Line Item Modeling Guide

PV9.0.0 SV120

Table of Contents

Overview

The Line Item Modeling solution in OneStream is designed to configure diverse FP&A needs for precise line-item planning throughout your organization. The solution empowers users to build detailed, driver-based operational plans directly within the OneStream platform. Designed for agility, scale, and business ownership, it enables granular modeling across operational domains like workforce, sales, capital, and contracts, with full control over logic, security, and performance with minimal IT assistance required. The solution leverages formulas and various drivers to compute data, which is then presented in structured plans for reporting purposes. It can be used independently or combined with other OneStream solutions based on your requirements. This solution offers three different configurations depending on your planning needs:

- **Workforce Planning**: This configuration aids in workforce budgeting, forecasting, and analysis, providing you with an efficient means of managing human resources. The Register uses defined start and end dates to perform calculations and includes a built-in transfer feature that enables you to manage employee movements across different areas of the organization.
- **Fixed Term Planning**: This configuration uses defined start and end dates in the Register to perform calculations and can be used for date-driven operations that aren't tied to specific individuals, such as travel planning, leases, subscriptions, or project planning.
- **Duration Based Planning**: This configuration uses a defined start date and duration to perform calculations and can be used for duration-driven operations that aren't tied to a specific end date, such as project level planning, contracts, grants or other engagements.

NOTE: Line Item Modeling is compatible with the Modern Browser Experience.

NOTE: The Line Item Modeling solution supports all culture code settings.

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.

See OneStream Solution Modification Considerations.

Dependencies

Component	Description
OneStream 9.0.0 or later	Minimum OneStream Platform version required to install this version of Line Item Modeling.
Microsoft SQL Server 2017 or later	Line Item Modeling requires an instance of Microsoft SQL Server 2017 or later.

Load Solution

1. In the OneStream Solution Exchange, go to OneStream Solutions and select the **Line Item Modeling** tile.
2. On the **Line Item Modeling Solution** page, in the **Platform Version** drop-down menu, select the appropriate OneStream Platform version.
3. In the **Solution Version** drop-down menu, select the most recent version. Click **Download**.
4. Log into OneStream.

5. On the **Application** tab, go to **Tools** > **Load/Extract**.
6. On the **Load** tab, use the **Select File** buttons to locate the solution package. Click **Open**.
7. When the solution file name appears, click **Load**.
8. Click **Close** to complete.

Install Overview

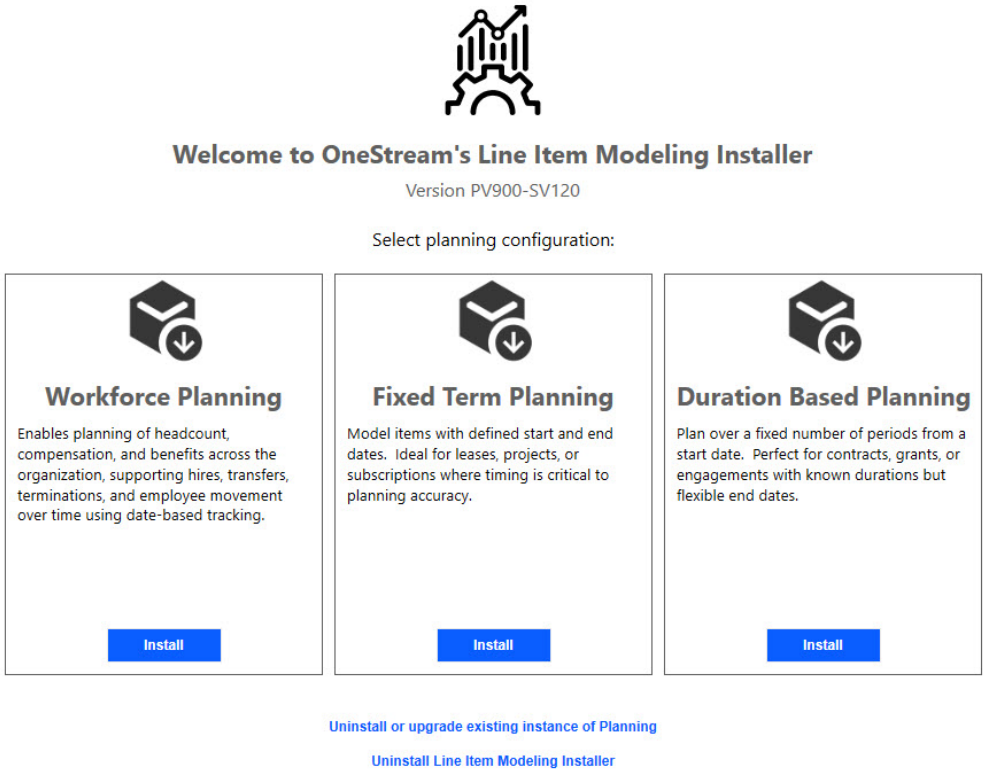
Welcome to OneStream's Line Item Modeling Installer. This powerful installer offers three different configurations to install: Workforce Planning, Fixed Term Planning and Duration Based Planning. You can also install multiple instances of the different configurations depending on your planning needs.

Once the setup of your configuration type is complete, either by following the Setup Wizard or importing a configuration file, a new dashboard is created as the configuration type and instance.

Install Configuration

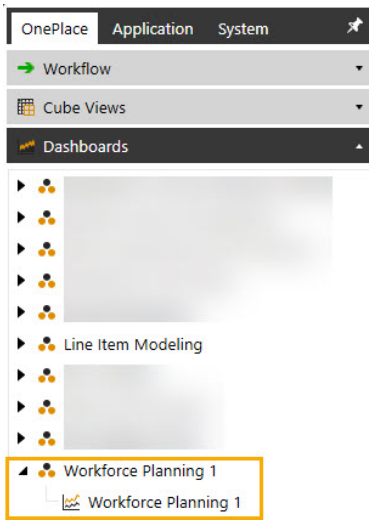
Use the Line Item Modeling Installer in the OnePlace tab to install a planning configuration.

> **NOTE:** Only administrators can set up the solution, adjust the settings and see the Line Item Modeling solution Installer.



1. Go to **Dashboards** > **Line Item Modeling** > **Line Item Modeling Installer**.
2. Click the **Install** button below the type of planning configuration you want to install.
3. In the dialog box, click the **PROCEED** button.

> **NOTE:** Once the configuration is installed, a new workspace and dashboard are created as the configuration type and instance. You may have to refresh the application to see the new dashboard on the OnePlace tab.



4. On the configuration Welcome Page, click **Install Tables**.

> **NOTE:** Each install of the configuration options will install in its own schema and instance number. For example, Workforce Planning 1.

After tables are installed, you're directed to a welcome page to start your setup. You can either use the Setup Wizard or the Configuration option.

Uninstall Installer

To uninstall the Line Item Modeling installer, click the **Uninstall Line Item Modeling Installer** link on the installer welcome page.

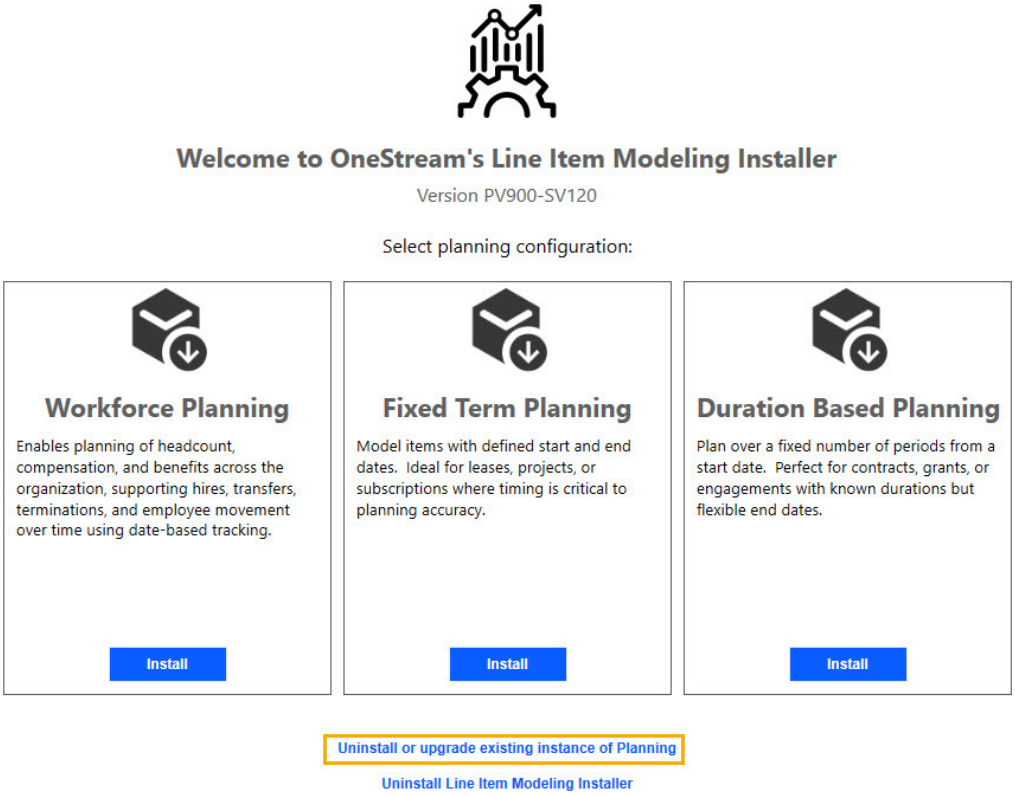
> **IMPORTANT:** A dialog box will display to confirm if you want to proceed.

> **NOTE:** Current planning instances will remain installed.

Instance Management

The Line Item Modeling Installer includes a centralized Instance Management capability for administrators. This feature provides a clear and streamlined path to upgrade or remove existing instances of planning configurations from a single location, improving maintainability and reducing complexity.

To access the Instance Manager page, click the **Uninstall or upgrade existing instance of Planning** link on the installer welcome page.

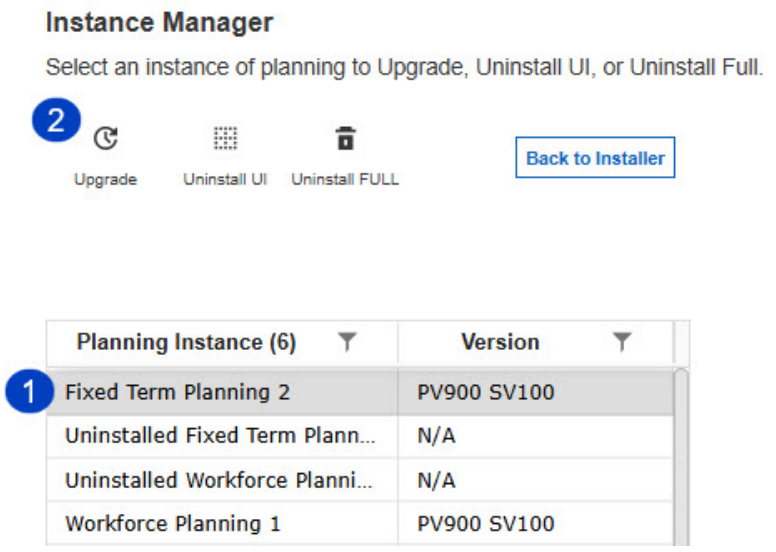


Upgrade Instance

As an administrator, you can upgrade planning instances to the latest version from the Instance Manager page. This process ensures your planning instance runs on the most current version without requiring a full reinstall. The latest version of the solution will be installed on the same instance number and carryover the workspace name and profile as well as existing data and database tables.

> **NOTE:** Changing the workspace name in Line Item Modeling is not recommended.

To upgrade a planning instance, follow the legend and corresponding instructions:



1. On the Instance Manager page, select an instance.
2. Click the **Upgrade** button.

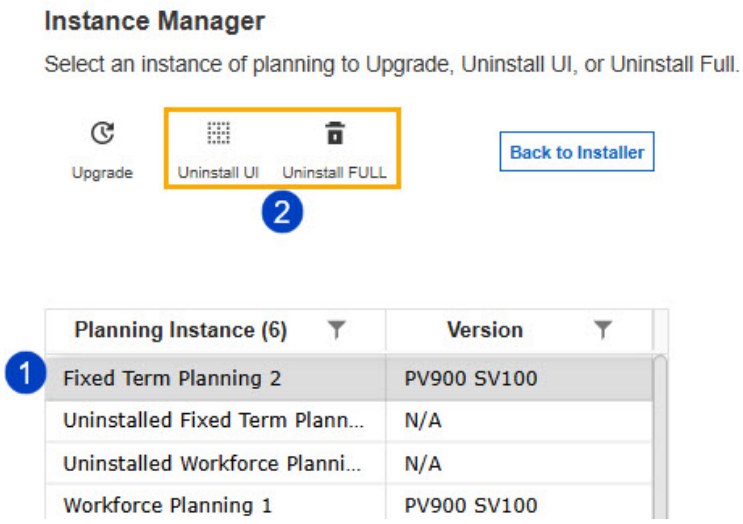
> **IMPORTANT:** A dialog box will display to confirm if you want to proceed.

After installation is complete, the instance is ready to use without needing to use the setup wizard again.

Uninstall Instance

As an administrator, you can uninstall planning instances from the Instance Manager page.

To uninstall a planning instance, follow the legend and corresponding instructions:



1. On the Instance Manager page, select an instance.
2. Click the **Uninstall Full** or **Uninstall UI** button.
    - Use the **Uninstall Full** button to remove all related data tables, data, workspaces and workspace components, but retain business rules. The instance is removed from the table.
    - Use the **Uninstall UI** button to remove all dashboards, but retain databases, related tables and business rules. The instance name updates to start with Uninstalled.

> **IMPORTANT:** A dialog box will display to confirm if you want to proceed.

Application Setup Options

The Setup Wizard provides a user-friendly, step-by-step process, ideal for first time setup or those who prefer a more guided experience. The Configuration option offers more control for users who are comfortable importing a configuration file that already contains all the solution settings in a single JSON file. Review the sections below and select the option best suited to your setup needs.

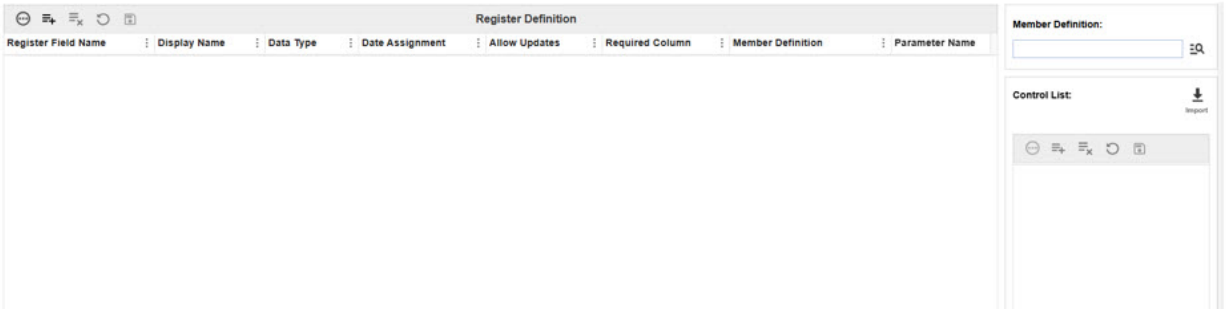
> **NOTE:** Only administrators can set up the solution, adjust the settings and see the Line Item Modeling solution Installer.

Setup Wizard

Launch Setup Wizard: From your configuration Welcome Page, click the **Start** button to begin the Setup Wizard. If this is the first time you are installing the solution, or you do not have a configuration file generated from a previous version of the solution, the Setup Wizard is the recommended option.

This section will guide you through setup of the Register, Accounts, and Security steps. The Setup Wizard has built-in validations to make sure all necessary information is populated. In the Security setup, dialog boxes will display if you skip over a step and inform you to go back and fill in any missing criteria.

> **IMPORTANT:** Any attribute named in the solution, such as Register Field Names, Accounts, Global Drivers, Cube Drivers, Lookup Drivers and Formula Names, must be unique from each other.



Register

Step 1 of the Setup Wizard is the Register. This is a crucial tool that aids in the initial configuration and ongoing management of your planning environment. It is designed to streamline the setup process and make it easier to define your Register and the attributes within it.

Through the Setup Wizard Register, you can dynamically load your column definition and configure a variety of settings, including display names, data type, control lists, and data dimensions.

The Register portion of the Setup Wizard ensures that you can set up your Line Item Modeling solution according to your specific business requirements.

It is essential to review and update the settings in the Setup Wizard Register periodically to ensure they remain aligned with any changes in your business operations or planning needs.

Register Setup

Register Definition: In this step, you will dynamically create the columns used for your Register. These fields, for example, can come from your human resources (HR) source if you are in the Workforce Planning solution. Some examples include Employee ID, Job Title, Department, and Status. These columns within the Register Definition table will help define your Register:

- **Register Field Name**: The column name that is imported from your .csv file.
- **Display Name**: The column name that will display on your Register. Display Name can only contain letters a to z, numbers 0 to 9, underscore characters, and spaces.
- **Data Type**: Define the data types for each Register column. You have these options: String (numbers or letters), Date, and Number. It is important to assign the correct Data Type for your Register Field Names based on the data you intend to import into the Register later in the planning process.
- **Column Format**: Define the formatting for each data type using the drop-down menu. Formatting types include: decimal places (N#), dates and Percentages (P#). Choose from the following: blank (default), N0, N1, N2, N3, N4, N5, N6, N7, N8, N9, MM/dd/yyyy, dd/MM/yyyy, yyyy/MM/dd, P0, P1, P2, P3, P4, P5, P6, P7, P8 or P9.

  > **NOTE:** The assigned formatting for dates in the Register Definition will override date formatting from a culture code.

- **Date Assignment**:
  - For the Workforce Planning and Fixed Term Planning configurations, select a Register field to have a start and end date assigned for your incremental and periodic calculations.
  - For the Duration Based Planning configuration, select a Register field to have a start date and duration assigned for your incremental and periodic calculations. The duration selection can only be an integer ranging from 0 to 2400.
- **Allow Updates**: You have the option to allow updates on certain columns. This will determine which columns can or cannot be modified in the Register.

  > **IMPORTANT:** If this attribute is not assigned, you will not be able to edit regardless of security permissions.

- **Required Column**: Select which Register columns you want to be required when importing and editing Register data.
- **Member Definition**: Define which member metadata you want to assign to a Register column.

  > **NOTE:** If your member definition is using extensibility where there is more than one dimension, and you want to plan at a more detailed level, you can define the specific dimension in your member definition. For example, U1#CC100.Base:Dim:Equipment Cost Centers Budget. Member definitions link core dimensionality to the Register and provide data validations and security options within the Line Item Modeling solution.

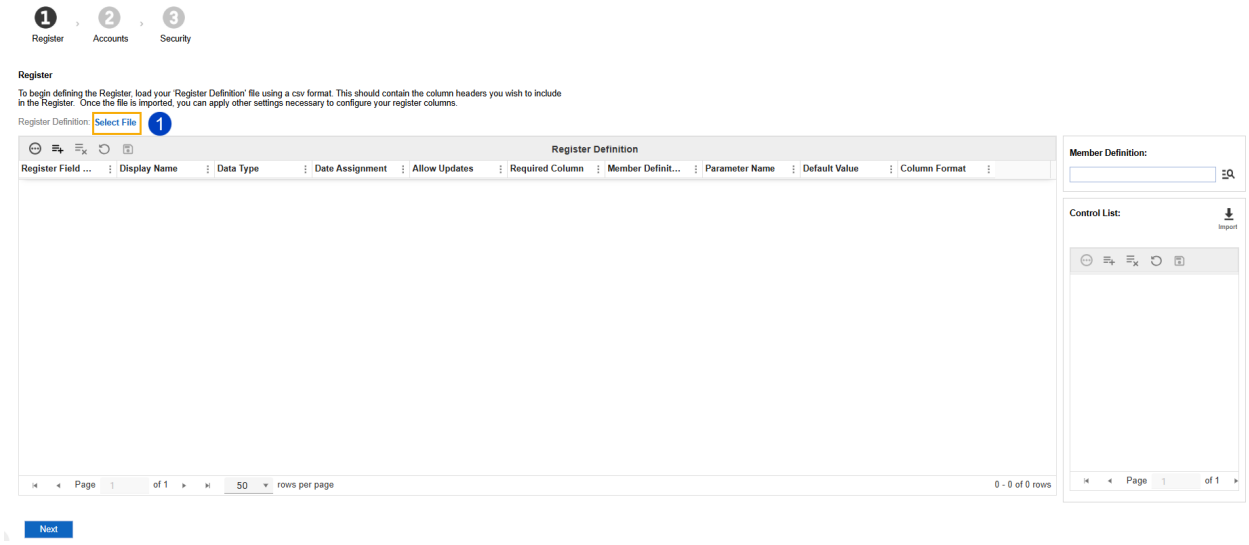
- **Parameter Name**: Provides the option to select a predefined parameter in your application to assign to a Register column.
- **Control List**: Indicates if the Register column has control list values.
- **Default Value**: Define a custom default value for each Register column. If you input a value that does not match the assigned data type or input a value that is not included in the member definition, a dialog box displays. When a new row is added to the Register, the default value populates for that field.

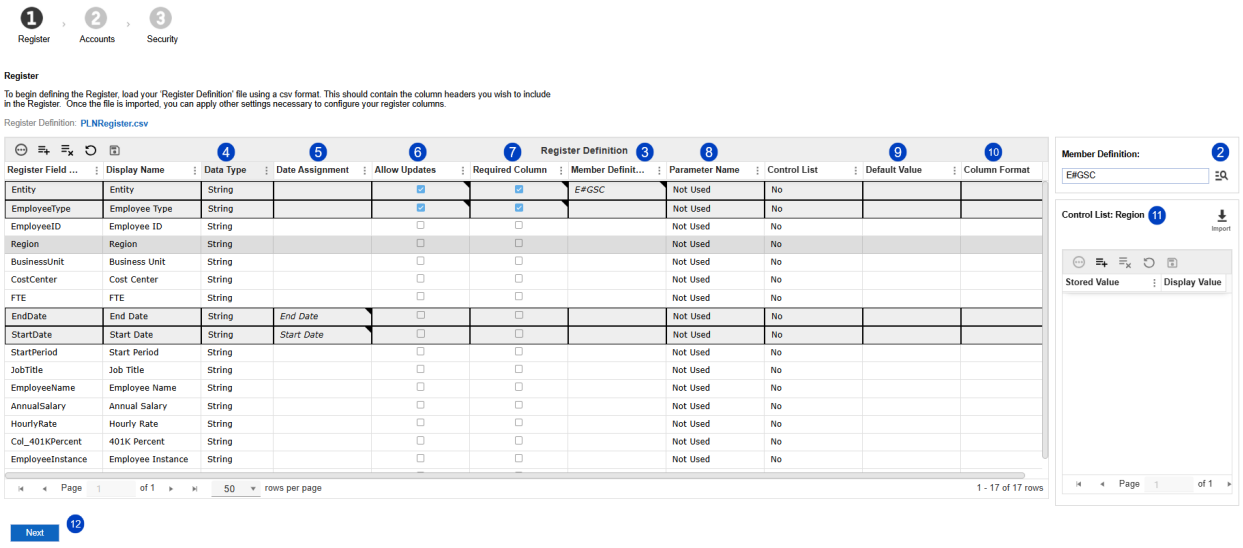
  > **NOTE:** If you have a default value assigned and import a new .csv file, the default value is automatically applied to the column upon saving the Register.

There is also a control list table next to the Register Definition table that enables you to populate acceptable control list values for each Register field. For example, if you have a Register field name of Region and you only have data for two regions, USA and Canada, you can input those values in the table to make sure no other regions are accepted. When you assign a member definition to a row in the Register table and save it, the control list automatically populates the associated member definition values for that row which provides the option to assign security to list members in step 3 of the Setup Wizard. See Security Setup.

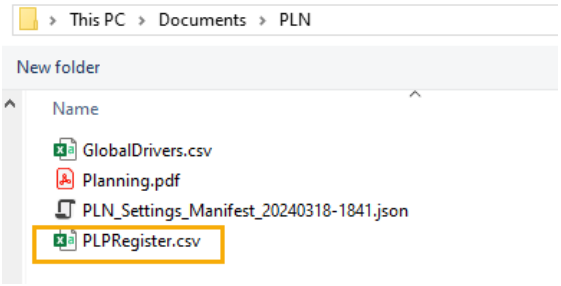
Before importing, verify that the Register columns within your .csv file only contain letters a to z, numbers 0 to 9, or underscore characters to avoid any issues or missing data in your Register.

To set up your Register, follow the legend and corresponding instructions:





1. Click **Select File** and a dialog box displays prompting you to upload a file. The Register Definition will populate with the data and order of the .csv file. You can also manually add or remove entries using the grid toolbar.



2. Once the table is populated, you will see a list of all your columns in the Register Definition table. Set the member definition by clicking the **Member Definition** button .

   The Member Filter Builder dialog box is displayed for member definition creation. Create the member definition and then click the **OK** button.

3. Copy the member definition in the text box created in step 2 and paste it into the **Member Definition** column for the **Entity** row. Entity is a required field, and it should only be applied to one **Register Field Name**.

   > **NOTE:** You can also assign a User-Defined (UD) member definition for other Register field names based on your planning needs. This can be done through the Member Filter Builder as well. Only one token type can be assigned to a Register Field Name.

4. Select the **Data Type** for each **Register Field Name**. Choose from the following: Number, String or Date.
5. In the **Date Assignment** column, select a cell and use the drop-down menu to select a Start Date and End Date for your corresponding **Register Field Name**. Start Date and End Date are required fields.

   > **NOTE:** The Workforce Planning and Fixed Term Planning configurations use the Start date and End date selections. The Duration Based Planning configuration uses a Start date and a Duration selection.

6. Select the checkbox in the **Allow Updates** column for each **Register Field Name** you want to allow editing access for. Leaving it blank means that the field is read-only and cannot be updated.
7. Select the checkbox in the **Required Column** column for each **Register Field Name** to define if data is required when importing and editing the Register data during the planning process.
8. Setting the **Parameter Name** for each **Register Field Name** is optional. Set them by selecting a row and using the drop-down menu in the **Parameter Name** column. You can also search for a parameter by using the drop-down menu and then typing in the text box.
9. In the **Default Value** column, select a value for each **Register Field Name**.

10. In the **Column Format** column, select a value for each **Register Field Name**. Choose from the following: blank (default), N0, N1, N2, N3, N4, N5, N6, N7, N8, N9, MM/dd/yyyy, dd/MM/yyyy, yyyy/MM/dd, P0, P1, P2, P3, P4, P5, P6, P7, P8 or P9.
11. (Optional) You can use the control list table next to the Register Definition table to populate acceptable values for each Register field as well as the stored value and display value.

    > **NOTE:** The control list column in the Register Definition table indicates if a Register column has control list values. This will update automatically upon clicking the Save or Next button on the Setup Wizard or by going to Settings > Register Definition and clicking the Update button.

12. Click the **Next** button and a dialog box displays. Select **Proceed** or **Cancel**.

There are built-in validations, so you will not be able to move forward if there is missing or incorrect information entered in Register Definition table. For example, if you are missing a Display Name, you have two different dimensions tokens being used in the same column, or if you have the same dimension token on two different columns, a validation message will display.

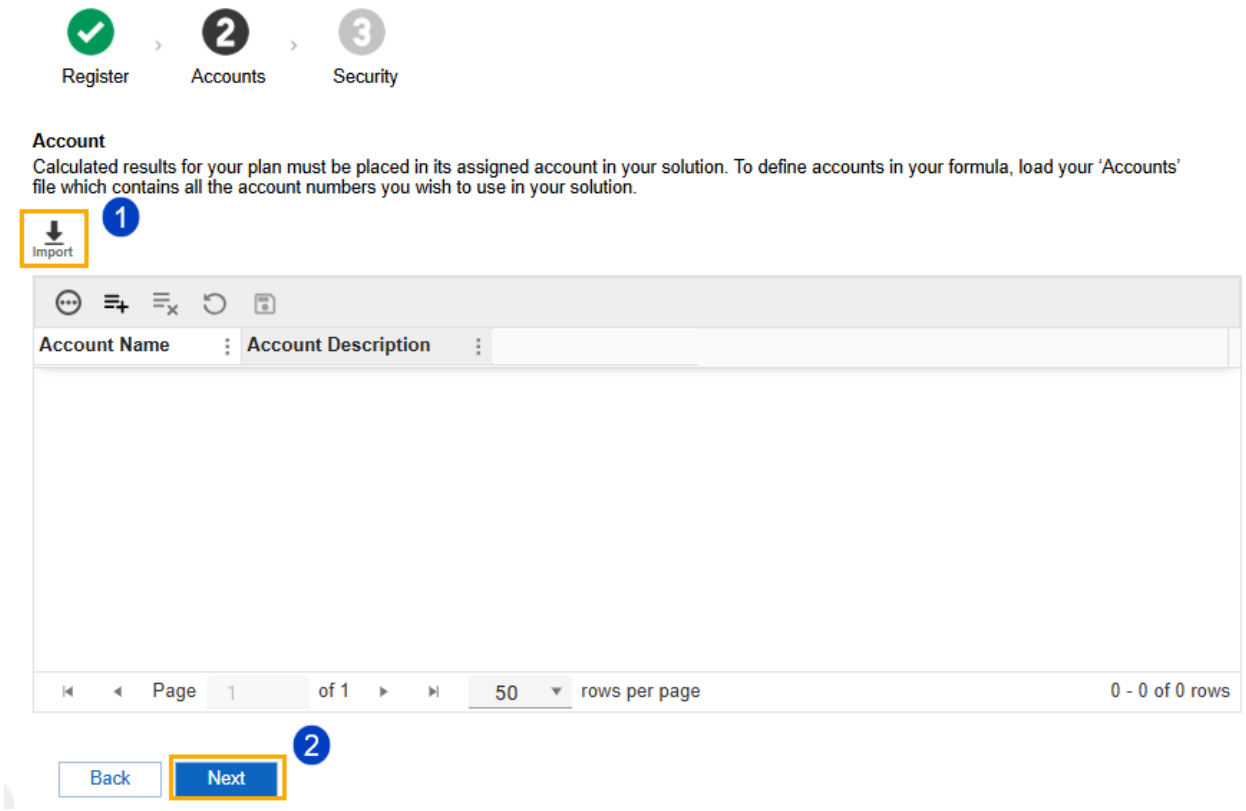
Accounts

In OneStream's Line Item Modeling solution, the term Accounts often refers to the accounts that are set up and used in formula creation and where the calculated values are stored. These accounts are crucial for ensuring the calculated values in your plan table are placed in the appropriate account. You can use the same account name and description as your application metadata or add accounts that may not be in your account structure but will help in calculating values on a more detailed level.

Before you import, verify you are using a .csv file. The column names on the .csv file must match the table shown in the solution.

> **IMPORTANT:** Any attribute named in the solution, such as Register Field Names, Accounts, Global Drivers, Cube Drivers and Formula Names, must be unique from each other.

To import Accounts, follow the legend and corresponding instructions:



1. Click the **Import** button and a dialog box displays prompting you to upload a file. You can also manually add or remove entries using the grid toolbar.
2. Click the **Next** button.

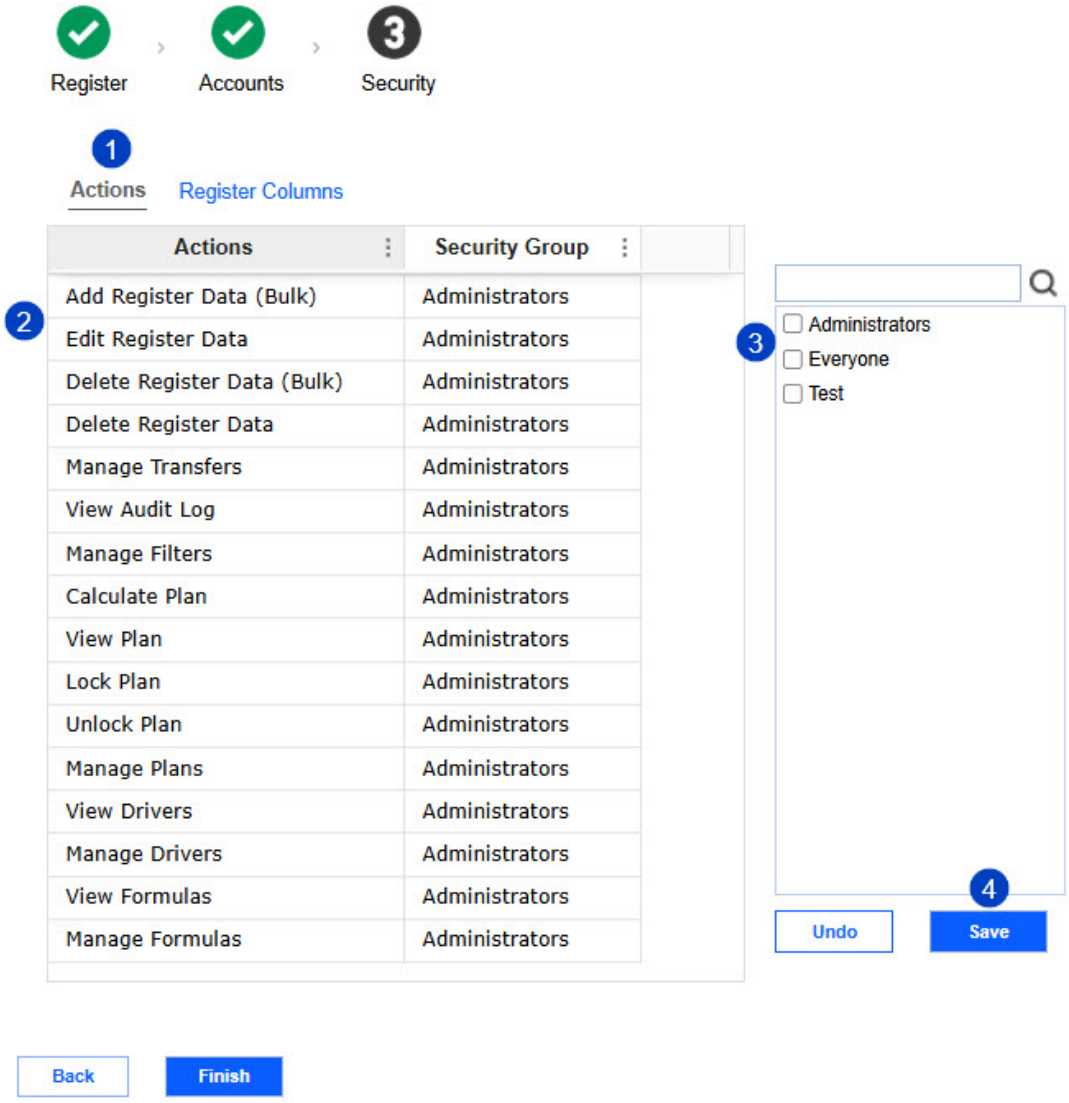
> **NOTE:** There are built-in validations so you will not be able to move forward if there are issues, such as duplicate account names.

