



Scenario Analysis 123 Guide

PV530 SV100

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Overview

Scenario Analysis 123 allows you to quickly create and iterate through several what-if scenarios using different driver-based rules to analyze different outcomes. The solution lets you create and manage rules and run calculation jobs across scenarios, and includes reporting capabilities so you can compare results across scenarios.

Important Usage Considerations

This topic identifies some considerations for best implementing and using Scenario Analysis 123.

Access

Scenario Analysis 123 is not intended for use in Workflows and must only be accessed using the OnePlace dashboard. Limit usage of Scenario Analysis 123 to the following:

- Experienced OneStream “Power Users”
- Administrator security role
- Security group with a limited number of experienced “Power Users”

Performance Impacts

Scenario Analysis 123 is not intended for full Entity or multi-Entity hierarchy consolidations spanning multiple periods or years for multiple users. Calculation jobs created using Force Consolidate are intended for base level calculations and small consolidation hierarchies.

The single environment shares resources between the two applications. Testing Scenario Analysis 123 in a single environment that includes Development and Production applications will impact both applications. Coordinate an optimal testing window within your organization to prevent negative impact on other reporting processes performed in the Production application.

When copying base data from one scenario to another, it is important to understand how much data is being copied and whether you need to consolidate the whole Entity structure or multiple Entity structures. Multiple large consolidations in the system may impact each other depending on the environment configuration.

Refer to the consolidation schedules of your organization before using Scenario Analysis 123.

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 also: "MarketPlace Solution Modification Considerations" on page 23

Dependencies

Component	Description
OneStream 5.3.0 or later	Minimum Platform version required to install this version of Scenario Analysis 123.
OneStream App for Windows	Scenario Analysis 123 is optimized for the OneStream App for Windows which has all the functionality as the browser-based version of OneStream.

Select the Scenario Analysis 123 Development Location

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

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

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

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

Create the OneStream Development Application

1. Ensure all the OneStream artifacts relating to Scenario Analysis 123 such as scenarios are in the Production application.
2. Copy your Production OneStream application to your Development environment and rename it. This Development version will be used for your Scenario Analysis 123 project.

Application Server Settings

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

See also: "Solution Database Migration Advice" on page 23

Configure the OneStream Application Server

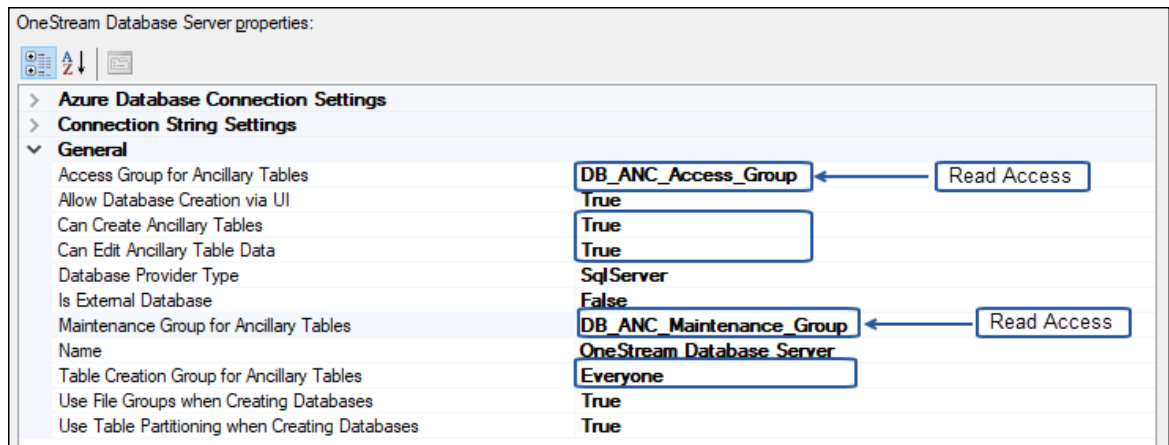
Be sure that the security group settings include the users who work on and set up the solution before proceeding.

NOTE: Group settings are applicable to all MarketPlace solutions; it is important to keep the group names generic.

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

Setup and Installation

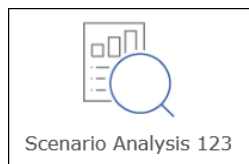
- **Table Creation Group for Ancillary Tables:** Select a group who can create tables.



