Forecast Value Add Guide

PV9.1.0 SV102

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Overview

This document details the expectations, functionality, and requirements of each page in the AIS Forecast Value Add user interface.

Blueprints Page

The first major section of Forecast Value Add is the Blueprints page. On this page, users can create new Blueprints, or Edit, Delete, and View existing Blueprints.

Click on a Blueprint in the available grid view to see basic information displayed relating to meta data members and target values.

For more information on Blueprints, see the Blueprints section.

Views Page

The Views page is the next major section of Forecast Value Add. Here, users can create new Views or interact with existing ones.

Click on a view listed on the left-hand side of the screen and configure the appropriate drop-downs to display accuracy metrics in your desired format.

For more information on Views, see the Views section.

Setup and Installation

This section contains details for planning, configuring, and installing the Forecast Value Add solution. Before you install the solution, familiarize yourself with these details.

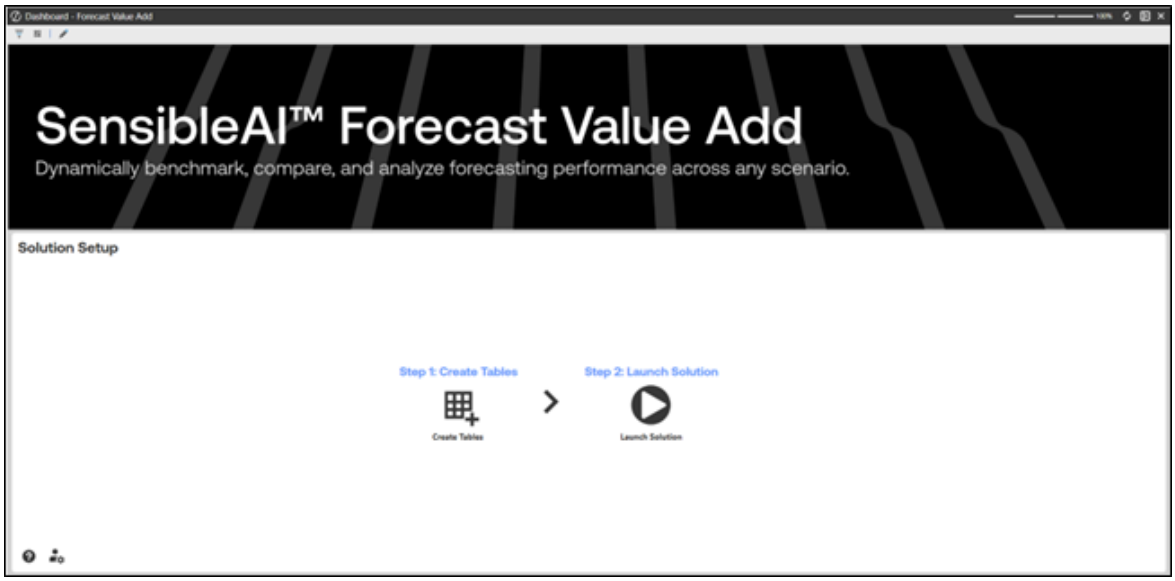
Dependencies

Component	Description
OneStream 9.1.0 or later	Minimum OneStream Platform version required to install this version of Forecast Value Add.
Xperiflow 4.1.0 or later	Minimum version required to install this version of Forecast Value Add.
Xperiflow Business Rules SV230 or Later	Minimum Xperiflow Business Rules version required to install this version of Forecast Value Add.

Set Up Forecast Value Add

Follow these steps to set up Forecast Value Add:

1. Download Forecast Value Add from the OneStream Marketplace.
2. Follow the outlined Solution Setup steps:



   a. Create Tables

   b. Launch Solution

3. Solution setup is complete once the Home page is rendered.


SensibleAI™ Forecast Value Add
Dynamically benchmark, compare, and analyze forecasting performance across any scenario.
Blueprints
Views

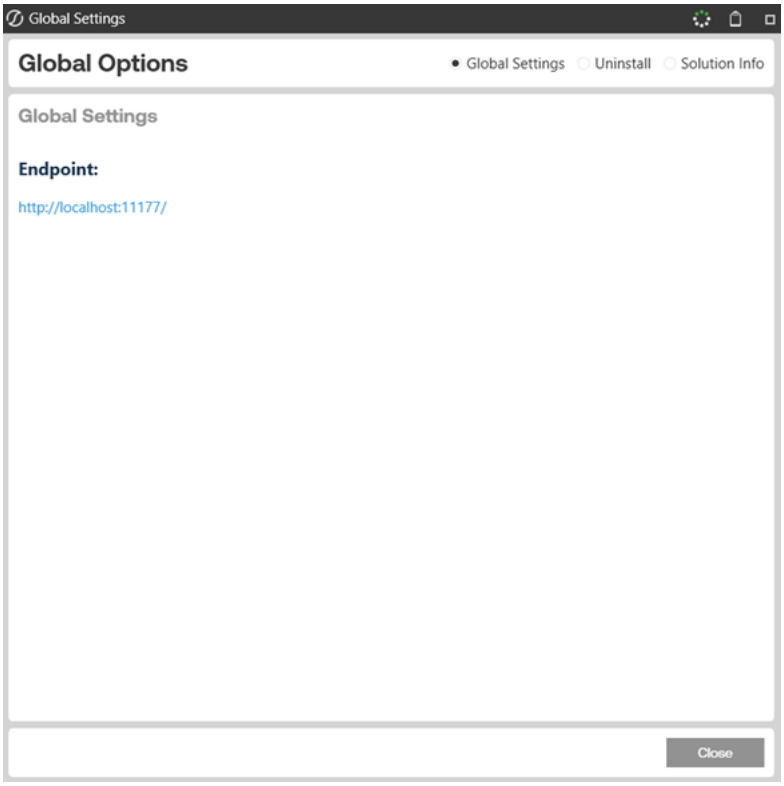
Settings

To access the Global Options page, click the settings icon in the bottom left corner of the page.