Security Setup

OneStream's Line Item Modeling Installer allows you to have different configuration types and set up security for each using the Wizard Security Groups, ensuring secure access control and data protection. These groups define the level of access and permissions each user or user group has within the system, enabling administrators to effectively manage who can view, edit, or approve data. By structuring user access rights through the Security Groups, organizations can maintain control over sensitive information and prevent unauthorized alterations. This feature enhances the security of the planning process and fosters accountability and proper data management within the organization. It is an essential component for businesses looking to safeguard their data while promoting a collaborative planning environment. See Security to adjust Security groups.

> **NOTE:** The Manage Transfers action is only available in the Workforce Planning configuration.

To set security groups for Actions, follow the legend and corresponding instructions:



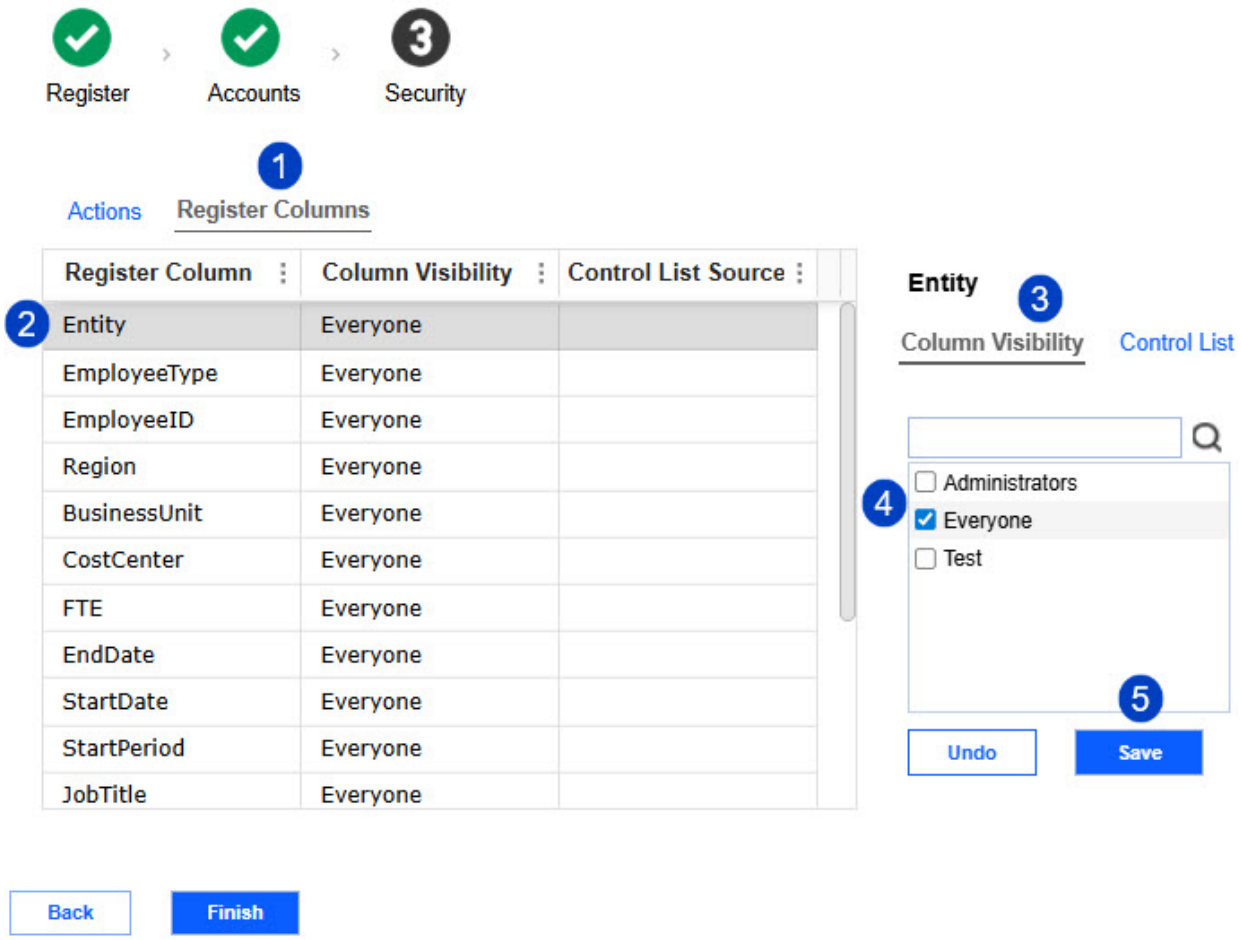
1. Click the **Actions** button.
2. Select a row.
3. Select security groups.

> **TIP:** You can search for a security group by typing in a security group name and clicking the **Search** button.

4. Click the **Save** button. You can revert your security group selections by clicking the **Undo** button.

> **IMPORTANT:** You need to click the **Save** button after each Action security group selection.

To set the security groups for Register Columns, follow the legend and corresponding instructions below:



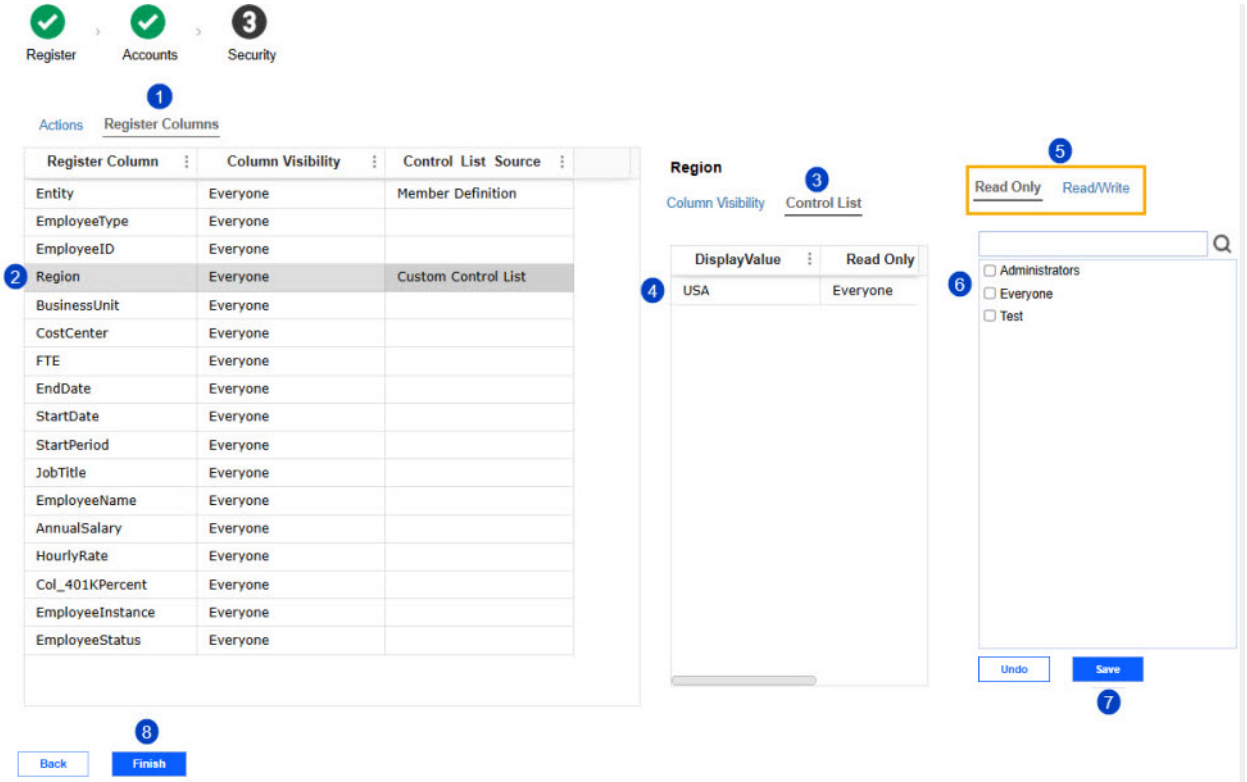
1. Click the **Register Columns** tab.
2. Select a row.
3. Click the **Column Visibility** tab.
4. Select security groups.

   > **TIP:** You can search for a security group by typing in a security group name and clicking the **search** button.

5. Click the **Save** button. You can revert your security group selections by clicking the **Undo** button.

   > **IMPORTANT:** You need to click the **Save** button after each Action security group selection.

To set the security groups for control list values, follow the legend and corresponding instructions:



1. Click the **Register Columns** tab.
2. Select a row with control list values.
3. Click the **Control List** tab.
4. Select a row.
5. Click the **Read Only** tab to set read-only permissions or click the **Read/Write** tab to set read/write permissions.
6. Select security groups.

   > **TIP:** You can search for a security group by typing in a security group name and clicking the **search** button.

7. Click the **Save** button.

> **IMPORTANT:** You need to click the **Save** button after each Action security group selection.

8. Click the **Finish** button.

The Control List Source column in the Register Columns tab indicates if control list values are populated from a Member Definition or custom control list. Security settings for members on the Entity dimension cannot be modified in Line Item Modeling. These settings are inherited from the dimension library and reflect the security applied there.

> **NOTE:** Security can only be applied to member definitions or custom control lists but not to parameters.

The following table details the actions you can set security groups for.

> **NOTE:** OneStream Administrators will not automatically have rights to the inner workings of this solution. If you have Administrators responsible for any of the Actions listed below, you must assign the Administrators group to the action or include those individuals to the security groups assigned. This also applies to row level security on the Entity, UD's or Control List items.

Actions	User Function
Add Register Data (Bulk)	User can import Register bulk data.
Edit Register Data	User can edit Register data. Edits include updating a row that exists and adding a row.

Actions	User Function
Delete Register Data (Bulk)	User can delete Register bulk data.
Delete Register Data	User can delete Register data. This permission allows specific users to delete an existing row. If a user has permission to Delete Register Data, they also have Edit Register Data permission.
Manage Transfers	User can execute transfers and is not data dependent, meaning this role is not tied to column or member security. The user assigned to this action can apply the execution of transfers globally within any intersection of data. This action is only available in the Workforce Planning configuration.
View Audit Log	User can view the Audit Log.
Manage Filters	User can create, edit, copy or delete Register filters.
Calculate Plan	User can calculate plan data.
View Plan	User can view plan data.
Lock Plan	User can lock plans.
Unlock Plan	User can unlock plans.

Actions	User Function
Manage Plans	User can create, edit, copy, calculate or delete plans.
View Drivers	User can view Global Drivers, Lookup Drivers and Cube Drivers.
Manage Drivers	User can import Global Drivers, Lookup Drivers and Cube Drivers.
View Formulas	User can view formulas.
Manage Formulas	User can create, edit, copy or delete formulas.

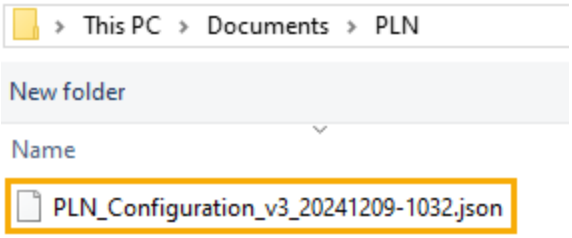
Configuration

The configuration option enables you to import a file that already contains solution settings from a different instance or another application and apply them automatically. The naming of the configurations is based on the specific planning use case:

- **PLNA1** - First instance and schema Fixed Term Planning
- **PLNB1** - First instance and schema of Workforce Planning
- **PLNC1** - First instance and schema of Duration Based Planning

IMPORTANT: You cannot import a configuration file into a planning instance that was created from a different planning configuration. For example, you cannot import a Workforce Planning configuration file into a Fixed Term Planning instance of the solution.

1. From the main Setup Wizard dashboard, click the **Import File** button to begin the setup process. You can only access the import of a configuration file during the Setup Wizard process.
2. Select the file you want to import and then click the **Open** button.

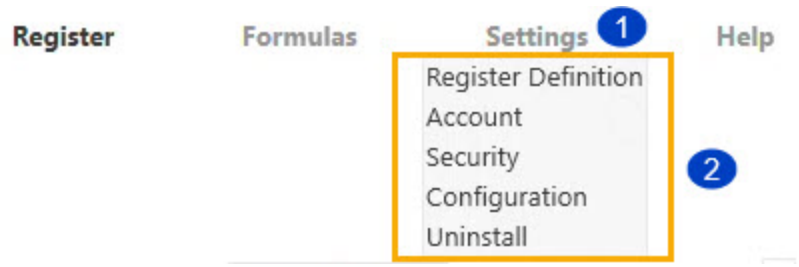


NOTE: When you import a configuration, Cube Driver and Lookup Driver values won't display in the preview table until you add Register data. Your Cube Driver or Lookup Driver is trying to compare values that are in the Register against values that are in a Cube or Lookup table so data needs to exist in the Register for that comparison to happen.

Settings

In OneStream's Line Item Modeling solution, the Settings drop-down menu enables the administrator to access the settings for Register Definition, Accounts, and Security. If further adjustments need to be made to the settings, you can do so from the respective dashboards. In addition to accessing your current solution configuration, this solution offers a way to export your configuration and apply it to another application or instance. See Configuration. As an administrator, you can export your configuration JSON file to capture additional settings, such as Global Drivers, Cube Drivers, Lookup Drivers or Formulas, which are detailed in the documentation. The standard Uninstall Full option is available in Settings as well. See Uninstall.

To access the settings menu, follow the legend and corresponding instructions:

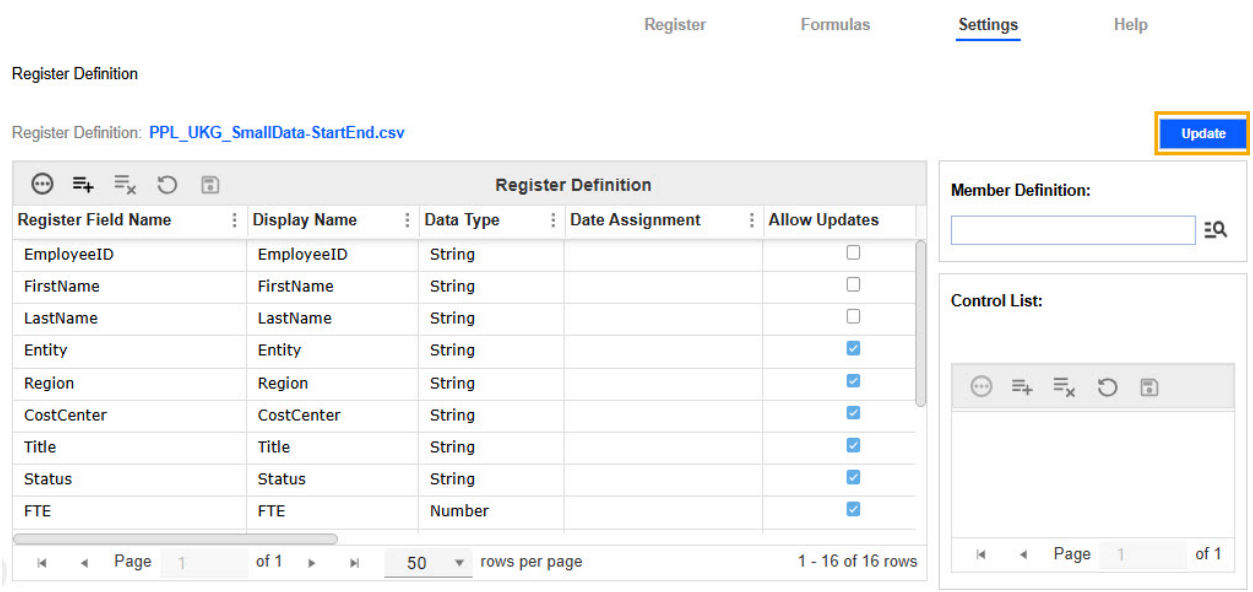


1. Hover your cursor over the **Settings** menu.
2. Choose from the following settings menus: Register Definition, Account, Security, Configuration, and Uninstall.

Register Definition

The Register Definition menu enables you to add new member definitions and make row and column updates to your Register Definition. After your changes are made you can click the **Save** button on the Register Definition table and your changes will only be reflected in the Register Definition table. To save your changes and apply them throughout the solution, click the **Update** button. If you update a data type, you are notified that the Register data will be removed because a new structure for the Register Definition has been established and you can either proceed or cancel.

> **NOTE:** To change the start and end date assignments, Register data must be removed.



There are built-in validations preventing you from moving forward if there is missing or incorrect information entered in the Register Definition table or control list table. Some examples are:

- You are missing a display name
- You have two different dimensions being used in the same column
- You have control list values that don't match the data type of the Register column

Register Definition Table

In the Register Definition table, you can insert a new row, remove row, cancel all changes prior to saving and save any updates without having to do a bulk .csv file import of Register fields. Once your changes have been saved and you click the **Update** button, your Register reflects the updates made in the Register Definition.

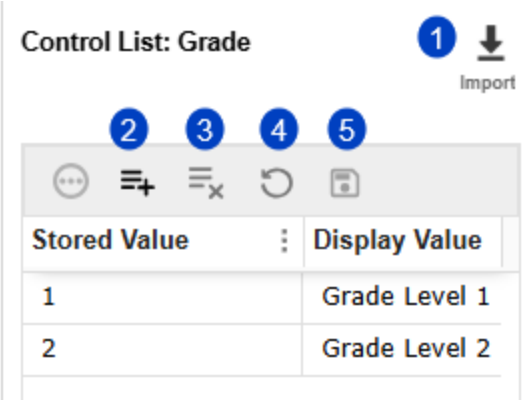
The column order defined in the Register Definition table is applied throughout the solution. When a new row is added or the .csv file is reloaded, any new fields or fields in use will automatically be shifted to the bottom of the Register Definition and, by default, display on the far right side of the Register. The grid component will allow you to modify your column order in its saved state.

- To Insert a Register row, click the  button. Enter the Register field and display name and update any other column attributes.
- To remove a Register row, click the button.
- To cancel all changes prior to saving, click the  button.
- To save, click the  button.

> **NOTE:** There may be instances that will prevent an update to your Register Definition in which you will receive a message that describes why it's prevented. For example, if you are trying to delete a Register Field that is in-use, you will receive a message stating where it's being used (a Register Filter Group, Driver, or Formula).

Control List Table

In the Control List table, you can perform the following actions:



1. Import a .csv file

   > **NOTE:** File must have the Stored Value and Display Value columns in that order. Importing a .csv file enables you to load many control list values at once.

2. Insert Row
3. Delete Row(s)
4. Cancel all changes prior to saving
5. Save

The control list table enables you to input a stored value and display value to manage control list values with greater detail and description. The data type selected in the Register Definition must match the data type of the control list values. You cannot enter a date value in a control list.

> **NOTE:** You cannot remove control list values that are used in a Register filter group or formula.

If you make an update in the Control List table and click the **Save** button, the updated control list values will only be reflected in the Register Definition.

> **IMPORTANT:** Once the changes have been saved, if you want the update to be reflected throughout the solution, click the **Update** button.

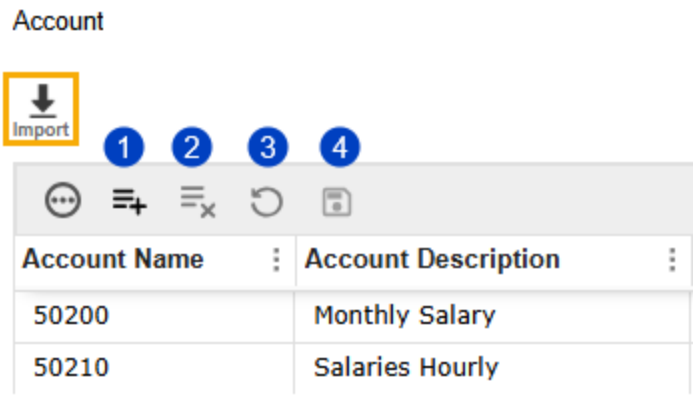
Account

The Account menu enables you to view, import, add, update, and remove accounts. After any updates are made, click the **Save** button.

Click the **Import** button to load any bulk changes to your .csv file.

> **NOTE:** If an account is currently being used in a formula, the account automatically remains in the table. All other accounts are removed, and the table then includes the new .csv file as well as the accounts used in formulas.

In the Accounts table, you can perform the following actions:



1. Insert Row
2. Delete Row(s)
3. Cancel all changes prior to saving
4. Save

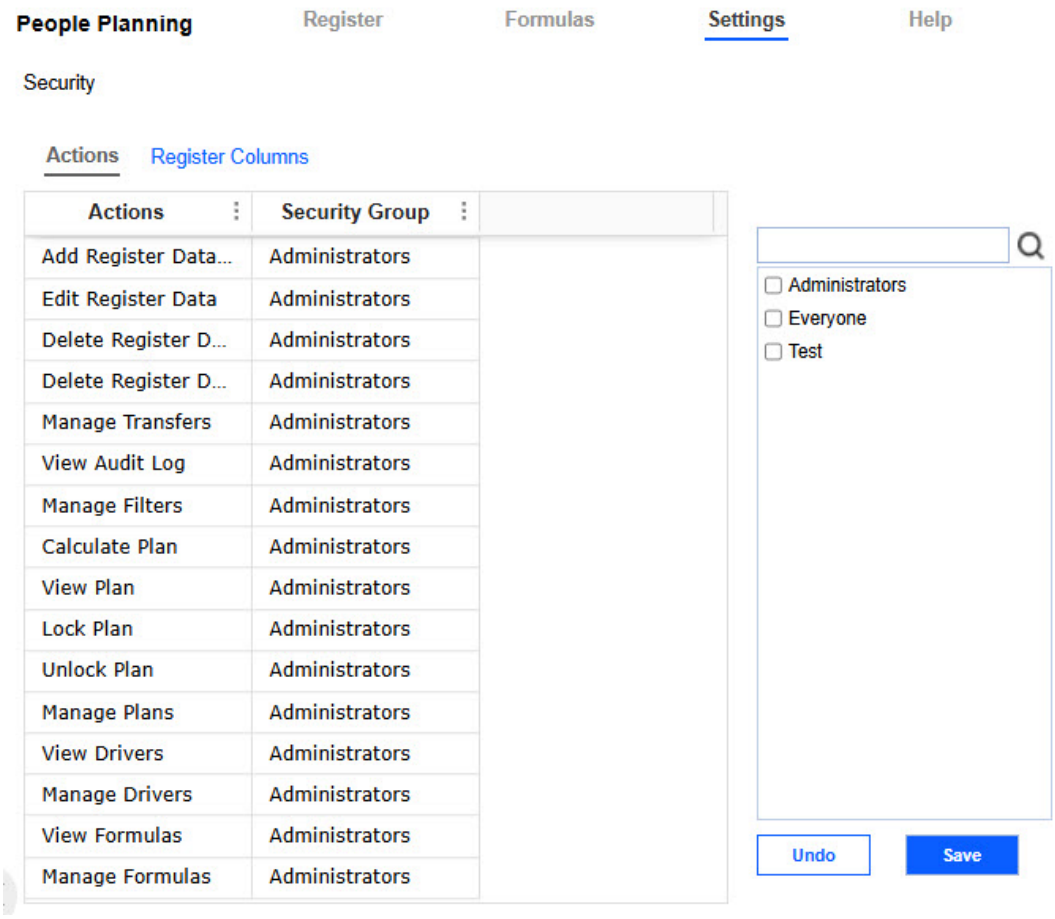
> **NOTE:** You cannot remove an account that is used in a formula; however, you can edit the Account Description of an account that is currently being used in a formula.

Security

Security in OneStream's Line Item Modeling solution is a fundamental component designed to protect sensitive data and ensure access control. The Security Groups feature enables administrators to define access levels and permissions for each user or user group, providing granular control over who can perform specific actions, access certain pages, or view and edit data. Furthermore, OneStream's Line Item Modeling solution complies with industry-standard security protocols, ensuring your data is safeguarded according to best practices. This robust security framework enables organizations to leverage the power of the Line Item Modeling tool confidently, knowing their data is well-protected.

You can add, save, edit, or remove Security Groups. Multiple security groups can be assigned to Actions or Register Columns for more control of what users can have access to. The Register Columns shown are based on the .csv file load from the Register setup.

For additional information on updating security groups for Actions, Register Columns and Control List values, see Security Setup.



NOTE: The Manage Transfers action is only available on the Workforce Planning configuration.

Configuration

Configuration enables you to package and reuse the current settings of your solution, such as: Register Definition, accounts, security, Register group filters, Global Drivers, Cube Drivers, Lookup Drivers, Formulas and Plan criteria. Using a Configuration can be helpful when switching from a development environment to a production environment, allowing for faster implementation and less manual setup.

The naming of the configurations is based on the specific planning use case:

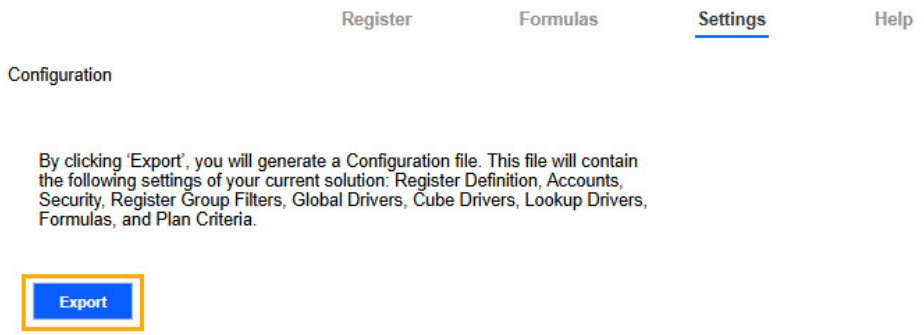
- **PLNA1** - First instance and schema Fixed Term Planning
- **PLNB1** - First instance and schema of Workforce Planning
- **PLNC1** - First instance and schema of Duration Based Planning

> **IMPORTANT:** The Audit Log, Register and Plan data cannot be exported with a configuration file.

> **NOTE:** When you import a configuration, Cube Driver and Lookup Driver values won't display in the preview table until you add Register data. Your Cube Driver or Lookup Driver is trying to compare values that are in the Register against values that are in a Cube or Lookup table so data needs to exist in the Register for that comparison to happen.

To export a configuration, follow these instructions:

1. Click the **Export** button.



2. In the File Explorer, select the folder location to store the configuration file, and click the **Select Folder** button.

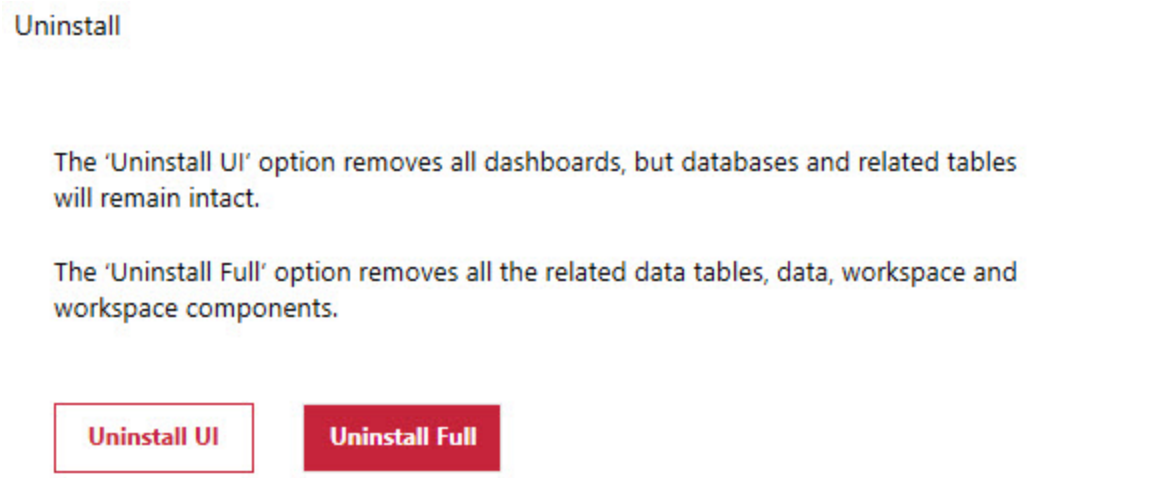
> **NOTE:** A placeholder file name is given to the configuration file in the following format: Solution/Type Code/Instance_Configuration_Version Number_Timestamp. For example, PLNB6_Configuration_v1_20250929-1115.json.

Uninstall

To uninstall a planning configuration, follow the instructions:

1. Hover your cursor over the **Settings** menu.
2. In the drop-down menu, select **Uninstall**.
3. Click the **Uninstall Full** or **Uninstall UI** button.
    - Use the **Uninstall Full** button to remove all related data tables, data, workspaces and workspace components, but retain business rules.
    - Use the **Uninstall UI** button to remove all dashboards, but retain databases, related tables and business rules.

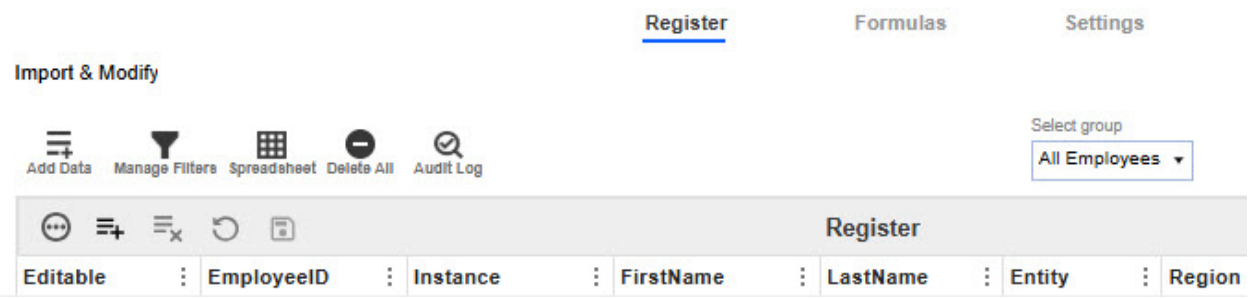
> **IMPORTANT:** A dialog box will display to confirm if you want to proceed.



> **NOTE:** Business rules and extenders remain if you uninstall. Re-Installing the solution overwrites any existing business rules and extenders.

Register

The Register in planning and management is usually a record keeping tool that tracks various details and data points. In the context of Workforce Planning, it refers to a tool for managing details about personnel, such as their roles, skills, and schedules. It might be used in human resources or project management to ensure that the right personnel are allocated to the right tasks. You can import and modify data and then calculate and analyze that data to make decisions about various types of planning.



Import and Modify

There are two options for importing data into the solution: using a .csv file or a connector.

1. Prepare your data: Before importing, ensure your data is in the correct format.

   CSV import:

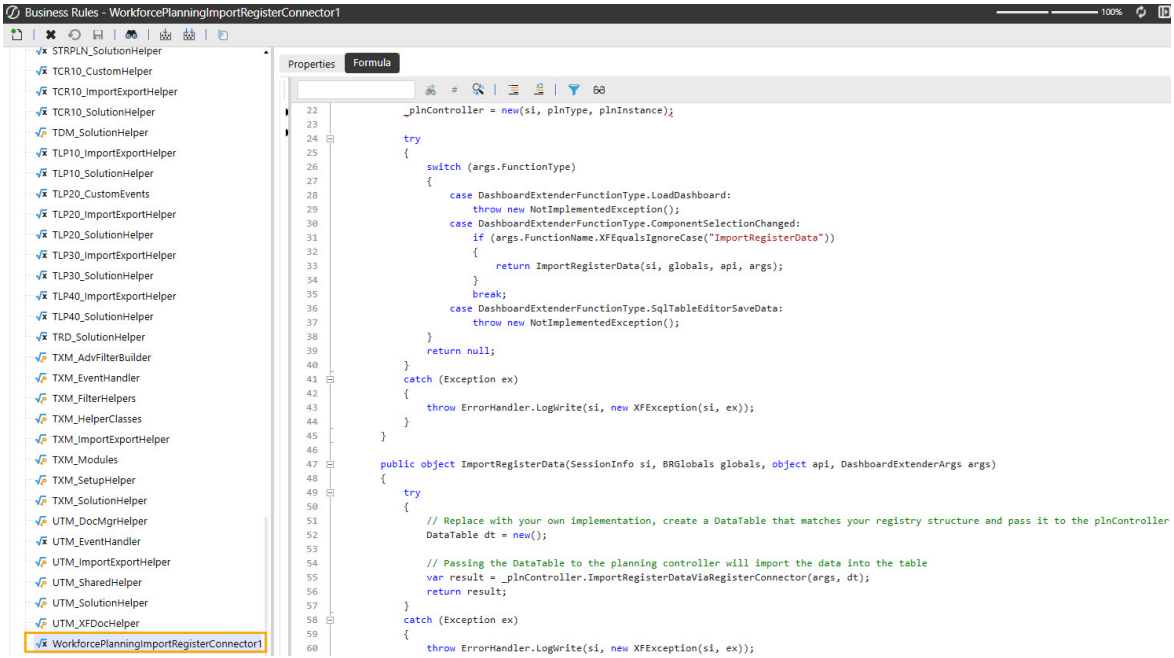
   Organize your data in a .csv file, with each column representing a different data point (for example, name, role, schedule), and each row representing a different individual.

   > **NOTE:** Your column order needs to match the Register order.

Connector:

The connector option uses a business rule to connect to an external source like an HR system.

