Interstage

FUJITSU

Interstage Business Process Manager Analytics V12.1

Studio Guide

Windows/Linux

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About this Manual

This chapter provides a general introduction to this user guide, describing its contents, such as an overview of the chapters, common terms used in the manual, and other related information to help you effectively use the guide.

Key concepts covered in this chapter include:

- [Purpose of this Guide](#)
- [Target Audience](#)
- [Chapter Overview](#)
- [Reference Material](#)
- [Customer Support](#)

Purpose of this Guide

The Fujitsu Interstage Business Process Manager Analytics (commonly referred to as "Analytics") comprises two key components—the Analytics Management Console and the Analytics Studio.

The Management Console facilitates configuration of Analytics environment settings, while the Analytics Studio enables data collection, data analysis, and displays the end result using appropriate visualization techniques, such as pie-charts and bar graphs.

This guide describes the Analytics Studio, explaining its features, functionality, and how to effectively use it to derive relevant business metrics.

Target Audience

This guide is intended for those who want to use the Analytics Studio for business monitoring.

NOTE
Prior experience of Analytics 12.0 or earlier is beneficial, but not mandatory.

Chapter Overview

The following table lists the chapters covered in this guide with their description.

Chapter	Description
1. Overview	Provides a general introduction to the Analytics Studio and explains how to log in to the application
2. Exploring the Analytics Studio GUI	Describes the Analytics Studio GUI, explaining its various components
3. Using the Analytics Studio	Explains how to define, configure, and manage Analytics Studio elements
4. Importing/Exporting Elements	Explains how to import and export elements across Analytics
5. Additional Configuration Parameters	Covers additional configuration parameters for Analytics Studio elements

Reference Material

You may refer to the following documents for more details about Analytics.

- Release Notes

  Contains an overview of the Analytics software and late-breaking information that could not be included in the manuals

- Overview

  Describes the architecture and features of the Analytics software

- Installation Guide

  Explains how to install Analytics

- Dashboard / Output Guide

  Explains how to use the Analytics Dashboard

- Administration Guide

  Covers administration tools and tips, message references, and troubleshooting

- Management Console Guide

  Explains how to use the Management Console and Management Commands to configure key parameters, such as how to start/stop the Analytics software service or how to display the software status

- Process Discovery Guide

  Explains how to use Process Discovery that generates process diagrams using historical data

- Migration Guide

  Explains how to migrate from an earlier version of Analytics

- Process Discovery Handbook

  Provides a high-level description of how to use Process Discovery

Customer Support

In case you encounter any issues using the Analytics Studio or require further assistance, contact the Fujitsu Technical Support consultant.

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Chapter 3   Using the Analytics Studio

Chapter 1

Overview

This chapter provides a general introduction to the Analytics Studio, which is the Analytics component used for configuring and administering objects for business monitoring.

Key concepts covered in this chapter include:

- [What is the Analytics Studio?](#)
- [How to Access the Analytics Studio?](#)

What is the Analytics Studio?

A key aspect of Analytics is the collection and management of appropriate business data to derive business trends, identify critical conditions, and optimize production.

The Analytics Studio (see Figure 1-1 below) enables you to define objects, referred to as elements, for collecting, analyzing, and administering business data.
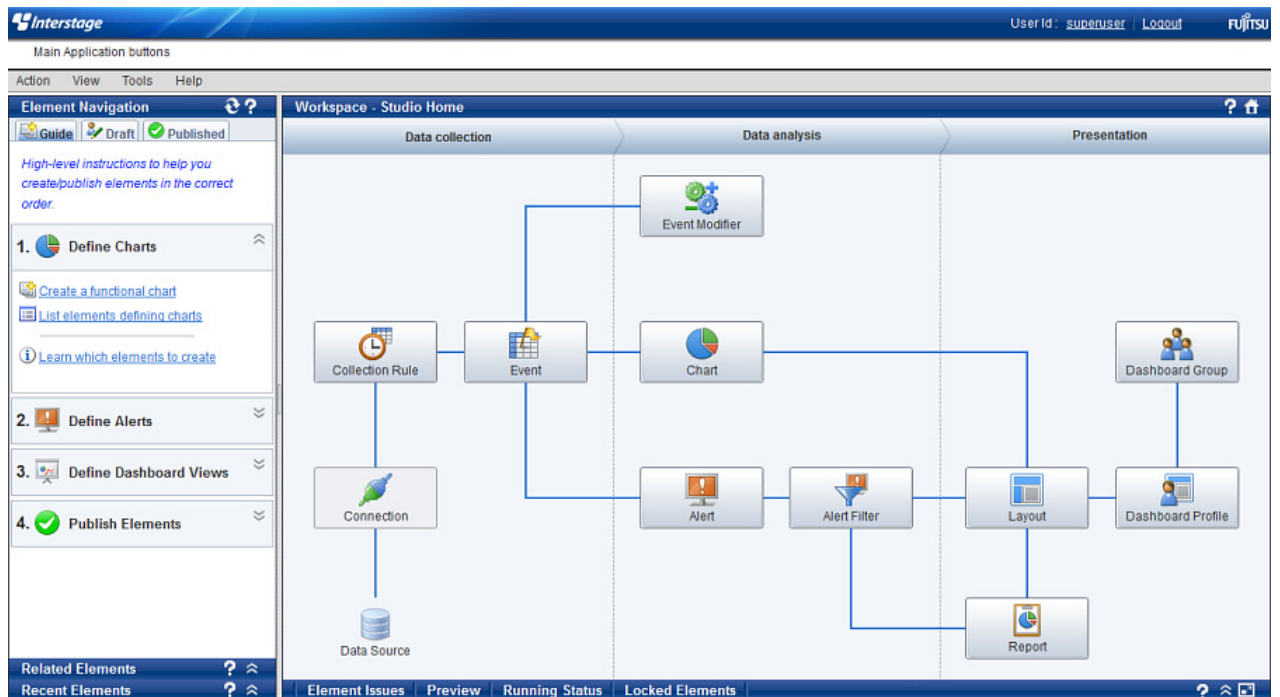
Figure 1-1 Analytics Studio home page

Using the Analytics Studio, you can:

- Identify the data to be collected from a data source

- Apply specific conditions for data collection

- Assign the collected data to specific events for data storage

- Define calculations on the collected data to derive business statistics and trends

- Select appropriate visualization techniques, such as bar graphs and pie charts, to display business data

- Define alerts to highlight exceptions or critical situations in a business environment

- Design layouts for the Analytics Dashboard to depict the most relevant Key Performance Indicators (KPIs) specific to your business

- Implement user profiling by assigning specific Analytics Studio features, functionality, and dashboard views to distinct users depending on their role and responsibilities

Figure 1-2 below displays the key Analytics Studio procedures. All procedures are identified by a number indicative of the preferred order in which they should be created.
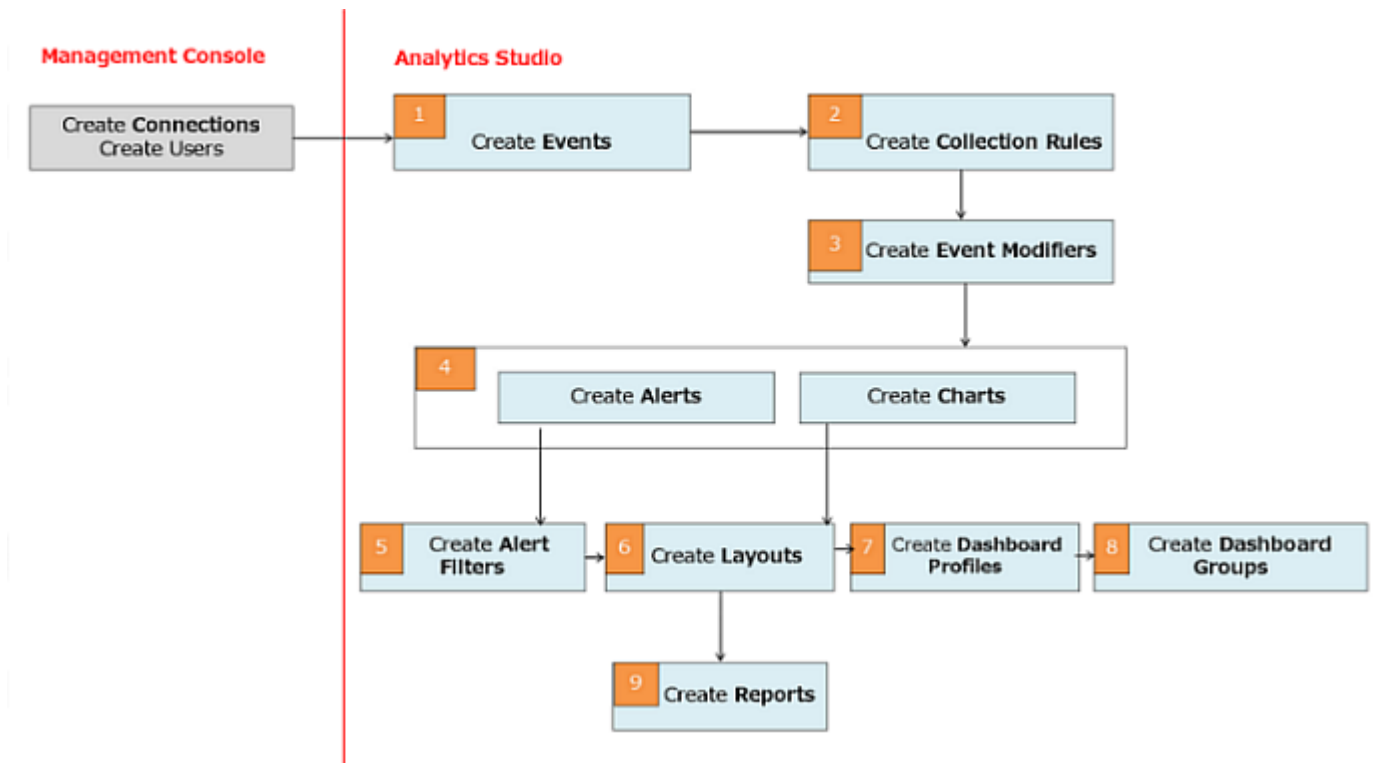
Figure 1-2 Analytics Studio procedures

How to Access the Analytics Studio?

IMPORTANT!
Before accessing the Analytics Studio, ensure the *iFlow.jar* (for IBPM) is configured with the Analytics Server. This file enables integration of Analytics with Interstage BPM systems. For details, refer to the *Interstage Business Process Manager Analytics Installation Guide*.

To log in to the Analytics Studio:

1. Open a Web browser, and type the following URL in the Address bar:

   `http://server:port/ibpmm/dashboard/Welcome`

   In the above URL, `server` is the host name or IP address of the Analytics Server and `port` is the port number used by the Web server. The default port number for the built-in application server is 40330. For other application servers, confirm and specify their respective port number. If omitted, the default value of 80 is used.

2. On the Analytics login page, specify your user ID, password, and then click **Login.**

NOTE
You will not be able to log in to the Analytics Studio if your user ID does not have the required permissions for accessing the application. Contact the Management Console administrator to assign you appropriate permissions or create a new user ID, if required.