Global Options Include:

- Global Settings
- Uninstall
- Solution Info

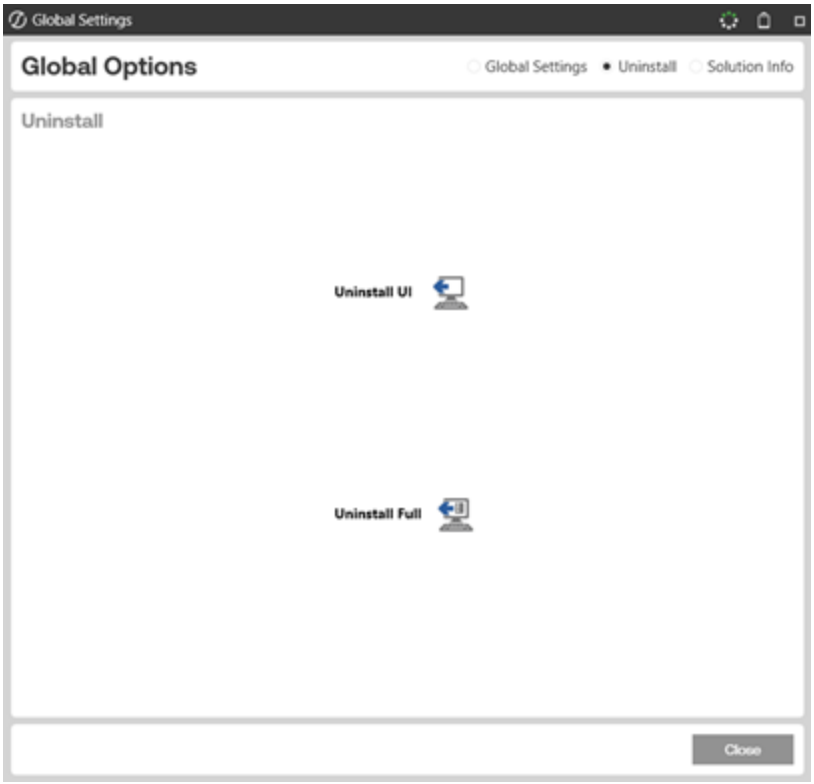
Global Settings



Endpoint parameter: Predefined URL to access the application.

> **CAUTION:** Do not make changes to this value unless instructed to do so.

Uninstall



There are two uninstall options:

Uninstall UI removes Forecast Value Add, including related dashboards and business rules, but leaves the database and related tables in place. Choose this option if you want to accept a Forecast Value Add update without removing data tables.

Uninstall Full removes all related data tables, data, Forecast Value Add dashboards, and business rules. Choose this option to completely remove Forecast Value Add or to perform an upgrade that is so significant in its changes to the data tables that this method is required.

