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POWER  
TO KNOW.

# SAS<sup>®</sup> Strategy Management 5.1 User's Guide



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# What's New in SAS Strategy Management 5.1

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## Overview

SAS Strategy Management 5.1 has the following changes and enhancements:

- enhanced support to ease the task of maintaining model data
- the use of model data from within Microsoft Excel
- enhancements to the Diagram Editor
- general enhancements

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## Enhanced Support to Ease the Task of Maintaining Model Data

The software now enables you to do the following tasks:

- Perform batch maintenance of model data.

The SAS macro named %STMBMF performs batch maintenance to enable you to more easily update a model that contains large amounts of data. This macro uses data stored in comma-separated values (CSV) files or SAS data sets.

- Export access permissions.

The comma-separated values file can be used with the %STMBMF macro.

- Set access permissions for multiple objects from one location.

From one location, you can now view, create, and maintain access permissions for templates, projects, scorecards, and elements.

- Edit the properties of multiple objects at one time, from one location.

---

## The Use of Model Data from Within Microsoft Excel

The software now enables you to do the following task:

- Access the value of a scorecard metric attribute from within Microsoft Excel.

The value can be placed directly into a cell or used as part of a formula.

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## Enhancements to the Diagram Editor

The following actions are now possible in the Diagram Editor:

- Display multiple scorecards (for multiple periods) in a single diagram.
- Undo and redo certain actions in the Diagram Editor.
- Resize an element data node by dragging a corner of the data node's rectangle.
- Create a separate background color for the text inside of an element box.

This is useful when displaying element nodes that do not have a shape.

- Reconnect to a session from within the Diagram Editor.

If the SAS Strategy Management session times out while you are editing a diagram, you can reconnect to the session to prevent losing unsaved diagram changes.

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## General Enhancements

- You can display model data for relative dates in a SAS Strategy Management portlet.
- You can create notifications to alert you to when a comment is created for an element.
- You can copy the URL of a view.

The URL contains all necessary information to completely re-create the view, including column selections and date. This URL can then be pasted anywhere that a URL is allowed, such as in the SAS Information Delivery Portal or a Web browser.

## **Part 1**

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# Introduction

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# Chapter 1

## Introduction to SAS Strategy Management

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## About This Manual

### *Target Audience*

This user's guide has been written for SAS Strategy Management modelers and business analysts.

A modeler creates the projects and scorecards for an organization.

A business analyst does not create projects and scorecards, but a business analyst uses the projects and scorecards that have been created by a modeler to reveal information.

Therefore, a business analyst must be able to navigate the interface to perform such tasks as creating thresholds, subscribing to alerts, and creating column selections.

In some cases, one person functions as both a modeler and a business analyst.

This user's guide is not intended for system administrators. A system administrator focuses on setting up the data warehouse and on the associated data extraction, transformation, and loading (ETL) tasks. Although the system administrator's duties differ from those of the modeler and business analyst, knowledge of the modeler's and business analyst's duties can be useful to the system administrator.

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## What Is a Performance Management Framework?

A performance management framework is a management system that is supported by performance measures. Here are some examples of the results of measures:

- optimize strategy and manage organizational test strategies
- evaluate results and accomplishments
- revise strategy to reflect learning

Over 140 different measurement and management frameworks and reform initiatives were developed over the past four decades. Key Performance Indicators are quantifiable measurements that reflect the critical success factors of an organization. They must reflect the organization's goals, they must be key to its success, and they must be measurable.

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## Uses of SAS Strategy Management

SAS Strategy Management enables you to do the following:

- focus on key indicators of success  
You can expose information clearly, accurately, and quickly.
- expose relationships between activities and their impacts on shareholder value
- understand which activities drive others and what impact these activities have on your organization's performance
- identify potential problems by understanding root causes

---

## Overview: The General Workflow in SAS Strategy Management

A modeler creates a SAS Strategy Management model by performing tasks in the following general order:

1. Creates a template or uses a predefined template that is distributed along with SAS Strategy Management.

A template defines what types of project content and scorecard content the model will contain. The settings for a template affect all projects that are based on the template.

2. Creates a project.

A project contains project settings, project content, and scorecards.

Project settings include the following:

- Fiscal and calendar year settings
- Default display settings
- User preferences.

Project content includes the following:

- Data entry forms
- Color-coded ranges
- Column selections.

3. Creates scorecards in a hierarchy.

A scorecard contains the details of each type of element that was defined in the template. For example, in a template that defines the elements Goals, Objectives, and Measures, the scorecards within the project will contain specific Goals, Objectives, and Measures.

Scorecards are organized in a hierarchical fashion. Typically, scorecards represent an organization's department/division/location structure. However, scorecards can be organized in any way the modeler wants.

4. Creates elements.

An element is a unit of data that is represented by a row in a scorecard table. Each element belongs to a project or scorecard element type that has been defined in the template that is associated with the project. For example, a user's name might be an element that belongs to the Contacts project element type. "Create New Products" might be an element that belongs to the Objectives scorecard element type.

5. Creates ETL jobs to load more data for further validation.

Using ETL to load data is not addressed in this user's guide.

A business analyst then uses the model to explore business data by performing tasks in the following general order:

1. Adds ranges, formulas, column selections, and customizations.

A range enables you to control how data values are displayed by defining the upper and lower bounds of the displayed data. A range can be composed of intervals, each of which can be associated with a normalized value, a grade, an icon, and a color.

You can define and apply formulas to the columns in scorecard tables.

A column selection specifies the columns that are displayed with an element type in a table view, aggregate table view, or association view. You can apply column selections to element types within a project.

2. Inputs test data using data entry forms, and apply calculations to test the model.

A data entry form is used to insert data that is related to scorecard elements.

If you have created formulas for your project, you can apply them and display the results in the cells that contain formulas.

3. Adds user access permissions to provide security.

An access permission controls the method that a particular user or group can use to access a SAS Strategy Management object.

4. Uses SAS Strategy Management views and reports to view calculated results.

---

## Overview: SAS Strategy Management Views

In a SAS Strategy Management project, you can display different views of your model:

- Scorecard tables display data for the selected scorecard in tabular form.

Scorecard tables display data in rows and columns. The columns in the table are determined by the template with which the project is associated. The elements are displayed in rows. For more information, see [“What Is a Scorecard Table?” on page 171](#).

- Aggregate tables display data for the selected scorecard and all of its children. For more information, see [“What Is an Aggregate Table?” on page 177](#).
- Associations display the relationship between scorecard elements in the form of a hierarchy.

An association displays relationships between scorecard element types and their associated attributes in a project and displays the elements in an association. For more information, see [“What Is an Association?” on page 179](#).

- Diagrams display data in the form of diagrams.

A diagram is a graphical way of representing elements, their relationships to one another, and their respective scores. For more information, see [“What Is a Diagram?” on page 189](#).

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## Overview: The SAS Information Delivery Portal

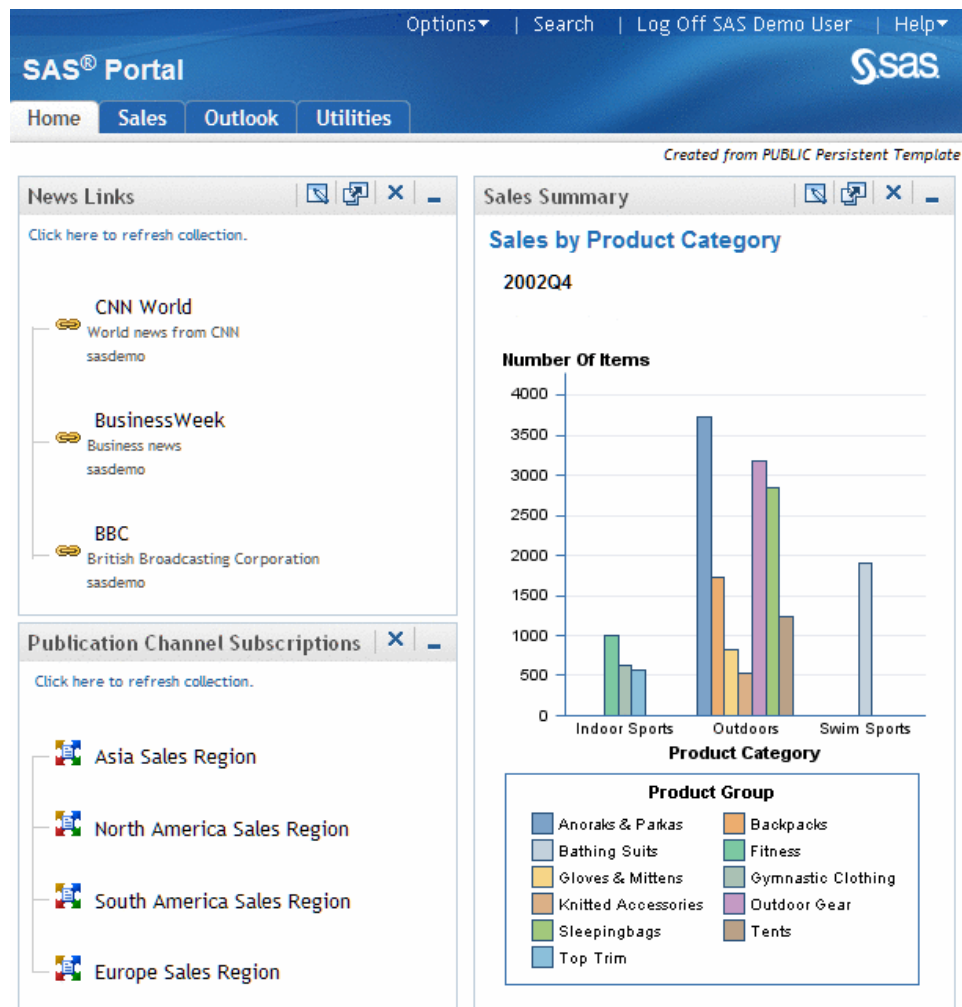
### Overview

The SAS Information Delivery Portal provides a Web-based interface to access enterprise data, applications, and information. SAS Strategy Management is accessed via the SAS Information Delivery Portal and all SAS Strategy Management content can be displayed on a portal page. The SAS Information Delivery Portal is built on the SAS Business Intelligence Architecture, which provides a single point of entry and user security.

### Organization of the SAS Information Delivery Portal

The SAS Information Delivery Portal uses pages and portlets to organize information, as shown in the following figure.





The name of the currently displayed page appears in the highlighted tab. The names of the other pages in your personal portal are shown in the other tabs. In the above example, the portal contains pages that are titled Home, Sales, Outlook, and Utilities.

Each page in the SAS Information Delivery Portal contains rectangular portlets. Portlets are the display components of a portal and are used to organize content on a page. A page can contain any number of portlets. The Home page shown in this example contains three portlets.

You can use the portal's personalization features to arrange the portlets in one, two, or three columns on a page. The two-column format is shown in the example above. If you specify a grid layout, then the portlets are lined up both vertically (in columns) and horizontally (in rows).

For more information about using the portal, see the SAS Information Delivery Portal online Help.

### Portlets That Are Specific to SAS Strategy Management

You can add to the portal the following portlets that display SAS Strategy Management information:

- Performance Aggregate Table portlet

The Performance Aggregate Table portlet enables users to view SAS Strategy Management aggregate tables from within the portal framework. For more information, see [“What Is an Aggregate Table?” on page 177](#).

- Performance Association portlet

The Performance Association portlet enables users to view SAS Strategy Management association tables from within the portal framework. For more information, see [“What Is an Association?” on page 179](#).

- Performance Dashboard portlet

The Performance Dashboard portlet enables users to view SAS Strategy Management dashboard graphs from within the portal framework.

- Performance Diagram portlet

The Performance Diagram portlet enables users to view SAS Strategy Management diagrams from within the portal framework. For more information, see [“What Is a Diagram?” on page 189](#).

- Performance Table portlet

The Performance Table portlet enables users to view SAS Strategy Management scorecard tables from within the portal framework. For more information, see [“What Is a Scorecard Table?” on page 171](#).

## Chapter 2

# Getting Started

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## Start the SAS Information Delivery Portal

### Overview

Before you access SAS Strategy Management, you must log on to the SAS Information Delivery Portal and create a page to contain a SAS Strategy Management portlet in the portal.

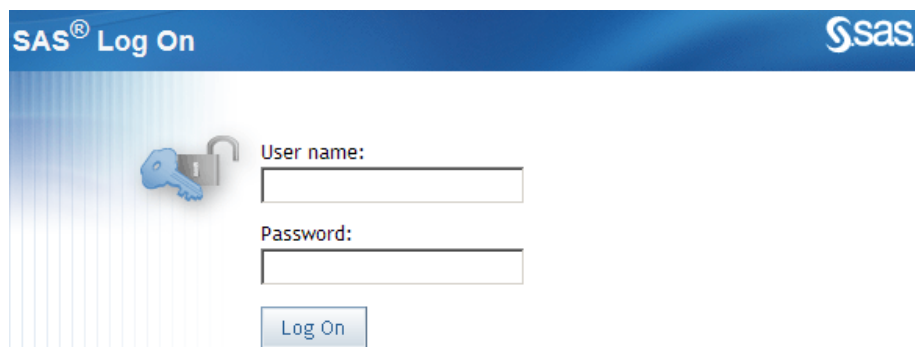
### Log On

To log on to the SAS Information Delivery Portal:

1. Open your browser and specify the portal's URL.

To obtain the URL, contact your portal administrator.

The logon page appears.



The screenshot shows the SAS Log On interface. At the top is a blue banner with 'SAS® Log On' and the SAS logo. Below this, on a light blue background, is a key icon. To the right of the icon are two text input fields labeled 'User name:' and 'Password:'. Below the password field is a button labeled 'Log On'.

2. Type your user name and password.
3. Click **Log On**.

Your personal portal opens. Initially, the portal contains no pages or portlets.

## Create a Page

Before you add a SAS Strategy Management portlet to the portal, you must create a page that will contain the portlet. To create a new page:

1. Select **Options** ⇨ **Add Page**.

The Add Pages to Profile page appears.

2. On the Create tab, enter descriptive information about the page:

### Name

a short name that will appear in the page's tab in the navigation bar.

### Description

a short description that will appear along with the page title in search results.

### Keywords

single words that you or other users can use to search for this page. Use spaces to separate keywords from one another.

*Note:* To ensure efficient searching, develop a list of standard keywords and use these keywords consistently.

### Page rank

a number that indicates the importance of this page as compared to other pages. The default value is 100.

This number determines the order in which pages are listed in the navigation bar. The pages are ordered by rank from lowest to highest. Pages that have equal rank are listed in the order in which they were created.

3. Click **Add**.
4. Click **Done**.

The new, empty page appears in the portal.

## Add a My Favorites Portlet to the Page

A My Favorites portlet contains links to the content and applications that you frequently use. Your portal might contain a number of My Favorites portlets, each containing its own set of links.

For SAS Strategy Management, a My Favorites portlet can contain links to tasks that start SAS Strategy Management.

To add a My Favorites portlet to a page:

1. Navigate to the page to which you want to add a portlet.
2. Select **Options** ⇨ **Edit Page Content**.

The Edit Page Content page appears.

**Edit Page Content • Home**

Layout: ☒ By column ☐ By grid

Number of columns: ☐ 1 ☒ 2 ☐ 3

Column width:  %  %

Portlet layout:

Column 1	Column 2
My Collection Dashboard	Bookmarks
↑ ↓ → ← ×	↑ ↓ ×

3. Click **Add Portlets**.

The Add Portlets page appears.

**Add Portlets to Page • Home**

Create Search

Portlet type: Alerts

\*Name:

Description:

Keywords:

Add

Done

4. From the Portlet type drop-down list, select **My Favorites**.
5. Type the name, description, and keywords, if any.
6. Click **Add**.
7. Click **Done**.
8. On the Edit Page Content page, click **OK**.

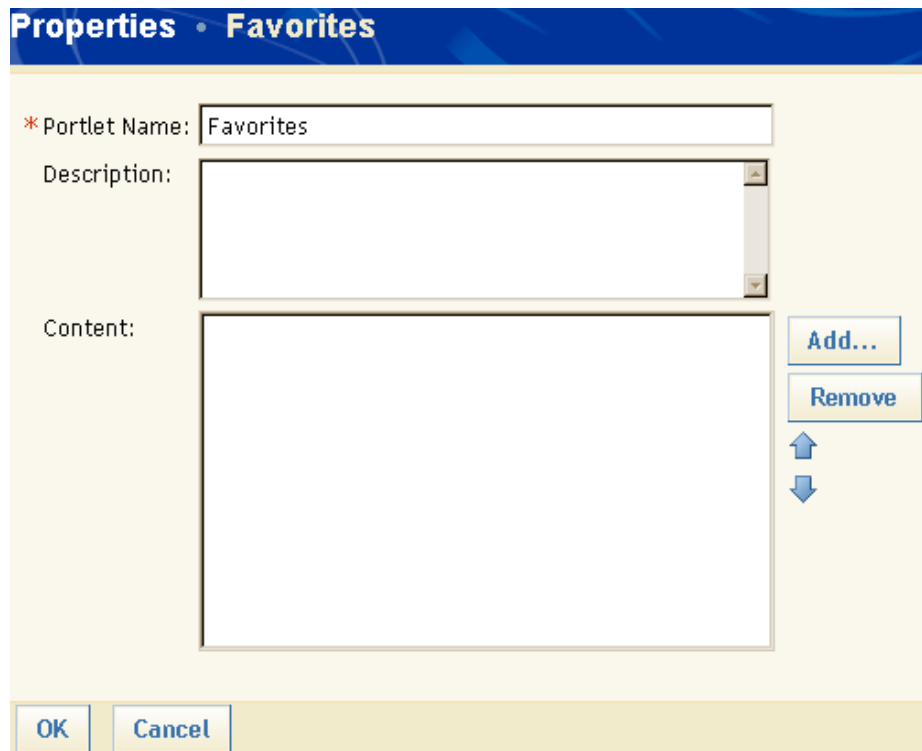
The new portlet appears on the page.

### ***Add a Link to Start SAS Strategy Management***

To add a link to start SAS Strategy Management:

1. At the bottom of the portlet, click the **Edit Portlet** link.

The portlet's Properties page appears.



**Properties • Favorites**

\* Portlet Name: Favorites

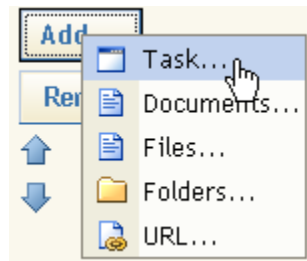
Description:

Content:

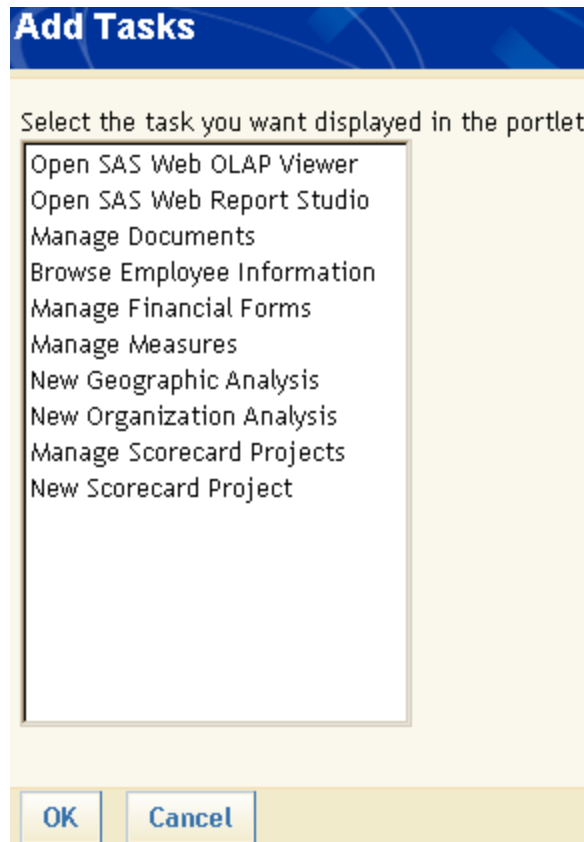
Add...  
Remove  
↑  
↓

OK Cancel

2. Click **Add** and select **Task**.



The Add Tasks page appears.



3. Select **Manage Scorecard Projects**.
4. Click **OK**.
5. On the Properties page, click **OK**.

The portlet now contains a link to manage scorecard projects.

6. To start SAS Strategy Management, click the **Manage Scorecard Projects** links in the portlet.



## Part 2

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# Basic Concepts

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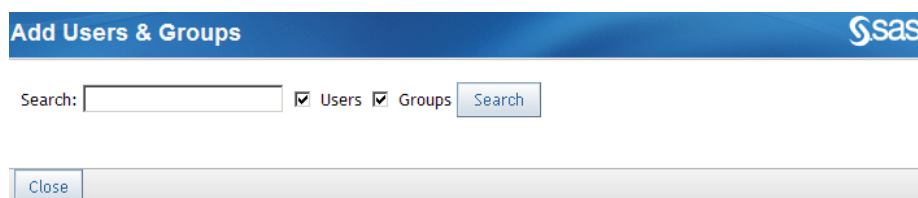



## Chapter 3

# Common Tasks

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### Add Users and User Groups







**Add Users & Groups** 

Search:  ☒ Users ☒ Groups

To find a user or user group:

1. Type a search string in the **Search** field.
2. Choose whether to include users and user groups.
3. Click **Search**.

A table of results is displayed.

<input type="checkbox"/>		Name	Description
<input type="checkbox"/>		BI Dashboard Administrators	Dashboard product. The SAS Trusted User is made a member during initial deployment.
<input type="checkbox"/>		BI Dashboard: Administration	Provides BI Dashboard administration capabilities.
<input type="checkbox"/>		BI Dashboard Users	The members of this group are allowed general viewing access of content for the SAS BI Dashboard product.

4. In the table of results, select the check mark next to one or more items, and click **Add**.



## Chapter 4

# Templates

---

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---

## What Is a Template?

### Overview

A template defines the following components:

- Project element types
- Scorecard element types
- Metric attributes
- Languages
- Associated projects

### Project Element Types

Project element types are categories of data that apply to all of the scorecards in an associated project. For example, a project element type might be named “Contacts,” and would contain elements that are employee names. The labels and values for a project element type are exactly the same for all of the scorecards in a project.

### Scorecard Element Types

Scorecard element types are categories of data that apply to one or more scorecards. For example, in a scorecard that uses the Balanced Scorecard methodology, an element type might be named “Strategic Objectives,” and would contain elements that are names of a company's strategic objectives. The labels and values for scorecard element types are different for each scorecard in a project.

You might also be able to select from a list of user-defined templates at your site.

### Metric Attributes

Metric attributes are the types of data that are collected in a project. For example, you might want to store actual, target, and performance values. Each type of value is a metric attribute. Every metric attribute that you define is available to all of the scorecards and projects that are based on the template.

## Languages

The term "languages" refers to the number of ways in which information can be displayed. Examples include the languages of different countries, the terminologies that are used in different parts of the same company or in separate divisions of recently merged companies, or short and long versions of column labels. In the template, data in a SAS Strategy Management model is displayed in different languages, depending on the scorecards that are in an associated project. Date and number formatting is not affected. If you do not create a language in an Strategy Management template, a default language is automatically defined.

## Associated Projects

Associated projects are the projects that are associated with the current template. Associated projects share the same project element types, scorecard element types, metric attributes, and languages.

## Predefined Templates

### Overview

The following predefined templates are shipped with SAS Strategy Management: a Balanced Scorecard template and a KPI template.

### Balanced Scorecard Template

The Balanced Scorecard template reflects the Balanced Scorecard methodology for measuring performance. The Balanced Scorecard template contains the following components:

- A project element type named Contacts
- Scorecard element types named Objective, Measure, Initiative, Perspective, Vision, and Mission
- Metric Attributes named Actual, Target, Status, and Performance
- A language named U.S. English.

### KPI Template

The KPI (Key Performance Indicator) template is used to measure key performance indicators. The KPI template contains the following components:

- A scorecard element type named KPI
- Metric Attributes named Performance, Actual, and Target
- A language named U.S. English.

---

## List Templates

Templates are listed in the Template and Project Manager. For more information, see [“Display the Template and Project Manager Page” on page 64.](#)

## Create a Template

### Open the New Template Page

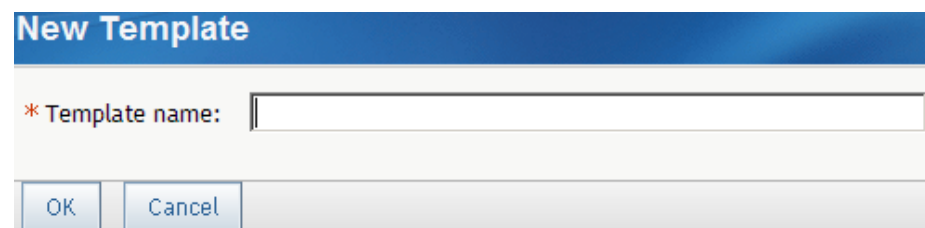
To create a template:

1. Display the Template and Project Manager page.

For more information, see [“Display the Template and Project Manager Page”](#) on page 64.

2. Select **Template** ⇨ **New Template**.

The New Template page appears.



### Name the Template

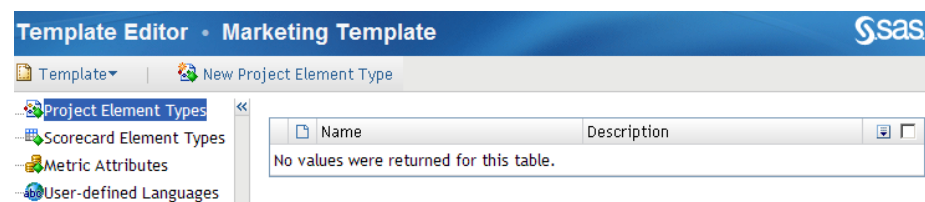
To name the template:

1. Type a name for the new template in the **Template name** field.

*Note:* The name must be unique among the user-defined templates.

2. Click **OK**.

The Template Editor page appears.



### Define Project Element Types

To define a project element type:

1. Select **Project Element Types** from the list on the left.
2. Click **New Project Element Type**.

The New Project Element Type page appears.



3. In the General settings section, type a name for the element type. You can also type a description.  
*Note:* The name must be unique among the project element types and the scorecard element types in the template.
4. Click the icon that is next to **Image** and select an image to represent the element type.  
*Note:* When you view a scorecard later, if the image that is specified here is missing, no image is displayed for that project element type. An image might be missing because the previously assigned image has been removed.
5. In the Diagram settings section, click the icon that is next to **Font color** and select a font color to be displayed with the element type in a diagram.
6. Click the icon that is next to **Background color** and select a color to be displayed in the background of the element type in a diagram.
7. From the **Shape** drop-down list, select a shape to be displayed with the element type in a diagram.

## Define Scorecard Element Types

To define a scorecard element type:

1. Select **Scorecard Element Types** from the list on the left.
2. Click **New Scorecard Element Type**.

The New Scorecard Element Type page appears.

3. In the General settings section, type a name for the element type. You can also type a description.
4. Click the icon that is next to **Image** and select an image to represent the element type.  
*Note:* When you view a scorecard later, if the image specified here is missing, no image is displayed for that scorecard element type. An image might be missing because the previously assigned image has been removed.
5. To enable users to suggest elements, select **Allow Suggested Elements**.
6. In the Diagram settings section, click the icon that is next to **Font color** and select a font color to be displayed with the element type in a diagram.  
*Note:* The diagram settings are applied only when a diagram is created. The settings do not affect existing diagrams.
7. Click the icon that is next to **Background color** and select a color to be displayed in the background of the element type in a diagram.
8. From the **Shape** drop-down list, select a shape to be displayed with the element type in a diagram.

### Define Metric Attributes

To define a metric attribute:

1. Select **Metric Attributes** from the list on the left.
2. Click **New Metric Attribute**.

The New Metric Attribute page appears.

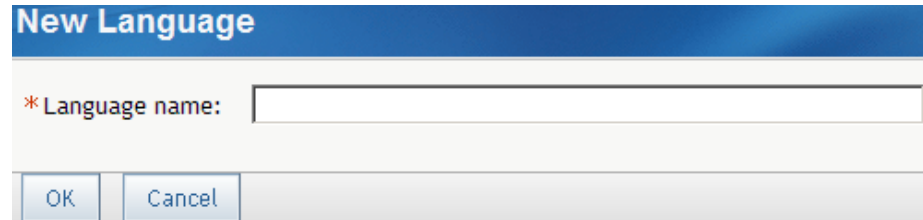
3. Type a name for the metric attribute.

## Define Languages

To define a language:

1. Select **User-Defined Languages** from the list on the left.
2. Click **New Language**.

The New Language page appears.



3. Type a name for the language.

---

## Open a Template

You can open a template for editing and viewing. Element types, metric attributes, and languages that you add to a template after you have created a project are reflected in the project. If you delete element types, metric attributes, or languages from a template, those items will be deleted from the project, whether or not they contain data.

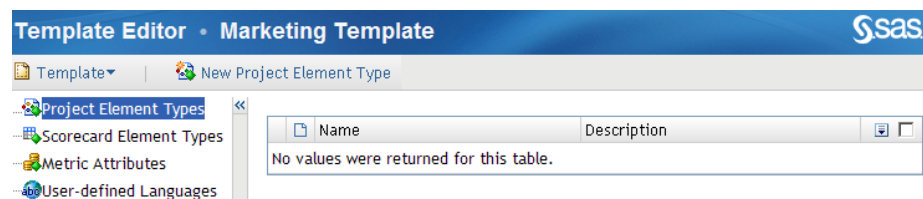
To open a template:

1. Display the Template and Project Manager page.

For more information, see [“Display the Template and Project Manager Page”](#) on page 64.

2. Select a template name in the list of templates.
3. Select **Template** ⇌ **Edit Template**.

The Template Editor page appears.



## Project Elements

### ***Define a Project Element Type***

You define a project element type when you create a template. For more information, see [“Define Project Element Types” on page 22](#).

### ***List Project Element Types***

To list the project element types in a template:

1. Open a template.

For more information, see [“Open a Template” on page 25](#).

2. Select **Project Element Types**.

The Project Element Types table displays the element types that you have created for the selected template. From this table, you can create new element types, edit the properties of element types, and copy and delete element types.


### ***Edit Project Element Type Properties***

To edit project element type properties in a template:


1. Open a template.

For more information, see [“Open a Template” on page 25](#).

2. Select **Project Element Types** from the list on the left.

3. Click the action menu  that is next to an element type in the table and select **Properties**.

The Project Element Type Properties page appears.

**Project Element Type Properties • Contacts** 

**General**

General settings

Element type: Project

\*Element type name:

Description:




Image: 

Diagram settings

Font color:  Shape:

Background color: 

**Attribute Definition**

Add and define the attributes that describe the information you want to display in scorecards.

To change the general properties of a project element type:

1. In the **General** section, you can change the name in the **Element type name** field.

**General**

General settings

Element type: Project

\*Element type name:

Description:




Image: 

Diagram settings

Font color:  Shape:

Background color: 

2. (Optional) Change the description in the **Description** field.
3. To change the image to be displayed with the element type, click the icon that is next to **Image** and select an image.

*Note:* If an image does not exist, no image is displayed for that element type. Images might be missing because a previously assigned image has been removed without updating the element type properties.

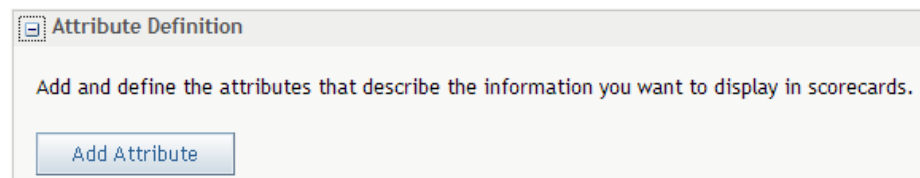
4. In the **Diagram Settings** section, click the icon that is next to **Font color** to change the font color to be displayed with the element type in a diagram.
5. Click the icon that is next to **Background color** to change the color to be displayed in the background of the element type in a diagram.
6. From the **Shape** drop-down list, change the shape to be displayed with the element type in a diagram.

An attribute definition describes the kinds of information that can be displayed with project element types. You can define more than one attribute for an element. An attribute can belong to one of the following categories:

- Text
- Email
- Date
- URL
- Element type.

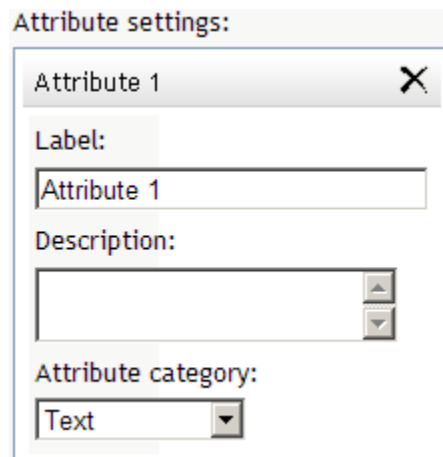
To define an attribute for a project element type:

1. Expand the **Attribute Definition** section.



2. Click **Add Attribute**.

A new attribute is added to the right-most column.




3. In the **Label** field, type a new label such as User ID for the attribute.
4. (Optional) In the **Description** field, type a description of the attribute.
5. From the **Attribute category** drop-down list, select a category.
6. If you select **Element Type** as the category:
  - a. Select an element type from the **Element type** drop-down list.

This action associates the attribute to an element type.


- b. To associate the attribute with more than one element type, select the **Allow multiple selections** check box.

To edit an attribute definition, type a new label or a new description, or select a different category for the selected attribute.

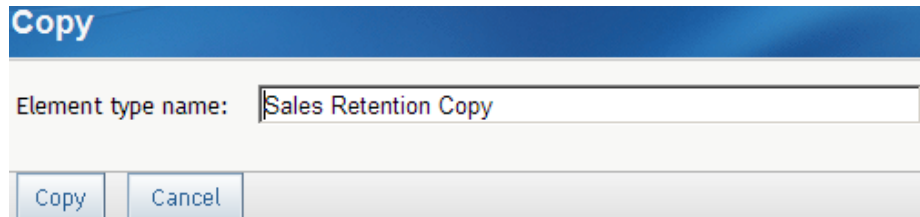
To delete an attribute, click the Delete icon  that is next to the attribute name.

### Copy Project Element Types

To save a project element type or a scorecard element type under a different name in the same user-defined template:

1. Open a user-defined template.  
For more information, see [“Open a Template” on page 25](#).
2. Select **Project Element Types** or **Scorecard Element Types** from the list on the left.
3. Click the action menu  that is next to an element type in the table and select **Copy**.




The Copy page appears.



4. Type a name for the copy of the element type.  
By default, the name is *element-type-name copy*.

### Delete Project Element Types

To delete a project element type:

1. Open a template.  
For more information, see [“Open a Template” on page 25](#).
2. Select **Project Element Types** from the list on the left.
3. Click the action menu  that is next to an element type in the table and select **Delete**.
4. To delete more than one element type, do either of the following:
  - Select the check box to the right of each element type, click the action menu  for the column and select **Delete**.
  - To delete all element types, select the check box at the top of the right-most column, click the action menu  for the column and select **Delete**.


### Change the Order of Element Types

You can change the order in which element types are displayed within SAS Strategy Management.

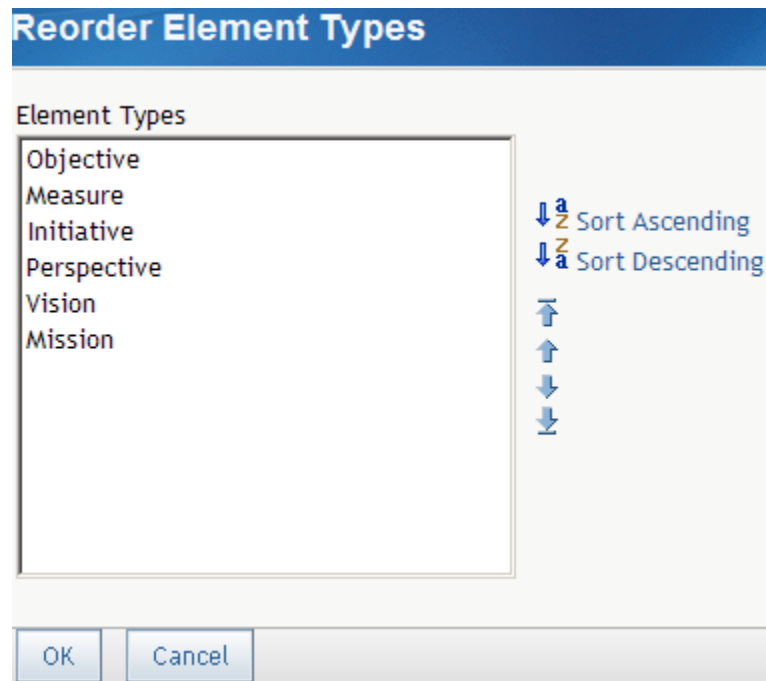
To change the order of element types:

1. Create or open a template.

For more information, see [“Open the New Template Page” on page 22](#) or [“Open a Template” on page 25](#).

2. On the left, select **Project Element Types** or **Scorecard Element Types**.
3. Click the action menu  to the left of an element type and select **Reorder**.

The Reorder Element Types page appears.



4. To sort the element types in ascending or descending alphabetic order, select **Sort Ascending** or **Sort Descending**.
5. Move individual element types by selecting one or more element types and using the following:



moves the selected element type to the beginning of the list.



moves the selected element type up.



moves the selected element type down.



moves the selected element type to the end of the list.



---

## Scorecard Elements

### **List Scorecard Element Types**

To list the scorecard element types in a template:

1. Open a template.

For more information, see [“Open a Template” on page 25](#).

2. Select **Scorecard Element Types** from the list on the left.

The table displays the scorecard element types that have been created for the selected template. From this table, you can create new scorecard element types, edit the properties of scorecard element types, and copy and delete scorecard element types.


### **Edit Scorecard Element Type Properties**

To edit scorecard element type properties:

1. Open a template.

For more information, see [“Open a Template” on page 25](#).

2. Select **Scorecard Element Types** from the list on the left.

3. Click the action menu  that is next to an element type in the table and select **Properties**.

The Scorecard Element Type Properties page appears.

**Scorecard Element Type Properties • Measures**

**General**

General settings

Element type: Project

\*Element type name: Contacts

Description: These are the contacts

Image:

Diagram settings

Font color:

Shape: Triangle

Background color:

**Attribute Definition**

Add and define the attributes that describe the information you want to display in scorecards.

[Add Attribute](#)

OK Cancel Apply

To change the general properties of a scorecard element type:

1. In the **General** section, you can change the name in the **Element type name** field.

**General**

General settings

Element type: Project

\*Element type name: Contacts

Description: These are the contacts

Image:

Diagram settings

Font color:

Shape: Triangle

Background color:

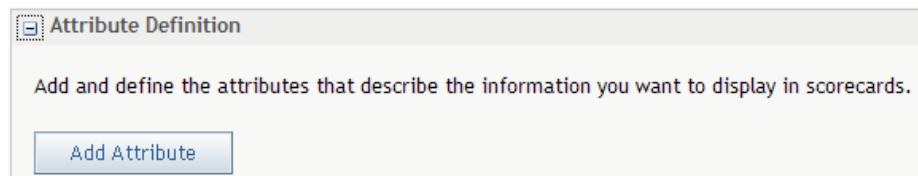
2. Change the description in the **Description** field.
3. To change the image to be displayed with the element type, click the icon that is next to **Image** and select an image.

*Note:* If an image does not exist, no image is displayed for that element type. Images may be missing because a previously assigned image has been removed without updating the element type properties.

4. In the **Diagram Settings** section, click the icon that is next to **Font color** to change the font color to be displayed with the element type in a diagram.
5. Click the icon that is next to **Background color** to change the color to be displayed in the background of the element type in a diagram.
6. From the **Shape** drop-down list, change the shape to be displayed with the element type in a diagram.

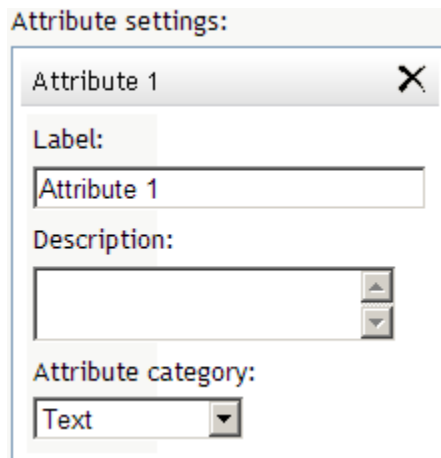
To define an attribute for a scorecard element type:

1. Expand the **Attribute Definition** section.




2. Click **Add Attribute**.

A new attribute is added to the right-most column.




3. In the **Label** field, type a new label for the attribute, such as “Vision.”
4. In the **Description** field, type a description of the attribute.
5. From the **Attribute category** drop-down list, select a category.
6. If you select **Element Type** as the category:
  - a. Select an element type from the **Element type** drop-down list.  
 This action associates the attribute to an element type. Associated elements are affected by formula functions that calculate the mean, max, min, or sum of all elements that are associated. Associations show relationships between elements that have been defined. For more information, see [“What Is an Association?” on page 179](#).
  - b. To associate the attribute to more than one element type, select the **Allow multiple selections** check box.

To edit an attribute definition, type a new label or a new description, or select a different category for the selected attribute.

To delete an attribute, click the Delete icon  that is next to the attribute name.




## Copy Scorecard Element Types

To copy a scorecard element type in the same template:

1. Open a template.  
For more information, see [“Open a Template” on page 25](#).
2. Select **Scorecard Element Types** from the list on the left.
3. Click the action menu  that is next to an element type in the table and select **Copy**.  
The Copy page appears.
4. Type a new name for the copy of element type.  
By default, the name is *element-type-name copy*.

## Delete Scorecard Element Types

To delete a scorecard element type:

1. Open a template.  
For more information, see [“Open a Template” on page 25](#).
2. Select **Scorecard Element Types** from the list on the left.
3. To delete a single element type, click the action menu  that is next to an element type in the table and select **Delete**.
4. To delete more than one element type in a user-defined template only, do either of the following:
  - Select the check box to the right of each element type, click the action menu  for the column and select **Delete**.
  - To delete all element types, select the check box at the top of the right-most column, click the action menu  for the column and select **Delete**.










---

## Metric Attributes

### List Metric Attributes


To list metric attributes:

1. Open a template.  
For more information, see [“Open a Template” on page 25](#).
2. Select **Metric Attributes** from the list on the left.  
The Metric Attributes table displays the metric attributes that you have created for the selected template.

		Name		<input type="checkbox"/>
		Status		<input type="checkbox"/>
		Actual		<input type="checkbox"/>
		Target		<input type="checkbox"/>
		Performance		<input type="checkbox"/>

### Rename Metric Attributes

To rename a metric attribute:

1. Open a template.  
For more information, see [“Open a Template” on page 25](#).
2. Select **Metric Attributes** from the list on the left.
3. Click the action menu  that is next to a metric attribute in the table and select **Rename**.

The Rename Metric Attribute page appears.

**Rename Metric Attribute • Performance**


Old name:

\*New name:

4. Type a new name in the **New name** field.

### Delete Metric Attributes

To delete a metric attribute from a template:

1. Open a template.  
For more information, see [“Open a Template” on page 25](#).
2. Select **Metric Attributes** from the list on the left.
3. Click the action menu  that is next to a metric attribute in the table and select **Delete**.

---

## Languages

### Define a Language

You define a language when you create a template. For more information, see [“Define Languages” on page 25](#).

## Select a Language to Edit Content

By default, template content is displayed in the default language that was set in the preferences for the portal.

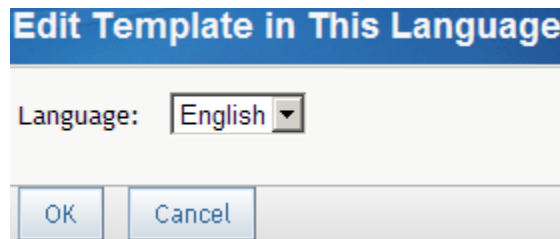
To select a different language to use in editing a template:

1. Open a template.

For more information, see [“Open a Template” on page 25](#).

2. Select **Template** ⇨ **Select Template Edit Language**.

The Edit Template in This Language page appears.



3. Select a language from the **Language** drop-down list.

The list includes all languages that have been defined. For more information, see [“Define Languages” on page 25](#).

## List Languages

To list languages:

1. Open a template.

For more information, see [“Open a Template” on page 25](#).

2. Select **User-Defined Languages** from the list on the left.

The Languages table displays the languages that are defined for the selected template.

## Rename Languages


You can change the name of a language.

To rename a language:

1. Open a template.

For more information, see [“Open a Template” on page 25](#).

2. Select **User-Defined Languages** from the list on the left.

3. Click the action menu  that is next to a language name in the Languages table and select **Rename**.

The Edit Language page appears.

**Edit Language • English**



Old name:

New name:

4. Type a new name in the **New name** field.  
The name must be unique in the template.

## Delete Languages

To delete a language from a template:

1. Open a template.  
For more information, see [“Open a Template” on page 25](#).
2. Select **User-Defined Languages** from the list on the left.
3. Click the action menu  that is next to a language in the table and select **Delete**.
4. To delete multiple languages, select the check mark that is next to each language, click the action menu  that is at the top of the right-most column, and then select **Delete**.

*Note:* You cannot delete the default language.

---

## List Associated Projects





You can view the projects that are associated with a template.

To view associated projects from the Template and Project Manager:

1. Display the Template and Project Manager page.  
For more information, see [“Display the Template and Project Manager Page” on page 64](#).

2. Select the template.

The projects that are associated with the selected template are displayed on the right.

	Name	Last Recalculated	
	Balanced Scorecard	-	<input type="checkbox"/>
	Marketing Scorecard	-	<input type="checkbox"/>

3. To open a project, click the project name.

## Edit User-Defined Template Properties

You can edit some properties in a user-defined template such as the name and default language and the users and groups who have access to the template.

To edit template properties:

1. Display the Template and Project Manager page.

For more information, see [“Display the Template and Project Manager Page”](#) on page 64.

2. Select a user-defined template.
3. Select **Template** ⇌ **Properties**.

The Template Properties page appears.

4. To change the name of the template, type a new name in the **Template name** field.
5. (Optional) Type a description.
6. To specify the owner of the template, click **Select Owner**.

For more information, see [“Select the Owner of a Project, Scorecard, or Element”](#) on page 39.

After you change the language, the SAS Strategy Management interface text for the template, and all of the scorecard based on the template, changes to the specified language.

7. To change the default language, select a language from the **Default language** drop-down list.

For information about defining languages for a template, see [“Define Languages”](#) on page 25.


8. Expand the **Permissions** section.



Permissions define the type of access granted to a user or group for an object.

Name	Read	Write	Delete	Administer
sasdemo	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Add Users & Groups...

9. Click **Add Users & Groups**.  
For more information, see [“Add Users and User Groups” on page 17](#).
10. In the Permissions table, select the appropriate **Read**, **Write**, **Delete**, or **Administer** access permissions for each user or group.  
For more information about access permissions, see [“What Are Access Permissions?” on page 161](#).
11. To remove the user or group name from the list, click  to the right of the check boxes.

---

## Select the Owner of a Project, Scorecard, or Element

Select an owner for the scorecard.

Find:

	Name	Full Name/Description
<input type="radio"/>	Lillian	
<input type="radio"/>	Chip	
<input type="radio"/>	Mercy	

Select a user name from the list, or type a user name in the **Find** field, click **Search**, and select a user name from the list.

---

## Edit Predefined Template Properties

You can edit the default language of a predefined template such as the Balanced Scorecard template or KPI template.

To edit predefined template properties:

1. Display the Template and Project Manager page.

For more information, see “Display the Template and Project Manager Page” on page 64.

2. Select a predefined template.
3. Select **Template** ⇌ **Properties**.

The Template Properties page appears.

4. To change the default language, select a language from the **Default language** drop-down list.

For information about defining languages for a template, see “Define Languages” on page 25.

After you change the language, the interface text that you see in a project or scorecard changes to reflect the new language.

---

## Copy a Template

When you copy a template, even a predefined template, the copy appears in the User-defined Templates list. To save a copy of a template under a different name:

1. Display the Template and Project Manager page.

For more information, see “Display the Template and Project Manager Page” on page 64.

2. Select the template.
3. Select **Template** ⇌ **Copy**.

The Copy page appears.

4. Type a name for the copy of the template in the **Template name** field.

By default, the name is *template-name Copy*.

---

## Delete a Template

You cannot delete a predefined template; you can delete only a user-defined template. To delete a user-defined template:

1. Display the Template and Project Manager page.

For more information, see [“Display the Template and Project Manager Page” on page 64](#).

2. Select the template.
3. Select **Template** ⇒ **Delete**.

---

## Export a Template to SQL

You can copy a template to a different installation of SAS Strategy Management by exporting a template definition as a set of SQL commands, and then importing the SQL commands into another database. For information about exporting a project to SQL, see [“Export a Project to SQL” on page 63](#).

To export a template to SQL format:

1. Display the Template and Project Manager page.

For more information, see [“Display the Template and Project Manager Page” on page 64](#).

2. Select a template name in the list of templates.
3. Select **Template** ⇒ **Export**.

The Export Template page appears.

The screenshot shows a dialog box titled "Export Template • MyNewTemplate". It contains a text field for "File name:" with a red asterisk. Below this are two sections: "Export template options" and "Export project options". The "Export template options" section has two radio buttons: "Current template (MyNewTemplate)" (selected) and "All templates". Below these are two checked checkboxes: "Images" and "Permissions". The "Export project options" section has two radio buttons: "No project, only template" (selected) and "All projects". Below these are two unchecked checkboxes: "Measures (including those used in formulas)" and "Current time dimension and hierarchy settings". At the bottom are "Save" and "Cancel" buttons.

**Export Template • MyNewTemplate**

\*File name:

Export template options

☒ Current template (MyNewTemplate)  
☐ All templates

Select those options you may want to include:

☒ Images  
☒ Permissions

Export project options

☒ No project, only template  
☐ All projects

Select those options you may want to include:

☐ Measures (including those used in formulas)  
☐ Current time dimension and hierarchy settings

4. In the **File name** field, type the fully qualified pathname to the storage location for the exported file.

The pathname must identify a location that is accessible to all groups and users and the location must be on a machine that is known to the SAS Solutions Services server.

5. Specify the optional information to include in the exported file.

# Chapter 5

## Projects

---

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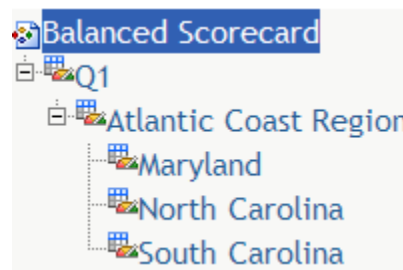
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---

## What Is a Project?

A project is a collection of scorecards. The scorecards can be at a single level or can be arranged in a hierarchical structure. SAS Strategy Management projects are stored within folders in the Document Manager.