3. Click the **Analytics Studio** tab to display the Analytics Studio home page.
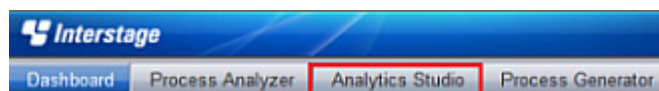
Chapter 2

Exploring the Analytics Studio GUI

The Analytics Studio provides an intuitive GUI comprising four distinct sections: menu bar, Element Navigation pane, Workspace, and Quick Panel (see Figure 2-1). Each of these sections provides several options to define and configure objects that enforce the Business Activity Monitoring (BAM) capabilities of Analytics.
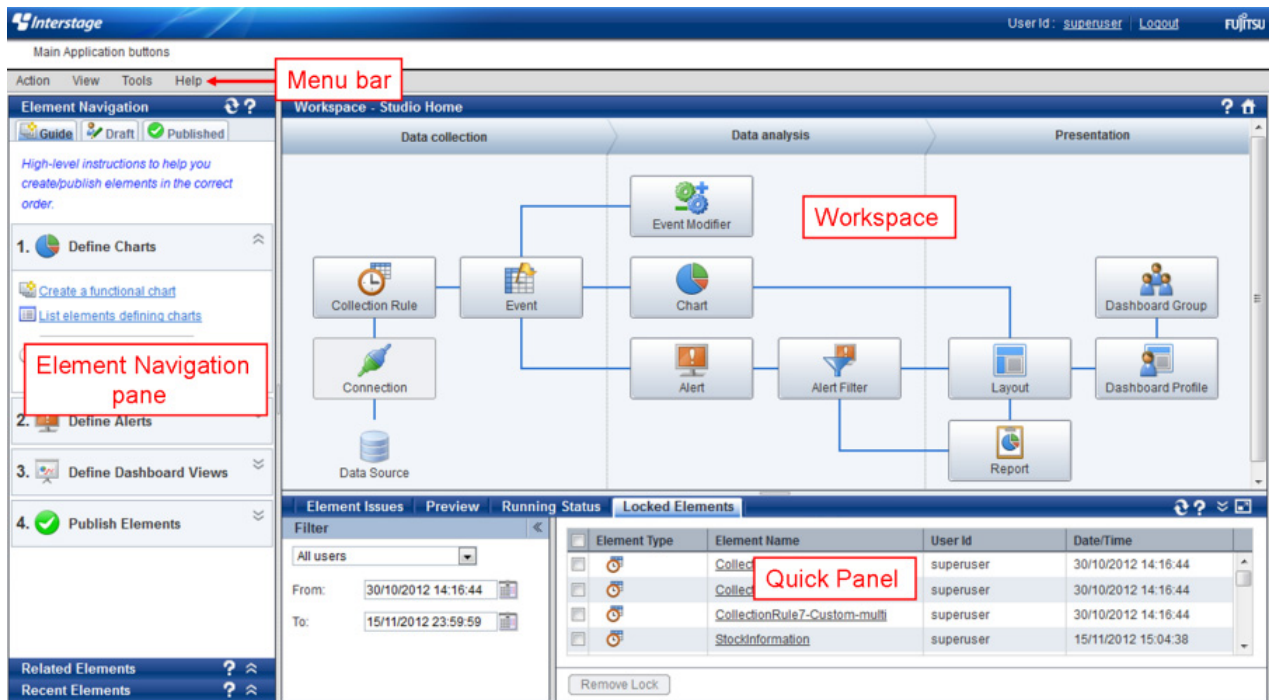
Figure 2-1 Analytics Studio GUI

This chapter describes the Analytics Studio GUI, explaining its various components and how to effectively use them.

Key concepts covered in this chapter include:

- Using the Menu Bar

- Using the Element Navigation Pane

- Using the Workspace

- Using the Quick Panel

- Using the Analytics Studio GUI Icons

Using the Menu Bar

NOTE
The Analytics Studio uses objects, referred to as "elements", for collecting and managing business data. An example of an Analytics Studio element is the "collection rule" that is used to collect data from a monitored data source. Another example is the "event" that stores the collected data.

The menu bar provides options that facilitate basic Analytics Studio features, such as element creation, element migration, and accessing Help.

The following figure displays the various menus that constitute the Analytics Studio menu bar. Refer to the following table for a brief description of these menus and their respective menu options.
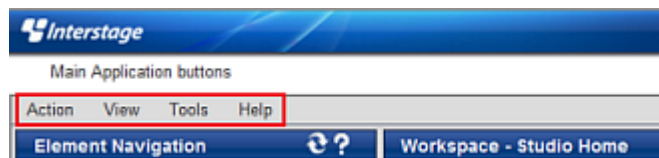
Figure 2-2 Analytics Studio menu bar

NOTE
The menus and their respective options vary for different Analytics Studio users depending on their access rights and permissions.

Table 2-1 Analytics Studio menu options

Menu	Menu option	Description
Action	New	Provides options for creating Analytics Studio elements, such as collection rules, events, and alerts
	Recent Elements	Displays a list of recently modified elements
View	Refresh	Updates the Analytics Studio GUI
	Studio Home	Displays the Analytics Studio home page
	Element Issues	Opens the **Element Issues** tab of the Quick Panel
	Preview	Opens the **Preview** tab of the Quick Panel
	Running Status	Opens the **Running Status** tab of the Quick Panel
	Locked Elements	Opens the **Locked Elements** tab of the Quick Panel
Tools	Export Elements	Exports elements as an exchange file
	Import Elements	Imports an exchange file to Analytics
Help	Help	Displays the Analytics Studio Help

IMPORTANT!

The Analytics Studio online help requires the Java Runtime Environment (JRE) installed and enabled on your local computer. If JRE is not installed, download the latest version from http://www.java.com/en/download/index.jsp.

Using the Element Navigation Pane

The Element Navigation pane enables processing of elements in the Analytics Studio and provides several features to manipulate and customize elements.

It comprises the **Guide** tab, the **Draft** tab, the **Published** tab, the Related Elements panel, and the Recent Elements panel.
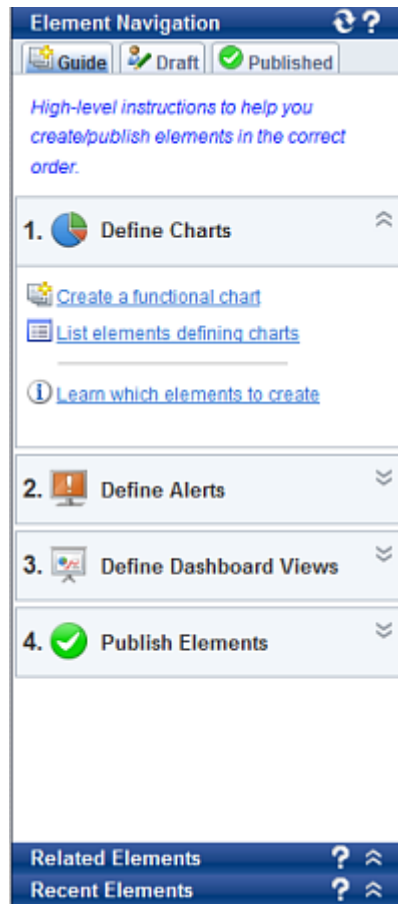
Figure 2-3 Element Navigation pane

Guide Tab

The **Guide** tab provides quick access to commonly used Analytics Studio features in an easy and simplified manner.

Key features of the **Guide** tab include:

- Wizards to assist you with element creation

- Cumulative view of all the elements defined in the Analytics Studio, enabling you to access their definition

- Functionality to publish elements for use in real-time business monitoring

Refer to "Using the Guide Tab" in Chapter 3, "Using the Analytics Studio" for information on how to use the **Guide** tab.

Draft Tab

The **Draft** tab lists all the elements configured for business monitoring. The element can be in different processing states: Draft, Ready, or Published. The **Draft** tab enables you to manipulate elements, such as create elements and review or modify elements' definitions, process elements to the next stage in their element processing lifecycle, or even delete elements.

Refer to Table 2-7 and Table 2-8 for details about the element icons and the element state icons displayed on the **Draft** tab.

Published Tab

The **Published** tab lists the elements that have been published and are currently being used for monitoring business data. Published elements are represented by the ✅ icon.

NOTE
The **Guide**, **Draft**, and **Published** tabs enable sequential processing of elements before they can be used for business monitoring. Collectively, these tabs enforce the "Draft-Ready-Published" lifecycle for elements, which is essential for making the elements functional for use in real-time business monitoring.   A new element, when created, is considered to be in the "Draft" state. It is then transferred to the "Ready" state for review. If approved, it is transferred to the "Published" state where it is used by Analytics for monitoring real-time business activity.   Refer to "Understanding the Analytics Studio Workflow" in Chapter 3, "Using the Analytics Studio" for details about the Draft-Ready-Published lifecycle.

Related Elements

Analytics Studio elements are interdependent on each other. For example, to be functional, a layout requires chart details, which in turn, uses event properties. Similarly, layouts are referenced by dashboard profiles, which are further used in dashboard groups.

Modifying the definition of an element impacts its related elements. Therefore, before making changes to an element, it is recommended you view its related elements. The Related Elements panel (see Figure 2-4) enables you to do so.

Simply, select an element on the **Draft** tab in the Element Navigation pane, and then click the **Open panel** button (⬆) in the Related Elements panel to display its related elements. You may further select an element in the Related Elements panel to view its definition.

TIP!
An alternate method to view related elements is to use the **Related Elements** button (⬚) on the Overview page. Refer to "View related elements" for details.
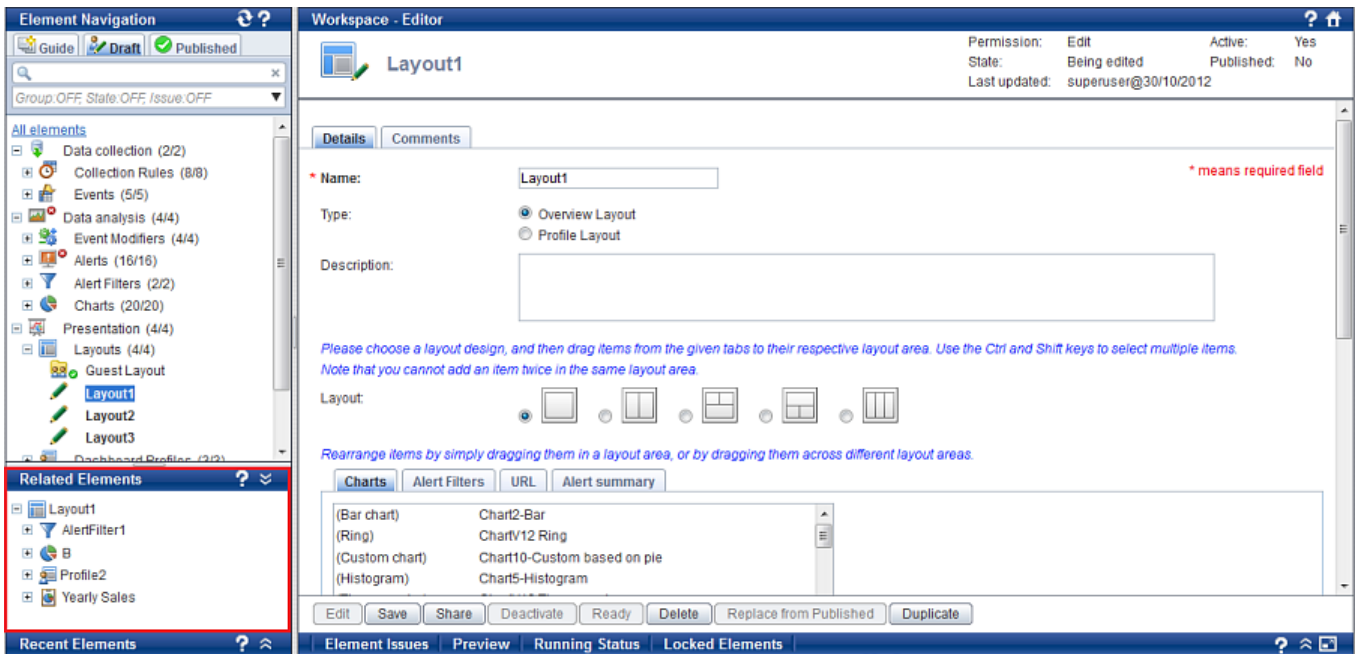
Figure 2-4 Related Elements panel

Recent Elements

Click the **Open panel** button ( ) in the Recent Elements panel (see Figure 2-5) to display the list of elements that have been recently modified. You may further select an element from the given list to view its definition.