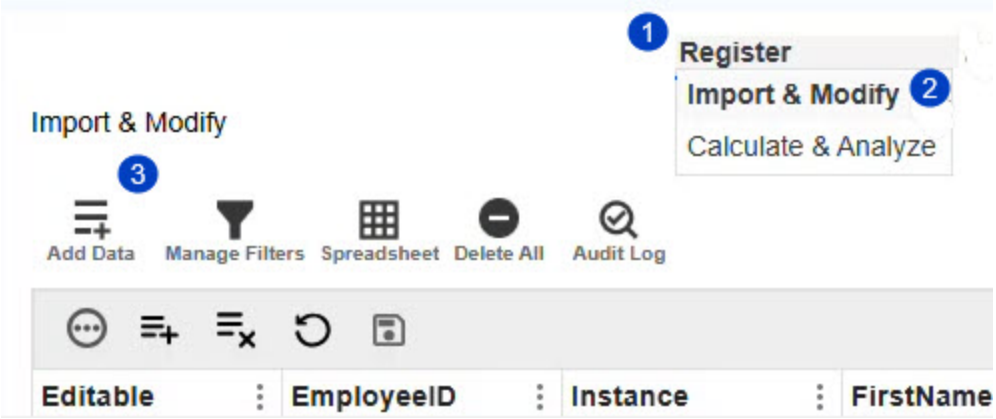
An application business rule template is preconfigured for loading from a connector but requires you to replace information with your own implementation to populate the Register structure. Each instance of a configuration has its own business rule. To access this business rule template, go to **Application** > **Business Rules** > **DashboardExtender** and then locate your planning configuration import Register connector instance [ConfigurationName]ImportRegisterConnector[InstanceNumber]. See the example below for the first instance of the Workforce Planning configuration (WorkforcePlanningImportRegisterConnector1):

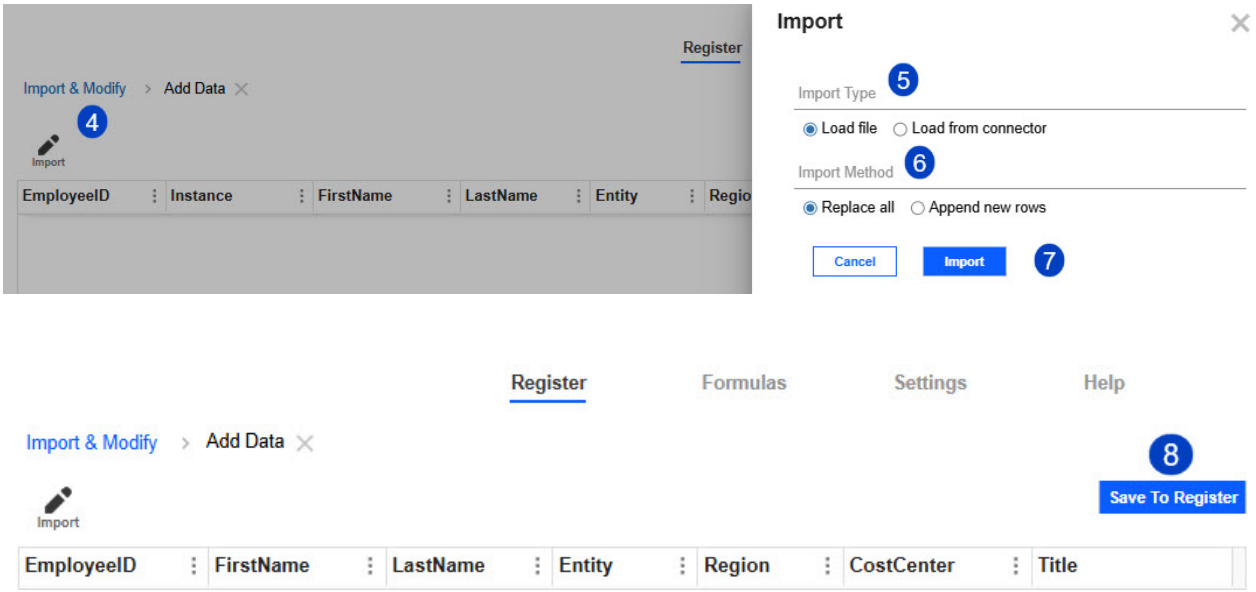


2. Import your data: Navigate to the import function in your planning Register and load from a local file or an external source. You can import a file and replace all the current data or only add new rows of data by selecting the append new rows option.
3. Map your data: The solution compares the fields used in your import to the fields that are defined in your Register Definition. If they match, the data loads into the Add data stage table. If they do not match, the system will consider that column name as invalid. The stage table in the Add Data breadcrumb is utilized to validate the data being imported. The validation checks that the date type matches, invalid members are not imported and duplicate line items do not exist.
4. Complete the import: Once everything is correctly mapped and all data validations are successful, save the Register. The system will populate the Register with your data and the stage table will be cleared.

Add Data to Register

To add data to the Register, follow the legend and corresponding instructions:





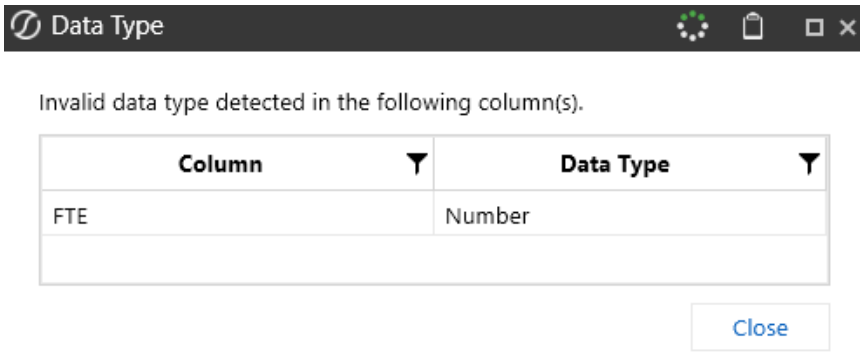
1. Hover your cursor over the **Register** menu.
2. In the drop-down menu, select **Import & Modify**.
3. Click the **Add Data** button.
4. Click the **Import** button.
5. In the Import pane, select an import type:
    a. Select the **Load file** checkbox to load data from a local file.
    b. Select the **Load from connector** checkbox to load data from an external source.
6. In the Import pane, select an import method:
    a. Select the **Replace all** checkbox to replace all data in the Register.
    b. Select the **Append new rows** checkbox to only add new rows of data to the Register.
7. Click the **Import** button and upload a file.
8. Click the **Save To Register** button.

Validations upon import ensure your data is correctly formatted and matches what was set up for the solution, such as:

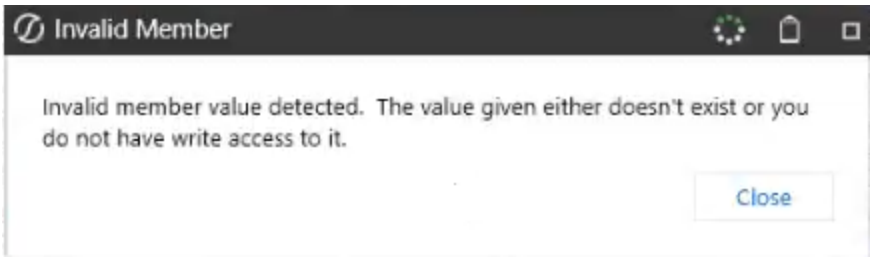
- **Register column definition**: You have a column in your import file that is not defined in the solution.
- **Duplicate column**: You have duplicate column headings or values.
- **Data type**: You have an incorrect data type in one of your columns.
- **Control list**: You have values in a column that do not match the control list values for that column.
- **Connector**: You do not have a connector implemented correctly.
- **Required column**: You do not have data in your required column.
- **Invalid Value**: You have incorrect cultural date or number format values.

Validations upon editing ensure your information does not get removed or go against any preselected attributes of the solution.

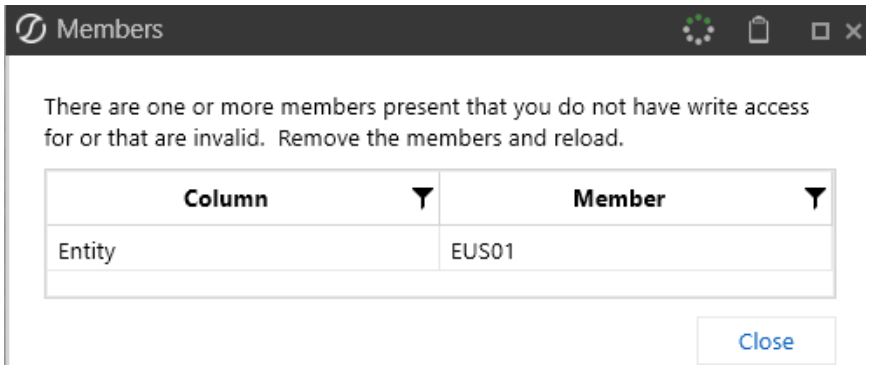
- If you input the wrong value type in a cell, for example, you enter letters in a column that should only have numbers, a dialog box opens informing you of an error.



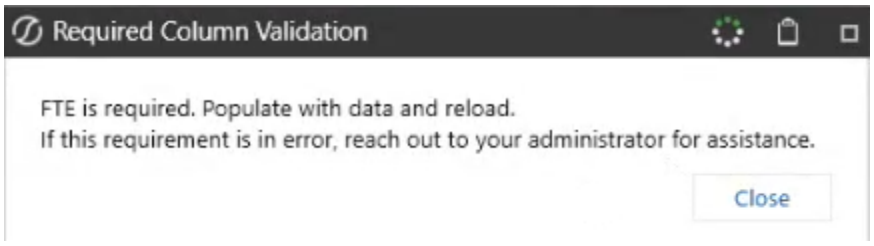
- If you try to add or replace any data for a column that has a member definition that you do not have write access to, a dialog box displays and your change is unsaved. Resolve any issues before saving again because the solution will not complete a save until all edits are valid.



- If you try to load and then save a new .csv file that has members that you are not permitted to edit, a dialog box will display. Only the entities that you have write access to will be updated and will replace the previous data.



- If you are missing values in a required column, a dialog box displays.



If you import a .csv file with numbers used at the beginning of a column name or spaces used in a column name, the application automatically adds the prefix of **Col_** to ensure the import is usable and compatible with the solution.

> **NOTE:** If you import a .csv file that has different member definitions than what you defined in the **Setup Wizard** or **Configuration** import, a dialog box displays informing you of an invalid member.

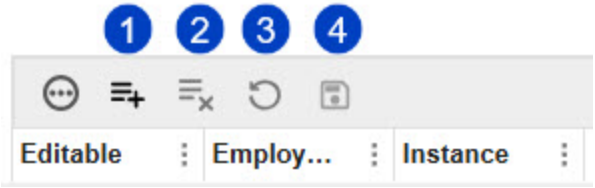
Modify Data in the Register

1. **Locate the data**: Navigate to the data you want to modify. This involves searching for a specific individual or record, or filtering the Register to display certain data.
2. **Edit the data**: Once you've located the data, select the field you want to edit. This enables you to directly input new data or select from a drop-down menu. You must have security access to edit data.
3. **Save your changes**: After editing the data, ensure you save your changes. This is done by clicking **Save** button.

Editing the Register

You can edit the Register by using the Spreadsheet tool or the Register grid controls.

The Register uses the Dynamic Grid enabling you to add, remove, cancel all changes prior to saving, and save Register values. You can also select a cell in the Register and a list of drop-down values will display based on member definitions, control lists, or parameter values assigned from the Register Definition.



1. Insert Row

   > **NOTE:** When you insert a row, default values will automatically populate.

2. Delete Row(s)
3. Cancel all changes prior to saving
4. Save

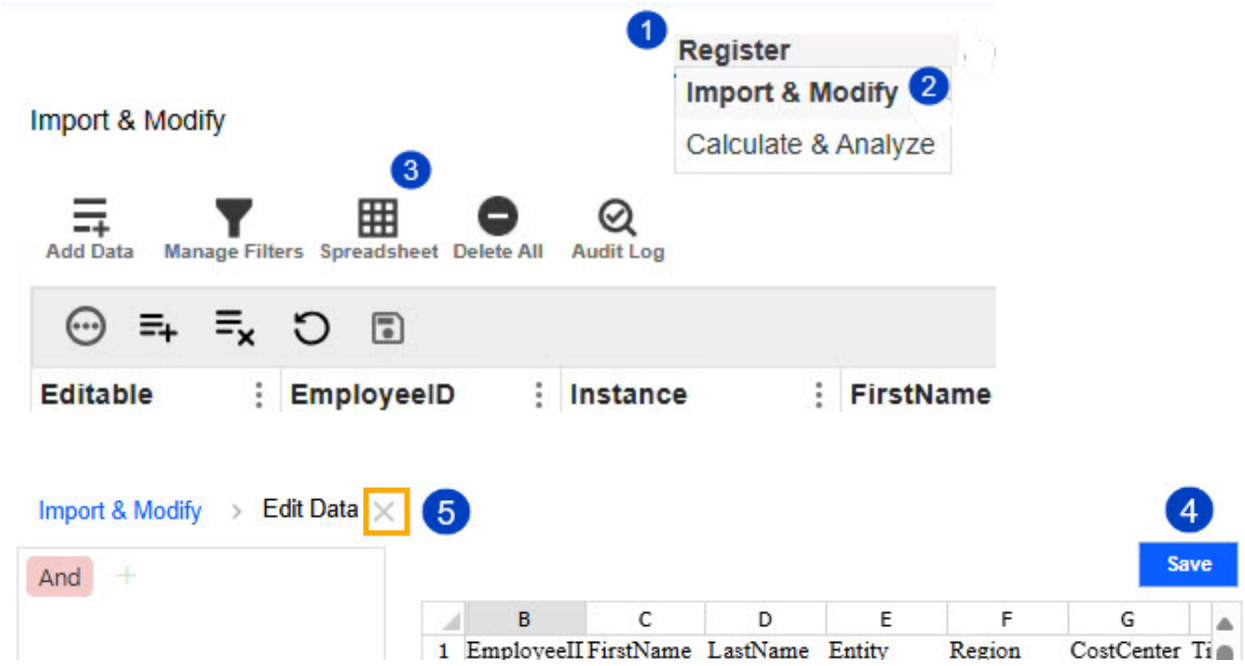
All of these functions are tied to security access, so if you do not have security access to delete rows, you will not be able to perform that action. You can view the **Editable** column to verify which rows of information you have read/write access to. A checked box indicates read/write access. If you make edits to information you do not have access to, a dialog box displays and the information will remain.

Spreadsheet Tool

The Spreadsheet tool opens a new page which enables you to make edits to your Register and not have to upload a new set of data every time you need to make an update. The tool enables you to edit a single cell, edit multiple cells at once, copy and paste from cell to cell, copy and paste a row to a new row, right-click and insert a row, and delete rows.

The spreadsheet tool also utilizes drop-down menus within cells in a column. These drop-down menus populate from control lists and parameters that have been assigned in the Register Definition for a quick way to make updates and avoid invalid entries.

To edit your Register using the Spreadsheet tool, follow the legend and corresponding instructions:

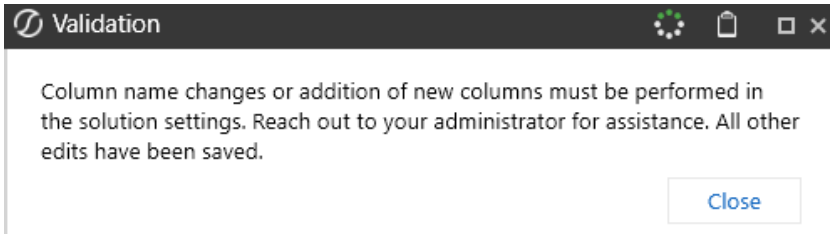


1. Hover your cursor over the **Register** menu.
2. In the drop-down menu, select **Import & Modify**.
3. Click the **Spreadsheet** button.
4. Complete edits and click the **Save** button.
5. Click the **X** button to navigate back to the Register read-only page.

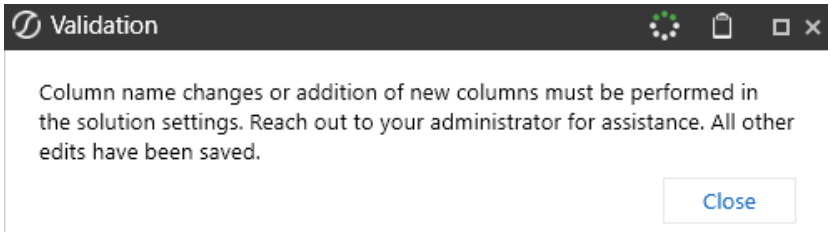
> **NOTE:** When scrolling through your data, the header row remains fixed at top of the spreadsheet so you do not lose track of which column the information is in.

Certain validations are put in place to make sure your information does not get removed or go against any preselected attributes of the solution, such as:

- Columns cannot be removed if selected column data is being used in a formula. To remove the column data, formula information must be updated to reflect the change you want to make.

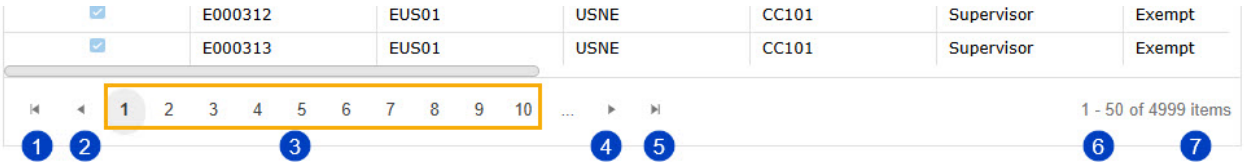


- When editing the Register, you cannot update the column name or add a new column. If you right-click on a column, the Insert and Delete selections are unavailable. If changes are made to the column name and other row information, a dialog box displays and only the row information changes are saved.



View Data

To view your Register data or plan data, use the pagination tools. Users are only able to view the Register information they have security access to.

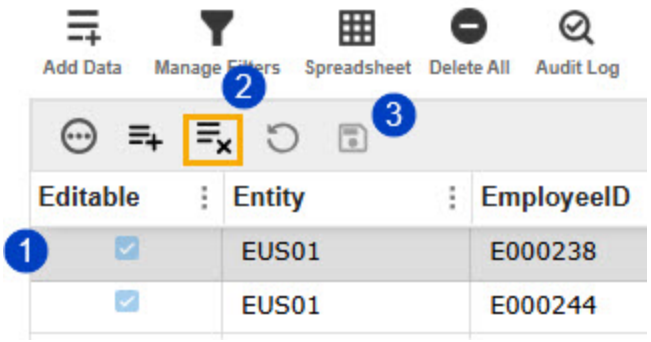


1. Skip to the first
2. Navigate to the previous page
3. Select a page
4. Navigate to the next page
5. Skip to the last page
6. Number of rows
7. Total number of rows

Delete Rows

To delete rows in the Register, you must have security access.

To delete a row, follow the legend and corresponding instructions:



1. Select a row.
2. Click the **Delete Row(s)** button.
3. Click the **Save** button.

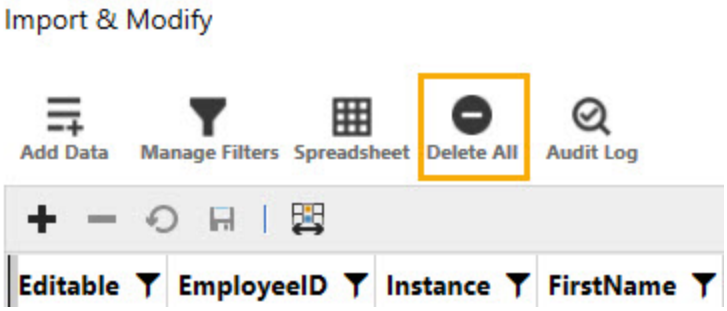
Delete All Rows

To delete all rows in the Register using the Delete All action, you must have the Delete All Register Rows (Bulk) action permission.

> **IMPORTANT:** The Delete All action deletes all rows, not just the rows you have write access to.

To delete all rows, click the **Delete All** button. A validation message displays to confirm the deletion.

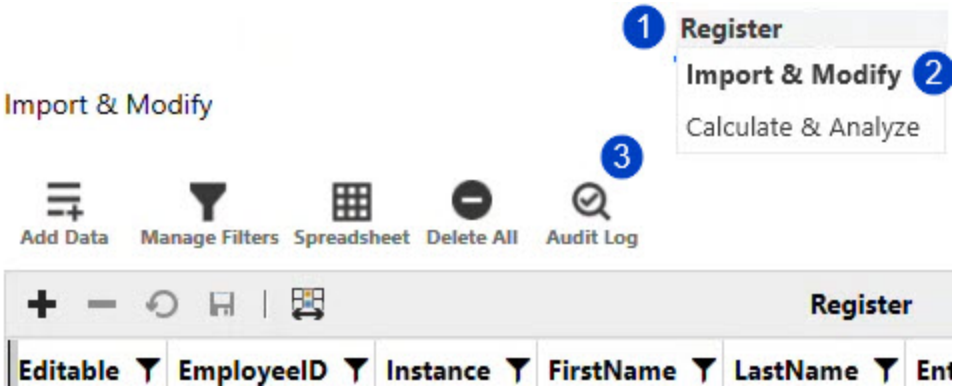
> **NOTE:** Plan data and Register filter groups will remain.



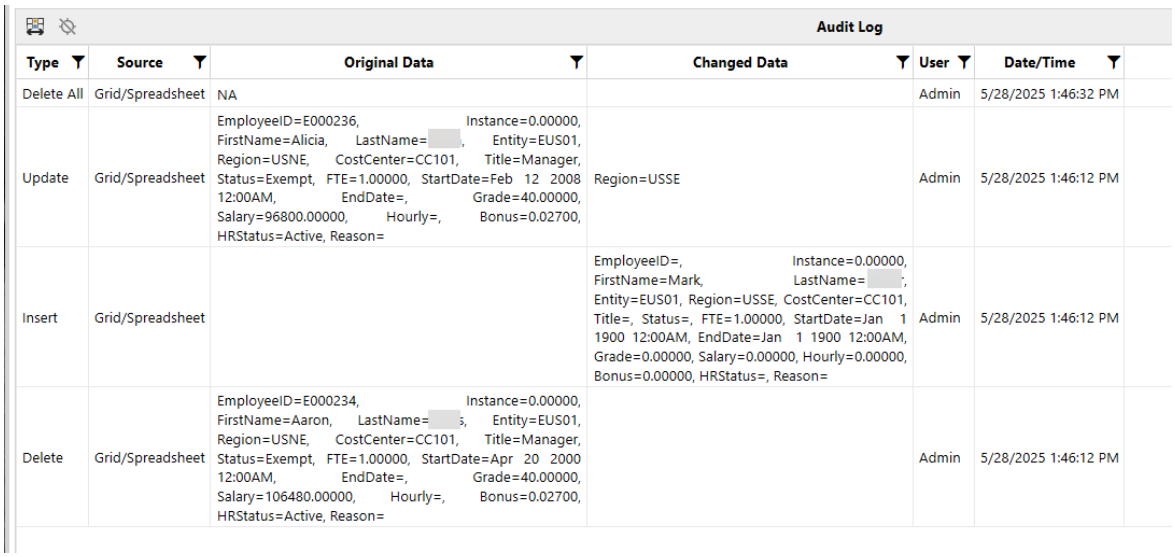
Audit Log

The Audit Log provides a detailed history of data changes in the Register and allows you to track who made them. It is read-only and can be viewed if you have security access. Only saved changes display in the Audit Log.

To view the Audit Log, follow the legend and corresponding instructions:



1. Hover your cursor over the **Register** menu.
2. In the drop-down menu, select **Import & Modify**.
3. Click the **Audit Log** button and a new page opens.



Audit Log

Type	Source	Original Data	Changed Data	User	Date/Time
Delete All	Grid/Spreadsheet	NA		Admin	5/28/2025 1:46:32 PM
Update	Grid/Spreadsheet	EmployeeID=E000236, Instance=0.00000, FirstName=Alicia, LastName=[redacted], Entity=EUS01, Region=USNE, CostCenter=CC101, Title=Manager, Status=Exempt, FTE=1.00000, StartDate=Feb 12 2008 12:00AM, EndDate=, Grade=40.00000, Salary=96800.00000, Hourly=, Bonus=0.02700, HRStatus=Active, Reason=	Region=USSE	Admin	5/28/2025 1:46:12 PM
Insert	Grid/Spreadsheet		EmployeeID=, Instance=0.00000, FirstName=Mark, LastName=[redacted], Entity=EUS01, Region=USSE, CostCenter=CC101, Title=, Status=, FTE=1.00000, StartDate=Jan 1 1900 12:00AM, EndDate=Jan 1 1900 12:00AM, Grade=0.00000, Salary=0.00000, Hourly=0.00000, Bonus=0.00000, HRStatus=, Reason=	Admin	5/28/2025 1:46:12 PM
Delete	Grid/Spreadsheet	EmployeeID=E000234, Instance=0.00000, FirstName=Aaron, LastName=[redacted], Entity=EUS01, Region=USNE, CostCenter=CC101, Title=Manager, Status=Exempt, FTE=1.00000, StartDate=Apr 20 2000 12:00AM, EndDate=, Grade=40.00000, Salary=106480.00000, Hourly=, Bonus=0.02700, HRStatus=Active, Reason=		Admin	5/28/2025 1:46:12 PM

The Audit Log displays the following columns:

- Type: Displays the type of change made such as Delete, Delete All, Update, Insert, Transfer or Import.

  > **NOTE:** The Audit Log history will remain when the Delete All action is used.

- Source: Displays the source of the change such as Grid, Spreadsheet, Append-File, Replace all-File, Replace all-connector or Append-connector.
- Original Data: Displays all column values of the original data.
  - If data is inserted, the Original Data cell is blank since there is no previous information.
  - If data is imported by a file or a connector, the Original Data cell displays NA.
  - If the Delete All action is used, the Original Data cell is blank since all data was removed.
  - If the Transfer feature is used, the Original Data cell is blank since a new row is added to the Register once a transfer is complete.
- Changed Data: Displays the specific changed data.
  - If the specific data is removed or the Delete All action is used, the Changed Data cell is blank since the data was removed.
  - If data is imported by a file or a connector, the Changed Data cell displays NA.
  - If data is inserted, the Changed Data cell displays all column values of the new data.
- User: Displays who made the change.
- Date/Time: Displays when the change was made.

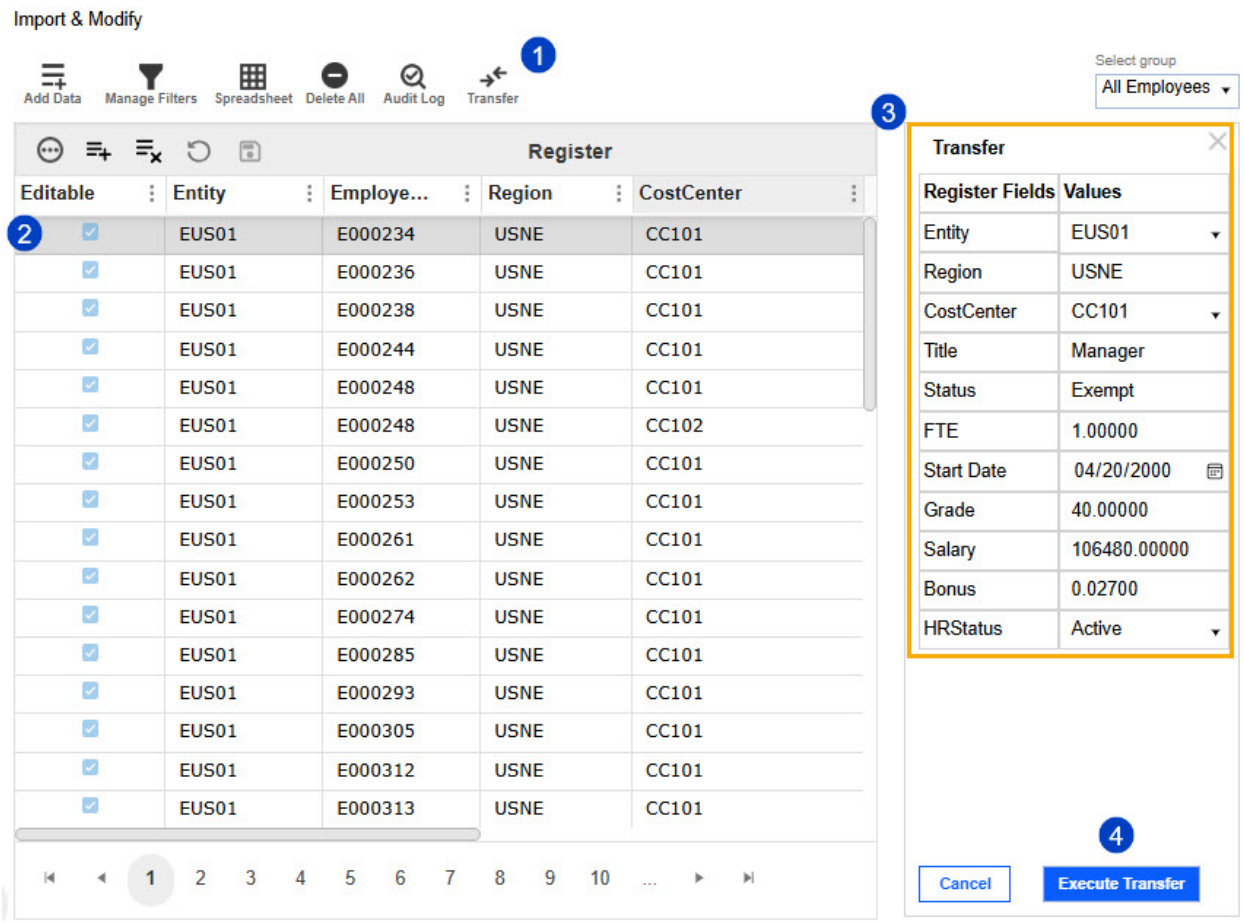
Transfer

The Transfer feature enables you to manage employee transfers between different parts of your business such as departments, entities or cost centers and execute the transfer in the Register. When you click the transfer button, a separate transfer pane opens for editing the employee Register information. Only users with the Manage Transfers action security permission can utilize the Transfer feature and view the transfer changes in the Register.

> **IMPORTANT:** The Transfer feature is only available in the Workforce Planning configuration.

Execute Transfer

To execute a transfer, follow the legend and corresponding instructions:



1. Click the **Transfer** button. The Transfer pane opens.
2. In the Register, select a row.
3. In the Transfer pane, update Register fields.

   > **NOTE:** You have access to Register fields that have the Allow Updates or Required column enabled in the Register Definition.

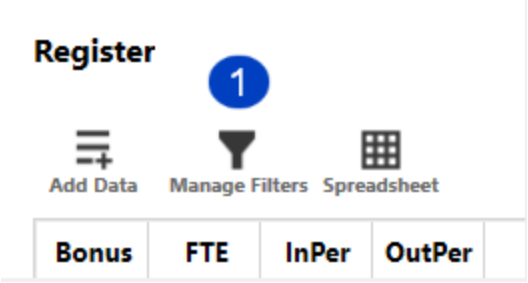
4. Click the **Execute Transfer** button. A new row is added to the bottom of the Register.

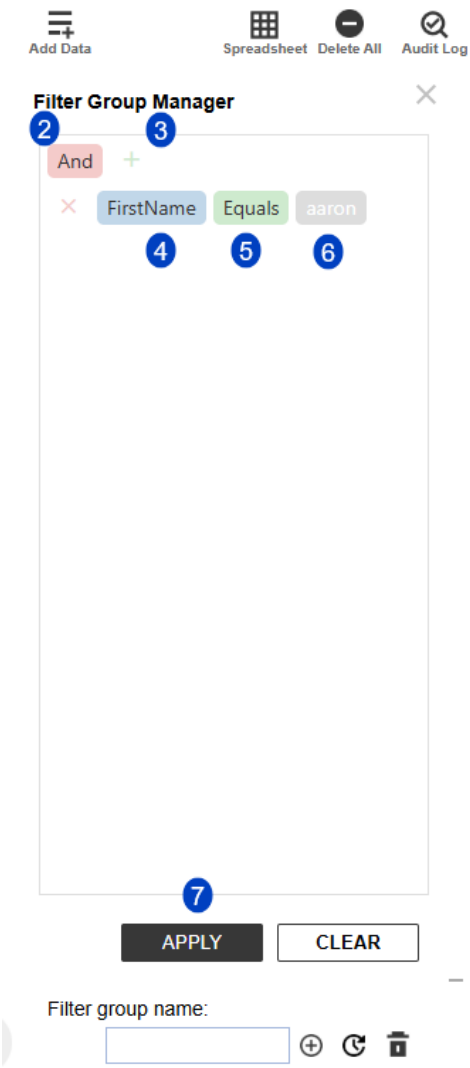
   > **NOTE:** The start date of the Transfer becomes the end date of the initial row.

Manage Filters

After a Register is saved, you can use the **Manage Filters** button to set specifications to populate distinct sets of information. You can select a variety of factors in the filter tool to create new conditions or groups.

To create a new filter, follow the legend and corresponding instructions:





1. Click the **Manage Filters** button and a new pane will open.
2. Click the **And** button and a drop-down menu will open to display options: And, Or.
3. Click the plus button to display options: Add Condition or Add Group.

> **NOTE:** For self-hosted environments, Click the drop-down arrow next to the plus icon to display the options.

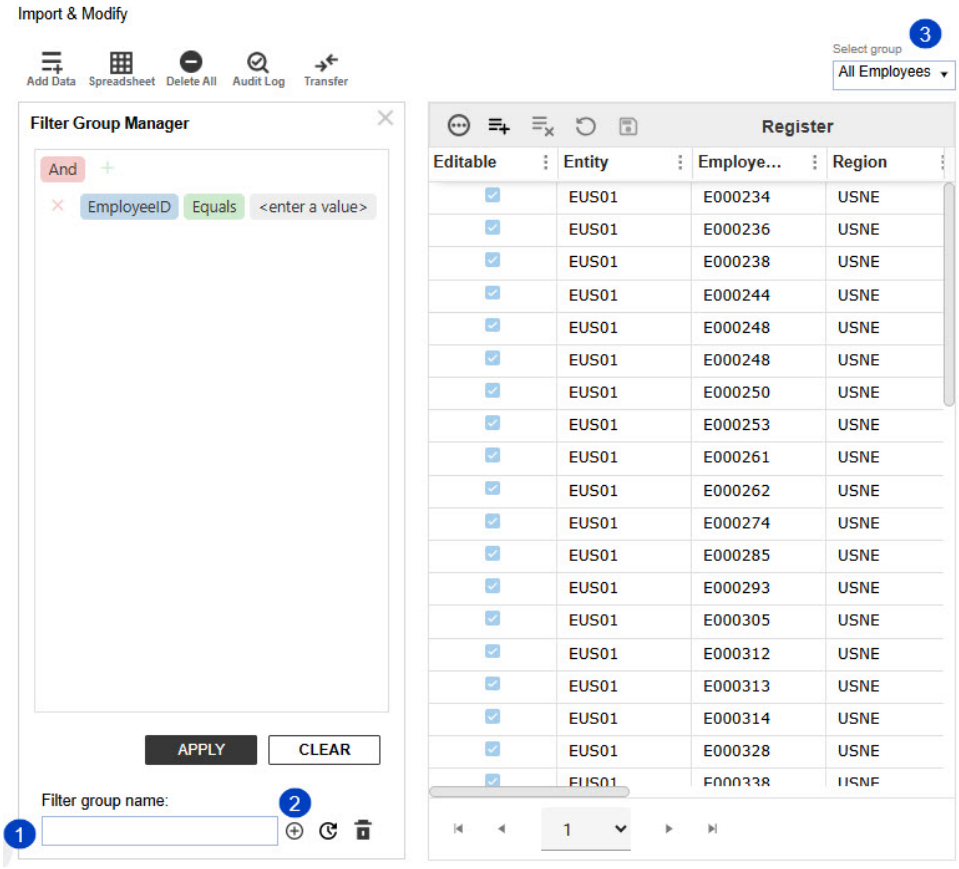
4. Click the first box to display a drop-down menu of your columns. Make a selection.
5. Click the second box to display a drop-down menu of operations. Make a selection.
6. Click the third box, and type in the value you want to filter for.
7. Click the **Apply** button.