A project can have one or more root-level scorecards. Each root-level scorecard can have child scorecards that are arranged in a hierarchy. For example, a root-level scorecard might represent a corporation's balanced scorecard. At successively lower levels of the hierarchy, there might be scorecards for geographical areas, divisions, or departments.



From a project you can do the following:

- create and manage projects  
For information, see [“Start the New Project Wizard”](#) on page 45.
- create and manage scorecards  
For information, see [“Start the New Scorecard Wizard”](#) on page 66 and [“Display the Template and Project Manager Page”](#) on page 64.
- create and manage ranges  
For information, see [“Create a Range”](#) on page 134.
- create and manage forms, and use them to add data  
For information, see [“Start the New Form Wizard”](#) on page 148.
- create and manage column selections  
For information, see [“Create a Column Selection”](#) on page 139.
- perform calculations  
For information, see [“Calculate a Project”](#) on page 157.
- view data in the form of scorecard tables, aggregate tables, associations, and diagrams.
- manage suggested elements  
For more information, see [“Manage Suggested New Elements for a Project”](#) on page 53.
- export and register a project  
For more information, see [“Export a Project to SQL”](#) on page 63 and [“Register a Project in Document Manager”](#) on page 50.

- manage access permissions

For more information, see [“Set Access Permissions for Multiple Objects”](#) on page 162.

- manage the default project options

For more information, see [“Specify Project Options”](#) on page 54.

- manage the properties of a project

For more information, see [“Overview”](#) on page 50.

## See Also


- [“What Is a Template?”](#) on page 20
- [“What Is a Scorecard?”](#) on page 65
- [“What Is a Range?”](#) on page 133
- [“What Is a Data Entry Form?”](#) on page 147
- [“What Is a Column Selection?”](#) on page 139

## Create a Project

### Start the New Project Wizard

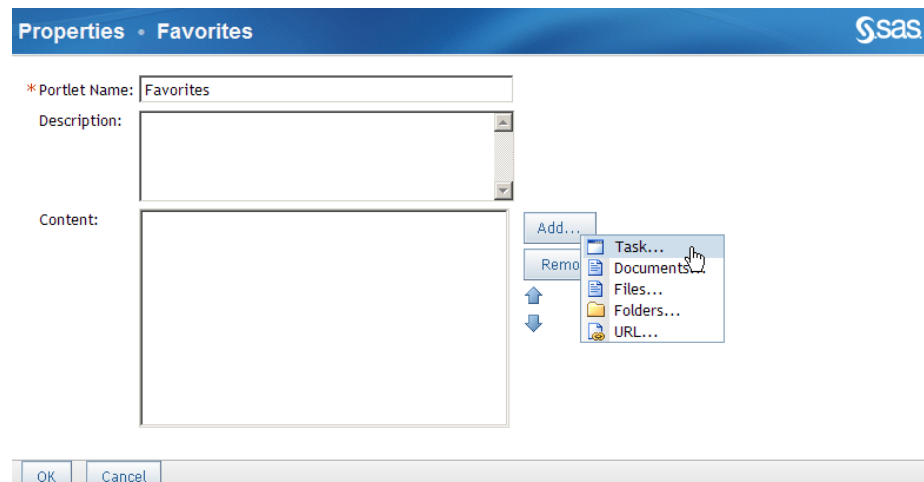
The New Project Wizard specifies the location, template, and other aspects of the project. You can start the New Project Wizard from the portal or from the Template and Project Manager, or from within another project. To create a project, you must be a scorecard modeler, and you must have the appropriate access permissions.

To start the New Project Wizard from the portal:

1. Click the Edit icon  in a My Favorites portlet.

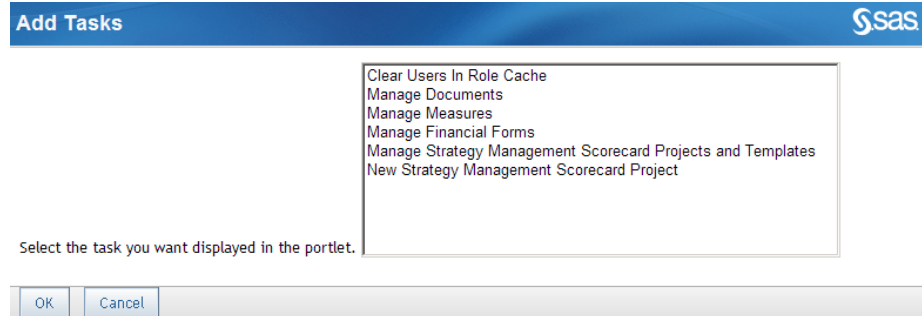
The Properties page appears.

2. Click **Add** and select **Task**.



The Add Tasks page appears.

3. Select **New Strategy Management Scorecard Project**.



4. Click **OK**.
5. Click **OK** on the Properties page.
6. In the portlet, click **New Project**.

The New Project Wizard appears.

To start the New Project Wizard from the Template and Project Manager page:

1. Display the Template and Project Manager page.

For more information, see [“Display the Template and Project Manager Page”](#) on page 64.

2. Click **New Strategy Management Scorecard Project**.

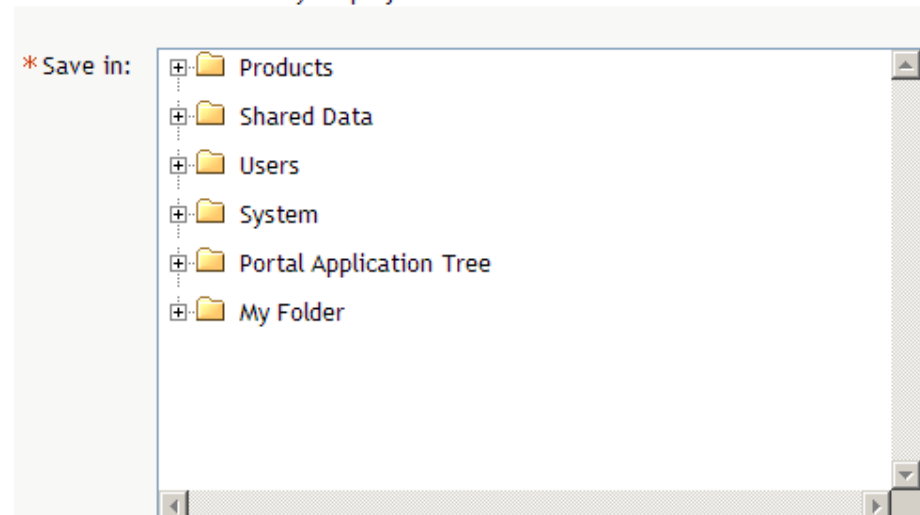
The New Project Wizard appears.

To start the New Project Wizard when a project or scorecard is open, select **Project** ⇒ **New Project**

## Specify the Project Location

### Location

Select a location to store your project.





To specify the storage location for the project:

1. Click on the folders to expand the **Save in** hierarchy, and select a folder as the location for the project.
2. Click **Next**.

## Specify the Project Properties

### Properties

Specify the name and time dimension and hierarchy of this project.



The screenshot shows a 'Properties' dialog box with the following fields and options:

- \* Project name:** A text input field.
- Description:** A large text area with a vertical scrollbar.
- \* Time hierarchy:** A section containing two expandable items:
  - Time Default (TIME\_Default)
  - Time (TIME)

To specify the project's properties:

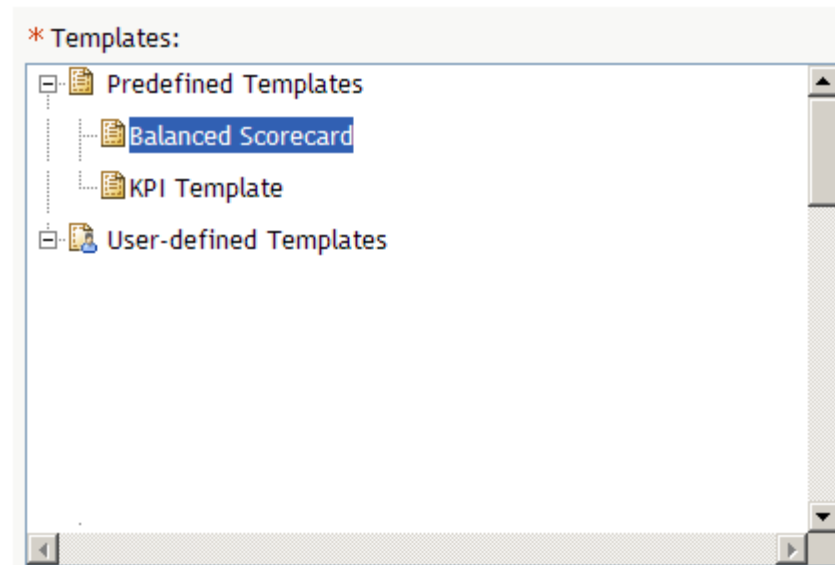
1. Type the name of the project in the **Project name** field.  
The project name cannot contain a caret (^) or vertical bar (|). If you type a caret, it is converted to a tilde (~). If you type a vertical bar, it is converted to a percent sign (%).
2. If more than one time hierarchy has been defined, click on the folders to expand the Time hierarchy, and select a hierarchy for the project.
3. Click **Next**.

## Associate a Template with a Project

Specify the template on which the new project is based. For information about templates, see [“What Is a Template?”](#) on page 20.

## Associate a Template

Select a template to associate with this project.



Select a template from the list of predefined or user-defined templates.

Click **Next**.

## Import a Hierarchy into a Project

The Import a Hierarchy page enables you to use an existing dimensional hierarchy that you created to share with other SAS solutions, or that was created by other SAS solutions and is shared with SAS Strategy Management. You can create dimensions in the Dimension Editor.

## Import a Hierarchy

Do you want to convert an existing dimension to a scorecard hierarchy?

☒ No

☐ Yes

To build the project hierarchy manually, click **No**.

To base your project on an existing hierarchy:

1. Click **Yes**.
2. Expand the list of hierarchies, and select a hierarchy from the list.
3. Click **Next**.

### CAUTION:

**If you base your project on a shared hierarchy, you will be alerted when changes are made to the hierarchy and when your project is no longer synchronized with the shared hierarchy.** If hierarchy members (scorecards) are deleted in the existing hierarchy, they will be deleted from your project during synchronization. You will not be able to rename scorecards in the hierarchy. You can choose not to synchronize your project with the changes; you will continue to receive alerts that your project is out of

synchronization. You can remove your project from a shared hierarchy if you do not want to receive any more synchronization alerts.

## Summarize Project Options

### Summary

Summary of options selected.

Associated template:	Balanced Scorecard
Project name:	Reduce Waste
Description:	
Time dimension:	Time Default (TIME_Default)
Time hierarchy:	Standard Time Hierarchy (TIME_Default)
Saved location:	/Users/sasdemo/My Folder(Folder)
Dimension and hierarchy:	Not applicable

Review all of the options that you have selected for the project.

To make changes, click **Previous** to return to the page that you want to change. If you do not want to make any more changes, click **Finish** to complete the creation of the new project.

---

## Open a Project

You can open a project from the portal or from within SAS Strategy Management.

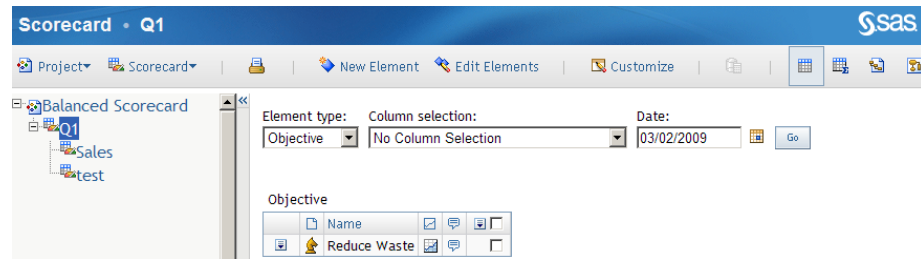
If you have added a project name to a portlet in the portal, click the project name.

To open a project from Document Manager, open the folder that contains the project and click the project name.

To open a project from the Template and Project Manager page:

1. Display the Template and Project Manager page.  
For more information, see [“Display the Template and Project Manager Page” on page 64](#).
2. Select the template with which the project is associated.
3. Click the project name in the list of projects that are associated with the template.

By default, the project opens with the table view on the right and the scorecard hierarchy on the left.



If a project no longer exists in the database or if you do not have the appropriate access permissions, you will not be able to open the project.

---

## Register a Project in Document Manager

To display in Document Manager a project that was imported (such as a migrated project) or created with the %STMBMF macro, you need to register the project. A project that is created with the New Project Wizard is automatically registered. For information about the %STMBMF macro, see the *SAS Strategy Management Batch Maintenance Facility User's Guide*.

When a project is registered in Document Manager, it is available to other applications. One such application, the SAS Solutions Services Add-In for Microsoft Office, enables you to insert values from SAS Strategy Management into a Microsoft Office document.

To register a project:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Select **Project** ⇒ **Register**.  
The Register Project page appears.
3. Select the location in Document Manager where you want to save the project.

---

## Edit Project Properties

### Overview

Project properties define the name, project and scorecard hierarchy, time and dimension, image location, and access permissions for the project.

To view or edit a project's properties:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Select **Project** ⇒ **Properties**  
The Project Properties page appears.

**Project Properties - Sales - Balanced Scorecard**

**General Settings**

General properties of a project.

\*Project name: Sales - Balanced Scorecard

Description:

Location: Users/SAS Demo User/My Folder

Associated template: Balanced Scorecard

Internal project ID: 44fde194-0a0c-12d0-008b-33e8b383a638

Owner: SAS Demo User Select Owner...

Owner email: scott.reuss@sas.com

**Project and Scorecard Hierarchy**

**Time**

**Image Location**

**Permissions**

OK Cancel Apply

Depending on your access privileges for the project, you might be able to change the project name, owner, and access permissions. Access permissions that you cannot change are unavailable.

### Specify the General Values

If the project is not registered, a message appears. For more information, see [“Register a Project in Document Manager” on page 50](#).

- To change the project name, type a new name in the **Project name** field.  
The project name cannot contain a caret (^) or vertical bar (|). If you type a caret, it is converted to a tilde (~). If you type a vertical bar, it is converted to a percent sign (%). The project name is displayed in the default language in the Document Manager.
- To display a description of the project in Document Manager, type text in the **Description** field.
- To change the project owner, click **Select Owner**.  
The Owner page appears. For more information, see [“Select the Owner of a Project, Scorecard, or Element” on page 39](#).

### Review the Project and Scorecard Hierarchy

To review the hierarchy on which the project and its scorecards are based, expand the **Project and Scorecard Hierarchy** section.

**Project and Scorecard Hierarchy**

A project and its scorecards is based on a manual hierarchy or on a dimension hierarchy.

Project is based on: Manual hierarchy

☐ Remove link with dimension and hierarchy

☐ Set project as needing synchronization with its dimension hierarchy

In a dimension-based hierarchy, you can remove a project from the hierarchy. If you do this, SAS Strategy Management treats the project as though it had been created manually. Therefore, you will no longer receive messages that the project is out of synchronization.

You can mark the project as needing synchronization with its dimension hierarchy. This option is useful when the dimension hierarchy members have been directly loaded with the %STMSMF macro or altered outside of the SAS Solutions Dimension Editor.

### Review the Time Properties

To review the time properties, expand the **Time** section.

**Time**

Time properties of the project.

Time dimension: Time Default (TIME\_Default)

Time hierarchy: Standard Time Hierarchy (TIME\_Default)

### Review the Image Location

To review where images are located, expand the **Image Location** section.

**Image Location**

Location of images.

Common image library: images/customer

Project image library: images/customer/cd65033b-0a0c-0a3a-0057-968bb913e25b

### Specify the Access Permissions

The **Permissions** section displays user names and their access permissions for the project.

To set access permissions:

1. Expand the **Permissions** section.

**Permissions**


Permissions define the type of access granted to a user or group for an object.

Name	Read	Write	Delete	Administer	
sasdemo	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Lillian	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X

Add Users & Groups...

2. Click **Add Users & User Groups**.

For more information, see [“Add Users and User Groups” on page 17](#).

3. Select the check boxes below **Read**, **Write**, **Delete**, and **Administer** to add or remove that access permission for the listed user or user group.
4. To delete a user or user group, click Delete icon  to the right of the check boxes.

## Suggest a New Element to Be Added to a Project

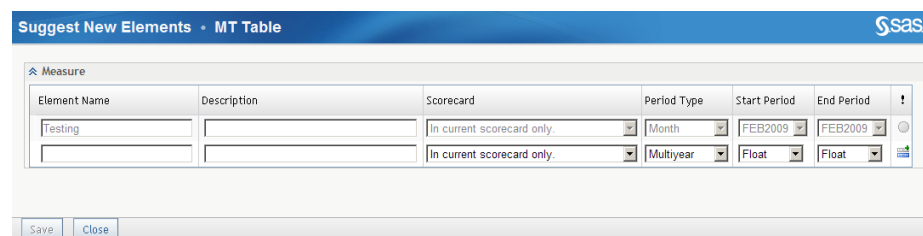
You can suggest a new element to be added to a project. You might suggest a new element that supports achieving a goal or objective, or that improves performance.


As users suggest new elements, your organization's scorecard modeler then reviews and approves all suggested elements.

To suggest a new element:

1. At the bottom of a SAS Strategy Management portlet, click **Suggest New Elements**.

The Suggest New Elements page appears.



2. Type a name and, if needed, a description.
  3. Select the scorecards in which the element should be included.
  4. Select the type of period, the start period, and the end period.
  5. Click the Add Suggestion icon .
- A new row is added to the table.
6. To suggest more elements, repeat steps 2 through 5.

## Manage Suggested New Elements for a Project


After users have suggested new elements to be added to a project, a scorecard modeler then reviews and approves all suggested elements.

To manage suggested new elements:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Select **Project** ⇒ **Manage Suggestion Elements**.

The Manage Suggestion Elements page appears.

Name	Element Name	Description	Scorecard	Period Type	Start Period	End Period	
SAS Demo User	Recycle Rain Water		Scorecard - 1	Multiyear	Float	Float	

- For each suggested element, click the action menu  to the left of the element and select an action.

Selecting **Send Notification** invokes your default e-mail application so that you can alert the user who submitted the suggestion.

---

## Select the Owner of a Project, Scorecard, or Element

Select an owner for the scorecard.

Find:

	Name	Full Name/Description
<input type="radio"/>	Lillian	
<input type="radio"/>	Chip	
<input type="radio"/>	Mercy	

Select a user name from the list, or type a user name in the **Find** field, click **Search**, and select a user name from the list.

---

## Specify Project Options


### Overview

To specify project options:

- Open a project.  
For more information, see [“Open a Project” on page 49](#).
- Select **Project** ⇒ **Options**.

The Project Options page appears.






**Project Options • Balanced Scorecard** 

**General Settings**

**Default view and scorecard**  
Select the view and scorecard to open when you first open the project.

View:

Scorecard:  Balanced Scorecard  
 Q1  
 Sales


**Default content language**

☒ Use the default language: U.S. English

☐ Use the following language:

**Default date for views**  
Set the default period for all views - scorecard table, aggregate table, association, and diagram.

☒ Current date

☐ Specific date:  

**Table Options**

**Aggregate Table Options**

**Association Table Options**

**Diagram Options**

**Trend Analysis Options**

**Web Data Entry Options**

## Specify the General Settings

To specify the general settings:

1. Expand the **General Settings** section.

**General Settings**

**Default view and scorecard**  
Select the view and scorecard to open when you first open the project.

View: Table

Scorecard: Please use a browser that supports IFRAME to see the tree of projects and scorecards.

- Balanced Scorecard
  - Q1
    - Sales

**Default content language**


☒ Use the default language: U.S. English

☐ Use the following language: U.S. English

**Default date for views**  
Set the default period for all views - scorecard table, aggregate table, association, and diagram.

☒ Current date

☐ Specific date:

- From the **View** drop-down list, select the default view that will be displayed.
- In the **Scorecard** hierarchy, select the default scorecard.  
You will not be able to select a scorecard for which you do not have access permissions.
- In the **Default content language** section, do either of the following:
  - To display the scorecard in the default language, select **Use the default language**.
  - To display the scorecard in another defined language, select **Use the following language** and then select a language from the drop-down list.  
Selecting another language does not affect the display of dates or numbers.
- In the **Default date for views** section, do either of the following:
  - To use the current date, select **Current date**.
  - To use a specific date, select **Specific date**, and click the calendar button () to select a date.

## Specify the Table Options

To specify the table options:

- Expand the **Table Options** section.

**Table Options**

Element type: Objective

Column selection: No Column Selection

Select what type of information you want to see on elements. Note, this setting applies to all projects not just the current project.

☐ Show formula icon

- From the **Element type** drop-down list, select the default element type that will be displayed in the scorecard.

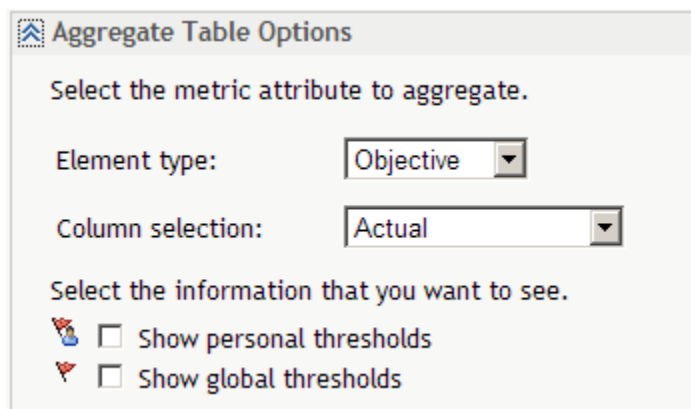
3. From the **Column selection** drop-down list, select the default column selection that will be displayed.
4. To show the formula icon for a element, select the check box that is next to the **Show formula icon** option.

### Specify the Aggregate Table Options

You can display several metric attributes in an aggregate table, based on the column selection that you created. For information about creating column selections, see [“Create a Column Selection” on page 139](#).

To specify the aggregate table options:

1. Expand the **Aggregate Table Options** section.



**Aggregate Table Options**

Select the metric attribute to aggregate.

Element type: Objective

Column selection: Actual

Select the information that you want to see.

☐ Show personal thresholds

☐ Show global thresholds

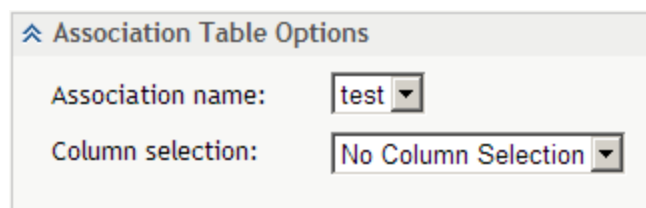
2. Select an element type from the **Element type** drop-down list.
3. Select a column selection from the **Column selection** drop-down list.
4. To display only personal thresholds, select the check box that is next to the **Show personal thresholds** option.
5. To display only global thresholds, select the check box that is next to the **Show global thresholds** option.

### Specify the Association Table Options

You can display associations in an association table, based on the column selection that you created. For information about creating column selections, see [“Create a Column Selection” on page 139](#).

To specify the association table options:

1. Expand the **Association Table Options** section.



**Association Table Options**

Association name: test

Column selection: No Column Selection

2. Select an element type from the **Element type** drop-down list.

3. Select a column selection from the **Column selection** drop-down list.

### Specify the Diagram Options

To specify the diagram options:

1. Expand the **Diagram Options** section.

2. Select a diagram from the **Diagram name** drop-down list.

When there are no diagrams, the drop-down list is replaced with the word **None**.

3. Select a diagram format.

The format that you select applies to all projects, not to the current project only.

4. To clear the cache of temporary diagrams, click **Clear Diagram Cache**.
5. (Optiona) Disable diagram caching.

### Specify the Trend Analysis Options

To specify the trend analysis options:

1. Expand the **Trend Analysis Options** section.

	Metric Attribute
<input type="checkbox"/>	Metric Attribute
<input checked="" type="checkbox"/>	Actual
<input type="checkbox"/>	Target
<input type="checkbox"/>	Status
<input type="checkbox"/>	Performance

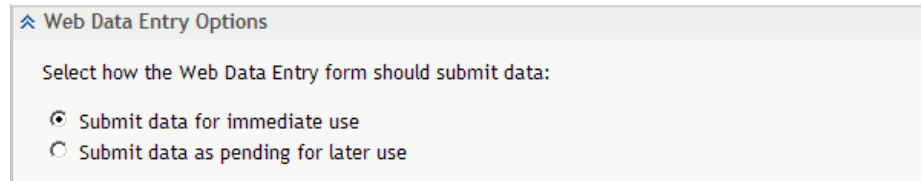
2. In the **Metric attribute defaults** section, select one or more metric attributes to include in the chart, by doing either of the following:

- To include specific metric attributes, select the check box that is next to each attribute.
  - To include all metric attributes, select the check box that is at the top of the table.
3. In the **Start and end date defaults** section, specify a start date and an end date.

## Specify the Web Data Entry Options

To specify the Web data entry options:

1. Expand the **Web Data Entry Options** section.




Web Data Entry Options

Select how the Web Data Entry form should submit data:

- ☒ Submit data for immediate use
- ☐ Submit data as pending for later use

2. Select one of the options.

If you select the **Submit data for immediate use** option and there is pending Web data entry data, then a warning is displayed. You must either post the data or delete the data. If you post the data, it is immediately available to all users.

If you select the **Submit data as pending for later use** option, then Web data entry data is stored in a temporary location until it is posted. When data is temporarily stored and awaiting posting, the Post and Calculate WDE Data icon () is available on the toolbar.

For information about data entry forms, see [“What Is a Data Entry Form?”](#) on page 147.


---

## Copy a Project

To copy a project to another location:

1. Display the Template and Project Manager page.

For more information, see [“Display the Template and Project Manager Page”](#) on page 64.

2. Select a template name in the list of templates.
3. Click the action menu  for the project and select **Copy To**.

If the project is not registered, a message informs you that it needs to be registered before it can be copied. For more information, see [“Register a Project in Document Manager”](#) on page 50.

The Copy To page appears.

**Copy To - Balanced Scorecard**

Repository: Foundation  
Copy: Balanced Scorecard

\* Location:

- + Products
- + Shared Data
- + Users
- + System
- + Portal Application Tree
- + My Folder

Project name:

**Copy Options**

Scorecards are automatically copied for you, but you may also want to include:

- ☒ Elements and attributes
  - ☐ Select all options below
    - ☐ Metric attribute values
    - ☐ Formulas
    - ☐ Ranges
    - ☐ Thresholds
    - ☐ Actions

4. Select the location in the project hierarchy to which you want to copy the project.
5. Enter a name for the project in the **Project name** field.  
The project name cannot contain a caret (^) or vertical bar (|). If you type a caret, it is converted to a tilde (~). If you type a vertical bar, it is converted to a percent sign (%). By default, the copied project is named **Copy:project-name**.
6. To copy elements and attributes that are associated with the current project, select the **Elements and attributes** check box.
7. To copy all other information, select the **Select all options below** check box.
8. To include other information with the copied project, select the check boxes that are next to **Metric attribute values**, **Formulas**, **Ranges**, **Thresholds**, or **Actions**.

## Add a Project or Scorecard to a Portlet

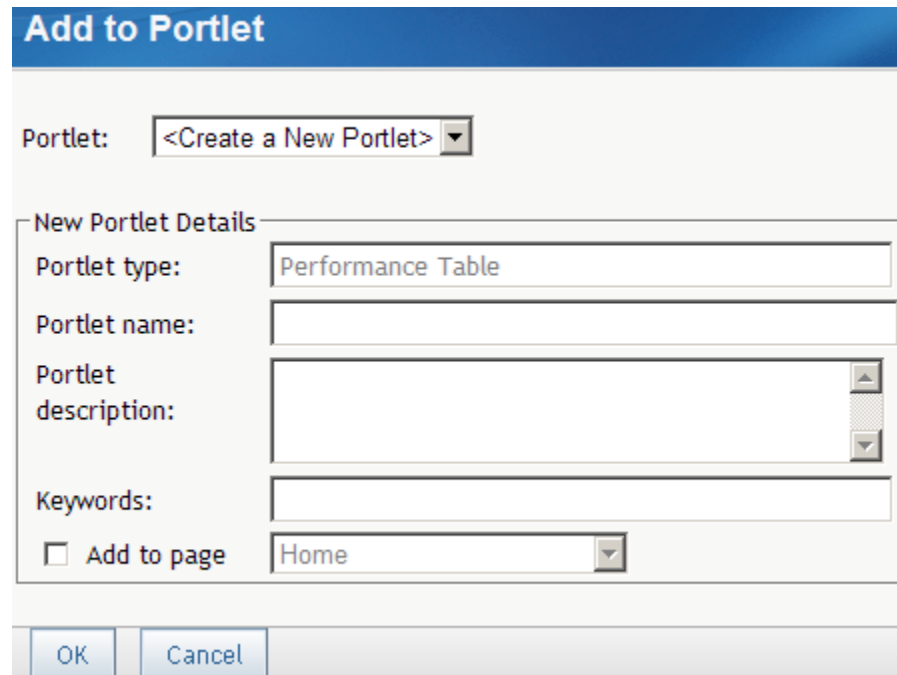
To add a project or scorecard to a portlet:

1. Open a project or scorecard.

For more information, see “Open a Project” on page 49 or “Open a Scorecard” on page 68.

2. Click .

The Add to Portlet page appears.



3. To add the project or scorecard to an existing portlet, select the portlet from the **Portlet** drop-down list.

The list includes only those portlets that are of the same type as the current view. For example, when you add a portlet from the table view, the **Portlet** drop-down list includes only Performance Table portlets.

4. To create a new portlet and add the project or scorecard to the portlet:
  - a. Select **<Create a New Portlet>** from the **Portlet** drop-down list.
  - b. Specify the portlet name, description, and keywords.
  - c. To specify the page on which the portlet appears, select the **Add to page** check box, and select a page from the drop-down list.

If you do not select the **Add to page** check box, the portlet is created but is not added to a page. You can search for the portlet later and add it to a page.

## Move a Project

Use Document Manager to move a project to another location. For more information, see the SAS Information Delivery Portal online Help.

---


## Delete a Project

You can delete a project from Document Manager or from the Template and Project Manager page.

To delete a project from the Template and Project Manager:

1. Click the **Manage Scorecard Projects** link in the portal, or open a project and select **Project** ⇒ **Manage Templates and Projects**.

The Template and Project Manager page appears.

2. Select the template that is associated with the project that you want to delete.
3. Select the check box that is next to one or more project names.
4. Click the action menu  that is at the top of the right-most column and select **Delete**.

*Note:* Alternately, to delete a single project, click the action menu for the row, and select **Delete**.

---

## Synchronize a Project

If your project is based on an existing dimension hierarchy and if changes have been made to the hierarchy that affect the project, then you will need to synchronize your project with the existing hierarchy. This might mean that some scorecards and elements in your project will be deleted.

To synchronize a project:

1. Open a project.

For more information, see [“Open a Project” on page 49](#).

2. Click **Project out-of-sync** above the list of projects on the left.

The Project Out-Of-Sync page appears.



3. Select **Now** to synchronize the project now, or select **At a later date** to postpone the synchronization. If you select **At a later date**, the project will remain out of synchronization with the dimension hierarchy until you synchronize it.

## Export a Project to SQL

You can copy a project to a different installation of SAS Strategy Management by exporting a project definition as a set of SQL commands, and then importing the SQL commands into another database. For information about exporting a template to SQL, see [“Export a Template to SQL” on page 41](#). For information about importing the formulas for a project, see [“Import Formulas for a Project” on page 159](#).

To export a project to SQL format:

1. Open a project.

For more information, see [“Open a Project” on page 49](#).

2. Select **Project** ⇒ **Export**.

The Export Project page appears.

3. Type the fully qualified pathname to the storage location for the exported file in the **File name** field.

The pathname must identify a location that is accessible to all groups and users and the location must be on a machine that is known to the SAS Solutions Services server.

4. To export all images that are associated with the project, select the **Images** check box.
5. To export all measures that are associated with the project, including measures that are used in formulas, select the **Measures** check box.
6. To export time dimension and hierarchy information, select the **Current time dimension and hierarchy settings** check box.
7. To export all access permissions that are associated with the template, select the **Permissions** check box.
8. To export the template that is associated with the project, select the **Associated template** check box.

---

## Display the Template and Project Manager Page

To display the Template and Project Manager page, do either of the following:

- If you are at the portal level, click on the **Manage Scorecard Projects** task.  
*Note:* If this task does not appear in the portal, add the task to a portlet.
- If you are using SAS Strategy Management, select **Project** ⇒ **Manage Templates and Projects**.

## Chapter 6

# Scorecards

---

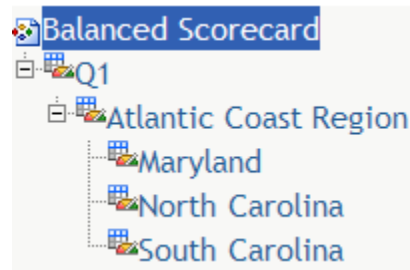
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---

## What Is a Scorecard?

A scorecard is a collection of elements for a given business unit. A scorecard tracks internal business processes and external outcomes so that you can plan a strategy for your organization. You can use a scorecard to document strategic objectives, targets, initiatives, or any other measurement of your organization's progress.

Scorecards can be arranged in a hierarchy within a project. You can expand and contract the levels of the hierarchy by clicking the arrow that is next to the name of a parent scorecard.



### See Also

- “Start the New Scorecard Wizard” on page 66
- “Open a Scorecard” on page 68
- “Edit Scorecard Properties” on page 72

---

## Create a Scorecard

### Start the New Scorecard Wizard

Before you can create a scorecard, you must create a project to contain the scorecard. For more information, see “Start the New Project Wizard” on page 45.

To create a scorecard, open a project and select **Scorecard** ⇒ **New Scorecard**.

### Specify Scorecard Properties

The Properties page of the New Scorecard Wizard lists the project and scorecard name.

#### Properties

Specify the name of this scorecard.

Project name:    **Balanced Scorecard**

\* Scorecard name:

To specify the properties:

1. Type the name of the scorecard in the **Scorecard name** field.

The scorecard name cannot contain a caret (^) or vertical bar (|). If you type a caret, it is converted to a tilde (~). If you type a vertical bar, it is converted to a percent sign (%).

2. Click **Next**.

## Specify Scorecard Location

Each scorecard that you create is in a scorecard hierarchy. A parent can be either another scorecard or the project that contains the new scorecard. A parent is above other scorecards in the hierarchy. Child scorecards are below a parent.

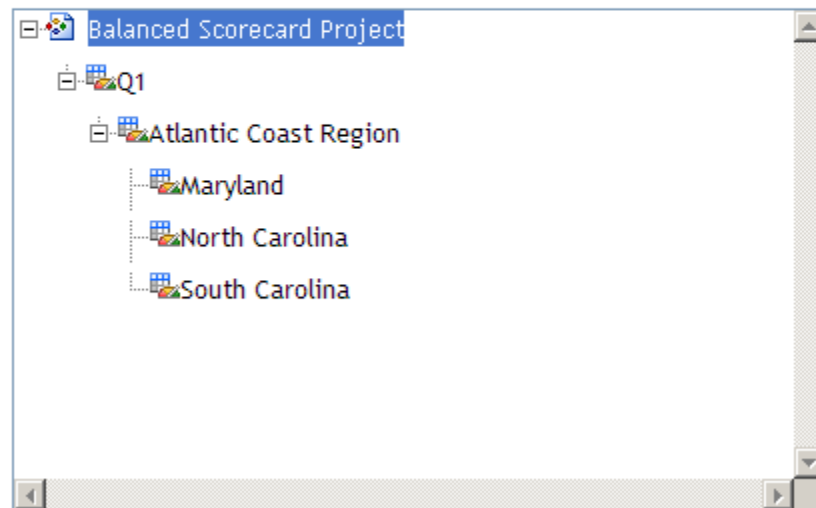
To specify the scorecard location:

1. Click the project or scorecard name in the hierarchy that you want to designate as the scorecard's parent.

### Location

Select a scorecard's parent. This can be either a project or a scorecard. To place a scorecard at the top level of the scorecard hierarchy, select a project. Otherwise, select the scorecard under which you want this scorecard to be located.

Select the scorecard's parent:



☐ Inherit existing elements from parent scorecard

2. To cause the new scorecard to inherit elements that exist in a parent scorecard, select the **Inherit existing elements from parent scorecard** check box.

If the parent of the scorecard is a project, the scorecard cannot inherit elements.

3. Click **Next**.

## Summarize Scorecard Options

The Summary page displays all of the scorecard options that you have selected.

## Summary

Summary of options selected.

Project name:	Balanced Scorecard
Scorecard name:	Georgia
Parent:	Atlantic Coast Region
Inherit existing elements:	No

To finish creating the scorecard:

1. To change an option, click **Previous** to return to a preceding page.
2. Click **Finish**.

---

## Open a Scorecard

You can open a scorecard from within a project or from a link in the portal.

To open a scorecard from within a project, open a project and click on the name of the scorecard.

To open a scorecard from the portal, create a link to the scorecard from a portlet, and click on the link.

---

## Calculate a Scorecard

To calculate a scorecard:

1. Select **Scorecard** ⇒ **Calculate**.

The Calculate page appears.

2. Specify either the date range or the period.
3. (Optional) Select **Include child scorecards**.

---

## Select the Owner of a Project, Scorecard, or Element

Owner

Select an owner for the scorecard.

Find:

	Name	Full Name/Description
<input type="radio"/>	Lillian	
<input type="radio"/>	Chip	
<input type="radio"/>	Mercy	

Select a user name from the list, or type a user name in the **Find** field, click **Search**, and select a user name from the list.

---

## Save a Scorecard as a SAS Information Map

To save a scorecard as a SAS Information Map:

1. Select **Scorecard** ⇒ **Save As Information Map**.

The Save As SAS Information Map page appears.

**Save As SAS Information Map**

**General Information**

Current scorecard: Q1

\*SAS Information Map Path:

\*SAS Information Map name:

Description:

**Data Options**

**Scorecard Options**

Specify where the data should come from:

☒ Current scorecard

☐ Current scorecard and all its children

**Time Period Options**

☒ Use the current date and offset the number of periods (Example: 1, -1):

☐ Use this date:

Include periods:

**Element Options**

Specify which element types to use in the SAS Information Map:

☒ Current element type

☐ All element types

2. Click **Add** to select a storage location for a new information map or to select an existing information map.

For more information, see [“Select a Storage Location or Information Map”](#) on page 71.

3. (Optional) Type the name and description of the information map.

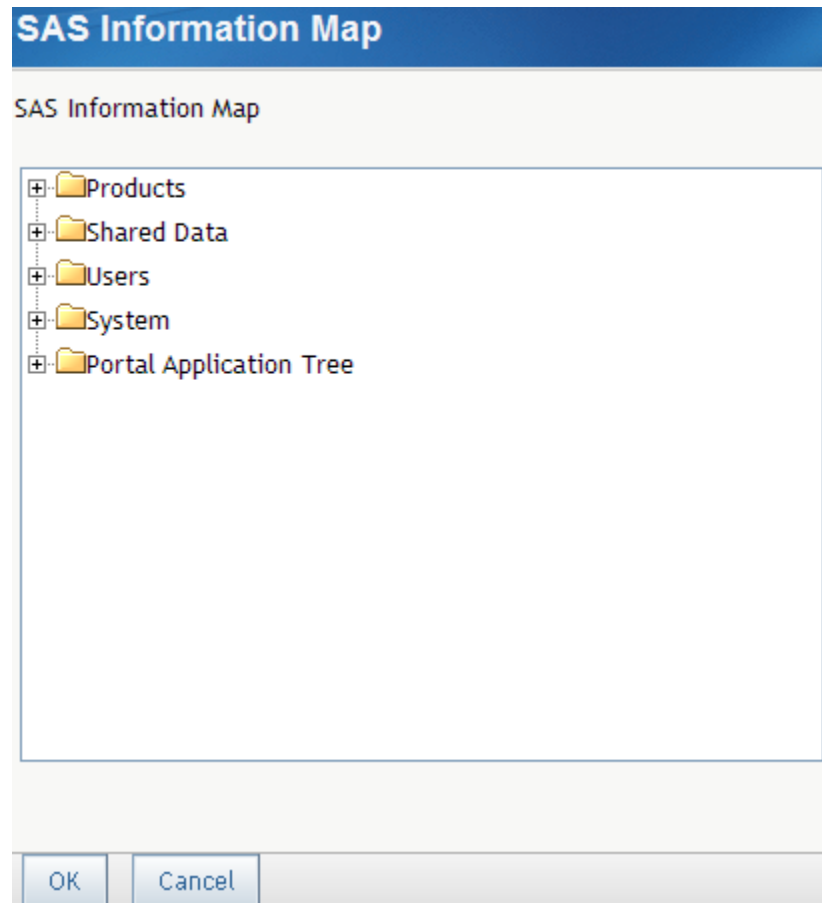
*Note:* If you select an existing information map and do not change the name, the existing information map is overwritten.

4. In the Data Options section, set the options for which scorecards, time periods, and the element types included in the information map.



---

## Select a Storage Location or Information Map



To select a storage location for a new information map or to select an existing information map, navigate the hierarchy, and select a folder or an information map.

---

## Change the Order of Scorecards

You can change the order in which scorecards are displayed within a scorecard hierarchy. However, you cannot change the order of scorecards that are based on a dimension hierarchy.

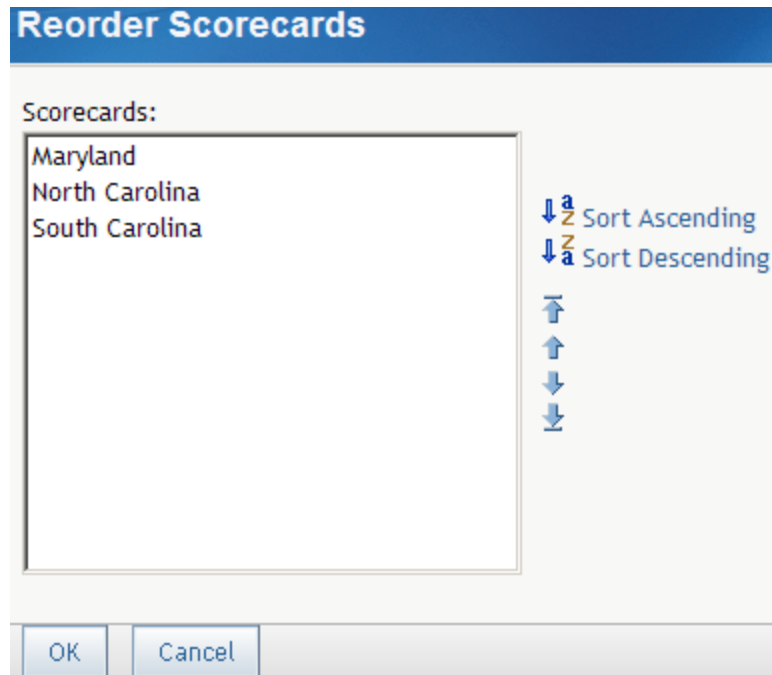
To change scorecard order:

1. Open a scorecard.

For more information, see [“Open a Scorecard” on page 68](#).

2. Select **Scorecard** ⇒ **Reorder**.

The Reorder Scorecards page appears.



3. Select a scorecard.
4. To sort the scorecards in ascending or descending alphabetic order, select **Sort Ascending** or **Sort Descending**.
5. Move individual scorecards by selecting one or more scorecards and using the following:



moves the selected scorecard to the beginning of the list.



moves the selected scorecard up.



moves the selected scorecard down.



moves the selected scorecard to the end of the list.

---

## Edit Scorecard Properties

### *Open the Scorecard Properties Page*

1. Open a scorecard.  
For more information, see [“Open a Scorecard” on page 68](#).
2. Select **Scorecard** ⇒ **Properties**.  
The Scorecard Properties page appears.

**Scorecard Properties - Q1**

General Settings

General properties of a scorecard.

\* Scorecard name: Q1

Description: Not defined in current or default language

Internal scorecard ID: cd65033b-0a0c-0a3a-0057-968b8573ee24

Associated project: Balanced Scorecard

Parent scorecard: None

Owner:  [Select Owner...](#)

Owner email:

Permissions

OK Cancel Apply

### Edit Name and Owner

1. In the **General Settings** section, change the scorecard name by typing a new name in the **Scorecard name** field.

The scorecard name cannot contain a caret (^) or vertical bar (|). If you type a caret, it is converted to a tilde (~). If you type a vertical bar, it is converted to a percent sign (%).

*Note:* You cannot change the name of a scorecard in a project that is based on an existing hierarchy.

2. (Optional) Type a description.
3. To specify the owner of the scorecard, click **Select Owner**.

The Owner page appears. For more information about selecting an owner, see [“Select the Owner of a Project, Scorecard, or Element” on page 39](#).

### Assign Access Permissions

1. Expand the **Permissions** section.

Permissions

Permissions define the type of access granted to a user or group for an object.

Name	Read	Write	Delete	Administer
sasdemo	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

[Add Users & Groups...](#)

2. Click **Add Users & Groups**.
- For more information, see [“Add Users and User Groups” on page 17](#).
3. In the Permissions table, select the **Read**, **Write**, **Delete**, or **Administer** access permissions for each user or group

4. To remove a user's name from the list of users who have access to the scorecard, click the Delete icon (✕) to the right of the check boxes.

For more information about access permissions, see [“What Are Access Permissions?”](#) on page 161.

## Add a Project or Scorecard to a Portlet

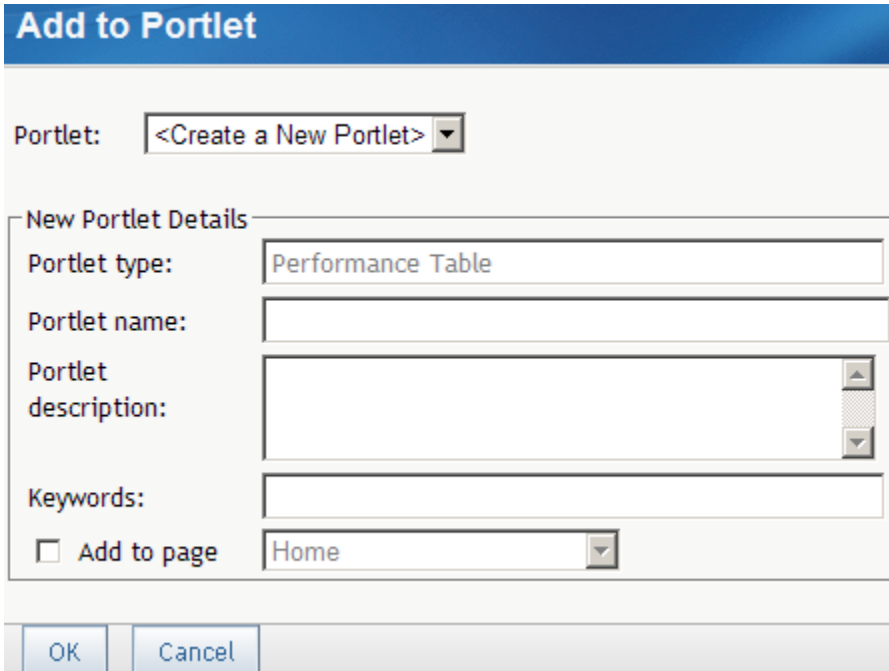
To add a project or scorecard to a portlet:

1. Open a project or scorecard.

For more information, see [“Open a Project”](#) on page 49 or [“Open a Scorecard”](#) on page 68.

2. Click .

The Add to Portlet page appears.



3. To add the project or scorecard to an existing portlet, select the portlet from the **Portlet** drop-down list.

The list includes only those portlets that are of the same type as the current view. For example, when you add a portlet from the table view, the **Portlet** drop-down list includes only Performance Table portlets.

4. To create a new portlet and add the project or scorecard to the portlet:
  - a. Select **<Create a New Portlet>** from the **Portlet** drop-down list.
  - b. Specify the portlet name, description, and keywords.
  - c. To specify the page on which the portlet appears, select the **Add to page** check box, and select a page from the drop-down list.

If you do not select the **Add to page** check box, the portlet is created but is not added to a page. You can search for the portlet later and add it to a page.

---

## Move a Scorecard

You can move a scorecard to a different location in the scorecard hierarchy within the same project or to another project that is associated with the same template.

*Note:* You cannot move a scorecard that is in a hierarchy that is based on a dimension.

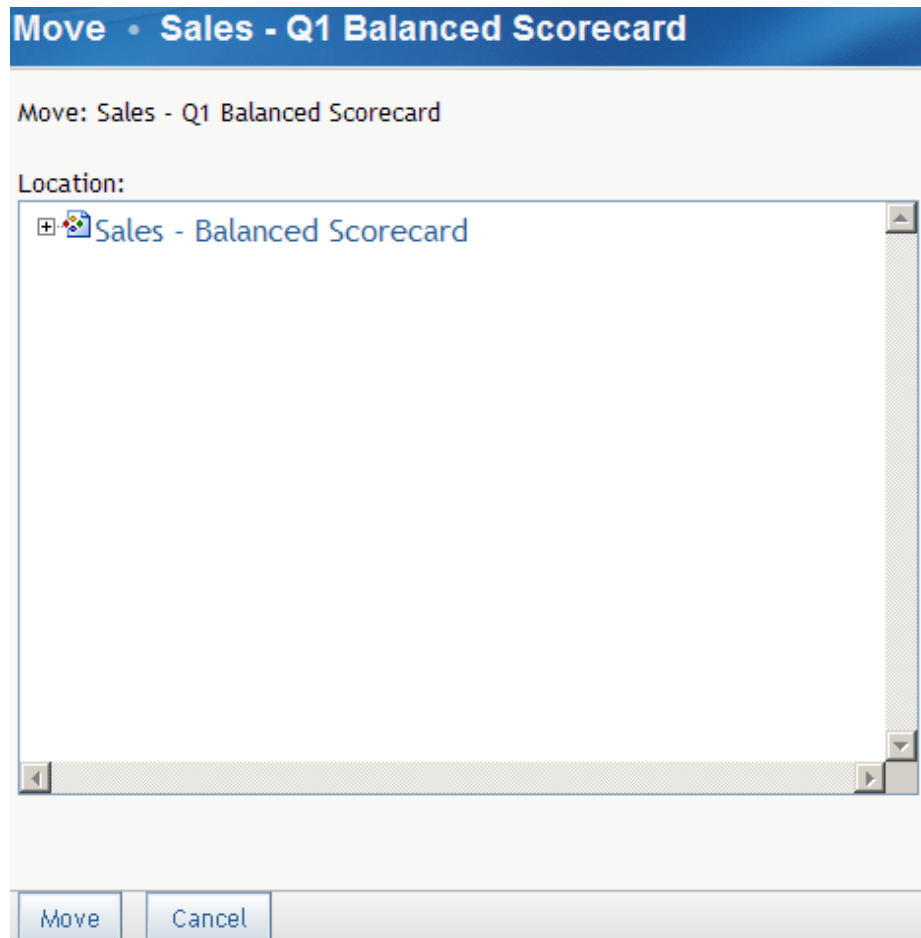
To move a scorecard:

1. Open a scorecard.

For more information, see [“Open a Scorecard” on page 68](#).