NOTE
The number of elements that can be displayed in the Recent Elements panel can be set by using the user preference screen. Select the user name at the upper-right corner of the Analytics Studio GUI to display the **User Preference** dialog box.
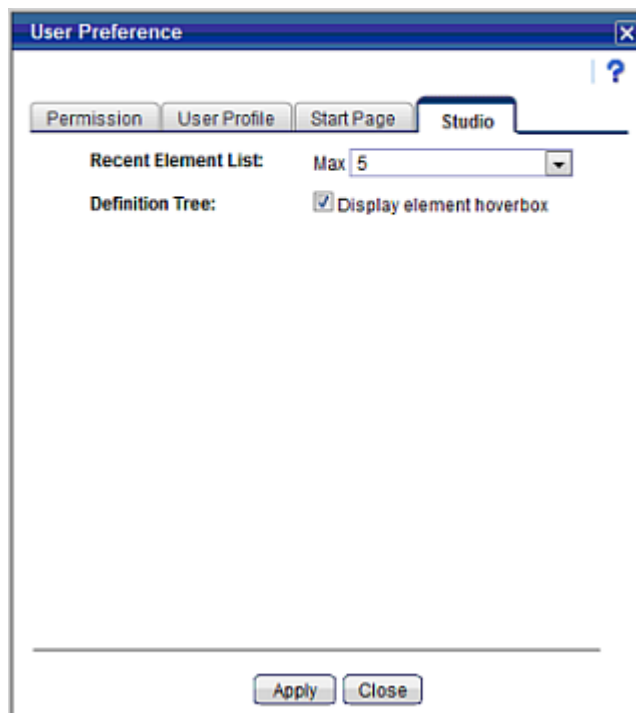
TIP!
Another method to view the elements that have been recently modified is to click **Action** > **Recent Elements** on the menu bar.
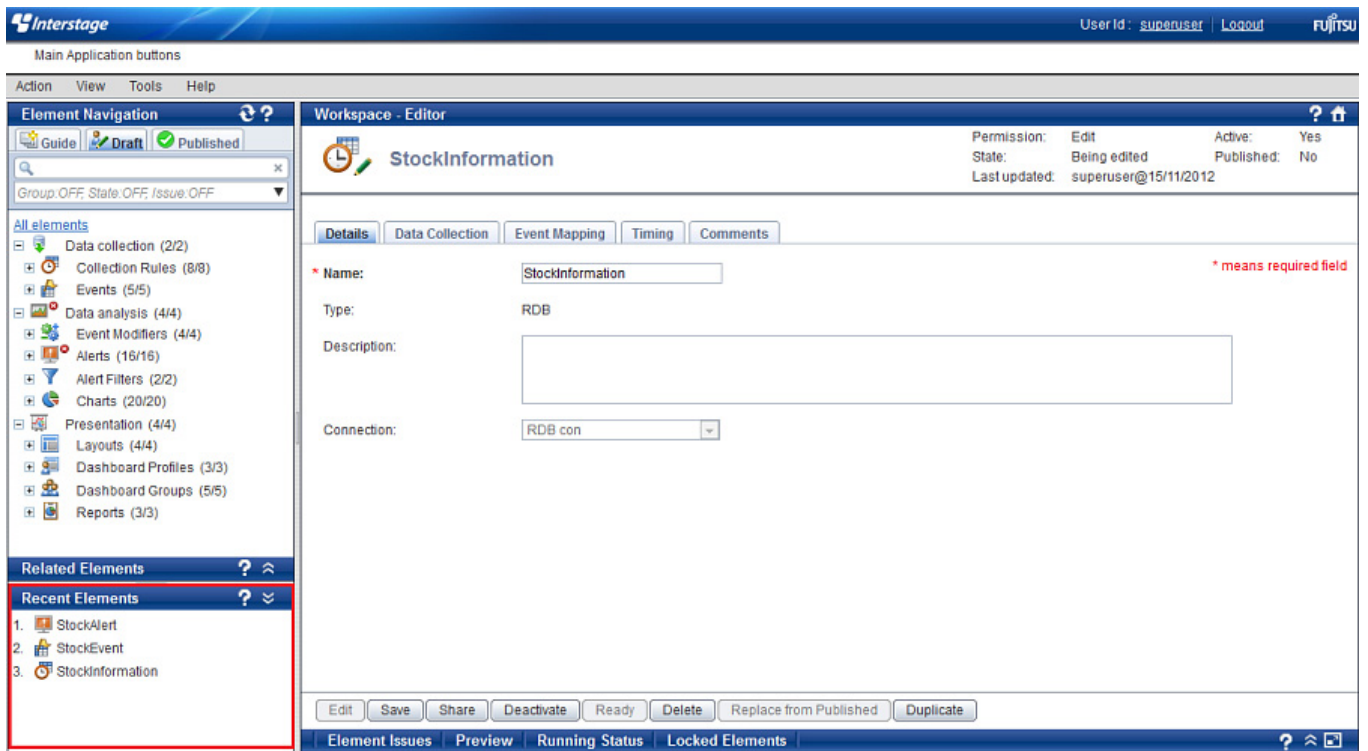
Figure 2-5 Recent Elements panel

Using the Workspace

The Workspace is the primary area where you can edit an element's definition, define its functionality, and control its behavior to obtain relevant business data.

The Analytics Studio provides three distinct views of the Workspace:

- Studio Home

- Overview

- Editor

Studio Home

The Studio Home is the Analytics Studio home page (see Figure 2-6) that is displayed when you first log in to the application. It depicts all the studio elements aligned in a sequential flow indicative of their interdependencies on each other. For example, events are referenced by event modifiers, charts, and alerts. Similarly, alert filters are used by layouts, which are further referenced by dashboard profiles.
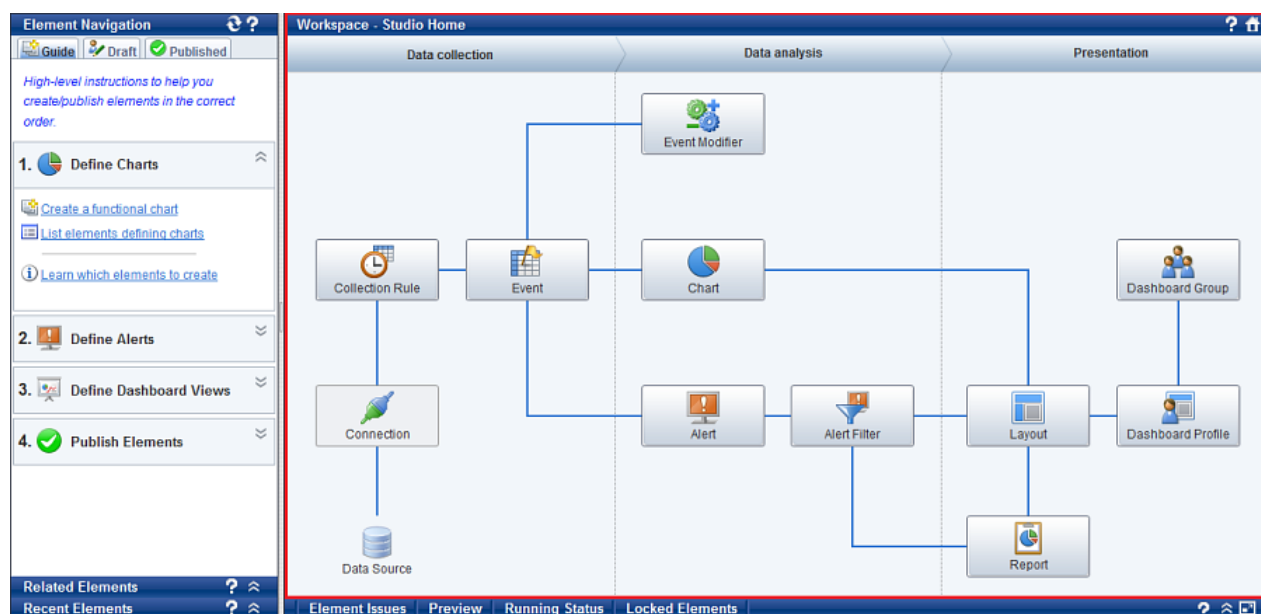
Figure 2-6 Studio Home

As depicted in the above figure, the Studio Home classifies elements as Data collection, Data analysis, and Presentation elements. Refer to the following table for a brief description of these elements.

TIP!
On the Studio Home, move the pointer over an element icon to view its description. You may also click the element icon to define a new element.

Table 2-2 Analytics Studio elements

Element category	Description	Type
Data collection elements	Collect and store data from various data sources deployed in a business environment	- Connections (*1) - Collection rules - Events
Data analysis elements	Manipulate the collected data, for example, perform calculations, apply conditions, sort and filter data to derive business statistics, trends, and patterns	- Event modifiers - Alerts - Alert filters - Charts
Presentation elements	Display the calculated business statistics and related information on the Analytics Dashboard	- Layouts - Dashboard profiles - Dashboard groups - Reports

*1: Details of the connections configured for use by the Analytics Studio are only available on the **Published** tab.

NOTE

The Studio Home displays only those elements that are specific to an end user's profile. If you do not have the appropriate rights and permissions, some elements might appear disabled, restricting you access.

Note that the "Connection" element would always be disabled for all Analytics Studio users because connections are configured in the Management Console.

Overview

On the **Draft** tab in the Element Navigation pane, select a parent node, such as **Collection Rules**, **Events**, or **Alerts**, to display the Overview page. This page provides a cumulative view of all the elements of a specific type defined in the Analytics Studio.

NOTE

Click the **Published** tab for elements currently being used for business monitoring. Additionally, click a parent node, such as **Collection Rules**, **Events**, or **Alerts**, to display the Overview page with published elements of a specific type.

However, take into account that by using the **Published** tab, you can only view an element's definition. It does not provide the functionality to edit element definitions.

The following figure depicts the Alerts Overview page displayed on selecting the **Reports** node in the Element Navigation pane.

Figure 2-7 Reports Overview page

Each element listed on the Overview page is qualified by several attributes, such as Name, Schedule, and State. However, these attributes vary for different element types. For example, the Reports Overview page displays "Schedule" details, which are not displayed for the Layouts Overview.

Using the Overview page, you can:

- View or edit an element's definition

- Change the state of multiple elements simultaneously

- View related elements

View or edit an element's definition

Select an element on the Overview page to view its definition (see Figure 2-8).
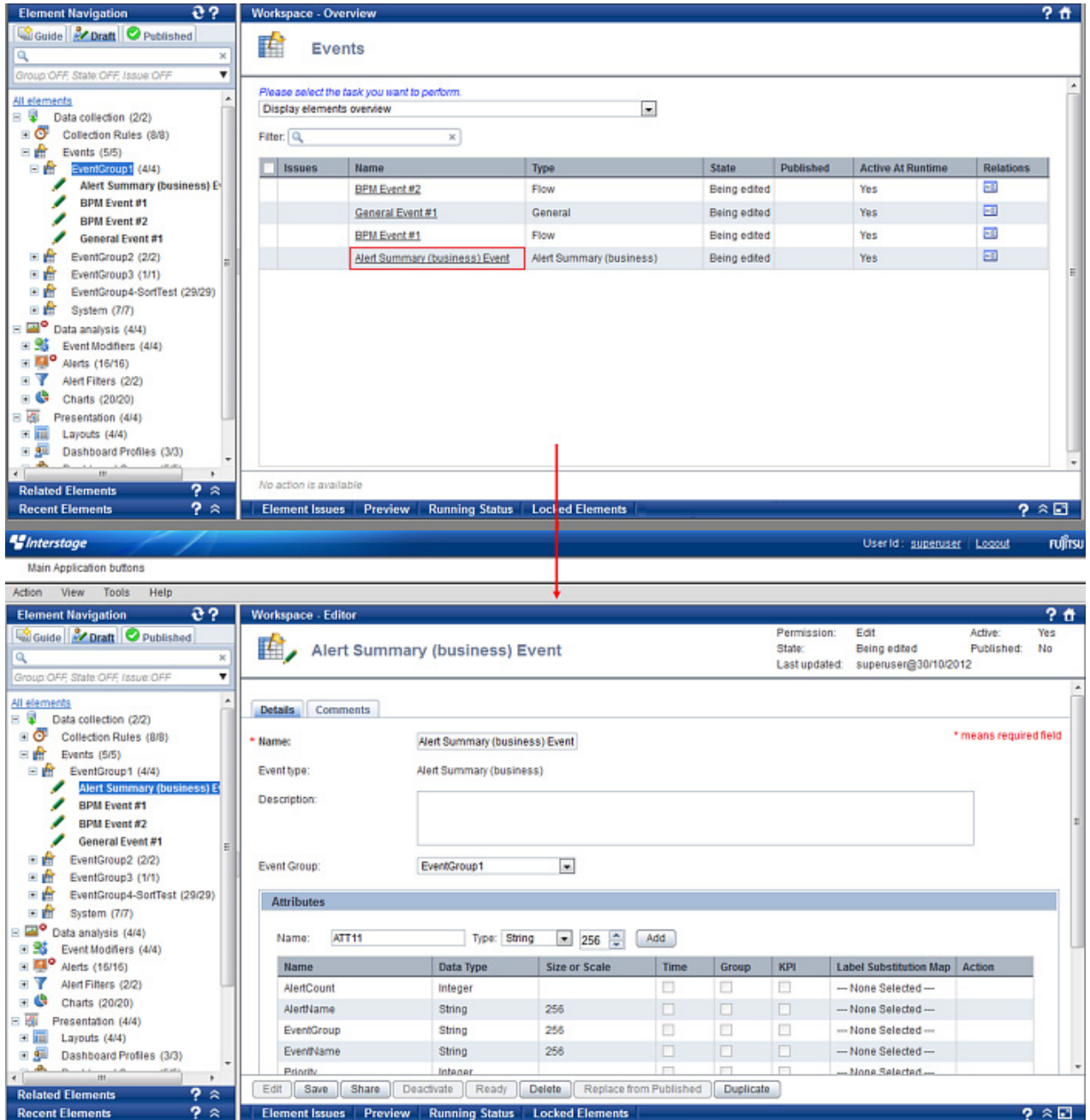