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

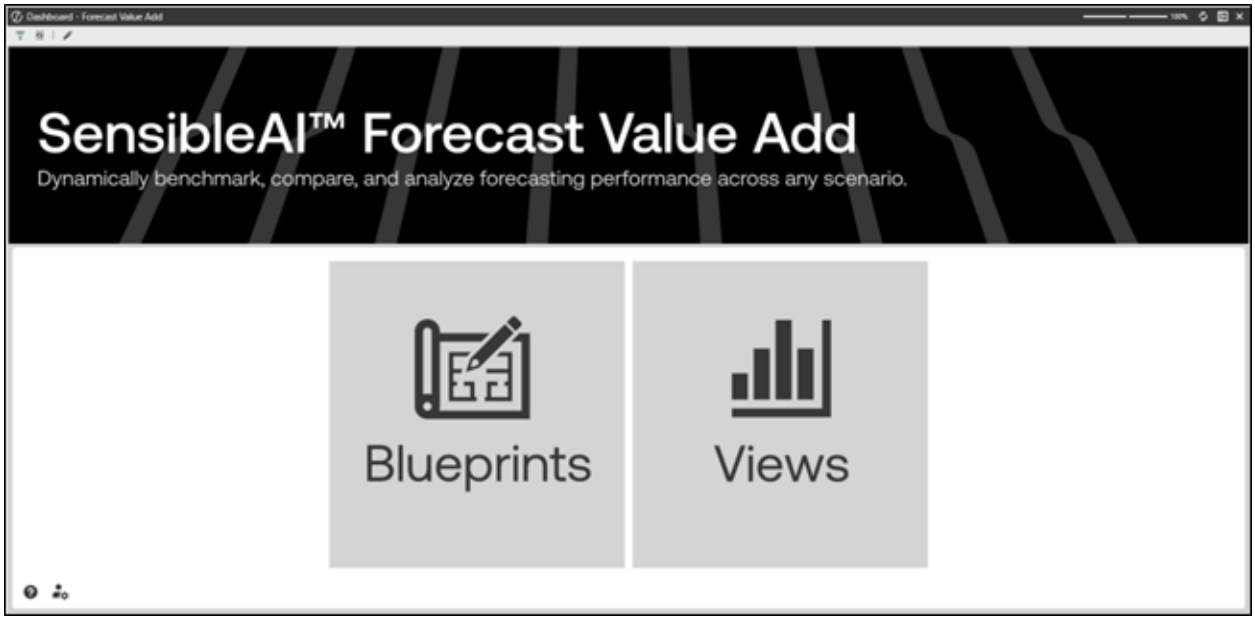
Solution Info

The Solution Version is comprised of the Solution Code, Solution Version, Xperiflow Version, and OneStream platform version (Solution Code-Solution Version-Xperiflow Version-OneStream Platform Version).

Navigate in Forecast Value Add

The following sections describe the ways to navigate the Forecast Value Add solution.

Forecast Value Add Home Page



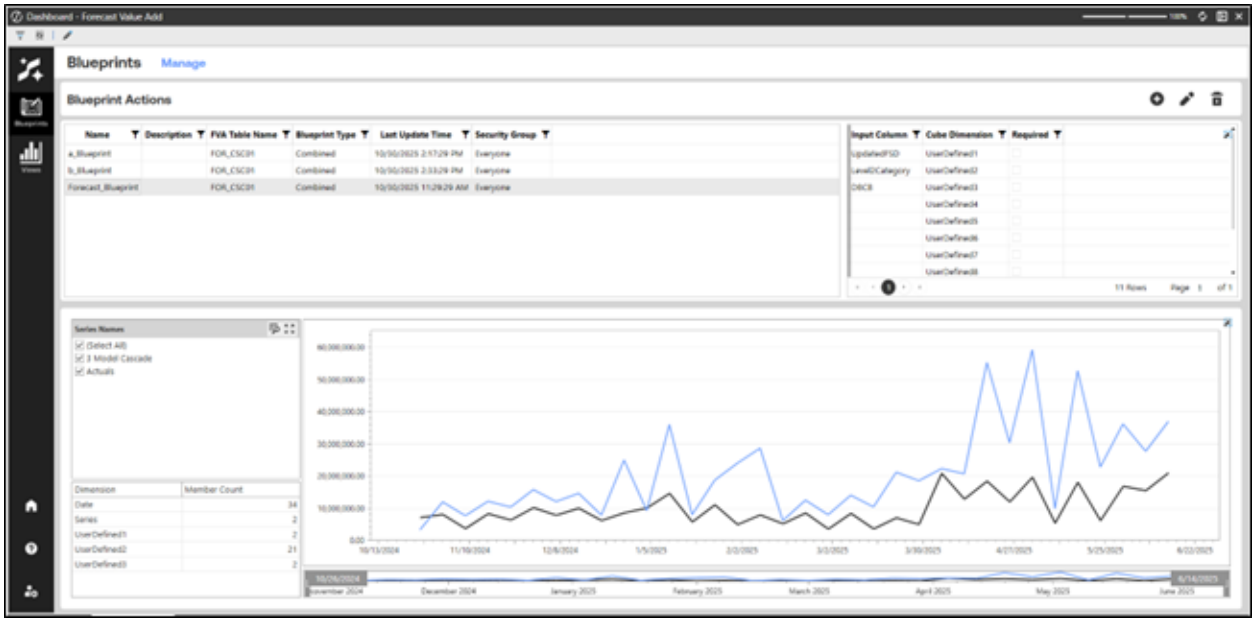
The Home Page is the launching point for the solution. From here, you can enter either of the two main sections (defined below).

Forecast Value Add Sections

The left navigation panel includes two sections: **Blueprints** and **Views**. The top left corner of the upper tool bar shows the pages available for each section. You can refresh each page by clicking on the page name. For each section of Forecast Value Add, there is only a single page. Below are the descriptions of each page available in the two sections:

Blueprints Section – Manage Page

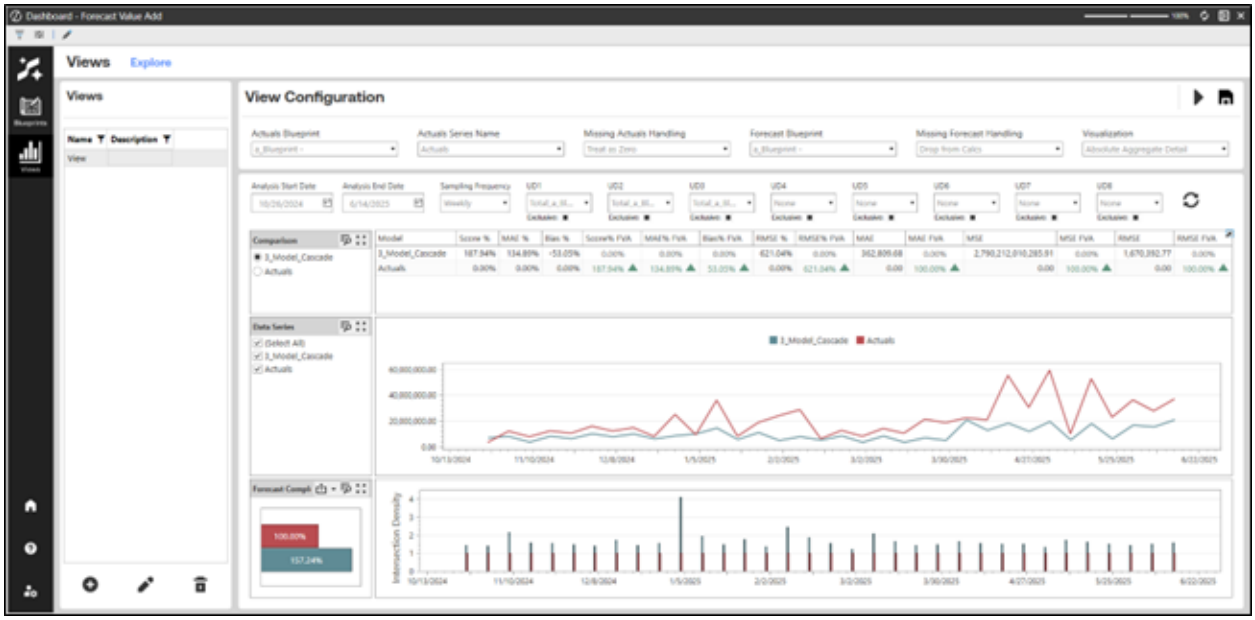
Within the Manage Page, click on a Blueprint in the available grid to generate data and related visuals on the dashboard.



To create, edit, or delete a Blueprint, use the action buttons on the top right-hand corner of the screen, and follow the workflow steps presented on your screen.

Views Section – Explore Page

Within the Explore Page, click on a View in the available grid on the left to begin configuring its respective settings.



To create, edit, or delete a View, use the action buttons on the bottom left-hand corner of the screen, and follow the workflow steps presented on your screen.

Toolbar

Each section page includes the **Home**, **Help**, and **Settings** buttons at the lower left.

Icon	Description
 **Home**	Opens the Forecast Value Add Home page.
 **Help**	Opens the Forecast Value Add User Guide.
 **Settings**	Opens the Forecast Value Add settings. Configure Global Settings options and uninstall the solution.

Blueprints

A blueprint is an object created by the user that utilizes a data table as its source. The data table may contain exclusively Forecast data, exclusively Actuals data, or a combination of both.

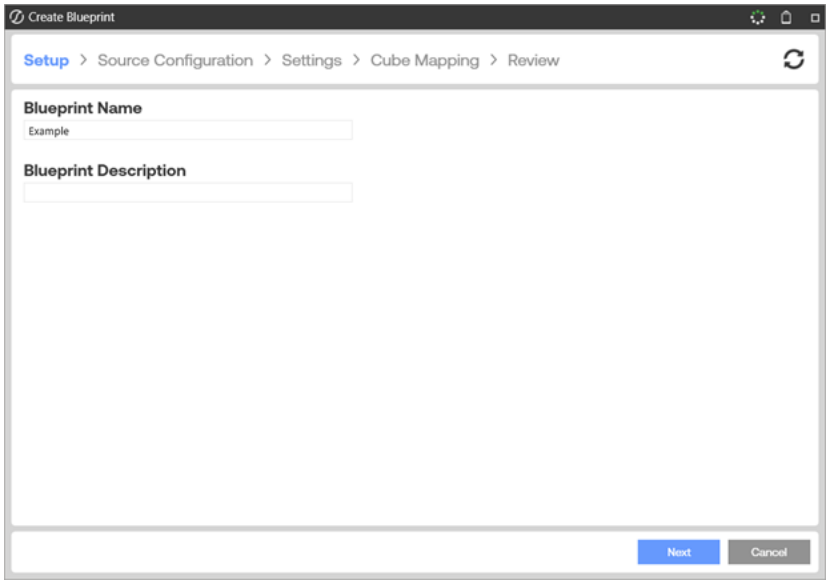
Blueprints can be directly interacted with via the following actions: create , edit , and delete .

Blueprint Actions

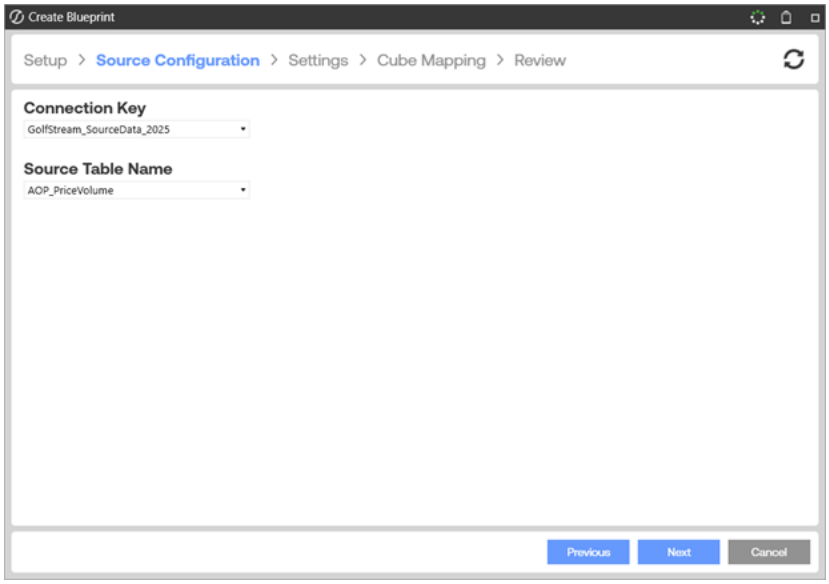
Create

The create button allows users to create a new Blueprint.