2. Select **Scorecard** ⇒ **Move To**.

The Move page appears.



3. Select the location that you want to designate as the parent of the selected scorecard, and click **Move**.

## Copy a Scorecard

You can copy a scorecard to a different location within the same project.

To copy a scorecard:

1. Open a scorecard.

For more information, see [“Open a Scorecard” on page 68](#).

2. Select **Scorecard** ⇒ **Copy To**.

The Copy To page appears.

Copy To - Q1

Copy: Q1

\* Location:

- + Balanced Scorecard
- + DefectTest
- + MT\_Feb20
- + Marketing Scorecard
- + NewTestAlerts
- + es project
- + le\_BSC\_proj

Scorecard name:

☐ Include all scorecards under the current scorecard

Copy Options

Elements are automatically copied for you, but you may also want to include:

- ☐ Attribute selections
- ☐ Select all options below
  - ☐ Metric attribute values
  - ☐ Formulas
  - ☐ Ranges (Only applicable if copying within the same project)
  - ☐ Thresholds
  - ☐ Actions
- ☐ Automatic creation of links between elements

3. Select the location in the project hierarchy to which you want to copy the scorecard.

4. Enter a name for the scorecard in the **Scorecard name** field.

The scorecard name cannot contain a caret (^) or vertical bar (|). If you type a caret, it is converted to a tilde (~). If you type a vertical bar, it is converted to a percent sign (%). By default, the copied scorecard is named *scorecard-name copy*.

5. To copy all of the child scorecards under the current scorecard to the same location, select the **Include all scorecards under the current scorecard** check box.

6. To copy attribute selections that are associated with the current scorecard, select the **Attribute selections** check box.
7. To include other information with the copied scorecard, select the check boxes that are next to **Metric attribute values**, **Formulas**, **Ranges**, **Thresholds**, or **Actions**.
8. To copy all values, select the **Select all options below** check box.
9. To retain existing links between elements (if this option is available for this element), select the **Automatic creation of links between elements** check box.

For more information about linking elements, see [“Link Elements” on page 99](#).

---

## Delete a Scorecard

*Note:* When a scorecard is in a hierarchy, and that hierarchy is based on a dimension, you cannot delete that scorecard.

To delete a scorecard:

1. Open a scorecard.

For more information, see [“Open a Scorecard” on page 68](#).

2. Select **Scorecard** ⇒ **Delete**.

*Note:* If the scorecard contains child scorecards, the child scorecards are also deleted.

---

## Set Default Scorecard Preferences

You can set the default display preferences for all the scorecards that you open. You can override these preferences by customizing an individual scorecard. For information about customizing the display of an individual scorecard, see [“Customize a Scorecard Table or an Association View” on page 174](#).

To set default display preferences for all scorecards:

1. Select **Preferences** in the upper right of the SAS Strategy Management window.

The Preferences page appears.

2. Click **Scorecards** in the list on the left.

The scorecard preferences appear.

The screenshot shows a dialog box titled "Table Display Options" with the following sections and controls:

- Table Display Options**
  - Number of rows to display:  Default: 10
- Thresholds**
  - Show thresholds:  Default: None
- Additional Display Options**
  - Show Historical Trend Chart:  Default: No views
  - Show comments:  Default: No views

At the bottom of the dialog are two buttons: "Apply" and "Restore Defaults".



3. Specify the options in the **Table Display Options** section, the **Thresholds** section, and the **Additional Display Options** section.
4. To return the scorecard preferences to their default settings, click **Restore Defaults**.



## Chapter 7

# Elements and Element Attributes

---

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---

## What Is an Element?

An element is a unit of data that is represented by a row in a scorecard table. Each element belongs to a project element type or scorecard element type that has been defined in the template that is associated with the project. For example, a user's name might be an element that belongs to the Contacts project element type. “Create New Products” might be an element that belongs to the Objectives scorecard element type.

An element can have periodic and non-periodic values. Metric attribute values are periodic. Attribute values are not periodic. Attributes are created in the template for each element type.

### See Also

[“What Is a Template?” on page 20](#)

---

## Create an Element

### *Start the New Element Wizard*

To create an element, you must be a scorecard modeler and have the appropriate access permissions.

To create an element:

1. Open a project.

For more information, see “Open a Project” on page 49.

2. Click the Tables icon .

3. From the **Element type** drop-down list, select a type, and click **Go**.

*Note:* Once you start the New Element Wizard, you cannot change the type of element created. To create a different type of element, you must cancel the wizard, select another element type, and restart the wizard.

4. Select **New Element**.

The New Element Wizard appears.

## Define Element Properties

The Properties page displays general options and time settings for the element.

### Properties

Specify the name, description, and time settings of this element.

General options

Element type: Objective

\*Element name:

Description:

Time settings

Time dimension: Time Default

Time hierarchy: Standard Time Hierarchy

Period type: 

Month

Start period: 

Float

End period: 

Float

General options include the element type, element name, and a description of the element. The element type is the element type that you have selected to display in the scorecard. To supply other information about the new element, type a name and a description. The element name cannot contain a caret (^) or vertical bar (|). If you type a caret, it is converted to a tilde (~). If you type a vertical bar, it is converted to a percent sign (%).

Time settings include the time dimension, time hierarchy, period type, start period and end period that apply to the element. To set time periods for the element:

1. From the **Period type** drop-down list, select the type of period.

The period type defines the intervals at which data is collected for the element.

2. From the **Start period** drop-down list, select the beginning period of data collection.

The start period defines the first interval at which data is collected. For example, if the period type is **YEAR**, the start period might be 1999. If you have selected **Multiyear** as the period type, the only available start period is **MULTYR**. **FLOAT** means that the start point of the period is not set.

3. From the **End period** drop-down list, select the period of data collection.

The end period defines the last interval at which data is collected.

4. Click **Next**.

### Add Element to Project and Scorecards

The Add Element to Project/Scorecards page determines which scorecards will contain the new element.

If you are adding the element to a project, the current project is displayed.

#### Add Element to Project/Scorecards

A new element can be created in current scorecard only, in current scorecard and its children, or in all scorecards of the current project.

Current project:      Balanced Scorecard

If you are adding the element to a scorecard, you can choose the following options:

#### Add Element to Project/Scorecards

A new element can be created in current scorecard only, in current scorecard and its children, or in all scorecards of the current project.

Current project:      Balanced Scorecard

Current scorecard:      Q1

Specify where you would like to add this new element:

☒ In current scorecard only

The new element will be added to "Q1" only.

☐ In current scorecard and all its children

An instance of the element will be created in "Q1" and all its children.

☐ In all scorecards of this project

An instance of the element will be created in each scorecard of the scorecard hierarchy.

#### In current scorecard only

adds the element to the scorecard that is currently open.

#### In current scorecard and all its children

adds the element to the scorecard that is currently open and to all of its children.

#### In all scorecards of this project

adds the element to all of the scorecards in the project that is currently open.

To change a setting, click **Previous** to return to a previous page. When you are satisfied with the settings, click **Finish**.

---

## Edit Metric Attributes


### Overview

Metric attributes are defined in the template that is associated with the project. You can change the values, actions, and ranges that are associated with metric attributes, and you can specify the time periods to which the changes apply.

To edit metric attributes for an element:

1. Open a project or scorecard.

For more information, see [“Open a Project” on page 49](#) or [“Open a Scorecard” on page 68](#).

2. Click the action menu  for an element and select **Edit Metric Attributes**.

The Metric Values, Ranges, and Actions page appears.

**Metric Values, Ranges, and Actions • Reduce Waste**

Metric attribute:

Display period:

☐ Actual Value

Computed value:

Enter a value and then select a period. If a formula has been set for this element, entering a manually entered value effectively deletes the formula.

Entered value:  (Example 1.02)

☐ Actual Text

Enter a text and then select a period.

Metric text:

☐ Actual Action

Select an action to apply to the metric attribute.

Action:

☐ Actual Range

Select the range to apply to the metric attribute.

Range:

Apply changes to the following period or select a range of periods:

☒ Display period:

☐ Start period:

End period:

3. Select a metric attribute from the **Metric attribute** drop-down list.
4. Select a period from the **Display period** drop-down list, and click **Go**.
5. To set the value, select the **<type> Value** check box, and select a value from the **Computed value** drop-down list:

For more information about these methods, see [“Choosing a Method to Derive a Metric Attribute's Value” on page 87](#).

6. To set a text, select the **<type> Text** check box, and type text in the **Metric text** field.
7. To set an action, select the **<type> Action** check box, and select an action from the **Action** drop-down list.

For information about actions, see [“Set Action” on page 87](#).

8. To set a range, select the **<type> Range** check box, and select a range from the **Range** drop-down list.

For more information about creating ranges, see [“Create a Range” on page 134](#).



9. To set the time period to the selected period in the table view, select **Display period**.
10. To set the time period to a specific date range:
  - a. Select **Start period**.  
The default value of the start period is the selected period in the table view. The default value of the end period is the last period in the element's lifetime.
  - b. Select a start period or end period from the drop-down lists.

## Set Action

SAS Strategy Management contains a number of defined actions, such as opening a document or managing measures, that you can assign so that the action is started when a metric attribute is selected.

To assign an action to a metric attribute, select an action from the **Action** drop-down list:

### Manage Documents

opens the Document Manager.

### Open a Document

opens a document that you specify in the Document Manager. Click the icon that is next to the **Document** field to select the document.

### Generic Redirection Directive

opens the URL that you specify. Type the URL in the **URL** field.

### Manage Financial Forms

opens the Financial Form Manager.

### Manage Strategy Management Scorecard Projects and Templates

opens the Template and Project Manager.

### New Strategy Management Scorecard Project

starts the New Project Wizard.

---

## Choosing a Method to Derive a Metric Attribute's Value

### Manually Entered Method

The manually entered method displays an **Entered value** field into which you can type a value.

### Formula-Based Method

The formula-based method designates a formula to apply to the metric value. Any calculation that cannot be computed appears as **#NUM!**.

To apply a predefined formula:

1. Select a formula from the **Formula** drop-down list.
2. Select a function from the **Function** drop-down list.

3. If the function you selected supports an attribute and metric attribute, select values for these from the drop-down lists.
4. Click **Insert Formula**.

The formula is displayed in the **Formula definition** field.

To override the formula result with another value, select the **Override formula result** check box, and type a value.

To define a formula or to modify a predefined formula, click **Advanced Formula** to start the Formula Editor. For more information, see [“Editing a Formula” on page 121](#).

### **Measure-Based Method**

The measure-based method supplies a measure on which the element's value is based.

To select a measure:

1. Click **Select Measure**.  
The Select Measure page appears.
2. Select a category from the **Category** drop-down list, and click **Go**.
3. From the **Metric table** drop-down list, select the metric table on which the measure is based, and click **Go**.
4. From the **Value** drop-down list, select the value on which the measure is based.
5. Select a member from each dimension.
6. Select a measure name in the table of measures.
7. If the measure has a drill-through directive that has been set for it, select **Enable drill-through action on measure**.


---

## **Edit Element Properties**

### **Open the Element Properties Page**

You can edit element properties such as name, attributes, and access permissions.

To edit the properties of an element:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Open a scorecard table.
3. Click the action menu  for an element and select **Properties**.

The Element Properties page appears.

## Supply General Information

General settings include the element type, element name, a description of the element, and its owner. The element type is the element type that you have selected to display in the scorecard.

The screenshot shows a web form titled "General Information". It contains two main sections: "General settings" and "Time settings".

**General settings:**

- Element type:** Objective
- \* Element name:** Reduce Waste
- Description:** (empty text area)
- Internal element ID:** af3bd5a4-0a0c-12d0-01c5-7e85e674a55d
- Owner:** (empty text field with a "Select Owner..." button)
- Owner email:** (empty text field)

**Time settings:**

- Time dimension:** Time
- Time hierarchy:** Time Dimension
- Period type:** Month
- Start period:** Float
- End period:** Float

To change general settings:

1. Edit the name.  
The element name cannot contain a caret (^) or vertical bar (|). If you type a caret, it is converted to a tilde (~). If you type a vertical bar, it is converted to a percent sign (%).
2. Edit the description, if you want.
3. To designate the owner of the element, click **Select Owner**.  
For more information about selecting an owner, see [“Select the Owner of a Project, Scorecard, or Element” on page 39](#).

Time settings include the period type, start period, and end period for the time dimension that applies to the element.

To change time periods:

1. From the **Period type** drop-down list, select the type of period.  
The period type defines the intervals at which data is collected for the element.
2. From the **Start period** drop-down list, select the beginning date of data collection.  
The start period defines the first interval at which data is collected. For example, if the period type is **YEAR**, the start period might be 1999. If you have selected **Multiyear** as the period type, the only available start period is **MULTYR**. **FLOAT** means that the start point of the period is not set.
3. From the **End period** drop-down list, select the end date of data collection.  
The end period defines the last interval at which data is collected. **FLOAT** means that the end point of the period is not set.

*Note:* If an element has a value, action, range, threshold, or formula that is associated with it, you cannot edit its periodicity. If an element contains values that are not included in the changed time settings, the values are retained in the database and can be displayed if the time settings are readjusted to include those values.

## Supply Attribute Information

Attributes and their associations are defined in the template on which the project is based. For more information about defining attributes, see [“Define Metric Attributes” on page 24](#).

*Note:* Attribute information is not available for the elements in a KPI project.

To select associations for an element:

1. Expand the **Attribute Options and Associations** section.

2. Select an attribute from the list.
3. Type or select the value for the options.

For example, if the element is a contact name and the category of the attribute is e-mail, supply the e-mail address for the contact name.

## Assign Access Permissions

In order to assign access permissions to an element, you must have the appropriate access permissions.

You can assign access permissions to an element so that only designated individuals and groups can read or change the element.

To assign access permissions:

1. Expand the **Permissions** section.

Name	Read	Write	Delete	Administer
SAS Demo User	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

2. Click **Add Users & Groups**.

For more information, see [“Add Users and User Groups” on page 17](#).

3. Select the **Read**, **Write**, **Delete**, or **Administer** check box to apply those access permissions to the selected user or group.

---

## Edit Multiple Elements

### *Open the Edit Elements Page*

You can edit the time, owner, and values of more than one element at a time.

To edit multiple elements:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Click **Edit Elements**.  
The Edit Elements page appears.

### Edit Elements

**Element Selection**

☒ Project elements: NewTestAlerts (project elements only)

☐ Scorecards:

Element type:

Select the elements you want to change:

☒ All elements

☐ Selected elements:

☐ Override properties set on an individual cell

Select the edits you want to make.

**General Properties**

☐ Element's lifetime: Period type:  Start period:  End period:

☐ Owner:

☐ Comment alert:

**Metric Attribute Properties**

Select a metric attribute. This indicates what column the properties are applied to.

Metric attribute:

☐ Value:

☐ Metric text:

☐ Range:

☐ Global threshold: Interval type:  Condition:  Threshold:

☐ Personal threshold: Interval type:  Condition:  Threshold:

☐ Action:

Apply any information that has been checked to the following set of periods:

☒ Display period:

☐ Start date:  End date:

3. Do one of the following:

- To edit project elements, select **Project elements**.
- To edit scorecard elements, select **Scorecards**.

You can edit the elements in all scorecards, or click **Select** to select the scorecard whose elements you want to edit. For more information, see [“Select Scorecards” on page 94](#).

4. Select an element type from the **Element type** drop-down list.
5. Do one of the following:
  - To edit all elements, select **All elements**.
  - To edit specific elements, select **Selected elements** and select the check boxes that are next to the elements.
6. To override cell properties, select the **Override properties set on an individual cell** check box.

*Note:* To change any existing values on the selected elements, you must select this option.

7. To change the time properties of the elements:
  - a. Select the **Element's lifetime** check box.
  - b. Select a period type from the **Period type** drop-down list.
  - c. Select a start period and an end period from the **Start period** and **End period** drop-down lists.

Select **Float** to indicate that the start period or end period for the project has not been set.

*Note:* If an element contains values that are not included in the changed time settings, the values are retained in the database and can be displayed if the time settings are readjusted to include those values.

**CAUTION:**

**If you change the periodicity of an element, data is lost.**

8. To change the owner of the elements:
  - a. Select the **Owner** check box.
  - b. Click **Select Owner**.  
The Owner page appears. For more information about selecting an owner, see [“Select the Owner of a Project, Scorecard, or Element” on page 39](#).
9. To specify whether you receive a notification when a comment is added:
  - a. Select the **Comment alert** check box.
  - b. Click **Change**.  
The Alerts on Comments page appears. For information about the Alerts on Comments page, see [“Change Comment Notification Options for Multiple Elements” on page 98](#).
10. To specify the column to which metric attribute properties are applied, select an attribute from the **Metric attribute** drop-down list.
11. To change a value:
  - a. Select the **Value** check box.
  - b. Click **Change**.  
The Values page appears. For information about the Values page, see [“Change Values” on page 94](#).
12. To change or supply text, select the **Metric text** check box, and type the text into the field.

13. To change or apply a range:
  - a. Select the **Range** check box.
  - b. Select a range from the drop-down list, or click **New** to create a new range.  
For more information about creating ranges, see [“Create a Range” on page 134](#).
14. To change or apply a global threshold:
  - a. Select the **Global threshold** check box.
  - b. Click **Change**.  
The Global Threshold Options page appears. For more information about the Global Threshold Options page, see [“Change Global Threshold Options” on page 95](#).
15. To change or apply a personal threshold:
  - a. Select the **Personal threshold** check box.
  - b. Click **Change**.  
The Personal Threshold Options page appears. For more information about the Personal Threshold Options page, see [“Change Personal Threshold Options” on page 97](#).
16. To change the action that has been defined for multiple elements:
  - a. Select the **Action** check box.
  - b. Click **Change**.  
The Action page appears. For more information about the Action page, see [“Change Action” on page 98](#).
17. To specify the time period to which the changes apply, do one of the following:
  - To specify the current period, select **Display period**.
  - To specify a date range, select **Start date**, and click the calendar button that is next to **Start date** and **End date**.

## Select Scorecards

Do one of the following:

- To include all of the scorecards in the project, select **All scorecards**.
- To specify the scorecards to include:
  1. Select **Selected scorecards**.
  2. Expand the scorecard hierarchy to display all of the scorecard names.
  3. Select the check box that is next to the scorecard names.

## Change Values

You can change the metric attribute values for multiple elements.



**Values**

Set a value for the elements selected.

☒ Entered value:  (Example 1.02)

☐ Measure:  [Select Measure...](#)

☐ Formula definition:

[Insert Formula](#) [Advanced Formula...](#)

Predefined formulas

Formula:

Select the following options:

Function:

[OK](#) [Cancel](#)

To enter a value, select **Entered value** and type the new value in the field.

To select a measure, select **Measure** and click **Select Measure**. For information about selecting measures, see [“Measure-Based Method” on page 88](#).

To add a predefined formula:

1. Select **Formula definition**.
2. From the **Formula** drop-down list, select a formula.
3. Select a function, attribute, and metric attribute as needed.
4. Click **Insert Formula**.

The formula appears in the **Formula definition** field.

To define a formula, click **Advanced Formula**. For more information about defining a formula in the Formula Editor, see [“Editing a Formula” on page 121](#).

## Change Global Threshold Options

You can change global thresholds for multiple elements.

**Global Threshold Options**

**Threshold trigger**  
Threshold settings determine when a flag is displayed.

Interval type:  Condition:  Threshold:

☐ Set threshold: 
☐ Remove thresholds on selected elements
 ☒ No change

**Notification and subscription**  
Notifications are sent to the list of subscribers when the alert is triggered.

☐ Set subscribers on selected elements  
 List of subscribers:

☐ Remove all subscribers on selected elements
 ☒ No change

**Stored Process**  
Select a stored process to run when the threshold condition is met.

Stored Process:

Stored Process parameter:

The format is keyword=value and multiple parameters should be separated with semicolons.

To specify the type of interval that will trigger the alert:

1. To specify the threshold:
  - a. Select **Set threshold**.  
*Note:* You cannot change the interval type.
  - b. Select an operator from the **Condition** drop-down list.  
 For example, if you want to trigger an alert when the interval falls below a certain value, select the < (less than) operator.
  - c. Type a value in the **Threshold** field.
2. To remove all thresholds from the selected elements, select **Remove thresholds on selected elements**.  
 This choice also removes all subscribers.
3. To make no change to elements with differing thresholds, select **No change**.

To specify who receives notification:

1. To add a user to the list of subscribers to a global threshold:
  - a. Select **Set subscribers on selected elements**.
  - b. Click **Subscribe**.  
 For more information, see [“Add Users and User Groups” on page 17](#).
2. To remove a user from the list of subscribers, select the user, and click **Remove**.

3. To remove all subscribers from the selected elements, select **Remove all subscribers on selected elements**.
4. To make no change to elements with differing notifications, select **No change**.

To specify a stored process to run when the threshold is met:

1. Click **Add**, expand the hierarchy as needed, and then select a stored process.
2. If the stored process requires one or parameters, type the parameters in the **Stored Process parameter** field.

Separate each parameter with a semicolon (;).

## Change Personal Threshold Options

You can change the personal threshold for multiple elements.

**Personal Threshold Options**

**Threshold trigger**  
Threshold settings determine when a flag is displayed.

Interval type:  Condition:  Threshold:

☐ Set threshold:   
☐ Remove thresholds on selected elements  
☒ No change

**Notification and subscription**  
Notifications are sent to the list of subscribers when the alert is triggered.

☐ Enable alert notifications and subscribe me  
☐ Remove my alert notifications subscription on selected elements  
☒ No change

**Stored Process**  
Select a stored process to run when the threshold condition is met.

Stored Process:

Stored Process parameter:   
The format is keyword=value and multiple parameters should be separated with semicolons.

To specify the type of interval that will trigger the alert:

1. To specify the threshold:
  - a. Select **Set threshold**.  
*Note:* You cannot change the interval type.
  - b. Select an operator from the **Condition** drop-down list.  
For example, if you want to trigger an alert when the interval falls below a certain value, select the < (less than) operator.
  - c. Type a value in the **Threshold** field.

2. To remove all thresholds from the selected elements, select **Remove thresholds on selected elements**.

This choice also removes your notification.

3. To make no change to elements with differing thresholds, select **No change**.

To specify whether you are notified:

1. To be notified, select **Enable alert notifications and subscribe me**.
2. To remove notification, select **Remove my alert notifications subscription on selected elements**.
3. To make no change to elements with differing notifications, select **No change**.

To specify a stored process to run when the threshold is met:

1. Click **Add**, expand the hierarchy as needed, and then select a stored process.
2. If the stored process requires one or parameters, type the parameters in the **Stored Process parameter** field.

Separate each parameter with a semicolon (;).

## Change Action

You can change the action that has been defined for multiple elements.

To change the action, select an action from the **Action** drop-down list:

### Manage Documents

opens the Document Manager.

### Open a Document

opens a document that you specify in the Document Manager. Click the icon that is next to the **Document** field to select the document.

### Generic Redirection Directive

opens the URL that you specify. Type the URL in the **URL** field.

### Manage Financial Forms

opens the Financial Form Manager.

### Manage Strategy Management Scorecard Projects and Templates

opens the Template and Project Manager.


### New Strategy Management Scorecard Project


starts the New Project Wizard.

## Change Comment Notification Options for Multiple Elements

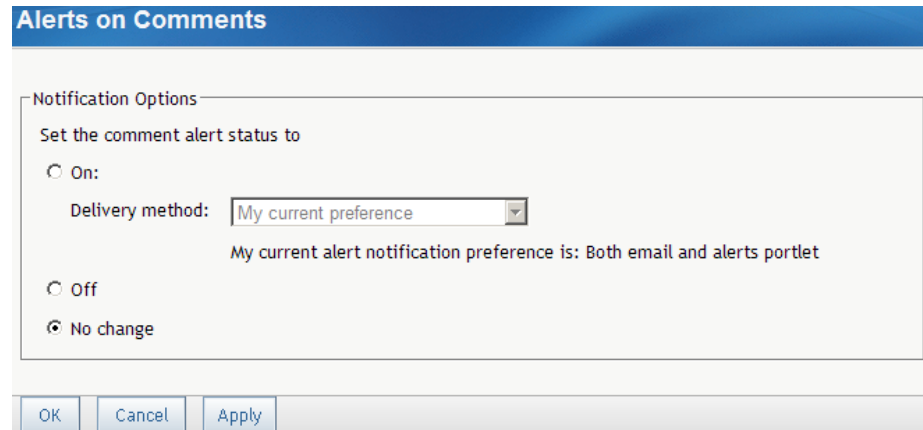
You can choose to receive a notification when a comment is added to an element. You can select multiple elements and change the options for all at one time.

To change the comment notification options:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Click the Tables icon .

3. Select multiple elements.
4. Click the action menu  at the top of the last column and select **Alerts on Comments**.

The Alerts on Comments page appears.




5. To enable notification, select **On**, and select a notification method from the **Delivery method** drop-down list.
6. To maintain the different states of notification for multiple elements, select **No change**.

## Link Elements

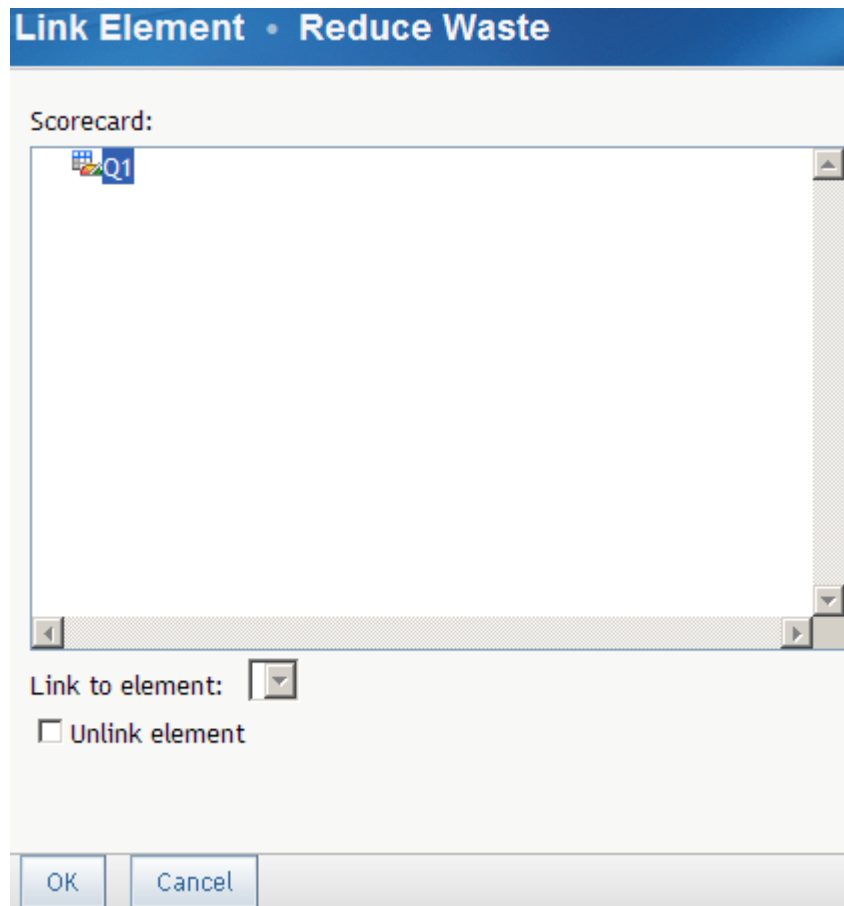
In a project that contains multiple scorecards, you can link an element to an element of the same element type in a parent scorecard. Linked elements are used in the following ways:

- Thresholds that are crossed in a child scorecard will cause a flag to appear in linked elements in the parent and grandparent scorecards.
- Parent scorecards that have a formula that uses the **Current Children** function will include only those child elements that are linked.
- An aggregate view will display all linked elements on the same line of the aggregate table. Elements that are not linked are displayed on separate lines.

To link an element to an element in its parent scorecard:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Select a scorecard below the level of the top scorecard.
3. Click the action menu  for an element and select **Link Element**.

The Link Element page appears.



4. Select a parent scorecard from the **Scorecard** list.
5. Select an element from the **Link to element** drop-down list.
6. To unlink the element, select the **Unlink element** check box.



*Note:* You cannot link multiple elements in one scorecard to a single element in a parent scorecard.

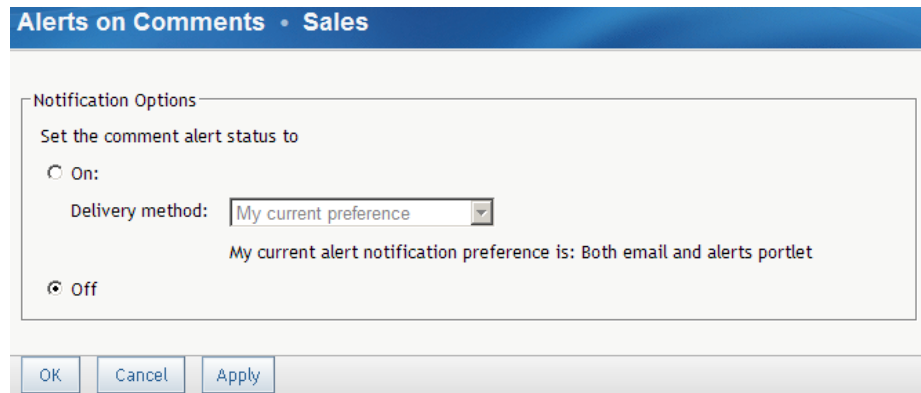
---

## Change Comment Notification Options for an Element

You can choose to receive a notification when a comment is added to an element.

To change the comment notification options:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Click the Tables icon .
3. Click the action menu  for the element and select **Alerts on Comments**.  
The Alerts on Comments page appears.



**Alerts on Comments • Sales**

Notification Options

Set the comment alert status to

☐ On:

Delivery method:

My current alert notification preference is: Both email and alerts portlet

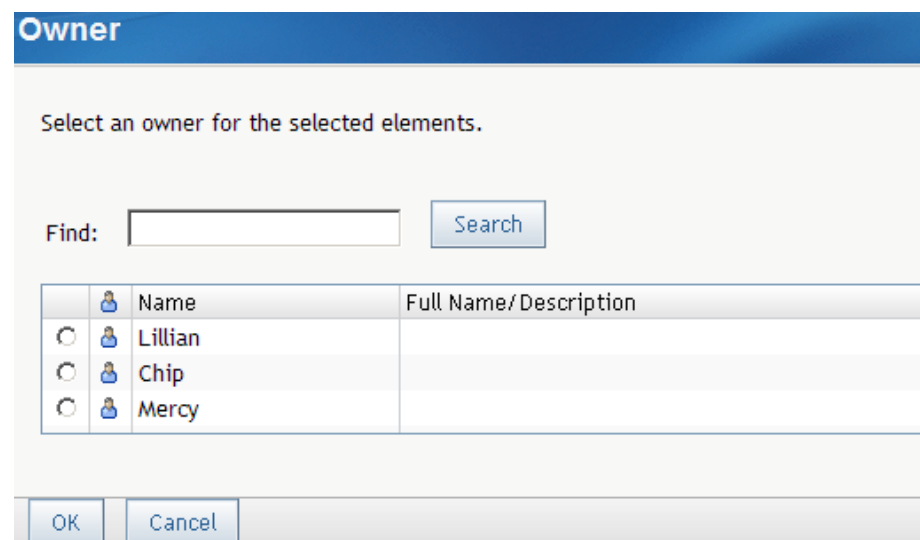
☒ Off

OK Cancel Apply

- To enable notification, select **On**, and select a notification method from the **Delivery method** drop-down list.

---





## Select the Owner of an Element



**Owner**

Select an owner for the selected elements.

Find:

		Name	Full Name/Description
<input type="radio"/>		Lillian	
<input type="radio"/>		Chip	
<input type="radio"/>		Mercy	

OK Cancel

Select an owner from the table. To find a user, type a search string in the **Find** field and click **Search**.

---

## Copy Element Properties

You can copy the properties of an element to other elements. Copying properties enables you to define a set of properties for an element, such as a value to be entered manually, a measure or a formula, a global threshold, a personal threshold, a range, and an action. You can then copy the properties from that element to a set of elements throughout the scorecard hierarchy for a given set of periods.


*Note:* Element associations are copied only to elements that are in the same scorecard.

To copy the properties of an element:

1. Open a project.

For more information, see “Open a Project” on page 49.

2. Click the Tables icon .

- Click the action menu  for an element and select **Copy Properties To**.

The Copy Properties To page appears.

## Copy Properties To

Element name: Reduce Waste

Properties to copy

Select a metric attribute (indicates what column the properties are copied from), then select the properties you want to copy.

Metric attribute: Actual

☐ Value: 11.0

☐ Metric text:

☒ Range:

☐ Global threshold: Interval type:  Condition:  Threshold:

☐ Personal threshold: Interval type:  Condition:  Threshold:

☐ Action:

Element Selection

☒ Project elements: Q1 (project elements only)

☐ Scorecards: All Select...

Element type: All

Select the elements you want to copy properties to:

☒ All elements

☐ Selected elements:

☐ Override properties set on an individual cell

Period Selection

Copy any information that has been checked to the following set of periods:

☒ Display period: Month


☐ Start date:   End date:

OK Cancel Apply

4. Select a metric attribute from the **Metric attribute** drop-down list.
5. Select the **Value**, **Metric text**, **Range**, **Global threshold**, **Personal threshold**, and **Action** check boxes to copy these properties.



The fields to the right of these check boxes are unavailable.



6. To copy the properties to a project, select **Project elements**.
7. To copy the properties to a scorecard, select **Scorecards** and click **Select**.  
For information about selecting scorecards, see [“Select Scorecards” on page 94](#).
8. Select an element type from the **Element type** drop-down list.
9. Do one of the following:
  - To copy the properties to all elements in the selected project or scorecards, select **All elements**.
  - To copy the properties only to selected elements, select **Selected elements**, and click on the elements that you want to select.
10. To override existing properties, select the **Override properties set on an individual cell** check box.
11. Do one of the following:
  - To copy the properties to the currently displayed period, select **Display period**.
  - To specify the time period that you want to copy the properties to:
    1. Select **Start date**, and click the calendar button .
    2. Select **End date**, and click the calendar button.

---

## Copy an Element

You can copy an element to a scorecard in the same project, or in a different project if the project is based on the same template. The copied element retains the link and other attributes of the original element. You can copy project elements only to other projects, and you cannot link project elements. You can copy scorecard elements only to other scorecards.

To copy an element:



1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Click the Tables icon .
3. Click the action menu  for the element and select **Copy**.  
The Copy Element page appears.
4. Select the project and scorecard to which to copy the element.  
You can copy the element to more than one scorecard. An element cannot be copied to itself.
5. To change the name of the element when it is copied, type the name in the **Element name** field.

---

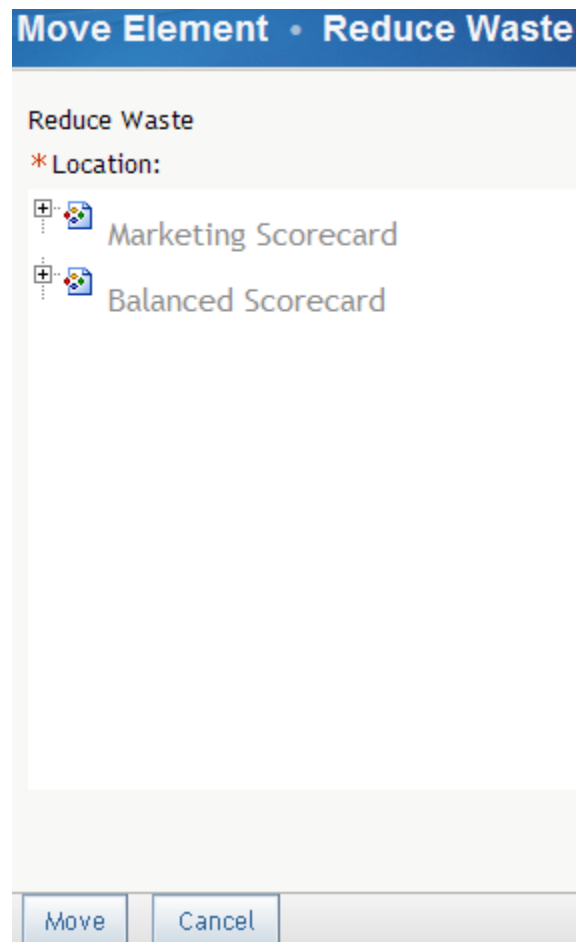
## Move an Element

You can move an element to a scorecard in the same project, or in a different project if the project is based on the same template.

To move an element to another scorecard:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Click the Tables icon .
3. Click the action menu  for the element and select **Move**.

The Move Element page appears.






4. Select the project and scorecard to which to move the element.

---

## Delete an Element

To delete an element:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Click the Tables icon .
3. Click the action menu  for the element and select **Delete**.
4. To delete more than one element, do either of the following:
  - Select the check box to the right of each element, click the action menu for the column and select **Delete**.
  - To delete all elements, select the check box at the top of the right-most column, click the action menu  for the column and select **Delete**.

*Note:* Deleting an element that is used in a formula will render the formula invalid.


---

## Cell Format

### Overview

You can change the number format and font of the cells within a scorecard element.

To change cell format:

1. Open a project.
2. Click the action menu  at the left of a row and select **Format Cells**.

The Format Cells page appears.

### Format Numbers and Dates

To format numbers and dates in cells:

1. Expand the **Number Settings** section.

**Number Settings**

Use number formats to change the appearance of numbers, including dates.

<input type="checkbox"/>	Metric Attribute	Type	Preview
<input type="checkbox"/>	Status	Current column format	
<input type="checkbox"/>	Actual	Current column format	
<input type="checkbox"/>	Target	Current column format	
<input type="checkbox"/>	Performance	Current column format	
<input type="checkbox"/>	TestColumn	Current column format	

**Options**

Select the type to change the selected metric type attributes. To format cells as text, select General.

Type: General

Preview

2. Select the metric attributes in the table to which to apply the format, or select the **Metric Attribute** check box in the column heading to select all of the attributes.
3. From the **Type** drop-down list in the **Options** section, select the number format to apply to the selected attribute:

#### **Current Column Format**

applies the format of each column to the cells in the selected row.

#### **General**

applies a text format.

#### **Currency**

applies a currency format. An example is \$1,234.10.

#### **Number**

applies a numeric format.

#### **Percentage**

applies a percentage format. An example is 100%.

#### **Date**

applies a date format. An example is 03Dec04.

4. If you selected the **Currency** type, specify other options:
  - a. To use the locale that is specified by your preferences, select **Use the locale selected in your preferences**.
  - b. To specify a different locale, select **Use this locale**, and choose a locale from the drop-down list.
  - c. From the **Decimal places** drop-down list, select a value.
5. If you selected the **Number** type, specify other options:
 

*To use the SAS numeric format:*

  - a. Select **SAS Format**.
  - b. From the **List of formats** drop-down list, select a common format.
  - c. From the **Decimal places** drop-down list, select a value.

*Note:* This field is unavailable for the **BEST** format.

- d. In the **Width** field, type a value.

*To use a numeric format other than the SAS format along with settings that are in your profile:*

- e. Select **Other**.
- f. Select **Use the settings in your profile**.

*To use a numeric format other than the SAS format along with settings different from those in your profile:*

- g. Select **Use these settings**.
  - h. From the **Decimal places** drop-down list, select a value.
  - i. Choose whether or not to use a comma to separate 1000s and whether or not to switch the 1000 separator and the decimal separator.
6. If you selected the **Percentage** type:
    - a. Choose whether to format the percentage as a standard percentage or to use the format from the locale.
    - b. From the **Decimal places** drop-down list, select a value.
  7. If you selected the **Date** type, select a format from the **Available date formats** list.
  8. To view the format selection in the metric attribute table, click **Preview**.

## Set Fonts

To set the fonts that are displayed in cells:

1. Expand the **Font Settings** section.

**Font Settings**

To make text stand out, you can format any metric attribute.

**Attributes:**

<input type="checkbox"/>	Metric Attribute	Type	Preview
<input type="checkbox"/>	Status	Current column format	
<input type="checkbox"/>	Actual	Current column format	
<input type="checkbox"/>	Target	Current column format	
<input type="checkbox"/>	Performance	Current column format	
<input type="checkbox"/>	TestColumn	Current column format	

**Options**

Select the formatting options.

☐ Current column format

**Alignment**

☐ Left  
☐ Center  
☒ Right

**Style**

☐ Bold  
☐ Italic  
☐ Underline  
☐ Strikeout  
☐ Wrap text

**Color**

Text:

Background:

**Preview**

2. Select the metric attributes in the table to which to apply the font, or select the **Metric Attribute** check box in the column heading to select all of the attributes in the table.
3. To apply the column format to the cells in the selected row, select **Current Column Format**.

The other settings in the **Options** section are unavailable.


4. From the **Alignment** section, select the alignment of the text within the cell.
5. From the **Style** section, select one or more styles of text.
6. From the **Text** and **Background** drop-down lists, select a color for the text and background.
7. To view the font selection in the metric attribute table, click **Preview**.

## Column Format

### Overview

You can change the number format and font of the columns within a scorecard table.

To change column format:

1. Open a project.
2. Select a column in a scorecard table.
3. Click the action menu  at the top of a column and select **Format Column**.

## Format Numbers and Dates

To format numbers and dates in columns:

1. Expand the **Number Settings** section.

Number Settings

Formats all the text in the column.

Options

Select the type to change the selected metric type attributes.  
To format cells as text, select General.

Type: Date

Set the options to apply to selected type.

Available date formats:

- 02/23/2009
- 23/02/2009
- 02/23/2009
- February 23, 2009

2. From the **Type** drop-down list, select the number format to apply to the selected column:

### General

applies a text format.

### Currency

applies a currency format. An example is \$1,234.10.

### Number

applies a numeric format.

### Percentage

applies a percentage format. An example is 100%.

### Date

applies a date format. An example is 03Dec04.

3. If you selected the **Currency** type, specify other options:
  - a. To use the locale that is specified by your preferences, select **Use the locale selected in your preferences**.
  - b. To specify a different locale, select **Use this locale**, and choose a locale from the drop-down list.
  - c. From the **Decimal places** drop-down list, select a value.
4. If you selected the **Number** type, specify other options:
 

*To use the SAS numeric format:*

  - a. Select **SAS Format**.
  - b. From the **List of formats** drop-down list, select a common format.

- c. From the **Decimal places** drop-down list, select a value.

*Note:* This field is unavailable for the **BEST** format.

- d. In the **Width** field, type a value.

*To use a numeric format other than the SAS format along with settings that are in your profile:*

- e. Select **Other**.
- f. Select **Use the settings in your profile**.

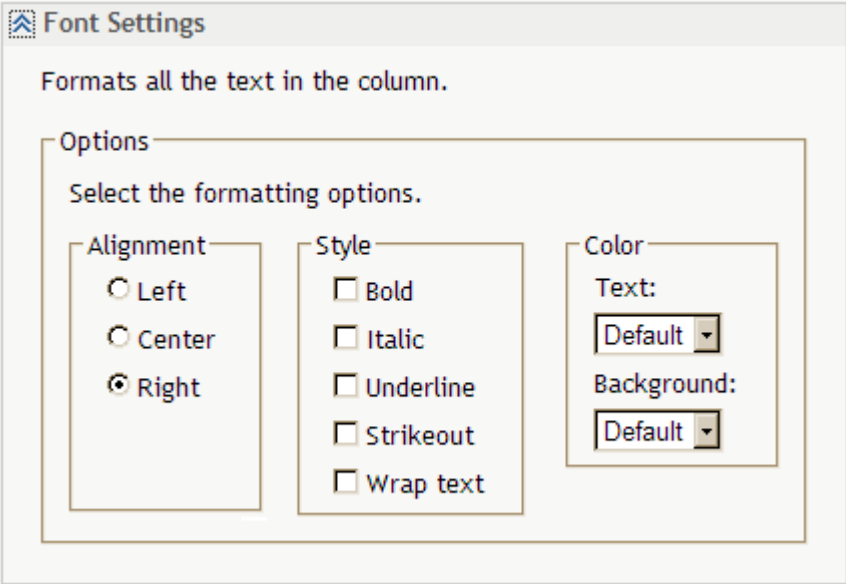
*To use a numeric format other than the SAS format along with settings different from those in your profile:*

- g. Select **Use these settings**.
  - h. From the **Decimal places** drop-down list, select a value.
  - i. Choose whether or not to use a comma to separate 1000s and whether or not to switch the 1000 separator and the decimal separator.
5. If you selected the **Percentage** type:
    - a. Choose whether to format the percentage as a standard percentage or to use the format from the locale.
    - b. From the **Decimal places** drop-down list, select a value.
  6. If you selected the **Date** type, select a format from the **Available date formats** list.
  7. To view the format selection in the metric attribute table, click **Preview**.

## Set Fonts

To set the fonts that are displayed in columns:

1. Expand the **Font Settings** section.



**Font Settings**

Formats all the text in the column.

**Options**

Select the formatting options.

**Alignment**

☐ Left  
☐ Center  
☒ Right

**Style**

☐ Bold  
☐ Italic  
☐ Underline  
☐ Strikeout  
☐ Wrap text

**Color**

Text:  
Default

Background:  
Default

2. From the **Alignment** section, select the alignment of the text within the column.
3. From the **Style** section, select one or more styles of text.



4. From the **Text** and **Background** drop-down lists, select a color for the text and background.

---

## What Is a Threshold?

A threshold triggers an alert whenever data meets specified conditions. You can assign a threshold to any metric attribute of any element.

Global thresholds are set by scorecard modelers, who have access permissions to create scorecards, and are available to every user of a scorecard.


Personal thresholds are set by an individual user and are viewable only by that user.

---

## Set a Global Threshold

### *Open the Global Threshold Options Page*

To open the Global Threshold Options page:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Select a project or scorecard table.
3. Select the element in the table to which you want to apply a threshold.
4. Click the action menu  for the row and select **Global Threshold Options**.

The Global Threshold Options page appears.

### Select a Period

To view threshold information for a specified period, select a period from the **Period** drop-down list and click **Go**. The current period is displayed by default.

### Select a Metric Attribute

From the **Select a metric attribute** list, select the metric attribute to which you want to apply the threshold.

### Activate the Threshold

Select the **Enable global threshold** check box.

### Set Alert Trigger

You can specify the conditions that will trigger alert notifications to subscribers. To set alert triggers:

1. Select an interval type from the **Interval type** drop-down list.  
 If you have applied a range to the metric attribute, the list contains intervals that are defined in the range properties.  
 If you have not applied a range to the metric attribute, **Value** is the only item in the **Interval Type** list.  
 For more information about defining intervals in ranges, see [“Define Intervals” on page 134](#).
2. Select an operator from the **Condition** drop-down list.  
 For example if you want an alert to be triggered when the interval falls below a certain value, select the < (less than) operator.
3. Type a value in the **Threshold** field or select an interval from the **Threshold** drop-down list.
4. To specify the period of time to which the threshold applies, do either of the following:
  - Select **Period range** and select a start period and end period from the **Start** and **End** drop-down lists.  
 The default value of the start period is the selected period in the table view. The default value of the end period is the last period in the element's lifetime.
  - Select **Current period**.

### ***Enable Alert Notifications and Subscriptions***

When you set a global threshold, you can identify subscribers who should be notified when an alert is triggered. To enable alert notifications and add users to the list of subscribers:

1. Select the **Enable alert notifications** check box.
2. To add a user or user group to the list of subscribers to a global threshold, click **Add**.  
 For more information, see [“Add Users and User Groups” on page 17](#).
3. To remove a user from the list of subscribers to a global threshold, click **Remove**.

### ***Specify a Stored Process***


To specify a stored process to run when the threshold is met:

1. Click **Add**, expand the hierarchy as needed, and then select a stored process.
2. If the stored process requires one or parameters, type the parameters in the **Stored Process parameter** field.  
 Separate each parameter with a semicolon (;).
3. To delete the stored process, click **Remove**.

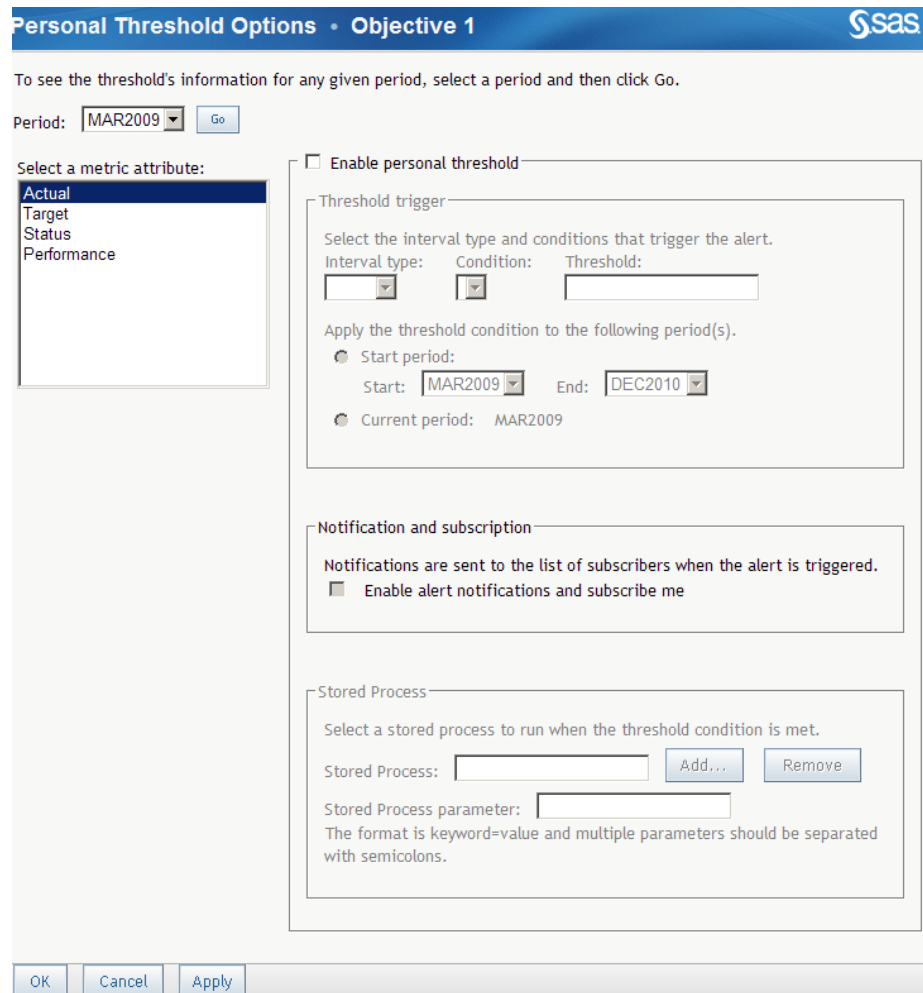
## Set a Personal Threshold


### Open the Personal Threshold Options Page

To open the Personal Threshold Options page:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Select a project or scorecard table.
3. Select the element in the table to which you want to apply a threshold.
4. Click the action menu  for the row and select **Personal Threshold Options**.