After the filter has finished running, your Register view displays the filtered data as well as an updated row and page count.

Save a Filter

To reuse a filter, save it as a group and avoid recreating filters.

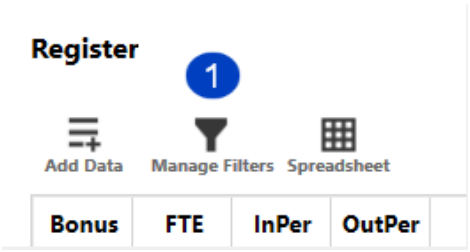
To save a filter as a group, follow the legend and corresponding instructions:

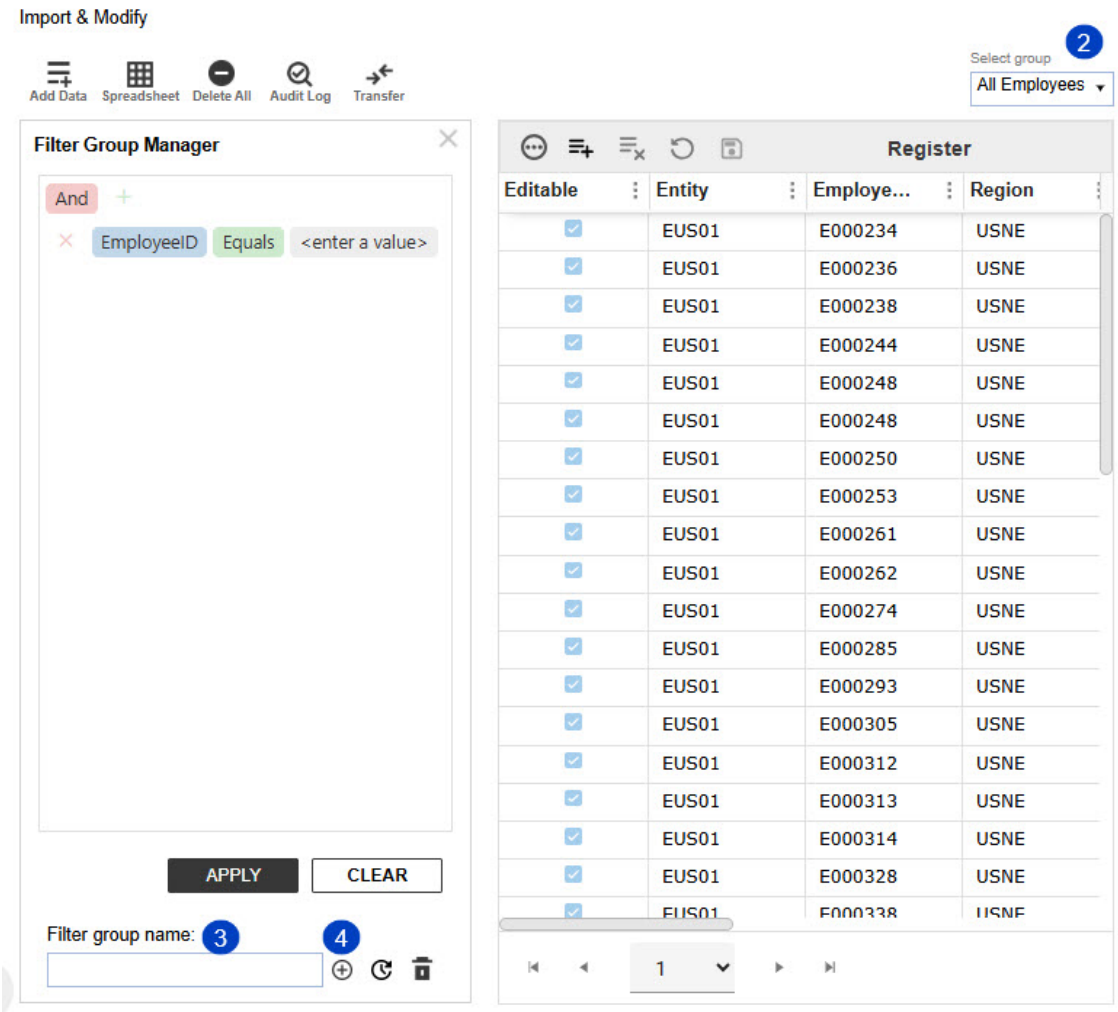


1. With a filter created and applied, locate the text box at the bottom of the Filter Group Manager pane and add a name.
2. Click the **Add/Copy Filter Group** button.
3. The filter displays in the Select group drop-down menu.

Copy a Filter

To copy a filter, follow the legend and corresponding instructions:

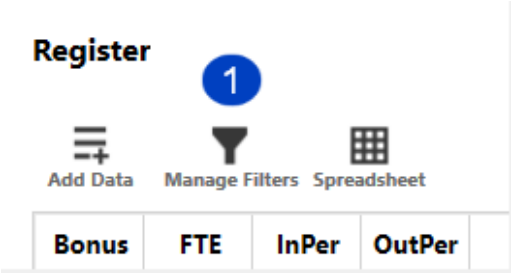

Register
1
Add Data
Manage Filters
Spreadsheet
Bonus
FTE
InPer
OutPer

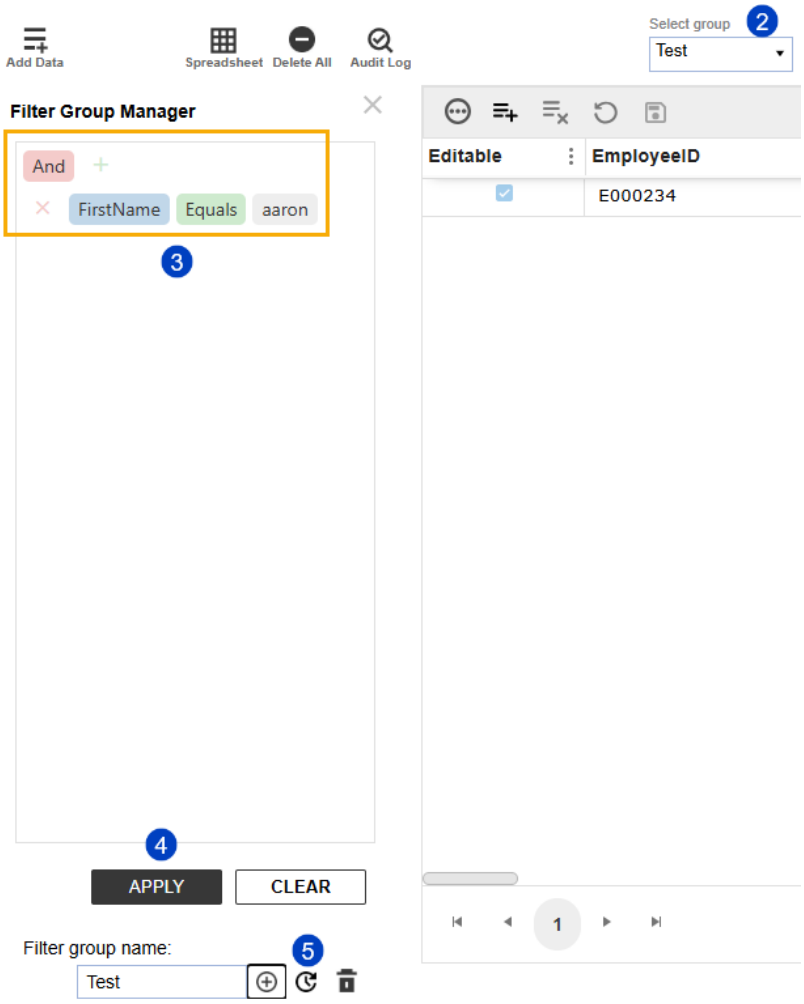

Import & Modify
Add Data
Spreadsheet
Delete All
Audit Log
Transfer
Select group
2
All Employees
Filter Group Manager
And
EmployeeID
Equals
<enter a value>
APPLY
CLEAR
Filter group name:
3
4
Register
Editable
Entity
Employe...
Region
EUS01 E000234 USNE
EUS01 E000236 USNE
EUS01 E000238 USNE
EUS01 E000244 USNE
EUS01 E000248 USNE
EUS01 E000248 USNE
EUS01 E000250 USNE
EUS01 E000253 USNE
EUS01 E000261 USNE
EUS01 E000262 USNE
EUS01 E000274 USNE
EUS01 E000285 USNE
EUS01 E000293 USNE
EUS01 E000305 USNE
EUS01 E000312 USNE
EUS01 E000313 USNE
EUS01 E000314 USNE
EUS01 E000328 USNE
1

1. Click the **Manage Filters** button.
2. Select a filter group from the drop-down.
3. Add a new Filter Group Name.
4. Click the **Add/Copy Filter Group** button.

Update a Filter

To update a filter, follow the legend and corresponding instructions:

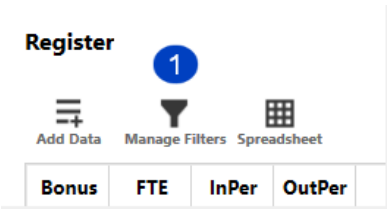


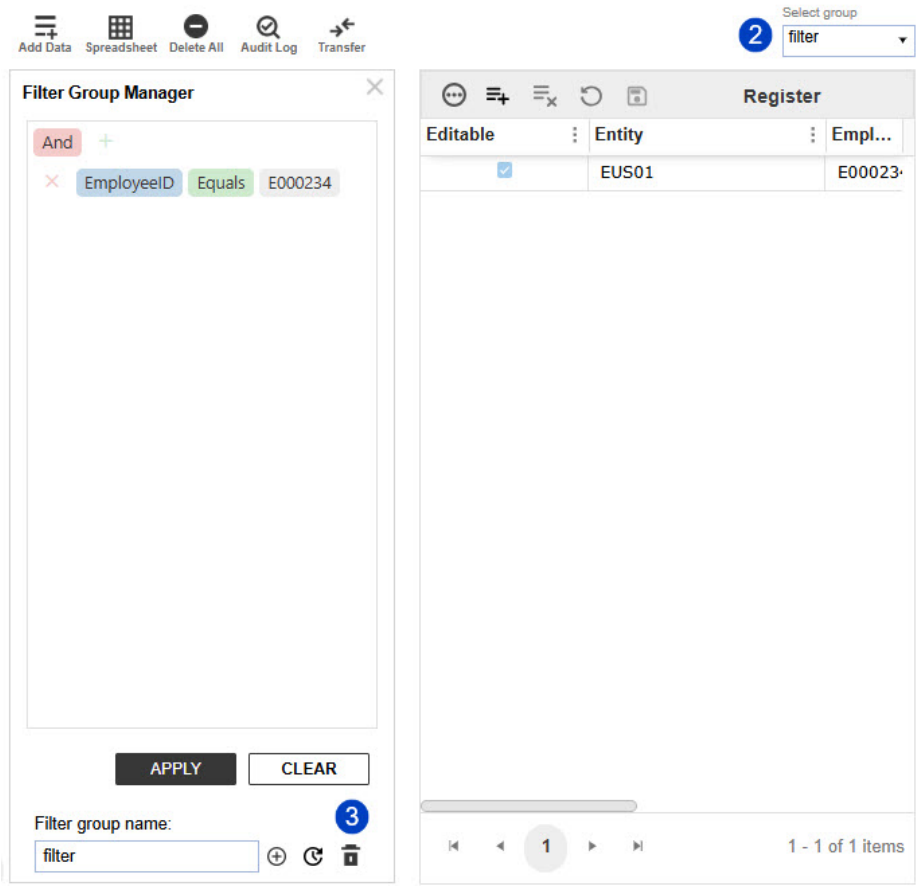


1. Click the **Manage Filters** button.
2. Select a filter group from the drop-down.
3. Update the filter criteria.
4. Click the **Apply** button.
5. Click the **Update Filter Group** button.

Delete a Filter

To delete a filter, follow the legend and corresponding instructions:





1. Click the **Manage Filters** button.
2. Select a filter group from the drop-down.
3. Click the **Delete Filter Group** button.

> **NOTE:** You cannot delete a filter group being used in a formula.

Calculate and Analyze

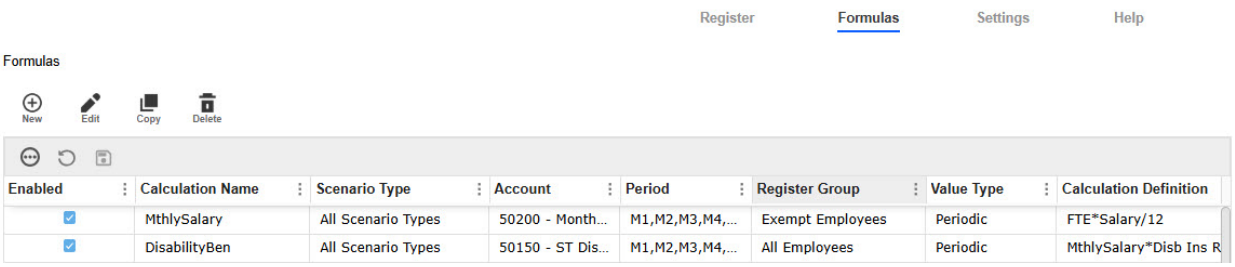
1. **Use Built-in Calculation Functions**: Most planning registers or management software have built-in calculation functions. The Line Item Modeling solution offers DateDIFF (Month), DateDIFF(Year), DateDIFF(Day), IIF, CurrentPeriod, AND, OR, ISNULL, RollingPeriod, and CurrentYear functions.
2. **Create Custom Formulas**: If the built-in functions are insufficient, you can create custom formulas. See Formulas. This enables you to combine data in unique ways to identify insights, specific to your needs.
3. **Apply Calculations to Data Groups**: You can apply these calculations to specific groups of data created by the filter builder. For example, you might calculate the average skill level of employees in a certain department or the total hours worked by employees on a specific project.

Analyze Data in the Planning Register

To narrow your analysis, you can filter and sort your data by using the Manage Filters button. See Manage Filters. For example, you might filter to only show data from a certain time period or sort data by highest to lowest values. You can also add more Register columns to a plan for reference. See Plan Data.

Formulas

Formulas in OneStream's Line Item Modeling solution are used to leverage Global Drivers, Lookup Drivers, and Cube Drivers to create meaningful and accurate calculations and develop driver-based operational plans. They can be applied to a wide range of data fields, from basic arithmetic operations to complex business calculations.



Enabled	Calculation Name	Scenario Type	Account	Period	Register Group	Value Type	Calculation Definition
☑	MthlySalary	All Scenario Types	50200 - Month...	M1,M2,M3,M4,...	Exempt Employees	Periodic	FTE*Salary/12
☑	DisabilityBen	All Scenario Types	50150 - ST Dis...	M1,M2,M3,M4,...	All Employees	Periodic	MthlySalary*Disb Ins R

Workforce Planning Use Case

This Use Case demonstrates the following situation:

- **Scenario:** Build a set of formulas to determine if the federal tax amount still applies for an employee in a specific month.
- **Role:** Implementer, Administrator
- **Benefits:** Formulas can be individually created and the accounts applied to the formulas can be used as dependencies or building blocks for more advanced formulas to calculate more complex data.

See Workforce Planning FUTA Formula Use Case for more information.

Global Drivers

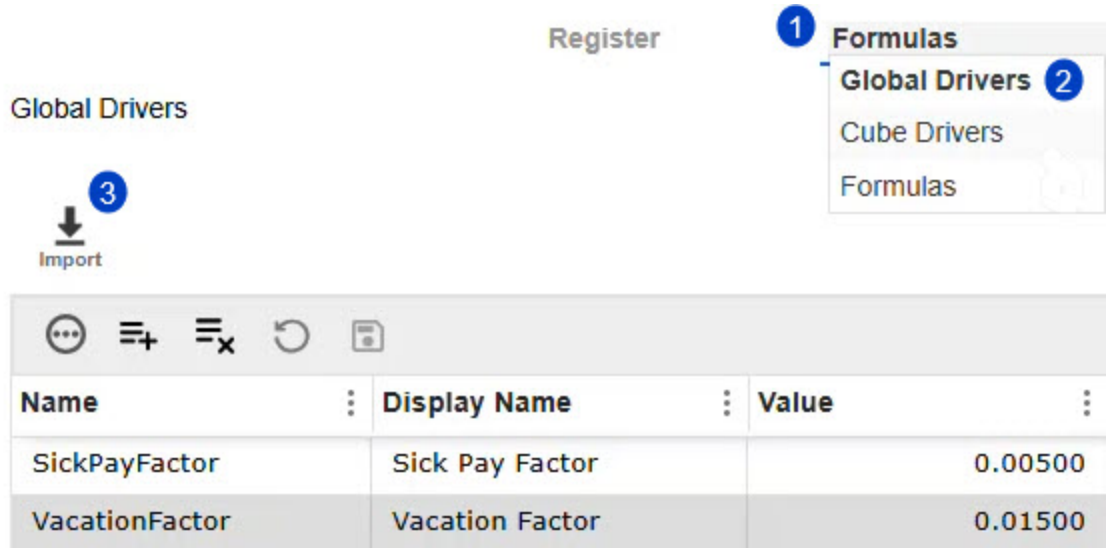
Global Drivers in OneStream's Line Item Modeling solution are key variables or factors that can be used in formulas. These drivers can be financial indicators that are common concepts across organizations, for example, merit, bonus, tax limits and percentages, benefit amounts, and vacation days. Global Drivers can be used when you have a static value that can be used across all time or dimensions (one driver with one value).

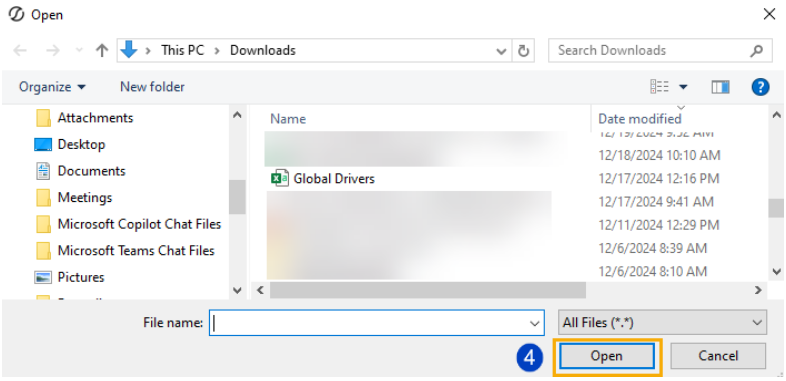
By using Global Drivers, organizations can align their planning processes, improve accuracy, and enhance the comparability of results across different units or departments. It is a powerful tool for strategic planning, budgeting, and forecasting, helping decision-makers understand the impact of various factors on the company's performance.

> **IMPORTANT:** Any attribute named in the solution, such as Register Field Names, Accounts, Global Drivers, Cube Drivers, Lookup Drivers and Formula Names, must be unique from each other.

Import Global Drivers

To import a bulk file of Global Drivers, follow the legend and corresponding instructions:





1. Hover your cursor over the **Formulas** menu.
2. In the drop-down menu, select **Global Drivers**.
3. Click the **Import** button.
4. Select a file in the dialog box and then click the **Open** button.

> **NOTE:** You cannot save if there is a duplicated Name or Display Name.

To update or add to the current Global Drivers, you can import an updated .csv file or use the Global Drivers grid controls. In the Global Drivers grid, you can add, remove, cancel all changes since last save, and save Global Drivers.

- To Insert, click the  button.
- To remove, click the button.
- To cancel all changes prior to saving, click the  button.
- To save, click the  button.

> **NOTE:** Global Drivers that are referenced in a saved formula cannot be removed.

When you import a new .csv file, that file is compared with the current list of Global Drivers. Drivers that are not used in a saved formula are removed if they are not included in the imported file. Drivers that are used in saved formula are retained, even if they are not included in the imported file.

> **NOTE:** If you import a .csv file with numbers used at the beginning of a column name or spaces used in a column name, the application will automatically add the prefix Col_ to ensure the import is usable and compatible with the solution.

Cube Drivers

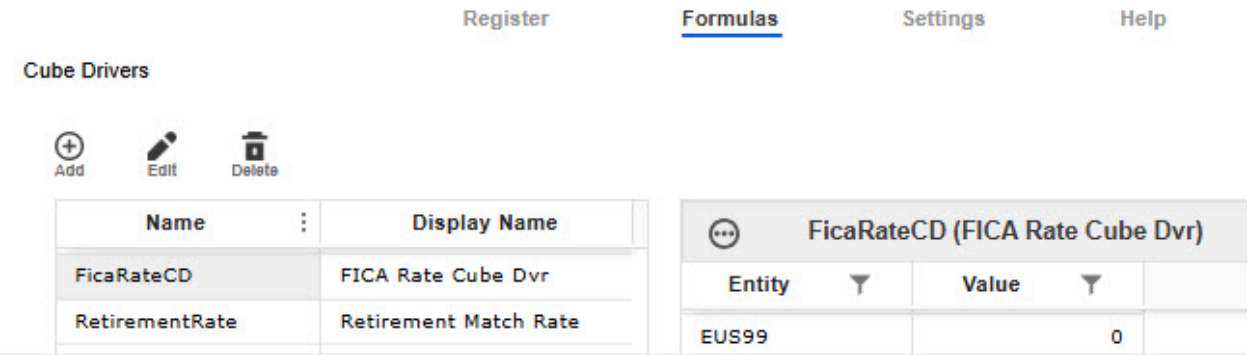
Cube Drivers take the dimensionality of cubes used across OneStream and enables you to utilize their information for formula building and plan data creation within the Line Item Modeling solution. You can connect driver values from a Cube View to the solution by adding a Cube Driver. The Cube Driver is dynamic and changes based on any Cube View changes. When creating a Cube Driver, you can select the Variable option for Time Frequency to track values across multiple months and years to view all potential results from different time periods or you can select Fixed which will take the value of the specific month and year the driver is stored in.

> **NOTE:** A Cube Driver can be utilized across multiple years in the plan calculation, however, the Preview table of the Cube Driver only displays values for a single year.

On the Cube Drivers page, Cube Driver Names and Display Names are stored in the table on the left and the associated cube driver values are presented in the table on the right. When you select a Cube Driver from the table on the left, the cube driver values will display in the table on the right. A Cube Driver may be tied to multiple entities, each with unique values.

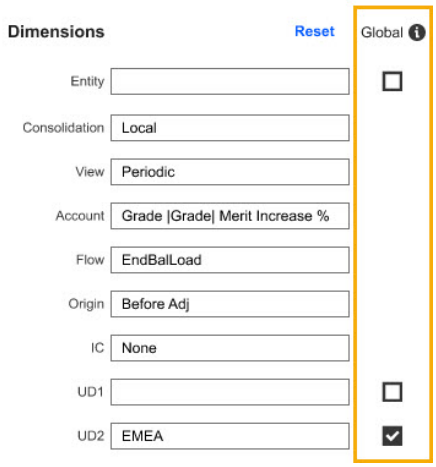
> **NOTE:** When you import a configuration, Cube Driver values won't display in the preview table until you add Register data and preview the new data. Your Cube Driver is trying to compare values that are in the Register against values that are in a Cube so data needs to exist in the Register for that comparison to happen.

> **IMPORTANT:** Any attribute named in the solution, such as Register Field Names, Accounts, Global Drivers, Cube Drivers and Formula Names, must be unique from each other.



When adding or editing a cube driver, you can use the Global checkbox to control whether a cube driver applies universally or only to specific dimensions. When selected, the driver is applied to all Register records, and the corresponding dimension column is removed from the preview. If left unchecked, the driver applies only to the selected dimension, and those columns remain visible in the preview. This setting ensures flexibility in managing calculations and configurations. Global checkboxes only display if a Member Definition is assigned in the Register Definition for a given Dimension.

> **NOTE:** Global selections are preserved when exporting configuration files.



Add Cube Drivers

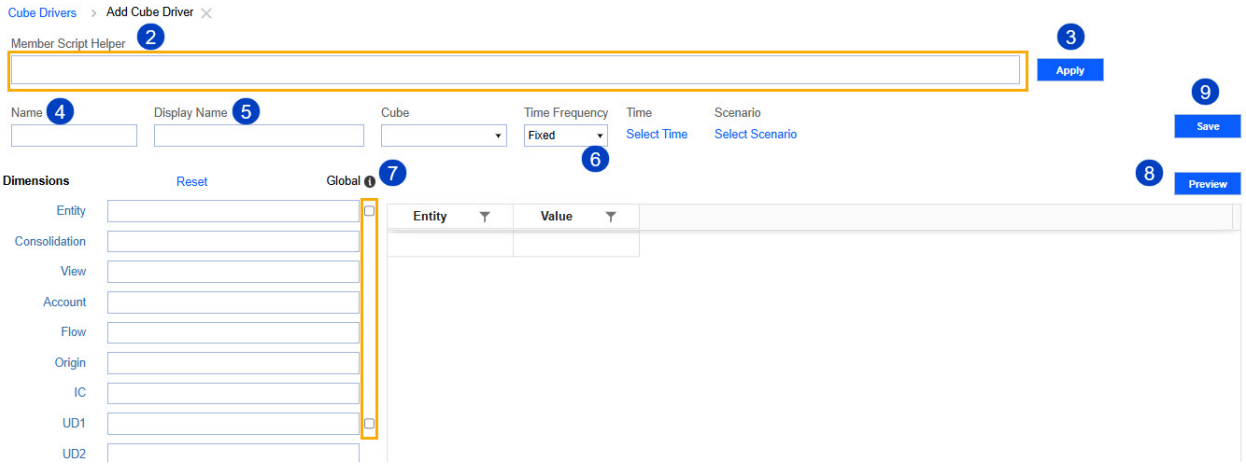
There are two methods for adding Cube Drivers: copying and pasting the member script information from a cube view POV within the OneStream application or manually selecting all criteria.

You also can apply the column name of a Register field in the Account or UD dimension for a cube driver by typing the column name in between pipes. The pipe substitution variable using a Register column name dynamically injects the values from that column and will match values stored in the cube to generate a preview for those intersections. This allows you to leverage alternate Register fields that don't have a member definition assigned.

> **Example:** Input the Register column name Grade Level in the Account dimension as **|GradeLevel|**. Do not include spaces.

To add a Cube Driver by using the Member Script Helper, follow the legend and corresponding instructions:

> **NOTE:** When you use a Top level cube in a member script, the solution finds the base cube level of which the Entity and the dimension resides in and will preview the data from that base cube.



1. On the Cube Drivers page, click the **Add** button.
2. Paste the member script from your cube view in the **Member Script Helper** field.

> **NOTE:** If a dimension is blank, all the values for that dimension will dynamically be pulled based on member definition. If you do not populate Entity, all Entity values from the Register are compared to the cube Entities and data will preview based on those intersections available. You can also leave a UD blank and if there is data stored at the UD level, it will retrieve the same way as entities. Leaving a field blank relies on there being a member definition to use the data from the Register to dynamically return values based on the intersection of where the data is stored in the cube.

3. Click the **Apply** button.

> **TIP:** If you need to update your dimensions, you can click on the **Reset** button to clear all your selections and the preview.

> **NOTE:** If there are multiple cubes referenced in a UD or Flow Register column in the Register Definition, only the dimension correlating with the cube selection is utilized.

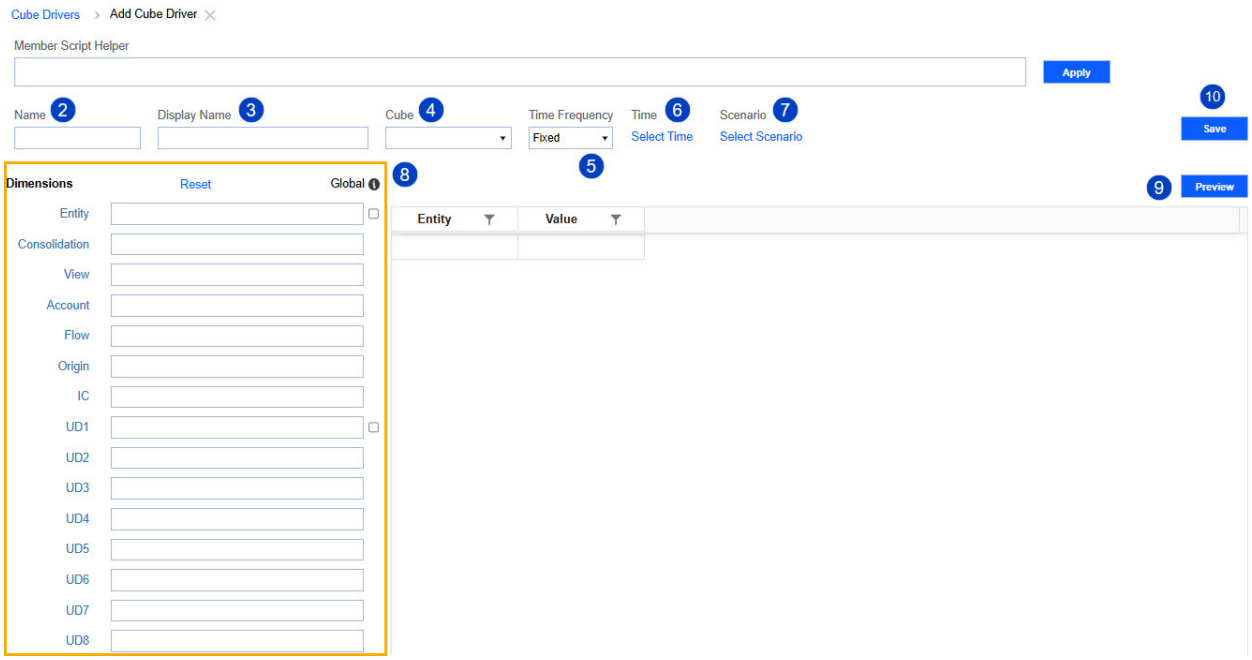
4. Enter a Name.
5. Enter a Display Name.
6. Select a Time Frequency. Select **Fixed** for a single value based on the time selection. Select **Variable** for the values across the time selection.
7. Select a Global checkbox to control whether a cube driver applies universally or only to that specific dimension.
8. Click the **Preview** button.

> **NOTE:** If there is an invalid data intersection, a message box displays and you will need to update your selections on the **Add Cube Driver** page.

9. Click the **Save** button.

> **IMPORTANT:** The **Save** button displays once the preview table is populated successfully with no invalid intersections.

To add a Cube Driver without using the Member Script Helper, follow the legend and corresponding instructions:



1. On the Cube Drivers page, click the **Add** button.
2. Enter a Name.
3. Enter a Display Name.
4. From the Cube drop-down menu, select a Cube.
5. Select a Time Frequency. Select **Fixed** for a single value based on the time selection. Select **Variable** for the values across the time selection.
6. Select a Time.
7. Select a Scenario.
8. Select the member filters for your dimensions by clicking on each dimension or entering values in the field. Select a Global checkbox to control whether a cube driver applies universally or only to that specific dimension.

If no selection is made, all the values for that dimension will dynamically be pulled based on member definition. If you do not populate Entity, all Entity values from the Register are compared to the cube Entities and data will preview based on those intersections available. You can also leave a UD blank and if there is data stored at the UD level, it will retrieve the same way as entities. Leaving a field blank relies on there being a member definition to use the data from the Register to dynamically return values based on the intersection of where the data is stored in the cube.

> **TIP:** If you need to update your dimensions, you can click on the **Reset** button to clear all your selections and the preview.

> **NOTE:** If there are multiple cubes referenced in a UD or Flow Register column in the register definition, only the dimension correlating with the cube selection is utilized.

9. Click the **Preview** button and the table will populate the corresponding member definitions and values.

> **NOTE:** If there is an invalid intersection of data, a message box displays and you will need to update your selections on the **Add Cube Driver** page.

10. Click the **Save** button.

> **IMPORTANT:** The **Save** button displays once the preview table is populated successfully with no invalid intersections.

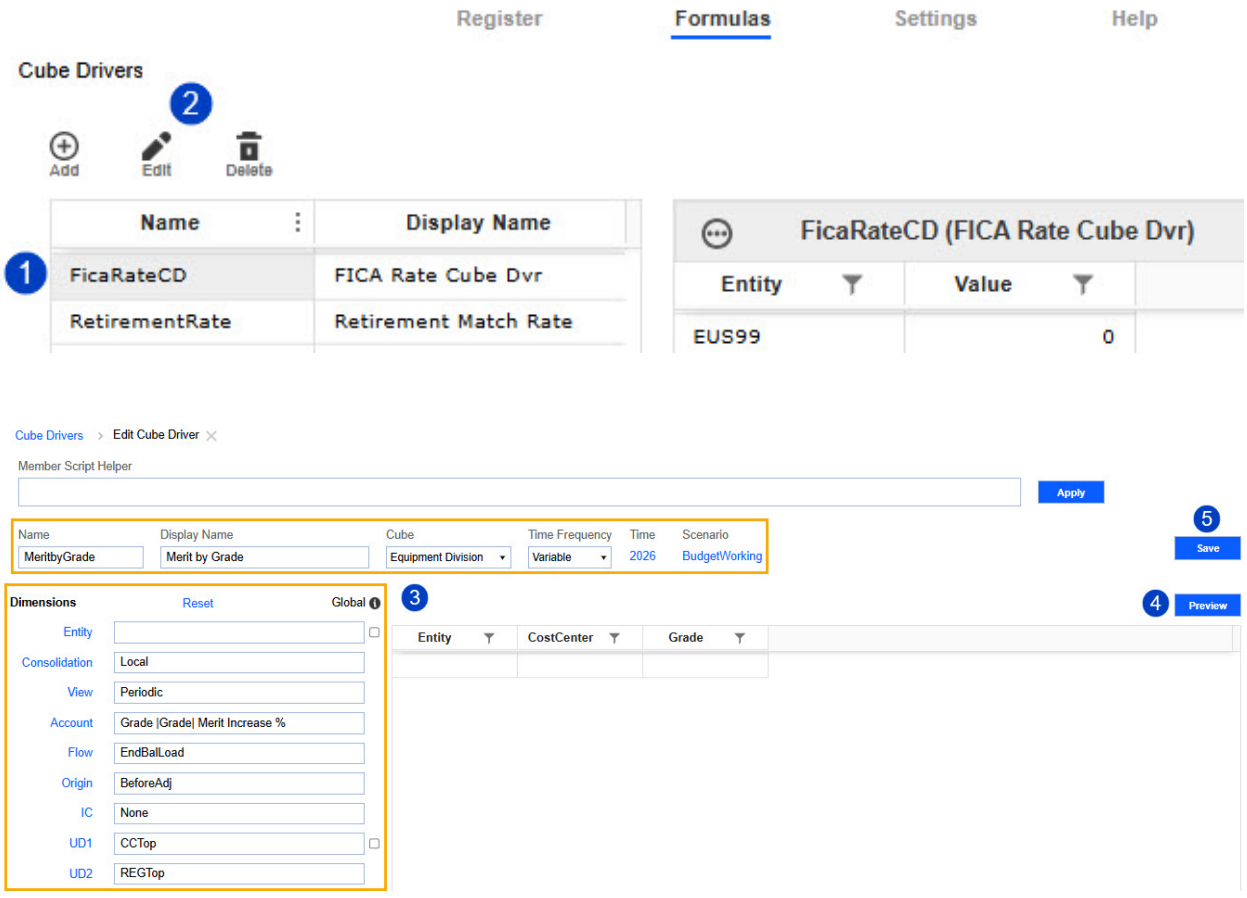
The values will display in the Cube Drivers table.