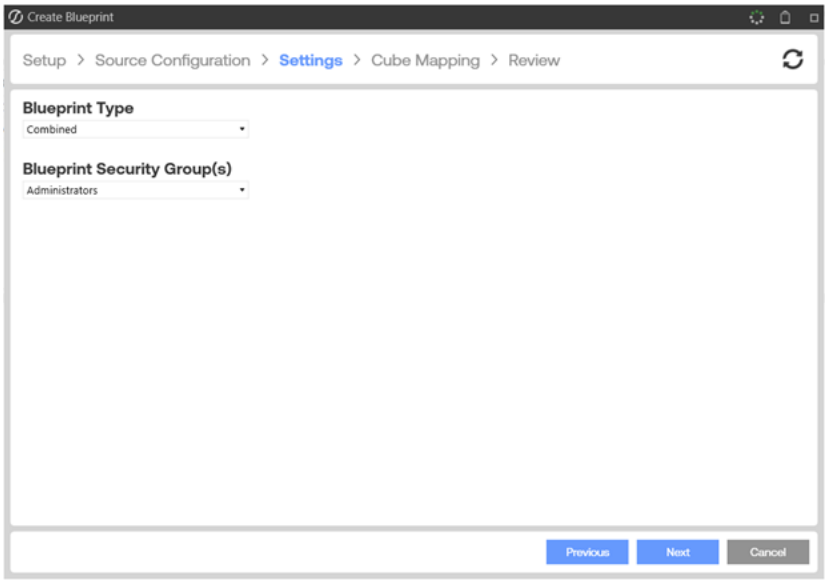
1. **Setup**: Begin by providing a name and (optionally) a description for your Blueprint. Ensure the name does not contain any special characters or spaces - only underscores are permitted.



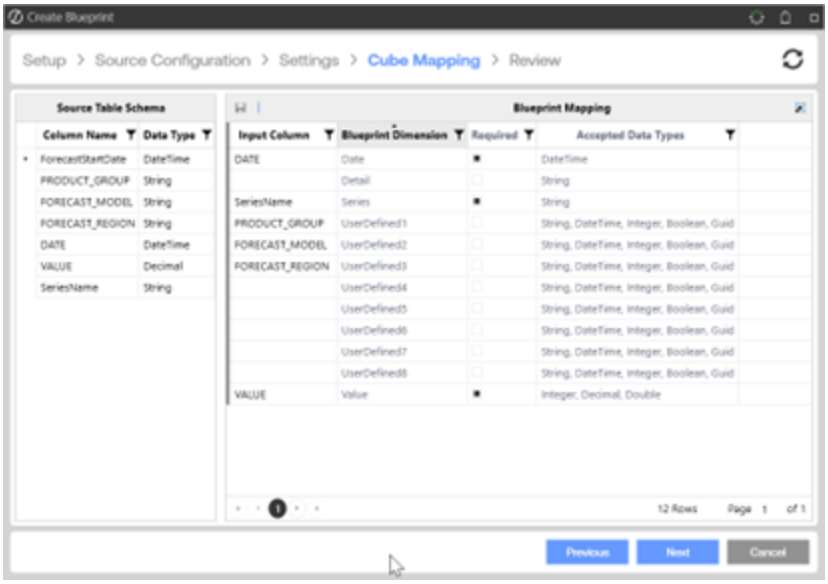
2. **Source Configuration**: Select the database and associated data table from which you would like to source your Blueprint's data.



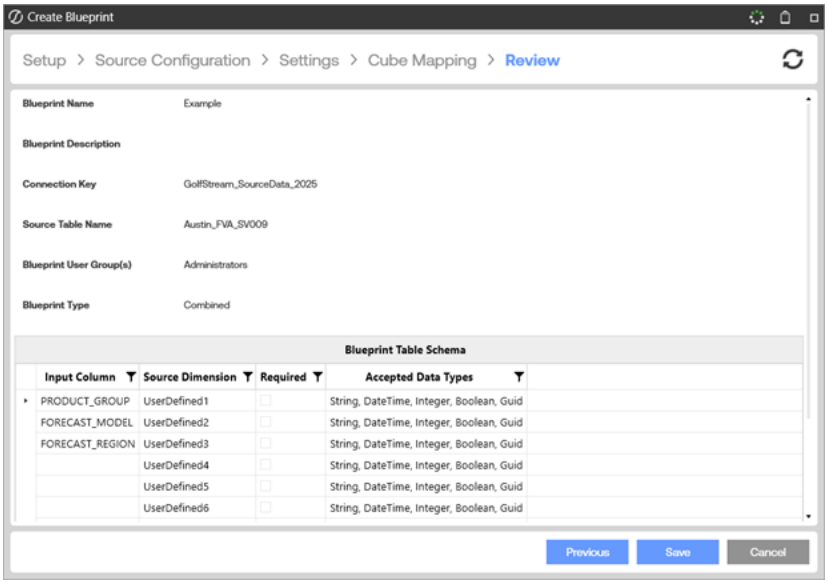
3. **Settings**: Choose the appropriate Blueprint Type based on the type of data contained in your data table.