The Personal Threshold Options page appears.



**Personal Threshold Options • Objective 1** 

To see the threshold's information for any given period, select a period and then click Go.

Period:

Select a metric attribute:

- Actual**
- Target
- Status
- Performance

☐ Enable personal threshold

Threshold trigger

Select the interval type and conditions that trigger the alert.

Interval type:  Condition:  Threshold:

Apply the threshold condition to the following period(s).

☒ Start period:

Start:  End:

☐ Current period: MAR2009

Notification and subscription

Notifications are sent to the list of subscribers when the alert is triggered.

☐ Enable alert notifications and subscribe me

Stored Process

Select a stored process to run when the threshold condition is met.

Stored Process:

Stored Process parameter:

The format is keyword=value and multiple parameters should be separated with semicolons.

### Select a Period

To view threshold information for a specified period, select a period from the **Period** drop-down list, and click **Go**. The current period is displayed by default.

### Select a Metric Attribute

From the **Select a metric attribute** list, select the metric attribute to which you want to apply the threshold.

### Activate the Threshold

Select the **Enable personal threshold** check box.

### Set Alert Trigger

You can specify the conditions that will trigger alert notifications to subscribers. To set alert triggers:

1. Select an interval type from the **Interval type** drop-down list.

If you have applied a range to the metric attribute, the list contains intervals that are defined in the range properties.

If you have not applied a range to the metric attribute, **Value** is the only item in the **Interval Type** list.

For more information about defining intervals in ranges, see [“Define Intervals” on page 134](#).

2. Select an operator from the **Condition** drop-down list.

For example, if you want an alert to be triggered when the interval falls below a certain value, select the < (less than) operator.

3. Type a value in the **Threshold** field or select an interval from the **Threshold** drop-down list.

4. To specify the period of time to which the threshold applies, do either of the following:

- Select **Start period** and select a start period and end period from the **Start** and **End** drop-down lists.

The default value of the start period is the selected period in the table view. The default value of the end period is the last period in the element's lifetime.

- Select **Current period**.

### Enable Alert Notification and Subscriptions

When you set a personal threshold, you can subscribe yourself so that you are notified when an alert is triggered. To subscribe to alert notifications for a personal threshold, select the **Enable alert notifications and subscribe me** check box.

## Specify a Stored Process

To specify a stored process to run when the threshold is met:

1. Click **Add**, expand the hierarchy as needed, and then select a stored process.
2. If the stored process requires one or parameters, type the parameters in the **Stored Process parameter** field.

Separate each parameter with a semicolon (;).



---

## View Thresholds

To view the thresholds that have been set for a table:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Select a project or scorecard table.
3. Customize the table so that threshold flags are displayed.

For information, see [“Customize a Scorecard Table or an Association View” on page 174](#).

4. Click one of the threshold icons ( or ) in a cell.

The Threshold Conditions page appears.

The table displays the name of the scorecard, the value of the selected element, the threshold, and the absolute difference between the threshold and the value. The table also displays any scorecards that meet the threshold conditions for that metric attribute, starting at the selected scorecard and including any of its child scorecards.

5. You can click on the scorecard name to display the scorecard.

## Part 3

---

# Displaying Data

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## Chapter 8

# Formulas

---

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---

## Apply a Formula to a Column

You can define and apply formulas to the columns in scorecard tables. Formulas can be applied only to columns that contain numeric values. Any calculation that cannot be computed appears as **#NUM!**.

*Note:* A formula on a cell always takes precedence over a column formula. Therefore, when you apply a formula to a column, any cells that already have a formula will ignore the column formula; all other cells in the column will accept the formula. Likewise, when you remove a formula from a column, the formula will be removed only from those cells that accepted the column formula; the other cells will retain their cell formulas.

To apply a formula to a column:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Open the scorecard table to which you want to apply the formula.
3. Click the action menu  in a column heading and select **Apply Formula**.

To see the action menu, the column selection must include numeric values. For more information, see [“What Is a Column Selection?” on page 139](#).

The Apply Formula to a Column page appears.

**Apply a Formula to a Column • Actual**

Formula definition:

Insert Formula    Advanced Formula...

Predefined formulas

Formula: Children of the current element

Select the following options:

Function: SUM

Apply this formula for the following date:

☒ Display date to the last date of the element's lifetime

☐ Start date:    End date:   

☐ Based on existing date: 02/26/2009

OK    Cancel

4. To apply a predefined formula to the column:
  - a. Select a formula from the **Formula** drop-down list.
  - b. Select a function from the **Function** drop-down list.
  - c. Click **Insert Formula**.

The formula appears in the **Formula definition** field.
5. To define or edit a formula:
  - a. Click **Advanced Formula**.

For information about editing a formula, see [“Editing a Formula” on page 121](#).

  - b. If you do not have the required version of the Java 2 Run-time Environment installed, you will be prompted to install it. After installation, reboot the computer.
  - c. Click **Yes** in the dialog box to install several JAR files that are required by the Formula Editor.
6. If you are using SAS Strategy Management on more than one server, delete the temporary Internet files in Internet Explorer to ensure proper installation and operation of the Formula Editor:
  - a. Start Internet Explorer.
  - b. Select **Tools** ⇒ **Internet options**.
  - c. In the **Temporary Internet files** section, click **Delete Files**.

7. Specify the dates to which the formula applies:
  - a. To apply the formula to periods that extend from the selected period to the last period in the element's life time, select **Display date to the last date of the element's lifetime**.
  - b. To specify a start and end date, select **Start date** and click the calendar button that is next to **Start date** and **End date**.
  - c. To apply the formula to the date that is specified in the column selection definition, select **Based on existing date**.

*Note:* When you apply a formula to a column selection, the current date is the absolute date that is specified in the column selection definition, or that is followed by an indicator of the relative period offset from the column selection definition. For more information about column selections, see [“Create a Column Selection” on page 139](#).

---

## Editing a Formula

### Insert and Delete Text

#### Overview

Use the Formula Editor to build and edit formulas. The current formula is displayed in the **Expression Text** field. You can insert text into the formula at the insertion marker. Before you insert text, be sure to position the insertion marker at the correct location by clicking there.

Any calculation that cannot be computed appears as **#NUM!**.

To insert a symbol, use the symbol toolbar, which is immediately below the **Expression Text** field. For more information, see [“Insert a Symbol” on page 122](#).

To insert a function, use the **Functions** tab. For more information, see [“Insert a Function” on page 122](#).

To insert a reference to a data source, use the **Data Sources** tab. For more information, see [“Insert a Data Source Reference” on page 122](#).

You can also type text into the formula.

#### Special Constants

Special constants have been defined to enable you to account for unresolved and missing values in a formula. These are the special constants:

- represents a value that is missing.
- \_BLANK\_** represents a value that is missing. You can use **\_BLANK\_** in an IF condition to determine whether a value is missing.
- \_ERROR\_** represents an error such as divide-by-zero. You can use **\_ERROR\_** in an IF condition to determine whether a value has an error.

**Insert a Symbol**

Click any button in the symbol toolbar to insert the symbol that the button represents. From left to right, the buttons are in four groups:

- Arithmetic operators
- Boolean operators
- Comparison operators, which can be used to compare two numeric values or two strings
- A miscellaneous group, which includes a matching pair of single quotation marks and a matching pair of parentheses.

**Insert a Function**

To insert a function into the formula that you are building:

1. In the **Categories** list, select a category that contains the function.

Each function is in the **All Functions** category and also in one other, more focused category. When you select a category, all the functions in the selected category are listed alphabetically in the **Functions** list.

2. In the **Functions** list, click a function to select it.

When you select a function, a brief description of the function is displayed below the list. For more information functions, see [“Dictionary of Functions” on page 123](#).

3. Click **Insert**.

A syntactic template of the function is inserted into the **Expression Text** field at the insertion point.

4. In the syntactic template, replace each argument placeholder with an appropriate argument.

**Insert a Data Source Reference**

To insert a reference to a data source:

1. Click the **Data Sources** tab.
2. Select a data source from the **Data Source** drop-down list.
3. In the **Scorecards** list, first select a project from the drop-down list, then select a scorecard in the project.
4. Select a table from the **Tables** drop-down list.

The elements that have been defined for each table are displayed. *<Current Element>* applies to the element that you select in the scorecard table. Select *<Current Element>* if you are assigning the formula to a column or if the formula will be copied to another element as part of a scorecard or element copy operation.

5. Select a metric attribute from the **Metric Attribute** drop-down list.
6. Select a time period from the **Time Period** drop-down list.

Select *<Current>* if you are assigning the formula to a column or if the formula will be copied to another element as part of a scorecard or element copy operation. The Formula Editor uses the period code, rather than the period name, in its syntax.

7. Select a scorecard from the **Use Value From** drop-down list.

The value of the metric attribute will be the value of the attribute from the selected scorecard.

8. Click **Add** to the right of the **Variable to Add** field.

The contents of the **Variable to Add** field are inserted into the formula at the insertion point.

### **Validate Expression**

When you have entered the formula text, click **Validate Expression** to verify that the formula is valid.

*Note:* Numeric constants without decimal points are limited to a range between  $-2,147,482,648$  and  $2,147,483,647$ . To use a numeric constant that is outside of that range, insert a decimal point and a zero after the constant, such as  $-2,147,482,649.0$ .

---

## Dictionary of Functions

The following functions can be used in formulas and are available for selection on the **Functions** tab of the Formula Editor:

### **ABS**

returns the absolute value of its only argument. The argument must have a numeric value.

### **ACOS**

returns the arccosine, in radians, of its only argument. The argument must have a numeric value between  $-1$  and  $+1$ , inclusive.

### **ASIN**

returns the arcsine, in radians, of its only argument. The argument must have a numeric value between  $-1$  and  $+1$ , inclusive.

### **ATAN**

returns the arctangent, in radians, of its only argument. The argument must have a numeric value.

### **attribute**

returns the string representation of the value of an attribute. The value must be one of these types:

- Text
- Email address
- Date
- URL
- Element type

For example:

- `attribute([ELE=current("ELE")][ATTR="Status"])` returns the text value of the attribute Status for the current element.
- `attribute([ELE=current('ELE')][ATTR='End Date'])` returns the attribute value of the attribute End Date for the current element. The returned value is the SAS numeric Date value representing the number of days since January 1, 1960 to the value of End Date.
- `attribute([ELE=current('ELE')][COL=current('COL')][PER=current('PER')])` returns the metric text values of the column and period for the current element.

**attributeIsMe**

selects the elements that specify for a given attribute the element to which the formula is assigned.

**CEIL**

returns the smallest integer that is greater than or equal to its only argument. For example, **CEIL**(5.3) returns 6 and **CEIL**(5.0) returns 5. The argument must have a numeric value.

**COMPRESS**

returns a string that is formed by removing certain characters from an input string. You can use this function with either one argument or two arguments.

When **COMPRESS** has only one argument, the argument is the input string and the function removes all the spaces from it. For example, **COMPRESS**('A B C D') returns the string **ABCD**.

When **COMPRESS** has two arguments, the first argument is the input string and the function removes from it all the characters that are specified in the second argument. For example, **COMPRESS**('A+B-C=D', '+-=' ) returns the string **ABCD**.

**COS**

returns the cosine of its only argument. The argument must have a numeric value, which represents an angle measure in radians.

**Current**

returns the current dimension member, given the dimension type. The **CURRENT** function takes one argument, a dimension type code. It is most often used as part of a relative reference within a time hierarchy.

**Current Children**

returns an array of values for the immediate children of the specified element. Use this function as an input to other functions.

**DATE**

returns the SAS integer representation of the date on which it is evaluated. This function does not take an argument. For example:

- On January 1, 1960, **DATE**() returns 1.
- On January 2, 1960, **DATE**() returns 2.
- On February 1, 1960, **DATE**() returns 32.

**DATE()** and **TODAY()** are equivalent.

**DATETIME**

returns the number of seconds that have elapsed since the beginning of January 1, 1960. This function does not take an argument. Here is the syntax: **DATETIME**()

You can use the **PUTN** function to convert the value returned by the **DATETIME** function to a readable exact time, as follows: **PUTN**(**DATETIME**() , 'DATETIME.')

**DAYOFMONTH**

returns the sequence number of the day on which it is evaluated within the month in which it is evaluated. For example, on the twelfth day of any month **DAYOFMONTH**() returns 12.

**DAYOFWEEK**

returns the sequence number of the day on which it is evaluated within the week in which it is evaluated, starting with Sunday as day 1. For example, on any Thursday **DAYOFWEEK**() returns 5.

**DAYOFYEAR**

returns the sequence number of the day on which it is evaluated within the year in which it is evaluated, starting with January 1 as day 1. For example, on February 10 of any year **DAYOFYEAR()** returns 41.

**EXP**

returns the result of raising *e* to the power that is specified in its only argument. The argument must have a numeric value. *e* is the base of the natural logarithms, which is approximately 2.718.

EXP is the inverse of LOG. For example, **EXP(LOG(2.65))** returns 2.65.

**FLOOR**

returns the largest integer that is less than or equal to its only argument. For example, **FLOOR(5.3)** returns 5 and **FLOOR(5.0)** returns 5. The argument must have a numeric value.

**ForAll**

returns Boolean true when all values in an array of values satisfy a logical condition. For example, **ForAll(children([ELE='Revenue'] [COL='Actual'] [PER=current('PER')] > 0.5))** returns true when all of the children of element Revenue have a value greater than 0.5.

**ForAny**

returns Boolean true when any value in an array of values satisfy a logical condition. For example, **ForAny(children([ELE='Revenue'] [COL='Actual'] [PER=current('PER')] > 0.5))** returns true when any of the children of element Revenue have a value greater than 0.5.

**ForNone**

returns Boolean true when no values in an array of values satisfy a logical condition. For example, **ForNone(children([ELE='Revenue'] [COL='Actual'] [PER=current('PER')] > 0.5))** returns true when none of the children of element Revenue have a value greater than 0.5.

**IF**

returns a value that depends on the truth value of a Boolean expression. The IF function takes three arguments, as illustrated in the following examples:

```
IF('A'='B','right','wrong') IF(1=2,'right','wrong')  
IF('A'='B',1,0) IF(1=2,1,0)
```

The first argument is the Boolean expression. The second and third arguments can be expressions of any kind. If the Boolean expression is true, then the IF function returns the value of the second argument. If the Boolean expression is false, then the IF function returns the value of the third argument.

The Boolean expression can compare two character values or two numeric values. Within the Boolean expression, you can use any of the Boolean operators and comparison operators that are available on the symbol toolbar.

The second and third arguments must be of the same data type. They must both yield numeric values, or they must both yield string values, or they must both yield Boolean values.

**INDEX**

returns an integer that indicates the starting position of a specified substring within a longer string. The INDEX function takes two arguments. The first argument is the longer string to search in. The second argument is the shorter string to search for. If the shorter string occurs more than once in the longer string, then the INDEX function returns the starting position of its first occurrence. If the shorter string does not occur in the longer string, then the INDEX function returns 0. For example:

- **INDEX**('herewego','we') returns 5.
- **INDEX**('nono','no') returns 1.
- **INDEX**('yesyes','no') returns 0.

**INDEXC**

returns an integer that indicates the first position in an input string that contains any character in a specified set of characters. The **INDEXC** function takes two arguments. The first argument is the input string. The second argument is a string that represents the set of characters to search for. If none of the specified characters are in the input string, then the **INDEXC** function returns 0. For example:

- **INDEX**('education','aeiou') returns 1.
- **INDEX**('school','aeiou') returns 4.
- **INDEX**('jklmn','aeiou') returns 0.

**LEFT**

returns a string that is formed by removing all the leading spaces from an input string. **LEFT** takes one argument, which must have a character value. For example, **LEFT**(' abc') returns the string **abc**.

**LENGTH**

returns the length of an input string. It takes one argument, which must have a character value. For example, **LENGTH**('January') returns 7.

**LOG**

computes the natural logarithm of a number. **LOG** takes one argument, which must have a numeric value greater than zero. **LOG** is the inverse of **EXP**. For example, **LOG**(**EXP**(2.65)) returns 2.65.

**LOWCASE**

returns a character string that is formed from an input character string by converting each uppercase letter to the corresponding lowercase letter. **LOWCASE** takes one argument, which must have a character value. For example, **LOWCASE**('HIGH5') returns **high5**.

**MAX**

returns the value of the argument that has the largest value. **MAX** can have any number of arguments, all of which must be numeric. For example, **MAX**(-5, -2.1, 0.3, 1.1, 1.3) returns 1.3.

You can also use a colon (:) to specify a range of locations, as in the following example:

```
SUM( [ELE='Interest'] [COL='Actual'] [PER='JAN2005'] ) :  
[ELE='Interest'] [COL='Actual'] [PER='JUN2005'] )
```

In such a range specification, the first and last locations must be at the same level in the hierarchy of variation. The specified range includes only locations at that one level, in order to avoid double counting. The example above specifies a six-location range at the month level of a time hierarchy.

Optionally, you can exclude certain numbers. For example, **EXCLUDE**(-4, 4, 2.3).

**Max Children**

returns the maximum value of the immediate children of the specified element.

**MEAN**

returns the mean of the values of all its arguments. **MEAN** can have any number of arguments, all of which must be numeric. The mean is the sum of all the values, divided by the number of values. For example, **MEAN**(1, 2, 3, 3, 16) returns 5.



You can also use a colon (:) to specify a range of periods, as in the following example:

```
SUM( [ELE='Interest'] [COL='Actual'] [PER='JAN2005'] :
[ELE='Interest'] [COL='Actual'] [PER='JUN2005'] )
```

Such a range specification must satisfy these requirements:

- the first and last periods must be at the same level in the hierarchy of variation
- the elements and columns must be the same
- the first period must be before the second period

You can specify the current period with `current("PER")`, and you can specify relative periods with a numeric offset, such as `current("PER") - 1`.

The specified range includes only periods at that one level, in order to avoid double counting. The example above specifies a six-period range at the month level of a time hierarchy.

Optionally, you can exclude certain numbers. For example, `EXCLUDE(4,7)`.

#### Mean Children

returns the mean of the values for the immediate children of the specified element.

#### MIN

returns the value of the argument that has the smallest value. MIN can have any number of arguments, all of which must be numeric. For example, `MIN(-5, -2.1, 0.3, 1.1, 1.3)` returns `-5`.

You can also use a colon (:) to specify a range of locations, as in the following example:

```
SUM( [ELE='Interest'] [COL='Actual'] [PER='JAN2005'] :
[ELE='Interest'] [COL='Actual'] [PER='JUN2005'] )
```

In such a range specification, the first and last locations must be at the same level in the hierarchy of variation. The specified range includes only locations at that one level, in order to avoid double counting. The example above specifies a six-location range at the month level of a time hierarchy.

Optionally, you can exclude certain numbers. For example, `EXCLUDE(4,7)`.

#### Min Children

returns the minimum value of the immediate children of the specified element.

#### MOD

returns the remainder after dividing the first argument by the second argument. For example, `MOD(5,2)` returns `1`.

#### myAttribute

selects the elements that are specified by a given attribute of the element to which the formula is assigned.

#### NESTIF

returns a value that depends on the truth values of one or more Boolean expressions. NESTIF takes an even number of arguments, which are arranged in pairs. The second member of each pair is an expression whose value might be returned. These are the even-numbered arguments of the function. The first member of each pair is a Boolean expression that is associated with the second member of the pair. These are the odd-numbered arguments of the function. Within the Boolean expressions, you can use any of the Boolean operators and comparison operators that are available on the symbol toolbar.

The function returns the value of the first even-numbered argument that is associated with a true Boolean expression. For example:

- `NESTIF(1=2, 'first', 1=1, 'second')` returns `second`.

- **NESTIF**(1=1, 'first', 1=1, 'second') returns **first**.

There is no limit to the number of arguments that the NESTIF function can take. However, the number must be even.

All the even-numbered arguments must be of the same data type. They must all yield numeric values, or they must all yield character-string values, or they must all yield Boolean values.

If all the Boolean expressions in the odd-numbered arguments are false, then NESTIF returns a default value that depends, in the following way, on the data type of the even-numbered arguments:

- Numeric data type — SAS missing value
- Character-string data type — zero-length empty string
- Boolean data type — Boolean FALSE.

#### POW

returns the result of raising its first argument to the power that is given by its second argument. POW takes two arguments. Both arguments must have numeric values. For example:

- **POW**(2,4) returns 16.
- **POW**(9,0.5) returns 3.
- **POW**(3,-2) returns 1/9 or 0.11111....

#### PUTC

returns the result of applying a specified SAS character format to a specified character value. PUTC takes two arguments. The first argument is the character value to format. The second argument is the SAS character format to apply.

For example, **PUTC**(**LOWCASE**('HELLO'), '\$QUOTE.') returns **"hello"**.

#### PUTN

returns the result of applying a specified SAS numeric format to a specified numeric value. PUTN takes two arguments. The first argument is the numeric value to format. The second argument is the SAS numeric format to apply.

You can use the PUTN function to convert the value returned by the DATETIME function to a readable exact time, as follows:**PUTN**(**DATETIME**(),'DATETIME.')

#### Range

returns the normalized value for a cell. The normalized value is set in the range for each interval. If a range does not exist on the metric attribute, RANGE returns the value of the metric attribute.

For example, if the value of element M2's Actual attribute is 99.85,

**range**([ELE="M2"][COL="Actual"][PER=current('PER')]) returns 3.75.

#### REPEAT

returns a string that is formed from an input string by appending the input string to itself a specified number of times. REPEAT takes two arguments. The first argument is the input string. The second argument is the number of repetitions, beyond the first occurrence. For example:

- **REPEAT**(no,1) returns **nono**.
- **REPEAT**(ha,2) returns **hahaha**.

**REVERSE**

returns a string that is formed by reversing the character sequence of an input string. **REVERSE** takes one argument, which must have a character value. For example, **REVERSE('nuts')** returns **stun**.

**RIGHT**

returns a string that is formed by removing all the trailing spaces from an input string. **RIGHT** takes one argument, which must have a character value. For example, **RIGHT('abc ')** returns the character string **abc**.

**ROUND**

returns the integer that is closest to a specified number. It takes one argument, which must have a numeric value. If the specified number is exactly midway between two integers, then the larger integer is returned. For example:

- **ROUND(2.4)** returns 2.
- **ROUND(2.5)** returns 3.
- **ROUND(2.6)** returns 3.
- **ROUND(-2.5)** returns -2.

**SCAN**

returns a segment of an input string that is selected by a standard set of delimiters and a specified numeric position. **SCAN** takes two arguments. The first argument is the input string. The second argument is the numeric position of the desired substring. Positions are counted from the beginning of the input string if the second argument is positive, and from the end of the input string if the second argument is negative. The following characters are treated as delimiters that divide the input string into countable segments: **<(+&!\$\*);^-/,%|**

For example:

- **SCAN('12+34-56+78',4)** returns **78**.
- **SCAN('The%quick%brown%fox%jumped',-2)** returns **fox**.

**SIN**

returns the sine of its only argument. The argument must have a numeric value, which represents an angle measured in radians.

**SQRT**

returns the square root of its only argument. The argument must have a non-negative numeric value.

**SUBSTR**

returns a substring of an input string. **SUBSTR** can take either two or three arguments. The first argument is the input string. The second argument is the numeric position in the input string of the first character of the returned substring. If there is a third argument, then it specifies the length of the returned substring. If there is no third argument, then the returned substring runs to the end of the input string.

For example:

- **SUBSTR('reiterate',3,2)** returns **it**.
- **SUBSTR('reiterate',3)** returns **iterate**.

**SUM**

returns the sum of its arguments. **SUM** can take any number of arguments. All the arguments must have numeric values. For example, **SUM(1, 2, 3, 3, 16)** returns **25**.

You can also use a colon (:) to specify a range of locations, as in the following example: `SUM([ELE='Interest'] [COL='Actual'] [PER='JAN2005'] : [ELE='Interest'] [COL='Actual'] [PER='JUN2005'])`

In such a range specification, the first and last locations must be at the same level in the hierarchy of variation. The specified range includes only locations at that one level, in order to avoid double counting. The example above specifies a six-location range at the month level of a time hierarchy.

Optionally, you can exclude certain numbers. For example, `EXCLUDE(5,12)`.

#### Sum Children

returns the sum of the values for the immediate children of the specified element.

#### TABLEC

returns a character value that it retrieves from a specified table. Ask your SAS consultant for details.

#### TABLEN

returns a numeric value that it retrieves from a specified table. Ask your SAS consultant for details.

#### TAN

returns the tangent of its only argument. The argument must have a numeric value, which represents an angle measured in radians.

#### TIME

returns the current clock time in military format, to the nearest second. For example, if TIME is executed at exactly noon, it returns `12:00:00`. The syntax is `TIME()`.

#### TODAY

returns the SAS integer representation of the current date. For example:

- January 1, 1960 is 1.
- January 2, 1960 is 2.
- February 1, 1960 is 32.

This function does not take an argument. `DATE()` and `TODAY()` are equivalent.

#### TRANSLATE

returns a character string that is formed by replacing certain characters in an input string with designated substitution characters. TRANSLATE normally takes three arguments. The first argument is the input string that will undergo translation. The second argument lists one or more substitution characters. The third argument lists the characters to replace, in a sequence that corresponds to the sequence of substitution characters. For example, `TRANSLATE('bone', 'iw', 'ob')` returns `wine`.

If you want, you can spread the translation instructions over additional pairs of arguments. For example, `TRANSLATE('bone', 'i', 'o', 'w', 'b')` also returns `wine`.

#### TRIM

returns a character string that is formed by removing all the leading spaces and all the trailing spaces from an input character string. TRIM takes one argument, which must have a character value. For example, `TRIM(' abc ')` returns the character string `abc`.

#### UPCASE

returns a character string that is formed from an input character string by converting each lowercase letter to the corresponding uppercase letter. This function takes one argument, which must have a character value. For example, `UPCASE('they8it')` returns `THEY8IT`.

**VERIFY**

checks whether one or more characters are present in one or more strings. The first argument is a list of characters to check for. Each subsequent argument is a string to check. If every character in the first argument is found in at least one subsequent argument, then **VERIFY** returns the numeric value **0**. Otherwise, **VERIFY** returns the numeric position of the first character that is not found in any subsequent string. For example:

- **VERIFY('aeiou', 'state', 'union')** returns **0** because each vowel is found in at least one of the words.
- **VERIFY('aeiou', 'state', 'onion')** returns **5** because neither word contains **u**.



## Chapter 9

# Ranges

---

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---

## What Is a Range?

Ranges enable you to control how data values are displayed by defining the upper and lower bounds of the displayed data. A range can be composed of intervals, each of which can be associated with a normalized value, a grade, an icon, and a color.

### See Also

- “List the Ranges” on page 138
- “Create a Range” on page 134
- “Edit a Range” on page 136
- “Apply a Range to a Column” on page 137

## Create a Range

### Open the New Range Page

You specify the details of the range on the New Range page. To open the New Range page:

1. List the ranges.

For more information, see [“List the Ranges” on page 138](#).

2. Click **New Range**.

*Note:* You cannot create a range unless you have Scorecard Modeler access permissions.

### Specify the Range Name and Description

To apply a name and a description to the new range:

1. Expand the **General Settings** section.

The screenshot shows the 'General Settings' section of the 'New Range' page. It contains the following fields:

- Project:** A dropdown menu with 'Balanced Scorecard' selected.
- \*Range name:** A text input field.
- Description:** A text input field with a small icon to its right.

2. Type a name for the new range in the **Range name** field.
3. (Optional) Type a description for the range in the **Description** field.

### Define Intervals

A range can contain several intervals, or subsets of data.

To define an interval:

1. Expand the **Interval Definitions** section.

The screenshot shows the 'Interval Definitions' section. It includes a text input for 'Boundary value' and two buttons: 'Add Value' and 'Add Formula...'. Below this is a table with the following columns: Name, Interval, Label, Grade, Normalized Value, Color, Icon, and Delete.

Name	Interval	Label	Grade	Normalized Value	Color	Icon	Delete
Interval 1*	All Values	Lower Bound Intei		0.0			

At the bottom left is a 'Validate' button. At the bottom right is a footnote: '\* Will not display in dashboards'.

2. To create an interval based on a specific value:
  - a. Type a value for the lower bound of the range in the **Boundary value** field.
  - b. Click **Add Value**.

The new interval appears in the table below the **Boundary value** field.

3. To create an interval based on a formula, click **Add Formula**.




For more information, see [“Create a Formula to Calculate a Range Interval” on page 135](#).

4. In the **Interval 1** row, type a label in the **Label** field for values that fall below the lower bound of the interval.
5. In the **Grade** field, type a letter grade that represents the interval.
6. In the **Normalized Value** field, type a value that represents the interval.
7. Click the icon in the **Color** column, and select from the palette a color to be displayed with values that fall below the lower bound.
8. Click the icon in the **Icon** column, and select an icon to be displayed with values that fall below the lower bound.

*Note:* If an image does not exist, no image is displayed for that interval. Images might be missing because a previously assigned image has been removed without updating the interval properties.

9. In the **Interval 2** row, select an operator from the drop-down list in the **Interval** column.
10. Specify a label, grade, normalized value, color, and icon to be displayed with the interval.
11. To add more intervals, repeat steps 2 through 11.
12. To verify that all of the intervals have values and that the boundary values of the intervals do not conflict with each other, click **Validate**.

To remove an interval, click the Delete icon  in the row that contains the interval.

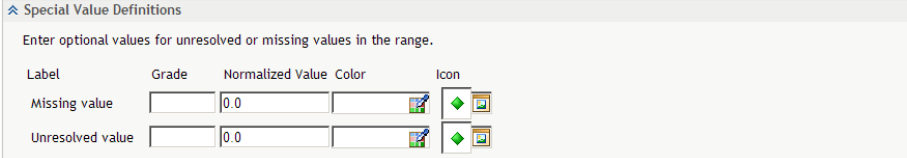
*Note:* To display percentages within a range, specify the interval boundaries as decimal values. For example, a boundary of 90 percent should be specified as .90.





## Define Unresolved and Missing Values

Unresolved or missing values might appear in the new range. Unresolved values (any calculation that cannot be computed) appear as **#NUM!**. Missing values appear as blank cells.

To define labels for these values:

1. Expand the **Special Value Definitions** section.



Label	Grade	Normalized Value	Color	Icon
Missing value		0.0		
Unresolved value		0.0		

2. For the **Missing value** and **Unresolved value** labels, specify a grade, normalized value, color, and icon to be displayed with the value.

---

## Create a Formula to Calculate a Range Interval

You can create a formula to calculate a range interval. The formula can use all of the constructs that are normally used for formula-based metric attributes. These constructs

enable you to reference the values of other metric attributes within the same scorecard or different scorecards, or to access the values of the current metric attribute over time (for example, the mean of the last six periods).

Any calculation that cannot be computed appears as **#NUM!**.

*Note:* Formula-based ranges might generate unexpected range results. The results of formula-based ranges are not calculated when you create them. They are calculated at runtime. As a result, it is possible to create ranges that have overlapping intervals. When this happens, SAS Strategy Management returns the last interval that satisfies the condition.

To create a formula to calculate a range interval:

1. Create or edit a range.  
For more information, see [“Create a Range” on page 134](#) or [“Edit a Range” on page 136](#).
2. Do one of the following:
  - In the **Formula definition** field, type a formula.
  - Click **Advanced Formula** to start the Equation Editor.  
For more information, see [“Editing a Formula” on page 121](#).

## See Also

[“Dictionary of Functions” on page 123](#)

---

## Edit a Range

To edit a range:

1. List the ranges.  
For more information, see [“List the Ranges” on page 138](#).
2. Click the name of the range.  
The Range Properties page appears.
3. Modify the general information, interval definitions, and special value definitions.  
For more information about editing range properties, see [“Create a Range” on page 134](#).

*Note:* You cannot change a range unless you have Scorecard Modeler access permissions.

---

## Copy a Range

To base a new range on a range that has already been created:

1. List the ranges.

For more information, see [“List the Ranges” on page 138](#).

2. Click **Copy Ranges**.

The Copy Range page appears.

3. From the **Project** drop-down list, select the name of the project that contains the existing range.

4. Click **Go**.

5. From the **Range** drop-down list, select the name of the existing range.

6. Click **Go**.

7. Type a name for the new range in the **New range name** field.

8. Type a description for the range in the **Description** field.

9. Modify the interval definitions and special value definitions as needed.

For information about modifying these definitions, see [“Create a Range” on page 134](#).


---

## Delete a Range


To delete a range:

1. List the ranges.

For more information, see [“List the Ranges” on page 138](#).

2. Click the action menu  that is next to a range and select **Delete**.

3. To delete more than one range, do either of the following:

- Select the check box to the right of each range, click the action menu for the column and select **Delete**.
- To delete all ranges, select the check box at the top of the right-most column, click the action menu  for the column and select **Delete**.



---

## Apply a Range to a Column

To apply a range to a column:

1. Open a project.

For more information, see [“Open a Project” on page 49](#).

2. Click the Tables icon .
3. Click the action menu  in a column label and select **Apply Range**.  
The Apply a Range to a Column page appears.
4. Select a range from the **Range** drop-down list.
5. Specify the dates to which the range applies by doing one of the following:
  - To apply the range to periods starting from the selected period to the last period in the element's lifetime, select **Display date to the last date of the element's lifetime**.
  - To specify a start and end date, select **Start Date**, and click the calendar button that is next to **Start Date** and **End Date**.
  - To apply the range to the date that is specified in the column selection definition, select **Based on existing date**.

*Note:* When you apply a range to a column selection, the existing date is the absolute date that is specified in the column selection definition, or that is followed by an indicator of the relative period offset from the column selection definition. For more information about column selections, see [“Create a Column Selection” on page 139](#).

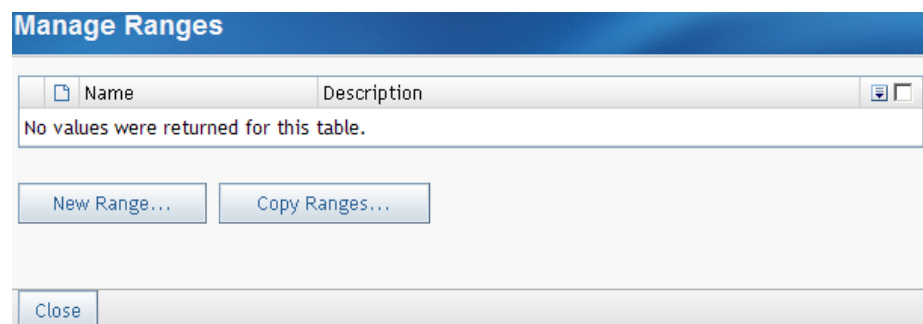
---

## List the Ranges

To list the ranges:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Select **Project** ⇒ **Manage Ranges**.

The Manage Ranges page appears.



Name	Description
No values were returned for this table.	

New Range... Copy Ranges...

Close

## Chapter 10

# Column Selections

---

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---

## What Is a Column Selection?

A column selection specifies the columns that are displayed with an element type in a table view, aggregate table view, or association view. You can apply column selections to element types within a project.

When you create a project that is based on a template that defines metric attributes, column selections for the new project are automatically generated from the metric attributes. Columns selection are also generated for the element types.

---

## Create a Column Selection

To create a column selection:

1. List column selections.  
For more information, see [“List Column Selections” on page 141](#).
2. Click **New**.  
The New Column Selection page appears.
3. Expand the **General** section.

General

\* Column selection name:

Description:

☐ Share this column selection to make it available to all users

4. Type a name for the column selection in the **Column selection name** field.
5. (Optional) Type a description in the **Description** field.
6. To make the column selection available to all users of the project, select **Share this column selection to make it available to all users**.

By default, the column selection is available only to its creator.

7. Expand the **Definition** section.

Definition

List by:

Selection based on:

Available attributes:

- Attributes
  - Perspective
  - Measure
  - Initiative
- Metric Attributes
  - Actual
  - Target
  - Status
  - Performance
- Properties
  - Description

Attribute options:

You can apply a column selection to the elements in a table view, to the associations in an association view, or you can create a column selection that is not connected to element types or associations.

8. Select how you want to apply the column selection:
  - a. From the **List by** drop-down list, select one of the following:

#### Element Types

applies the column selection to elements in a table view.

#### General

creates a column selection that is not connected to element types or associations. The General column selection is used to display metric attributes in aggregate tables.

- b. Click **Go**.
9. To determine the element type on which the column selection is based:
  - a. Select an element type from the **Selection based on** drop-down list.
  - b. Click **Go**.
10. To display attributes as columns with the element type or association:
  - a. Select attributes from the **Available attributes** list.
 

The **General** column selection can contain only metric attributes.
  - b. Click **Add**.
  - c. (Optional) Type a label for each column in the **Label** field.

By default, the column label is the same as the attribute name.

- d. To move a column, select the check box that is next to the column name, and click **Move as First**, **Move Left**, **Move Right**, or **Move as Last**.
- e. To delete a column, select the check box that is next to the column name, and click **Delete**.

---

## List Column Selections

To display the list of column selections:

1. Open a project.
2. Select **Project** ⇒ **Manage Column Selections**.

The Manage Column Selections page appears.

Name	Element Type	Personal or Shared	Owner	
All Non-Metric Attributes For Measures	Measures	Shared	SAS Demo User	
All Attributes For Measures	Measures	Shared	SAS Demo User	

3. From the **List by** drop-down list, select which column selections to display in aggregate tables.
4. Click **Go**.

### See Also

- “Copy a Column Selection” on page 141
- “Delete a Column Selection” on page 142
- “Edit Column Selection Properties” on page 142

---

## Copy a Column Selection

To copy a column selection and add it to the list of column selections:

1. List column selections.  
For more information, see “List Column Selections” on page 141.
2. Click the action menu to the left of the row and select **Copy**.


The Copy page appears.

3. Type a name for the copy in the **Column selection name** field.  
By default, the copy is named *column-selection-name Copy*.

---

## Delete a Column Selection


To delete a column selection:

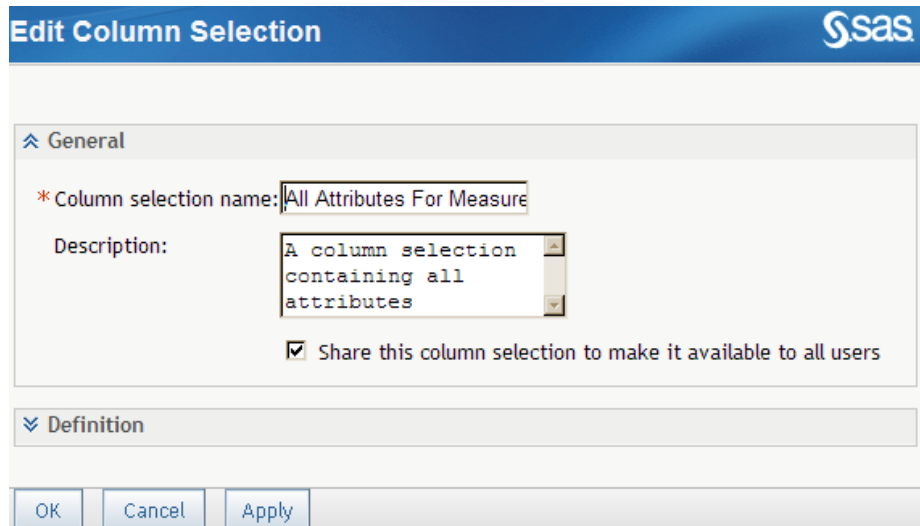
1. List column selections.  
For more information, see [“List Column Selections” on page 141](#).
2. Click the action menu  to the left of the row and select **Delete**.


---

## Edit Column Selection Properties

To edit the properties of a column selection:

1. List column selections.  
For more information, see [“List Column Selections” on page 141](#).
2. Click the action menu  to the left of the row and select **Properties**.  
The Edit Column Selection page appears.



**Edit Column Selection** 

**General**

\* Column selection name:

Description:

☒ Share this column selection to make it available to all users

**Definition**

OK Cancel Apply


3. Edit the properties of the column selection.  
For information about editing column selection properties, see [“Create a Column Selection” on page 139](#).



---

## Apply a Column Selection to a Table

To display the selected columns for an element type in a table:

1. Open a project.
2. Click the Tables icon .

The table view appears.

3. Select a project or scorecard.
4. Select an element type from the **Element type** drop-down list.


The list includes only column selections based on element types and general column selections.

5. Select a column from the **Column selection** drop-down list.
6. Click **Go**.

---

## Apply a Column Selection to an Association

To display the selected columns for an association:

1. Open a project.
2. Select a scorecard.
3. Click the Associations icon .

The association view appears.

4. Select an association from the **Association** drop-down list.


The list includes only column selections based on associations and general column selections.

5. Select a column from the **Column selection** drop-down list.
6. Click **Go**.

---

## Apply a Column Selection to an Aggregate Table

To display the selected columns for an aggregate table:

1. Open a project.
2. Click the Tables icon .

The table view appears.

3. Select a project or scorecard.
4. Select an element type from the **Element type** drop-down list.

5. Select a column from the **Column selection** drop-down list.
6. Click **Go**.

## **Part 4**

---

# Entering Data, Calculating a Model, and Setting Permissions

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## Chapter 11

# Web Data Entry Forms

---

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---

## What Is a Data Entry Form?

You can create and use data entry forms to collect data that is related to scorecard elements directly from users. Data entry forms collect only metric attribute values (both numeric and text) for scorecard elements. Data entry forms cannot collect element attribute values. The values are always periodic.

*Note:* You cannot use data entry forms to insert data that is related to project elements.

For a project, you can choose when a data entry form data is submitted to SAS Strategy Management. The choices are immediately or pending. For more information, see [“Specify the Web Data Entry Options” on page 59](#).

Immediately posting data enables you to automatically post data to SAS Strategy Management. But the data can appear to be incorrect while the data is sent to SAS Strategy Management and values are calculated.

Pending data enables you to always see the correct data. But you must manually post the pending data to SAS Strategy Management. For more information, see [“Post Pending Web Data Entry Data” on page 175](#).

See Also

[“Start the New Form Wizard” on page 148](#)

---

# Create a Form

## Start the New Form Wizard

To create a data entry form:

1. List the data entry forms. For more information, see [“List the Data Entry Forms” on page 152](#).
2. Click **New**.

The New Form Wizard appears.

## Select Metric Attributes

The Metric Attributes page displays the metric attributes and period type for the project.

### Metric Attributes

Select the metric attributes you would like to collect data on.  
The following metric attributes exist in project "Sales - Balanced Scorecard".

Metric attributes	Numeric		Text	
Actual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Target	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Status	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Period type: 

Month

To select metric attributes for inclusion in the form:

1. Select one or more metric attributes in the **Metric Attributes** list by selecting **Numeric** or **Text** for each metric attribute.  
  
You can create two columns per metric attribute: One for numeric values and one for text values.
2. If you want the values to be read-only, select the check box under the lock icon for each type of metric attribute value.
3. From the **Period type** drop-down list, select the period type.  
  
For example, if you select **Month** as your period type, the collected data will be applied on a monthly basis. A form can have elements of only one period type.
4. Click **Next**.

## Select Scorecards

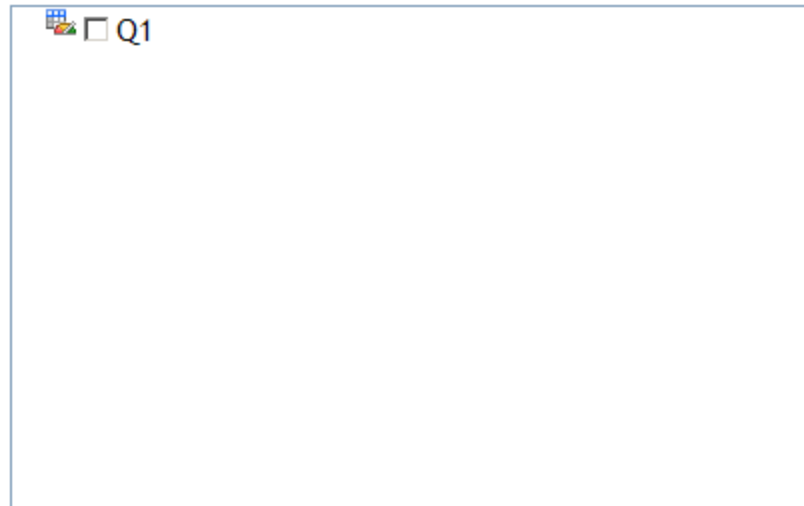
The Scorecards page lists the scorecards within the current project.

### Scorecards

Select the scorecards you would like to collect data for.

Project: Balanced Scorecard

\* Scorecards:

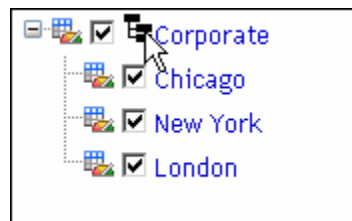


Select All | Clear All

To select the scorecards to receive the data:

1. Select the check box that is next to one or more scorecards in the **Scorecards** hierarchy.
2. To select all child scorecards, click the hierarchy icon that is next to the parent scorecard.

The icon becomes completely black.



3. Click **Next**.

## Select Elements

On the Elements page, you can select the elements for which you want to collect data.

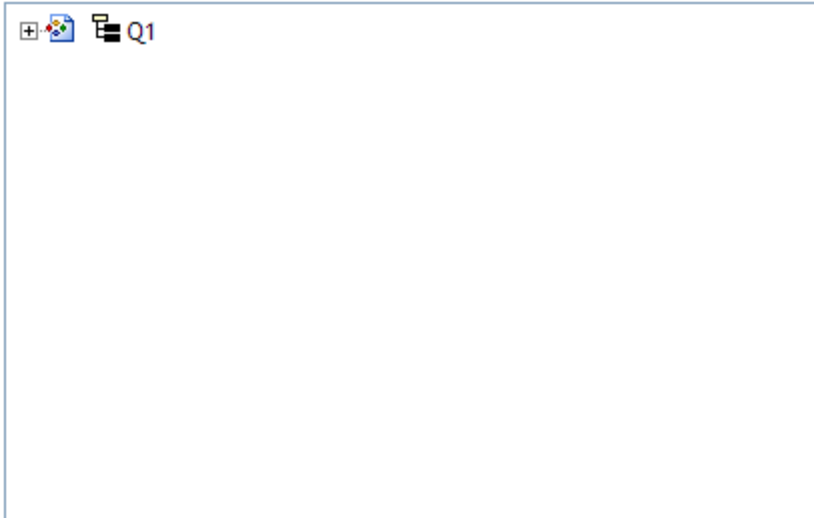
## Elements

Select the elements you would like to collect data on.

\*Element type:

Objective ▾

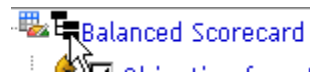
- ☒ All elements in selected scorecards  
☐ Only the following elements in selected scorecards



To select the elements to receive data:

1. From the **Element type** drop-down list, select an element type.
2. To collect data for all elements of the selected type, select **All elements in selected scorecards**.
3. To collect data for only some elements of the selected type:
  - a. Select **Only the following elements in selected scorecards**.
  - b. Select the check boxes that are next to the elements in the scorecard hierarchy. To select all elements, click the hierarchy icon that is next to the scorecard.

The icon becomes completely black.



4. Click **Next**.

## Select Time Periods

On the Time Periods page, you can select the time periods to be displayed on the form.



## Time Periods

Select the time periods you would like to display on the form.

☐ Include past periods?

How many periods in the past?

☐ Include periods in between?

☐ Include future periods?

How many periods in the future?

☐ Include periods in between?

1. To include past periods:
  - a. Select **Include past periods?**.
  - b. Type a value in the **How many periods in the past?** field.  
You can specify up to 52 periods
  - c. To include all intervening periods, select **Include periods in between?**.
2. To include future periods:
  - a. Select **Include future periods?**.
  - b. Type a value in the **How many periods in the future?** field.  
You can specify up to 52 periods
  - c. To include all intervening periods, select **Include periods in between?**.
3. Click **Next**.

## Specify the Layout

On the Form Layout page, you can specify whether to group the data by metric attribute or by period.

## Form Layout

Specify how you would like to group metric columns.

☒ Group by metric attribute

☐ Group by period

1. Select **Group by metric attribute** or **Group by period**.
2. Click **Next**.

## Name and Save the Form

On the Name the Form page, you can provide a name and a description for your form.

## Name the Form

You need to provide a name for this form.

This form will be saved in project "Balanced Scorecard".

\* Form name:

Description:

Type a form name and description. You must specify at least a name for the form.

To change a setting, click **Previous** to return to a previous page. When you are satisfied with the settings, click **Finish**.

---

## List the Data Entry Forms

To list the data entry forms:

1. Open a project.

For more information, see [“Open a Project” on page 49](#).

2. Select **Project** ⇒ **Data Entry Forms**.

The Manage Forms page appears.

Name	Frequency	Last Entered	Owner	
Manufacturing Data Entry Form	Month	26Feb09:11:08:46	SAS Demo User	<input checked="" type="checkbox"/>

New...

Close

---

## Use a Form to Enter Data

To use a data entry form to enter data into a scorecard:

1. List the data entry forms. For more information, see [“List the Data Entry Forms” on page 152](#).

2. Click on the name of the form.

The Data Entry page appears.

**Data Entry • Manufacturing Data Entry Form**

Project: Balanced Scorecard



Current period: JAN1997 Period type: Month


Scorecard: Q1 Element type: Objective

Element Label	Performance	Target	Actual	Status
	JAN1997	JAN1997	JAN1997	JAN1997
Reduce Waste				

Save Close

- From the **Current period** drop-down list, select the period for which you want to enter data.
- From the **Scorecard** drop-down list, select the scorecard for which you want to enter data.
- Type values in the fields in the data entry table. Values that are derived from formulas are enclosed by single angle brackets (<value>); overridden values are enclosed by double angle brackets (<<value >>). You can replace these values with new values, and the override flag for the cell will be displayed.

Numeric columns are indicated by the Numeric icon  and text columns are indicated by the Text icon .


Read-only columns are indicated by the Read only icon .

*Note:* Percentages, commas, inline formulas, currency, or any other notation are not supported in data entry forms.

---

## Edit a Form

To change the properties of a form:

- List the data entry forms.  
For more information, see [“List the Data Entry Forms” on page 152](#).
- Click the action menu  that is next to the form name and select **Edit**.


Editing a form uses the same steps as creating a form. For information about editing the properties of a form, see [“Select Metric Attributes” on page 148](#).