Figure 2-8 Viewing an element's definition

If you have appropriate rights, you may also edit an element's definition and change its state by using the buttons aligned at the bottom of the Overview page. Refer to the following table for a brief description of these buttons.

NOTE
Only specific buttons will be enabled depending on the current state of the selected element and your Analytics Studio rights and permissions.

Table 2-3 Action buttons

Button	Description
Edit (*1)	Edit an element's definition and sets an exclusive lock on the element, restricting other users from viewing the changes you make to the element
Cancel Edit	Indicates that an element is currently being edited; use this button to complete editing
Save (*2)	Saves the changes made to an element's definition
Share	Shares the changes you made to an element's definition with all Analytics Studio users; however, the element is not editable at this stage
Deactivate (*3)	Disables an element's definition, restricting it from being used by Analytics
	Is applicable to certain elements, including collection rules, event modifiers, alerts, alert filters, and reports
Activate	Enables a deactivated element
Ready	Marks an element as "Ready", requiring a review of the element's definition by a Publisher
Cancel Ready	Revokes the "Ready" state of an element and return it to the "Shared" state
Delete (*4)	Deletes an element
Replace from Published	Replaces the local copy of the published element currently being edited with its published version, discarding any changes that may have been made since it was last published
Duplicate (*5)	Creates a duplicate copy of the element

*1: While you edit an element, the previous version of the element's definition (and not the current version being edited) is visible to other Analytics Studio users.

*2: Saving does **not** display the updated element definition to all Analytics Studio users. You need to "share" an element to display its definition globally.

*3: Deactivated elements can progress to the "Shared" state though they are not used in Analytics operations.

*4: Elements that have not been published are deleted immediately. However, deleting "published" elements in the "Shared" state simply changes their state to "Deleted" and requires deletion by Advanced Analytics Studio users (with appropriate rights and permissions) to remove the element from Analytics.

*5: Regardless of the state of its source element, a duplicate element always originates in the "Being Edited" state.

Change the state of multiple elements simultaneously

An element progresses through several states before it can be published for use in real-time business monitoring. You can either change the state for each element individually, or change the state for multiple elements simultaneously.

NOTE

To be functional, each element undergoes the draft-ready-published lifecycle. A new element, when created, is considered to be in the "draft" state. It is then forwarded to the "Ready" state for review. If approved, it is transferred to the "Published" state where it is used by the Analytics system for monitoring real-time business activity.

Refer to "Understanding the Analytics Studio Workflow" in Chapter 3, "Using the Analytics Studio" for details about the Draft-Ready-Published lifecycle.

To change the state of multiple elements simultaneously:

1. On the **Draft** tab in the Element Navigation pane, select a parent node, such as **Collection Rules**, **Events**, or **Alerts**, to display its respective Overview page.

   The following image displays the Event Modifiers Overview page with the **Event Modifiers** node selected in the Element Navigation pane.
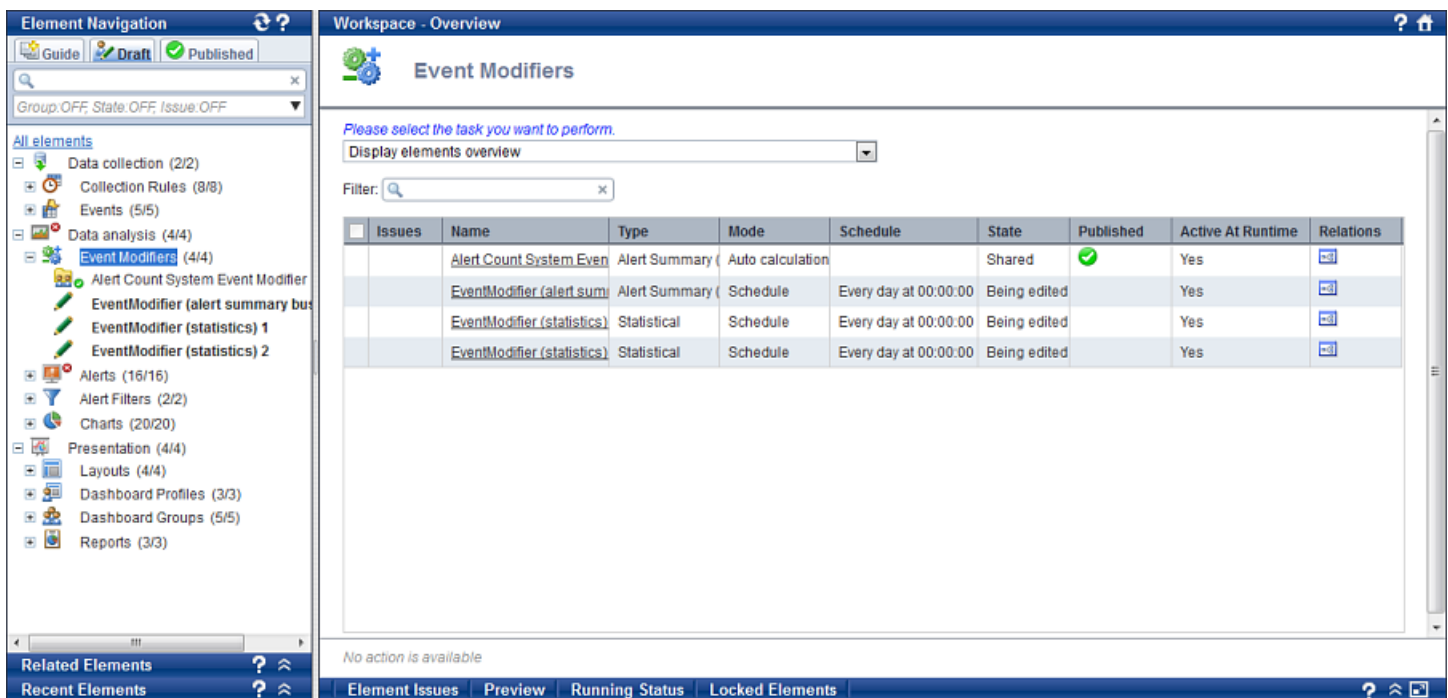
2. From the list displayed at the upper left corner of the Overview page, select an appropriate value (described in the following table) depending on the task you want to perform.
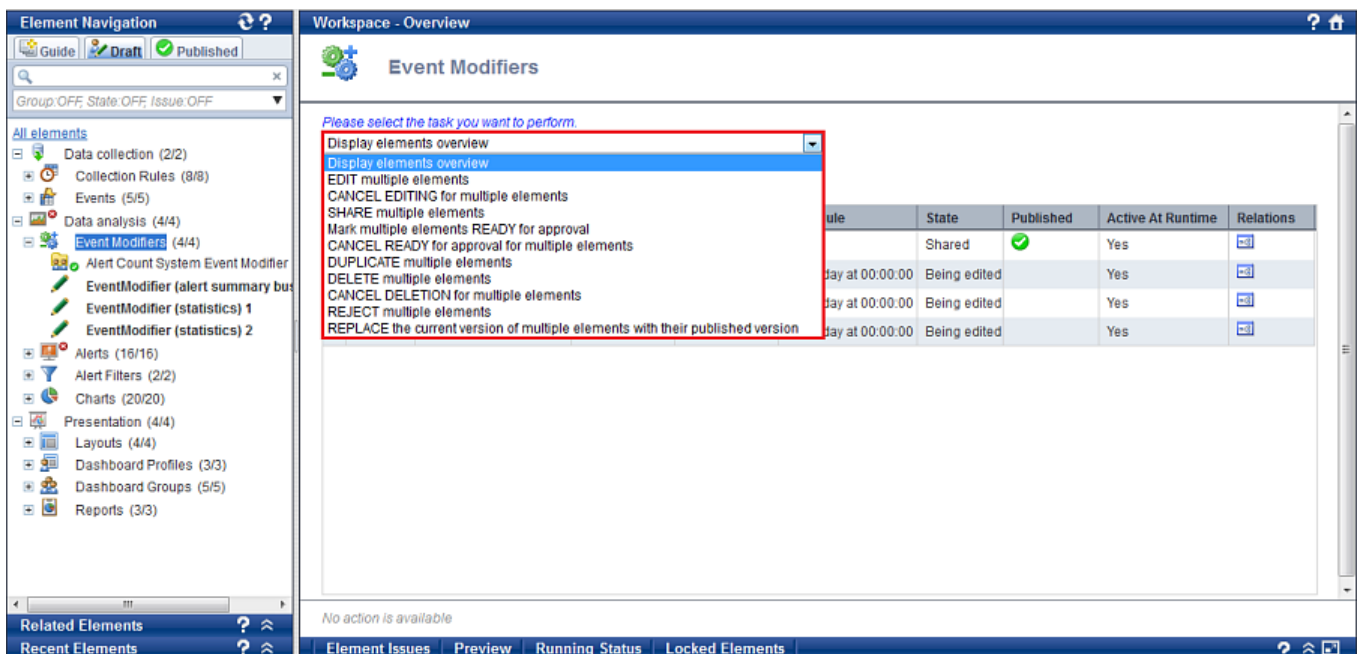
Table 2-4 Overview page list options

Option	Description
Display elements overview	Select this option to view all the elements configured for the element type selected in the Element Navigation pane.
EDIT multiple elements	Select this option to edit elements' definitions.
CANCEL EDITING for multiple elements	Select this option to revert all "edits" made to elements' definitions.
SHARE multiple elements	Select this option to share the changes you made to elements' definitions with other Analytics Studio users.
Mark multiple elements READY for approval	Select this option to mark or designate elements as "Ready" for a review of their specification.
CANCEL READY for approval for multiple elements	Select this option to revoke the "Ready" state of an element, and revert it to its previous state, "Shared".
DUPLICATE multiple elements	Select this option to create duplicate copies of elements.
DELETE multiple elements	Select this option to mark or designate elements for deletion.
CANCEL DELETION for multiple elements	Select this option to revoke the deletion of elements.
REJECT multiple elements	Select this option to reject elements marked "Ready" from being published.
REPLACE the current version of multiple elements with their published version	Select this option to replace the local version of a published element currently being edited with its published version.

3. Select the check boxes for elements whose state needs to be changed.

4. Select the button, aligned at the bottom of the Overview page, to change the state of the element.

   Refer to the following table for a brief description of the buttons displayed on the Overview page. Note that only specific buttons will be displayed depending on the value selected in step 2.