> **NOTE:** You cannot save if there is a duplicated Name or Display Name.

> **NOTE:** Ensure the entities used in the Register have the Member Property setting of InUse set to True in order for the Cube Driver dashboard to preview results. This can be configured in the Entity Dimensions area of the Application tab.

Edit Cube Drivers

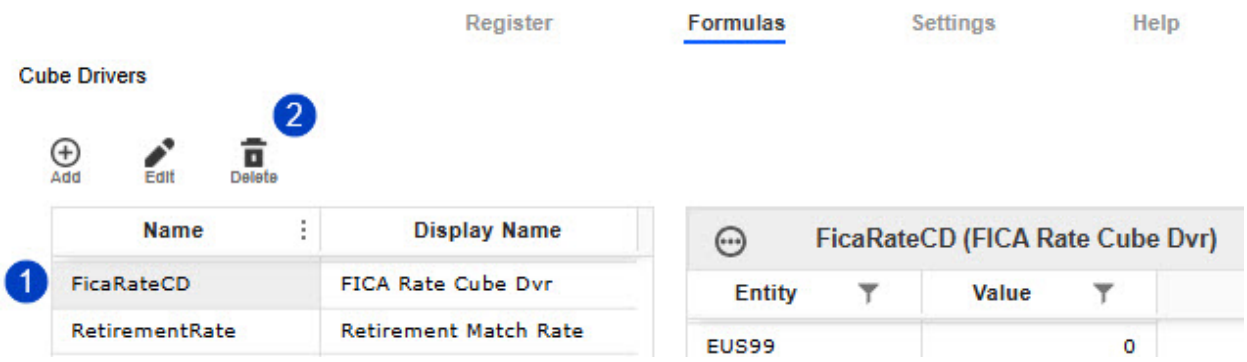
To edit a Cube Driver, follow the legend and corresponding instructions:



1. On the Cube Drivers page, select a Cube Driver from the table.
2. Click the **Edit** button.
3. Update all relevant criteria.
4. Click the **Preview** button.
5. Click the **Save** button.

Delete Cube Drivers

To delete a Cube Driver, follow the legend and corresponding instructions:



1. On the Cube Drivers page, select a Cube Driver from the table.
2. Click the **Delete** button.

> **NOTE:** You cannot delete a cube driver that is being used in a formula.

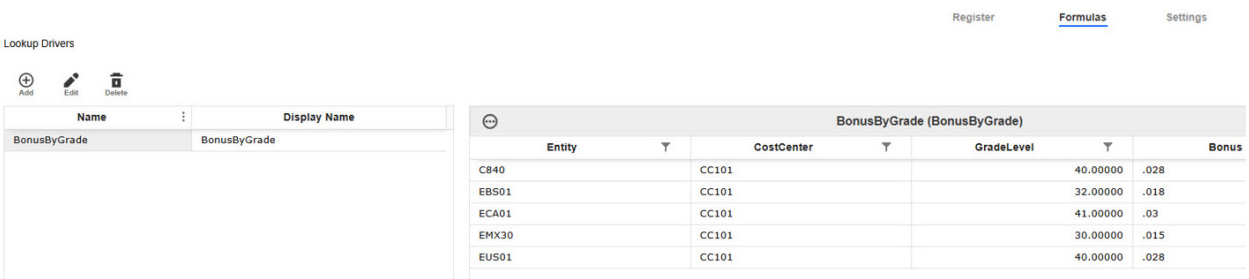
Lookup Drivers

Lookup Drivers enable you to utilize values stored in XFC tables (any table with the prefix XFC_) within OneStream for formula and plan creation. Users often store ad hoc data in XFC tables to avoid unnecessary data inclusion in a cube or the Register. Lookup Drivers provide the ability to match column names in the Register with the column names in the Lookup table applied. The data points that match between the Register data and Lookup table within those columns provide a preview based on the return values drop-down selection that is available via the Lookup table.

If more than one Register field is populated in the Lookup Driver column, the values in the preview will concatenate the values of the Register Fields and display the Return Value based on those combinations.

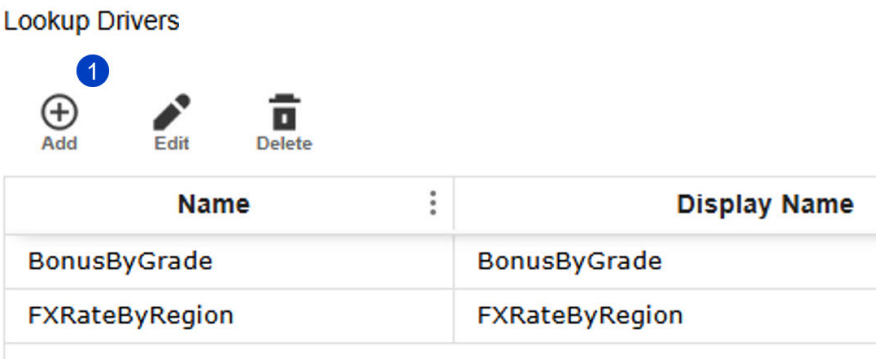
> **NOTE:** When you import a configuration, Lookup Driver values won't display in the preview table until you add Register data and preview the new data. Your Lookup Driver is trying to compare values that are in the Register against values that are in a Lookup table so data needs to exist in the Register for that comparison to happen.

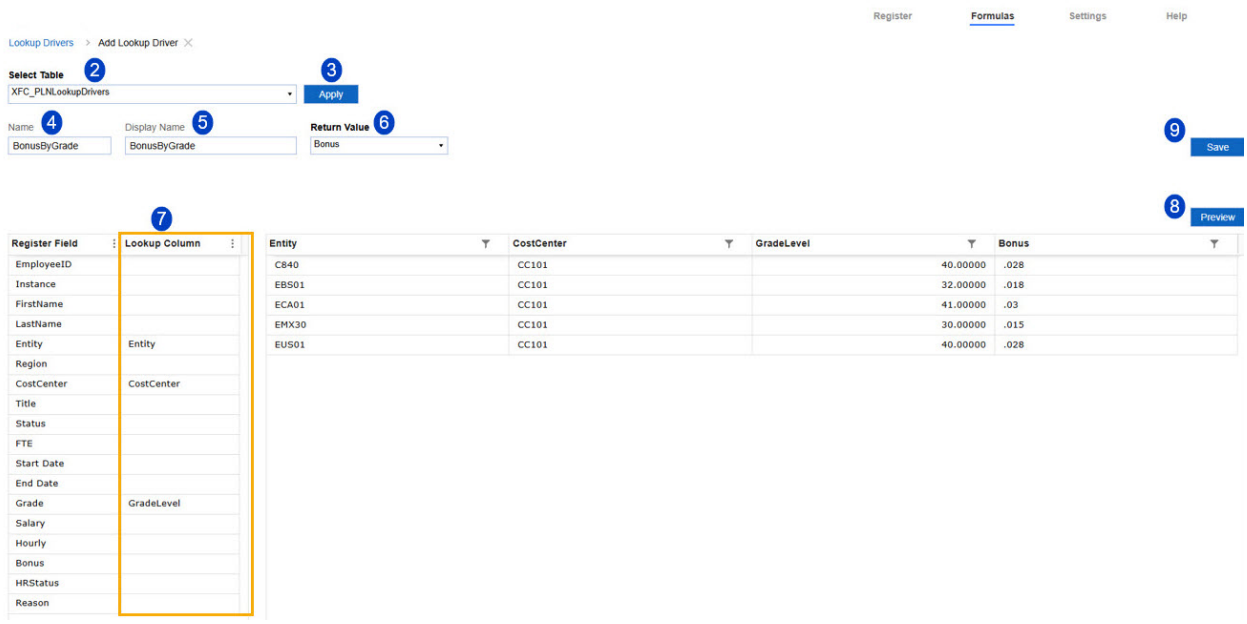
> **IMPORTANT:** Any attribute named in the solution, such as Register Field Names, Accounts, Global Drivers, Cube Drivers, Lookup Drivers and Formula Names, must be unique from each other.



Add Lookup Drivers

To add a Lookup Driver, follow the legend and corresponding instructions:





1. On the Lookup Driver page, click the **Add** button.
2. In the Select Table drop-down menu, select an XFC table.

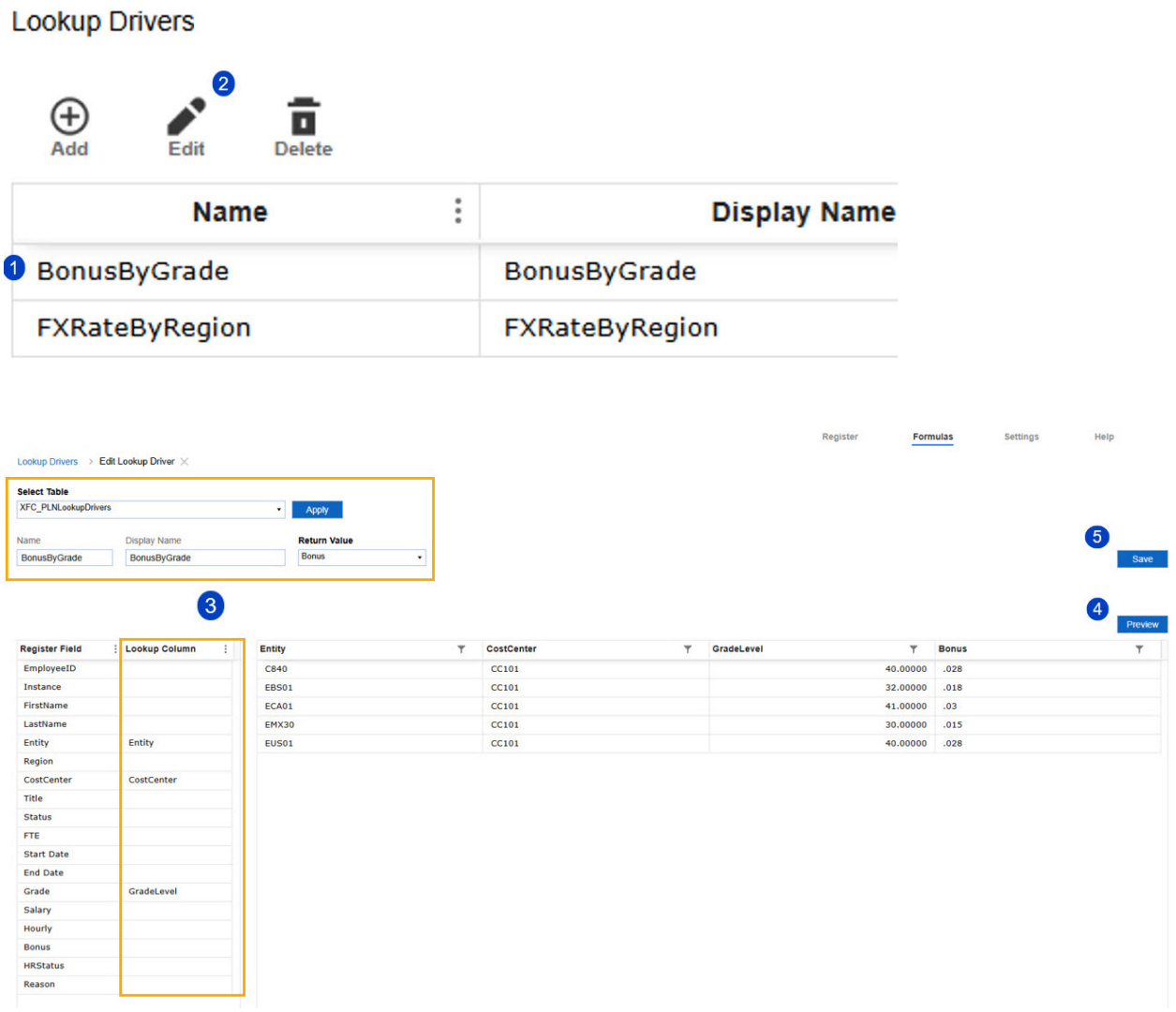
   > **NOTE:** Only tables with the prefix XFC_ can be selected.

3. Click the **Apply** button.
4. Enter a name.
5. Enter a display name.
6. In the Return Value drop-down menu, select the column with the driver value you want to return.
7. In the Lookup Column drop-down menus for each Register Field, select a column to map the Register field value to the Lookup column value. Values must match to return a result.
8. Click the **Preview** button. The Preview table on the right will populate with data.
9. Click the **Save** button. Once saved, the Lookup Driver displays in the Lookup Drivers page.

   > **IMPORTANT:** The **Save** button displays once the Preview table is populated successfully.

Edit Lookup Drivers

To edit a Lookup Driver, follow the legend and corresponding instructions:

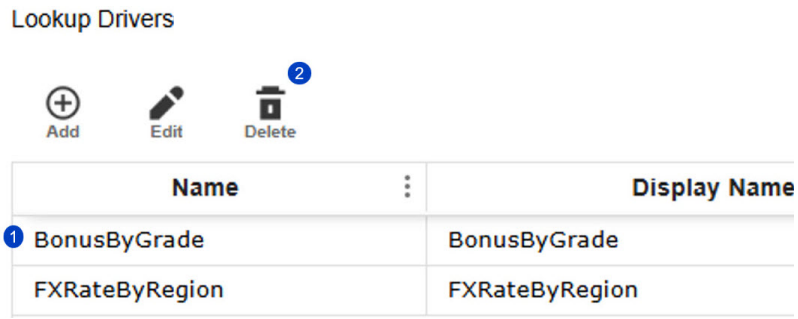


1. On the Lookup Driver page, select a Lookup Driver.
2. Click the **Edit** button.
3. Update all relevant criteria.
4. Click the **Preview** button.
5. Click the **Save** button.

> **IMPORTANT:** The **Save** button displays once the Preview table is populated successfully.

Delete Lookup Drivers

To delete a Lookup Driver, follow the legend and corresponding instructions:



1. On the Lookup Driver page, select a Lookup Driver.
2. Click the **Delete** button.

> **NOTE:** You cannot delete a Lookup Driver that is being used in a formula.

Formula Wizard

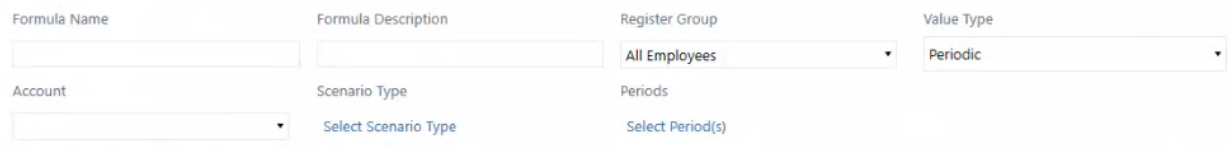
The Formula Wizard provides a guided and intuitive experience for formula creation. It offers selectable criteria to help generate specific formulas based on the required data. You can only select criteria to which you have security access.

> **IMPORTANT:** Any attribute named in the solution, such as Register Field Names, Accounts, Global Drivers, Cube Drivers, Lookup Drivers and Formula Names, must be unique from each other.

There is a wide variety of selections and functions available in the Formula Wizard. Review the following sections to guide you through the process:

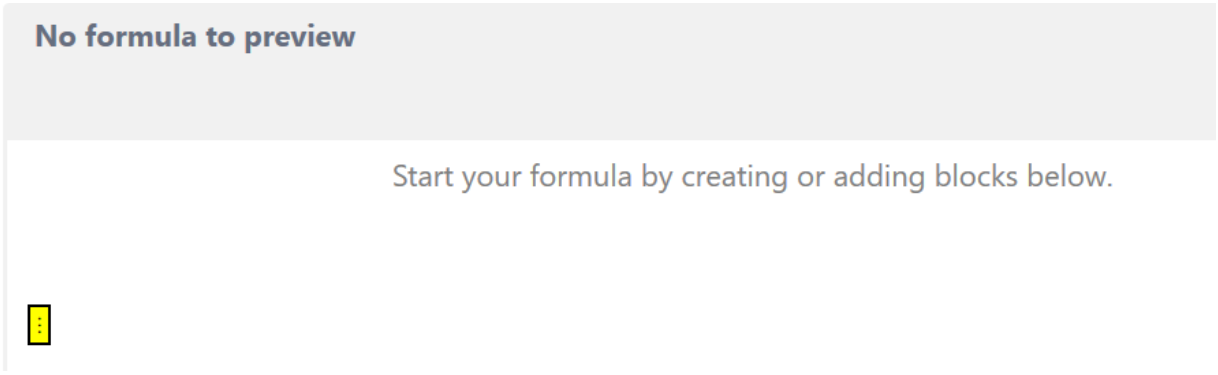
- **Formula Name**: This is a required field that can have a maximum of 100 characters. As a best practice, create a unique formula name and avoid using the Account Name as the Formula Name.
- **Formula Description**: This optional field enables you to add a description for your Formula Name. It is recommended that you use 100 characters or less.
- **Register Group**: The Register Group defaults to All Employees for the Workforce Planning configuration or All Records for the Fixed Term Planning and Duration Based Planning configurations. If the formula only applies to a filtered data set, select the drop-down menu to apply a saved Register filter to pare down the calculated data set and remove unnecessary data points.
- **Value Type**: Select either **Year-To-Date (YTD)** to calculate for the cumulative value or **Periodic** to calculate the periodic value.
- **Account**: Informs the calculation engine where to place the result amount for a formula when calculating a plan.
- **Scenario Type**: Informs the calculation engine which formulas apply to a plan. If the formula applies to all scenarios, select **All Scenarios**. For example, If the formula only applies to the budget scenario type, select the budget scenario type. See Plan Data.
- **Periods**: Apply the months you want the formula to be calculated in. You can select all 12 months, a single month, or any combination of months depending on your planning needs. You can also select the time profile.

> **TIP:** For a detailed list of formulas, see Appendix A.



The gray area below your selectable criteria is the Formula Preview. When creating a new formula, this area will display No formula to preview. Once you start building your formula, this area will dynamically populate a concatenated view of your formula for easier viewing. If the formula is too long to fit in the space, the formula text will wrap in format and you can scroll down to view the full formula.

Below the gray Formula Preview is the Formula Block area where you are prompted to add blocks. The yellow highlighted block is automatically selected so you can freely add blocks and operations to your formula.



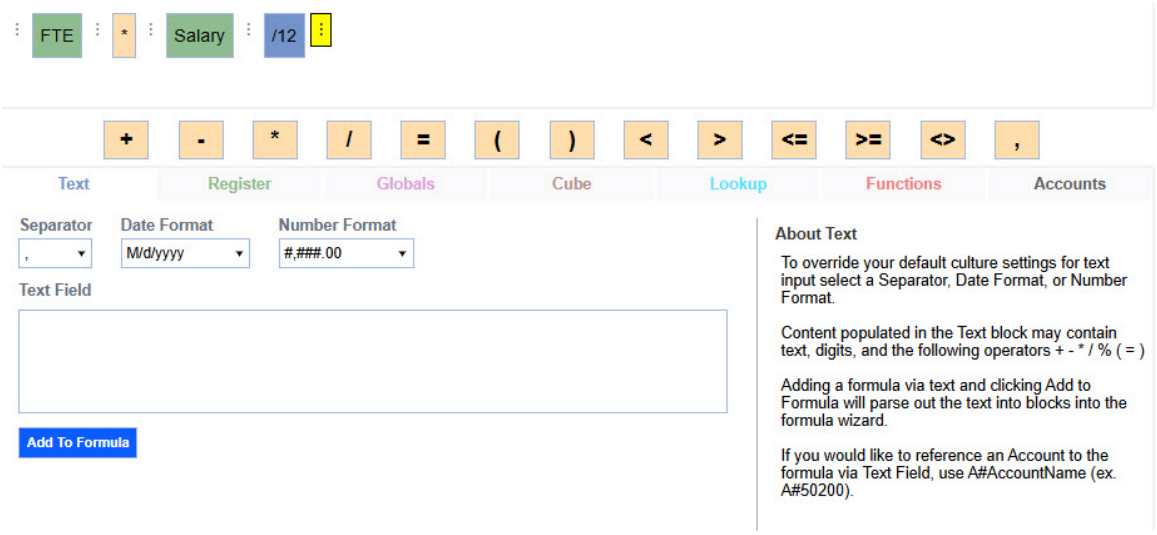
There is an About section available for each formula block type that gives a brief explanation of how each block functions.The building block options are:

- **Operators**: These are the mathematical symbols above each of the building block options, like the equal sign. Click the operator you need, and it will display in the Formula Block area.

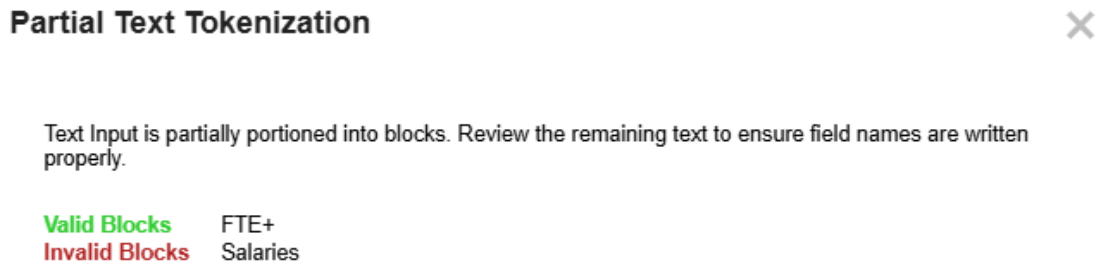
- **Text**: In the Text Field, you can type in numbers or certain operators listed in the About Text description. You can also type in formulas or parts of formulas such as global drivers or functions to be converted into blocks.

  Before you input text, you can use the Separator, Date Format and Number Format drop-down menus to override your default culture settings. This is helpful if you are trying to copy in formulas that use a different culture setting.

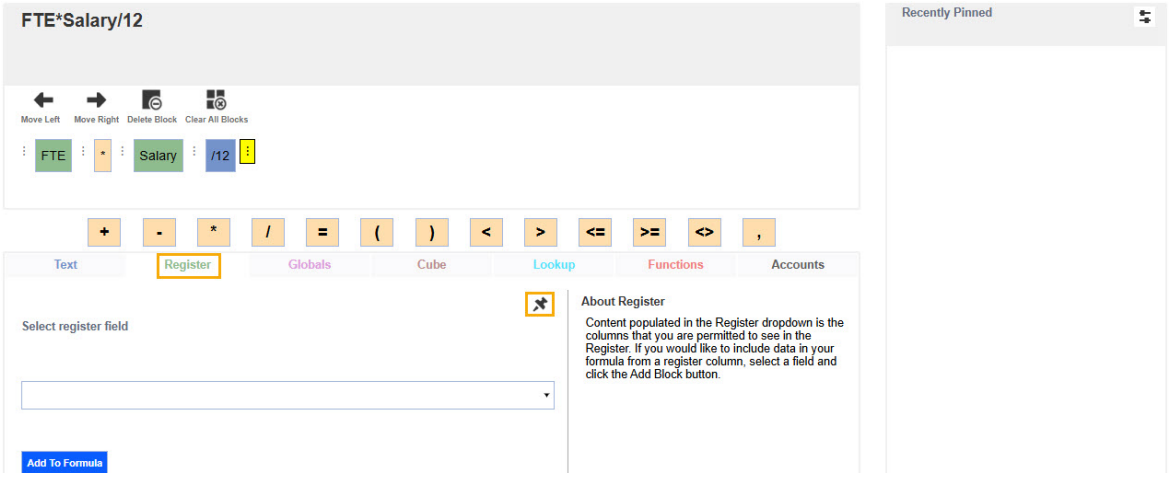
  > **NOTE:** The default value of the Separator, Date Format, and Number Format drop-down menus is based on your culture settings.



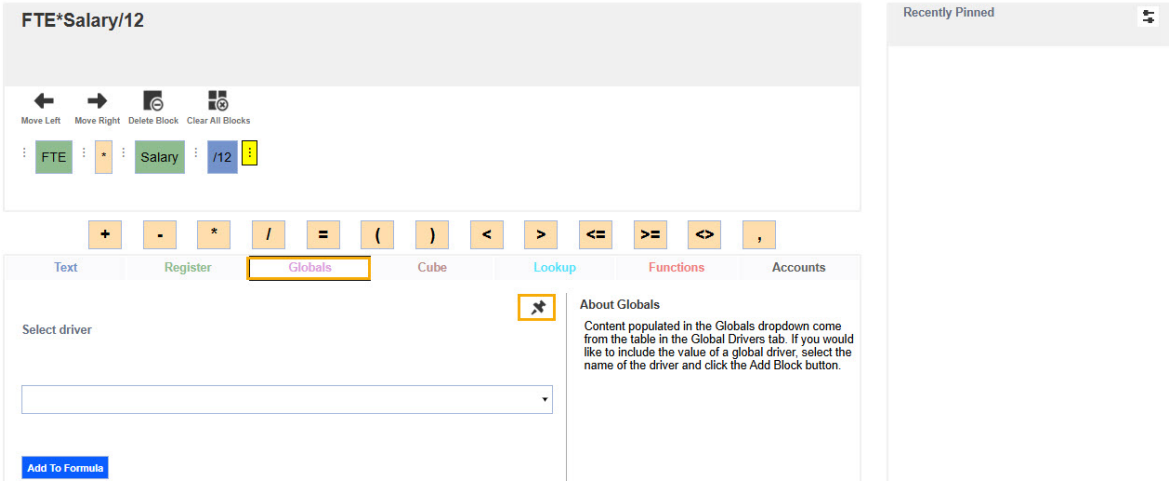
  > **IMPORTANT:** When you type in a formula, each block within that typed formula has to match the specific formula block naming or a validation will display. For example, if you type in the formula, FTE+Salaries, but the Register column name is Salary, the formula will not populate until all blocks are valid.



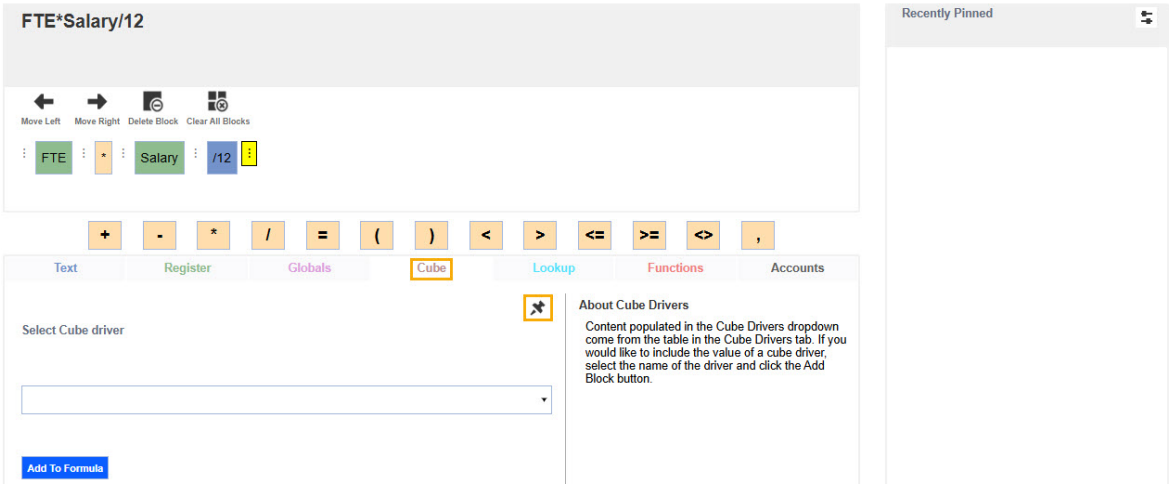
- **Register**: The Register tab enables you to select from any of the columns you have permission to view. When you add a named block, the value tied to the Register field is used in the formula creation. You can also pin all the fields available in the Register tab by clicking the **Pin** button, and they will display in the Recently Pinned pane for easy reuse when building your formulas.



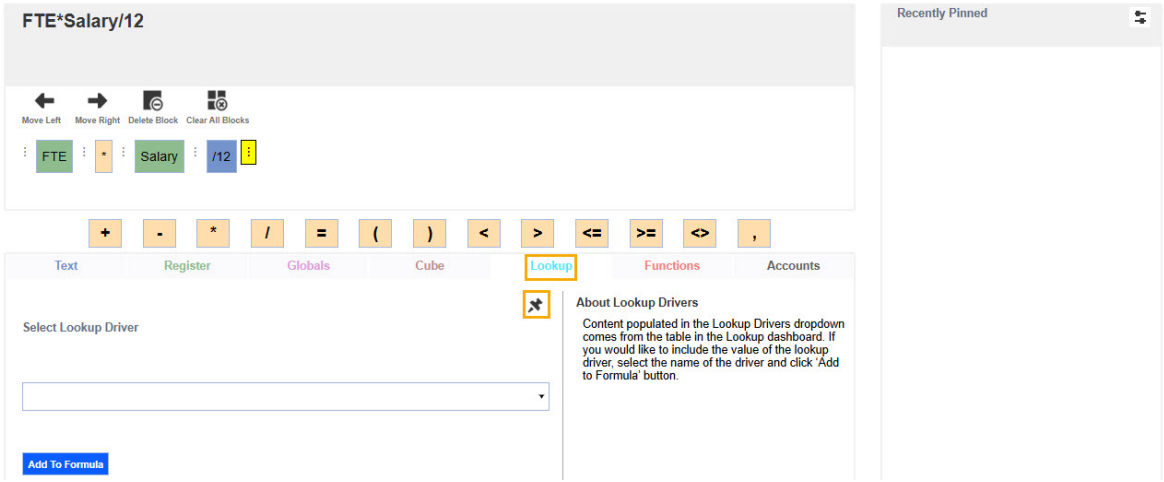
- **Globals**: The Globals tab enables you to select from any of the Global Drivers that were previously imported. When you add a named block, the value tied to the Global Driver is used in the formula calculation. You can also pin all the fields available in the Globals tab by clicking the **Pin** button, and they will display in the Recently Pinned pane for easy reuse when building your formulas.



- **Cube**: The Cube tab enables you to select from any of the Cube drivers added to the solution. When you add a named block, the value tied to the Cube driver is used in the formula calculation. You can also pin all the fields available in the Cube tab by clicking the **Pin** button and they will display in the Recently Pinned pane for easy reuse when building your formulas.



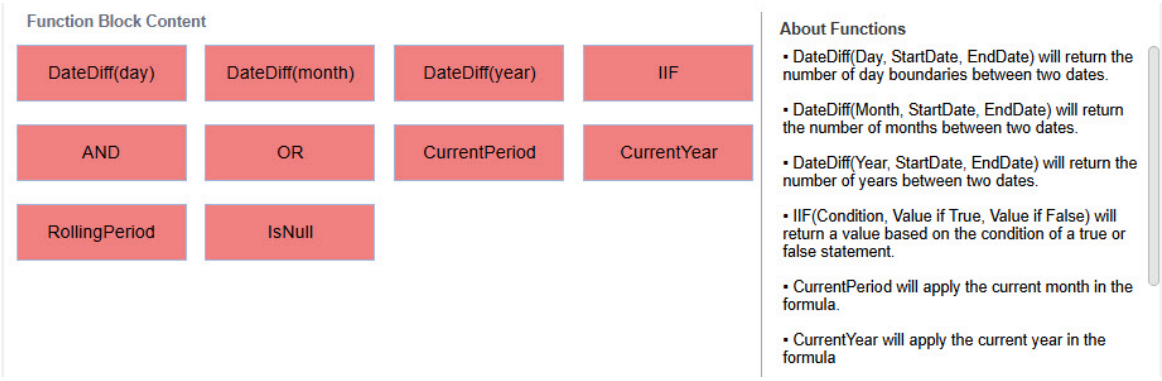
- **Lookup**: The Lookup tab enables you to select from any of the Lookup drivers added to the solution. When you add a named block, the value tied to the Lookup driver is used in the formula calculation. You can also pin all the fields available in the Lookup tab by clicking the **Pin** button and they will display in the Recently Pinned pane for easy reuse when building your formulas.



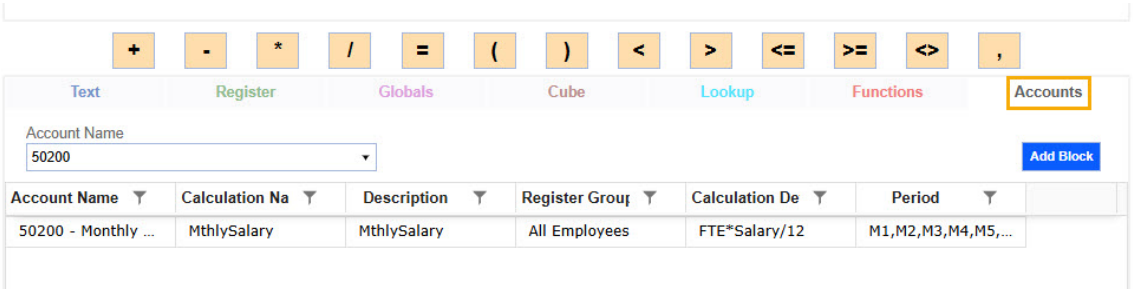
- **Functions**: The function block content enables you to select from several different functions that help define your formula.
    - **DateDiff(day)**: Returns the number of day boundaries between two dates.
    - **DateDiff(month)**: Returns the number of months between two dates.
    - **DateDiff(year)**: Returns the number of years between two dates.
    - **IIF**: Returns a value based on the condition of a true or false statement.
    - **AND**: Displays or uses records if all the conditions are true.
    - **OR**: Displays or includes records if any of the conditions are true.
    - **CurrentPeriod**: Applies the current month in the formula.

- **IsNull**: Evaluates if there are blank values in a calculation.
- **RollingPeriod**: Returns the number of periods in a plan.
- **CurrentYear**: Returns the current year in the formula.