---

## Add a Form to a Portlet

You can add a form to a portlet so that users can easily add data to the scorecard from the portal.

To add a form to a portlet:

- List the data entry forms.  
For more information, see [“List the Data Entry Forms” on page 152](#).
- Click the action menu  that is next to the form name and select **Add to Portlet**.

The Add to Portlet page appears.

3. Select a portlet from the **Portlet** drop-down list.

By default, the form is added to the portlet under the **My Tasks** tab in the portal.


---

## Copy a Form

To copy a form:

1. List the data entry forms.

For more information, see [“List the Data Entry Forms” on page 152](#).

2. Click the action menu  that is next to the form name and select **Copy**.

The Copy page appears.

3. Type a name for the copy of the form in the **Form name** field.


By default, the name is *form-name* Copy.

4. Click **Copy**.

---

## Delete a Form

To delete a form:

1. List the data entry forms. For more information, see [“List the Data Entry Forms”](#) on [page 152](#).
2. Click the action menu  that is next to the form name and select **Delete**.



## Chapter 12

# Calculating a Model

---

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---

## Calculate a Project

### Overview

If you have created formulas for your project, you can calculate them and display the results in the cells that contain formulas. Any calculation that cannot be computed appears as **#NUM!**.

For information about formulas for columns, see “[Apply a Formula to a Column](#)” on page 119. For information about formulas for cells, see “[Edit Metric Attributes](#)” on page 85 concerning the formula-based method for editing metric attributes.

To calculate to a project:

1. Open a project and select **Project** ⇒ **Calculate**.
2. Click **Calculate**.

The Calculate page appears.

**Calculate • Balanced Scorecard**

☒ **Select by date range:**

Start date:

End date:

☐ **Select by period:**

Period type:

Period:

**SPM 1.4 Information**

☐ Migrate SPM 1.4 formulas, ranges, thresholds, and values from the selected period.

**2.x SPM formula import**

☐ Import formulas that have been exported from previous or current versions of SPM 2.x

## Select Dates

You can specify a date range or a period to calculate.

To calculate according to a range of dates:

1. Select **Select by date range**.  
This is the default.
2. In the **Start date** field, type a date, or click the calendar button that is next to the field and select a date.
3. In the **End date** field, type a date, or click the calendar button that is next to the field and select a date.

To calculate according to a period:

1. Select **Select by period**.  
The default value is the period that is displayed in the table view.
2. Select a period type from the **Period type** drop-down list.
3. Select a period from the **Period** drop-down list.



### ***Import Formulas for a Project***

If you have imported a project from SQL, you will then need to import the formulas that are associated with the project.

To import the formulas that are associated with a project, select **Import formulas that have been exported from previous or current versions of SPM 2.x**.

For information about exporting a project to SQL, see [“Export a Project to SQL” on page 63](#).



## Chapter 13

# Setting Access Permissions

---

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---

## What Are Access Permissions?

Access permissions control the method that a particular user or group can use to access a SAS Strategy Management object. More than one type of access permission can be assigned to a user or group. The following access permissions are available.

### Read

View or display the object. When users have Read access permission only, they cannot move or rename the object or change any of its information.

### Write

Edit the object. Users can rename and change the properties and contents of the object. Read access permission is automatically granted with Write access permission.

### Delete

Delete the object. Read and Write access permission is automatically granted when users have Delete access permission.

### Administer

Change all access permissions for the object. Read, Write, and Delete access permission is automatically granted when users have Administer access permission.

The user who creates an object receives all access permissions for the object. Subsequent users who are added to the access permissions list for an object are given Read access permission by default.

A user inherits the access permissions of the group that the user belongs to. A group does not inherit access permissions that have been assigned to a specific user.

You assign access permissions when you perform the following tasks:

- Edit the properties of a user-defined template. For more information, see [“Edit User-Defined Template Properties” on page 38](#).
- Edit the properties of a project. For more information, see [“Specify the Access Permissions” on page 52](#).
- Edit the properties of a scorecard. For more information, see [“Assign Access Permissions” on page 73](#).

- Edit the properties of an element. For more information, see [“Assign Access Permissions” on page 90](#).

You can also set access permissions for multiple objects. For more information, see [“Set Access Permissions for Multiple Objects” on page 162](#).

---

## Set Access Permissions for Multiple Objects

You can set the access permissions for multiple objects from one location rather than navigating to each object. One location enables you to set the access permissions more quickly.

To set access permissions for multiple objects:

1. Open a project.

For more information, see [“Open a Project” on page 49](#).

2. Select **Project** ⇒ **Security Administration**.

The Security Administration - Project Permissions Display page appears.

**Security Administration • Project Permissions Display**

Administration Selection  
Balanced Scorecard

Project Permissions Display

Object Name	Type	Inherited	Owner	Identity	Read	Write	Delete	Administer
Balanced Scorecard Template		No Permissions						
Balanced Scorecard Project								

Close Export Permissions... Expand All

3. From the **Administration Selection** drop-down list, select a project.

The list of the project's objects and their access permissions appears in a table.

4. Click the name of an object.

The object's properties page appears.

5. Set the access permissions.

### See Also

[“Export Access Permissions” on page 162](#)

---

## Export Access Permissions

You can export the access permissions for scorecards and elements as comma-separated values (CSV) files. Scorecard permissions are written to the file <Project-name>\_Scorecard\_Permissions.csv. Element permissions are written to the file <Project-name>\_Element\_Permissions.csv.

*Note:* Access permissions that are inherited from a project are not included in the CSV files. If the access permissions for all of the scorecards and elements are inherited, the CSV files will be empty (except for the first row, which contains column headings).

To export the access permissions:

1. Open a project.

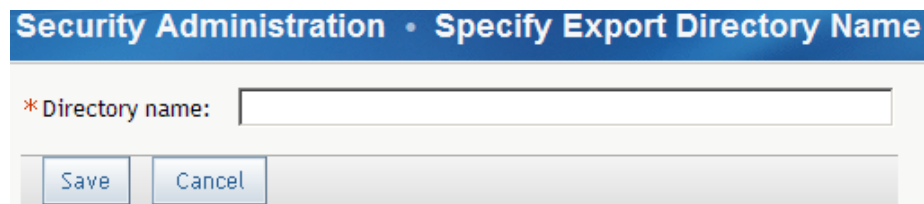
For more information, see [“Open a Project” on page 49](#).

2. Select **Project** ⇒ **Security Administration**.

The Security Administration - Project Permissions Display page appears.

3. Click **Export Permissions**.

The Security Administration - Specify Export Directory Name page appears.



Security Administration • Specify Export Directory Name

\*Directory name:

Save Cancel

4. In the **Directory name** field, type the path in which to create the CSV files.

The path is relative to the current working directory on the server.



## Part 5

---

# Viewing Data and Creating Reports

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## Chapter 14

# Introduction to Views

---

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---

## What Is a View?

You can display different views of model data:

### Tables

display data for the selected scorecard in tabular form. For more information, see [“What Is a Scorecard Table?” on page 171](#).

### Aggregate Tables

display data for the selected scorecard and all of its children. For more information, see [“What Is an Aggregate Table?” on page 177](#).

### Associations

display the relationship between scorecard elements in the form of an association. For more information, see [“What Is an Association?” on page 179](#).

### Diagrams

display data in the form of diagrams. For more information, see [“What Is a Diagram?” on page 189](#).

Any calculation in a view that cannot be computed appears as **#NUM!**. Any missing value appears as a blank cell.

To display a view, open a project and click one of the following icons:



displays a table view.



displays an aggregate table view.



displays an association view.




displays a diagram view.

---

## Print a View

You print a view by first displaying a preview of the page in a browser window.

To print a view:

1. Open a project or scorecard.  
For more information, see [“Open a Project” on page 49](#) or [“Open a Scorecard” on page 68](#).
2. Display a view.  
For more information, see [“What Is a View?” on page 167](#).
3. Click the Print icon .  
A prompt dialog box appears.
4. Type the name, and click **OK**.  
A new browser window opens.
5. Print the page as you would print any Web page.


---

## Copy the Address for a View

You can display the address for a view within SAS Strategy Management so that you can copy the address. You can use the address in any application that accepts an address, such as a bookmark in Microsoft Internet Explorer or a desktop shortcut.

The address contains information that is needed to recreate the view, such as the column selection and the date.

To copy the address for a view:

1. Open a project or scorecard.  
For more information, see [“Open a Project” on page 49](#) or [“Open a Scorecard” on page 68](#).
2. Click .  
The Show and Copy URL window appears.
3. To always display the data for the current date, select the **Always use this date** check box.

If you see a Microsoft Internet Explorer error dialog box that mentions a runtime error, do the following:

1. In Microsoft Internet Explorer, select **Tools** ⇒ **Internet Options**.  
The Internet Options dialog box appears.
2. Click the **Advanced** tab.
3. In the **Settings** list, in the **Browsing** category, clear the check box for **Disable Script Debugging (Internet Explorer)**.

4. Click **OK**.
5. Refresh the browser window.



## Chapter 15

# Table View

---











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---

## What Is a Scorecard Table?

Scorecard tables display data in rows and columns.

Measure

	Name	
	% Revenue Growth	
	Customer Satisfaction Index	
	% of Staff Exceeding Performance Goals	
	% of Accounts as Bad Debts	
	Avg Annual Profit per Customer	

The columns in the table are determined by the template with which the project is associated. The elements are displayed in rows. You can create elements in a table.

In a table you can perform the following tasks:



- Display data that is organized by element type, attribute, and date.
- Create, copy, move, and delete elements.
- Customize the rows, columns, and kinds of links that are displayed in the table.
- Format columns and cells.
- Apply formulas and ranges to columns.

- Set global and personal threshold options.
- Display history.
- View and add comments.

---

## Open a Table

To open a table:

1. Open a scorecard.  
For more information, see [“Open a Scorecard” on page 68](#).
2. Click the Tables icon .
3. To display the most current updates to the data in the table, especially after you perform a calculation, click the Refresh icon .

---

## Specify How to View Scorecard Table Data

To specify how to view scorecard table data:

1. Open a table.  
For more information, see [“Open a Table” on page 172](#).
2. To display the metric attributes by the type of element, select an element type from the **Element type** drop-down list.
3. To display the metric attributes that belong to a specified column selection in a scorecard table, select a column selection from the **Column selection** drop-down list.  
Column selections are defined in the project options. For more information about creating column selections, see [“Create a Column Selection” on page 139](#).
4. To display data for a particular date, click the calendar button that is next to the **Date** field and select a date.  
SAS Strategy Management matches the date that you specify to the appropriate time period for each element. For example, if one element is based on a yearly period, and another element is based on a monthly period, the table displays data that is valid for the year and the month that contain the date that you supplied.
5. Click **Go**.

---

## Sort Rows

You can sort the rows of data in a scorecard table.

To sort the rows according to the value of the column:

1. Open a table.

For more information, see [“Open a Table” on page 172](#).

- Click a column heading (such as **Strategic Objectives** or **Target**).

A downward-pointing arrow indicates that the rows are sorted in descending numeric or alphabetical order; an upward-pointing arrow indicates that the rows are sorted in ascending numeric or alphabetical order.

## Change the Order of Rows in a Scorecard Tables

You can change the order of rows within a table.

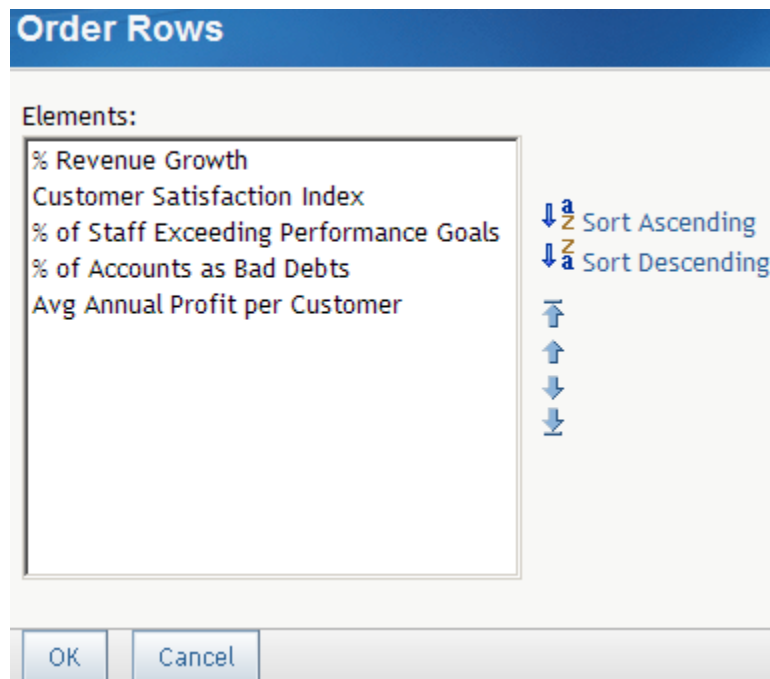
To change row order:

- Open a table.

For more information, see [“Open a Table” on page 172](#).

- Click the action menu  for a row and select **Order Rows**.

The Order Rows page appears.



- Select an element.
- To sort the elements in ascending or descending alphabetic order, select **Sort Ascending** or **Sort Descending**.
- Move the element using the following:



moves the element to the beginning of the list of elements.



moves the element up.



moves the element down.



moves the element to the end of the list of elements.

## Customize a Scorecard Table or an Association View

You can change the way in which the information in a scorecard table or an association view is displayed.

*Note:* Customized settings, except for row and column size, continue to apply to the project after it is closed and reopened.

To customize a scorecard table or an association view:

1. Open a scorecard table or an association view.

For more information, see [“Open a Table” on page 172](#) or [“View an Association” on page 182](#).

2. Click **Customize**.

The Customize page appears.

*Note:* The options that you see depend on what you are customizing.

3. Expand the **Row and Column Paging** section.

To display all the rows and columns in a scorecard table, select **All rows and columns**.





To specify the number of rows and columns that are displayed, select **Specify number of rows and columns**, and select the number from the **Rows** and **Columns** drop-down lists.

4. Expand the **Cell Display** section.

Cell Display

Select what type of information you want to see on elements.

☐ Show formula icon
   
☐ Show threshold icon
 

☐  Personal
   
☐  Global

To display a formula icon when a formula has been applied to the cell, select **Show formula icon**.




To display thresholds, select the **Show threshold icon** check box, and select the **Personal** check box or the **Global** check box.

*Note:* Cell display information applies only to cells that contain values. For example, cells that display range icons will not display threshold or formula icons.

5. Expand the **Additional Information Columns** section.

Additional Information Columns

Select what columns of information you want to see.

☐  Comments
   
☐ Comment Alert
   
☒  Trend Analysis Chart
   
☐  Period

Select the columns of information to display in the scorecard table.

---

## Post Pending Web Data Entry Data


Before you post pending Web data entry (WDE) data, you can view the pending Web data entry data. For more information, see [“View Pending Web Data Entry Data” on page 176](#).

After you post pending WDE data, other users who are viewing the data will see the updated data.

To post pending Web data entry data:

1. Open a table.

For more information, see [“Open a Table” on page 172](#).

2. Click the Post and Calculate WDE Data icon .

The Calculate page appears. For more information, see [“Calculate a Project” on page 157](#).

If there is no pending Web data entry data, the Post and Calculate WDE Data icon is disabled.

## View Pending Web Data Entry Data

You can view or delete Web data entry (WDE) data that is pending for later posting to SAS Strategy Management. This functionality is available only when you choose to submit Web data entry data as pending for later posting. For more information, see [“Specify the Web Data Entry Options” on page 59](#).







To view pending Web data entry data:

1. Open a table.

For more information, see [“Open a Table” on page 172](#).

2. Select **Project** ⇒ **View Pending WDE Data**.

The Pending WDE Data page appears. If there is no pending data, the table is empty.

Pending WDE Data							
	Element	Scorecard	Metric Attribute	Period	Date Entered	Text	Value
	% Revenue Growth	Q1	Performance	FEB2009	03/06/2009		12.00
	Customer Satisfaction Index	Q1	Performance	FEB2009	03/06/2009		34.00
	% of Staff Exceeding Performance Goals	Q1	Performance	FEB2009	03/06/2009		432.00
	% of Accounts as Bad Debts	Q1	Performance	FEB2009	03/06/2009		2.00
	Avg Annual Profit per Customer	Q1	Performance	FEB2009	03/06/2009		34.00
Delete Pending Data							
Close							

To delete all pending Web data entry data, click **Delete Pending Data**.

## Chapter 16

# Aggregate Table View

---

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---


## What Is an Aggregate Table?

An aggregate table shows data from the selected scorecard and all of its children.

---

## Open an Aggregate Table

To open an aggregate table:

1. Open the project that contains the table.
2. Select a parent scorecard.
3. Click the Aggregate Tables icon .
4. Specify how to view the data.

For more information, see [“Specify How to View Aggregate Table Data” on page 177](#).

5. Move the mouse pointer over each value, range icon, range color, or range label to display the names of the associated element.
  6. To sort the first column of the table, click the table heading until you sort by ascending or descending.
  7. To drill-down into a child scorecard, click the name of a child scorecard.
- 

## Specify How to View Aggregate Table Data

To specify how to view aggregate table data:

1. Open an aggregate table.

For more information, see [“Open an Aggregate Table” on page 177](#).

2. To display the metric attributes by the type of element, select an element type from the **Element type** drop-down list.

3. To display the metric attributes that belong to a specified column selection in an aggregate table, select a column selection from the **Column selection** drop-down list.

Column selections are defined in the project options. For more information about creating column selections, see [“Create a Column Selection” on page 139](#).

4. To display data for a particular date, click the calendar button that is next to the **Date** field and select a date.

SAS Strategy Management matches the date that you specify to the appropriate time period for each element. For example, if one element is based on a yearly period, and another element is based on a monthly period, the table displays data that is valid for the year and the month that contain the date that you supplied.

5. Click **Go**.

6. To organize data in an aggregate table by scorecard or metric attribute, click **Scorecard** or **Metric Attribute**.

Metric attributes are defined in the template with which the project is associated.

## Chapter 17

# Association View

---

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---

## What Is an Association?

An association displays relationships between scorecard element types and their associated attributes in a project and displays the elements in an association.

### See Also

- “Start the New Association Wizard” on page 180
- “List Associations” on page 185
- “View an Association” on page 182
- “Customize a Scorecard Table or an Association View” on page 174

---

## Create an Association

### ***Start the New Association Wizard***

To create a new association, you must have the appropriate access permissions.

1. List the associations.

For more information, see [“List Associations” on page 185](#).

2. Click **New**.

The New Association Wizard appears.

### ***Specify Association Properties***

Name and describe the association:

#### **Properties**

Specify the name of this element association.

\* Association name:

Description:

1. Type the name of the association.
2. Type a description.
3. Click **Next**.

### ***Choose Element Types to Display***

Select an element type to display at the highest level in the association:

## Select Element Type

Select the element type that you want to display in the association.

What element type do you want displayed in the association?

\* Element type:

1. From the **Element type** drop-down list, select a type.  
After you select a type, an **Association preview** appears.
2. Click **Next**.

### Associate Attributes

You can use an association to display attributes that are associated with an element type. Attributes are associated with element types in the template on which the project is based.


### Associate Attribute

Select an attribute to add it as a new row in the association.

What is the linked attribute that is next in the association?

\* Attribute:

Association preview:

Level	Element type:
1	 Objective

To select associated attributes:

1. Select an attribute from the **Attribute** drop-down list.
2. Click **Add**.  
The attribute appears in the **Association preview** list.
3. Add as many attributes as needed.
4. Click **Next**.

### Subtotal and Total Rows

You can display the totals and subtotals of rows in the association. You can also apply functions to the totals and subtotals.

## Subtotaling and Totaling Rows

Apply the following subtotaling and totaling options to the association.

☐ Include totals

Include subtotals for:

☐ Measure (Objective)

Select metric type attribute functions for:

Actual	<input type="text" value="None (default)"/>
Target	<input type="text" value="None (default)"/>
Status	<input type="text" value="None (default)"/>
Performance	<input type="text" value="None (default)"/>

To display totals and subtotals and apply functions to them:

1. To display row totals, select the **Include totals** check box.
2. To include subtotals from the selected element type, select the check boxes that are below **Include subtotals for**.
3. To apply a function to the total for each metric type attribute, select functions from the drop-down lists under **Select metric type attribute functions for**.
4. Click **Next**.

### Summarize Association Properties


Review the association information.

Click **Previous** to return to a previous page to change a property. When you are satisfied with the settings, click **Finish**.

---

## View an Association

To view an association:

1. Open a scorecard.  
For more information, see [“Open a Scorecard” on page 68](#).
2. Click the Associations icon .
3. Select an association from the **Association** drop-down list.
4. Select a column selection from the **Column selection** drop-down list.

For more information about column selections, see [“Create a Column Selection” on page 139](#).



*Note:* Element type column selections are not included in the list. Only association column selections and general column selections are included.

5. Type a date in the **Date** field, or click the calendar button to select a date.
6. Click **Go**.
7. To display all the levels of associated attributes and subtotals, click **Expand All**.
8. To collapse all levels, click **Collapse All**.

### See Also

- [“What Is an Association?” on page 179](#)
- [“List Associations” on page 185](#)
- [“Edit Association Properties” on page 185](#)
- [“Delete an Association” on page 187](#)

---

## Customize a Scorecard Table or an Association View

You can change the way in which the information in a scorecard table or an association view is displayed.

*Note:* Customized settings, except for row and column size, continue to apply to the project after it is closed and reopened.

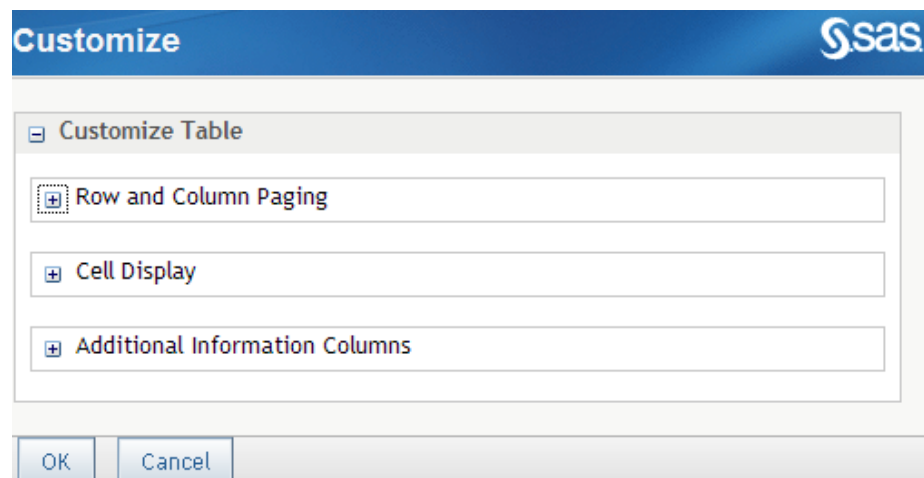
To customize a scorecard table or an association view:

1. Open a scorecard table or an association view.

For more information, see [“Open a Table” on page 172](#) or [“View an Association” on page 182](#).

2. Click **Customize**.

The Customize page appears.



*Note:* The options that you see depend on what you are customizing.

- Expand the **Row and Column Paging** section.

Row and Column Paging

Select the number of rows and columns to display before you need to page.

☐ All rows and columns

☒ Specify number of rows and columns.

Rows:  (min 1 - max 100)

Columns:  (min 1 - max 20)

To display all the rows and columns in a scorecard table, select **All rows and columns**.

To specify the number of rows and columns that are displayed, select **Specify number of rows and columns**, and select the number from the **Rows** and **Columns** drop-down lists.


- Expand the **Cell Display** section.


Cell Display

Select what type of information you want to see on elements.

☐ Show formula icon

☐ Show threshold icon

☐  Personal

☐  Global

To display a formula icon when a formula has been applied to the cell, select **Show formula icon**.


To display thresholds, select the **Show threshold icon** check box, and select the **Personal** check box or the **Global** check box.

*Note:* Cell display information applies only to cells that contain values. For example, cells that display range icons will not display threshold or formula icons.


- Expand the **Additional Information Columns** section.


Additional Information Columns

Select what columns of information you want to see.

☐  Comments

☐ Comment Alert

☒  Trend Analysis Chart

☐  Period

Select the columns of information to display in the scorecard table.

---


## List Associations

To list the associations that are associated with a project, you must be a scorecard modeler and have the appropriate access permissions.

To list associations:

1. Open a project.

For more information, see [“Open a Project” on page 49](#).

2. Click the Associations icon .
3. Click **Manage Associations**.

### See Also

- [“What Is an Association?” on page 179](#)
- [“Copy an Association” on page 187](#)
- [“Edit Association Properties” on page 185](#)
- [“Delete an Association” on page 187](#)

---

## Edit Association Properties

### Overview

To edit the properties of an association, you must have the appropriate access permissions.

To edit the properties of an association:

1. List the associations.

For more information, see [“List Associations” on page 185](#).

2. Click the association name.

The Association Properties page appears.

### Supply General Information

The **General** section contains the association's name and description.

1. Type a new name in the **Association name** field.
2. Type a new description in the **Description** field.

## Change the Levels in an Association

You can change the levels in an association by adding or deleting attributes when you edit association properties. For more information, see [“Edit Association Properties” on page 185](#).

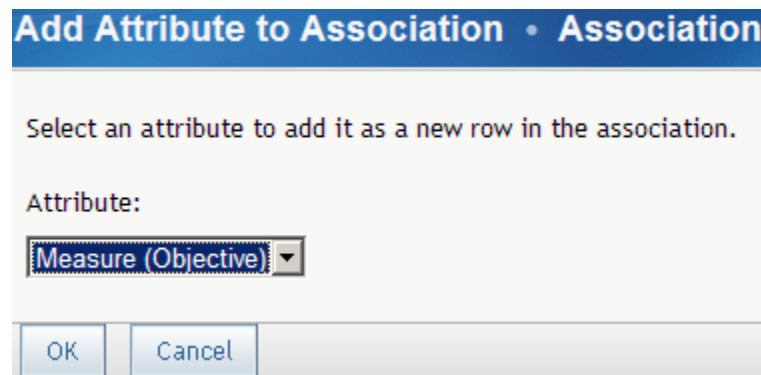
To change association levels, expand the **Association Definition** section.

To delete a level, click **Delete** that is next to the attribute name.

To add a level:

1. Click **Add Level**.

The Add Attribute to Association page appears.



2. Select an attribute from the **Attribute** drop-down list.

## Change Subtotals and Totals

You can change the display of totals and subtotals, and you can change the functions that are applied.

To change the totals and subtotals and to apply functions to them:

1. To display row totals, select the **Include totals** check box.
2. To include subtotals from the selected element types, select the check boxes below **Include subtotals for**.
3. To apply the function to the total for each metric type attribute, select functions from the drop-down lists under **Select metric type attribute functions for**.

### See Also

- [“What Is an Association?” on page 179](#)
- [“List Associations” on page 185](#)
- [“Copy an Association” on page 187](#)
- [“Delete an Association” on page 187](#)

---


## Copy an Association

To copy an association, you must have the appropriate access permissions.

To copy an association:

1. List the associations.

For more information, see [“List Associations” on page 185](#).

2. Click the action menu  to the left of the association and select **Copy**.

The Copy page appears.

3. Type the name of the copy.

By default, the copy is saved as Copy of *association-name*. You can also type a description of the association.

### See Also

- [“What Is an Association?” on page 179](#)
- [“List Associations” on page 185](#)
- [“Edit Association Properties” on page 185](#)
- [“Delete an Association” on page 187](#)

---


## Delete an Association

To delete an association, you must have the appropriate access permissions.

To delete an association:

1. List the associations.

For more information, see [“List Associations” on page 185](#).

2. Click the action menu  to the left of the association and select **Delete**.

### See Also

- [“What Is an Association?” on page 179](#)
- [“Copy an Association” on page 187](#)
- [“Edit Association Properties” on page 185](#)
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## Chapter 18

# Diagram View

---

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---

## What Is a Diagram?

A diagram is a graphical way of representing elements, their relationships to one another, and their respective scores. You can create diagrams that illustrate the relationships between scorecard elements. Diagrams can be based on project element types or scorecard element types.

Diagrams have two layers: a data node layer and a shape layer. The data node layer consists primarily of nodes that represent the elements in a scorecard or a project. This layer can also include links that connect the nodes.


The shape layer consists of shapes, text, and images and sections. Both shapes and sections can be used to contain the data nodes to better represent the data. For more information, see [“Shapes, Text, and Images” on page 245](#) and [“Sections” on page 258](#).

---

## Create a Diagram

### Start the New Diagram Wizard

To start the New Diagram Wizard:

1. Open a project.
2. Select a project or scorecard name in the hierarchy and click the Diagrams icon .
3. Click **New Diagram**.

The New Diagram Wizard appears.

### Name the Diagram

The Name page displays the project and scorecard that contain your diagram, and the name of the diagram.

1. Type the name of the new diagram in the **Diagram name** field.

Project diagram names must be unique within a particular project. Scorecard diagram names must be unique within a particular scorecard.

#### Name

Project:	Balanced Scorecard
Scorecard:	Q1
Diagram name:	<input type="text"/>








2. Click **Next**.

### Select Element Types

The Element Types page displays the element types in your project or scorecard. The diagram will display all of the elements of the element types that you select.

#### Element Types

Element types:

	Contacts	 
	Objective	
	Measure	
	Initiative	
	Perspective	

1. Click the names of the element types to select them.

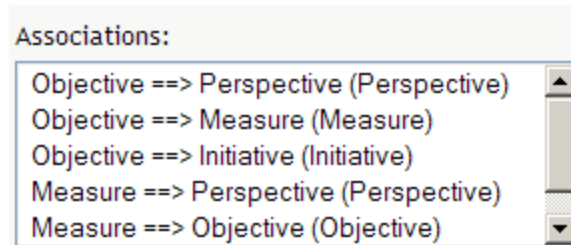


2. To select more than one element type, hold down the CTRL key.
3. Click **Next**.

### Select Associations

The Associations page displays the associations that have been established between project or scorecard element types.

#### Associations

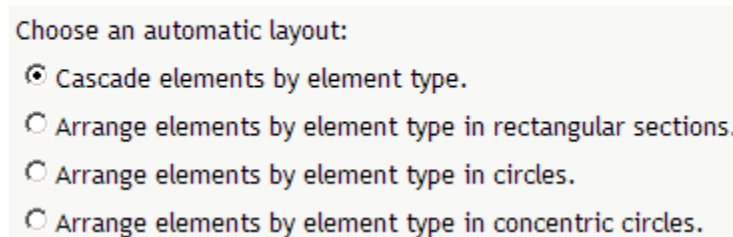


1. To select an association for display in a diagram, click on an association name.
2. To select more than one association, hold down the CTRL key.
3. Click **Next**.

### Select the Layout

The Layout page offers you choices of how to lay out the element types in a diagram.

#### Layout



1. Select a layout method.
2. Click **Next**.

### Finish the New Diagram

The Finish New Diagram page displays your diagram settings.

## Finish New Diagram

Project:	Balanced Scorecard
Diagram name:	Reduce Waste
Selected element types:	Contacts Objective Measure Initiative Perspective Vision Mission
Selected associations:	Objective ==> Perspective (Perspective) Objective ==> Measure (Measure) Objective ==> Initiative (Initiative) Measure ==> Perspective (Perspective) Measure ==> Objective (Objective) Initiative ==> Perspective (Perspective)
Layout:	Cascade elements by element type.


1. To change a setting, click **Previous** to return to a previous page.
2. When you are satisfied with the diagram settings, click **Finish**.


---

## View a Diagram

### Overview

To view a diagram:

1. Open a project.
2. Select a project or scorecard name in the hierarchy, and click the Diagrams icon .
3. Click **Manage Diagrams**.
4. Click the diagram name.


To view updates, such as changes to metric values, click **Go**, which is next to the zoom controls. Diagrams are cached on a per-user, per-date basis; each user must update the diagram view in order to see the most current data. In order to update the diagram, click the Refresh icon .


Elements whose dates fall outside the date that is specified for the diagram will not be displayed.


*Note:* If a label in a diagram does not exist in the currently set language for a project, the label is displayed in the default language.

### **Change the Size of a Diagram View**

*Note:* The project options for the diagram format must be set to show diagrams in SVG format. For more information, see [“Specify the Diagram Options” on page 58](#).

To magnify a diagram view, click the Zoom In icon  or press the CTRL key and move the mouse pointer over the diagram.

To shrink a diagram view, click the Zoom Out icon .

To reset the size of the diagram view, click the Reset Zoom icon .

### **Change the Position of a Diagram**


*Note:* The project options for the diagram format must be set to show diagrams in SVG format. For more information, see [“Specify the Diagram Options” on page 58](#).

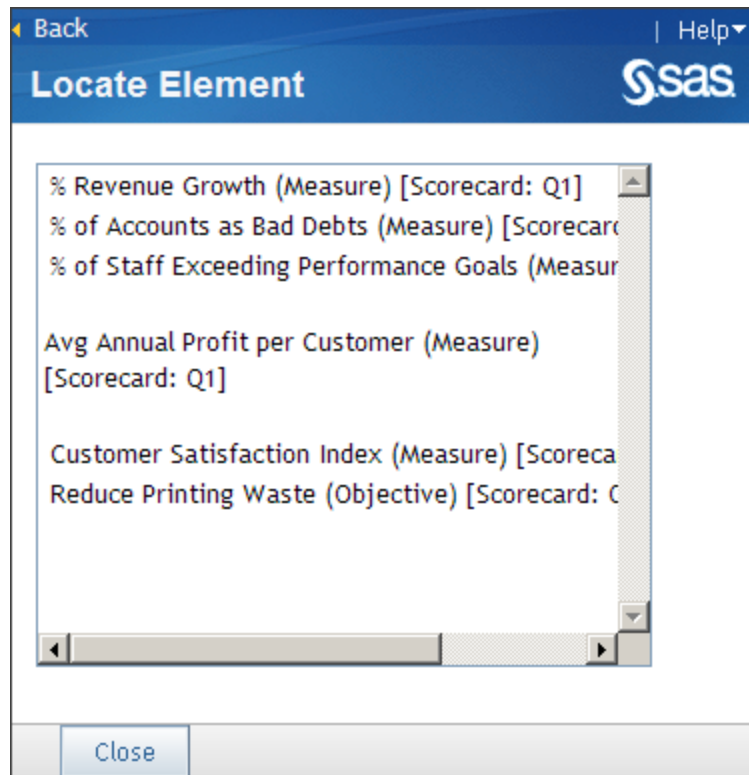
To change the position of the diagram in order to view other areas, press the Alt key and drag the mouse pointer over the diagram. The diagram will move in the same direction as the mouse pointer.

### **Locate Elements, Element Types, and Associations**

*Note:* The project options for the diagram format must be set to show diagrams in SVG format. For more information, see [“Specify the Diagram Options” on page 58](#).

To locate elements in a diagram:

1. Click the Locate Element icon .  
The Locate Element dialog box appears.



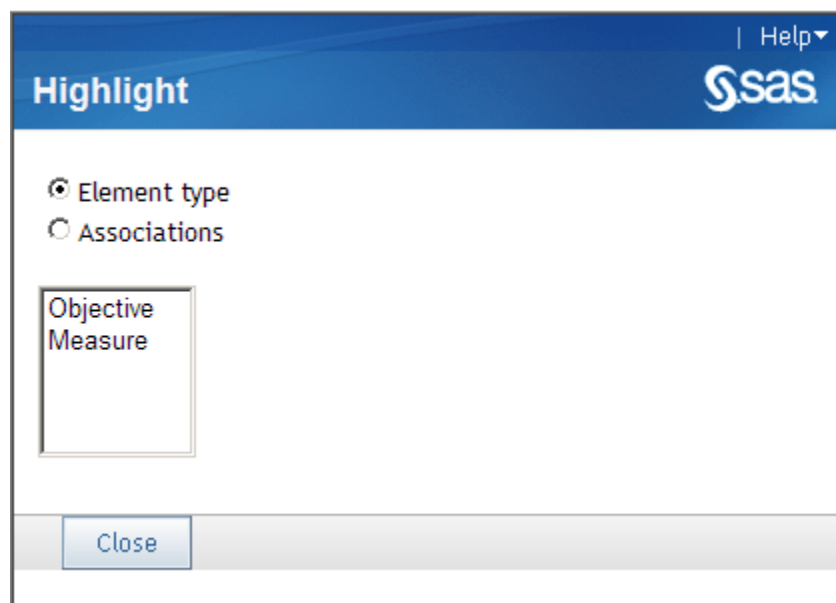
2. Select one or more elements.
3. Click **Close**.

The elements are highlighted by blinking red borders.

To highlight an element:


1. Click the Highlight icon .

The Highlight page appears.



2. Select the element types or associations that you want to highlight.

- From the list, select one or more items.

To reset the highlighting to its default state, click the Reset Highlights icon .



## View Element Attributes

To view the attributes of elements that are represented by nodes in a diagram, click on a diagram node. Metric attributes and non-metric attributes are listed for the element on the Element Attributes page.

Element Attributes • Q1	
<b>Metric Attributes</b>	
Attribute name	Value
Actual	
Target	
Status	
Performance	
<b>Non-Metric Attributes</b>	
Attribute name	Value
Perspective	
Measure	
Initiative	
Close	

## View Diagram Properties

To view the properties of a diagram:

- Open a project.
- Select a project or scorecard.
- Select a project or scorecard name in the hierarchy, and click the Diagrams icon .
- Click **Manage Diagrams**.
- Click the action menu  that is next to a diagram name in the table and select **Properties**.

The Diagram Properties page appears.

- If needed, change the name of the diagram.



## Chapter 19

# Trend Analysis

---

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---

## What Is Trend Analysis?



An element's historical trend is its performance over time. You can access a historical trend graph that tracks the changes in an element's data. For more information, see [“Access Trend Analysis” on page 197](#).

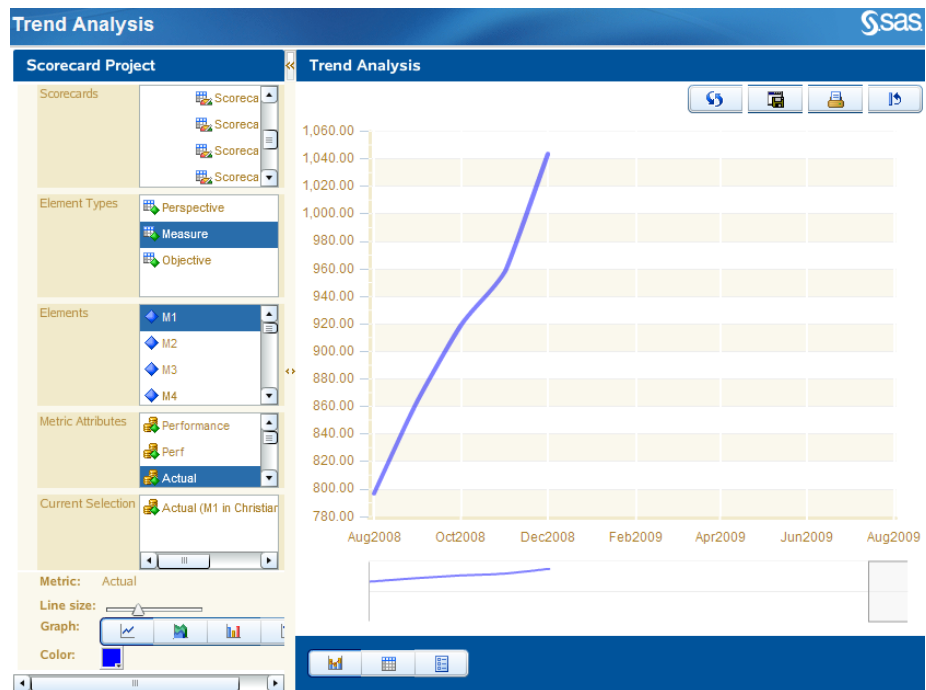
---


## Access Trend Analysis

### *Access Trend Analysis from a Table*

To access a historical trend chart from a scorecard table:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Click the Tables icon .
3. Click the action menu  to the left of an element and select **Show Trend Analysis**.  
The Trend Analysis page appears.



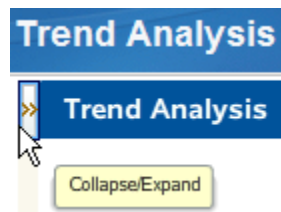
If the table view has been customized to display historical trends, you can also click the Trend Analysis icon .

For information about customizing the table view, see [“Customize a Scorecard Table or an Association View”](#) on page 174.

### Select the Metric Attributes to Analyze

You can select one or more metric attributes to analyze. To select the metric attributes:

1. Expand the left pane of the Trend Analysis page.





## Trend Analysis

### Scorecard Project

**Scorecards**

- Scorecard5
- Scorecard6
- Scorecard7
- Scorecard8
- ▶ Scorecard2
- ▶ Scorecard3

**Element Types**

- Perspective
- Measure**
- Objective

**Elements**

- M1**
- M2
- M3
- M4
- M5
- M6

**Metric Attributes**

- Performance
- Perf
- Actual**
- Target
- Duration

**Current Selection**

Actual (M1 in ChristianaS

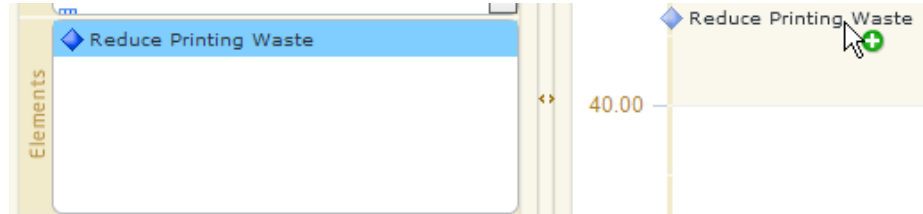
**Metric:** Actual

**Line size:**

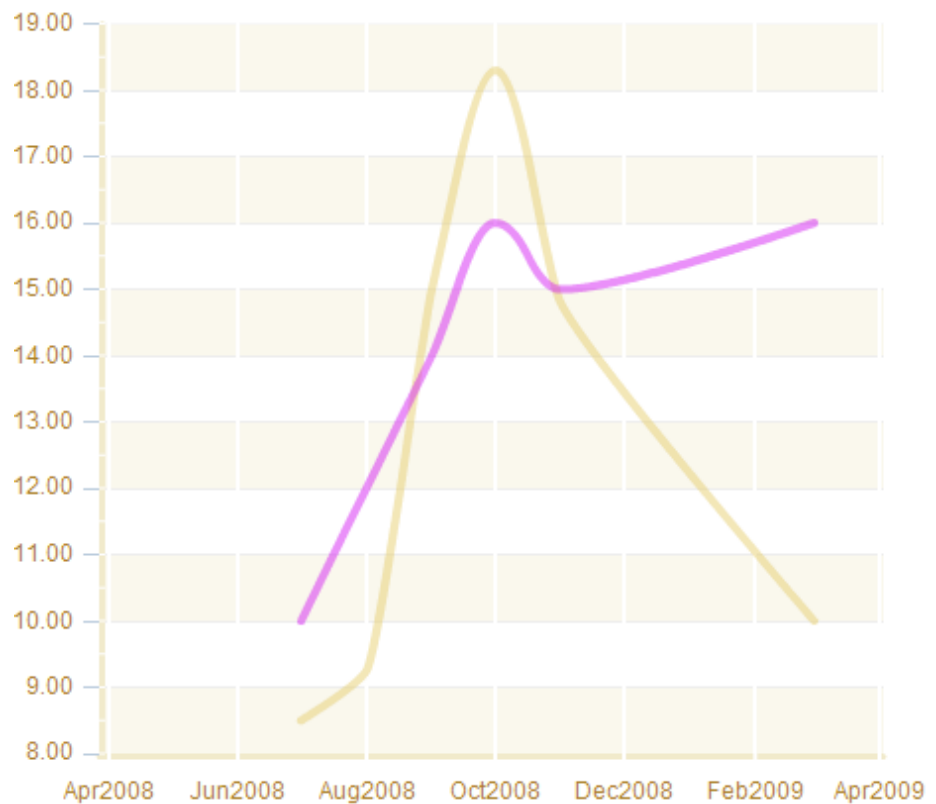
**Graph:**

**Color:**

2. From the **Scorecards** section, select a scorecard.
3. From the **Element Types** section, select an element type.
4. Do one of the following:
  - a. To analyze all of the metric attributes for an element, drag an element from the **Elements** section onto the graph.



The metric attribute values appear on the graph.



- b. To analyze specific metric attributes, drag one or more metric attributes from the **Metric Attributes** section onto the graph.

The items included in the trend analysis appear in the **Current Selection** section.

5. To remove an item from the trend analysis, select the item in the **Current Selection** section and press DELETE.

### Customize the Display of a Metric Attribute

You can customize how a metric attribute is displayed in the graph. To customize the display of a metric attribute:

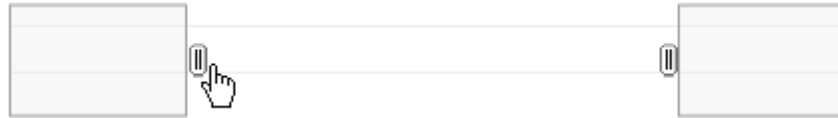
1. From the **Current Selection** section, select an attribute.

- Below the **Current Selection** section, specify the line size, type of graph, and color. As you specify each property, the display is updated.

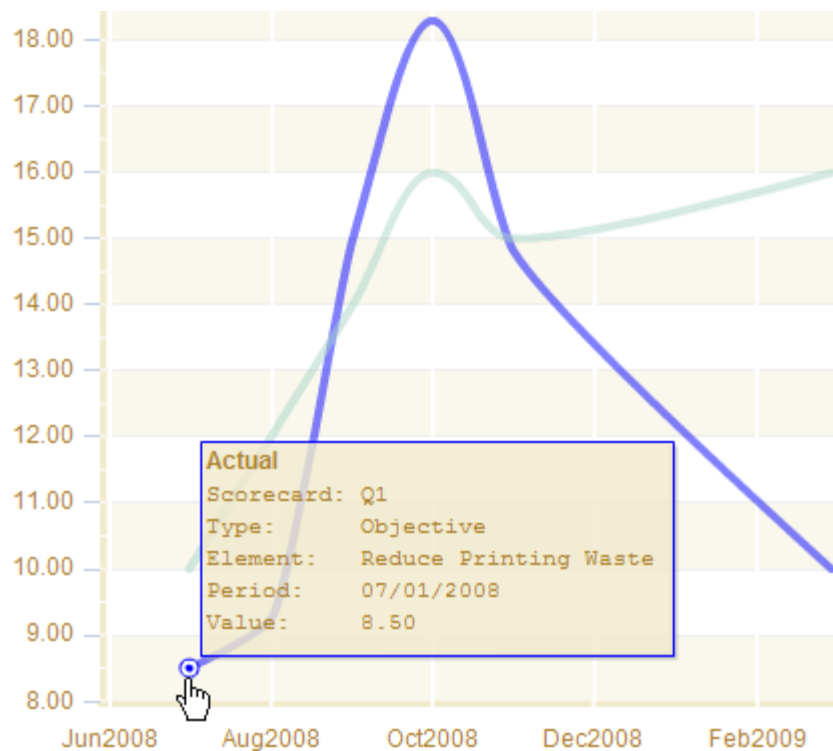
### Navigate a Trend Analysis Chart




To navigate a trend analysis chart:

- Change the start and end dates displayed in the chart by moving the start and end points on the slider below the chart.



- Pause the mouse pointer over a data point to display the underlying data.






- To save the chart as an image, click the Save as Image icon .
- To print the chart, click the Print icon .
- To restore the default value, click the Restore defaults icon .

### Customize the Trend Analysis Chart



You can display the trend analysis data as a chart or as a grid, and you can change the display properties.



*Note:* Customized settings are applied only to the current project and the current session.

To customize the trend analysis chart:

1. To change the display between a chart and a grid, click  (View in Chart button) or  (View in Grid button).
2. To change the properties of the display, click  (Properties button).  
The **General Properties** section appears.

**General Properties**

Show chart legend	<input type="checkbox"/>
Ignore missing values	<input checked="" type="checkbox"/>
Drop shadow for chart series	<input type="checkbox"/>
Line chart series interpolation	Curve ▾
Date unit interval	Month ▾
Date label interval	Month ▾
Date range	03/01/2008  to 12/31/1969 

3. Choose whether to show the chart legend, ignore missing values, and display a drop shadow for the chart series.
4. Specify values for the line chart series interpolation, date unit interval, and the date label interval.
5. To change the date range:
  - a. Click the Calendar icon , and select the start and end dates.
  - b. Click the Reload data for the selected time period icon .
6. Display the analysis as a chart or grid.  
The customizations are displayed.

## Chapter 20

# SAS Strategy Management Portlets

---

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## Types of SAS Strategy Management Portlets

### ***Performance Aggregate Table Portlet***

You can display a SAS Strategy Management aggregate table for a single scorecard by adding a Performance Aggregate Table portlet to the portal. If the scorecard contains child scorecards, you can navigate to those scorecards. If the scorecard does not contain child scorecards, the aggregate table will not be displayed.

For more information, see [“Edit a Performance Aggregate Table Portlet” on page 205](#).

### ***Performance Association Portlet***

You can display SAS Strategy Management association views for a single scorecard or project by adding a Performance Association portlet to the portal.

For more information, see [“Edit a Performance Association Portlet” on page 206](#).

### ***Performance Dashboard Portlet***

You can display key performance indicators or any SAS Strategy Management elements by adding a Performance Dashboard portlet to the portal.

For more information, see [“View a Performance Dashboard” on page 208](#).

*Note:* This type of portlet might not be available to you.

### ***Performance Diagram Portlet***

You can display SAS Strategy Management diagrams for a single scorecard or project by adding a SAS Performance Diagram portlet to the portal.

For more information, see [“Edit a Performance Diagram Portlet” on page 211](#).

### ***Performance Table Portlet***

You can view a SAS Strategy Management table from a single scorecard or project by adding a SAS Performance Table portlet to the portal.


For more information, see [“Edit a Performance Table Portlet” on page 213](#).