4. Restart Internet Information Server.

Install Scenario Analysis 123

1. On the OneStream MarketPlace Dashboard, click **MarketPlace > Scenario Analysis 123**.

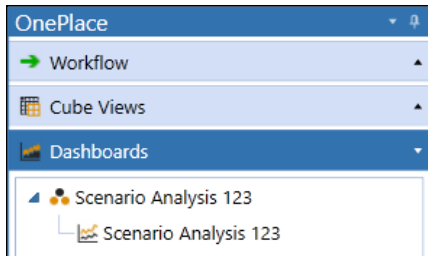


2. On the **Scenario Analysis 123** Solution page, select the appropriate Platform version from **Minimum Platform Version**.
3. Select the most recent version from **Solution Version** and then click **Download**.
4. Log in to OneStream.
5. Click **Application > Tools > Load/Extract**.
6. On **Load**, locate the solution package using the Select File icons and click **Open**.
7. When the solution's file name appears, click **Load**.
8. Click **Close** to complete the installation.

Set Up Scenario Analysis 123

The first time you run Scenario Analysis 123, you are guided through the table setup process.

- In OneStream, click **OnePlace > Dashboards > Scenario Analysis 123 > Scenario Analysis 123**.



Create Tables

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

This step may be necessary when upgrading even if tables are already present. Scenario Analysis 123 does not drop any tables that already exist but modifies table structures and adds any new ones if necessary.




2. Click **Step 2: Launch Solution** to open Scenario Analysis 123.

Package Contents

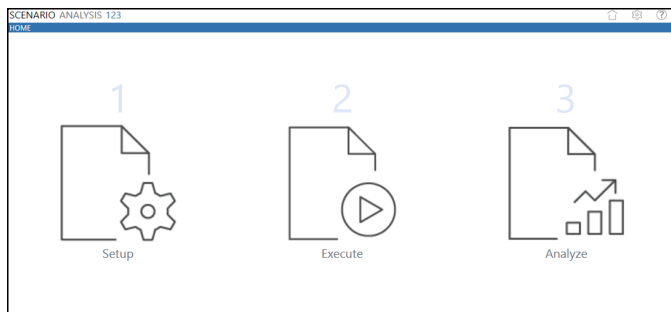
The Dashboard Maintenance Unit provides the user interface for Scenario Analysis 123 and includes the required dashboard groups, components, data adapters, parameters and files.

Home

 The Home page contains Setup, Execute, and Analyze.

Scenario Analysis 123 is grouped into these sections:

- Setup: Establishes the creation and maintenance of scenario definitions, rule sets, and rules.
- Execute: Contains execution and management of calculation jobs for scenario definitions.
- Analyze: Displays charts and pivot grids to view different scenario results.



Settings



The Settings page contains the Global Options tab where you can set properties to determine administration and uninstall options.

Global Options

Visit the Global Options page to start configuring Scenario Analysis 123.

NOTE: All Global Options settings are retained during an upgrade.

SCENARIO ANALYSIS 123	
SETTINGS	
Global Options	Access & Manage Scenario Analysis: Administrators
Uninstall	Analyze Results Row Limit: 50000

Access and Manage Scenario Analysis Security Role

Scenario Analysis 123 security is governed at the global level. Therefore, it is the assignment of the user group to the security role that determines who will be the global Scenario Analysis 123 Administrators.

Assign User Group to Security Role

- Click **Global Options**, select the user group from the drop-down list (the default value is Administrators), and click **Save**.

Analyze Results Row Limit

Analyze Results Row Limit sets the maximum number of data rows that can be used to display the charts and pivot grids on the Analyze page. The default value is 50,000 rows which can be raised or lowered to account for server and client hardware-based performance limitations.

Uninstall

Uninstall lets you remove the user interface or the entire Scenario Analysis 123 solution. If performed as part of an upgrade, any changes to standard Scenario Analysis 123 objects are lost.

There are two Uninstall options:

1. **Uninstall UI** removes Scenario Analysis 123, including related dashboards and business rules but leaves the database and related tables in place. For some releases, this step should be performed before accepting any new version of Scenario Analysis 123 since some of the Dashboards or other objects may have been modified.
 - Choose this option to update without removing the data tables.
 - The Scenario Analysis 123 Release Notes will indicate if an overinstall is supported.
2. **Uninstall Full** removes all the related data tables, all data, Scenario Analysis 123 dashboards, and business rules. Choose this option to remove Scenario Analysis 123 or to perform an upgrade, so significant in its changes to the data tables, that this method is required.