Table 2-5 Action buttons

Button	Description
Edit	- Is displayed on selecting **Edit multiple elements** from the list - Changes the state of selected elements to "Being edited", allowing you to further edit an element's definition
Cancel Edit	- Is displayed on selecting **CANCEL EDITING for multiple elements** from the list - Reverts all "edits" made to elements' definitions
Share	- Is displayed on selecting **SHARE multiple elements** from the list - Shares the changes made to the selected elements' definitions with all Analytics Studio users, changing the "Being edited" state to "Shared"
Ready	- Is displayed on selecting **Mark multiple elements READY for approval** from the list - Changes the state for selected elements to "Ready", indicating the elements are ready for a review of their definition
Cancel Ready	- Is displayed on selecting **CANCEL READY for approval for multiple elements** from the list - Revokes the "Ready" state of elements, reverting to the "Shared" state
Duplicate (*1)	- Is displayed on selecting **DUPLICATE multiple elements** from the list - Creates a duplicate copy of the selected element
Delete (*2)	- Is displayed on selecting **DELETE multiple elements** from the list - Deletes the selected elements
Cancel Delete	- Is displayed on selecting **CANCEL DELETION for multiple elements** from the list - Cancels the deletion of elements
Reject	- Is displayed on selecting **REJECT multiple elements** from the list - Rejects elements marked "Ready" from being published
Replace from Published	- Is displayed on selecting **REPLACE the current version of multiple elements with their published version** from the list - Replaces the local copy of a published element currently being edited with its published version, discarding any changes that may have been made since it was last published

*1: Regardless of the state of its source element, a duplicate element always originates in the "Being edited" state.

*2: Elements that have not been published are deleted immediately. However, deleting "published" elements in the "Shared" state simply changes their state to "Deleted" and requires deletion by Advanced Analytics Studio users (with appropriate rights and permissions) to remove the element from Analytics.

View related elements

All Analytics Studio elements are interdependent on each other. For example, to be functional, an alert filter requires alert details, which in turn, uses event properties.

From the displayed list of elements in the Overview page, click the **Related Elements** button (🖼) for an element to display its related elements in the Related Elements panel.

The following figure displays related elements for a report.

Figure 2-9 Viewing related elements

TIP!
An alternate method to view related elements is to select an element on the **Draft** tab in the Element Navigation pane, and then click the **Open panel** button (🔼) in the Related Elements panel to display its related elements.

Editor

The Editor (see Figure 2-10) is the element's definition page that appears on selecting an element.

NOTE
The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, or the Related Elements and Recent Elements panels.
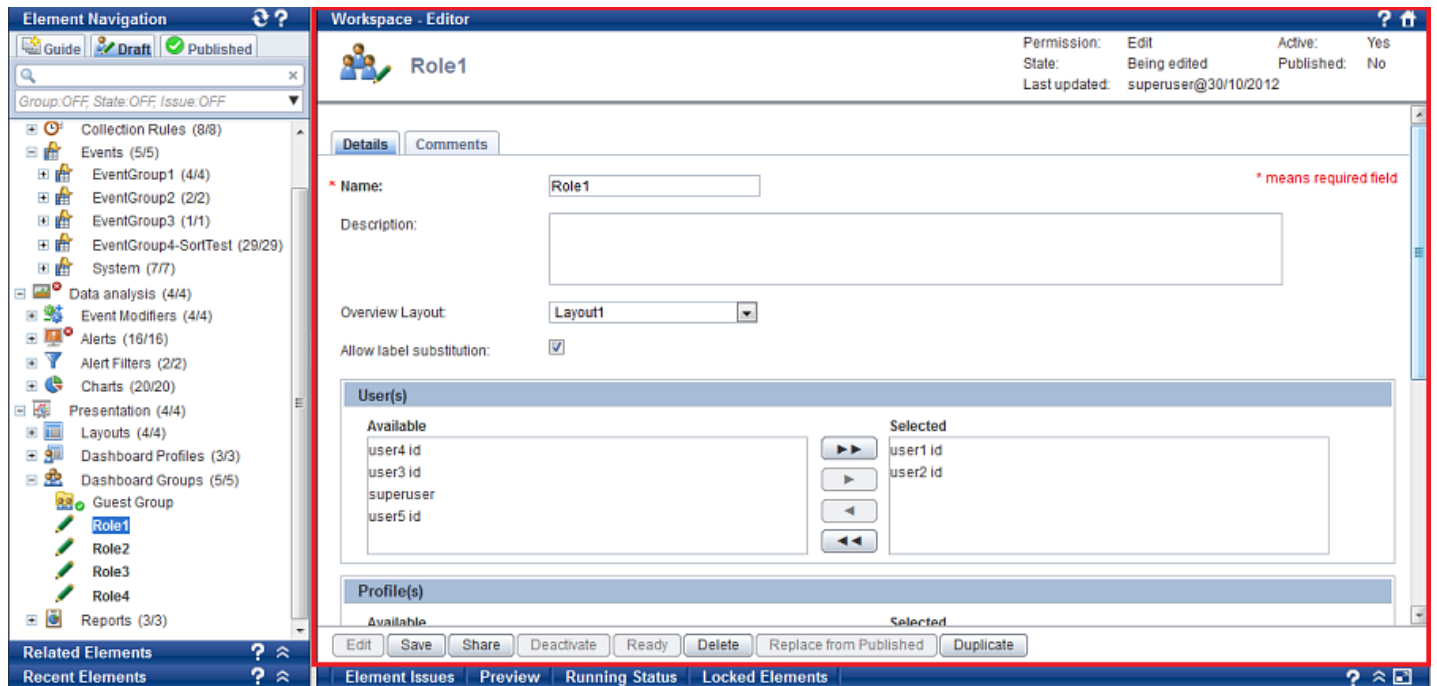
Figure 2-10 Editor

Use the Editor to modify an element's definition. Additionally, you can set the status of elements using the buttons aligned at the bottom of the Editor. Refer to "View or edit an element's definition" for a description of these buttons.

Using the Quick Panel
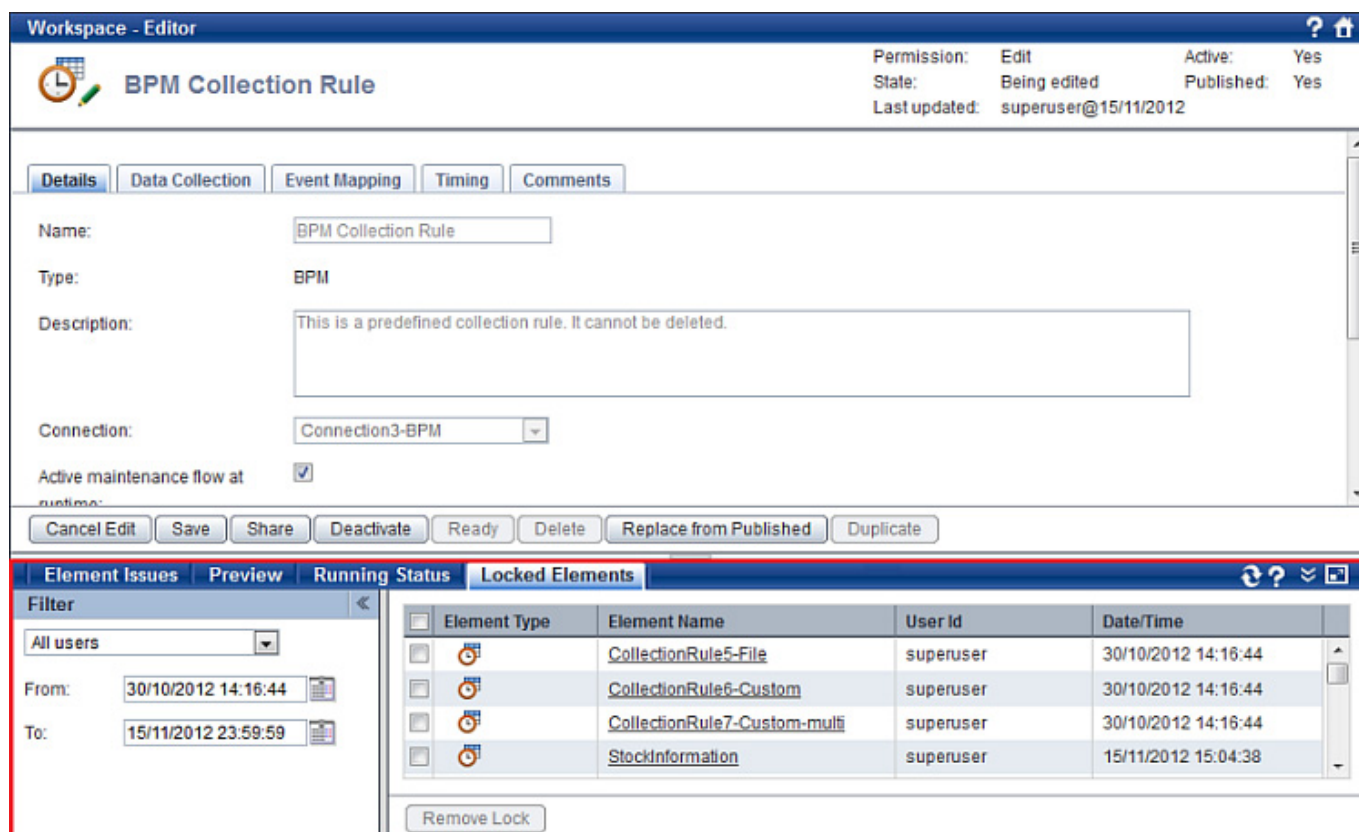
As the name suggests, the Quick Panel provides easy access to some key Analytics Studio features, such as locating issues in element definitions, unlocking elements, and generating preview of element definitions.

Aligned at the bottom of the Analytics Studio GUI, the Quick Panel (see Figure 2-11) is collapsed by default and comprises the following tabs:

- Element Issues Tab

- Preview Tab

- Running Status Tab

- Locked Elements Tab

TIP!
Use the **Maximize** button ( ) to display the contents of the Quick Panel in an enlarged window. Use the **Restore panel** button ( ) to restore the Quick Panel to its previous state. Additionally, use the **Close panel** button ( ) to minimize the Quick Panel.

Figure 2-11 Analytics Studio Workspace with the Quick Panel enabled

Element Issues Tab

Before you submit an element for publishing, it is recommended you review its definition for correctness to ensure it can be readily published. For this, select the element you want to review, and then click the **Element Issues** tab on the Quick Panel. Doing this lists all the issues with the element, if any.

> **NOTE**
>
> The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, or the Related Elements and Recent Elements panels.

The following figure displays the **Element Issues** tab for a sample dashboard group.
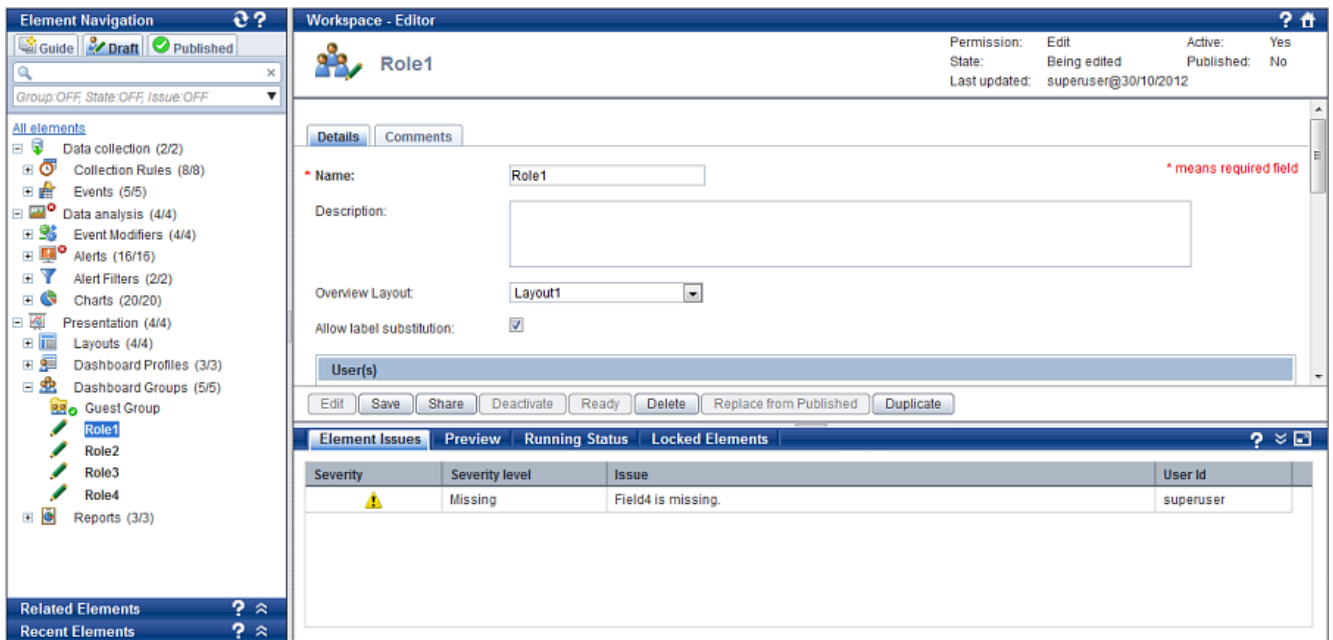
Figure 2-12 Element issues for a dashboard group

Each issue listed on the **Element Issues** tab is qualified by several attributes, such as Severity, Severity Level, and Issue, described in the following table. To resolve an issue, refer to the given description, update the element's definition, and click **Save**.