### ***Add a SAS Strategy Management Portlet***

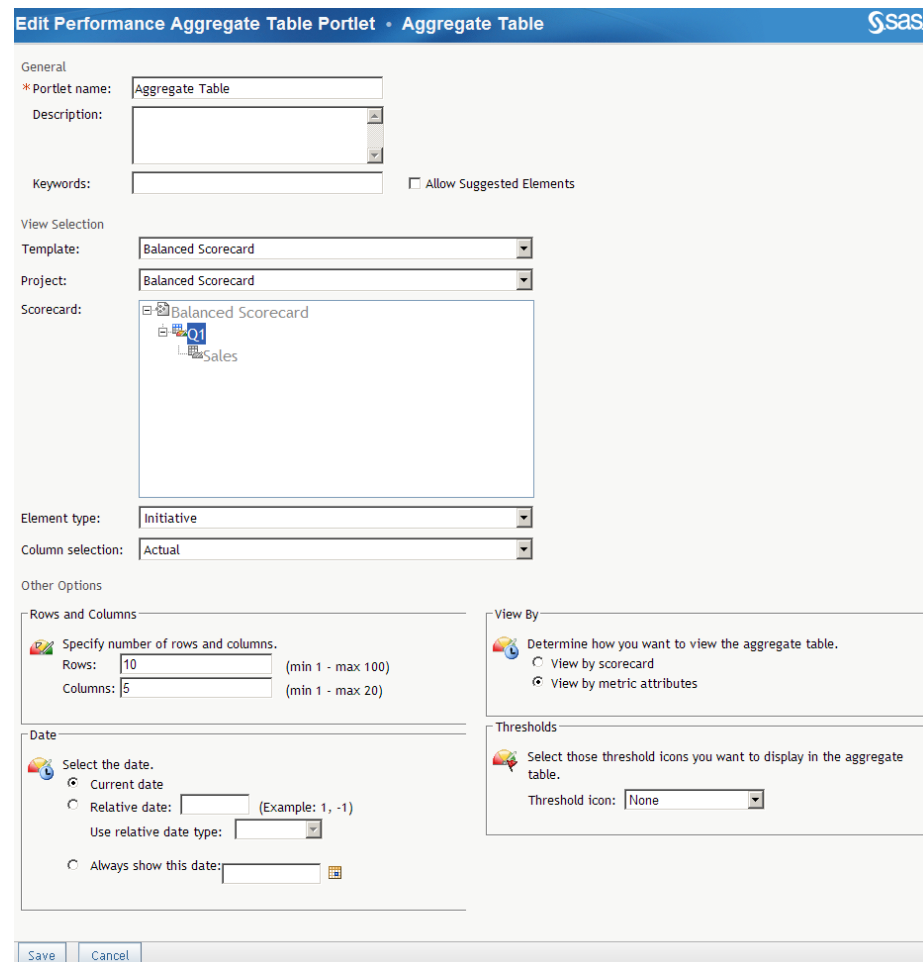
To add a SAS Strategy Management portlet to the portal, follow the steps that are described in SAS Information Delivery Portal online Help.

## Edit a Performance Aggregate Table Portlet

### Overview

To edit the properties of a Performance Aggregate Table portlet, click the Edit icon  in the portlet.

The Edit Performance Aggregate Table Portlet page appears.



**Edit Performance Aggregate Table Portlet • Aggregate Table**

**General**

\*Portlet name:

Description:

Keywords:  ☐ Allow Suggested Elements

**View Selection**

Template:

Project:

Scorecard:

Element type:

Column selection:

**Other Options**

**Rows and Columns**

Specify number of rows and columns.

Rows:  (min 1 - max 100)

Columns:  (min 1 - max 20)

**Date**

Select the date.

☒ Current date

☐ Relative date:  (Example: 1, -1)

Use relative date type:

☐ Always show this date:

**View By**

Determine how you want to view the aggregate table.

☐ View by scorecard

☒ View by metric attributes

**Thresholds**

Select those threshold icons you want to display in the aggregate table.

Threshold icon:

### Edit General Properties

Edit the portlet name, description, or keywords.

### Edit View Selection Properties

To specify the parameters that define the information to display in the aggregate table:

1. From the **Template** drop-down list, select a template.

2. From the **Project** drop-down list, select a project.
3. From the **Scorecard** list, select a scorecard.  
*Note:* You must select a scorecard that contains child scorecards.
4. From the **Element type** drop-down list, select an element type.
5. From the **Column selection** drop-down list, select a column selection.

### Edit Other Properties

To specify the number of rows and columns of the aggregate table to display in the portlet, in the **Rows and Columns** section, type values in the **Rows** and **Columns** fields.

To specify the date, in the **Date** section, do one of the following:

- Select **Current date**.
- Select **Relative date**, type a value in the field, and then select a value from the **Use relative date type** drop-down list.
- Select **Always show this date**, and type a date or click the calendar button.

To specify how to view the aggregate table, in the **View By** section, do one of the following:

- To display the scorecards as the column headings and the metric attributes as the rows, select **View by scorecard**.
- To display the metric attributes as the columns headings and the scorecards as the rows, select **View by metric attributes**.

To specify which threshold icons appear in the aggregate table, in the **Threshold** section, select the icon from the **Threshold icon** drop-down list.

---

## Edit a Performance Association Portlet

### Overview

To edit the properties of a Performance Association portlet, click the Edit icon  in the portlet.

The Edit Performance Association Portlet page appears.



Edit Performance Association Portlet • Association

General

\* Portlet name: Association

Description:

Keywords:

☐ Allow Suggested Elements

View Selection

Template: Balanced Scorecard

Project: Balanced Scorecard

Scorecard:

Balanced Scorecard

Q1
Sales

Association name:

Column selection: No Column Selection

Other Options

Icons

Select those icons you want to display.

Threshold icon: None

☐ Trend Analysis

☐ Comments

☐ Comment Alert

Date

Select the date.

☒ Current date

☐ Relative date: (Example: 1, -1)

Use relative date type:

☐ Always show this date:

Save Cancel

## Edit General Properties

To edit the general properties:

1. Edit the portlet name, description, or keywords.
2. If needed, select **Allow Suggested Elements**.

### **Edit View Selection Properties**

To specify the parameters that define the table that contains associations to display:

1. From the **Template** drop-down list, select a template.
2. From the **Project** drop-down list, select a project.
3. From the **Scorecard** list, select a scorecard.
4. From the **Association name** drop-down list, select an association.

*Note:* Associations are not available at the project level.

5. From the **Column selection** drop-down list, select a column selection.

To specify which threshold icons appear in the aggregate table:

1. In the **Icons** section, select the icon from the **Threshold icon** drop-down list.
2. Select other icons to display.

To specify the date, in the **Date** section, do one of the following:

- Select **Current date**.
- Select **Relative date**, type a value in the field, and then select a value from the **Use relative date type** drop-down list.
- Select **Always show this date**, and type a date or click the calendar button.

---

## **View a Performance Dashboard**

### **View Performance Dashboard Graphs**

If the element contains data for the specified time period, a graph is displayed in the Performance Dashboard Portlet for each element that you selected when you edited the portlet properties. Click on the link in each graph to view the underlying data table.

*Note:* If the range for the element contains fewer than two intervals, a graph for the element is not displayed.


### **Set Thresholds and Dates**

To specify the thresholds that are displayed in the graphs and the dates to which the data applies:

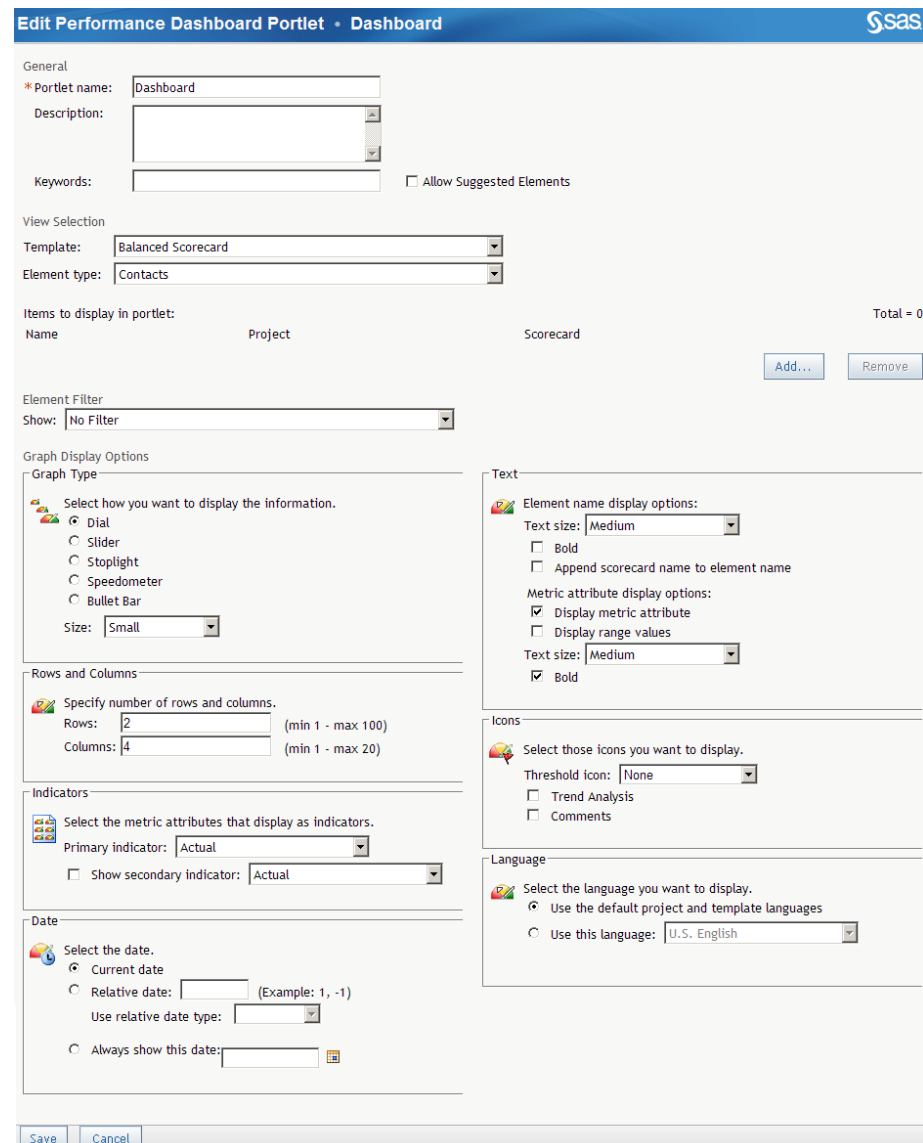
1. Select a threshold from the **Thresholds** drop-down list.
2. Click the calendar icon to select a date. Click **Go**.

## Edit a Performance Dashboard Portlet

### Overview

To edit the properties of a Performance Dashboard portlet, click the Edit icon  in the portlet.

The Edit Performance Dashboard Portlet page appears.



**Edit Performance Dashboard Portlet • Dashboard**

**General**

\*Portlet name:

Description:

Keywords:  ☐ Allow Suggested Elements

**View Selection**

Template:

Element type:

Items to display in portlet:

Name	Project	Scorecard
Total = 0		

Element Filter

Show:

**Graph Display Options**

**Graph Type**

Select how you want to display the information.

☒ Dial

☐ Slider

☐ Stoplight

☐ Speedometer

☐ Bullet Bar

Size:

**Rows and Columns**

Specify number of rows and columns.

Rows:  (min 1 - max 100)

Columns:  (min 1 - max 20)

**Indicators**

Select the metric attributes that display as indicators.

Primary indicator:

☐ Show secondary indicator:

**Date**

Select the date.

☒ Current date

☐ Relative date:  (Example: 1, -1)

Use relative date type:

☐ Always show this date:

**Text**

Element name display options:

Text size:

☐ Bold

☐ Append scorecard name to element name

Metric attribute display options:

☒ Display metric attribute

☐ Display range values

Text size:

☒ Bold

**Icons**

Select those icons you want to display.

Threshold icon:

☐ Trend Analysis

☐ Comments

**Language**

Select the language you want to display.

☒ Use the default project and template languages

☐ Use this language:

The size and style for metric attributes and element names, whether to append scorecard names to element names, and whether to display metric attributes are set on the Preferences page of the portal.

### **Edit General Properties**

To edit the general properties:

1. Edit the portlet name, description, or keywords.
2. If needed, select **Allow Suggested Elements**.

### **Edit View Selection Properties**

You can display many scorecard elements from multiple projects within the same template.

Select a template and element type.

### **List of Items to Display in Portlet**

To select the elements that will be displayed in the Performance Dashboard portlet:

1. In the **View Selection** section of the Edit Performance Dashboard Portlet page, click **Add**.

The Add Items to Portlet page appears.

2. Select a project from the **Project name** drop-down list.

The list contains all of the projects that are associated with the selected template.

3. Select the scorecard that contains the elements that you want to add.
4. Select the check box for each element to be displayed in the portlet.

After you close the Add Items to Portlet page, the Edit Performance Dashboard Portlet page appears. The elements that you have selected are displayed in the **Items to display in portlet** table. To remove an item from the table, select the check box next to the item and click **Remove**. To remove all of the items from the table, select the check box at the top of the column and click **Remove**. If you select elements that have a different element type, all elements of the previous element type are removed from the Performance Dashboard portlet.

### **Set Element Filter**

You can set a filter that displays elements that have or have not met global or personal threshold conditions. For more information, see [“What Is a Threshold?” on page 111](#).

To specify the threshold condition, select a filter from the **Show** drop-down list.

### **Set Graph Display Options**

Graphs in the Performance Dashboard portlet can be dials, sliders, or stoplights. To select the type of graph, in the **Graph Type** section, select the type of image and the image size.

To specify the number of rows and columns, in the **Rows and Columns** section, type values in the **Rows** field and the **Columns** field

To change the metric attributes that you use as indicators, in the **Indicators** section:

1. Select an indicator from the **Primary indicator** drop-down list.

2. If you want to display a secondary indicator, select the check box next to **Show secondary indicator**, and select an indicator from the drop-down list.

Stoplights do not display secondary indicators.

To specify the date, in the **Date** section, do one of the following:

- Select **Current date**.
- Select **Relative date**, type a value in the field, and then select a value from the **Use relative date type** drop-down list.
- Select **Always show this date**, and type a date or click the calendar button.

To specify how text is displayed, in the **Text** section:

1. Select a text size for the element name from the **Text size** drop-down list.
2. If you want, choose to display the element name as bold text or to append the scorecard name to the element name.
3. To display the metric attribute or range values, select the check box next to **Display metric attribute** or **Display range values**.
4. Select a text size for the metric attribute from the **Text size** drop-down list.
5. (Optional) Choose to display the element name as bold text.

To specify which threshold icons to display, in the **Icons** section:


1. Select the icon from the **Threshold icon** drop-down list.
2. (Optional) Choose to display a historical trend chart and comments.

To specify the language to display, in the **Language** section, select a specific language or the default language.

---

## Edit a Performance Diagram Portlet

### Overview

To edit the properties of a Performance Diagram portlet, click the Edit icon  in the portlet.

The Edit Performance Diagram Portlet page appears.

Edit Performance Diagram Portlet • Diagram

General

\*Portlet name:

Description:

Keywords: 
☐ Allow Suggested Elements

View Selection

Template:

Project:

Scorecard:

Diagram:

Other Options

Date

Select the date.

☒ Current date

☐ Relative date:  (Example: 1, -1)

Use relative date type:

☐ Always show this date:

Diagram Height

Specify the vertical size of the diagram viewing area.

Height:  (100 to 1500 pixels)

### Edit General Properties

To edit the general properties:

1. Edit the portlet name, description, or keywords.
2. If needed, select **Allow Suggested Elements**.

### **Edit View Selection Properties**

To specify the parameters that define the table that contains associations to display:

1. From the **Template** drop-down list, select a template.
2. From the **Project** drop-down list, select a project.
3. From the **Scorecard** list, select a scorecard or a project.
4. From the **Diagram** drop-down list, select a diagram.

### **Edit Other Options**

To specify the date, in the **Date** section, do one of the following:


- Select **Current date**.
- Select **Relative date**, type a value in the field, and then select a value from the **Use relative date type** drop-down list.
- Select **Always show this date**, and type a date or click the calendar button.

To specify the diagram height, type the height in the **Height** field.

---

## **Edit a Performance Table Portlet**

### **Overview**

To edit the properties of a Performance Table portlet, click the Edit icon  in the portlet.

The Edit Performance Table Portlet page appears.

**Edit Performance Table Portlet • Table**

**General**

\* Portlet name:

Description:

Keywords:  ☐ Allow Suggested Elements

**View Selection**

Template:

Project:

Scorecard:

Element type:

Column selection:

**Other Options**

**Rows and Columns**

Specify number of rows and columns.

Rows:  (min 1 - max 100)

Columns:  (min 1 - max 20)

**Date**

Select the date.

☒ Current date

☐ Relative date:  (Example: 1, -1)

Use relative date type:

☐ Always show this date:

**Icons**

Select those icons you want to display.

Threshold icon:

☐ Trend Analysis

☐ Period

☐ Comments

☐ Comment Alert

## Edit General Properties

To edit the general properties:

1. Edit the portlet name, description, or keywords.
2. If needed, select **Allow Suggested Elements**.

## Edit View Selection Properties

To specify the parameters that define the table to display:

1. From the **Template** drop-down list, select a template.
2. From the **Project** drop-down list, select a project.
3. From the **Scorecard** list, select a scorecard or a project.
4. From the **Element type** drop-down list, select an element type.
5. From the **Column selection** drop-down list, select a column selection.



## Edit Other Options

To specify the number of rows and columns of the performance table to display in the portlet, in the **Rows and Columns** section, type values in the **Rows** and **Columns** fields.

To specify the date, in the **Date** section, do one of the following:

- Select **Current date**.
- Select **Relative date**, type a value in the field, and then select a value from the **Use relative date type** drop-down list.
- Select **Always show this date**, and type a date or click the calendar button.

To specify which threshold icons to display, in the **Icons** section:

1. Select the icon from the **Threshold icon** drop-down list.
2. If you want, choose to display in the table the historical trend chart column, the period column, the comments column, and the comment alert column.



## Chapter 21

# Reports Using Microsoft Excel and Microsoft Word

---

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---

## Overview: SAS Solutions Services Add-In for Microsoft Office

The SAS Solutions Services Add-In for Microsoft Office enables you to insert either of the following elements into a Microsoft Excel spreadsheet or Microsoft Word document:

- the output of a stored process
- SAS Strategy Management project data from a SAS Solutions Services server

If the SAS Solutions Services Add-In for Microsoft Office has been installed, you can access it from the SAS Solutions menu in Microsoft Excel or Microsoft Word.

---

## Log On to the SAS Solutions Services Server

To log on to the SAS Solutions Services server:

1. Invoke Microsoft Word or Microsoft Excel.
2. Do one of the following:
  - (Version 2003) Select **SAS Solutions** ⇒ **Log On**.
  - (Version 2007) On the **SAS Solutions** tab, in the **Report** group, click **Log On**.

The SAS Log On dialog box appears.

3. From the **Environment** drop-down list, select a server.

The default value is the server that was specified when the SAS Solutions Services Add-In for Microsoft Office was installed.

4. Type your user name in the **User name** field.
5. Type your password in the **Password** field.

---

## Insert a Document

### Overview

You can insert a document from the Document Manager into a Microsoft Word or Microsoft Excel document.

You can insert a stored process. If you have installed SAS Strategy Management, you can insert the following SAS Strategy Management project views:

- Dashboard
- Diagram
- Association
- Table

To insert a document:

1. Start Microsoft Word or Microsoft Excel.
2. Do one of the following:
  - (Version 2003) Select **SAS Solutions** ⇒ **Report** ⇒ **Insert Document**.
  - (Version 2007) On the **SAS Solutions** tab, in the **Report** group, click **Insert Document**.

The Insert Document dialog box appears, showing a list of the documents in the Document Manager.

*Note:* A document inherits the access permissions of the folder that contains it. If you do not have access rights to the document, you will not be able to insert it.

3. From the list on the left, select a folder.
4. Select a document from the list on the right.

If you insert a stored process, the stored process is inserted immediately.

If you insert a SAS Strategy Management view, the View page appears. You must specify information about the view. See additional steps for each type of view (below).

*Note:* Documents and the output of stored processes are inserted into Microsoft Excel in read-only mode. To edit the spreadsheet in Microsoft Excel, select **Tools** ⇒ **Protection** ⇒ **Unprotect Sheet**.

## Insert a Dashboard View

To insert a SAS Strategy Management dashboard view into your document:

1. Select **Dashboard** on the View page.
2. Click **Next**.

The Dashboard Type page appears.

3. Select **Dial**, **Slider**, or **Stoplight** as the dashboard type.
4. If you want to include range values in a dial or slider, select **Display range values** check box.
5. Click **Next**.

The Scorecard page appears.

6. Select the scorecard whose dashboard view you want to insert.
7. Click **Next**.

The Element Type page appears.

8. Select an element type on which to base the report.
9. Click **Next**.

The Metric Value and Period page appears.

10. Select a metric value to display.
11. Specify a date by doing either of the following:
  - To be able to refresh the data with the most recent data for the current period, select **Always use the current date**.
  - To display data from a particular date, select **Use a specified date** and select a date from the drop-down list.
12. Click **Next**.

The Summary page appears.

13. Verify that the summary information is correct. To make changes, click **Back**.

*Note:* If the range for the element contains fewer than two intervals, a dashboard for the element is not displayed.

## Insert a Diagram View

To insert a SAS Strategy Management diagram view into your document:

1. Select **Diagram** on the View page.
2. Click **Next**.

The Scorecard page appears.

3. Select the scorecard whose diagram you want to insert.
4. Click **Next**.

The Diagram and Period page appears.

5. Select a diagram to insert.

6. Specify a date by doing either of the following:
  - To be able to refresh the data with the most recent data for the current period, select **Always use the current date**.
  - To display data from a particular date, select **Use a specified date** and select a date from the drop-down list.
7. Click **Next**.  
The Summary page appears.
8. Verify that the summary information is correct. To make changes, click **Back**.

### ***Insert an Association View***

To insert a SAS Strategy Management association view into your document:

1. Select **Association** on the View page.
2. Click **Next**.  
The Scorecard page appears.
3. Select the scorecard whose associations you want to insert.
4. Click **Next**.  
The Association page appears.
5. Select an association to insert.
6. Click **Next**.  
The Column Selection and Period page appears.
7. Specify a column selection by doing either of the following:
  - To apply no column selection, select **None**.
  - To apply a column selection, select **Selected column selection**, and select a column selection from the list.
8. Specify a date by doing either of the following:
  - To be able to refresh the data with the most recent data for the current period, select **Always use the current date**.
  - To display data from a particular date, select **Use a specified date** and select a date from the drop-down list.
9. Click **Next**.  
The Summary page appears.
10. Verify that the summary information is correct. To make changes, click **Back**.

### ***Insert a Table View***

To insert a SAS Strategy Management table view into your document:

1. Select **Table** on the View page.
2. Click **Next**.  
The Scorecard page appears.

3. Select the scorecard whose table view you want to insert.
4. Click **Next**.  
The Element Type page appears.
5. Select an element type on which to base the report.
6. Click **Next**.  
The Column Selection and Period page appears.
7. Specify a column selection by doing either of the following:
  - To apply no column selection, select **None**.
  - To apply a column selection, select **Selected column selection**, and select a column selection from the list.
8. Specify a date by doing either of the following:
  - To be able to refresh the data with the most recent data for the current period, select **Always use the current date**.
  - To display data from a particular date, select **Use a specified date** and select a date from the drop-down list.
9. Click **Next**.  
The Summary page appears.
10. Verify that the summary information is correct. To make changes, click **Back**.

---

## Refresh the Contents of a Report

If you selected **Always use the current date** when you inserted the document, you can refresh the contents of the report to insert the most recent data for the current period. You can refresh only those documents for which the **Allow refresh of embedded data** check box has been selected.

In Microsoft Excel:

1. To refresh the current spreadsheet, do one of the following:
  - (Version 2003) Select **SAS Solutions** ⇒ **Report** ⇒ **Refresh**.
  - (Version 2007) On the **SAS Solutions** tab, in the **Report** group, click **Refresh**.
2. To refresh all of the open spreadsheets, do one of the following:
3. In the dialog box, select the date for which you want the data to be refreshed.
  - (Version 2003) Select **SAS Solutions** ⇒ **Report** ⇒ **Refresh All**.
  - (Version 2007) On the **SAS Solutions** tab, in the **Report** group, click **Refresh All**.

In Microsoft Word:

1. To refresh the content under the mouse pointer, click on the area of the report that you want to update, and then do one of the following:
  - (Version 2003) Select **SAS Solutions** ⇒ **Report** ⇒ **Refresh**.
  - (Version 2007) On the **SAS Solutions** tab, in the **Report** group, click **Refresh**.

2. To refresh all of the data in the document, do one of the following:
  - (Version 2003) Select **SAS Solutions** ⇒ **Report** ⇒ **Refresh All**.
  - (Version 2007) On the **SAS Solutions** tab, in the **Report** group, click **Refresh All**.
3. In the dialog box, select the date for which you want the data to be refreshed.

*Note:* When data is refreshed, stored processes are not prompted for parameters.


---

## Share a Report

To post the report that is currently displayed in Microsoft Word or Microsoft Excel to the Document Manager, so that other users can view it:

1. Do one of the following:
  - (Version 2003) Select **SAS Solutions** ⇒ **Report** ⇒ **Share Report**.
  - (Version 2007) On the **SAS Solutions** tab, in the **Report** group, click **Share Report**.

The Share Report dialog box appears.

2. In the **Name** field, type the report name that will appear in the Document Manager.
3. In the **Description** field, describe the content of the report.
4. To create a new Document Manager folder in the repository:
  - a. Click the Create Folder button (  ).  
The Create New Folder dialog box appears.
  - b. Type the name of the folder.
  - c. Type the description of the folder, if needed.
5. From the **Save in** list, select the Document Manager folder that you want to place the report in.
6. If you want the report to be automatically updated with the most recent data for the current period each time a user opens it, select the **Allow refresh of embedded data** check box.

If you do not select the **Allow refresh of embedded data** check box, the report will always show the values that it showed when it was saved.

---

## Log Off from SAS Solutions Services Server

To log off from the SAS Solutions Services server, do one of the following:

- (Version 2003) Select **SAS Solutions** ⇒ **Log Off**.
- (Version 2007) On the **SAS Solutions** tab, in the **Report** group, click **Log Off**.



## Chapter 22

# Working with Microsoft Excel

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## Accessing the Value of a Scorecard Element Metric Attribute from Within Microsoft Excel

You can access the value of a scorecard element metric attribute from within Microsoft Excel. You can place the value directly into a cell or use the value as part of a formula. To access the data in SAS Strategy Management, you must be logged on to SAS Strategy Management and have Read access permission to the numeric attribute.

Here is the function syntax:

**GETSPMCELLVALUE**(*Template, Project, Scorecard, Element-Type, Element, Metric-Attribute, Date*)

*Note:* Each name in an argument must match the name that is used with the default language for the template.

Here are the arguments:

*Template*

a quoted string that represents the template name.

*Project*

a quoted string that represents the project name.

*Scorecard*

a quoted string that represents the scorecard name.

*Element-Type*

a quoted string that represents the element type name.

*Element*

a quoted string that represents the element name.

*Metric-Attribute*

a quoted string that represents the metric attribute name.

*Date*

a quoted string that represents a valid date. This is the specific date for which to return the value of the metric attribute. The format can be any recognizable date format.

No validation is performed on the values of the arguments. If any problems arise with the values, the function returns an empty string.

## Part 6

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# Appendix

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# Appendix 1

## Editing a Diagram

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---

## The Diagram Editor

### Overview

The Diagram Editor is a Java applet that you can use to change the way that your diagram looks and to create new associations.

### Undoing and Redoing Certain Actions

As you edit a diagram, you can undo and redo certain actions. You can undo or redo up to ten of these actions.


These are the actions that you can undo or redo:


Action	For More Information, See
Add or remove data nodes	<a href="#">“Add and Remove Data Nodes” on page 239</a>
Edit element properties	<a href="#">“Edit Element Properties” on page 232</a>
Hide an element	<a href="#">“Hide an Element” on page 232</a>
Move an element	<a href="#">“Move an Element” on page 232</a>
Resize an element	<a href="#">“Resize an Element” on page 232</a>
Edit data node properties	<a href="#">“Edit Data Node Properties” on page 233</a>
Move a shape, text, or image	<a href="#">“Move a Shape, Text, or Image” on page 247</a>
Edit the properties of a shape, text, or image	<a href="#">“Edit the Properties of a Shape, Text, or Image” on page 249</a>
Resize a shape or image	<a href="#">“Resize a Shape or Image” on page 248</a>

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## Start the Diagram Editor

To start the Diagram Editor:

1. Open a project.  
For more information, see [“Open a Project” on page 49](#).
2. Select a project or scorecard name in the hierarchy, and click the Diagrams icon .
3. Select a diagram.

4. Click the Edit icon .
5. If you have a version of the Java 2 Runtime Environment that is higher than the required version, you are asked to use the later version. Click **Yes**.
6. If you do not have the required version of the Java 2 Runtime Environment installed, you will be prompted to install it. After installation, reboot the computer.
7. Click **Yes** in the dialog box to install several JAR files that are required by the Diagram Editor.
8. Delete the Java plug-in cache:

*Note:* The names of the controls in the Java Control Panel might differ from the names shown here.

- a. In the Windows Control Panel, open the Java Control Panel.
- b. On the **General** tab, in the **Temporary Internet Files** section, click **Delete Files**.  
The Delete Temporary Files dialog box appears.
- c. Select **Downloaded Applets** and **Other Files**.

*Note:* If you are using SAS Strategy Management on more than one server, delete the temporary Internet files in Internet Explorer to ensure proper installation and operation of the Diagram Editor:

1. In Internet Explorer, select **Tools** ⇒ **Internet options**.
2. In the **Temporary Internet files** section, click **Delete Files**.

---

## Elements

### Overview

You can make changes to the scorecard data that underlies a diagram by adding, changing, and deleting elements in the diagram. In a single diagram, you can display any metric attribute from any scorecard, and you can display multiple instances of the same element but with element values for different dates.

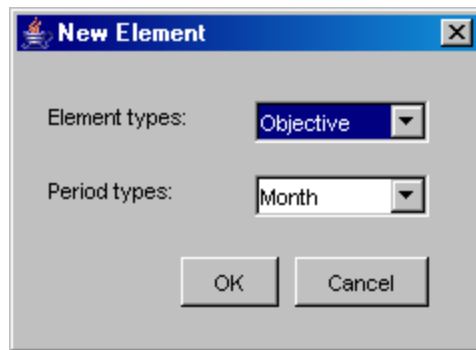
### Add an Element

To add an element:

1. Select **Elements** ⇒ **New**.

The New Element dialog box appears.





2. From the **Element types** drop-down list, select a type.
3. From the **Period types** drop-down list, select a type.
4. Click **OK**.

An element of the selected type is added to the scorecard, and a corresponding node appears in the diagram. It is inserted at x, y coordinates 200, 200. You can insert a new node under other nodes; rearrange the other nodes to display the new node.

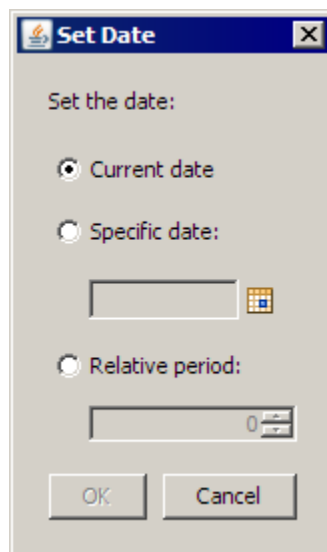
### Select the Date for an Element

A diagram can contain the same element multiple times, but each element might have a value for a different date.

To select the date for an element:

1. Right-click an element and select **Set Date**.

The Set Date dialog box appears.



2. To specify the current date, select **Current date**.
3. To specify a specific date, select **Specific date**, and then click the calendar icon to select a date.
4. To specify a relative period, select **Relative period**, and then type or select a positive or negative value.

## Edit Element Properties

To edit an element:

1. Double-click the node that represents the element that you want to edit.

The Edit Element dialog box appears, showing all the attributes of the element and their current properties. The attributes vary according to the element. The attributes of an objective are shown below.

The screenshot shows a standard Windows-style dialog box titled "Edit Element". It contains the following fields and controls:

- Name for language (U....):** A text box containing "Objective 1".
- Perspective:** A dropdown menu with a downward arrow.
- Measure:** A dropdown menu with a downward arrow.
- Initiative:** A dropdown menu with a downward arrow.
- Width:** A text box containing "441".
- Height:** A text box containing "237".
- Scorecard path:** A text box containing "Scorecard".
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

Element type attributes are defined in the template for the project.

2. Change the value of any attribute by typing a value or selecting a value from a drop-down list.

## Move an Element

To move an element, drag the element to a new location.

## Hide an Element

To hide an element, right-click the element and select **Hide**.

## Resize an Element

To change the dimensions of an element, select the element, and drag a handle to a new location.

## Delete an Element

To delete a table element:

1. Select the node that represents the element that you want to delete.
2. Select **Edit** ⇒ **Delete**.

The node disappears from the diagram and the corresponding element is deleted from the underlying table.

You can also delete data from a table by deleting a link in the diagram. For more information, see [“Delete a Link” on page 245](#).

---

## Data Nodes

### ***What Is a Data Node?***

A data node contains all of the data and metadata that are associated with an element, such as its labels, attributes, associations, and values. You can display any or all of the metric attributes of an element type in a data node. The initial shape and background color of a data node are set in the template for the project. For more information, see [“Open the New Template Page” on page 22](#).

### ***Move Data Nodes***

When you first open a diagram that you have created, the data nodes are bunched together. To make the diagram more readable, drag the nodes so that they do not cover other nodes or links.

To move a single node, drag the node to a new location. Any links that connect to the moved node will move, stretch, or shrink accordingly.

To move as a fixed formation node and all nodes that link to it or from it, hold down the SHIFT key and drag the assembly of nodes to a new location. Any links to or from a moved node that are not part of the assembly of nodes will move, stretch, or shrink accordingly.

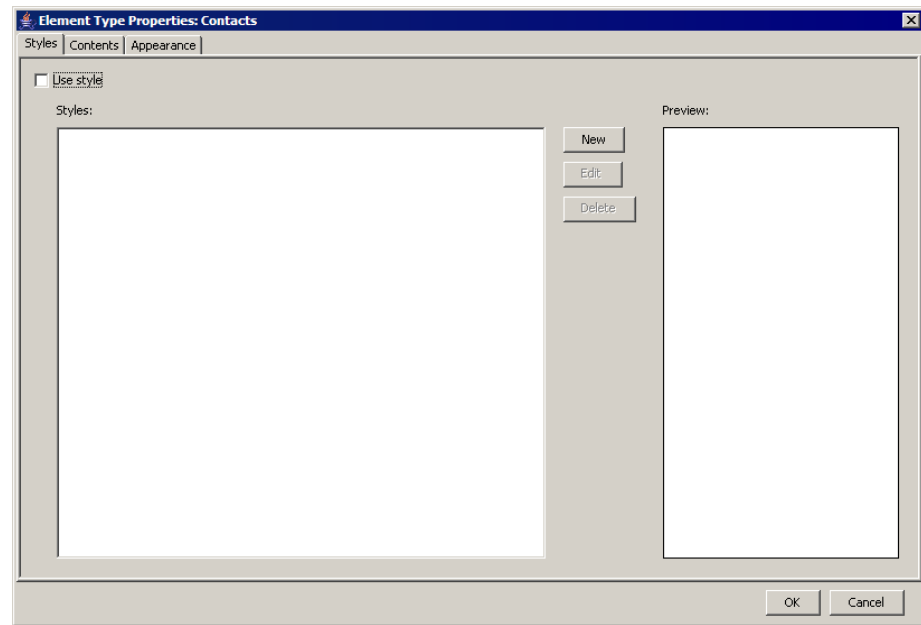
### ***Edit Data Node Properties***

#### ***Overview***

The node properties that are specified in the project template apply across all diagrams in all scorecards within the project. You can override these properties and specify additional properties for a particular diagram. For example, the scorecard master table might specify that nodes that represent strategic objectives are ellipses, yet within a particular diagram you can specify that nodes that represent strategic objectives are triangles. Then nodes that represent strategic objectives will generally be ellipses, but in that particular diagram, nodes that represent strategic objectives will be triangles.

To edit data node properties, select **Elements** ⇒ **Element Type Properties** ⇒ **<element-type>**.

The Element Type Properties dialog box appears.



### Styles Tab

On the Styles tab, you specify a style, which is a collection of settings such as font and background color. A style can be assigned to specific element types in a diagram. Styles are stored at the template level so that they are available to all diagrams in all projects that use the template.

To specify a style:

1. Select **Use style**.

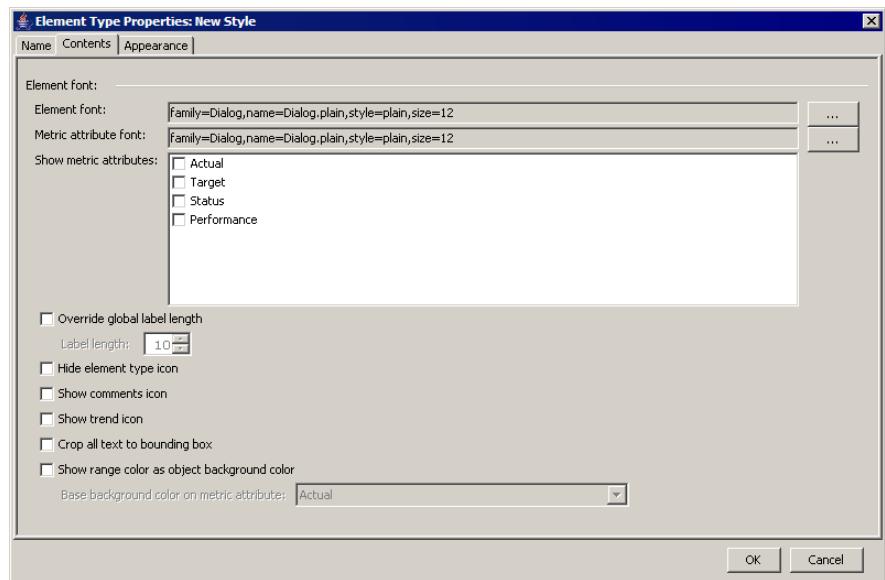
*Note:* The **Contents** and **Appearance** tabs are unavailable because the settings in the style override the settings on these tabs.

2. Select a style.

To create or edit style:

1. Do one of the following:
  - a. To create a style, click **New**.

The Element Type Properties: New Style dialog box appears.



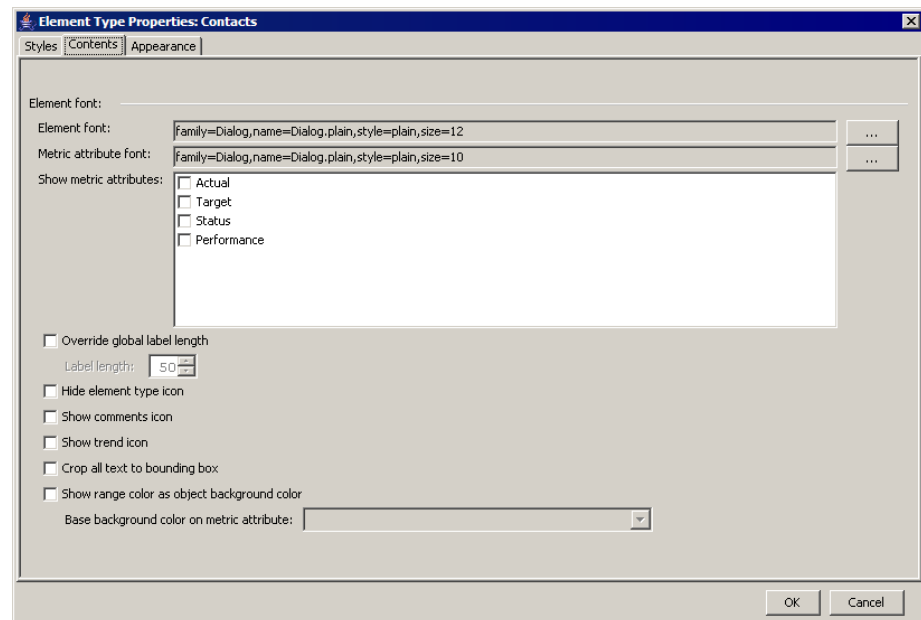
- b. To edit a style, select a style and click **Edit**.

The Element Type Properties: Edit Style dialog box appears. It is identical to the Element Type Properties: New Style dialog box.

2. Click the **Name** tab and name the style.
3. Click the **Contents** and **Appearance** tabs to set these types of properties. For more information, see [“Contents Tab” on page 235](#) and [“Appearance Tab” on page 237](#).

### Contents Tab

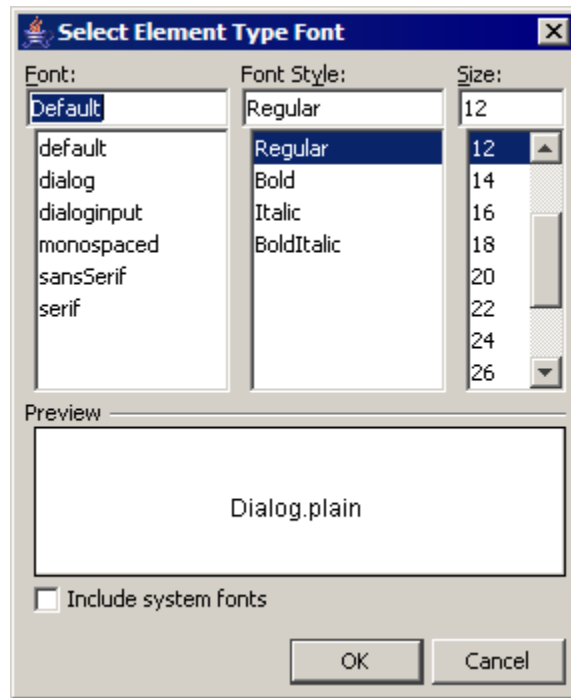
On the Contents tab, you specify text appearance, metric attributes, and the display of range colors and icons for the data node.



To specify the font for the contents:

1. Click the ellipsis (...) that is next to the **Element font** field or the **Metric attribute font** field.

The Select Element Type Font or the Select Metric Attribute Font dialog box appears.



2. Select a font, font style, and font size.

By default, the list of fonts includes only basic fonts.

3. To include all the fonts that are installed on the computer, select **Include system fonts**.

*Note:* Be aware that if the specified font does not exist on the SAS Strategy Management server, the rendering of the font can differ when the diagram is viewed in SAS Strategy Management.

To specify which metric attributes to display, from the **Show metric attributes** list, select metric attributes.

Here are other properties that you can specify:

**Override global label length**

limits the length of labels in a diagram.

**Hide element type icon**

prevents the display of the element type icon.

**Show comments icon**

displays the comment icon if comments exist.

**Show trend icon**

displays the trend icon if there is trend history.

**Crop all text to bounding box**

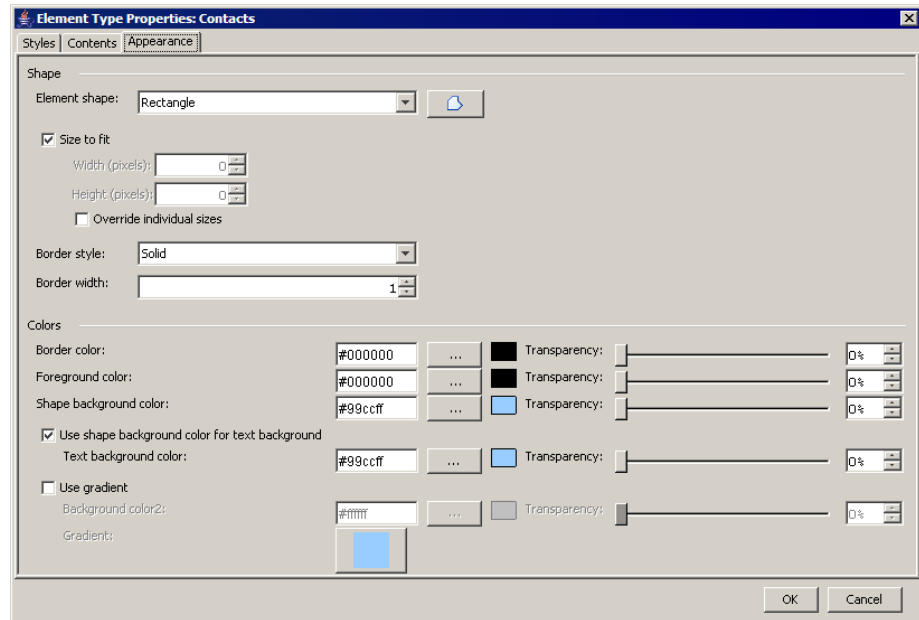
keeps text within the boundary lines of the data node.

**Show range color as object background color**


displays the range color in the background of the data node using the color of the metric attribute that you selected in the **Base background color on metric attribute** drop-down list.

## Appearance Tab

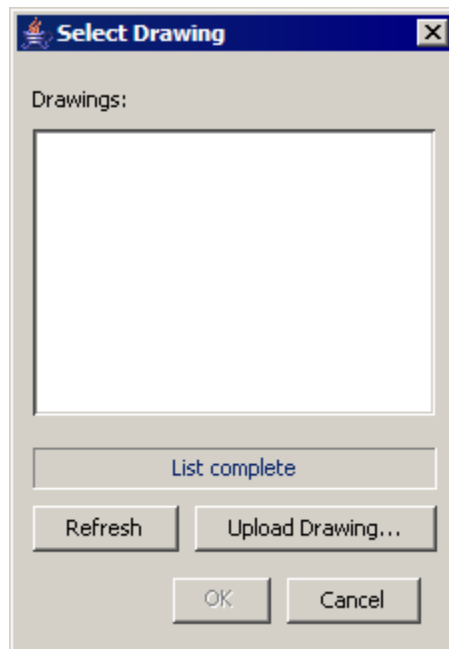
On the Appearance tab, you specify the shape, size, and color of the data node.



To change the shape of a node:

1. From the **Element shape** drop-down list, select a shape.
2. To select a scalable vector graphic (SVG) drawing to display with the element type:
  - a. Click .

The Select Drawing dialog box appears.



- b. Click on a drawing.
- c. To add a drawing to the list, click **Upload Drawing** and navigate to the drawing file.

- d. To refresh the list of drawings, click **Refresh**.

To specify the sizes of the nodes:

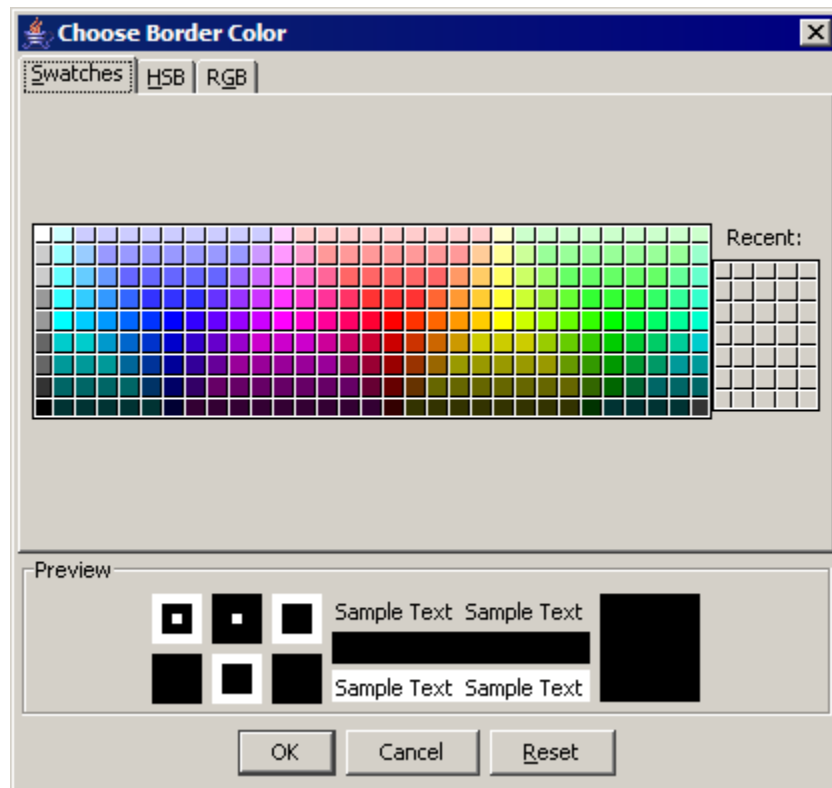
1. To specify that the nodes will be sized to fit in the diagram display, select **Size to fit**.  
If you select **Size to fit**, you can also select **Override individual sizes** to specify that nodes of that element type will all be sized to fit the diagram display.
2. To specify a different size for nodes of this element type, clear **Size to fit** and type the number of pixels in the **Width (pixels)** and **Height (pixels)** fields.

To specify the border style and width:

1. From the **Border style** drop-down list, select a style for the node border.
2. Type the number of pixels in the **Border width** field.

To change the border color, foreground color, or background color:

1. Click the ellipsis (...) that is next to the **Border color**, **Foreground color**, or **Background color** field and select a color from the palette, or type a hexadecimal value for the color.



The **Background color** field is unavailable if **Show range color as object background color** is selected on the Contents tab.

2. Move the **Transparency** slider that is next to each color field to select a saturation value (transparency).

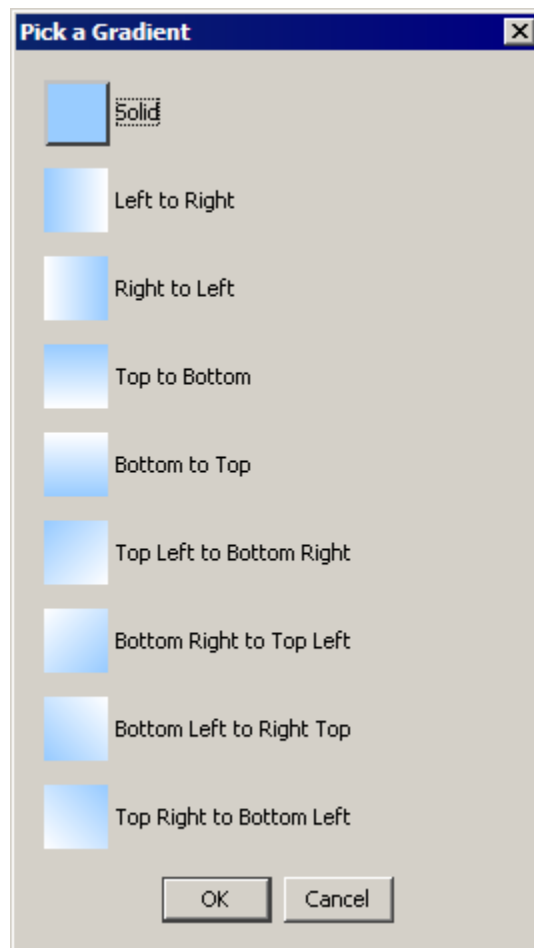
To specify a gradient in the background color:

1. Select **Use gradient**.
2. Click the ellipsis (...) that is next to the **Background color2** field and select a color from the palette, or type a hexadecimal value for the color.



3. Move the **Transparency** slider to select a saturation value (transparency).
4. Click the button that is next to **Gradient**.

The Pick a Gradient dialog box appears.