CAUTION: Uninstall procedures are irreversible.

Setup



Setup lets you create and maintain rule sets, rules and definitions.

Definitions

Definitions consist of a Source and Target scenario for a cube. Rules sets and rules can be created and applied to the Definition's Target Scenario.

Name

Freeform text field to give definition a short name.

Description

Optional freeform text field containing additional definition information.

Target Scenario

The scenario to which the rules are applied.

Source Scenario

The scenario that will be copied to the Target scenario.

Cube

The Cube where the Source and Target scenarios are located.

Created By

The name of the user who created the definition.

Created Date

The date the definition was created.

NOTE: Cube and Source scenarios are displayed based on the user's security access.

Definitions				
Name	Description	Target Scenario	Source Scenario	Cube
2020 Mar - EMEA Adjustment		2020 Mar EMEA	Plan	Finance
2020 Mar - NA Adjustment		2020 Mar NA	PlanAdj	Finance

Click **Create** to create a Target scenario by copying all Dimension Library properties and settings, including security settings, from the Source scenario in the same cube.

Create a Definition

TIP: Selecting a Scenario Type should be considered and based on business requirements. A new Scenario Type can be used if your requirements do not require all financial model rules to be attached to that Scenario Type.

1. On the **Setup** page, click **Create**.
2. In the **Create Definition** dialog, select the following:
 - **Definition Name:** Enter a display name to identify the definition.
 - **Definition Description:** Enter an optional description for the definition.
 - **Cube:** Select the cube where the Source and Target scenarios reside.
 - **Source Scenario:** Select the Source scenario to copy to the Target scenario.
 - **Target Scenario Type:** Select the new Target scenario type (defaults to the same type as the selected Source scenario).
 - **Target Scenario Name:** Enter the new Target scenario name where the rules will be applied.
 - **Target Scenario Description:** Enter an optional description for the new Target scenario.
 - Select **Copy All Rule Sets and Rules from Source** to copy existing scenario analysis definition rule sets and rules that exist for the source scenario. This will not copy member formulas and business rules.
3. Click **Save**.

IMPORTANT: The settings of the Source scenario and Target scenario must be the same. For example, copying from a Source scenario using Range to a Target scenario using Yearly is not recommended.

Create Definition

Definition Name:
2020 Mar - NA Adjustment

Definition Description:
Adjustment for March, 2020.

Cube:
Finance

Source Scenario:
PlanAdj

Target Scenario Type:
Plan

Target Scenario Name:
2020 Mar NA

Target Scenario Description:
Standard March, 2020

Copy All Rule Sets and Rules from Source:

Create **Cancel**

Delete a Definition

1. On the **Setup** page, select the definition.
2. Select **Delete Row(s)**.
3. Click **Save**.

NOTE: Deleting a definition does not delete the Target scenario created with the definition. To delete a scenario, use the Dimension Library under Application. Remove the scenario with a Data Management “Clear Data” job beforehand.

Rule Sets

Rule sets are a collection of rules you can apply to the Target scenario definition.

Name

Freeform text field to give rule set a short name.

Description

Optional freeform text field containing additional rule set information.

Process Sequence

The order in which the Rule Sets are run. Rule Sets are run in ascending order of the process sequence.

Active

Indicates if the rule set should be run during rule processing (on/off toggle).

Collapse Data

Collapses all data to the Import origin.

NOTE: Use Collapse Data if the scenario will be used in cube view forms to allow form adjustment entry into the origins.

Add a Rule Set

1. On the **Setup** page, select the definition.
2. Select **Insert Row** on the Rule Sets table header and then double-click these cells to enter information:

Name

Enter a display name to identify the rule set.

Description

Enter an optional description for the rule set.

Process Sequence

Enter the sequence order for rule set processing.