Table 2-6 Element Issues fields

Field	Description	Possible values
Severity	Contains an icon indicative of the severity of the issue	❌ : Error icon indicative of an error with the element that might disrupt the normal behavior of the element; elements with this error icon cannot progress to the "Ready" state
		⚠️ : Warning icon indicative of an issue with the element

Field	Description	Possible values
Severity level	Describes the severity level of the issue	**Mandatory**: Indicates that certain key parameters in the element's definition that are critical for the normal behavior of the element are empty
		Combination: Indicates that a certain combination of parameters in the element's definition is incorrect
		Missing: Indicates that some parameters in the element's definition are empty
		Incomplete: Indicates that certain related elements' parameters are incorrect
Issue	Provides a brief description of the element issue	-
User Id	Displays the user ID of the user currently logged into the Analytics Studio	-

Preview Tab

As the name suggests, the **Preview** tab of the Quick Panel (see Figure 2-13) enables you to generate a preview of the element, ensuring the element has been correctly configured and its implementation is correct.

To generate a preview for an element, select the element to display its definition, and then click the **Preview** tab on the Quick Panel.

On the **Preview** tab, select any of the following options to display a preview:

- **Use real data**

  Displays a preview using the actual collected data (event records); note that a preview is not displayed for elements that are not yet published or if the data has not been collected

- **Use random data**

  Displays a preview using random data

NOTE
Previews are available for charts and layouts only.
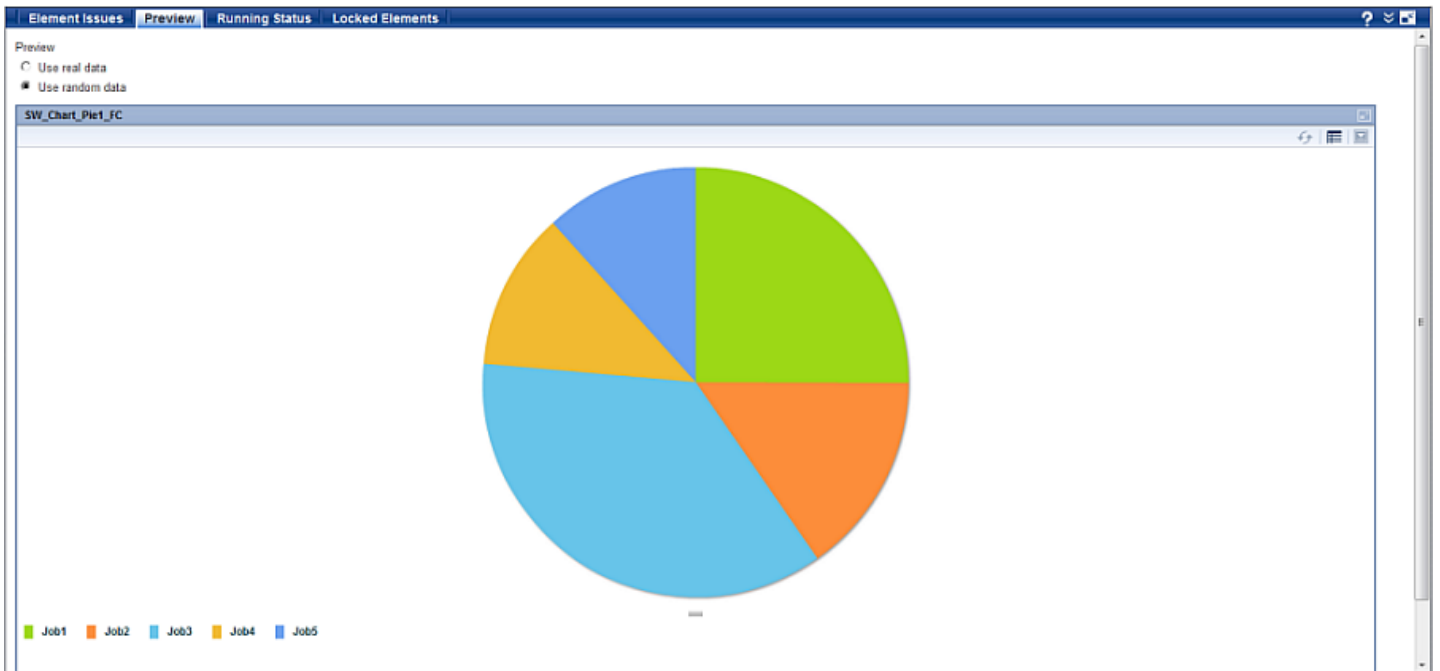
Figure 2-13 Preview Tab

Running Status Tab

You can view the runtime status of published elements added to the Analytics system using the **Running Status** tab of the Quick Panel. Simply, select the element to display its definition, and then, click the **Running Status** tab.

The following figure displays the runtime status for a sample alert.

Figure 2-14 Running status of a sample alert

NOTE
The Analytics Studio displays the runtime status only for events and alerts.

The running status includes details, such as the total count of events or alerts triggered, rate of occurrence of alerts, occurrence date for the first event or alert triggered, and occurrence date for the most recent event or alert triggered.

Locked Elements Tab

The Analytics Studio uses the concept of "locking" and "unlocking" to maintain data integrity and restrict multiple users from editing the same element simultaneously.

When you edit an element, the Analytics Studio locks the element, providing you exclusive rights to edit it without displaying the revisions being made to other users. While you edit the element, other Analytics Studio users view the previous "Shared" version of the element's definition. The revised definition becomes visible only when you share the element. This exclusive lock can be revoked using the **Locked Elements** tab (see Figure 2-15), but only certain Analytics Studio users are authorized to do so.

NOTE

The Quick Panel displays the **Locked Elements** tab only for specific users with appropriate rights and permissions. Moreover, removing the lock causes any changes made to the element's definition to be lost.

To unlock an element:

1. Click the **Locked Elements** tab on the Quick Panel.

2. The **Locked Elements** tab, as the name suggests, lists all elements that are currently locked for editing. Browse through the given list, and select the elements you want to unlock.

Figure 2-15 Locked Elements tab

TIP!

In case the **Locked Elements** tab provides an exhaustive list, use the **Filter** to sort specific elements you want to unlock. You can filter elements for specific Analytics Studio users, or even enter a time period to derive specific elements locked within that duration.

The Filter is displayed by default. To hide the filter, click **Close panel** button ( ). Invoke the filter by clicking **Open panel** button ( ).

---
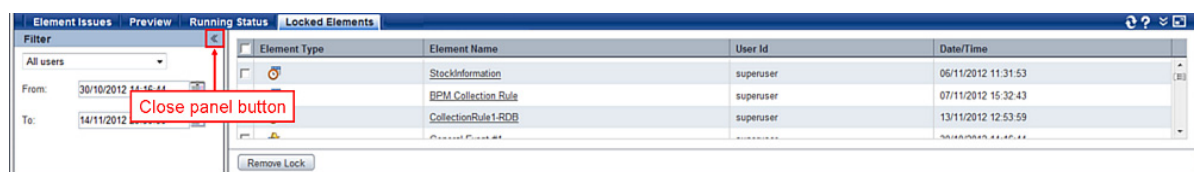
3. Click **Remove Lock** to unlock the selected elements.

Using the Analytics Studio GUI Icons

The Analytics Studio GUI uses various icons to represent elements and their states. It also provides additional icons that enable easy navigation of the GUI.

Refer to the following tables for a brief description of the Analytics Studio icons.

- Table 2-7; Element icons

- Table 2-8; Element state icons

- Table 2-9; Element issue icons

- Table 2-10; Common GUI icons

Table 2-7 Element icons

Icon	Element	Description
	Connection	Indicates connection with a data source; is configured using the Management Console
	Collection rule	Collects data from a data source
	Event	Is an instance of data collected from the data source or an instance of statistical data calculated from an existing event
	Event Modifier	Performs statistical calculations on events to generate new events
	Alert	Monitors business events and triggers an alert when events exceed their defined threshold
	Alert filter	Controls the display of alerts on the dashboard
	Chart	Is a graphical representation of business events
	Layout	Defines the dashboard layout; in other words, the alignment of dashboard components, such as alerts and charts, on the dashboard
	Dashboard profile	Defines custom views of the dashboard for different types of dashboard users
	Dashboard group	Creates logical groups of dashboard users with specific rights and permissions to use the Analytics dashboard
	Report	Is a collection of charts and alerts stored on the Analytics server for later reference

Table 2-8 Element state icons

Icon	State	Description
	Being edited	Indicates that an element is currently being edited by a user; additionally, the name of the element will be bold if the current user logged into the system holds the lock for the element
	Shared	Indicates an element is in the "Shared" state

Icon	State	Description
	Ready	Indicates an element is in the "Ready" state
	Rejected	Indicates an element that has been rejected from being published
	Published	Indicates a published element
	Being edited (Published)	Indicates that a published element is currently being edited
	Shared (Published)	Indicates that a published element is in the "Shared" state
	Ready (Published)	Indicates that a published element is in the "Ready" state
	Rejected (Published)	Indicates that a published element has been rejected from being published again with updated specifications
	Deleted	Indicates that a published element that has been marked for deletion

Table 2-9 Element issue icons

Icon	Element issue	Description
	Error	Indicates there is an error with the element's configuration, which must be resolved for proper functioning of the element
	Warning	Indicates that there is a fault with the element's configuration, which does not directly impact the functioning of the element

Table 2-10 Common GUI icons

Icon	Description
	Displays the Analytics Studio Help
	Opens a panel
	Closes a panel
	Opens the Analytics Studio home page
	Maximizes a panel
	Restores a panel

Chapter 3

Using the Analytics Studio

This chapter explains the workflow for processing elements using the Analytics Studio and explains how to create, edit, and publish elements.

Key concepts covered in this chapter include:

- [Understanding the Analytics Studio Workflow](#)
- [Creating Elements](#)
- [Editing Elements](#)
- [Duplicating Elements](#)
- [Deleting Elements](#)
- [Deactivating and Activating Elements](#)
- [Sharing Elements](#)
- [Readying Elements](#)
- [Publishing Elements](#)

Understanding the Analytics Studio Workflow

For an Analytics Studio element to be functional for business monitoring, it must be successively processed through three distinct states of "Draft", "Ready", and "Published". This sequential processing of elements from their initiation to their completion ensures data integrity.

The following figure depicts the Analytics Studio workflow illustrating the different element processing states and the user actions associated with each state. Refer to Table 3-1 below for a description of the Analytics Studio workflow.