5. Click the image of a gradient pattern.

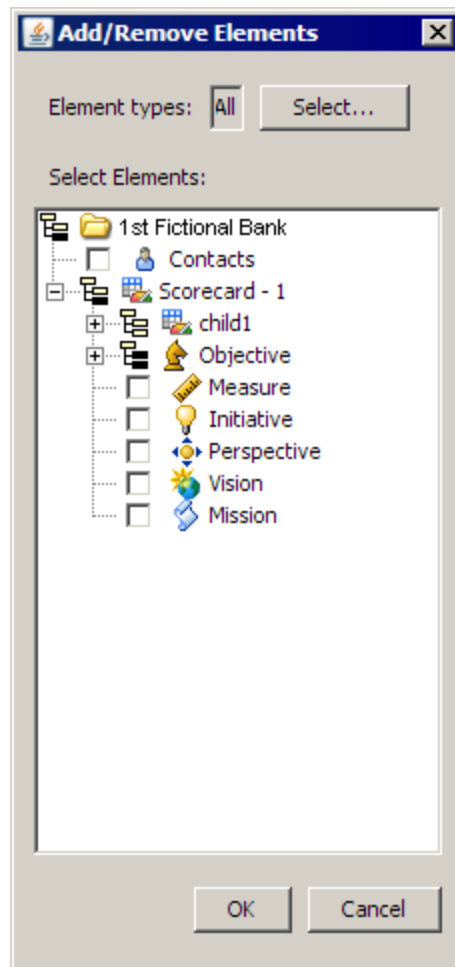
### **Add and Remove Data Nodes**

You can determine which data nodes are displayed in the diagram and which data nodes are not displayed.

To select the elements for display as data nodes:

1. Select **Elements** ⇒ **Add/Remove**.

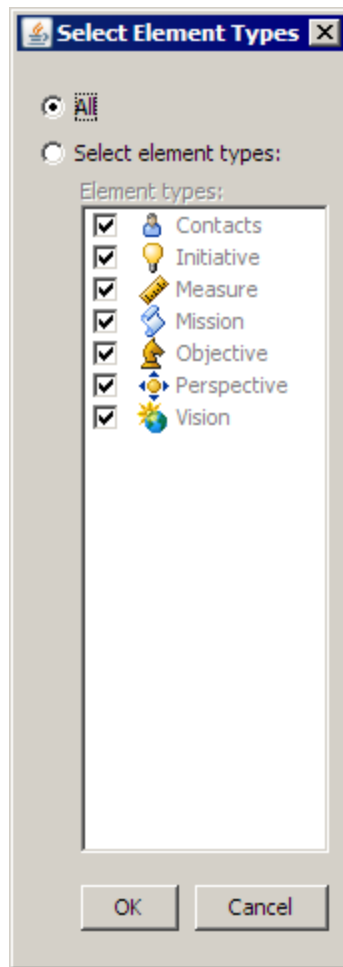
The Add/Remove Elements dialog box appears.



The hierarchy icons that contain selected elements are highlighted.

2. To limit which element types are displayed in the list:
  - a. Click **Select**.

The Select Element Types dialog box appears.



- b. Select the element types to display.
- c. Click **OK**.
3. Expand a hierarchy, and select or clear an element.

Adding or removing elements in a diagram does not affect the underlying data.

In a new diagram, nodes are arranged in a cascading fashion. After you change the layout, you might want to remove certain nodes. You can redisplay the removed nodes in their last position. When you save the diagram, any removed nodes are removed from the display.

## Delete a Data Node

When you delete a data node from a diagram, you delete the underlying element and all values for the element in the database for the scorecard. You also delete any shapes in the diagram that are associated with the element.

To delete a data node:

1. Select a data node.
2. Select **Edit** ⇒ **Delete**.

## Links

### *What Is a Link?*

Links depict associations between data nodes. These associations are set in the following places:

- The attribute definitions are set in the project, and the scorecard element properties are set in the template.
- The properties for each element are set in a project or scorecard.

### *Create a Link*

In addition to the associations that are displayed as links when you open a diagram, you can also create a link between data nodes.

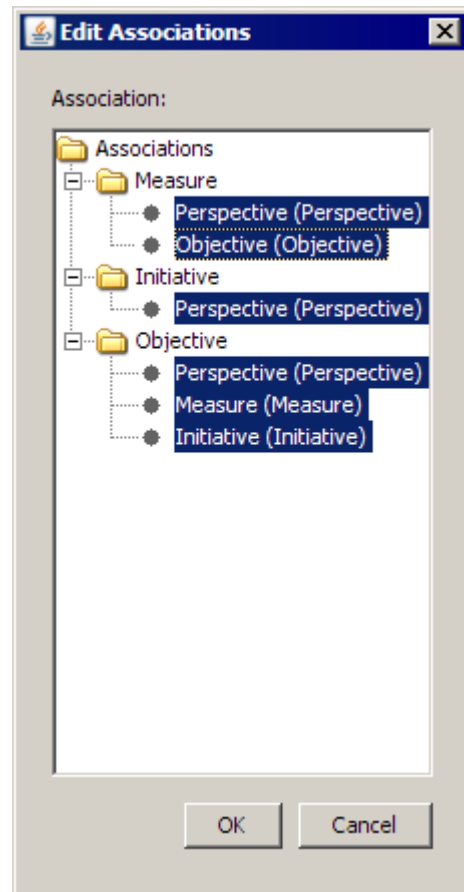
To create a link, hold down the CTRL key and drag the mouse pointer from one node to another. If the source node has an attribute of the type of the target node, the target node will allow an association and the mouse pointer will change to a green check mark. Release the mouse button to add a link between the two nodes.

If an association is not allowed, the mouse pointer will change to a red X, and a link will not be created.

### *Change Associations*

To view and change the associations that are displayed as links in a diagram, select **Elements** ⇒ **Associations**.

The Edit Associations dialog box appears and displays a list of all of the selectable associations. The currently selected associations are highlighted.



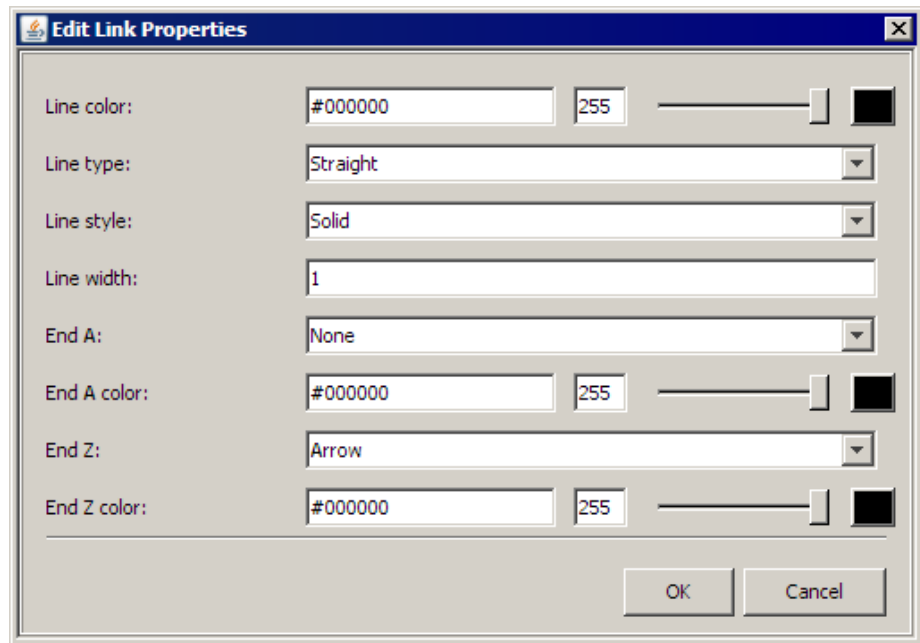
The associations were selected when the diagram was created. Click any item in the list to select it or to deselect it.

### ***Edit All Link Properties***

To change the appearance of all the links in the diagram:

1. Select **File** ⇒ **Link Settings**.

The Edit Link Properties dialog box appears with the current settings.



2. To change the color of a link or a connection point:
  - a. Click the button that is associated with the **Line color**, **End A color**, or **End Z color** field and select a color from the palette, or type a hexadecimal value for the color.  
  
 End A is the element whose attribute is End Z. For example, if a Strategic Objectives element contains an attribute that links that Strategic Objectives element to a specific Perspectives element, then End A is the Strategic Objectives element, and End Z is the Perspectives element that is its attribute.
  - b. Move the slider to select a saturation value (transparency), or type a value in the field that is next to the slider.
3. From the **Line type** drop-down list, select the type of line.
4. From the **Line style** drop-down list, select the style of line.
5. In the **Line width** field, type the width of the line in pixels.
6. From the **End A** and **End Z** drop-down lists, select how to represent the origination point and endpoint of the link.

### **Edit Individual Link Properties**

You can override diagram link settings and change the properties of an individual link.

To change the properties for a single link, right-click the origination point or endpoint of the link, and select **Link** ⇒ **Properties**.

### **Manipulate a Link**

To activate the handles of a curved link, click the origination point or the endpoint of the link. To manipulate the curvature of a curved link, drag a handle.

## Route Links around Other Content

You can route the links between element nodes around other content in the diagram so that the other content remains visible. The links between elements are orthogonal. That is, they are composed of multiple straight line segments that can be arranged at different angles.

To route a link around other diagram content:

1. Select a link and right-click one of the handles.
2. Select **Link** ⇒ **Insert point**.  
Insert as many points as you need.
3. Drag the link handles to arrange the line segments.

## Delete a Link

Deleting a link deletes both the selected link and the data value that underlies the link.

To delete a link, click the origination point or endpoint of the link, and select **Link** ⇒ **Delete**.

### CAUTION:

**When you delete a link, you delete data.**

---

# Shapes, Text, and Images

## Overview

Within a diagram, you can include shapes (rectangles, ellipses, and polygons), text, and images.

Rectangles and ellipses are defined by four points at the corners of a rectangle. The border of a rectangle is defined by the four points, but the border of an ellipse is defined by a rectangle that snugly contains the ellipse. Polygons can have any number of vertices and can be any polygonal shape, such as triangle, pentagon, or octagon.

Text is contained in a rectangular box that snugly contains the text.

An image is contained a rectangular box. Images are stored in the Customer folder on the SAS Solutions Services server. For access to other images, contact your system administrator.

## Create a Shape, Text, or Image

Regardless of whether you want to create a shape, text, or image, the process is the same. Do either of the following:

- Click a button on the toolbar.

Here are the buttons:



creates a rectangle.



creates a rectangle with rounded corners.



creates an ellipse.



creates a line.



creates a polygon.



creates text.

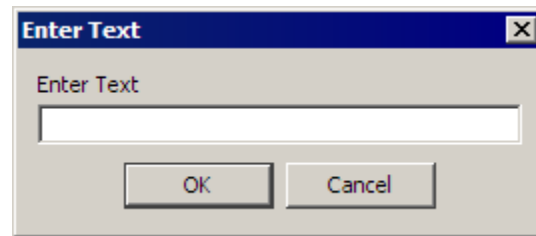


creates an image.

- Select **Shapes** ⇒ **New** ⇒ *<shape, text, or image>*.

If you selected a shape, the new shape appears at the center of the diagram. Selection handles appear around the shape. A rectangle starts as a square; an ellipse starts as a circle; a polygon starts as a triangle.

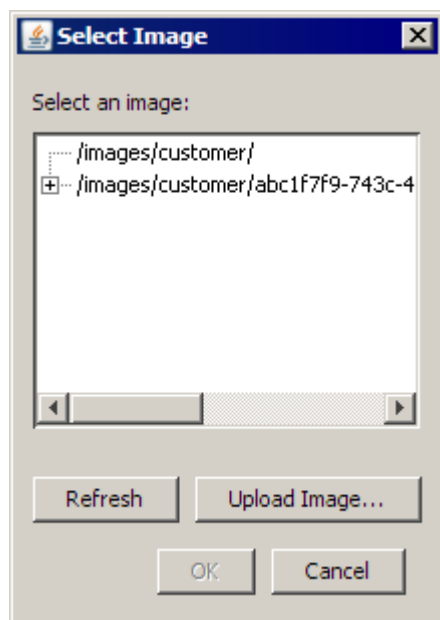
If you selected text, the Enter Text dialog box appears.



Type a single line of text. Later, you can edit the properties of the text to create more lines of text. For more information, see [“Edit the Properties of a Shape, Text, or Image”](#) on page 249.

If you selected an image, the Select Image dialog box appears.





Do the following:

1. Select an image file.
2. To add an image file to the list, click **Upload Image**, and navigate to the image file.
3. To refresh the list of images, click **Refresh**.

Images might be missing because a previously uploaded image has been removed.

*Note:* Most uncompressed image formats are supported by the Diagram Editor. Compressed formats might be supported by your Java Virtual Machine. See the documentation for your Java Virtual Machine for information about the image formats that are supported.

### **Select or Deselect a Shape, Text, or Image**

To select a shape, text, or image, click anywhere inside the item. Handles appear at the points that define the item.

To deselect a shape, text, or image, click anywhere in the diagram background. The handles disappear.

To select more than one item, do either of the following:

- Hold down the CTRL key, and click each item.
- Drag the mouse pointer across the background to create a selection rectangle that completely contains the items.

### **Move a Shape, Text, or Image**

To move a shape, text, or image without changing its dimensions, drag the item.

To move several items together as a single unit, first select all of the items, then drag any one of them. The items retain their relative positions to each other. For more information, see [“Select All Shapes in a Diagram” on page 267](#).

**Delete a Shape, Text, or Image**

To delete a shape, text, or image, select the item, and select **Edit** ⇒ **Delete**.

**Copy and Paste a Shape, Text, or Image**

To copy a shape, text, or image, select the item, and select **Edit** ⇒ **Copy**.

To paste the item elsewhere in the diagram, click on the area where you want to paste the copy, and select **Edit** ⇒ **Paste**.

**Add or Remove a Vertex within a Polygon**

To add or remove a vertex:

1. Select the polygon.  
Handles appear at all of the vertices.
2. To add a vertex, right-click a handle, and select **Insert Point**.  
A new vertex appears, marked by a green handle.
3. To remove a vertex, right-click the vertex that you want to remove, and select **Delete Point**.

**Group or Ungroup Shapes, Text, and Images**

To group shapes, text, and images, select all of the items that will be members of the group, and select **Shapes** ⇒ **Group**.

To ungroup the items, select an item within the group, and select **Shapes** ⇒ **Ungroup**.

**Rotate a Polygon**

To turn a polygon upside down:

1. Select the polygon.
2. Select **Shapes** ⇒ **Rotate** ⇒ **Horizontal**.

To reverse the left and right sides of a polygon:

1. Select the polygon.
2. Select **Shapes** ⇒ **Rotate** ⇒ **Vertical**.

**Resize a Shape or Image**

To change the dimensions of a shape or image, select the item, and drag a handle to a new location.

When you drag a handle of a rectangle, ellipse, or image, two handles on one side of the item always move together so that the item maintains its shape. When you drag a handle of a polygon, only the selected handle moves.

You can also edit the properties of a rectangle or ellipse to change the width and height. You cannot edit the properties of a polygon to change its dimensions. For more information, see [“Edit the Properties of a Shape, Text, or Image” on page 249](#).

## Edit the Properties of a Shape, Text, or Image

### Overview

To edit the properties of a shape, text, or image, do either of the following:

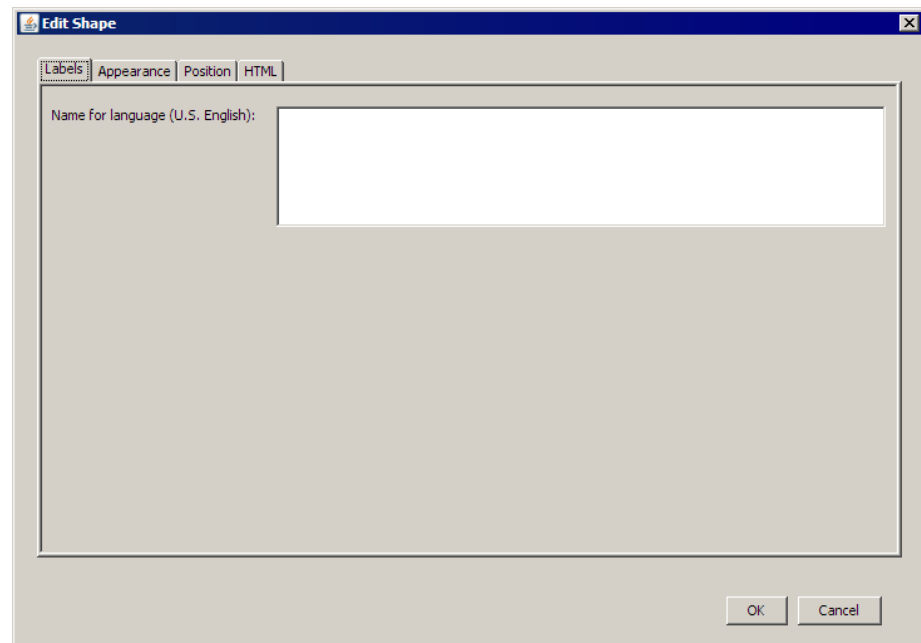
- Double-click the shape, text, or image.
- Right-click the item, and select **Edit**.
- Select **Shapes** ⇨ ⇨ **Properties**.

The Shape Properties dialog box appears.

*Note:* Some properties do not apply to certain items.

### Labels Tab

On the Labels tab, you specify the label text of the shape, text, or image.



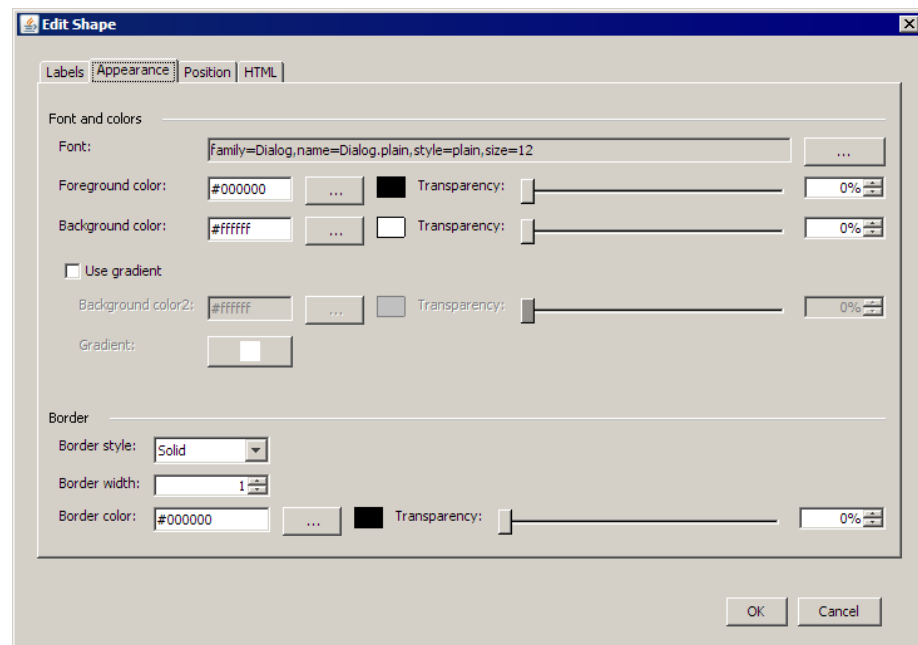
To specify the label, type in the **Name for language**.

There's a field for each language that has been defined.

*Note:* If a label does not exist in the language that is currently set for a project, the label is displayed in the default language.

### Appearance Tab

On the Appearance tab, you specify the font, color, and border of the shape, text, or image.



To specify the font:

1. Click the ellipsis (...) that is next to the **Font** field.  
The Select Element Type Font dialog box appears.
2. Select a font, font style, and font size.  
By default, the list of fonts includes only basic fonts.
3. To include all the fonts that are installed on the computer, select **Include system fonts**.

*Note:* Be aware that if the specified font does not exist on the SAS Strategy Management server, the rendering of the font can differ when the diagram is viewed in SAS Strategy Management.

To specify the foreground and background colors:

1. Click the ellipsis (...) that is next to the **Foreground color** or the **Background color** field and select a color from the palette, or type a hexadecimal value for the color.
2. Move the **Transparency** slider that is next to the field to select a saturation value (transparency).

*Note:* You cannot specify the background color of an image.

To specify a gradient in the background color:

*Note:* You cannot specify a gradient for an image.

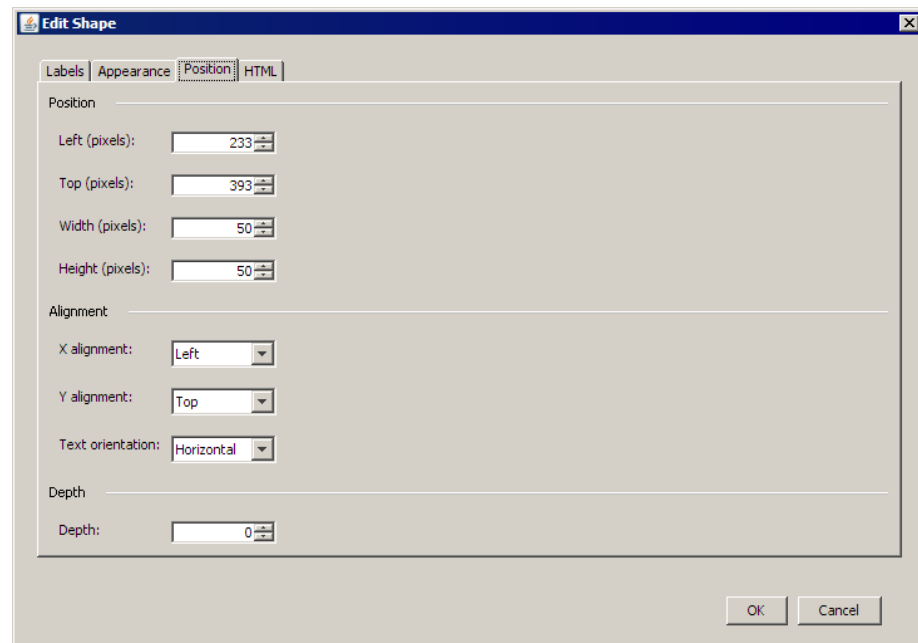
1. Select **Use gradient**.
2. Click the ellipsis (...) that is next to the **Background color2** field and select a color from the palette, or type a hexadecimal value for the color in the field.
3. Move the **Transparency** slider to select a saturation value (transparency).
4. Click the button that is next to **Gradient**.  
The Pick a Gradient dialog box appears.
5. Click the image of a gradient pattern.

To specify the border:

1. From the **Border style** drop-down list, select a style.
2. Type the number of pixels in the **Border width** field.
3. Click the ellipsis (...) that is next to the **Border Color** field and select a color from the palette, or type a hexadecimal value for the color.
4. Move the **Transparency** slider that is next to the field to select a saturation value (transparency).

### Position Tab

On the Position tab, you specify the position, alignment, and depth of the shape, text, or image.



To specify the position:

1. In the **Left** field, type the distance in pixels between the left border of the item and the left border of the diagram.
2. In the **Top** field, type the distance in pixels between the top border of the item and the top border of the diagram.

*Note:* You cannot specify the width and height of text.

3. In the **Width** field, type the width of the item in pixels.  
You can also change the width by dragging the handles of the item.
4. In the **Height** field, type the height of the item in pixels.  
You can also change the height by dragging the handles of the item.

To specify the alignment:

*Note:* You cannot specify the alignment of text.

1. From the **X alignment** drop-down list, select a value to control the horizontal position of any associated text.

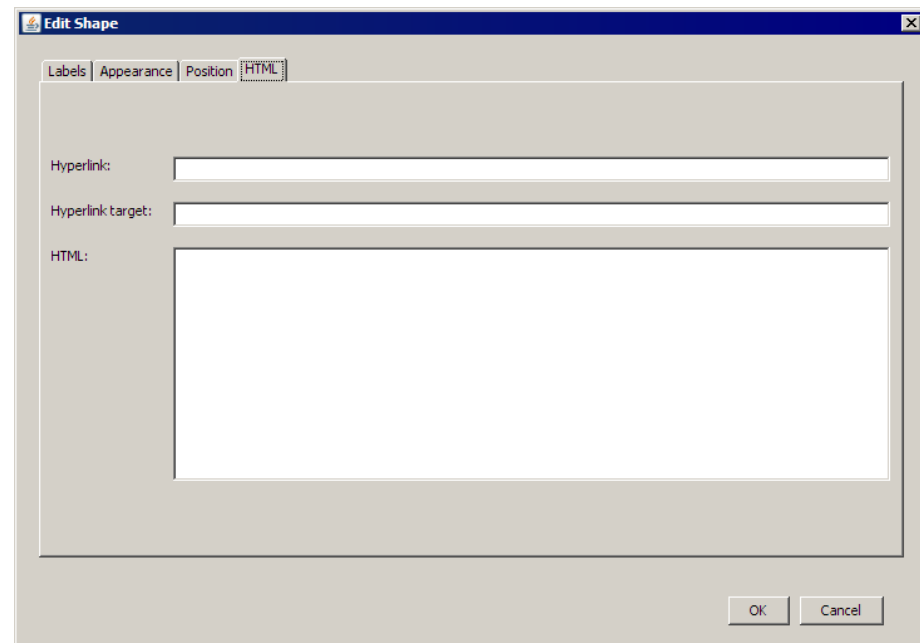
2. From the **Y alignment** drop-down list, select a value to control the vertical position of any associated text.
3. From the **Text orientation** drop-down list, select a value to control the orientation of any associated text.

To specify the depth, type an integer value in the **Depth** field.

If an item overlaps another item in a diagram, then the item with the greater depth value is covered by the item that has the smaller depth value.

### HTML Tab

On the HTML tab, you specify HTML code for the shape, text, or image.



To specify a URL:

1. In the **Hyperlink** field, type a URL to launch when the item is clicked.
2. In the **Hyperlink target** field, type a value that specifies how the URL content is displayed. The available choices include the following:
  - **\_self**  
displays the URL content in the frame that contains the diagram, replacing the diagram with the URL content. If **Hyperlink target** is blank, this is the default value.
  - **\_new**  
displays the URL content in a new browser window. If the new browser window is already open, that browser window is reused.
  - **\_blank**  
displays the URL content in a new browser window. No existing browser window is reused.
  - **\_top** or **\_parent**  
displays the URL content in the current browser window, replacing SAS Strategy Management with the URL content.

*the-name-of-a-frame*

displays the URL content in the designated frame.

To specify other HTML, such as JavaScript, in the **HTML** field, type HTML code.

If you specify JavaScript, the code is active in the displayed diagram. For example, you can type the following code:

```
onmouseover="JavaScript:
alert('Revenue Growth')"
```

Whenever a user moves the mouse pointer over this shape, text, or image, the following message appears in a dialog box:

```
Revenue
Growth
```

You must enclose the right side of the JavaScript expression in double quotation marks.

## Using a Shape, Text, or Image to Contain Other Items

### Overview

You can use a shape, text, or image to contain other items, such as shapes and data nodes, in a diagram. Such a container is useful for creating a visual grouping of items.

You can capture an item within another item in either of the following ways:

- Drag one item into another item (the container) so that the borders of the container item completely surround the contained item.
- Drag one item (the container) so that its borders completely surround another item.

When you drag a container to a new location, all of the captured items within the container move with the container in a fixed formation. To move the shape without moving the contents, hold down the SHIFT key while dragging the shape.

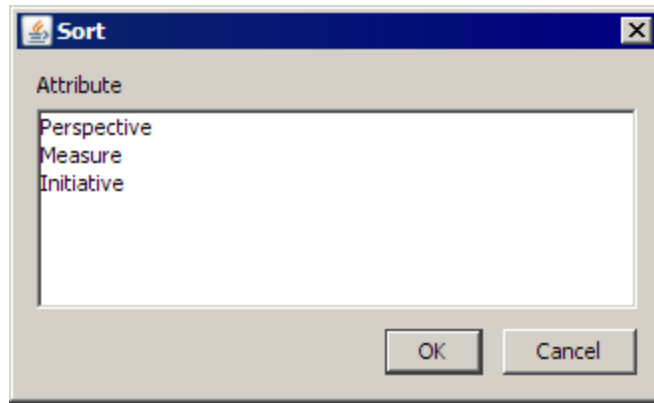
### Containing Data Nodes

You can capture data nodes inside a container by sorting the nodes.

To sort data nodes:

1. Associate a node with a container by dragging the node into the container.
2. Select any data node.
3. With the mouse pointer on the selected data node, right-click and select **Sort This Node by Attribute**.

The Sort dialog box appears, showing a list of all the available attributes.



4. Select the attribute to group the nodes by.

Nodes are captured by containers according to the following rule. Node A is captured by container X if the node A element has the attribute that you select, and if container X represents the first value or the only value of that attribute for the element. For example, if you associate an employee with a container and sort nodes by the owner attribute, then all the nodes whose owner is a given employee will be captured by the container that represents that employee. If you sort data nodes into containers and then change some of the data that affects the result of the sort operation, the diagram is not automatically refreshed. To align the diagram with the new data, you must repeat the sort operation.

To remove a data node from a container, press the SHIFT key and drag the node.

---

## Lines

### *What Is a Line?*

You can use straight or curved lines to connect containers. A straight line can be a single straight line segment or a chain of two or more straight line segments that are connected in a zigzag arrangement. A curved line can be a single smooth curve or a chain of two or more smooth curves that are connected at cusp points. Single straight line segments and single smooth curves should meet most of your needs.

### *Add a Line*

To add a line to a diagram, do any of the following:

- Click the line button  on the toolbar.
- Select **Shapes** ⇒ **New** ⇒ **Line**.

A new line appears at the center of the diagram. The line starts as a horizontal straight line with a handle at each end. To make the handles disappear, click anywhere in the diagram background. To make the handles appear, click either endpoint.

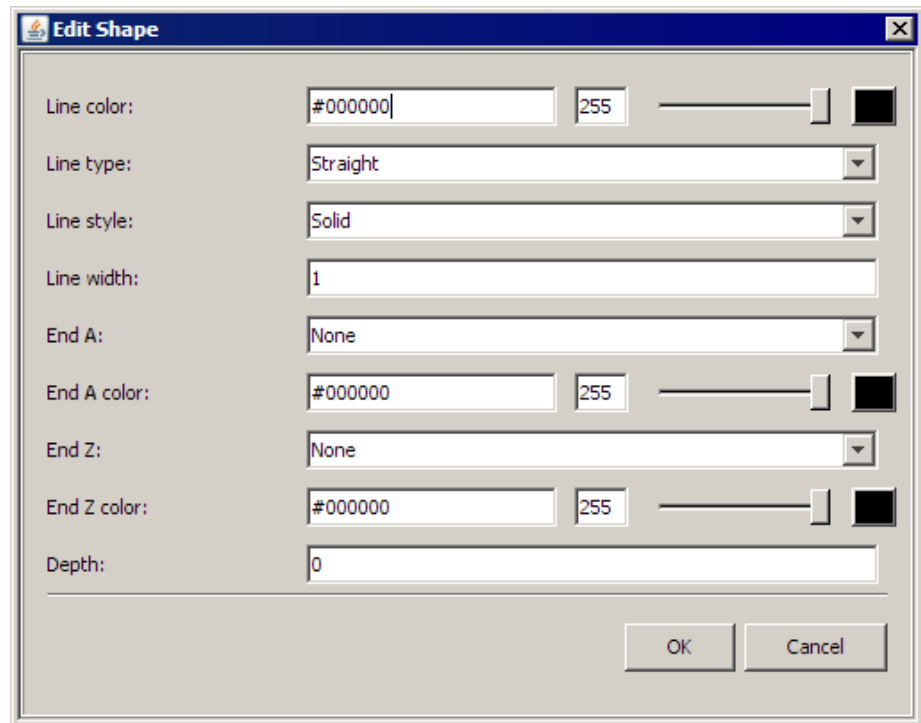
### *Turn a Straight Line into a Curved Line*

To turn a straight line into a curved line:



1. Click either endpoint of the straight line to display the line's handles.
2. Right-click the line (not a handle) and select **Properties**.

The Edit Shape dialog box appears.



3. From the **Line Type** drop-down list, select **Curved**.

There are now four handles that define a curve. You can reverse this procedure and turn the curved line into a straight line, but the result will be a chain of three straight line segments.

To return to a single straight line segment:

- a. Right-click an endpoint, and select **Delete Point**.
- b. Delete another endpoint.

## Add and Remove Line Segments

To add a straight line segment to an existing straight line or to a chain of line segments:

1. Click either endpoint of the line to display the line's handles.
2. Right-click a handle and select **Insert Point**.

The line splits into two segments.

To remove a straight line segment from an existing chain of segments:

1. Click an endpoint of an existing segment to display handles at all of the endpoints.
2. Right-click a handle that marks the endpoint that you want to remove, and select **Delete Point**.

The point is removed and the chain of segments is redrawn without it.

### Move a Line Segment

To move one endpoint of a straight line segment, drag the handle that is located at that endpoint. To move all endpoints together, hold down the SHIFT key and drag a handle.

### Reshape a Curved Line

To reshape a curved line, drag the handles.

To move a curved line without changing its shape, hold down the SHIFT key and drag a handle. In this way, you can produce any smooth arc or S-shaped curve at any location in a diagram.

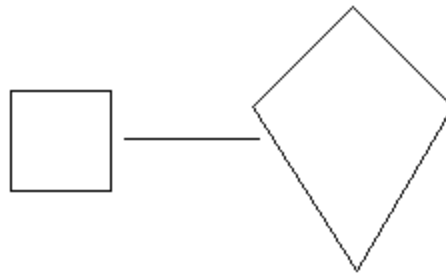
To produce an arc, arrange the handles in a trapezoidal formation.

To produce an S-shaped curve, arrange the handles in a Z formation.

### Use a Line to Connect Two Containers

When you use a line to connect two containers, you will probably want to attach each endpoint of the line to one of the containers. When an endpoint of a line is attached to a container, the endpoint moves with the container whenever you move the container.

To attach one endpoint of a line to a container, hold down the CTRL key, and drag the endpoint into the container. The endpoint takes a position near the border of the container and is attached to the container.



To break an attachment between an endpoint of a line and a container:

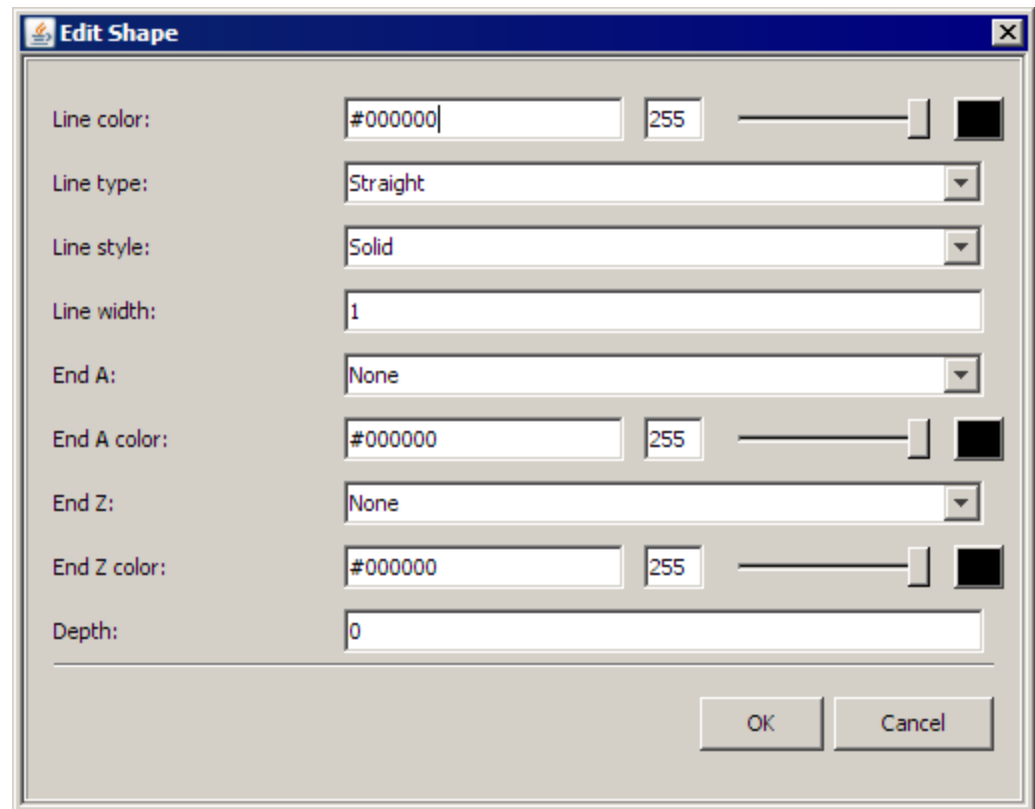
1. Click an endpoint of the line to select it.
2. Notice whether the end that you want to detach is marked with a horizontal bar (end A) or a vertical bar (end Z).
3. Right-click to display the pop-up menu.
4. To detach end A, select **Unattach A**. To detach end Z, select **Unattach Z**.

### Edit the Properties of a Line

To edit the properties of a line, select the line by clicking an endpoint, and do one of the following:

- Double-click the handle at one of the endpoints of the line.
- Right-click a handle, and select **Edit**.

The Edit Shape dialog box appears.



1. To change the color of the line:
  - a. Click the button associated with the **Line color** field and select a color from the palette, or type a hexadecimal value for the color.  
To specify a black line, leave the field empty.
  - b. Move the slider to select a saturation value (transparency), or type a value in the field that is next to the slider.
2. From the **Line type** drop-down list, select the type of line.
3. From the **Line style** drop-down list, select the style of line.
4. In the **Line width** field, type the width of the line in pixels.
5. Specify how to represent end A (the end whose handle is marked with a horizontal bar) and end Z (the end whose handle is marked with a vertical bar):
  - a. From the **End A** and **End Z** drop-down lists, select a shape.
  - b. Click the button that is associated with the **End A color** and **End Z** fields and select a color from the palette, or type a hexadecimal value for the color.  
To specify a black line, clear the field value.  
The color is applied only when the end shape is an arrowhead or a solid circle.
6. To specify the depth, type an integer value in the **Depth** field.  
If an item overlaps another item in a diagram, then the item with the greater depth value is covered by the item that has the smaller depth value.

### ***Copy and Paste a Line***

To copy a line, select the line, right-click, and select **Edit** ⇒ **Copy**.

To paste the copy elsewhere in the diagram, select **Edit** ⇒ **Paste**.

### ***Delete a Line***

To delete a line, select the line and select **Edit** ⇒ **Delete**.

---

## **Sections**

### ***What Is a Section?***

Sections are movable and resizable rectangles. Sections can be used to organize the data in a diagram by project, scorecard, and attribute.

### ***Add a Project Section to a Diagram***

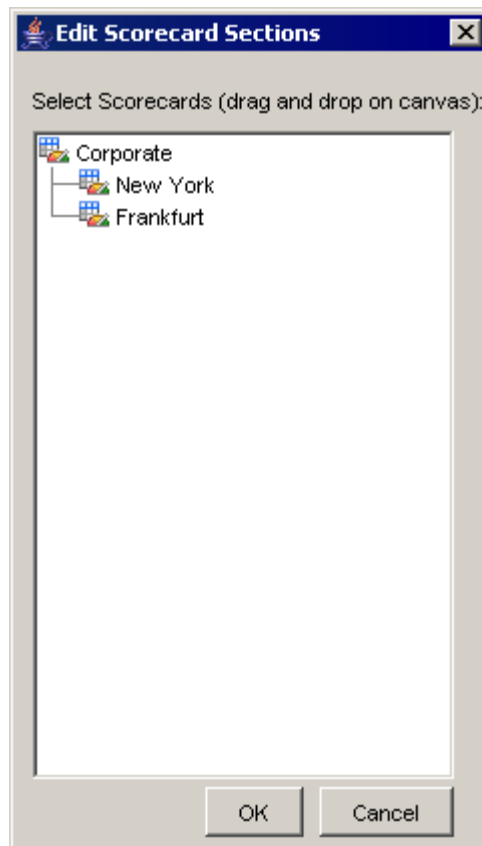
To add a section for the current project to a diagram, select **Sections** ⇒ **Add Project Section**.

### ***Add Scorecard Sections to a Diagram***

To add scorecard sections to a diagram:

1. Select **Sections** ⇒ **Add Scorecard Sections**.

The Add Scorecard Sections dialog box appears.



2. Drag a scorecard from the dialog box onto the diagram.

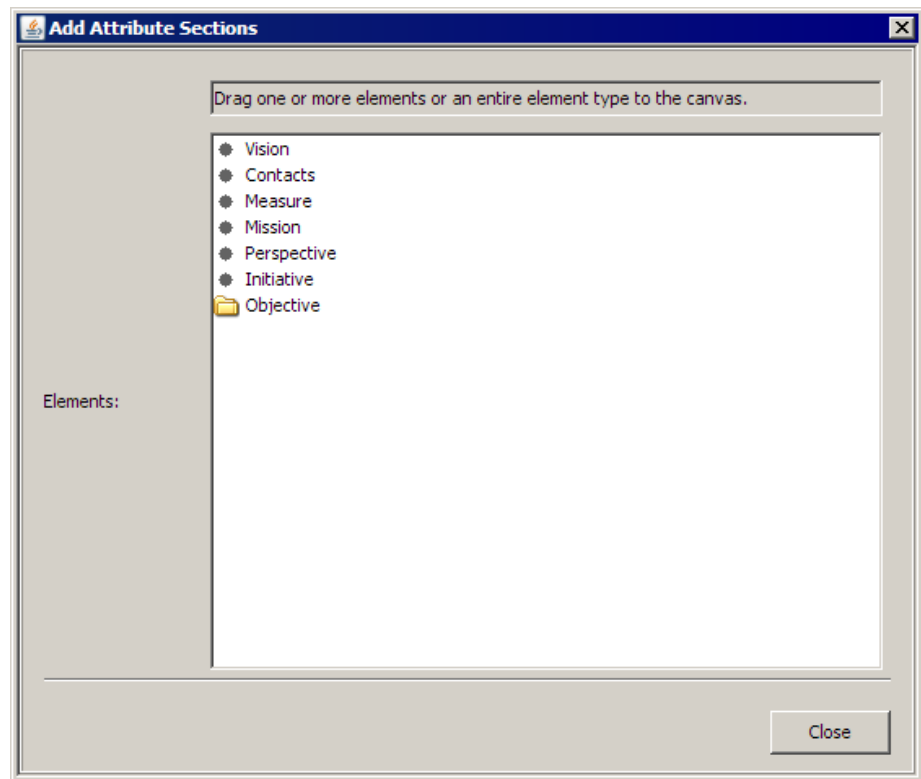
A section is created that has the name of the scorecard. You can also drag a parent scorecard onto a diagram to create a scorecard section for each child scorecard in the parent scorecard.

### ***Add Attribute Sections to a Diagram***

To add attribute sections to a diagram:

1. Select **Sections** ⇒ **Add Attribute Sections**.

The Add Attribute Sections dialog box appears. Attributes for the element types in the scorecard are available.



2. Drag an attribute from the dialog box onto the diagram.

A section is created that has the name of the attribute. You can also drag an attribute category onto a diagram to create a section for each attribute in the category.

### ***Resize a Section***

You can change the size of a section by moving the section boundary.

To change the dimensions of a section:

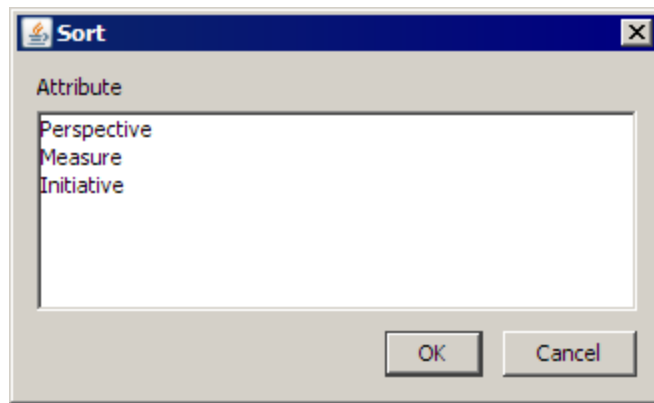
1. Click the section.  
Handles appear at the corners.
2. Drag a handle to a new location.

### ***Use Sections to Group Data Nodes***

To group data nodes into sections in accordance with a selected attribute:

1. Select any node and select **Elements** ⇒ **Sort This Node by Attribute** or **Elements** ⇒ **Sort All of This Type By Attribute**.

The Sort dialog box appears.



2. Select the attribute or element type to group the nodes by.

Nodes are grouped together in the sections that you have created. If you sort data nodes into sections and then change some of the data that affects the result of the sort operation, the diagram is not automatically refreshed. To align the diagram with the new data, you must repeat the sort operation.

To sort data nodes into project sections and scorecard sections, select any node and select **Elements ⇒ Sort This Node by Scorecard or Project or Elements ⇒ Sort All of This Type By Scorecard or Project**.

Nodes are grouped together in their respective sections: project nodes are grouped into the project section and scorecard nodes into their scorecard sections. If you sort data nodes into sections and then change some of the data that affects the result of the sort operation, the diagram is not automatically refreshed. To align the diagram with the new data, you must repeat the sort operation.

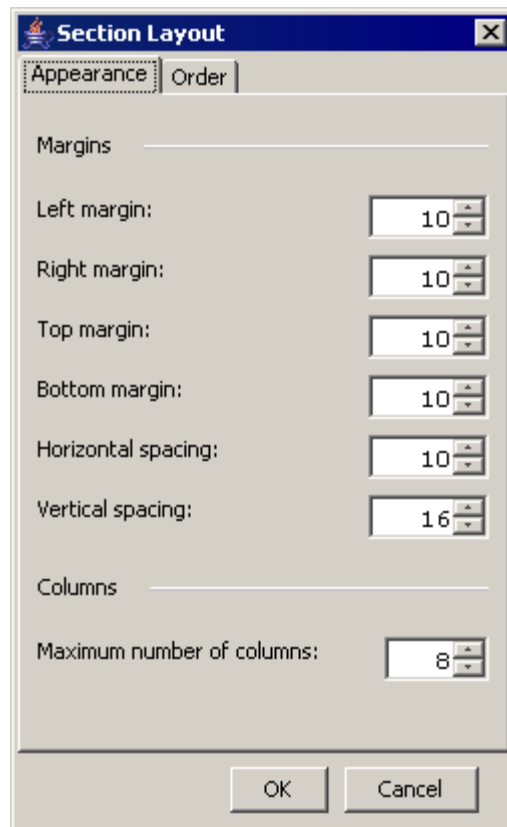
## ***Sort and Lay Out the Data Nodes in a Section***

As you group data nodes in a section, the data nodes might become poorly spaced and difficult to read.

To sort and lay out the data nodes in a section:

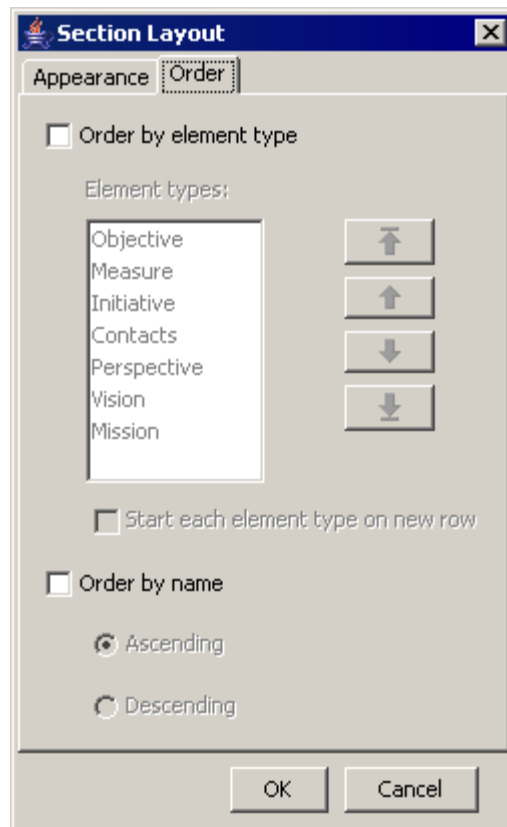
1. Right-click a section and select **Sort and Layout Nodes**.

The Section Layout dialog box appears.



2. In the **Margins** area, specify the margins around each element.
3. In the **Columns** area, specify the maximum number of columns.
4. Click the **Order** tab.





5. To order the elements by element type:
  - a. Select **Order by element type**.
  - b. To change the order, select a type in the **Element types** list, and click the arrows to the right to move the selection.
  - c. To start each element type on a new row, select **Start each element type on a new row**.
6. To order the elements by name, select **Order by name** and select the order method.

### **Lock the Contents of a Section**

After you arrange the contents of a section, you can lock the contents so that no item is inadvertently moved out of the section. However, you can add new items to the section.

To lock the contents:

1. Select the section.
2. Select **Sections** ⇨ **Lock Contents**.

### **Edit the Properties of an Attribute Section**

You edit the properties of an attribute section the same way that you edit the properties of a shape, text, or image. For more information, see [“Edit the Properties of a Shape, Text, or Image” on page 249](#).

## Edit the Properties of a Project Section or a Scorecard Section

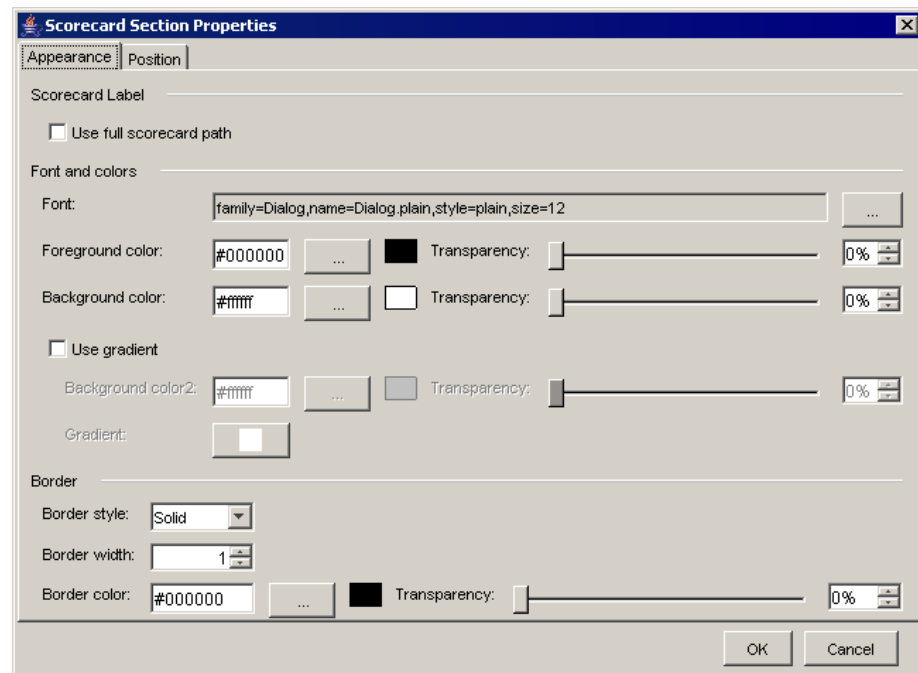
### Overview

The properties for a project section and a scorecard section are identical.