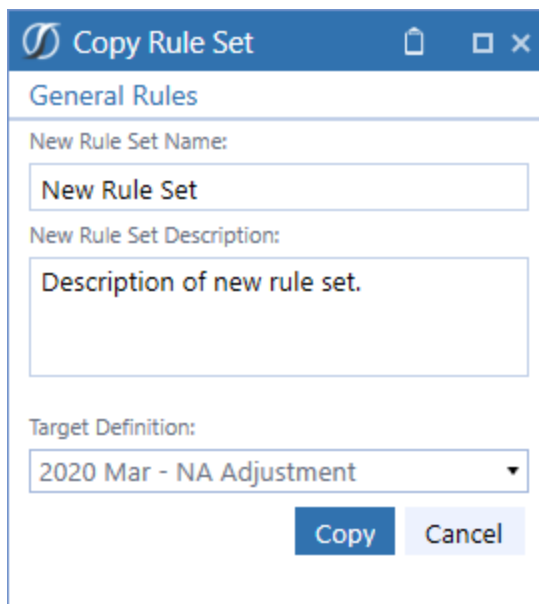
3. Click **Save**.

Copy a Rule Set

You can copy a rule set across definitions.

Setup

1. On the **Setup** page, select the definition.
2. Select the rule set you want to copy.
3. Select **Copy Set**.
4. In the **Copy Rule Set** dialog, add the new rule set name, a description and the target definition.
5. Click **Copy**.



The screenshot shows a dialog box titled "Copy Rule Set" with a blue header bar. Below the header, the section "General Rules" is visible. It contains three input fields: "New Rule Set Name" with the text "New Rule Set", "New Rule Set Description" with the text "Description of new rule set.", and "Target Definition" with a dropdown menu showing "2020 Mar - NA Adjustment". At the bottom right, there are two buttons: "Copy" and "Cancel".

Delete a Rule Set

1. On the **Setup** page, select the definition and rule set.
2. Select **Delete Row(s)**.
3. Click **Save**.

Rules

Rules are a collection of percentage values tied to a specific dimension and a time range for a given definition rule set.

Setup

Name

Freeform text field to give the rule a name.

Description

Optional freeform text field containing additional rule information.

Process Sequence

The order in which the rules are run. Rules are run in ascending order of the process sequence within each rule set.

NOTE: Consider how to sequence and process rules. Rules with broader to more specific member filters should be sequenced in ascending order.

Active

Indicates if the rule should be run during rule processing (on/off toggle)

Dimensions (Entity – UD8)

The dimensions available where member filters can be applied for the definition.

Origin

There are three options for origin: Top, BeforeAdj, and Import.

NOTE: Each dimension field is freeform so a member filters can be applied to filter data. Brackets are added to all member filters when applied to the formula in case a dimension member has a space. Example: [New York]

See the *Cube Member Filters* section in the *Design and Reference Guide* for details.

Periods (P1-P24)

Time periods 1 through 24 where the rule numerical percentage values will be applied.

Add a Rule

1. On the **Setup** page, select the definition and rule set.
2. Select **Insert Row** on the Rules table header and then double-click in these cells to enter information:

Name

Enter a display name to identify the rule.

Description

Enter an optional description for the rule.

Process Sequence

Enter the sequence order for the rule processing.

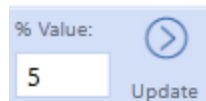
Dimensions (Entity – UD8)

Enter the member filters for each dimension.

Periods (P1-P24)

Enter the percentage values for each period. Alternatively, the percentage value can be entered in the % Value field for a percentage value to be applied to all periods.

3. Click **Save**.



The % Value field can be used to apply a percentage amount to all periods.

TIP: When creating a new definition, only the settings are copied from the Source scenario to the Target scenario. If the data needs to be copied to the Target scenario, apply an All or Root.Base member filter to each dimension in a rule. For example, **A#Root.Base, A#ALL**.

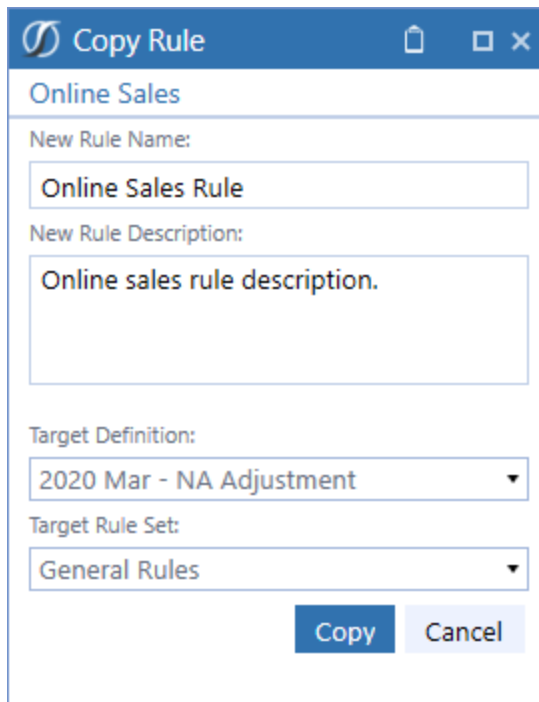
Copy a Rule

You can copy a rule to the same or another definition rule set.