Note that the Analytics Studio maintains two versions of an element: draft and published. The draft version is the version that can be edited, while the published version is implemented in Analytics for business monitoring. All elements are initially created as a draft and undergo successive processing to become published. In the following diagram, "Draft Area" signifies a draft element being edited, while the "Published Area" signifies the published version of the draft element.
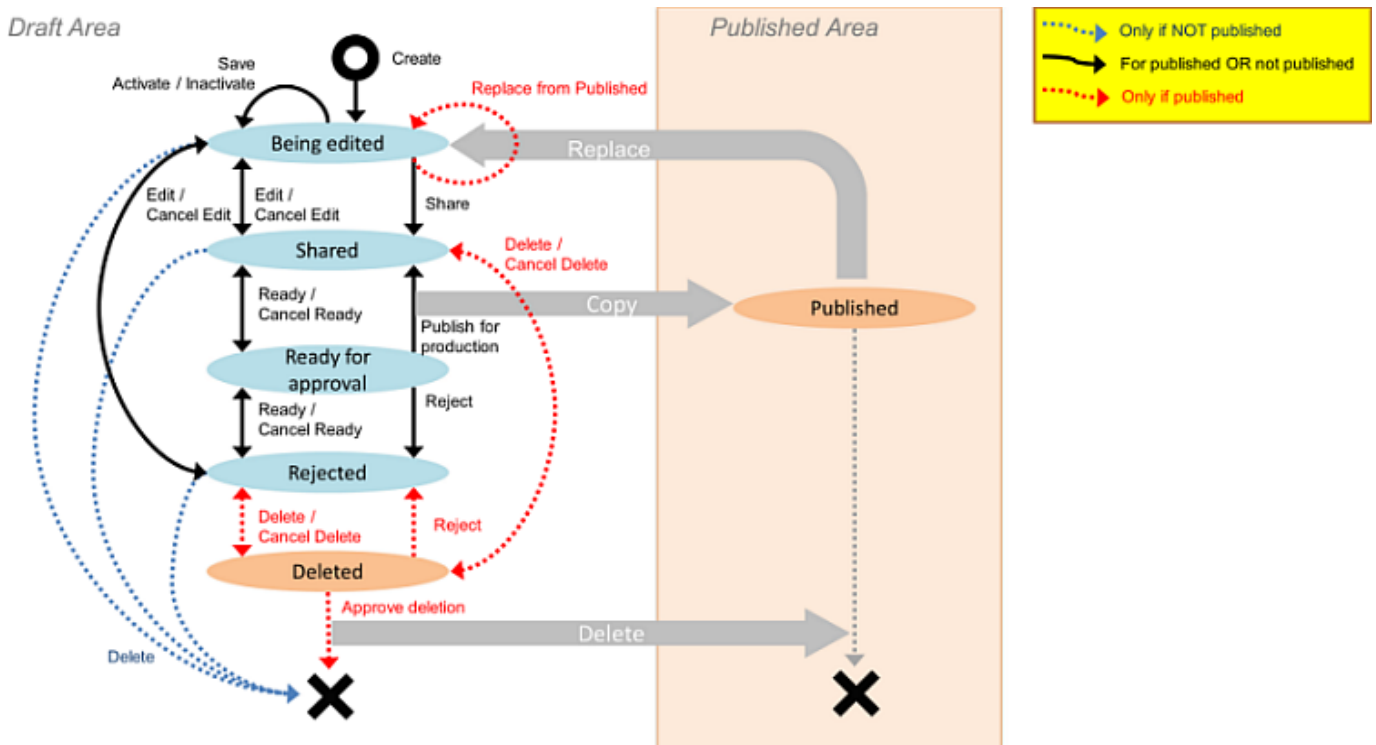
Figure 3-1 Analytics Studio workflow

Table 3-1 Analytics Studio workflow

State	Description	User action (*1)
Being edited	- A new element is initially created in the "Being edited" state. - An element in the "Being edited" state is listed on the **Draft** tab and is represented by the 🖉 icon. - An element in the "Being edited" state is exclusive to the user editing it and any	Edit the element's definition, and then click **Save** to apply the changes.

State	Description	User action (*1)
	changes/modifications being made are not visible to other users.	
Shared	After an element's definition has been updated and saved, its revised definition must be shared with all users.	- Click **Share** to share the element's definition with all users. - Click **Edit** if you want to further modify the element's definition. Doing this transitions the element to its previous "Being edited" state and displays the **Cancel Edit** button. - Click **Cancel Edit** to discard the changes made to an element's definition and revert the element to its previous "Shared" state.
Ready for approval	A "Shared" element must be forwarded to the "Ready for approval" state for a review of its definition.	- Click **Ready** to designate the element as "Ready for approval". Doing this displays the **Cancel Ready** button. - Click **Cancel Ready** to revoke the "Ready for approval" state of an element and revert it to its previous "Shared" state.
Published (*2)	A "Ready" element can be published for use in real-time business monitoring. A "Published" element is listed on the **Draft** and **Published** tabs represented by the and cons, respectively.	Refer to "Publishing Elements" later in this chapter for the procedure to publish an element.
Rejected	A "Ready" element can be rejected from being published, for example, if its definition is incomplete or incorrect.	Click **Reject elements** to reject the element from publication. The element transitions to the "Rejected" state and is represented by the icon.
Deleted	- Elements that have not been published can be deleted immediately. - Published elements are not directly deleted but are only marked for deletion. Their deletion is further approved by an advanced Analytics Studio user with appropriate rights and permission. - On deletion, a published element transitions to the "Deleted" state and is represented by the icon.	Click **Delete** to delete an element.

*1: The user actions in this table are specific to the Overview page displayed on selecting an element on the **Draft** tab in the Element Navigation pane.

*2: When an element is published, two copies of that element are maintained in Analytics: one is retained in the **Published** tab and is used in business monitoring, while the other is maintained on the **Draft** tab and can be further edited.

In case a "Published" element's definition is modified, it must go through the same lifecycle of Draft-Ready-Published for any changes to take effect.

Creating Elements

This section explains how to create Analytics Studio elements. There are two key methods to create elements:

- Using the Menu Bar

  This is the primary method for creating elements. All elements can be created using **Action** > **New** from the menu bar.

- Using the Guide Tab

  This is another method that enables creation of a set of related elements, also referred to as an element group, collectively and quickly.

Depending on your requirement, choose a method that fits your needs.

Using the Menu Bar

This section explains the procedure for creating elements using **Action** > **New** from the menu bar for creating elements. Refer to the following procedures for details.

- Creating connections
- Creating collection rules
- Creating event groups
- Creating events
- Creating event modifiers
- Creating alerts
- Creating alert filters
- Creating charts
- Creating layouts
- Creating dashboard profiles
- Creating dashboard groups
- Creating reports
- Creating a functional chart
- Creating a functional alert
- Creating a functional dashboard view

Creating connections

A connection defines how to connect to a data source. For example, an RDB connection uses the JDBC URL and login credentials (username/password) to connect to an RDB database.

You can configure connections using the Management Console. For details, refer to the *Interstage Business Process Manager Analytics V12.1 Management Console Guide*.

Creating collection rules

As the name suggests, a *collection rule* defines the criteria or rule for collecting data from a data source. In other words, it defines how, what, where, and when the data is collected. The collected data is stored as events in the *Events* database, which are later referenced by other Analytics Studio elements, such as alerts and charts, for display on the dashboard.

Analytics supports three types of collection rules: RDB, text, and BPM.

- RDB collection rule

  Collects data from relational databases

- Text collection rule

  Collects text-formatted data such as data in the CSV or FLAT format

- BPM collection rules

  Collects data from business processes managed using Interstage BPM systems

> **IMPORTANT!**
>
> You can only create RDB and text collection rules using the Analytics Studio. BPM collection rules are preconfigured in Analytics. You may, however, edit them using the Analytics Studio. Refer to "Editing BPM collection rules" for details.

Use the following procedure to create a collection rule.

1. From the menu bar, click **Action** > **New** > **Collection Rule** to display the **Create Collection Rule** dialog box.

> **TIP!**
>
> Use any of the following alternate methods to display the **Create Collection Rule** dialog box.
>
> - Click the **Collection Rule** icon on the Studio Home.
>
> - On the **Draft** tab, right-click **Collection Rules**, and then click **Create New**.

2. In the **Name** box, replace the default text with a unique, meaningful name for the collection rule.

> **NOTE**
>
> Ensure you provide a meaningful, unique name to the rule indicative of the type of data source it communicates with. For example, *DB_MonthlySales* indicates that it is an RDB collection rule. You can use any character, number, and even, embed spaces in a name, but it must not exceed 64 characters.

3. In the **Type** list, click either **RDB** or **Text** to create an RDB or text collection rule, respectively. If you selected **Text**, go to step 5.

4. Selecting **RDB** in the **Type** list provides the following options, allowing you to indicate the type of relational database object used to retrieve data.

- **Table**

  Indicates that the data will be collected from a table

- **Stored procedure**

  Indicates that a stored procedure will be invoked on the destination system

> **NOTE**
>
> Stored procedures cannot be used for the PostgreSQL database.

5. In the **Connection** list, select the connection that will be used to connect to the destination data source.

6. Ensure that the **Open the editor after element creation** check box is selected to display the element editor after the element has been created. Clear the check box if you do not want to display the element editor.

> **NOTE**
>
> It is recommended you edit an element's definition immediately after it has been created to configure the advanced settings for the element. Note that only the most basic and preliminary settings are configured when an element is created. Therefore, select the **Open the editor after element creation** check box to display the element editor and configure advanced settings.

7. Click **Create** to create the collection rule.

The new collection rule is listed in **Collection Rules** on the **Draft** tab.
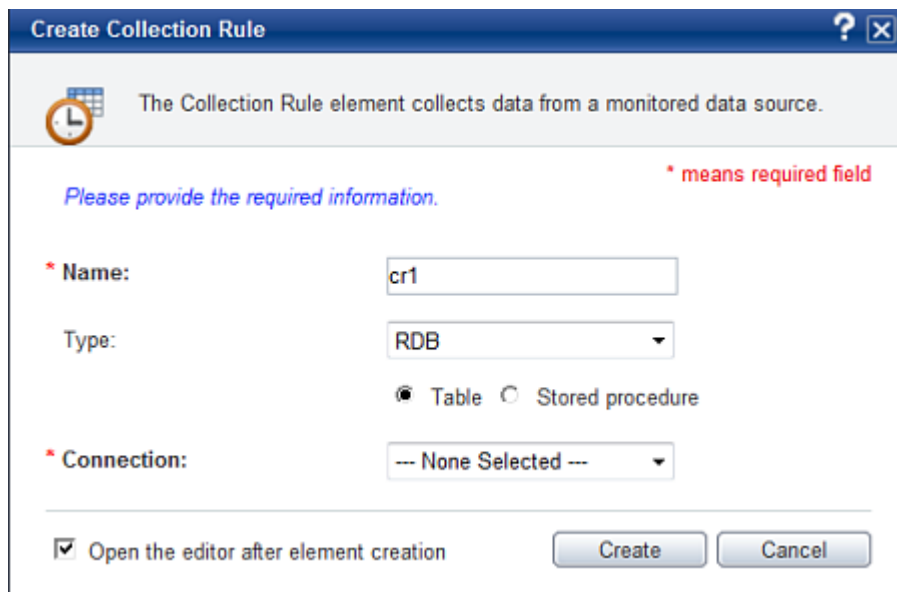
Figure 3-2 Create Collection Rule dialog box

Creating event groups

The data collected by collection rules is stored as events in the *Events* database. Analytics can logically combine these events into distinct groups, depending on the type of data they store. These groups are referred to as *event groups*.

NOTE

The Analytics Studio contains a default event group, "System", which comprises predefined events that are set when Analytics is initially configured. Note that the "System" event group cannot be deleted. Moreover, you cannot delete an event group that contains events.

To create an event group:

1. From the menu bar, click **Action** > **New** > **Event Group** to display the **Create Event Group** dialog box.

TIP!

An alternate method to display the **Create Event Group** dialog box is to right-click **Events** on the **Draft** tab, and then click **Create New Event Group**.