4. **Cube Mapping**: Map the relevant source table columns to the appropriate Blueprint columns. A single column cannot be mapped to more than one dimension. Ensure all fields marked as required are completed, and that at least one UserDefined field is provided. Additionally, the data types of the source table must match the accepted data types defined in the Blueprint mapping table.



5. **Review**: Confirm all fields and settings are accurate and complete.

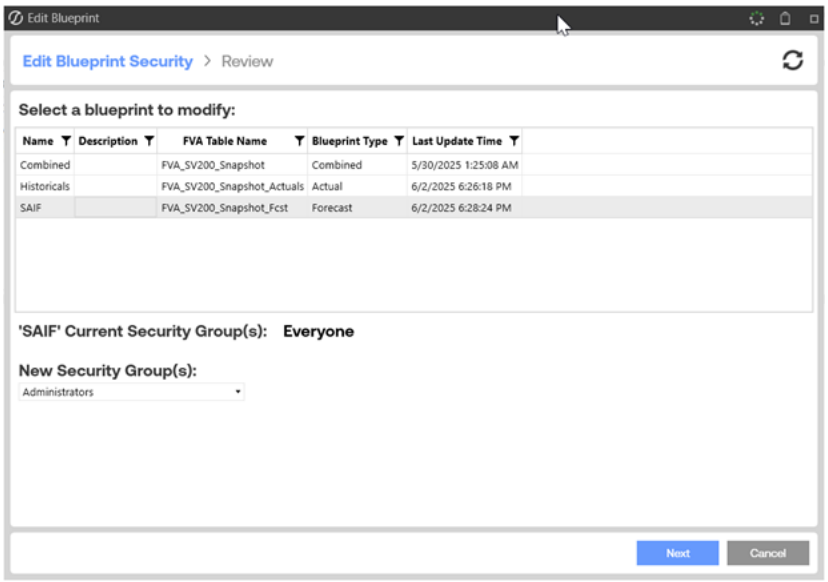


Edit

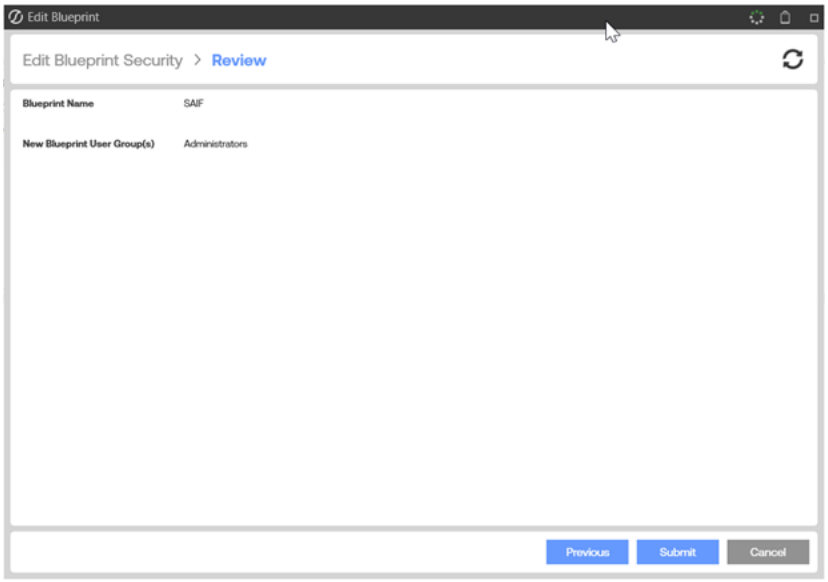
The edit button allows users to edit the security group assigned to each blueprint.

> **NOTE:** Blueprint settings, apart from security, cannot be altered after creation. For all other updates, a Blueprint will have to be deleted and recreated with the necessary updates.

1. **Edit Blueprint Security**: Begin by selecting a Blueprint from the grid for which you want to modify security settings. Then, choose the new security groups to assign to the selected Blueprint.



2. **Review**: Confirm all fields and settings are accurate and complete.