1. On the **Setup** page, select the definition and rule set.
2. Select the rule to copy.
3. Select **Copy Rule**.

Setup

4. In the **Copy Rule** dialog, add the new rule name, an optional description, target definition and target rule set.
5. Click **Copy**.



Copy Rule

Online Sales

New Rule Name:
Online Sales Rule

New Rule Description:
Online sales rule description.

Target Definition:
2020 Mar - NA Adjustment

Target Rule Set:
General Rules

Copy Cancel

Delete a Rule

1. On the Setup page, select the definition and rule set.
2. Select the rule.
3. Select **Delete Row(s)**.
4. Click **Save**.

Apply a Formula to a Target Scenario

Once rule sets and rules are created, the underlying member filters and percentage values can be applied to the Target scenario member formula.

Setup



The Apply action adds the member filters and percentage values from each rule to the Target scenario member formula.

IMPORTANT: When changing rule sets or rules, click Apply to implement changes.

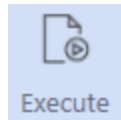
When the formula is applied the message, Formula Generated by Scenario Analysis 123 is added to the Formula text along with the data and time stamp of update to the Target scenario member formula in Member Properties.

The screenshot shows the 'Member Properties' dialog box for the 'PlanAdj' member. The 'Formula' field is highlighted in yellow and contains the text: `'---FORMULA GENERATED BY SCENA ...'`. Other properties shown include 'Use input view For Adj in Calculations' (False), 'No Data Zero View For Adjustments' (Periodic), 'No Data Zero View For NonAdjustments' (Periodic), and 'Consolidation View' (Periodic).

The screenshot shows the 'Formula Editor - [PlanAdj]' window. The formula text is displayed as follows:

```
1 Formula Header...
24 '---FORMULA GENERATED BY SCENARIO ANALYSIS 123 ON 5/1/2020 2:10:51 PM (UTC) ---'
25 'Initialize Rule Values Data Table
26 Dim dtRules As New DataTable()
```

Execute



Execute lets you manage and run calculation jobs for scenarios.

Calculation Jobs

Calculation jobs let you execute a Force Consolidate or Force Calculate data management job for a defined set of data in a definition scenario.

Definitions						Calculation Jobs - 2020 NA Sales Forecast v1						
Name	Description	Target Scenario	Source Scenario	Cube	Created By	Entity	Cons	Calculation Type	Start Period	Periods	Created By	Created Date
2020 NA Sales Forecast v1		2020 NA Sales Forecast v1	Actual	Houston	Admin	TotGroup.Base	Local	Force Consolidate	2019M1	1	Admin	5/4/2020 4:19:40 PM
2020 South Region Sales Forecast v1		2020 South Region Sales Forecast v1	Plan	Houston	Admin							

Entity

Where a member filter can be applied to execute the calculation job for a specific entity.

Cons

Where a member filter can be applied to execute the calculation job by a specific consolidation type.

Calculation Type

The type of calculation, Force Consolidate or Force Calculate.

NOTE: Consider the level in the Entity hierarchy. Each calculation job should only Force Consolidate or Force Calculate for the relevant data set required. For example, use Force Calculate when there are no parent members, all base, or just one base entity.

Start Period

The starting period for the calculation job.

Periods

The number of periods the calculation job should be executed.

Create a Calculation Job

1. On the **Execute** page, select the definition.
2. Select **Insert Row** on the Calculation Jobs table header and then double-click in these cells to enter information:

Entity

Enter the member filters for the Entity dimension.

Cons

Enter the consolidation type

Calculation Type

Select the calculation type of Force Consolidate or Force Calculate.

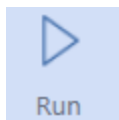
Start Period

Enter the starting period for the calculation job.

Periods

Select the number of periods the calculation job should be executed.

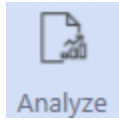
3. Click **Save**.



Runs the selected calculation data management job.

NOTE: Make performance considerations before executing calculation data management jobs against large metadata hierarchies.