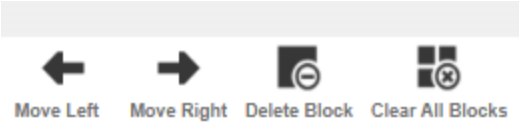
You can reference the definition for each function to the right of the function blocks in the About Functions pane.



- **Accounts**: The Account Library enables you to include formulas that are tied to a specific account as a dependency in a formula you are creating. In the Account Name drop-down menu, select an account name and a view-only field of the selected account information such as Account, Calculation Name and Register Group populates. Click the **Add Block** button to add that formula as a block into an active formula.



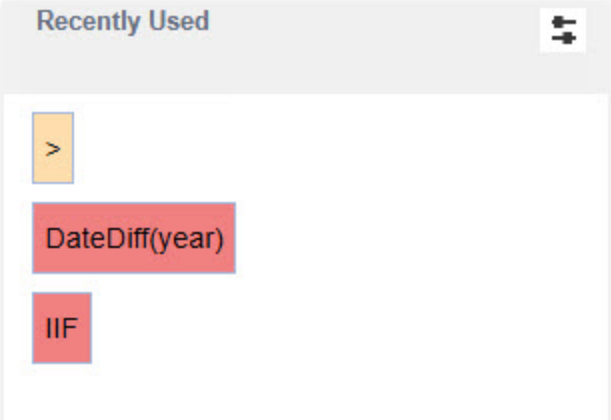
After you have made all your selections and built your formula using the block options available, you can view your formula in the Formula Preview and additional buttons will display in your Formula Builder area:



- To move a block to the left, select it and then click the **Move Left** button.
- To move a block to the right, select it and then click the **Move Right** button.
- To delete a block no longer needed in your formula, select it and then click the **Delete Block** button.
- To remove all blocks, click the **Clear All Blocks** button.

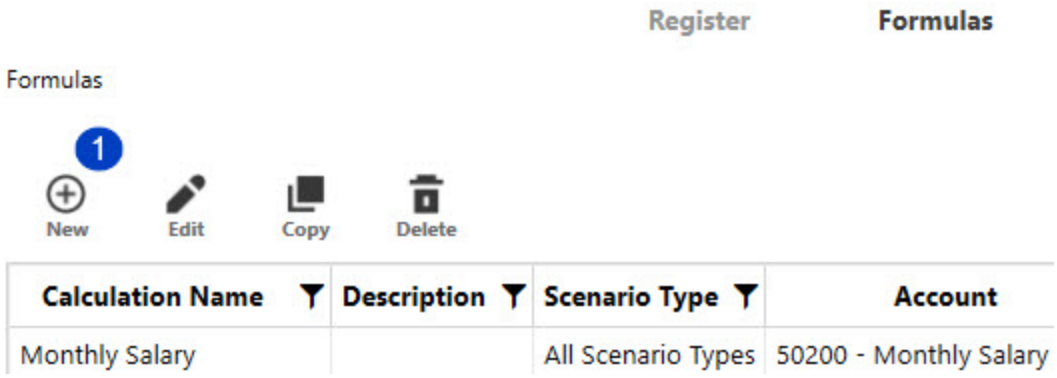
The Recently Used or Recently Pinned pane will automatically populate based on the blocks you have used or pinned. This enables you to easily reference blocks that are frequently used. Clicking the toggle button to switch between the Recently Used and Recently Pinned panes gives you the flexibility to set your own preferences when building formulas. You can select a block from either list to insert it into the formula you are working on.

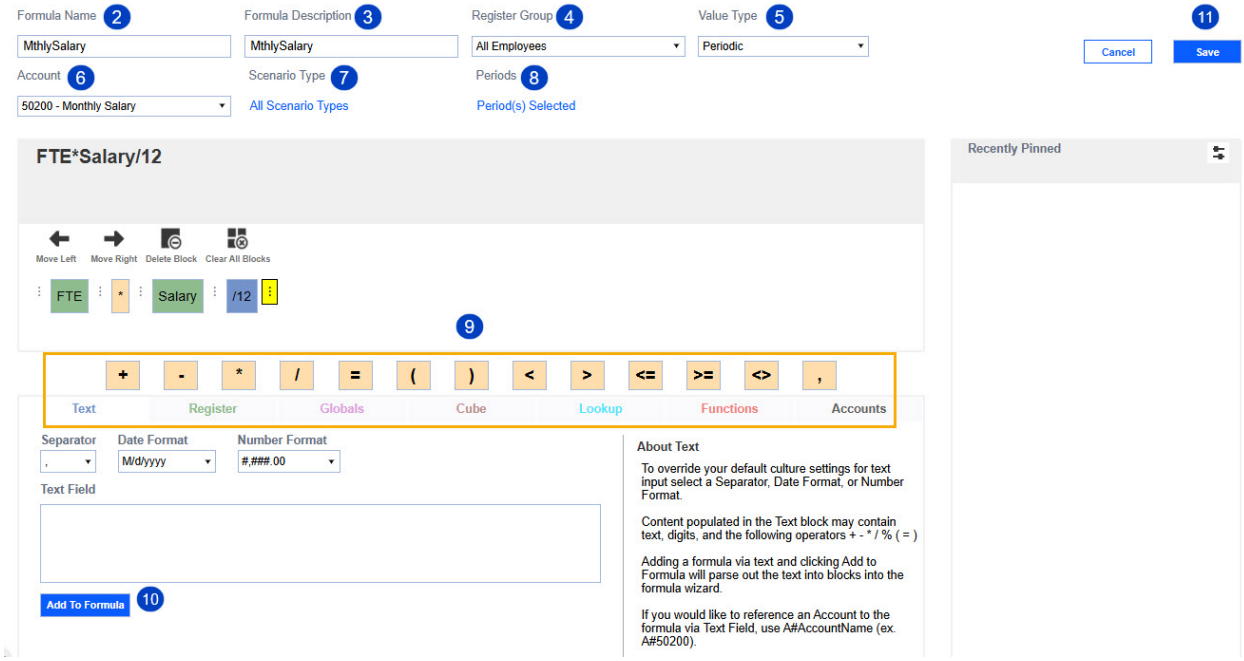
> **NOTE:** After creating, copying, or editing a formula, the last pinned information will remain.



Create a New Formula

To create a new formula, follow the legend and the corresponding instructions:





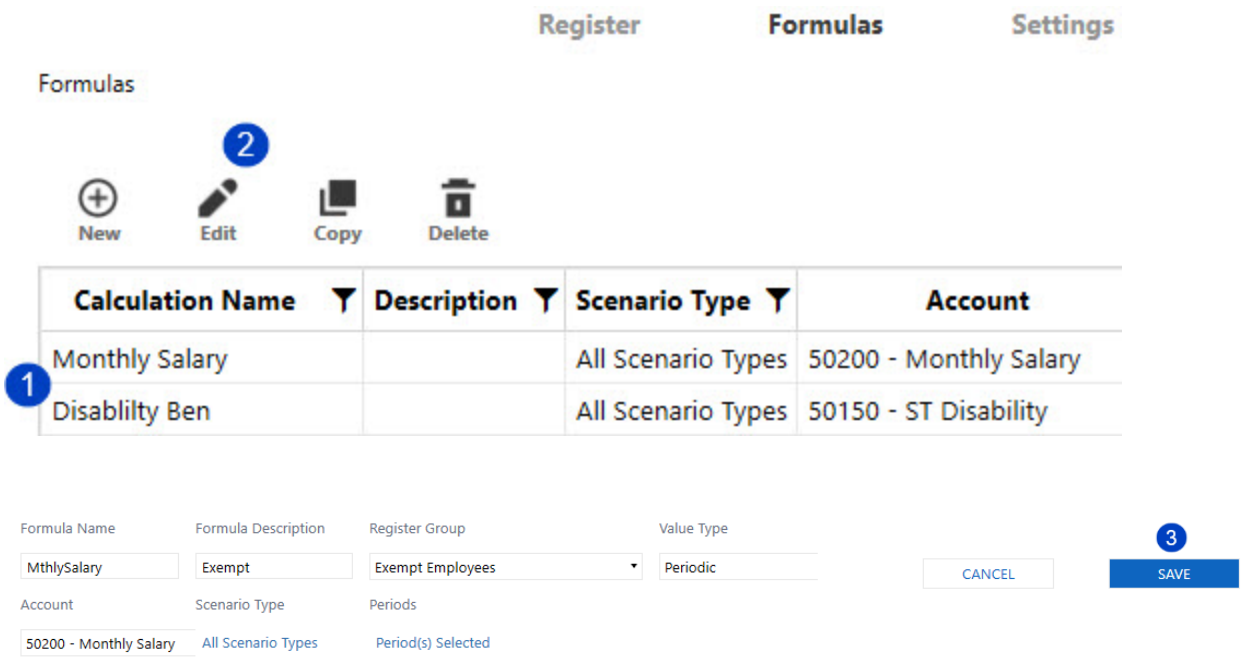
1. Click the **New** button.
2. Name the formula. This step is required.
3. (Optional) Enter a formula description.
4. From the Register Group drop-down menu, select a Register Group.
5. From the Value Type drop-down menu, select a Value Type.
6. From the Account drop-down menu, select an Account.
7. Click **All Scenario Types** to select a Scenario Type.
8. Click **Period(s) Selected** to select a periods.
9. Build your formula blocks by choosing from operators, **Text**, **Register**, **Globals**, **Cube**, **Lookup**, **Functions** or **Accounts**. When selected, each block is automatically added to the end of the formula unless otherwise designated.

10. After you have entered text in the Text Field or selected a block from the **Register**, **Globals** or **Cube** option, click the **Add to Formula** button. The block will populate in the formula preview.
11. Click the **Save** button.

> **NOTE:** If you click the Create Another Formula button after saving a formula, the Register Group drop-down menu will be reset to All Employees for the Workforce Planning configuration or All Records for the Fixed Term Planning and Duration Based Planning configurations.

Edit Formulas

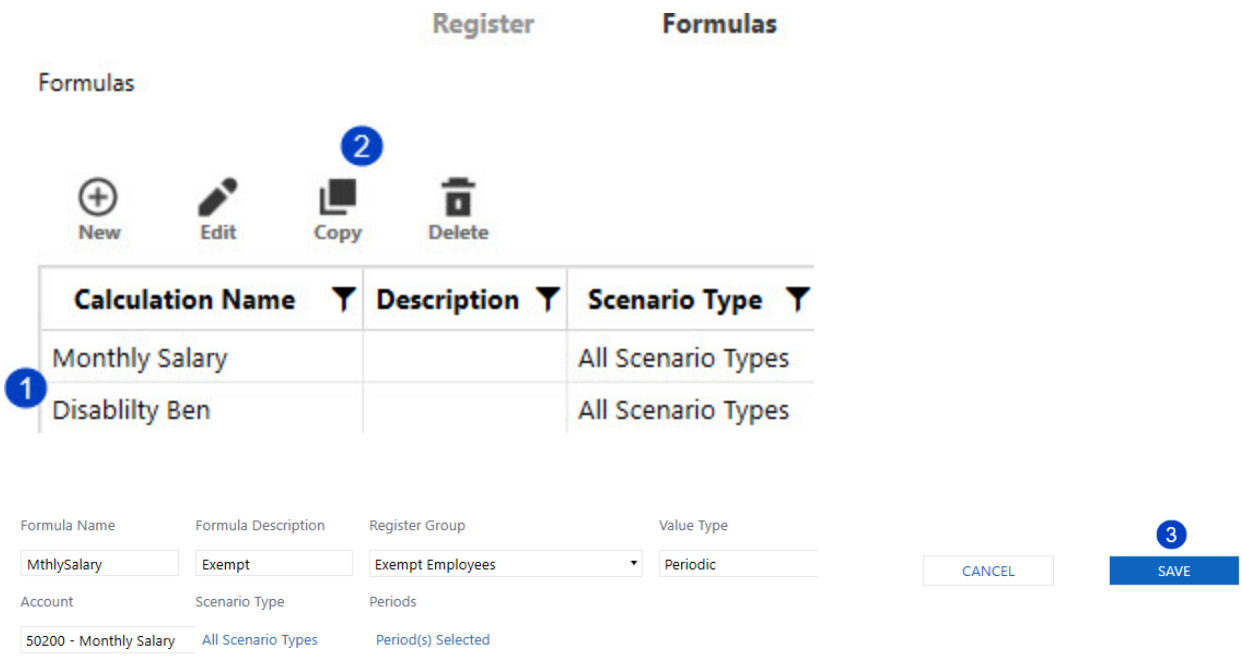
To edit a formula, follow the legend and the corresponding instructions:



1. Select an existing formula from the formulas page.
2. Click the **Edit** button. The Formula Wizard will open enabling you to make any updates.
3. Click the **Save** button.

Copy Formulas

To copy a formula, follow the legend and the corresponding instructions:



1. Select an existing formula from the grid.
2. Click the **Copy** button. The Formula Wizard will open, enabling you to make any updates.

> **NOTE:** When a formula is copied, the Formula Name adds the word Copy to the end of it, and the Formula Description is updated to Copy. Ensure the Formula

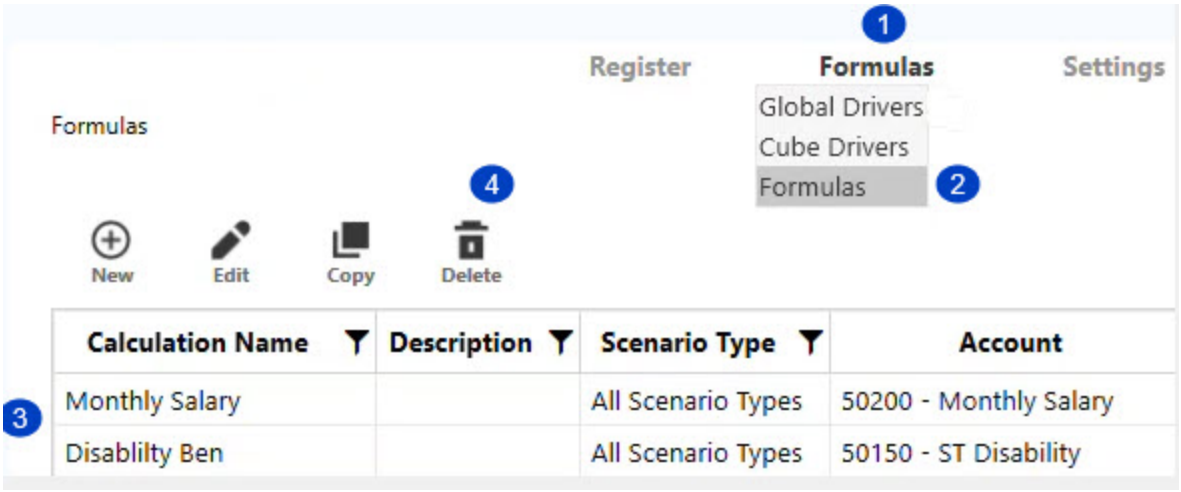
> Name is updated before saving.

3. Click the **Save** button.

Delete Formulas

You can only delete formulas if you have **Manage Formulas** security access. See Security.

To delete a formula, follow the legend and the corresponding instructions:



1. Hover your cursor over the **Formulas** menu.
2. In the drop-down menu, select **Formulas**.
3. Select a formula from the formula table.
4. Click the **Delete** button.

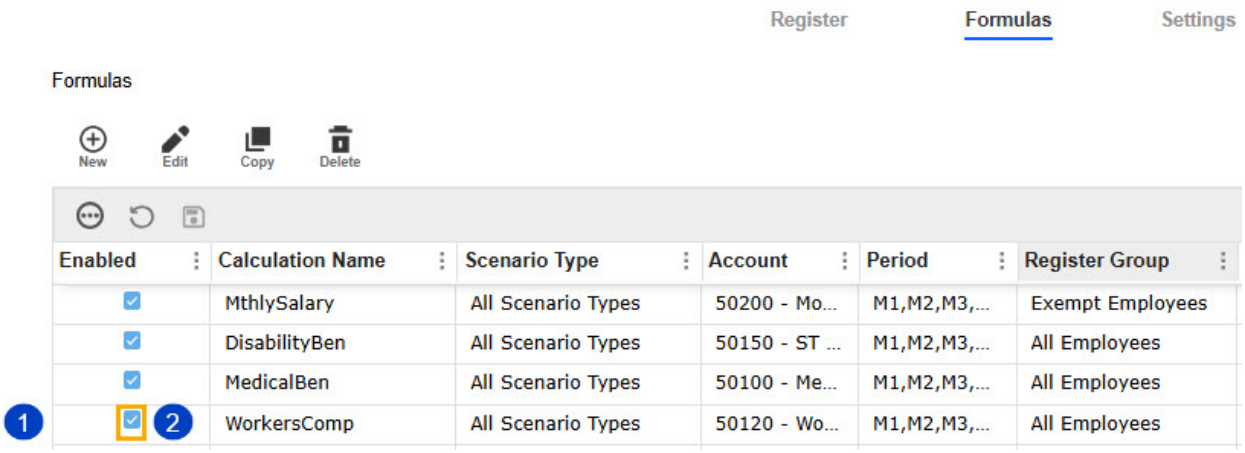
Data in an active or unlocked plan linked to a formula will remain until the next time a calculation is run. If a plan is locked and you delete a formula that is linked to the locked plan, the data will not change.

> **NOTE:** You cannot delete a formula that is being used within another formula as a dependency.

Enable Formulas

You can modify the enablement and execution of formulas in the Formula dashboard to determine how formulas are used. You can only enable formulas if you have **Manage Formulas** security access. When you create, copy or edit a formula, the enable column is automatically set to enabled.

To enable a formula, follow the legend and corresponding instructions:



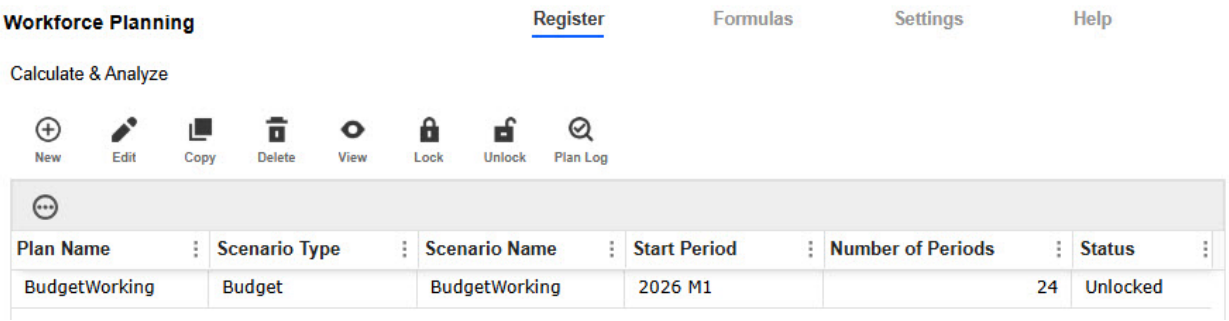
1. Select a formula.
2. In the Enable column, select the checkbox.

> **IMPORTANT:** You cannot disable a formula that is being used within another formula as a dependency or enable a formula that contains a disabled formula.

Plan Data

Plan data is the calculated output of the Line Item Modeling solutions. Plans are produced when your data is calculated using the formulas you create.

Plans Dashboard



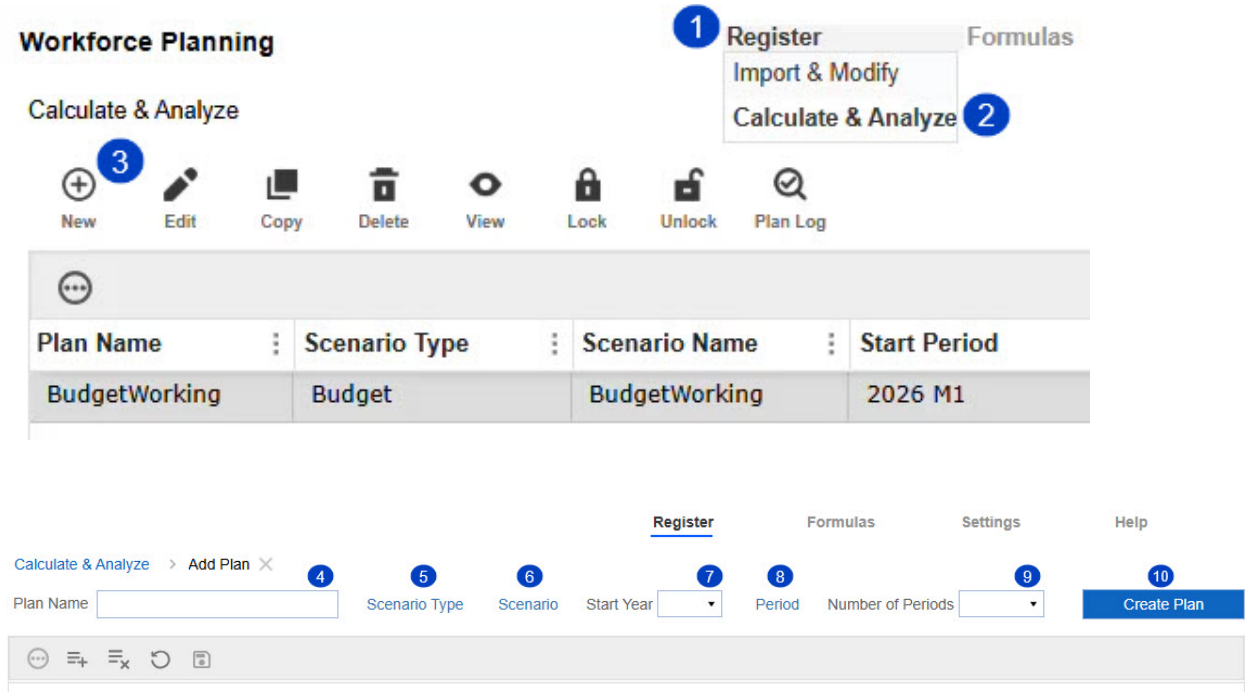
The Plans dashboard features all the functions for managing and running calculations on plans. Within the dashboard, you can see a table of created plans and all criteria related to each plan. You can also perform and view the following actions depending on your security access:

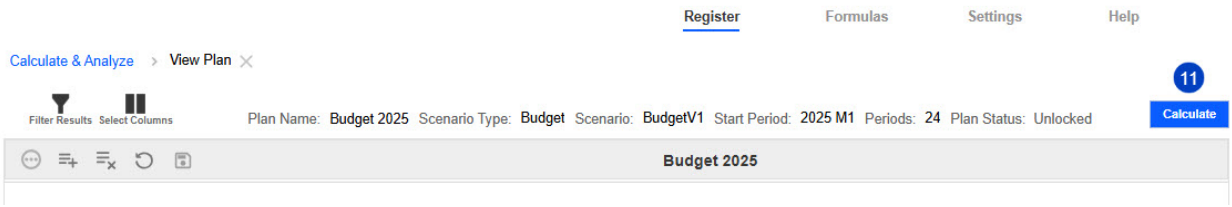
- Create a New Plan
- Recalculate a Plan
- View Plan
- Lock or Unlock Plan
- Delete Plan
- Copy Plan

- Edit Plan
- Plan Log
- Connector Business Rule
- Data Adapter
- Select Workflow

Create a New Plan

To create a new plan, follow the legend and corresponding instructions:





1. Hover your cursor over the **Register** menu.
2. In the drop-down menu, select **Calculate & Analyze**.
3. Click the **New** button.
4. Enter a plan name in the text box.

   > **NOTE:** Do not include special characters in the plan name, as the data adapter will not run if the plan name contains them.

5. Select **Scenario Type**. A dialog box displays with available options.

   > **NOTE:** Selecting your scenario type before selecting your scenario filters down the available scenario options. If you select your scenario before selecting your scenario type, you'll see all the scenario base members except for actuals.

6. Select **Scenario**. A dialog box displays with available options.
7. Select **Start Year**. A drop-down menu will display years.
8. Select **Period**. A dialog box displays available months.
9. Select the number of periods using the drop-down menu. You can select up to 120 months.
10. Click the **Create Plan** button. After the table is created, a **CALCULATE** button displays.
11. Click the **CALCULATE** button. A data management job displays showing the progression of the formulas being calculated. When the calculation is complete and the data

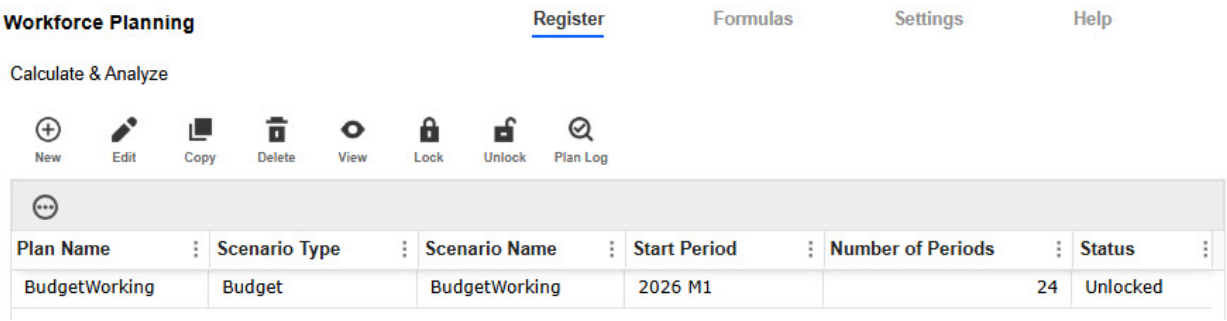
management job closes, you have to refresh the application to display your results.

> **NOTE:** The Windows Application refreshes the page automatically.

> **NOTE:** If you do not populate all the necessary criteria, a dialog box displays reminding you to fill out any remaining items.

To filter your results, you can use the filter editor component. See Manage Filters.

Plan data generates the columns in the table based on the criteria chosen, including any saved formulas. After the calculation is complete, you can navigate back to the Plans dashboard and your new plan is listed in the table with all of the chosen criteria including Last Calculation Date and Last Modified By. When you have other Register columns with member definitions assigned, those columns show up in the calculated plan data.



Recalculate a Plan

If you update a formula or edit Register or plan data, you can recalculate a saved plan. If you upload new plan data, you will need to refresh the page. You might consider recalculating when:

- Adding a new employee to the Register
- Updating the base wage of the employee
- Updating a Global Driver
- Updating an existing formula

> **NOTE:** If you delete all Register data and then try to recalculate a plan, a dialog box displays reminding you to populate Register data. When there is no Register data, the Calculate button does not display.

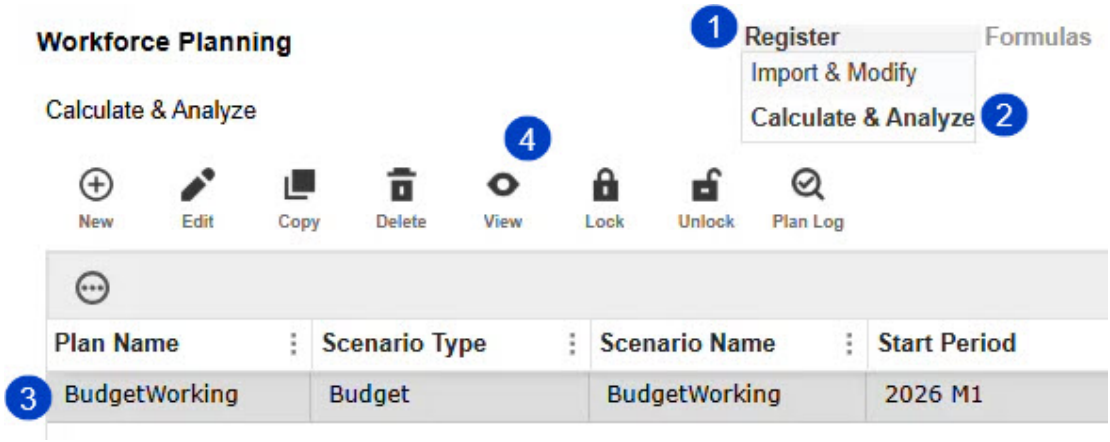
To recalculate a plan, follow these steps:

1. Navigate to the Plans dashboard.
2. Select the plan you want to run a new calculation on.
3. Click the **View** button.
4. Click the **CALCULATE** button.

When the calculation is complete, the plan data populates and overwrites the previous data.

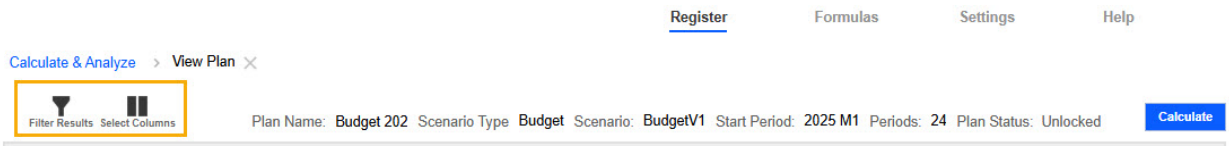
View Plan

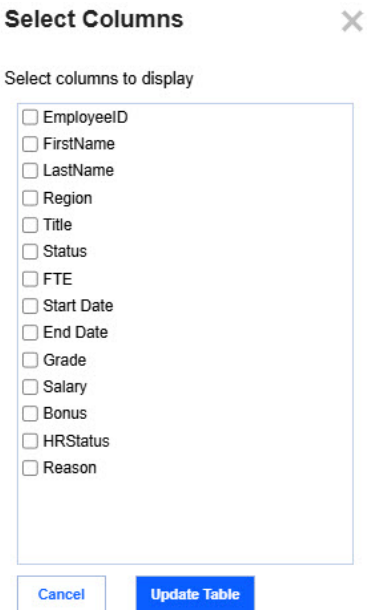
To view a saved plan, follow the legend and corresponding instructions:



1. Hover your cursor over the **Register** menu.
2. In the drop-down menu, select **Calculate & Analyze**.
3. Selected a previously created plan.
4. Click the **View** button.

A new page opens and you can view the calculated data of the selected plan. You can use the **Select Columns** button to filter and view all the Register columns you have access to within a selected plan. Use the Filter Results button to create a custom filter. See Manage Filters.



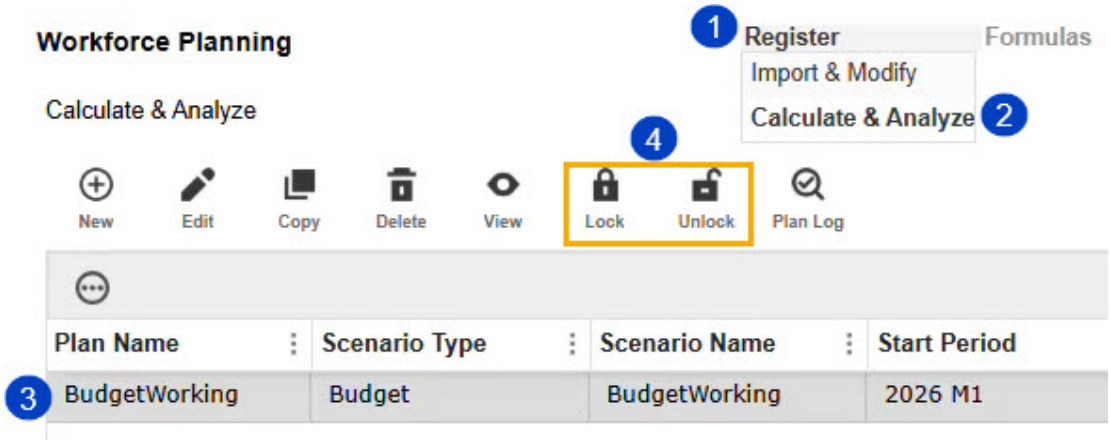


NOTE: If you do not have security access to calculate data or if all Register data is deleted, the **CALCULATE** button is not visible on the View Plan page. The **CALCULATE** button is unavailable if the plan is locked.

Lock or Unlock Plan

Once a plan is created and has data, you can lock or unlock plans depending on your security access. Locking a plan prevents any calculations from being made. Unlocking a plan enables you to run a calculation.

To lock or unlock a plan, follow the legend and corresponding instructions:



1. Hover your cursor over the **Register** menu.
2. In the drop-down menu, select **Calculate & Analyze**.
3. Select a plan.
4. Click the **Lock** button to lock the plan or click the **Unlock** button to unlock the plan. The **Status** column will update.

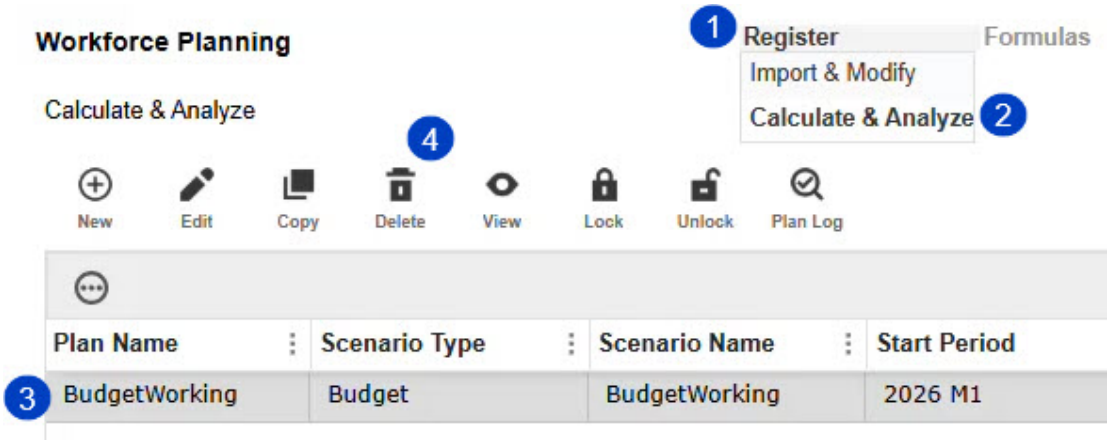
If the plan is locked and you click the **View** button, the following page will not show the **CALCULATE** button. If the plan is unlocked and you click the **View** button, the **CALCULATE** button will be available.

> **NOTE:** If you do not have security access to lock and unlock plan data, the **Lock** or **Unlock** buttons are not visible.

Delete Plan

If you want to delete a plan, it must be unlocked and finished calculating. If you try to delete a locked plan, a dialog box informs you that it cannot be removed. If you try and delete a plan that is calculating, a validation message informs you that calculations are in progress.