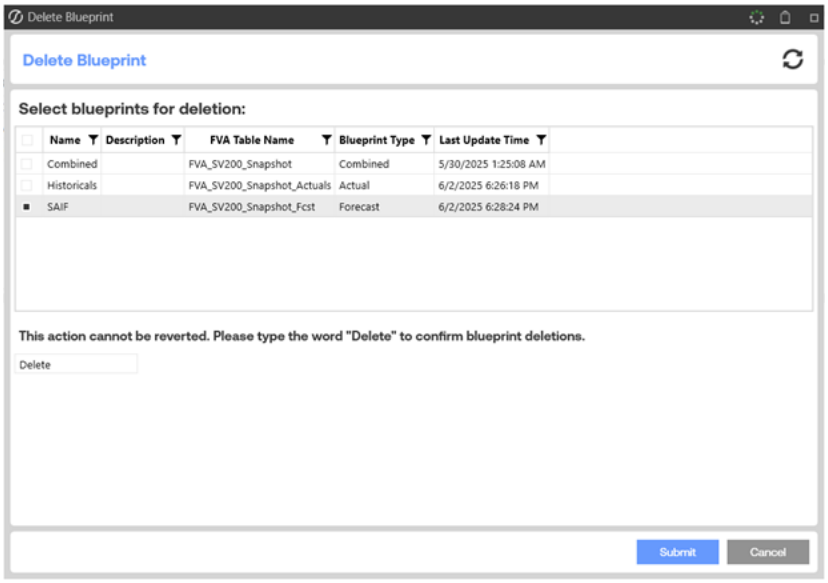


Delete

The delete button allows users to delete a blueprint.

> **NOTE:** This action is irreversible once submitted.

1. **Delete Blueprint**: Select all Blueprints from the grid that you wish to delete. To confirm the deletion, type “Delete” into the provided text box.



Views

A view is composed of a combination of compatible Blueprints selected by the user for comparative analysis.

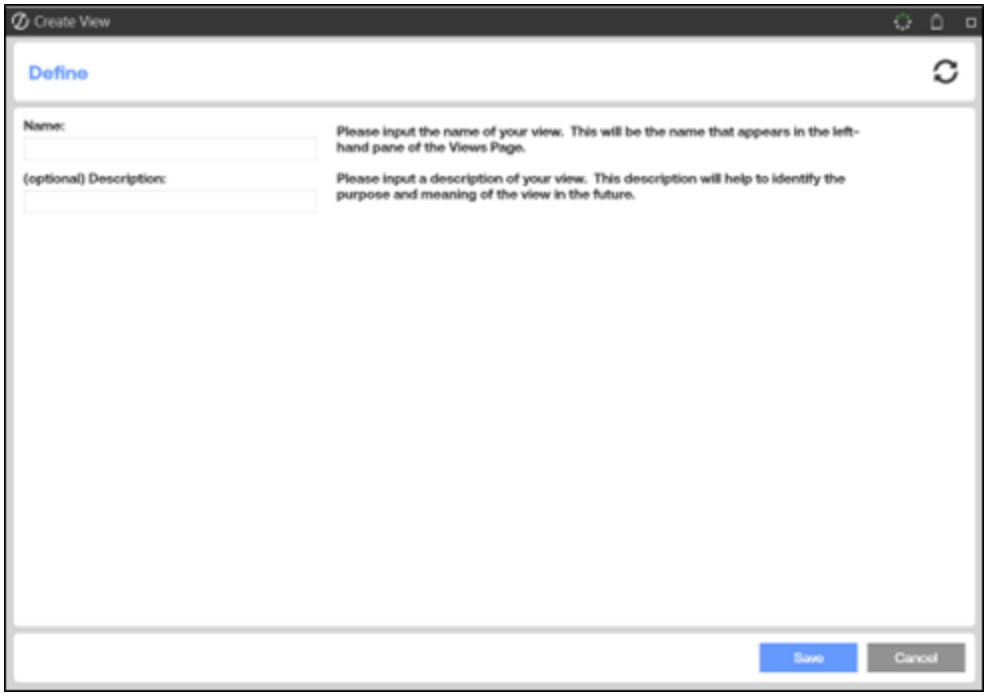
View Actions

Views can be directly interacted with via the following actions: create  , edit  , and delete  . Additionally, once a view has been configured, the following additional actions can be taken as well: run  and save  .

Create

The create button allows users to create a new View.

1. **Define**: Start by giving your view a name and (optionally) a description. Ensure the name does not contain any special characters or spaces - only underscores are permitted.



Edit

The edit button allows users to edit the description of a selected View.

> **NOTE:** The name of a view cannot be changed after it has been created. To use a different name, you must delete the existing view and create a new one with the desired name.

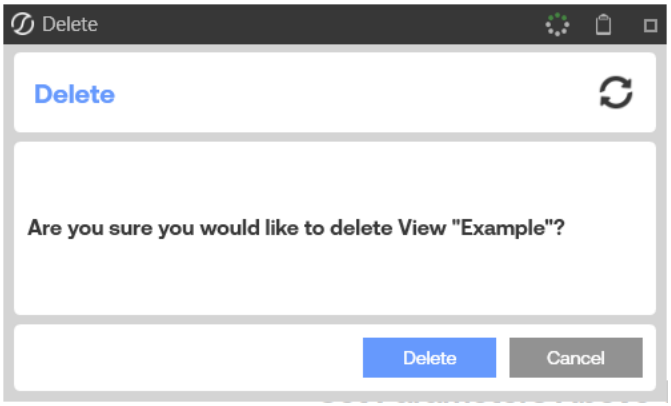
1. **Update**: Change the description, as necessary.

Delete

The delete button allows users to delete a selected blueprint.

> **NOTE:** This action is irreversible once submitted.