Analyze



Contains charts and pivot grids to view and analyze different scenarios.

Filters

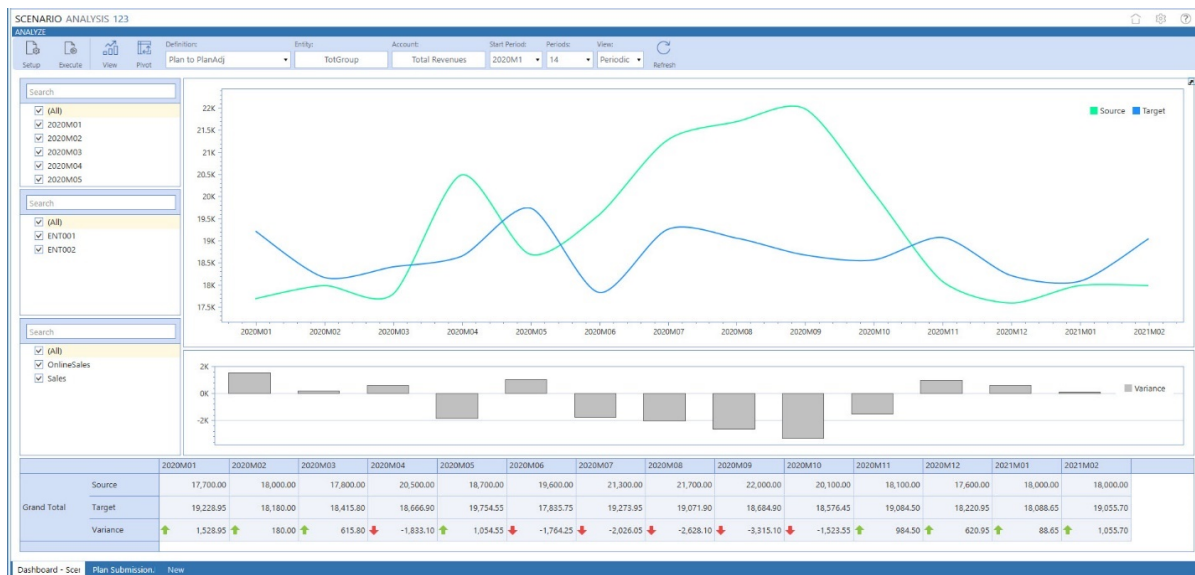
The View and Pivot results are returned when you specify the header filters.

Definition:	Entity:	Account:	Start Period:	Periods:	View:	Refresh
2020 NA Sales Forecast v1	TotGroup	TotalRevenues	2019M1	12	Periodic	

View



Provides a chart and grid so you can analyze variances between source and target scenarios. Additional Time, Entity, and Account filters are provided.



Analyze

Pivot



Provides a pivot grid where you can filter scenario data for a more granular analysis.

		2020M01			2020M02			2020M03			2020M04	
		Source	Target	Variance	Source	Target	Variance	Source	Target	Variance	Source	Target
ENT001	OnlineSales	1,500.00	1,600.95	-100.95	1,500.00	1,560.00	-60.00	1,500.00	1,613.40	-113.40	1,500.00	
	Sales	4,500.00	4,808.70	-308.70	4,500.00	4,576.50	-76.50	4,500.00	4,525.20	-25.20	4,500.00	
ENT001 Total		6,000.00	6,409.65	-409.65	6,000.00	6,136.50	-136.50	6,000.00	6,138.60	-138.60	6,000.00	
ENT002	OnlineSales	3,000.00	3,201.90	-201.90	3,000.00	3,120.00	-120.00	3,000.00	3,226.80	-226.80	3,000.00	
	Sales	9,000.00	9,617.40	-617.40	9,000.00	9,153.00	-153.00	9,000.00	9,050.40	-50.40	9,000.00	
ENT002 Total		12,000.00	12,819.30	-819.30	12,000.00	12,273.00	-273.00	12,000.00	12,277.20	-277.20	12,000.00	
Grand Total		18,000.00	19,228.95	-1,228.95	18,000.00	18,409.50	-409.50	18,000.00	18,415.80	-415.80	18,000.00	

Help & Miscellaneous Information

 This page contains additional solution documentation for Scenario Analysis.

Display Settings

OneStream and MarketPlace solutions frequently display multiple data elements for data entry and analysis. Set your screen resolution to a minimum of 1920 x 1080 to best render forms and reports.