To delete a plan, follow the legend and corresponding instructions:



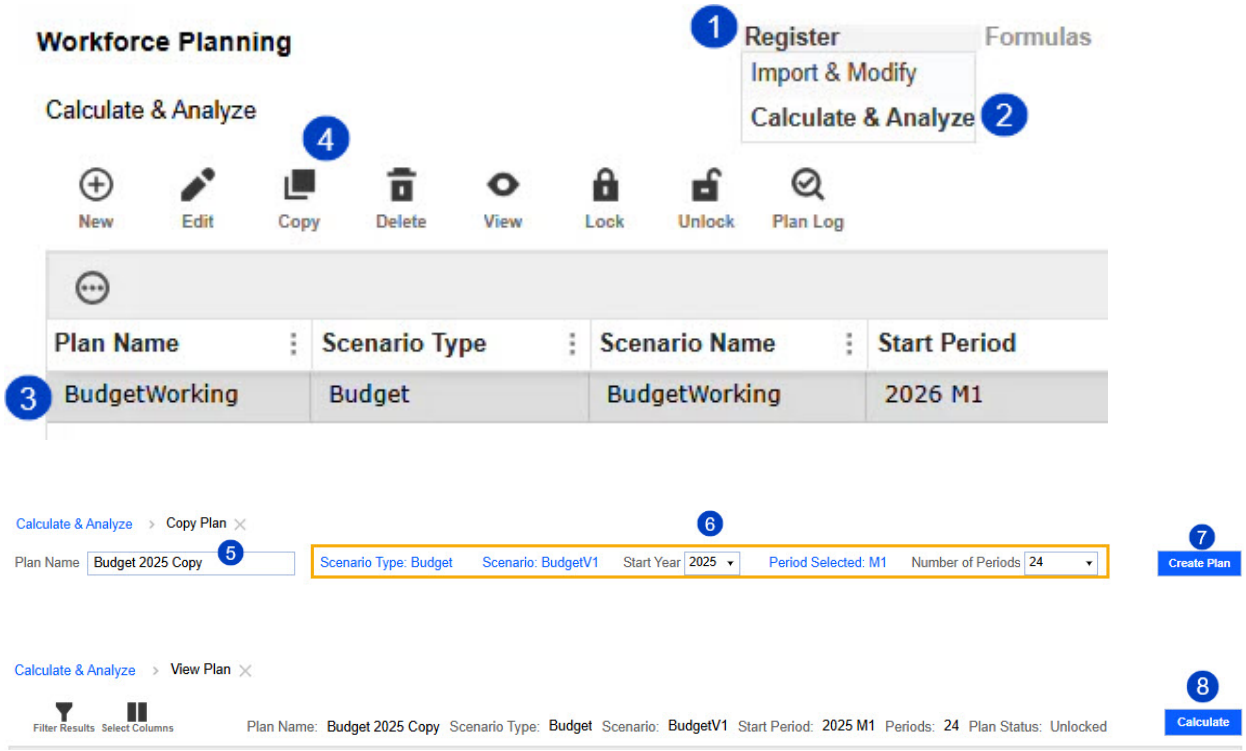
1. Hover your cursor over the **Register** menu.
2. In the drop-down menu, select **Calculate & Analyze**.
3. Select a plan.
4. Click the **Delete** button.

A dialog box displays to confirm if you want to proceed with removing the selected plan data. If there is no data in the plan, a dialog box will not display.

Copy Plan

You can copy a plan to utilize another plan's selected criteria. You can copy a locked plan because the copy function only copies the plan criteria.

To copy a plan, follow the legend and corresponding instructions:



1. Hover your cursor over the **Register** menu.
2. In the drop-down menu, select **Calculate & Analyze**.
3. Select a plan.
4. Click the **Copy** button.
5. (Optional) Rename the plan.

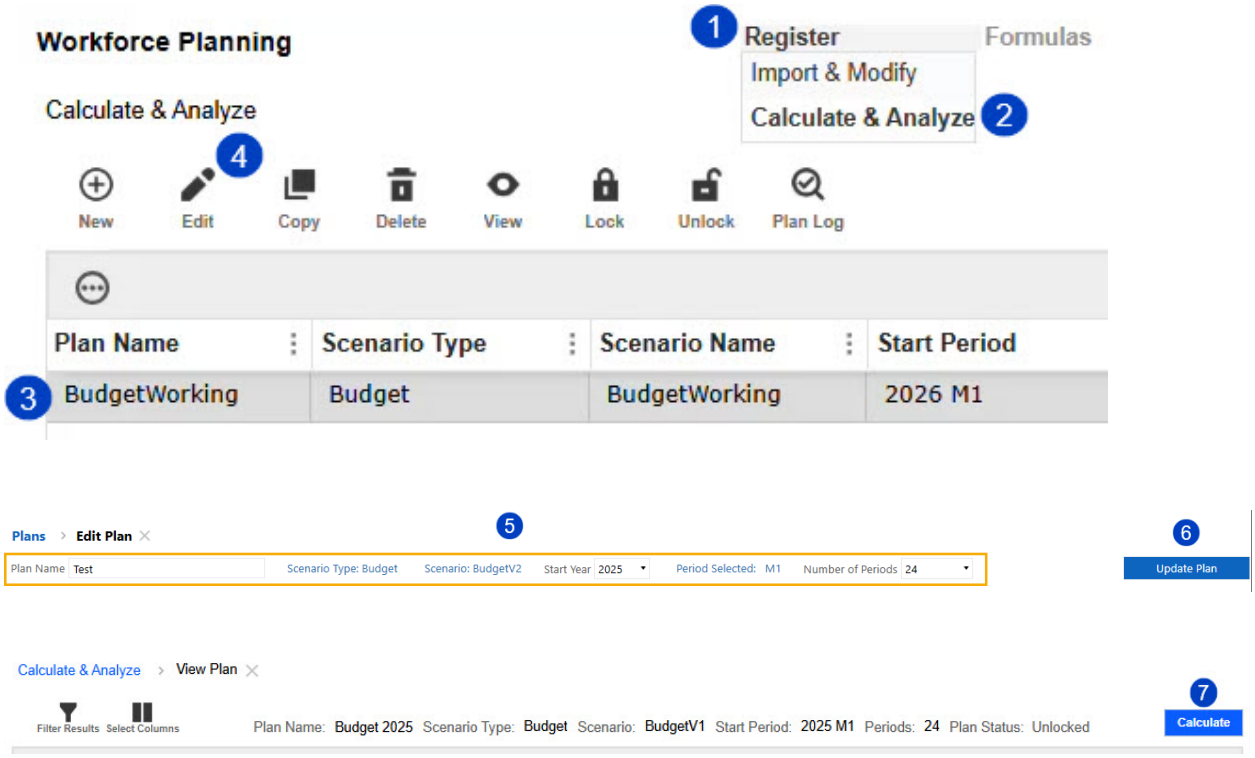
> **NOTE:** When a plan is copied, the word *Copy* is added to the end of the Plan Name.

6. (Optional) Update plan criteria.
7. Click the **Create Plan** button.
8. Click the **CALCULATE** button.

Edit Plan

You can edit a plan to update any of the plan criteria and re-run a calculation. You can only edit an unlocked plan.

To edit a plan, follow the legend and corresponding instructions:

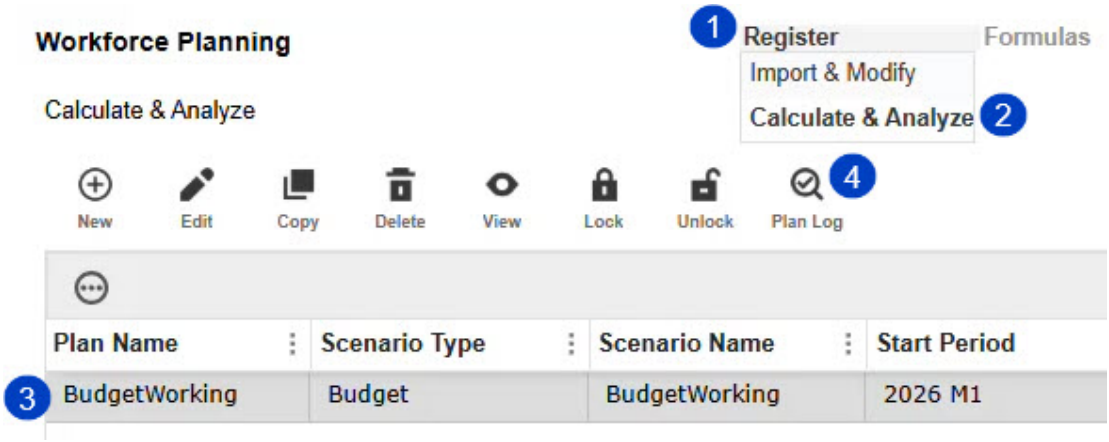


1. Hover your cursor over the **Register** menu.
2. In the drop-down menu, select **Calculate & Analyze**.
3. Select a plan.
4. Click the **Edit** button.
5. Update plan criteria.
6. Click the **Update Plan** button.
7. Click the **CALCULATE** button.

Plan Log

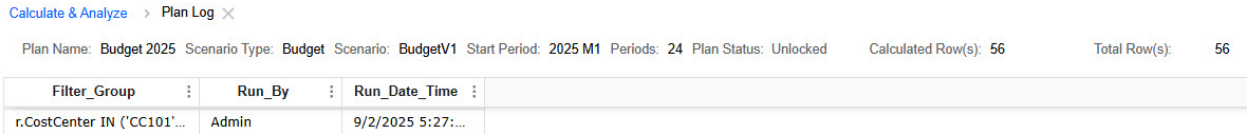
The plan log records information from the last calculation of a plan. You can use the plan log to audit your plans and verify what entities were calculated for.

To view a plan log, follow the legend and corresponding instructions:



1. Hover your cursor over the **Register** menu.
2. In the drop-down menu, select **Calculate & Analyze**.
3. Select a plan.
4. Click the **Plan Log** button.

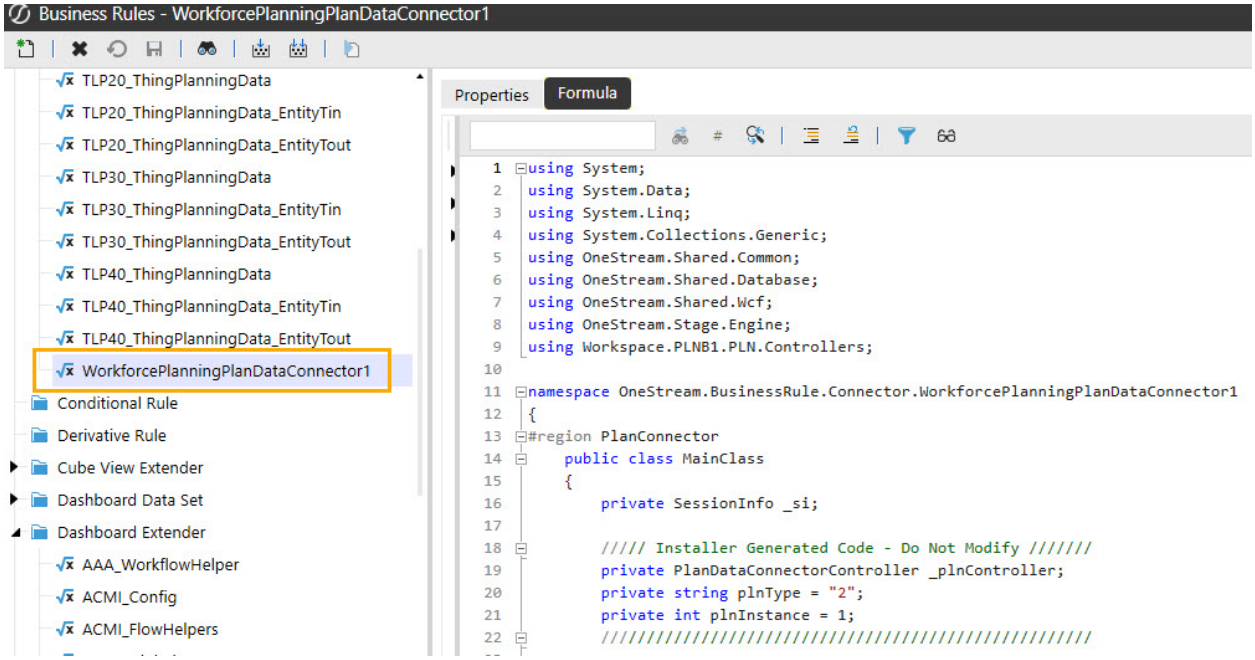
A new page will open, and you can view the filter groups calculated based on the security assigned, what time the plan was last calculated and who calculated it. The plan log will also display the number of calculated rows and total rows in the plan.



Connector Business Rule

A connector business rule is created automatically when you install the solution and captures relevant column information the entity member definition is assigned to within a plan. That plan data can then be directly imported to a OneStream workflow profile. You will need a corresponding **Data Source**, **Transformation Rule**, and **Workflow Profile** to connect the plan data to the workflow. For example, if you create a Workflow Profile with a scenario type that does not match the selected plan, the data will not populate and you will have to select the correct scenario type.

To access the connector business rule, go to **Application** > **Business Rules** > **Connector** and then locate your planning configuration plan data connector instance. See the example below for the first instance of the Workforce Planning configuration:

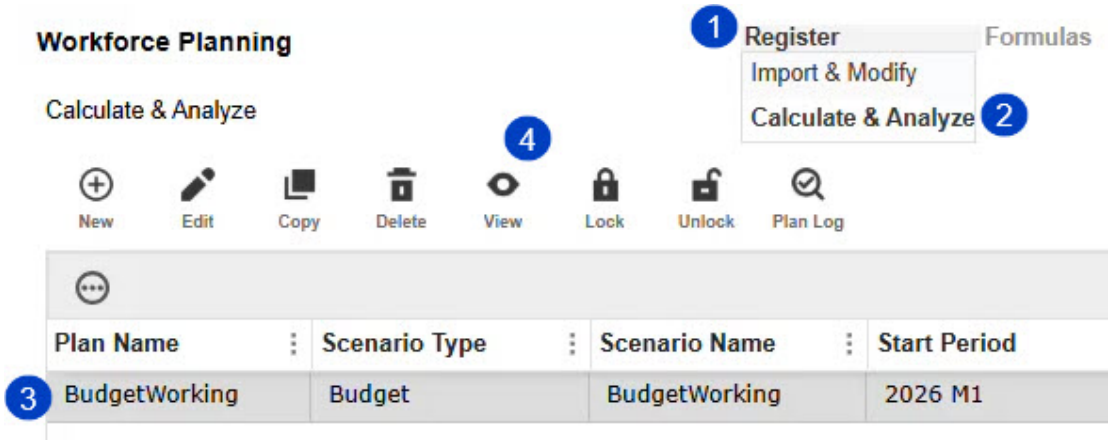


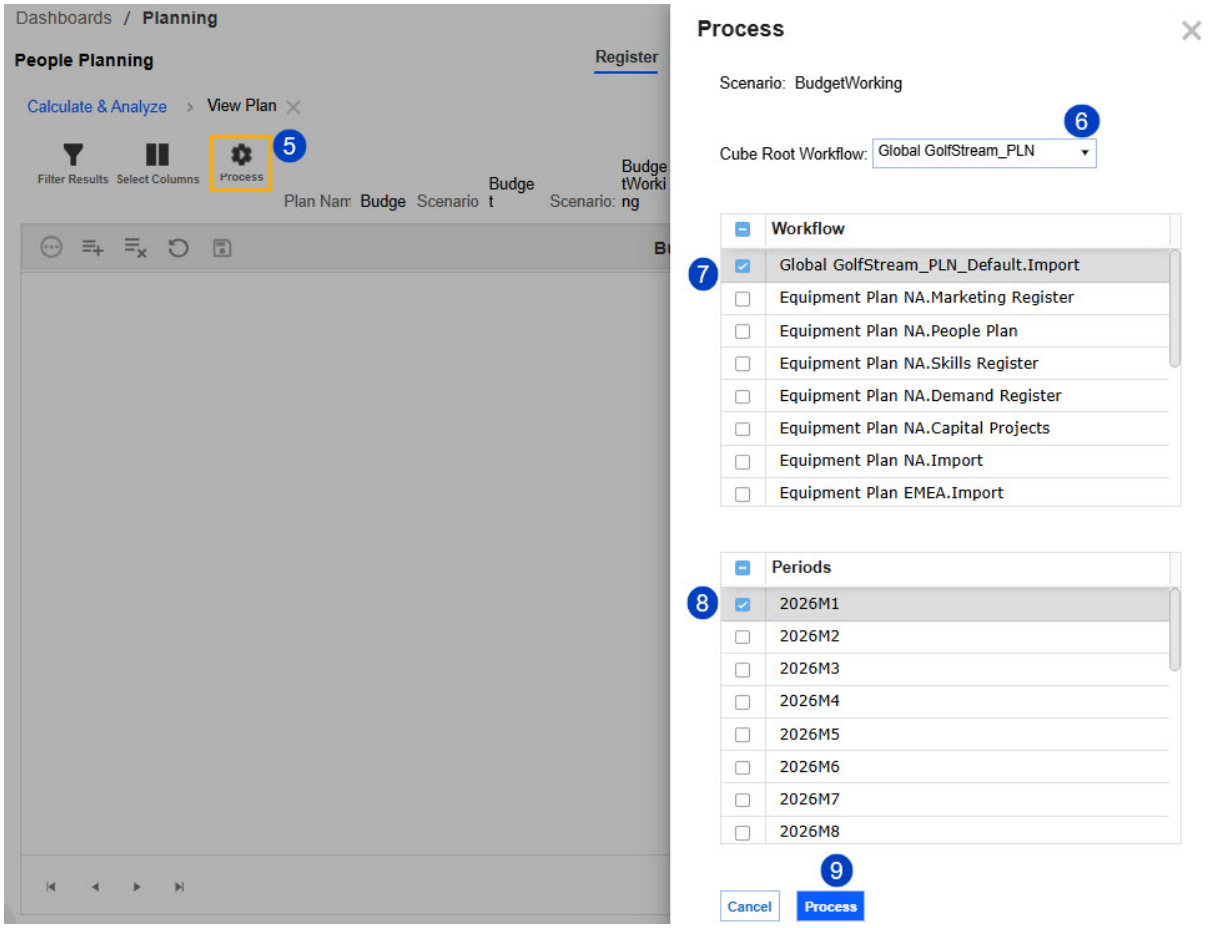
Select Workflow

The Line Item Modeling solution enables you to launch multiple workflows for multiple time periods to export plan data into a workflow and run the plan data through the entire workflow process and into a cube. The data in the plan table will integrate with the Workflow based on specific settings around the Can Load Unrelated Entities profile property and the Substitution Text Strings in the Workflow Profile. When the Can Load Unrelated Entities profile property is set to True, then the processing of the Plan Data to the Workflow will reference the Substitution Text Settings populated with PLNEntity=MemberDefinition, and will import data based on security defined in the solution. When the Can Load Unrelated Entities profile property is set to False, then the processing of the Plan Data to the Workflow will reference Entity Assignment tab within the Workflow Profile and match Entities that exist in the plan table to know which Entities to import (this will be done for users that have write access for the respective Entities).

Once data is exported, you can navigate to **OnePlace** > **Workflow** and select the periods that were loaded to view the data in the import step.

> **NOTE:** You must have the Manage Plans security permission to use the select workflow feature.





To export data into a workflow, follow the image and corresponding instructions:

1. Hover your cursor over the **Register** menu.
2. In the drop-down menu, select **Calculate & Analyze**.
3. Select a plan.
4. Click the **View** button.
5. Click the **Process** button.
6. In the **Cube Root Workflow** drop-down menu, select a workflow.

7. Select the checkbox of a Workflow.
8. Select the checkbox of a Period.

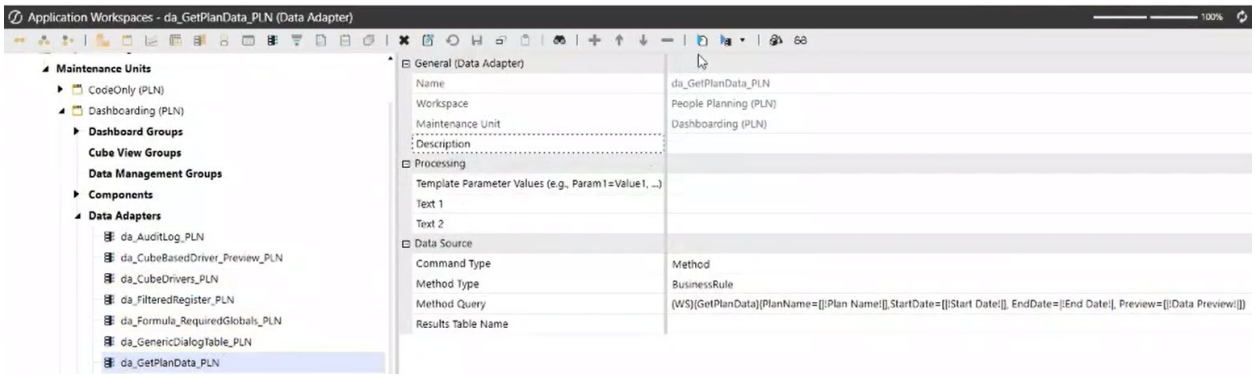
> **NOTE:** You can select multiple periods.

9. Click the **Process** button. A message box displays how many rows were loaded for each period.

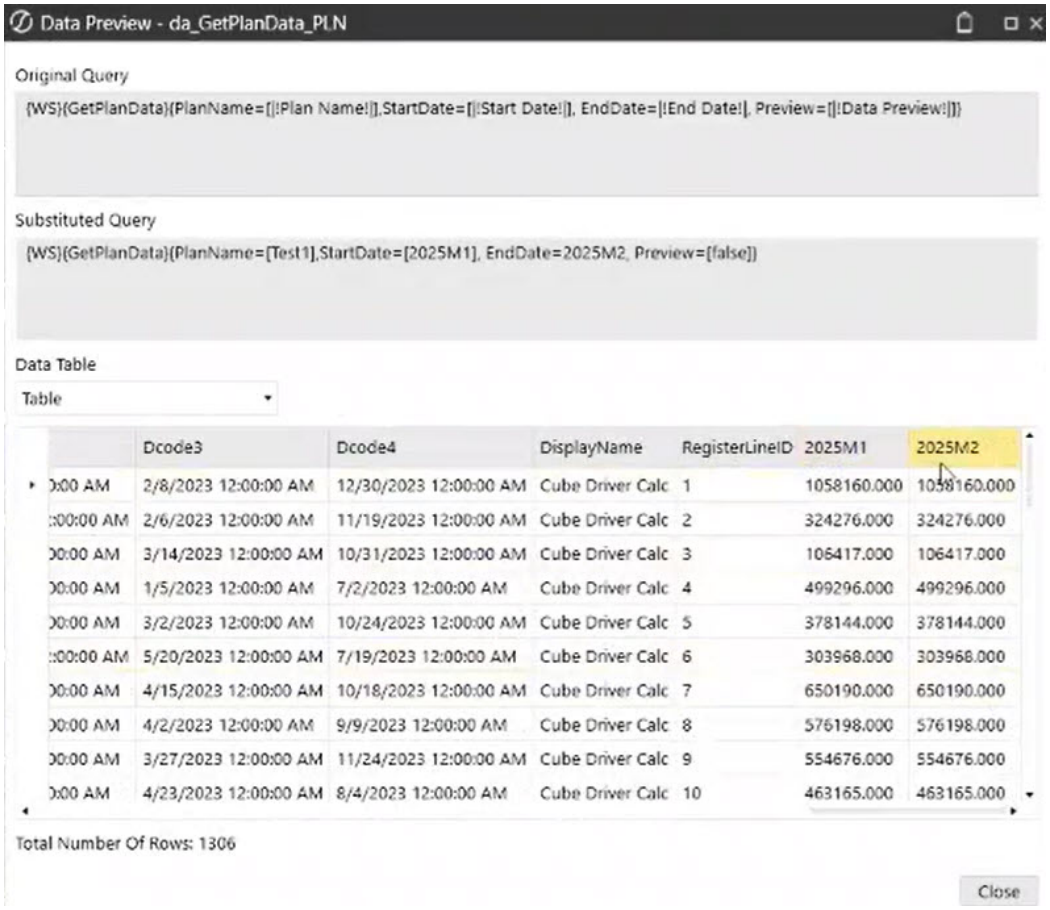
Data Adapter

When a plan has calculated data, a permitted user can run a data adapter query to access the plan. You can do so by going to the Application tab, clicking on Workspaces, opening the Workforce Planning (PLN) Workspace, expanding Dashboarding > Data Adapters, and selecting the **da_GetPlanData_PLN** data adapter.

> **NOTE:** The Data Adapter executes the designated security method to comply with all solution-specific security configurations within the Line Item Modeling solution. Security is a critical component of the adapter, ensuring that data accessed outside the solution continues to adhere to the established security protocols applied to the data set.



Once the data adapter is selected, click on Run button on the toolbar. Doing so will offer parameters for you to select the specific Plan Name, option to preview the data, and it's corresponding Start and End dates. Doing so will provide the resulting query in the Data Preview along with the total number of rows based on the query parameters.



Workforce Planning FUTA Formula Use Case

The following use case provides a detailed look into using formulas in the Workforce Planning configuration.

Scenario: Build a set of formulas to determine if the federal tax amount applies to an employee in a specific month. Federal tax calculation compares total monthly earnings of any employee to the federal tax limit.

Role: Implementer, Administrator

Benefits: Formulas can be individually created and the accounts applied to the formulas can be used as dependencies or building blocks for more advanced formulas to calculate more complex data.

You need to create a formula to calculate each category of earnings an employee could have, then populate the federal tax limit formula. You can create the following example formulas:

- Monthly Salary Formula
- Bonus Calculation Formula
- Merit Calculation Formula
- Total Monthly Salary
- Year-To-Date Salary Formula
- Year-To-Date Salary - Tax Limit Formula

- Periodic - (YTD-FUTA Limit) Formula
- FUTA Formula

> **IMPORTANT:** There are many ways of creating formulas based on your configured Register fields, Global Drivers, Cube Drivers, and Register Field Groups. These formulas are examples to detail a particular use case.

Solution Setup

Before you can create the formulas for this use case, you have to set up the solution by installing the Workforce Planning configuration. Follow these instructions for an example setup:

1. Set up the solution by using the Setup Wizard.
    - Register fields that are needed include: Salary (this field could be a yearly amount), FTE (this helps determine if the salary is dedicated to one Entity, Region, or Cost Center or should be split between multiple). For additional information, see Register.

      Example:

Register Definition

Register Field Name	Display Name	Data Type	Date Assignment	Allow Updates	Required Column	Member Definition	Parameter Name	Default Value
EmployeeID	EmployeeID	String					Not Used	
Instance	Instance	Number					Not Used	
FirstName	FirstName	String					Not Used	
LastName	LastName	String					Not Used	
Entity	Entity	String				E#GSE.Base, E#GSP.Base	Not Used	
Region	Region	String					Not Used	
CostCenter	CostCenter	String				U1#CC100.Base	Not Used	
Title	Title	String					Not Used	
Status	Status	String					Not Used	
FTE	FTE	Number					Not Used	
InPer	InPer	Number					Not Used	
OutPer	OutPer	Number					Not Used	
StartDate	Start Date	Date	Start Date				Not Used	
EndDate	End Date	Date	End Date				Not Used	
Grade	Grade	String					Not Used	
Salary	Salary	Number					Not Used	
Bonus	Bonus	Number					Not Used	
HRStatus	HRStatus	String					Not Used	
Reason	Reason	String					Not Used	
TermPer	TermPer	Number					Not Used	

- Ensure there is an account in your import that can hold your monthly salary amounts. In this example, Account Name 50200 and Account Description of Monthly Salary are used. For additional information, see Accounts.

  Example:

Account Name	Account Description
50200	Monthly Salary
50210	Salaries Hourly
50220	Bonus
50230	Overtime
50240	PTO
50250	Merit
50100	Medical Benefits
50120	Workers Compensation
50130	401K
50150	ST Disability
50160	LT Disability
50000	FUTA
50001	SUTA
50030	Medicare
50040	Social Security
50201	YTD Salary
50300	Total Salary
50221	YTD Bonus
50251	YTD Merit
50299	Monthly Total Salary
50202	YTD-FUTA Limit
50203	Periodic-YTD-FUTA Limit

- Security needs to be configured in order to complete the setup wizard. Assign as necessary. For additional information, see Security.

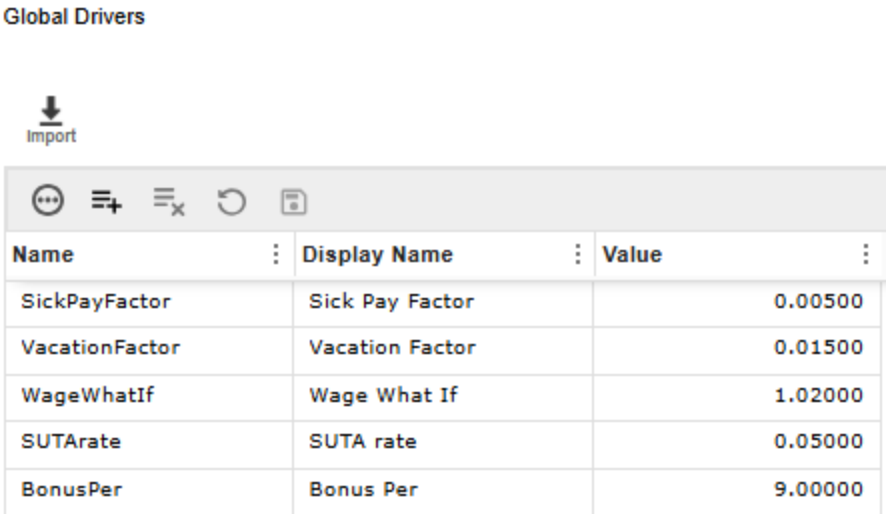
2. Load Register Data. For additional information, see Import and Modify.

   Example:

Bonus	FTE	InPer	OutPer	Salary	EmployeeID	Instance	FirstName	LastName	Entity	Region	CostCenter	Title	Status	Start Date	End Date	Grade	HRStatus	Reason	TermPer
0.02700	1.00000	0.00000	0.00000	106480.00000	E000234	0.00000	Aaron	Davis	EUS01	USNE	CC101	Manager	Exempt	1/1/1900 12:00:00 AM	1/1/1900 12:00:00 AM	40	Active		0.00000
0.02700	1.00000	0.00000	0.00000	96800.00000	E000236	0.00000	Alicia	Flynn	EUS01	USNE	CC101	Manager	Exempt	1/1/1900 12:00:00 AM	1/1/1900 12:00:00 AM	40	Active		0.00000
0.02700	1.00000	0.00000	0.00000	159830.00000	E000238	0.00000	Anne	Perkins	EUS01	USNE	CC101	Sales Director/VP	Exempt	1/1/1900 12:00:00 AM	1/1/1900 12:00:00 AM	41	Active		0.00000
0.02700	1.00000	0.00000	0.00000	96250.00000	E000244	0.00000	Richard	Reeves	EUS01	USNE	CC101	Inside Sales Mgr	Exempt	1/1/1900 12:00:00 AM	1/1/1900 12:00:00 AM	32	Active		0.00000
0.02700	0.70000	0.00000	0.00000	98200.00000	E000248	0.00000	Michelle	Andersen	EUS01	USNE	CC101	Manager	Exempt	1/1/1900 12:00:00 AM	1/1/1900 12:00:00 AM	40	Split		0.00000
0.02700	0.30000	0.00000	0.00000	98200.00000	E000248	1.00000	Michelle	Anderson	EUS01	USNE	CC102	Manager	Exempt	1/1/1900 12:00:00 AM	1/1/1900 12:00:00 AM	40	Split		0.00000
0.02700	1.00000	0.00000	0.00000	116160.00000	E000250	0.00000	Jennifer	Adams	EUS01	USNE	CC101	Manager	Exempt	1/1/1900 12:00:00 AM	1/1/1900 12:00:00 AM	40	Active		0.00000
0.02700	1.00000	7.00000	5.00000	105000.00000	E000253	0.00000	Janet	Flores	EUS01	USNE	CC101	Inside Sales Mgr	Exempt	1/1/1900 12:00:00 AM	1/1/1900 12:00:00 AM	32	Leave		0.00000
0.02700	1.00000	0.00000	0.00000	116160.00000	E000261	0.00000	Eric	Tapia	EUS01	USNE	CC101	Manager	Exempt	1/1/1900 12:00:00 AM	1/1/1900 12:00:00 AM	40	Active		0.00000
0.02700	1.00000	0.00000	0.00000	108800.00000	E000262	0.00000	Angela	Brown	EUS01	USNE	CC101	Manager	Exempt	1/1/1900 12:00:00 AM	1/1/1900 12:00:00 AM	40	Active		0.00000

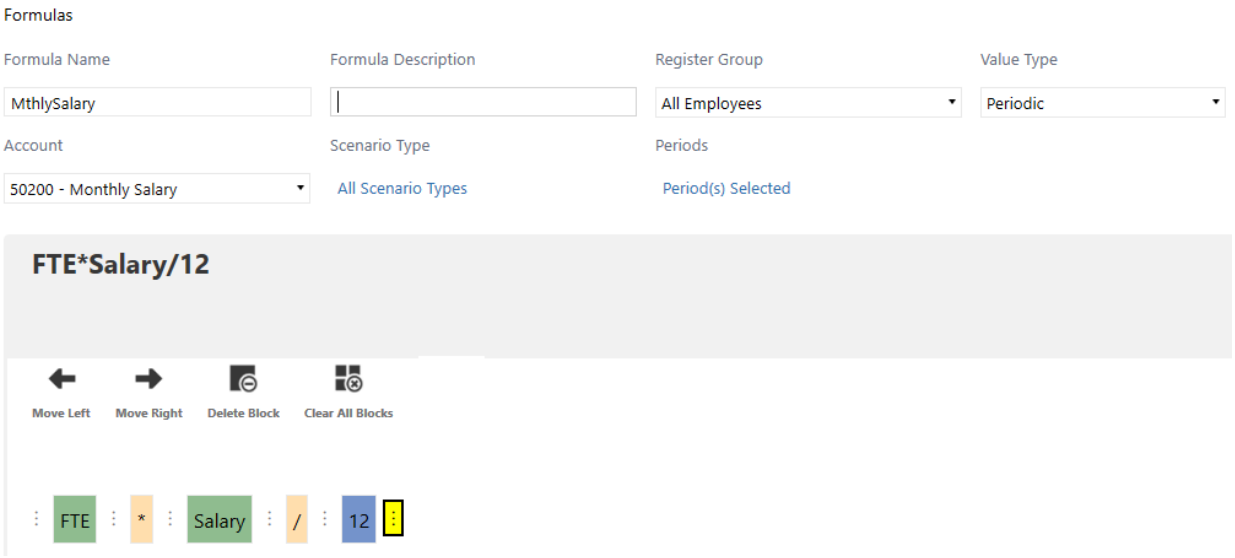
3. Import Global Drivers. For additional information, see Global Drivers.

   Example:



Monthly Salary Formula

The monthly salary formula is determined by the Full Time Equivalent (FTE) amount multiplied by the salary and divided by 12.