1. Ensure the listed view is correct, then click ‘Delete’.



Run

Click the run button to run the configured view or to refresh the current view with updated drop-down selections.

Save

Click the save button to store your selections for the view. This ensures the selections will persist and remain available whenever the view is accessed in the future, including by other users.

Visualizations

A Visualization presents graphical representations of accuracy and error metrics across the different data series within each Blueprint included in the selected view.

Visualization Configurations

Each visualization will present different configuration options, depending on the type of data being presented and the differing ways it can be filtered. Below are the configurable fields across all visualizations:

Analysis Start Date & Analysis End Date

This is the window of time you would like to evaluate your accuracy metrics over. Either type in the dates manually or select from the calendar view.

Sampling Frequency

The desired level of time granularity for viewing your data. This will dynamically up-sample or down-sample the data accordingly.

UD#

The User Defined dimension (target dimension) members you would like to filter the metrics for. Select the “Total_” member to see error metrics for all UD members. Selecting the “Exclusive” box beneath the respective UD# filter applies the inverse list of the selected members, implying an “everything except…” logic to the selection.

Series 1 & Series 2

The two forecast series you wish to compare against each other.

Error Metric

The error metric for which you would like the values to be calculated.

Visualization Types

The following sections define the different visualization types available to utilize in the Value-Add Views:

Net Aggregate View

The Net Aggregate view and the Absolute Aggregate view share many similarities. However, the error metrics are not computed using the same method. The Net Aggregate view first aggregates all values using the Date dimension and then calculates the error metrics using those new total values.

Absolute Aggregate View

The Absolute Aggregate view provides the accuracy of each Series' error metric values in comparison to one another across all Blueprint Intersections. Error metric scores are calculated at the most granular intersection and then aggregated.

Raw Metric View

This view is an embedded Spreadsheet giving users a live pivot table to filter and maneuver to evaluate the data as necessary. There are two tabs: ‘Raw Data’ and ‘Pivot Table’. The ‘Raw Data’ tab contains all metadata from the blueprint(s) defined along with their respective accuracy metrics. The ‘Pivot Table’ tab is a digestible and presentable grid that references the ‘Raw Data’ tab as its data source.

Win Margin View Tabs

Time Series –

All Time Series tabs (TS) include a visual to compare the total values of Series 1 and Series 2 compared to their Actuals across dates.

Volatility –

Each point in this chart displays the win margin (as a value or percentage) plotted against the volatility or coefficient of variation, which is based on the standard deviation of the Blueprint intersection versus the mean. You may filter by dimension intersections using the checked boxes on the left. The win margins displayed in these charts are based on the selected Metric option.

The bar chart in the left-hand pane displays the number of times the Top Series forecasts beat the Bottom Series forecasts and vice versa.

Mean Error %

Plots the mean of the selected error metric against significance for Series 1 and Series 2 and compares the two.

Score %

This tab displays the same visuals as the Mean Error % tab but utilizes the score % metric rather than Mean Error metric.

DateTime Win Margin View Tabs

Detail –

The top line graph compares values for the Top Series, Bottom Series, and Actuals.

The middle line graph displays the Win Margin values for the Top Series compared to the Bottom Series for each given date.

The bottom line graph compares error metric values for the Top Series and Bottom Series.

Breakdown –

The top line graph compares absolute error metric values for the Top Series and Bottom Series across each date.

The bottom bar chart is similar to the line graph above, but it breaks down the error metrics by dimension rather than displaying the data in a time series format.

The stacked bar chart in the left-hand pane displays the number of Top Series wins, Bottom Series wins, and Series ties.

Help and Miscellaneous Information

Display Settings

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

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

Package Contents and Naming Conventions

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

Example Package Name: FVA_SV102_XPFv4.1.0_PV910_PackageContents.zip

Identifier	Description
FVA	Solution ID
SV102	Solution Version

Identifier	Description
XPFv4.1.0	Xperiflow Version
PV910	Minimum Platform version required to run solution
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

Error Metrics

Mean Absolute Error (MAE)

An error measurement between paired observations expressing the same phenomenon. Examples of Y versus X include predicted versus observed comparisons, subsequent time versus initial time, and one measurement technique versus an alternative measurement technique.

Formula:

$$MAE = \frac{1}{n}\sum_{i=1}^{n}|\widehat{y_i} - y_i|$$

Where:
$\widehat{y_i}$ = Predicted value for the i^{th} data point
y_i = Actual value for the i^{th} data point
n = number of observations

Interpretation: Lower is better.

Benefits:

- Easily interpretable.
- No favoritism towards over- or under-predictions.

Shortcomings:

- The relative size of the error is not obvious as with percentages.

Mean Squared Error (MSE)

The average squared difference between the estimated values and the actual value. MSE is a risk function, corresponding to the expected value of the squared error loss.

Formula:

$$MSE = \frac{1}{n}\sum_{i=1}^{n}(\hat{y}_i - y_i)^2$$

Where:
$\hat{y}_i$ = Predicted value for the i^{th} data point
y_i = Actual value for the i^{th} data point
n = number of observations

Interpretation: Lower is better.

Benefits:

- Increased penalty for larger errors.
- Ensures positive values for easy interpretation.

Shortcomings:

- Less intuitive than MA