Package Contents & 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: SAM_PV5.3.0_SV100_PackageContents.zip

Identifier	Description
SAM	Solution ID
PV5.3.0	Minimum Platform version required to run solution
SV100	Solution version
PackageContents	File name

Solution Database Migration Advice

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

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

1. In the production OneStream application, install the solution and create the data tables. See "Configure the OneStream Application Server" on page 3 for Database Server Connection settings and installation details.
2. Data tables are created in the OneStream Development application during the solution installation. Using the [Microsoft Data Migration Assistant](#), copy the data from the tables to the Production Microsoft SQL Server Database. Only the Microsoft SQL Administrator should run the migration assistant.

IMPORTANT: This process may overwrite existing table data in the production application database if data already exists.

MarketPlace Solution Modification Considerations

A few cautions and considerations regarding the modification of MarketPlace solutions:

- Major changes to business rules or custom tables within a MarketPlace solution will not be supported through normal channels as the resulting solution is significantly different from the core solution.

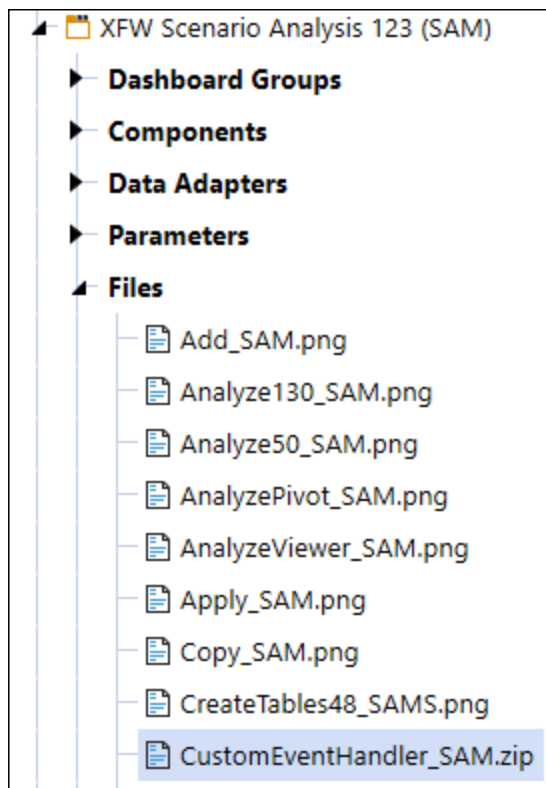
- If changes are made to any dashboard object or business rule, consider renaming it or copying it to a new object first. This is important because if there is an upgrade to the MarketPlace solution in the future and the customer applies the upgrade, this will overlay and wipe out the changes. This also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

Appendix A: Custom Event Model

The Custom Event model enables you to add customizations to Scenario Analysis 123 that are retained during an upgrade. Scenario Analysis 123 supports these models using business rules.

Set Up the Custom Event Model

1. On the Application tab click **Dashboards > Dashboard Maintenance Units > XFW Scenario Analysis 123 (SAM) > Files**.
2. In **Files**, click **CustomEventHandler_SAM.zip**.



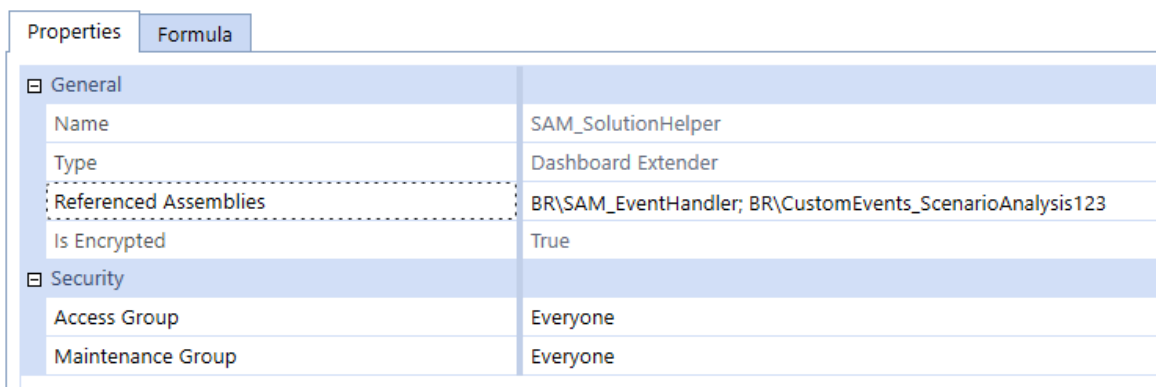
3. In the General (File) pane, click **Download File** and save the file to an appropriate location.
4. On **Application**, click **Tools > Load/Extract**.