There are two different options for creating this formula:

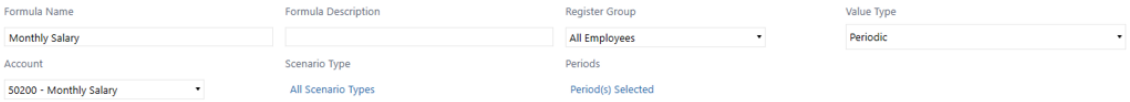
- Option 1: Select each formula block.
- Option 2: Type the formula in the text field of the Text tab.

Option 1

Follow these instructions to create this formula by selecting each block:

1. Populate the formula criteria:
    - Formula Name: Monthly Salary
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50200 - Monthly Salary

- Scenario Type: All Scenarios
- Periods: All periods selected



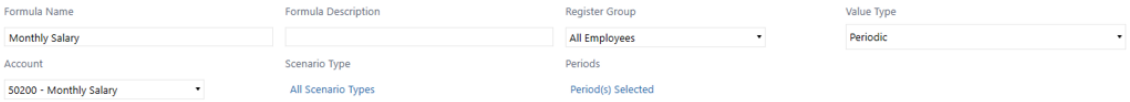
2. Click the Register tab, select **FTE** from the drop-down menu and click the **Add To Formula** button.
3. Click the ***** operator block.
4. Click the Register tab, select **Salary** from the drop-down menu and click the **Add To Formula** button.
5. Click the **/** operator block.
6. Click the Text tab, type 12 in the text field and click the **Add To Formula** button.
7. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

Option 2

Follow these instructions to create this formula by typing the formula in the Text tab:

1. Populate the formula criteria:
    - Formula Name: Monthly Salary
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50200 - Monthly Salary

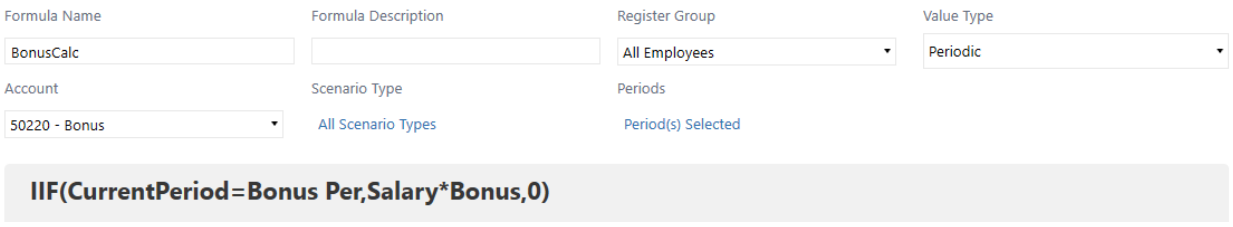
- Scenario Type: All Scenarios
- Periods: All periods selected



2. Click the Text tab, type **FTE*Salary/12** in the text field and click the **Add To Formula** button.
3. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

Bonus Calculation Formula

The bonus calculation formula uses a conditional IIF statement to determine if the CurrentPeriod is equal to the bonus period as defined in the Global Drivers as well as multiplying salary and bonus percent.



There are two different options for creating this formula:

- Option 1: Select each formula block.
- Option 2: Type the formula in the text field of the Text tab.

Option 1

Follow these instructions to create this formula by selecting each block:

1. Populate the formula criteria:
    - Formula Name: Bonus Calc
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50220 - Bonus
    - Scenario Type: All Scenarios
    - Periods: All periods selected
2. Click the Functions tab and select the **IIF** block.
3. Click the Functions tab and select the **CurrentPeriod** block.
4. Click the **=** operator block.
5. Click the Globals tab, select **Bonus Per** from the drop-down menu and click the **Add To Formula** button.
6. Click the **,** operator block.
7. Click the Register tab, select **Salary** from the drop-down menu and click the **Add To Formula** button.
8. Click the ***** operator block.
9. Click the Register tab, select **Bonus** from the drop-down menu and click the **Add To Formula** button.
10. Click the **,** operator block.
11. Click the Text tab, type **0** in the text field and click the **Add To Formula** button.

12. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

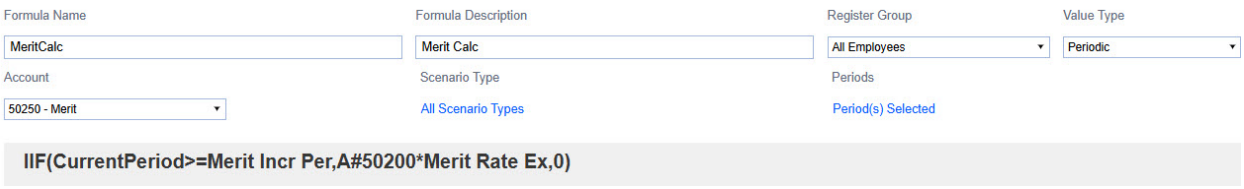
Option 2

Follow these instructions to create this formula by typing the formula in the Text tab:

1. Populate the formula criteria:
    - Formula Name: Bonus Calc
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50220 - Bonus
    - Scenario Type: All Scenarios
    - Periods: All periods selected
2. Click the Text tab, type **IIF(CurrentPeriod=Bonus Per,Salary*Bonus,0)** in the text field and click the **Add To Formula** button.
3. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

Merit Calculation Formula

The merit calculation formula uses a conditional IIF statement to determine if the CurrentPeriod is greater than or equal to merit increase period. If that value is true, the monthly salary will be multiplied by the merit rate.



There are two different options for creating this formula:

- Option 1: Select each formula block.
- Option 2: Type the formula in the text field of the Text tab.

Option 1

Follow these instructions to create this formula by selecting each block:

1. Populate the formula criteria:
    - Formula Name: Merit Calc
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50250 - Merit
    - Scenario Type: All Scenarios
    - Periods: All periods selected
2. Click the Functions tab and select the **IIF** block.
3. Click the Functions tab and select the **CurrentPeriod** block.
4. Click the **>=** operator block.
5. Click the Globals tab, select **Merit Inc Per** from the drop-down menu and click the **Add To Formula** button.

6. Click the **,** operator block.
7. Click the Accounts tab, select **50200** from the Account Name drop-down menu, select the **Monthly Salary** formula and click the **Add Block** button.
8. Click the ***** operator block.
9. Click the Globals tab, select **Merit Rate Ex** from the drop-down menu and click the **Add To Formula** button.
10. Click the **,** operator block.
11. Click the Text tab, type **0** in the text field and click the **Add To Formula** button.
12. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

Option 2

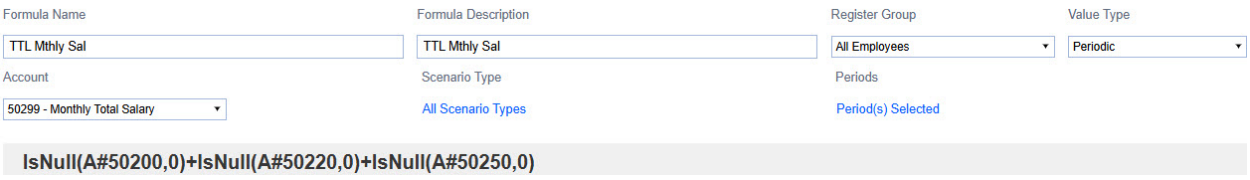
Follow these instructions to create this formula by typing the formula in the Text tab:

1. Populate the formula criteria:
    - Formula Name: Merit Calc
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50250 - Merit
    - Scenario Type: All Scenarios
    - Periods: All periods selected
2. Click the Text tab, type **IIF(CurrentPeriod>=Merit Incr Per,A#50200*Merit Rate Ex,0)** in the text field and click the **Add To Formula** button.

3. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

Total Monthly Salary

After you have created a monthly salary, bonus, and merit formula, you can create a formula that adds all of those calculations together. This formula utilizes the IsNull block from the Functions tab which determines if there are blank values for a specific period in the calculated results from the monthly salary, bonus, and merit formulas. You can enter a 0 in the IsNull calculation to replace any blank values to make sure there is no impact to the overall calculation. For example, if a bonus calculation for a given month is $1000 and the IsNull function is used with a value of 0 for all other periods, the bonus calculation will remain at $1000. If you use a value of 1 in the IsNull calculation, then the bonus calculation for the year would be $1,011 (based on the 11 months carrying a 1 dollar value).



There are two different options for creating this formula:

- Option 1: Select each formula block.
- Option 2: Type the formula in the text field of the Text tab.

Option 1

Follow these instructions to create this formula by selecting each block:

1. Populate the formula criteria:
    - Formula Name: Total Monthly Salary
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50299 - Monthly Total Salary
    - Scenario Type: All Scenarios
    - Periods: All periods selected
2. Click the Functions tab and select the **IsNull** block.
3. Select the vertical ellipses to the right of the IsNull block.
4. Click the Accounts tab, select **50200** from the Account Name drop-down menu, select the **Monthly Salary** formula and click the **Add Block** button.
5. Select the vertical ellipses after the next comma block.
6. Click the Text tab, type **0** in the text field and click the **Add To Formula** button.
7. Select the vertical ellipses after the next comma block.
8. Click the **+** operator block.
9. Click the Functions tab and select the **IsNull** block.
10. Select the vertical ellipses to the right of the IsNull block.
11. Click the Accounts tab, select **50220** from the Account Name drop-down menu, select the **BonusCalc** formula and click the **Add Block** button.
12. Select the vertical ellipses after the next comma block.
13. Click the Text tab, type **0** in the text field and click the **Add To Formula** button.

14. Select the vertical ellipses after the next comma block.
15. Click the **+** operator block.
16. Click the Functions tab and select the **IsNull** block.
17. Select the vertical ellipses to the right of the IsNull block.
18. Click the Accounts tab, select **50250** from the Account Name drop-down menu, select the **Merit Calc** formula and click the **Add Block** button.
19. Select the vertical ellipses after the next comma block.
20. Click the Text tab, type **0** in the text field and click the **Add To Formula** button.
21. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

Option 2

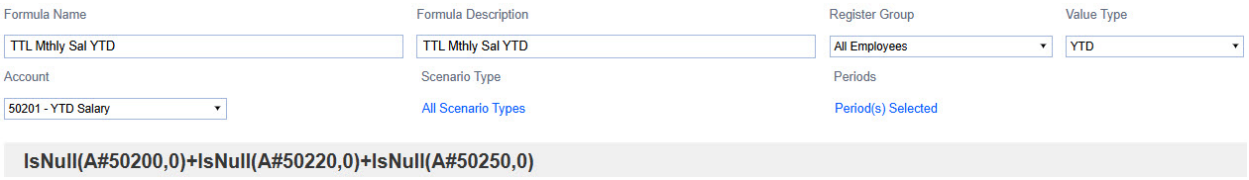
Follow these instructions to create this formula by typing the formula in the Text tab:

1. Populate the formula criteria:
    - Formula Name: Total Monthly Salary
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50299 - Monthly Total Salary
    - Scenario Type: All Scenarios
    - Periods: All periods selected
2. Click the Text tab, type **IsNull(A#50200,0)+IsNull(A#50220,0)+IsNull(A#50250,0)** in the text field and click the **Add To Formula** button.

3. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

Year-To-Date Salary Formula

The year-to-date salary formula is similar to the total monthly salary formula except that it calculates a year-to-date value type instead of a periodic.

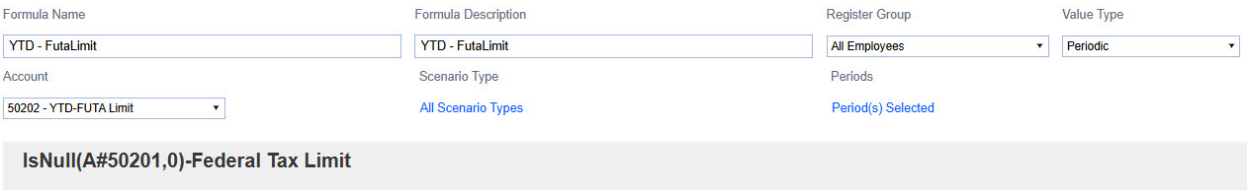


Follow these instructions to create a year-to-date salary formula using example data and dependency formulas:

1. Select the Total Monthly Salary formula from the formula dashboard and click the **Copy** button.
2. Update the Formula Name to YTD Salary.
3. From the Value Type drop-down menu, select **YTD**.
4. From the Account drop-down menu, select **50201 - YTD Salary**.
5. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

Year-To-Date Salary - Tax Limit Formula

The year-to-date salary - tax limit formula determines the difference between the YTD salary and the FUTA limit.



There are two different options for creating this formula:

- Option 1: Select each formula block.
- Option 2: Type the formula in the text field of the Text tab.

Option 1

Follow these instructions to create this formula using example data and dependency formulas:

1. Populate the formula criteria:
    - Formula Name: YTD - FUTA Limit
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50202-YTD-FUTA Limit
    - Scenario Type: All Scenarios
    - Periods: All periods selected
2. Click the Functions tab and select the **IsNull** block.
3. Select the vertical ellipses to the right of the IsNull block.
4. Click the Accounts tab, select **50202** from the Account Name drop-down menu, select the **YTD Salary** formula and click the **Add Block** button.
5. Select the vertical ellipses after the next comma block.

6. Click the Text tab, type **0** in the text field and click the **Add To Formula** button.
7. Select the vertical ellipses after the next parentheses block.
8. Click the **-** operator block.
9. Click the Globals tab, select the **Federal Tax Limit** from the drop-down menu and click the **Add To Formula** button.
10. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

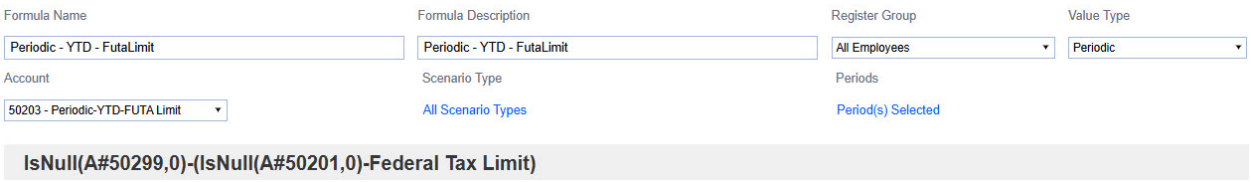
Option 2

Follow these instructions to create this formula by typing the formula in the Text tab:

1. Populate the formula criteria:
    - Formula Name: YTD - FUTA Limit
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50202 - YTD-Futa Limit
    - Scenario Type: All Scenarios
    - Periods: All periods selected
2. Click the Text tab, type **IsNull(A#50201,0)-Federal Tax Limit** in the text field and click the **Add To Formula** button.
3. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

Periodic - (YTD-FUTA Limit) Formula

The Periodic - (YTD - FUTA Limit) formula determines the difference between the total monthly salary formula and the year-to-date - FUTA Limit formula.



There are two different options for creating this formula:

- Option 1: Select each formula block.
- Option 2: Type the formula in the text field of the Text tab.

Option 1

Follow these instructions to create this formula using example data and dependency formulas:

1. Populate the formula criteria:
    - Formula Name: Periodic - (YTD - FUTA Limit)
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50203 - Periodic - (YTD - FUTA Limit)
    - Scenario Type: All Scenarios
    - Periods: All periods selected
2. Click the Functions tab and select the **IsNull** block.

3. Select the vertical ellipses to the right of the IsNull block.
4. Click the Accounts tab, select **50299** from the Account Name drop-down menu, select the **Total Monthly Salary** formula and click the **Add Block** button.
5. Select the vertical ellipses after the next comma block.
6. Click the Text tab and type **0** in the text field and click the **Add To Formula** button.
7. Select the vertical ellipses after the next parentheses block.
8. Click the **-** operator block.
9. Click the Functions tab and select the **IsNull** block.
10. Select the vertical ellipses to the right of the IsNull block.
11. Click the Accounts tab, select **50201** from the Account Name drop-down menu, select the **YTD Salary - Tax Limit** formula and click the **Add Block** button.
12. Select the vertical ellipses after the next comma block.
13. Click the Text tab, type **0** in the text field and click the **Add To Formula** button.
14. Select the vertical ellipses after the next parentheses block.
15. Click the **-** operator block.
16. Click the Globals tab, select the **Federal Tax Limit** from the drop-down menu and click the **Add To Formula** button.
17. Click the **)** operator block.
18. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

Option 2

Follow these instructions to create the formula by typing in the Text tab:

1. Populate the formula criteria:
    - Formula Name: Periodic - (YTD - FUTA Limit)
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50203 - Periodic - (YTD - FUTA Limit)
    - Scenario Type: All Scenarios
    - Periods: All periods selected
2. Click the Text tab, type **IsNull(A#50299,0)-(IsNull(A#50201,0)-Federal Tax Limit)** in the text field and click the **Add To Formula** button.
3. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

FUTA Formula

The FUTA formula utilizes two IIF statements. The first is used to determine if the year-to-date salary is less than or equal to the federal tax limit. If it is, then the calculation will apply the total monthly salary multiplied by the FUTA rate. If the first IIF statement is false and the federal tax limit is surpassed, then the calculation will apply the difference between the total monthly salary and the result of the (YTD Salary - Tax Limit) value multiplied by the FUTA rate.

There are two different options for creating this formula:

- Option 1: Select each formula block.
- Option 2: Type the formula in the text field of the Text tab.

Option 1

Follow these instructions to create this formula using example data and dependency formulas:

1. Populate the formula criteria:
    - Formula Name: FUTA
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50000 - FUTA
    - Scenario Type: All Scenarios
    - Periods: All periods selected
2. Click the Functions tab and select the **IIF** block.
3. Click the Accounts tab, select **50201** from the Account Name drop-down menu, select the **YTD Salary** formula and click the **Add Block** button.
4. Click the **<=** operator.
5. Click the Globals tab, select **Federal Tax Limit** from the drop-down menu and click the **Add To Formula** button.
6. Click the **,** operator block.
7. Click the Globals tab, select **Federal Tax Rate** from the drop-down menu and click the **Add To Formula** button.
8. Click the ***** operator block.

9. Click the Accounts tab, select **50299** from the Account Name drop-down menu, select the **Total Monthly Salary** formula and click the **Add Block** button.
10. Select the vertical ellipses after the next comma block.
11. Click the Functions tab and select the **IIF** block.
12. Click the Accounts tab, select **50203** from the Account Name drop-down menu, select the **Periodic-(YTD-FUTA Limit)** formula and click the **Add Block** button.
13. Click the **<** operator block.
14. Click the Text tab, and type **0** in the text field and click the **Add To Formula** button.
15. Select the vertical ellipses after the next comma block.
16. Click the **,** operator block.
17. Click the Accounts tab, select **50203** from the Account Name drop-down menu, select the **Periodic-(YTD-FUTA Limit)** formula and click the **Add Block** button.
18. Click the ***** operator block.
19. Click the Globals tab, select **Federal Tax Rate** from the drop-down menu and click the **Add To Formula** button.
20. Click the **)** operator block.
21. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

Option 2

Follow these instructions to create this formula by typing the formula in the Text tab:

1. Populate the formula criteria:
    - Formula Name: FUTA
    - (Optional) Formula Description
    - Register Group: All Employees
    - Value Type: Periodic
    - Account: 50000 - FUTA
    - Scenario Type: All Scenarios
    - Periods: All periods selected
2. Click the Text tab, and type **IIF(A#50201<=Federal Tax Limit,Federal Tax Rate*A#50299,IIF(A#50203<0,0,A#50203*Federal Tax Rate))** in the text field and click the **Add To Formula** button.
3. Click the **Save** button. You will receive a confirmation message with the option to create another formula or return to the formula library.

Help and Miscellaneous Information

 Access the help documentation.

Display Settings

OneStream Solutions frequently display multiple elements for data entry and analysis. We recommend you set your screen resolution to a minimum of 1920 x 1080 for optimal form and report rendering. Adjust the Windows System Display text setting to 100% and do not apply 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 in order to preserve the integrity of the naming conventions.

Example Package Name: `PLN_PV9.0_SV120_PackageContents.zip`

Identifier	Description
PLN	Solution ID
PV9.0.0	Minimum Platform version required to run solution
SV120	Solution version
PackageContents	File name

OneStream Solution Modification Considerations

A few cautions and considerations regarding the modification of OneStream Solutions:

- Major changes to business rules or custom tables within a OneStream 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 OneStream 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 OneStream 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: Workforce Planning Formulas

The following table is a detailed list of some Workforce Planning sample formulas.

Formula	Description	Calculation Logic	Calculation Definition
Monthly Salary	This is the amount of money an employee earns in a month.	FTE*Salary/12	FTE*Salary/12
Bonus	This is an extra payment given to an employee on top of their regular salary.	IIF (CurrentPeriod=Bonus Per,Salary* Bonus,0)	IIF(CurrentPeriod=Bonus Per,Salary*Bonus,0)

Formula	Description	Calculation Logic	Calculation Definition
Merit	This often refers to a system where pay increases are based on employee performance.	IIF (CurrentPeriod>=Merit Incr Per, Monthly Salary*Merit Rate Ex,0)	IIF(CurrentPeriod>=Merit Incr Per,A#50200*Merit Rate Ex,0)
Medical Benefits	These are health-related benefits provided by an employer.	FTE*Health Ins Rate/12	FTE*Health Ins Rate/12
Workers Comp	This insurance type pays for medical care and physical rehabilitation of employees injured on the job.	Workers Comp Rate*Monthly Salary	IIF(A#50200>0,Workers Comp Rate*A#50200,0)

Formula	Description	Calculation Logic	Calculation Definition
Disability	This insurance type pays a portion of an employee's salary for a period of time if they are unable to work due to injury or illness.	Disb Ins Rate*Monthly Salary	A#50200*Disb Ins Rate

Formula	Description	Calculation Logic	Calculation Definition
FUTA	This is short for Federal Unemployment Tax Act, which is a tax that employers pay to the federal government to fund state workforce agencies. These agencies provide unemployment benefits to people who have lost their jobs.	IIF(Total YTD Salary<=Federal Tax Limit,Federal Tax Rate*Total Monthly Salary,IIF (PartialLimitCalc<0,0, PartialLimitCalc*Federal Tax Rate))	IIF(A#50201<=Federal Tax Limit,Federal Tax Rate*A#50299,IIF (A#50203<0,0,A#50203*Federal Tax Rate))

Formula	Description	Calculation Logic	Calculation Definition
SUTA	This is short for State Unemployment Tax Act, which is a tax that funds programs and benefits for unemployed citizens.	SUTA rate*Monthly Salary	A#50200*SUTA rate
PTO Vacation	This is short for paid time off, which is a policy that allows employees to take time off from work while still being paid.	Vacation Factor*Monthly Salary	A#50200*Vacation Factor

Formula	Description	Calculation Logic	Calculation Definition
PTO Sick	This is short for paid time off, which is a policy that allows employees to take time off from work due to illness, while still being paid.	Sick Pay Factor*Monthly Salary	A#50200*Sick Pay Factor

Appendix B: Custom Service Factory

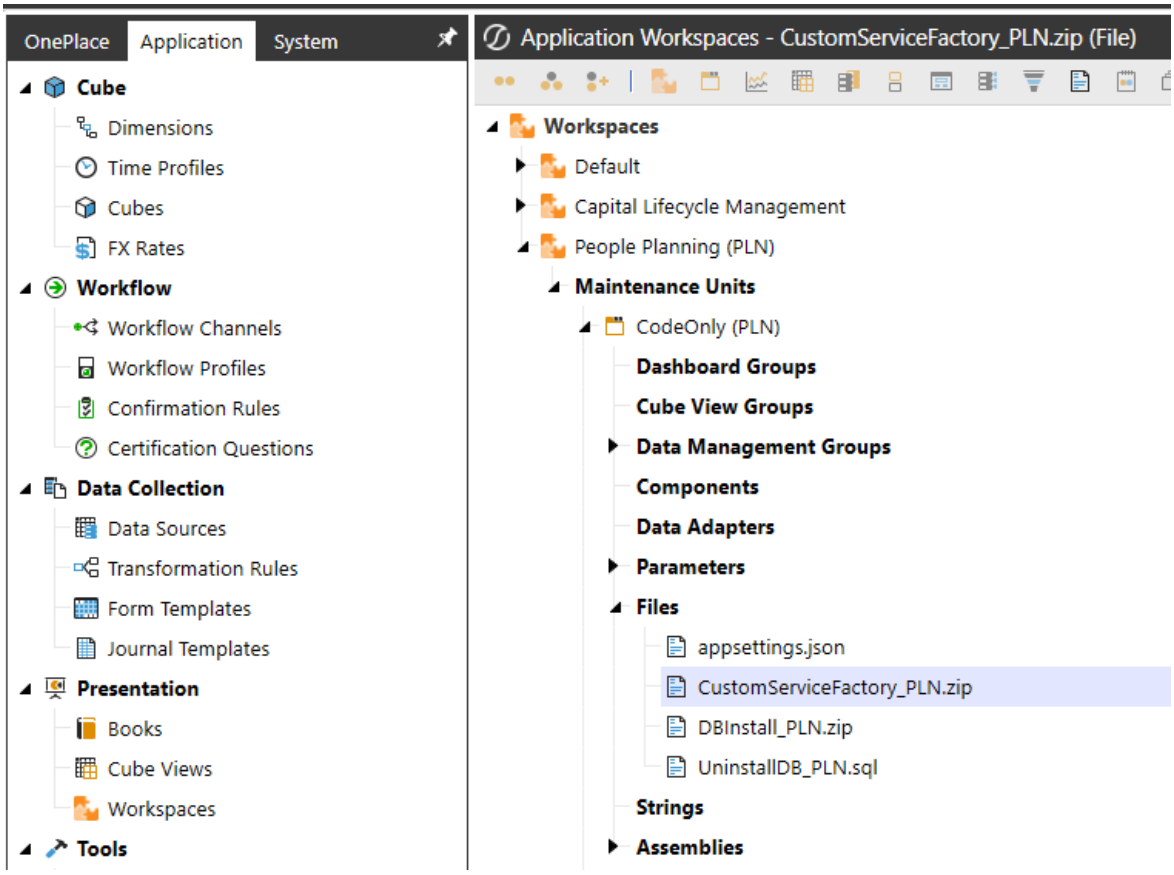
The purpose of the Custom Service Factory is to provide a method in which you can add customizations to the solution. You can add custom events for components, Dynamic Grid, and the SQL.

> **IMPORTANT:** Maintain your assembly as customizations will NOT remain in place during a solution upgrade.

> **NOTE:** The Custom Service Factory includes the ability to modify the table view service for the register editor. The table name for the register editor is already present in the custom service factory code and does not need to be changed. Other areas of the Custom Service Factory have placeholders such as my component or my grid name.

Set Up the Custom Service Factory

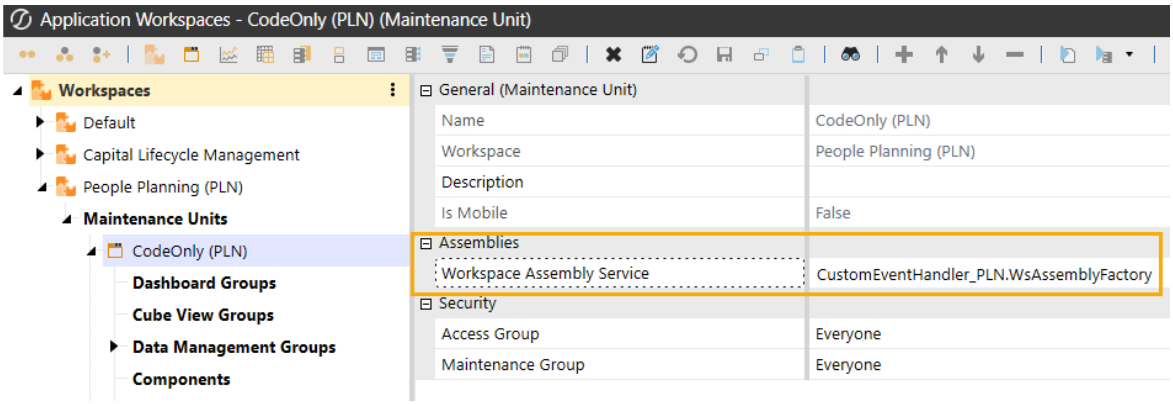
1. On the **Application** tab click **Workspaces** > **Line Item Modeling** > **Maintenance Units** > **CodeOnly (PLN)** > **Files**.
2. In the **Files** folder, click **CustomServiceFactory_PLN.zip**.



3. In the **General (File)** pane, click **Download File** and save the file to an appropriate location.
4. On the **Application** tab, click **Tools** > **Load/Extract**.
5. On the **Load** tab, locate `CustomServiceFactory_PLN.zip` using the **Select File** icons and click **Open**.

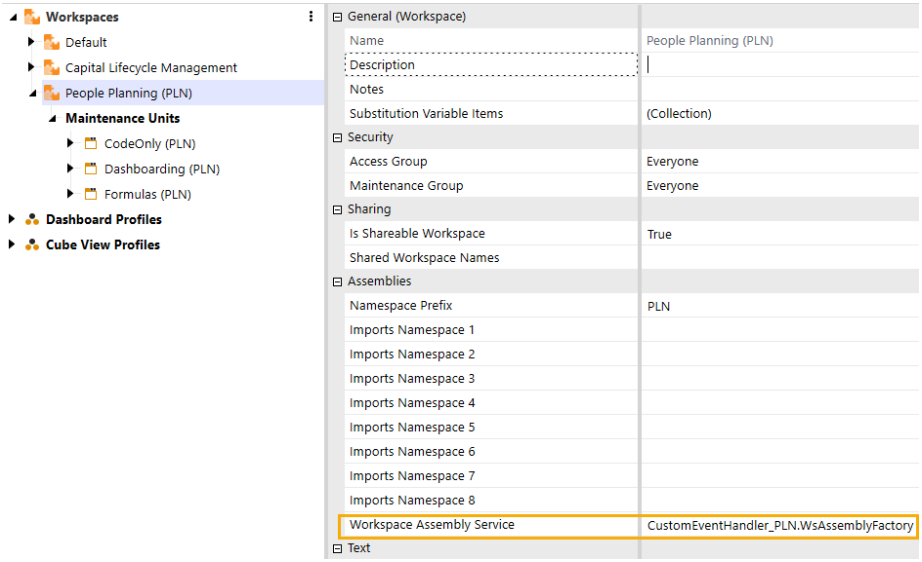
Change Assemblies Setting upon Install

1. On the **Application** tab click **Workspaces** > **Line Item Modeling** > **Maintenance Units** > **CodeOnly (PLN)**.
2. Update the **Workspace Assembly Service**: CustomEventHandler_ PLN.WsAssemblyFactory



3. On the **Application** tab click **Workspaces** > **Line Item Modeling**.
4. Update the **Workspace Assembly Service**: CustomEventHandler_

PLN.WsAssemblyFactory



Maintain Assembly

1. On the **Application** tab, click **Tools** > **Load/Extract** > **Extract**.
2. In the File Type drop-down menu, select **Application Workspaces**.
3. In the Items to Extract drop-down menu, unselect **All**.
4. Click **Workspaces** > **Line Item Modeling** > **Maintenance Units** > **Workspace Assemblies**.
5. Select **CustomEventHandler_PLN**.
6. Click the extract button  .

Example

Here is an example method that checks the titles of user-entered data in the Dynamic Grid for an empty or Boss value and substitutes them with the Team Leader value.

```
using OneStream.Shared.Common;
using OneStream.Shared.Wcf;
using OneStreamWorkspacesApi.V800;
using System;

namespace Workspace.__WsNamespacePrefix.__WsAssemblyName
{
    public class WsDynamicGridService : IWsasDynamicGridV800
    {
        public XFDynamicGridGetDataResult GetDynamicGridData(SessionInfo si, BRGlobals
brGlobals, DashboardWorkspace workspace, DashboardDynamicGridArgs args)
        {
            try
            {
                if ((brGlobals != null) && (workspace != null) && (args != null))
                {
                    return Workspace.__
WsNamespacePrefix.PLN.WsDynamicGridController.GetDynamicGridData(si, brGlobals, workspace,
args);
                }
                return null;
            }
            catch (Exception ex)
            {
                throw new XFException(si, ex);
            }
        }

        public XFDynamicGridSaveDataResult SaveDynamicGridData(SessionInfo si, BRGlobals
brGlobals, DashboardWorkspace workspace, DashboardDynamicGridArgs args)
        {
            try
            {
                // DO NOT MODIFY THIS METHOD ALL CHANGES SHOULD BE ADDED INSIDE THE
BEFORE/AFTER EVENT METHODS

                if ((brGlobals != null) && (workspace != null) && (args != null))
                {
                    BeforeEvent(si, brGlobals, workspace, args);

                    // Insert logic here to save modified rows.
                    XFDynamicGridSaveDataResult result = Workspace.__
WsNamespacePrefix.PLN.WsDynamicGridController.SaveDynamicGridData(si, brGlobals, workspace,
args);

                    AfterEvent(si, brGlobals, workspace, args, result);
```

```
                    return result;
                }

                return null;
            }
            catch (Exception ex)
            {
                throw new XFException(si, ex);
            }
        }

        private static void BeforeEvent(SessionInfo si, BRGlobals brGlobals,
DashboardWorkspace workspace, DashboardDynamicGridArgs args)
        {
            // GET FUNCTION NAME FROM COMPONENT SELECTION CHANGED SERVER TASK ARGUMENTS
            if (args.Component.Name.XFEqualsIgnoreCase("dg_Register_Insert_Delete_PLN"))
            {
                MyCustomBeforeEvent(si, args);
            }
        }

        private static void AfterEvent(SessionInfo si, BRGlobals brGlobals,
DashboardWorkspace workspace, DashboardDynamicGridArgs args, XFDynamicGridSaveDataResult
taskResult)
        {
            // GET FUNCTION NAME FROM COMPONENT SELECTION CHANGED SERVER TASK ARGUMENTS
            if (args.Component.Name.XFEqualsIgnoreCase("ComponentName"))
            {
                MyCustomAfterEvent(si);
            }
        }

        // PUT CUSTOM METHODS HERE
        private static void MyCustomBeforeEvent(SessionInfo si, DashboardDynamicGridArgs
args)
        {
            if (args.SaveDataArgs != null)
            {
                foreach (XFEditedDataRow row in args.SaveDataArgs.EditedDataRows)
                {
                    if (row.InsertUpdateOrDelete == DbInsUpdateDelType.Insert)
                    {
                        var titleValue = row.ModifiedDataRow.Items.ContainsKey("Title") ?
row.ModifiedDataRow.Items["Title"]?.ToString() : null;

                        if (string.IsNullOrWhiteSpace(titleValue) || titleValue == "Boss")
                        {
                            row.ModifiedDataRow.Items["Title"] = "Team Leader";
                        }
                    }
                }
            }
        }

        private static void MyCustomAfterEvent(SessionInfo si)
```

```
            {
                // ADD CUSTOM AFTER EVENT CODE HERE
            }
        }
    }
```