To edit the properties of a project section or a scorecard section:

- Double-click the section.
- Right-click the section, and select **Edit**.

The Project Section Properties or the Scorecard Section Properties dialog box appears.



### Appearance Tab

On the Appearance tab, you specify the font, color, and border of the section.

To include the scorecard path so that you can distinguish duplicate items from different projects and scorecards, select **Use full scorecard path**.

To specify the font:

1. Click the ellipsis (...) that is next to the **Font** field.  
The Select Element Type Font dialog box appears.
2. Select a font, font style, and font size.  
By default, the list of fonts includes only basic fonts.
3. To include all the fonts that are installed on the computer, select **Include system fonts**.

*Note:* Be aware that if the specified font does not exist on the SAS Strategy Management server, the rendering of the font can differ when the diagram is viewed in SAS Strategy Management.

To specify the foreground and background colors:

1. Click the ellipsis (...) that is next to the **Foreground color** or the **Background color** field and select a color from the palette, or type a hexadecimal value for the color.
2. Move the **Transparency** slider that is next to the field to select a saturation value (transparency).

*Note:* You cannot specify the background color of an image.

To specify a gradient in the background color:

1. Select **Use gradient**.
2. Click the ellipsis (...) that is next to the **Background color2** field and select a color from the palette, or type a hexadecimal value for the color in the field.
3. Move the **Transparency** slider to select a saturation value (transparency).
4. Click the button that is next to **Gradient**.

The Pick a Gradient dialog box appears.

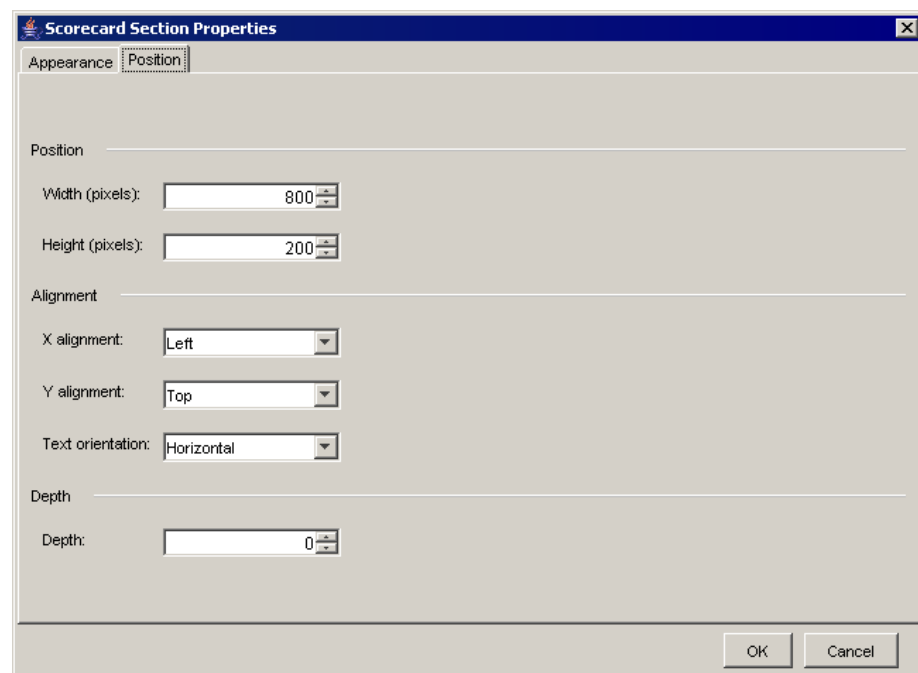
5. Click the image of a gradient pattern.

To specify the border:

1. From the **Border style** drop-down list, select a style.
2. Type the number of pixels in the **Border width** field.
3. Click the ellipsis (...) that is next to the **Border Color** field and select a color from the palette, or type a hexadecimal value for the color.
4. Move the **Transparency** slider that is next to the field to select a saturation value (transparency).

## Position Tab

On the Position tab, you specify the position, alignment, and depth of the section.



The screenshot shows the 'Scorecard Section Properties' dialog box with the 'Position' tab selected. The dialog has two tabs: 'Appearance' and 'Position'. The 'Position' tab contains the following settings:

- Position**
  - Width (pixels): 800
  - Height (pixels): 200
- Alignment**
  - X alignment: Left
  - Y alignment: Top
  - Text orientation: Horizontal
- Depth**
  - Depth: 0

At the bottom right of the dialog are 'OK' and 'Cancel' buttons.

To specify the position:

1. In the **Width** field, type the width of the item in pixels.  
You can also change the width by dragging the handles of the item.
2. In the **Height** field, type the height of the item in pixels.  
You can also change the height by dragging the handles of the item.

To specify the alignment:

1. From the **X alignment** drop-down list, select a value to control the horizontal position of any associated text.
2. From the **Y alignment** drop-down list, select a value to control the vertical position of any associated text.
3. From the **Text orientation** drop-down list, select a value to control the orientation of any associated text.

To specify the depth, type an integer value in the **Depth** field.

If an item overlaps another item in a diagram, then the item with the greater depth value is covered by the item that has the smaller depth value.

### ***Copy and Paste a Section***

To copy a section, select the section, and select **Edit** ⇒ **Copy**.

To paste the copy elsewhere in the diagram, click on the area where you want to paste the copy, and select **Edit** ⇒ **Paste**.

### ***Delete a Section***

To delete a section, select the section **Edit** ⇒ **Delete**.

---

## **Work with a Diagram**

### ***View Element Attributes***

To view the attributes of elements that are represented by nodes in a diagram, click on a diagram node. Metric attributes and non-metric attributes are listed for the element on the Element Attributes page.

Element Attributes • Q1

Metric Attributes

Attribute name	Value
Actual	
Target	
Status	
Performance	

Non-Metric Attributes

Attribute name	Value
Perspective	
Measure	
Initiative	

Close

### Select All Shapes in a Diagram

To select all of the shapes, text, images, lines, and sections in a diagram, select **Edit** ⇒ **Select All**.

### Use the Grid to Arrange Objects in a Diagram

Every diagram has a grid, which can be either visible or hidden.

To show or hide the points of the grid, select **Grid** ⇒ **Show Grid**.

To change the coarseness of the grid, select **Grid** ⇒ **Grid Size**, and select a coarseness.

To align shapes with the grid, select **Grid** ⇒ **Snap To Grid**. Any node or container that you drag to a new location snaps to align with the grid.

If you select a container, right-click, and select **Shapes** ⇒ **Resize To Grid**. Then each handle of the container snaps to the nearest grid point. The result is to subtly change the size and shape of the container.

*Note:* If the grid is shown, performance can decrease, particularly for small grid sizes when they are viewed in zoomed-out mode. To increase performance, hide the grid. Even when the grid is hidden, **Snap to Grid** will continue to be in effect.

### Zoom Diagram View

To magnify or shrink your view of a diagram, select **Grid** ⇒ **Zoom**, and select a percentage.

### Make a Diagram More Readable

Here are some suggestions for improving the readability of a diagram:

- Use containers or sections to group data nodes.
- Limit the number of data nodes, containers, and connecting arrows. One way to do this is to focus on a limited set of relationships. Do not try to show everything in one diagram.

- Drag nodes so that nodes do not cover other nodes or arrows.
- Do not make the diagram too big. The rulers in the Diagram Editor represent screen pixels. Consider the typical screen dimensions of your users when you create a diagram.

### Select a Language for a Diagram

If you have defined more than one language, you can select the language in which the diagram should be displayed. Select **Elements** ⇒ **User Defined Language**, and select a language.

### Preview a Diagram in HTML

To preview a diagram as it will appear when you display it in the Diagram view, select **File** ⇒ **HTML Preview**.

A browser window is opened to display the diagram.

---

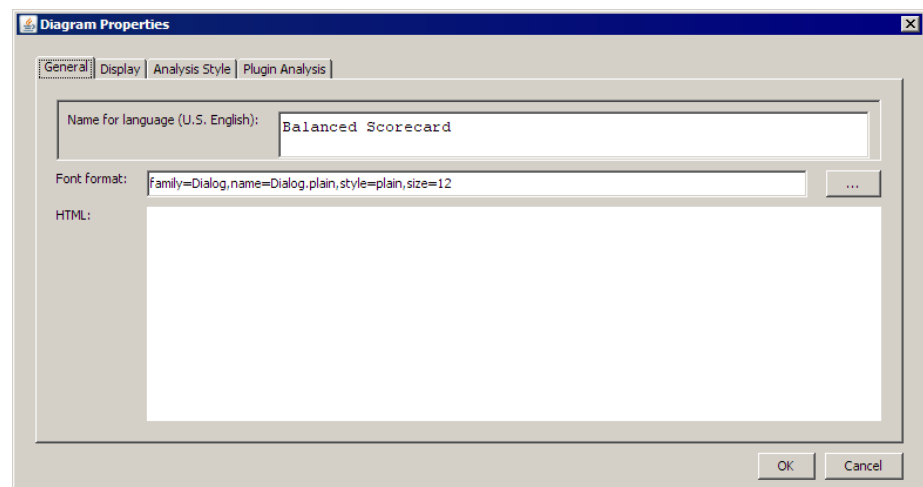
## Edit Diagram Settings

### Specify the General Settings

To edit the settings for the entire diagram:

1. Select **File** ⇒ **Diagram Settings**.

The Diagram Properties dialog box appears.



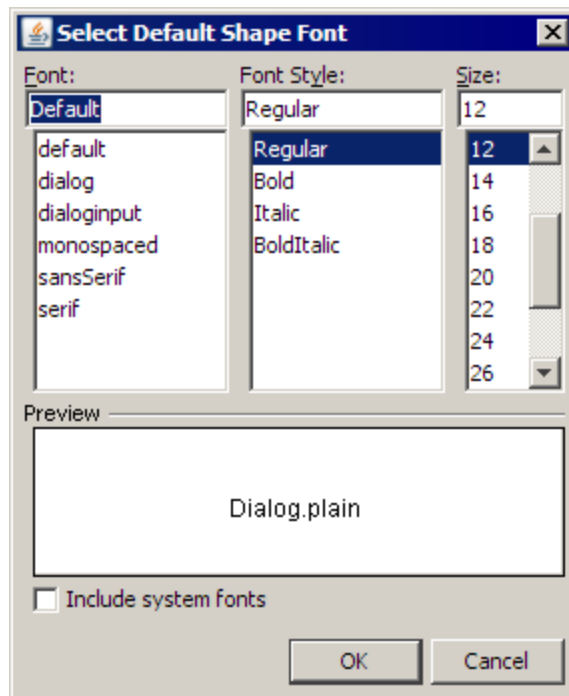
2. In the **Name for language** field, type the name of the diagram.

Each language that has been defined has a field.

*Note:* If a label does not exist in the language that is currently set for a project, the label is displayed in the default language.

3. To specify the default text font for all of the shapes in the diagram:
  - a. Click the ellipsis (...) that is next to the **Font format** field.

The Select Default Shape Font dialog box appears.



- b. Select a font, font style, and font size.

By default, the list of fonts includes only basic fonts.

- c. To include all the fonts that are installed on the computer, select **Include system fonts**.

*Note:* Be aware that if the specified font does not exist on the SAS Strategy Management server, the rendering of the font can differ when the diagram is viewed in SAS Strategy Management.

4. To specify HTML, such as JavaScript, in the **HTML** field, type HTML code.

If you specify JavaScript, the code is active in the displayed diagram. For example, you can type the following code:

```
onmouseover="JavaScript:
alert('Revenue Growth')"
```

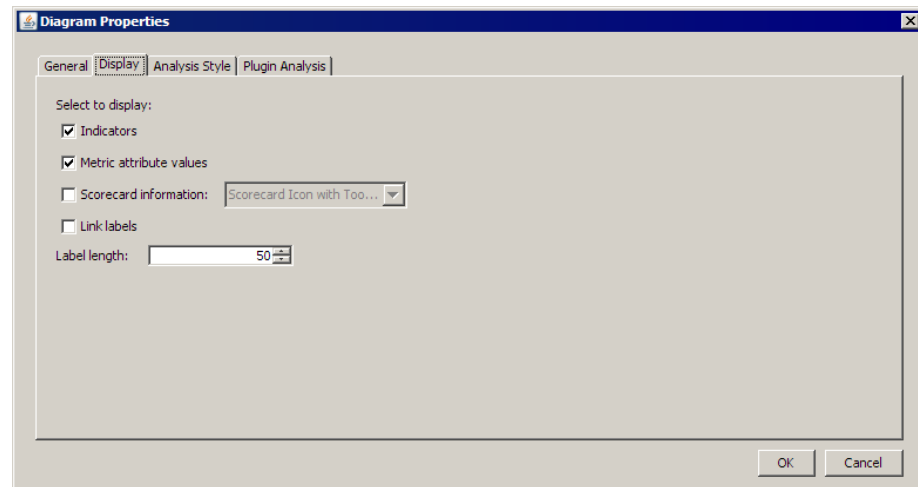
Whenever a user moves the mouse pointer over this shape, text, or image, the following message appears in a dialog box:

```
Revenue
Growth
```

You must enclose the right side of the JavaScript expression in double quotation marks.

## Specify the Display Settings

Click the **Display** tab and specify these display options:

**Indicators**

specifies that any data node that is associated with a numeric value to which a range is applied will show the image for the subrange that contains the value.

**Metric attribute values**

specifies that any data node that is associated with a numeric value will show that numeric value. If no value exists, a period (".") will be displayed.

**Scorecard information**

specifies that certain scorecard information is displayed. Select the information to display from the drop-down list.

**Link labels**

displays labels on all of the links in the diagram.

**Label length**

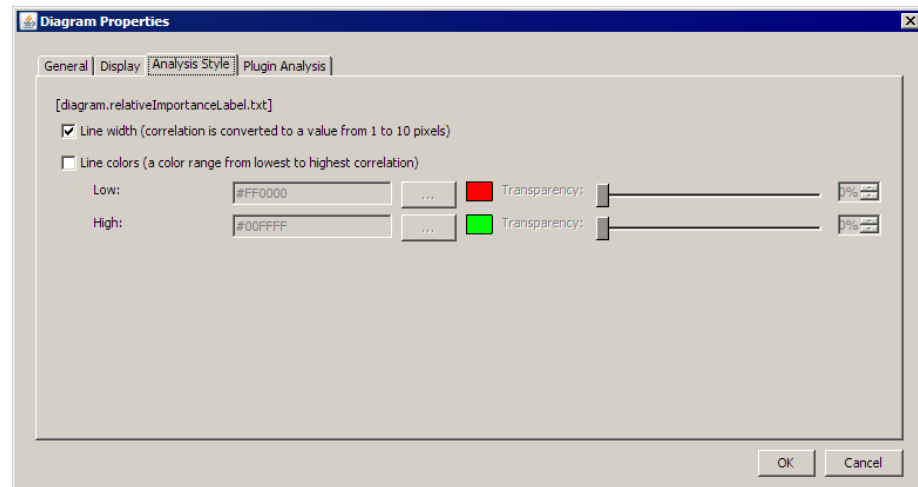
specifies the maximum number of characters per line of text in the nodes of the diagram.

The text will be wrapped in accordance with this maximum, but the maximum can be exceeded slightly in some cases in order to avoid splitting words. **Label length** applies only to element nodes for which a width and height have not been explicitly set.

**Specify the Analysis Style Settings**

Click the **Analysis Style** tab and specify these analysis style options for correlation analysis:





### Line width

specifies that the line width varies according to the correlation value. Correlation values range from -1.0 to 1.0. The line representing a value in this range would be between 0 and 10 pixels wide.

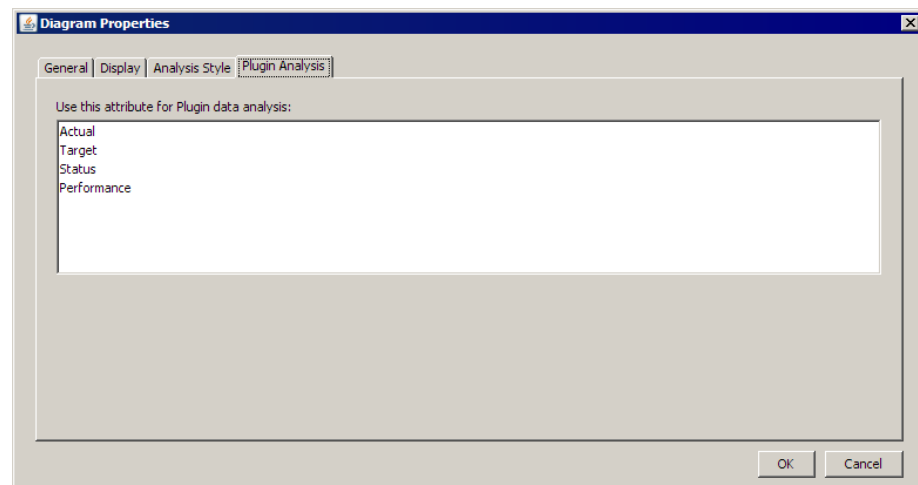
### Line colors

specifies that the line color varies according to the correlation value. Type values for the low and high correlation values, and set the transparency.

By default, a negative correlation (-1.0) is red and a positive correlation (+1.0) is green.

## Specify the Plugin Analysis Settings

Click the **Plugin Analysis** tab and select an attribute to use for analysis.



---

## Analyze a Diagram

### Overview

When two elements in a SAS Strategy Management model are connected by an association (such that the first element is thought to influence the second element, and both elements have sufficient and overlapping periodic metric attribute data), then it might be useful to calculate the correlation coefficient between the two elements.

The correlation coefficient (correlation analysis) can help determine whether the first element influences the second element. A correlation coefficient is a floating point number between -1 and 1, where 1 indicates a positive correlation and -1 means indicates a negative correlation. A value of 0 indicates no correlation. The correlation coefficient is calculated to a precision of two decimal places.

You can analyze the correlation in a diagram. To perform the analysis, you must select an association in the diagram and a date range. For the association, you must select two metric attributes: a "from" metric attribute and a "to" metric attribute. The "from" metric attribute influences the "to" metric attribute. The "from" and "to" metric attributes do not need to have the same name, but they must be inherently related to each other and mean the same thing.

For example, it would probably not make sense to compare the metric attribute named "Actual" against the metric attribute named "Performance." Similarly, the metric attributes should probably be of the scale, such as both values being integers or both values being percentages.

*Note:* The longer the date range, the more accurate the correlation results.

The results of the analysis are displayed in the diagram. The results are calculated dynamically from the input choices specified, and the results are not saved after you close the editor session. However, you can export the results. For more information, see the step to export analysis results to a comma-separated values file in [“Manage Analysis Definitions” on page 276](#).

*Note:* The presence or absence of a correlation does not definitively state the influence between the elements, but it merely suggests an influence. Because the influence is merely a suggestion, do not redesign a scorecard based only on the correlation coefficient. For example, do not assume that a negative correlation indicates no influence between the two elements. A negative correlation between expenses and profits indicates only that as expenses go down, profits go up. But expenses certainly have an influence on profits.

### Create an Analysis Definition

When you create an analysis definition, you set the properties required for the analysis. Later, you run the analysis. The analysis definition is saved to the SAS Strategy Management server so that it can be used in the future.

To create an analysis:

1. Select **Analysis** ⇨ **New**

The New Analysis wizard appears.

**New Analysis -- Step 1 of 4 Identification**

Identification

Enter a name and description for this analysis.

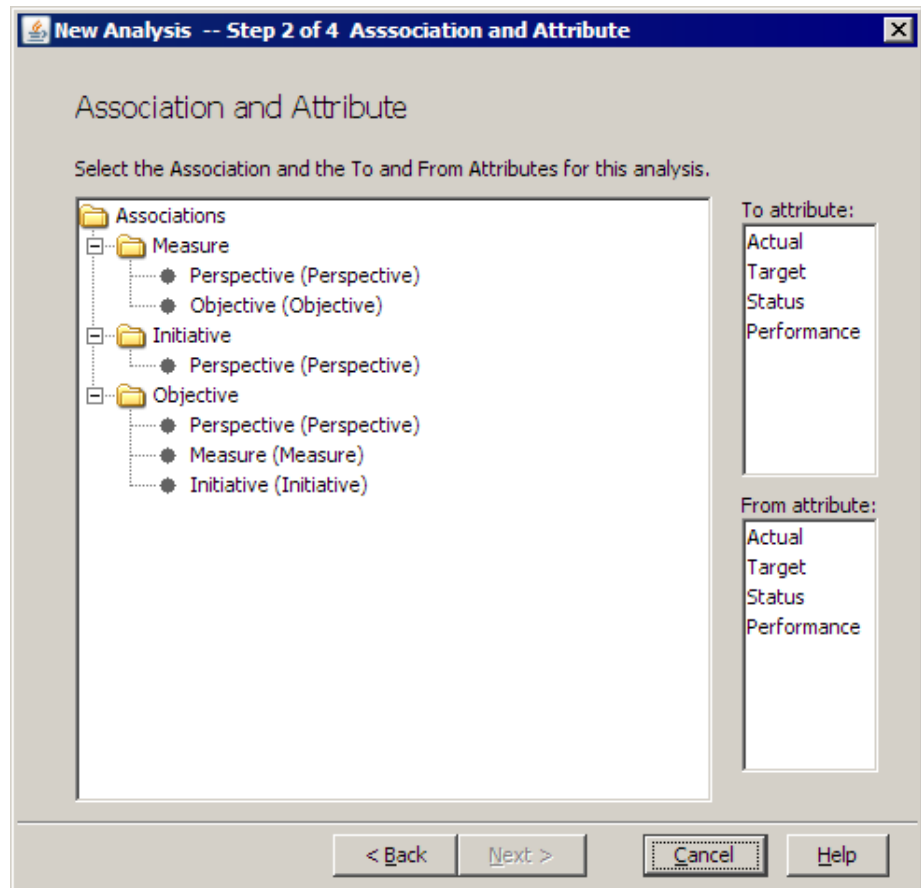
Name:

Description:

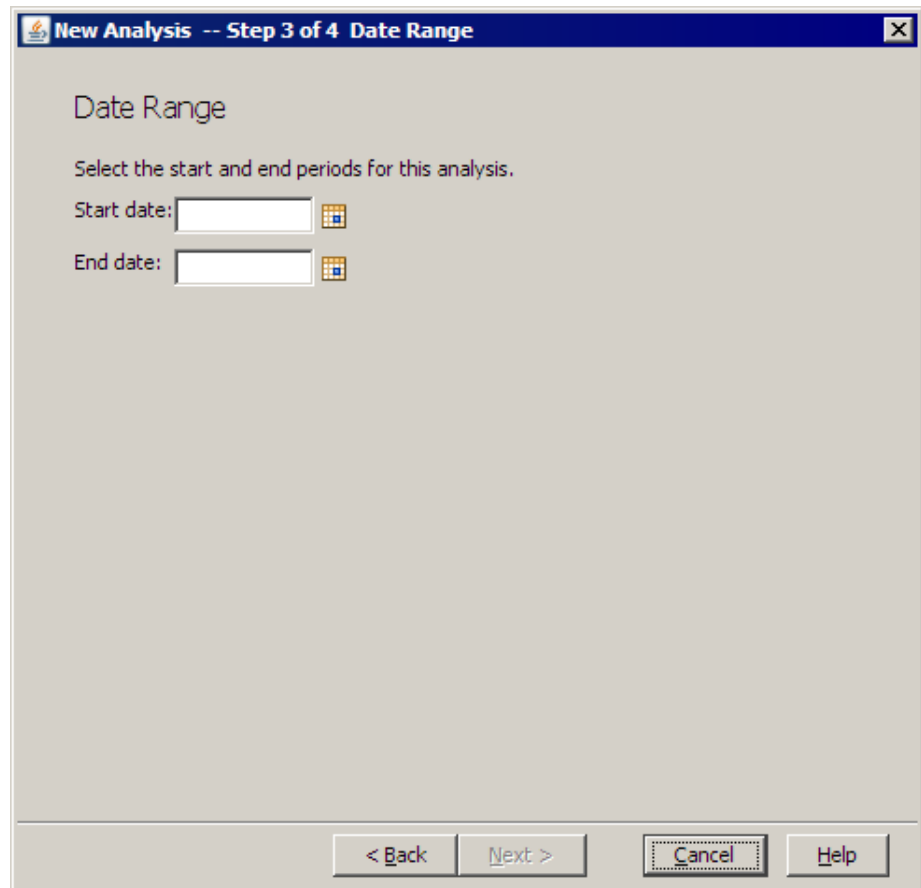
Copy from another analysis:

< Back   Next >   Cancel   Help

2. Type the name of the analysis.
3. (Optional) Type the description, and choose whether to copy another analysis to this analysis.
4. Click **Next**.
5. On the Association and Attribute page, select an association, and then select the "to" and "from" metric attributes.

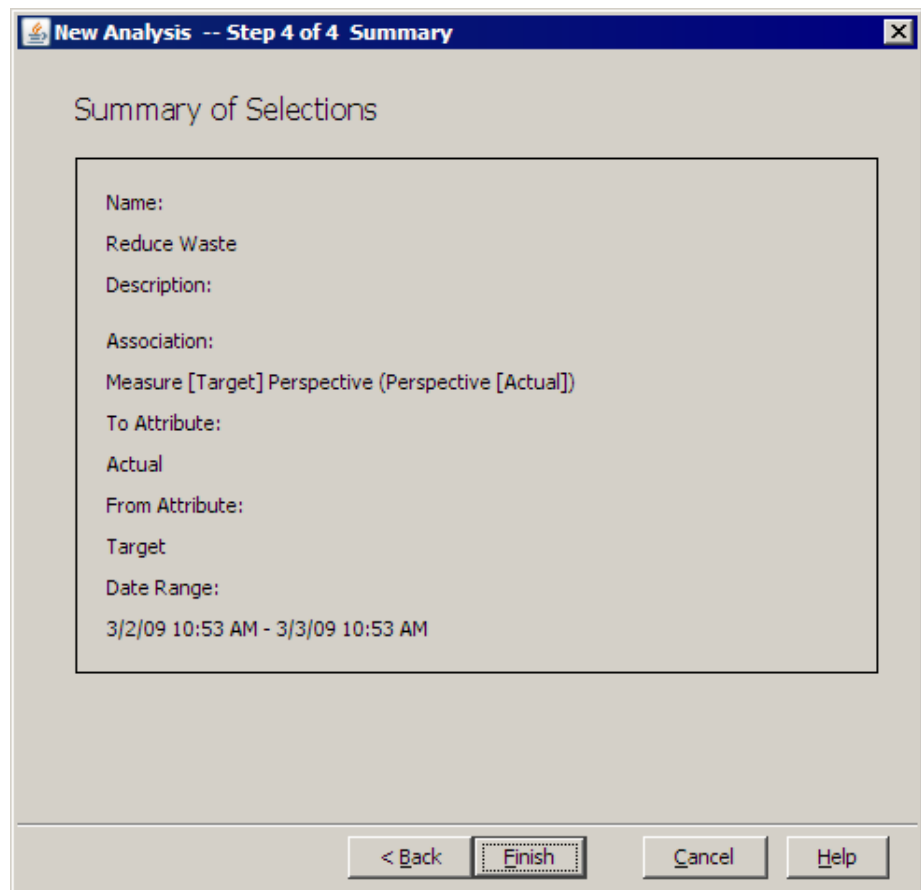


6. Click **Next**.
7. On the Date Range page, specify the start and end dates.



The screenshot shows a dialog box titled "New Analysis -- Step 3 of 4 Date Range". The main area is titled "Date Range" and contains the instruction "Select the start and end periods for this analysis." Below this, there are two input fields: "Start date:" and "End date:". Each field is followed by a small calendar icon. At the bottom of the dialog, there are four buttons: "< Back", "Next >", "Cancel", and "Help". The "Cancel" button is highlighted with a dashed border.

8. Click **Next**.
9. On the Summary of Selections page, review your choices.

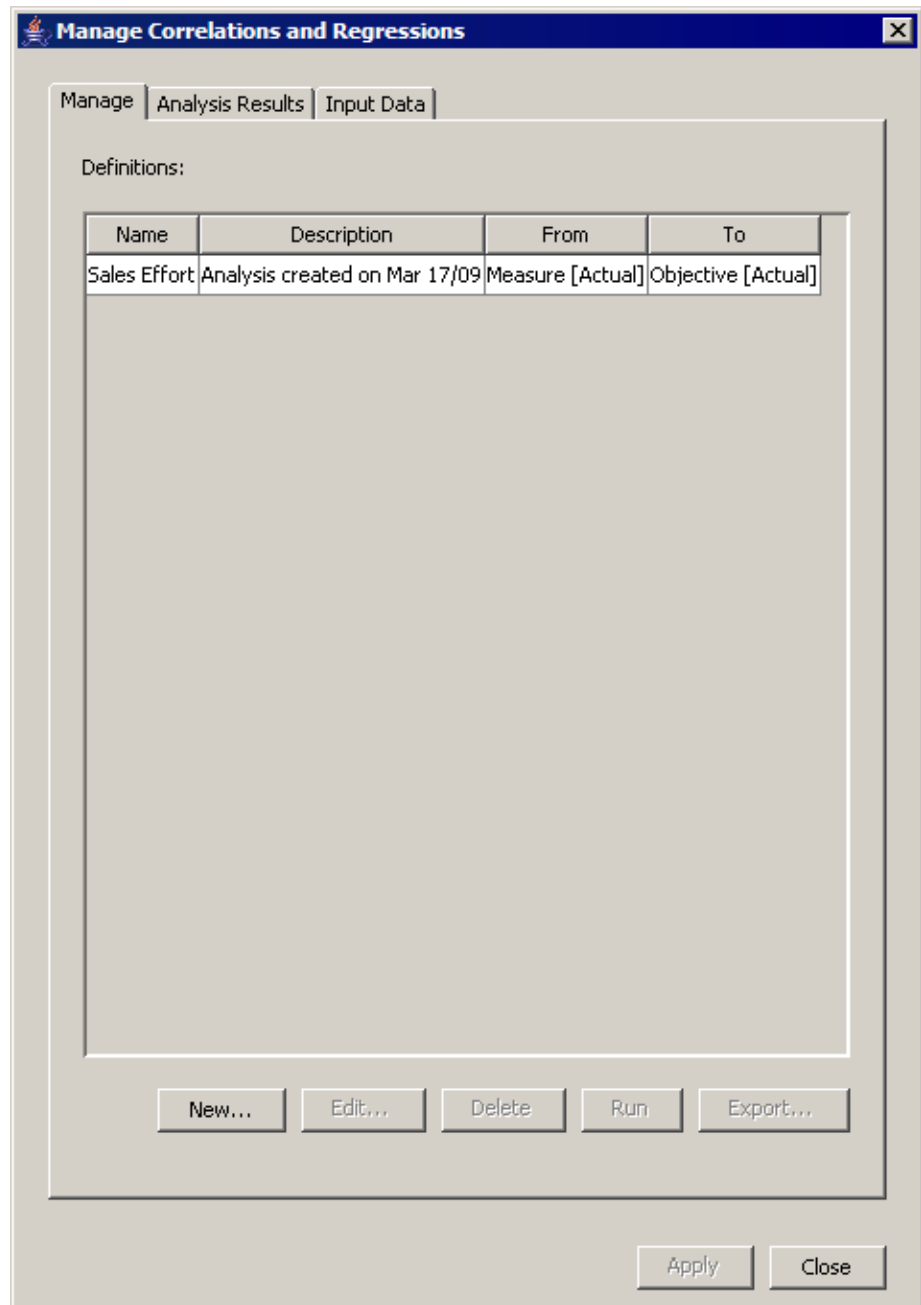


### ***Manage Analysis Definitions***

To manage analysis definitions:

1. Select **Analysis** ⇒ **Edit**.

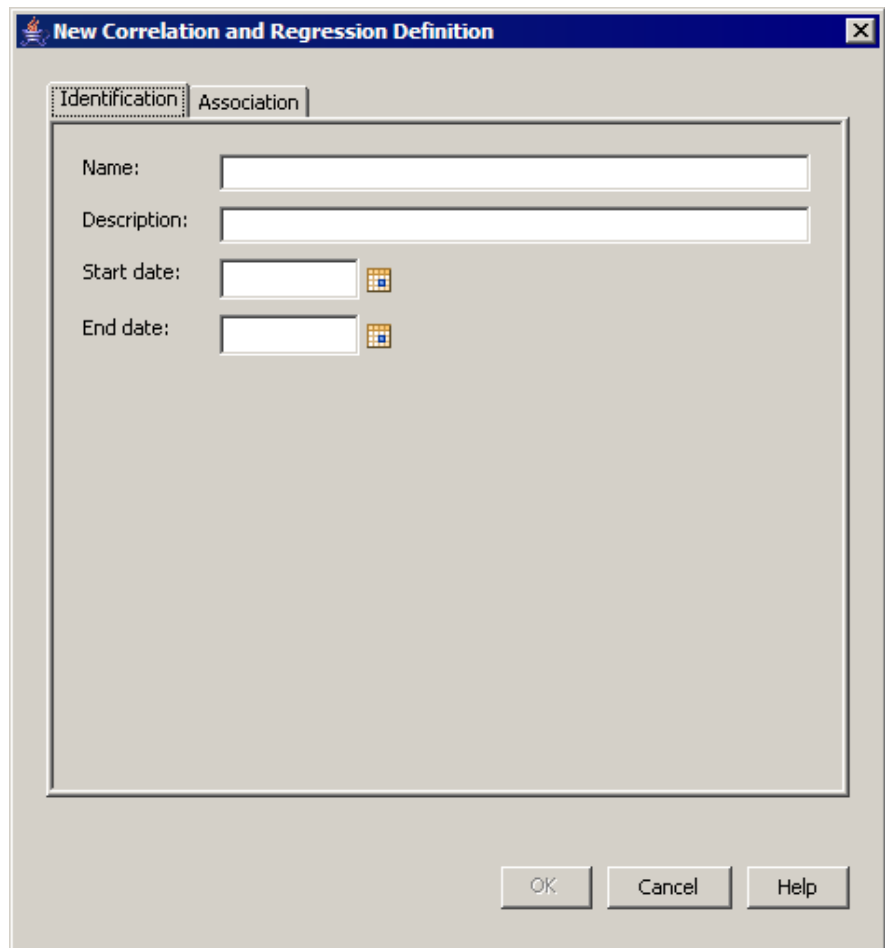
The Manage Correlations and Regressions dialog box appears.



2. To create a new analysis definition:

a. Click **New**.

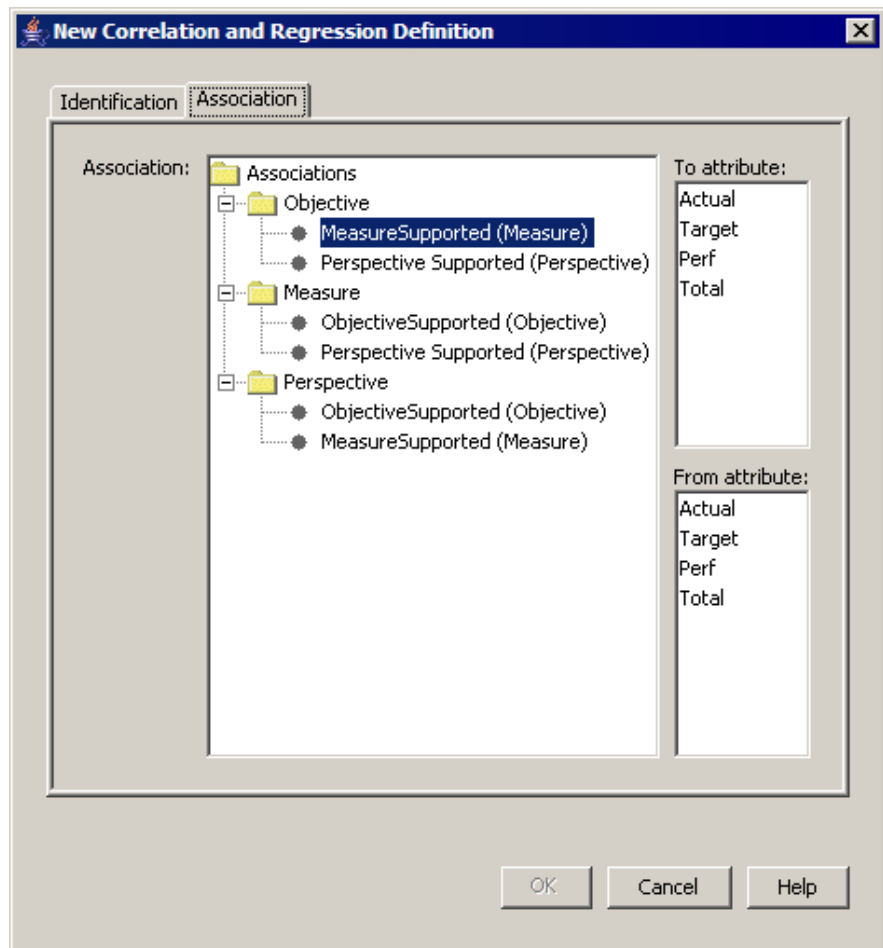
The New Correlation and Regression Definition dialog box appears.



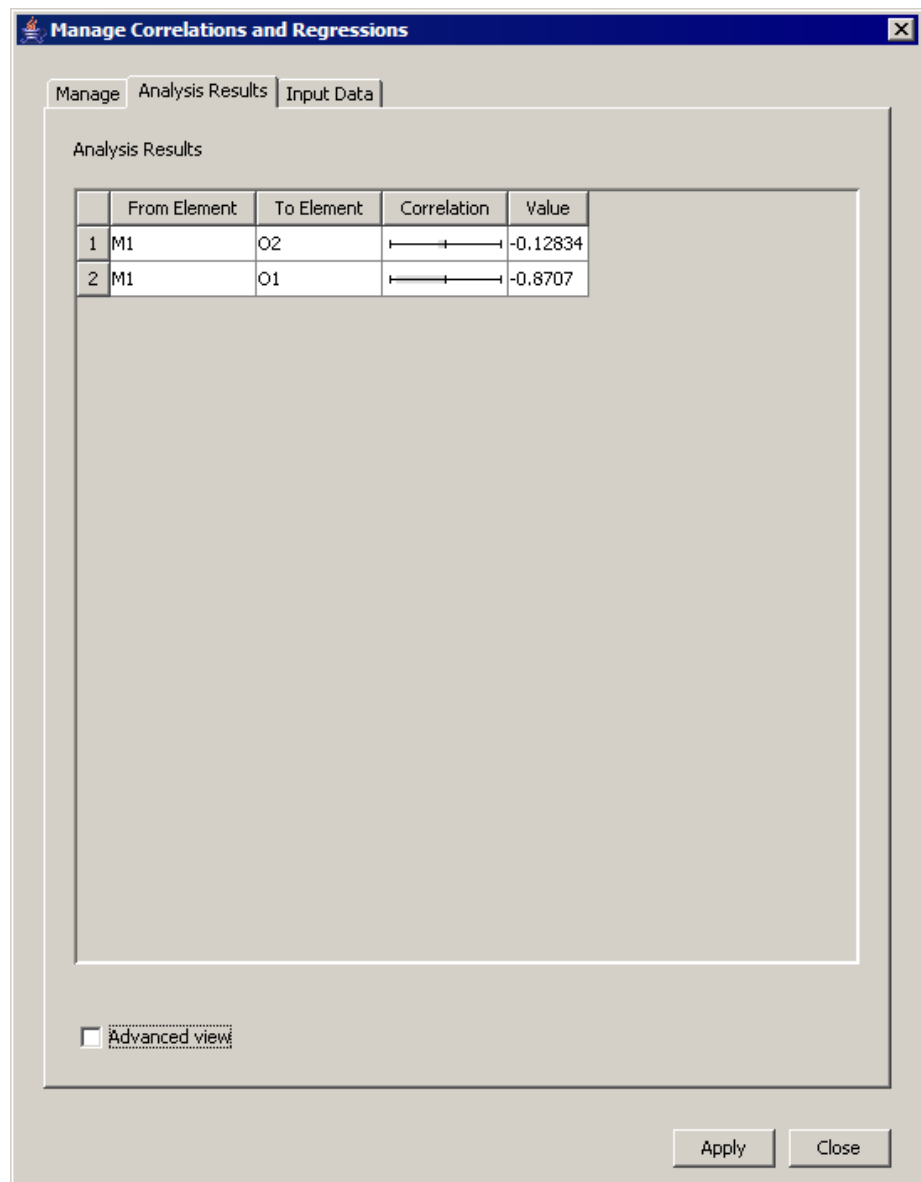
The image shows a software dialog box titled "New Correlation and Regression Definition". It has a blue title bar with a close button (X) in the top right corner. Below the title bar, there are two tabs: "Identification" and "Association". The "Identification" tab is currently selected. Inside this tab, there are four input fields: "Name:" (a long text box), "Description:" (a long text box), "Start date:" (a date picker with a calendar icon), and "End date:" (a date picker with a calendar icon). At the bottom right of the dialog box, there are three buttons: "OK", "Cancel", and "Help".

- b. Type the name and, if needed, the description.
- c. Specify the start and end dates.
- d. Click the **Associations** tab.





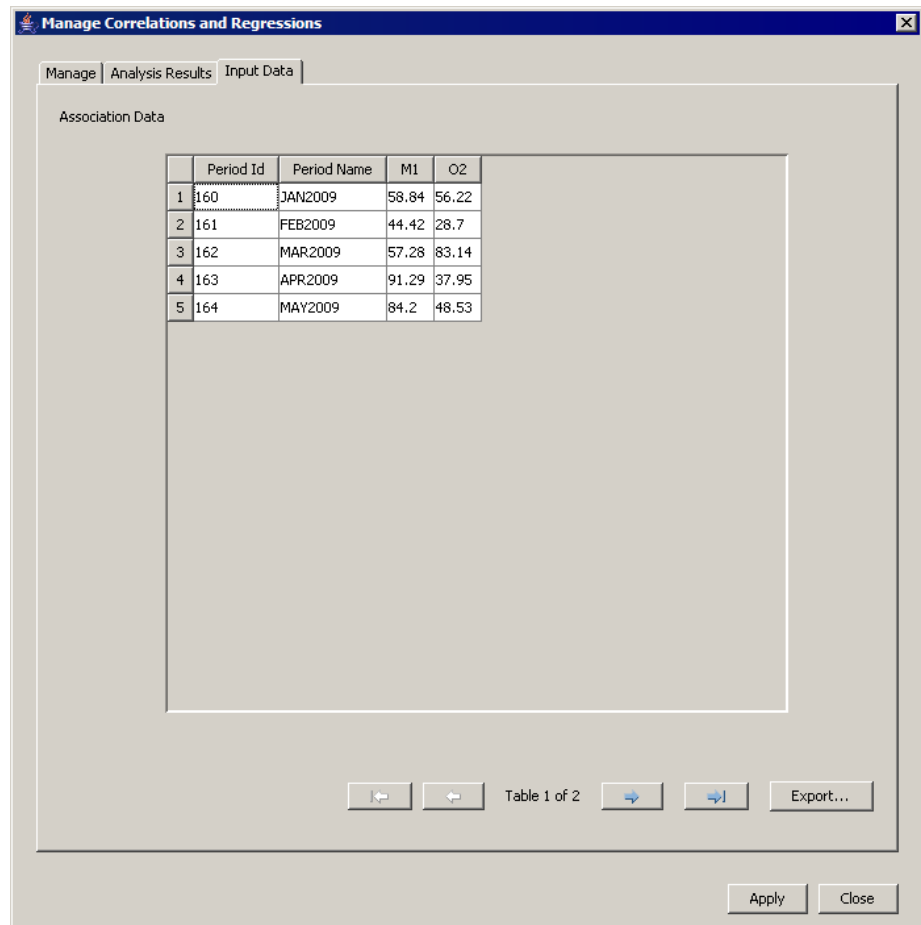
- e. Select an association, and then select the "to" and "from" metric attributes.
3. To edit an analysis, select an analysis definition, and click **Edit**.
4. To delete an analysis, select an analysis definition, and click **Delete**.
5. To run an analysis, select an analysis definition, and click **Run**.
6. To export the analysis results to a comma-separated values file, first run the analysis, and then do one of the following:
  - a. To export the currently displayed analysis, click **Export** on the **Input Data** tab.
  - b. To export all analyses, click **Export** on the **Manage** tab.
7. To view the analysis results after running an analysis, click the **Analysis Results** tab.



To view more detailed information about the results, select the **Advanced view** check box.

Analysis Results								
	From Element	To Element	Correlation	Value	Linear Regression f(x)	P Value	Y Probt	X Probt
1	M1	O2		-0.12834	60.0110841 + -0.1354505 * x	0.83704552	0.24828626	0.83704
2	M1	O1		-0.8707	168.703241 + -1.3751338 * x	0.0547149	0.01235812	0.05471

8. To view the input data used in the analysis, click the **Input Data** tab.

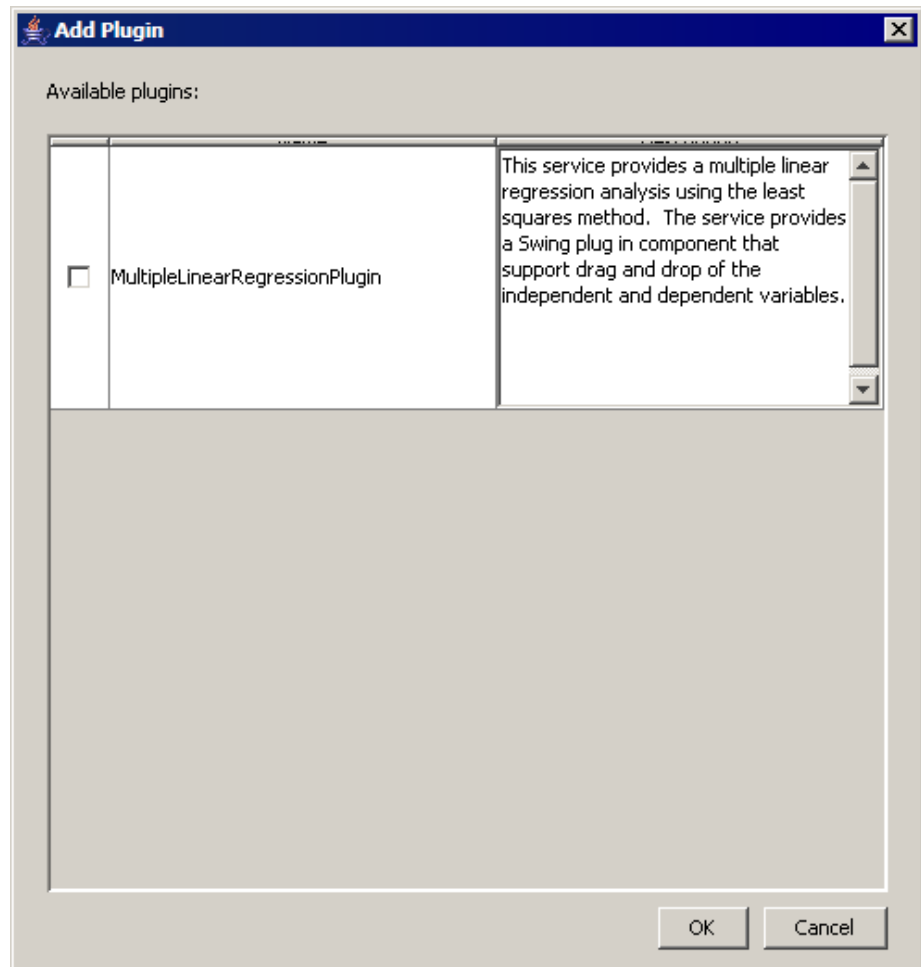


### Add an Analysis Plugin

To add an analysis plugin:

1. Specify the plugin analysis settings by selecting a metric attribute for analysis.  
For more information, see [“Edit Diagram Settings” on page 268](#).
2. Select **Analysis** ⇒ **Add Plugin**.

The Add Plugin dialog box appears.



3. Select the check mark next to one or more analysis plugins.
4. Click **OK**.

The Add Plugin dialog box closes, and, if needed, a dialog box to specify options for the analysis plugin appears.

---

## Multiple Linear Regression Plugin

The multiple linear regression plugin performs a multiple linear regression analysis using the least squares method.

To perform a multiple linear regression analysis:

1. Hold down the Ctrl key and drag one or elements onto the **Independent input variables** list.
2. Hold down the Ctrl key and drag one element onto the **Output variable** list.
3. Specify the start and end dates.
4. Click **Run**.

After the analysis runs, you can see the analysis results and the input data used for the analysis.

To investigate the impact of the input variables on the output variable:

1. Click the **Explore** tab.
2. Adjust the values of the input variables using the controls.



The impact of the changes is reflected in the output variable, which is displayed above the inputs.

---

## Manage a Diagram

### View Diagram Properties

To view the properties of a diagram:

1. Open a project.
2. Select a project or scorecard.
3. Select a project or scorecard name in the hierarchy, and click the Diagrams icon .
4. Click **Manage Diagrams**.
5. Click the action menu  that is next to a diagram name in the table and select **Properties**.

The Diagram Properties page appears.

6. If needed, change the name of the diagram.

### Copy a Diagram

You can copy a diagram to other scorecards in the same project. You can build a diagram that serves as a master at the top level of the scorecard hierarchy, comparable to a slide presentation, and then copy that diagram to one or more child scorecards.

A diagram that is copied to another scorecard might not look exactly like the original. Because diagrams contain nodes that are specific references to elements in the source diagram, elements that have the same name in the default language must exist in the target scorecard. If the elements do not have the same name, the diagram node cannot be copied. Containers can be copied unless they are bound to elements for which a copy does not already exist in the target scorecard.

To copy a diagram:

1. Select **File** ⇒ **Copy Diagram**.  
The Select Scorecard for Diagram Copy dialog box appears.
2. In the **Name** field, type the name of the copy of the diagram.
3. From the **Scorecards** list, select the scorecards where you want to copy the diagram.
4. If you want to replace an existing diagram in a scorecard, select **replace existing**.

### **Save a Diagram**

To save the changes that you have made to a diagram, select **File** ⇒ **Save**.

### **Revert to the Saved Diagram**

If you have not saved your recent changes to a diagram, you can revert to the last saved diagram. Select **File** ⇒ **Revert To Saved**.



### **Export a Diagram**

To export a diagram as a SVG drawing:

1. Select **File** ⇒ **Export**.  
The Save dialog box appears.
2. Navigate to a location.
3. Name the file.

### **Delete a Diagram**

To delete a diagram:

1. Open a project.
2. Select a project or scorecard.
3. Select a project or scorecard name in the hierarchy, and click the Diagrams icon .
4. Click **Manage Diagrams**.
5. Click the action menu  that is next to a diagram name in a table and select **Delete**.

---

## **Close the Diagram Editor**

To close the Diagram Editor, select **File** ⇒ **Exit**.

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## Your Turn

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