5. On **Load**, locate **CustomEventHandler_SAM.zip** using the Select File icons and click **Open**.
6. When the file name appears, click **Load** to import the business rule.

Integrate Business Rules

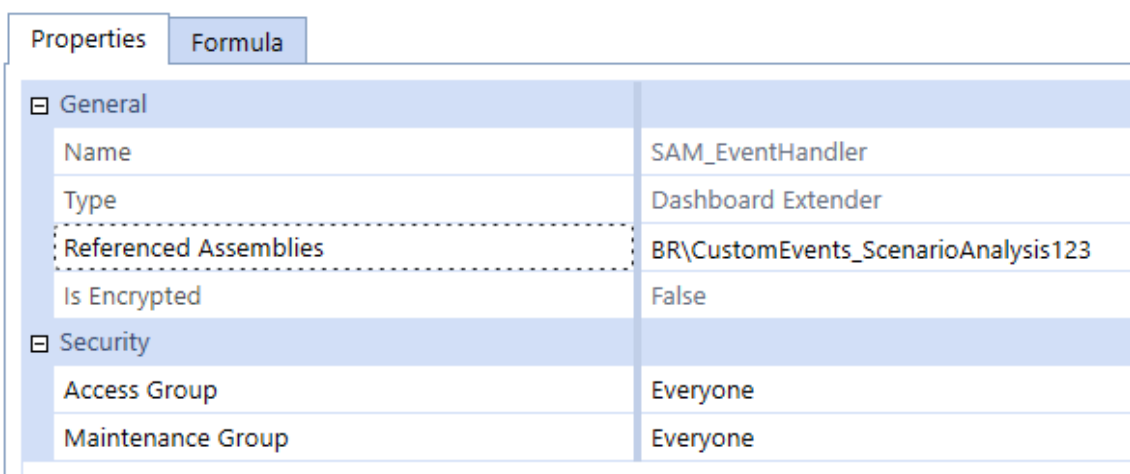
After importing the business rule, update the SAM_EventHandler business rule to integrate with the CustomEvents business rule.

1. In the General section of the SAM_SolutionHelper script **Properties** tab, add BR\CustomEvents_ScenarioAnalysis123 to Referenced Assemblies.



Properties	
Formula	
General	
Name	SAM_SolutionHelper
Type	Dashboard Extender
Referenced Assemblies	BR\SAM_EventHandler; BR\CustomEvents_ScenarioAnalysis123
Is Encrypted	True
Security	
Access Group	Everyone
Maintenance Group	Everyone

2. In the General section of the SAM_EventHandler script **Properties** tab, add BR\CustomEvents_ScenarioAnalysis123 to Referenced Assemblies.



Properties	
Formula	
General	
Name	SAM_EventHandler
Type	Dashboard Extender
Referenced Assemblies	BR\CustomEvents_ScenarioAnalysis123
Is Encrypted	False
Security	
Access Group	Everyone
Maintenance Group	Everyone

3. Comment out line 42 of the SAM_EventHelper business rule.
4. Uncomment line 43 of the SAM_EventHelper business rule.

```
41 | 'Custom Event Handler Declaration
42 |     Public Property m_CustomEvents As Object = Nothing
43 |     'Public Property m_CustomEvents As New DashboardExtender.CustomEvents_ScenarioAnalysis.MainClass
```

Once the custom event integration is complete, event actions can be defined in the CustomEvents_ScenarioAnalysis123 script.

NOTE: These events are not deleted or overridden in an upgrade. However, reapply these setup steps every time a new version is installed.

Available Custom Events

Before/After Selection Changed Events

These events run before/after a custom control is clicked:

- SaveSettings
- CreateSolutionTables
- ValidateSetupStepsExecuted
- Uninstall
- OnTableEditorOrGridSelection
- OnComboBoxSelection
- OnButtonClick
- OnShowContentPage

Before/After Save Data Events

These events run before/after the save event for a table editor. For example, this can be used to test grid data prior to saving and potentially not allowing the data to be saved if a check fails.

- OnSaveOrUpdateTableEditor