---

2. In the **Name** box, replace the default text with a unique, meaningful name for the event group.

3. Click **Create** to create the event group.

The new event group is listed in **Events** on the **Draft** tab.
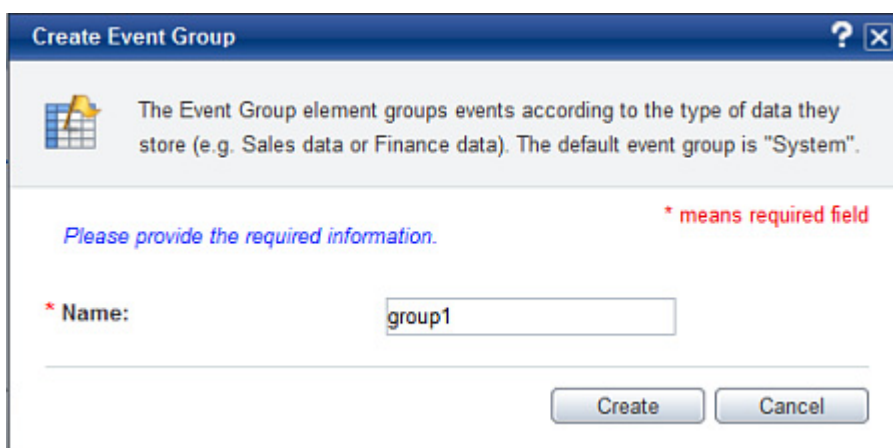
Figure 3-3 Create Event Group dialog box

Creating events

An *event* signifies the data captured from a data source. Events are the key to any Analytics operation, such as the statistical analysis of business processes or reporting of business anomalies using alerts.

IMPORTANT

Before you create an event, ensure that its respective event group is already defined in the Analytics Studio.

To create an event:

1. From the menu bar, click **Action** > **New** > **Event** to display the **Create Event** dialog box.

TIP!
Use any of the following alternate methods to display the **Create Event** dialog box.   **-** Click the **Event** icon on the Studio Home.   **-** On the **Draft** tab, right-click **Events**, and then click **Create New Event**.   **-** Right-click the event group in which you want to store the event, and then click **Create New Event**.

2. In the **Name** box, replace the default text with a unique, meaningful name for the event.

3. In the **Event Type** area, select an event type indicative of the type of data stored in the event.

- **General**

  Indicates the event stores data collected by sensors

- **Statistical**

  Indicates the event stores statistical data generated by event modifiers

- **Alert Summary (business)**

  Indicates that the event stores statistical data, related to alerts, generated by the Alert Summary (business) event modifier

4. Ensure that the **Open the editor after element creation** check box is selected to display the element editor after the element has been created. Clear the check box if you do not want to display the element editor.

NOTE
It is recommended you edit an element's definition immediately after it has been created to configure the advanced settings for the element. Note that only the most basic and preliminary settings are configured when an element is created. Therefore, select the **Open the editor after element creation** check box to display the element editor and configure advanced settings.

5. Click **Create** to create the event.

The new event is listed in **Events** on the **Draft** tab.

Figure 3-4 Create Event dialog box

Creating event modifiers

An *event modifier* performs calculations, such as sum, average, and other arithmetic operations, on existing events and generates new statistical events.

To create an event modifier:

1. From the menu bar, click **Action** > **New** > **Event Modifier** to display the **Create Event Modifier** dialog box.

TIP!
Use any of the following alternate methods to display the **Create Event Modifier** dialog box.   - Click the **Event Modifier** icon on the Studio Home.   - On the **Draft** tab, right-click **Event Modifiers**, and then click **Create New**.

2. In the **Name** box, replace the default text with a unique, meaningful name for the event modifier.

3. In the **Event Type** area, select a type for the event modifier.

- **Statistical**

  Creates a statistical event modifier that performs calculations on events to generate new events

- **Alert Summary (business)**

  Creates an Alert Summary (business) event modifier that counts the total number of alerts associated with an event; the event modifier then stores the results in the Alert Summary (business) event displayed on the Analytics Dashboard

4. Ensure that the **Open the editor after element creation** check box is selected to display the element editor after the element has been created. Clear the check box if you do not want to display the element editor.

> **NOTE**
>
> It is recommended you edit an element's definition immediately after it has been created to configure the advanced settings for the element. Note that only the most basic and preliminary settings are configured when an element is created. Therefore, select the **Open the editor after element creation** check box to display the element editor and configure advanced settings.

5. Click **Create** to create the event modifier.

The new event modifier is listed in **Event Modifiers** on the **Draft** tab.

Figure 3-5 Create Event Modifier dialog box

Creating alerts

Alerts are used to highlight exceptions or critical situations in a business scenario. They are triggered when events exceed their defined threshold. For example, an alert can trigger when the monthly sales are less than $5,000,000 or when a business process is still incomplete as the next process onsets.

To create an alert:

1. From the menu bar, click **Action** > **New** > **Alert** to display the **Create Alert** dialog box.

> **TIP!**
>
> Use any of the following alternate methods to display the **Create Alert** dialog box.
>
> -   Click the **Alert** icon on the Studio Home.
>
> -   On the **Draft** tab, right-click **Alerts**, and then click **Create New**.

2. In the **Name** box, replace the default text with a unique, meaningful name for the alert.

3. In the **Rule type** list, select an appropriate value to specify the alert rule; in other words, the basic functionality or purpose of the alert.

    The following table describes the alert rules supported by Analytics and identifies the type of event that the rule applies to.

The following symbols are used in the table to indicate whether a rule is applicable to an event:

Y: Supported N: Not supported

Table 3-2 Alert rule types

Alert rule	Description	General event	Workflow event
Check parameters (general Event)	Checks parameters of a general event	Y	N
Check parameters (workflow Event)	Check parameters of a workflow event	N	Y
Time limit	Checks the due data of a workflow event	N	Y
Waiting time	Checks the lead time of a workflow event	N	Y
Occurrence of a specific Event	Checks the activities of a workflow event, such as the starting process or ending activity	N	Y
Check relation of pair Events	Checks the relationship between events; for example, an alert can derive that the lead time of a business activity is more than 5 hours by checking the sequence between a start and an end event	Y	N
Check parameters between pair Events (general Event)	Checks parameters of two general events	Y	N
Check parameters between pair Events (workflow Event)	Checks parameters of two workflow events	N	Y
Check performance of workflow	Checks the performance of workflow events, for example, number of events per hour	N	Y

NOTE

The **Rule type** list displays workflow event-related alert rules, such as **Time limit** and **Check performance of workflow** only if **BPM Integration** is set to **Not Used** in the Management Console.

---

4. Ensure that the **Open the editor after element creation** check box is selected to display the element editor after the element has been created. Clear the check box if you do not want to display the element editor.

NOTE

It is recommended you edit an element's definition immediately after it has been created to configure the advanced settings for the element. Note that only the most basic and preliminary settings are configured when an element is created. Therefore, select the **Open the editor after element creation** check box to display the element editor and configure advanced settings.

---

5. Click **Create** to create the alert.

The new alert is listed in **Alerts** on the **Draft** tab.

Figure 3-6 Create Alert dialog box

Creating alert filters

Alert filters enable you to control the display of alerts on the Analytics Dashboard.

To create an alert filter:

1. From the menu bar, click **Action** > **New** > **Alert Filter** to display the **Create Alert Filter** dialog box.

TIP!

Use any of the following alternate methods to display the **Create Alert Filter** dialog box.

- Click the **Alert Filter** icon on the Studio Home.

- On the **Draft** tab, right-click **Alert Filters**, and then click **Create New**.

---

2. In the **Name** box, replace the default text with a unique, meaningful name for the alert filter.

3. Ensure that the **Open the editor after element creation** check box is selected to display the element editor after the element has been created. Clear the check box if you do not want to display the element editor.

NOTE

It is recommended you edit an element's definition immediately after it has been created to configure the advanced settings for the element. Note that only the most basic and preliminary settings are configured when an element is created. Therefore, select the **Open the editor after element creation** check box to display the element editor and configure advanced settings.

---

4. Click **Create** to create the alert filter.

The new alert filter is listed in **Alert Filters** on the **Draft** tab.
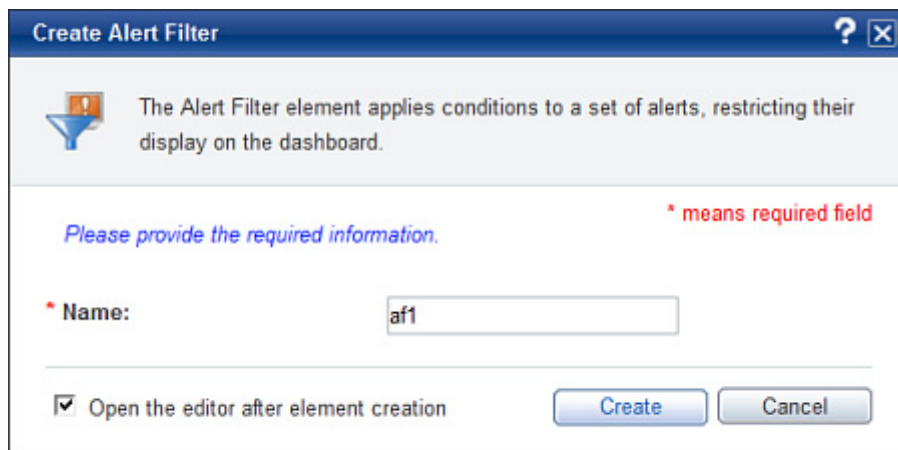
Figure 3-7 Create Alert Filter dialog box

Creating charts

*Chart*s enable graphical representation of business data in different formats, such as pie charts, bar graphs, or histograms.

To create a chart:

1. From the menu bar, click **Action** > **New** > **Chart** to display the **Create Chart** dialog box.

TIP!

Analytics Studio provides alternate methods to display the **Create Chart** dialog box.

- Click the **Chart** icon on the Studio Home.

- On the **Draft** tab, right-click **Charts**, and then click **Create New**.

- On the **Draft** tab, right-click an existing chart, and then click **Create New Drilling Chart**. This creates a nested chart with the parent chart's information added to the new drill-down chart.

---

2. In the **Name** box, replace the default text with a unique, meaningful name indicative of the data the chart represents.

3. In the **Drilling Chart** area, select any of the following values to specify whether you want to create a nested chart, which is a chart that is embedded in another chart.

   In Analytics, nested charts are referred to as *drill-down charts* as they enable you to drill-down for further statistics and information.

- **No**

   Is the default option; select this option if you do not want to create a drill-down chart

- **Yes, with parent**

   Displays a drop-down list containing charts currently configured in the Analytics Studio; select an appropriate parent chart

4. Ensure that the **Open the editor after element creation** check box is selected to display the element editor after the element has been created. Clear the check box if you do not want to display the element editor.

NOTE
It is recommended you edit an element's definition immediately after it has been created to configure the advanced settings for the element. Note that only the most basic and preliminary settings are configured when an element is created. Therefore, select the **Open the editor after element creation** check box to display the element editor and configure advanced settings.

5. Click **Create** to create the chart.

The new chart is listed in **Charts** on the **Draft** tab.

Figure 3-8 Create Chart dialog box

Creating layouts

A *layout* defines the position of presentation elements, such as charts and alerts, on the Analytics Dashboard.

To create a layout:

1. From the menu bar, click **Action** > **New** > **Layout** to display the **Create Layout** dialog box.

TIP!
Use any of the following alternate methods to display the **Create Layout** dialog box.
- Click the **Layout** icon on the Studio Home.
- On the **Draft** tab, right-click **Layouts,** and then click **Create New**.

2. In the **Name** box, replace the default text with a unique, meaningful name for the layout.

3. Ensure that the **Open the editor after element creation** check box is selected to display the element editor after the element has been created. Clear the check box if you do not want to display the element editor.

NOTE

It is recommended you edit an element's definition immediately after it has been created to configure the advanced settings for the element. Note that only the most basic and preliminary settings are configured when an element is created. Therefore, select the **Open the editor after element creation** check box to display the element editor and configure advanced settings.

---

4. Click **Create** to create the layout.

The new layout is listed in **Layouts** on the **Draft** tab.
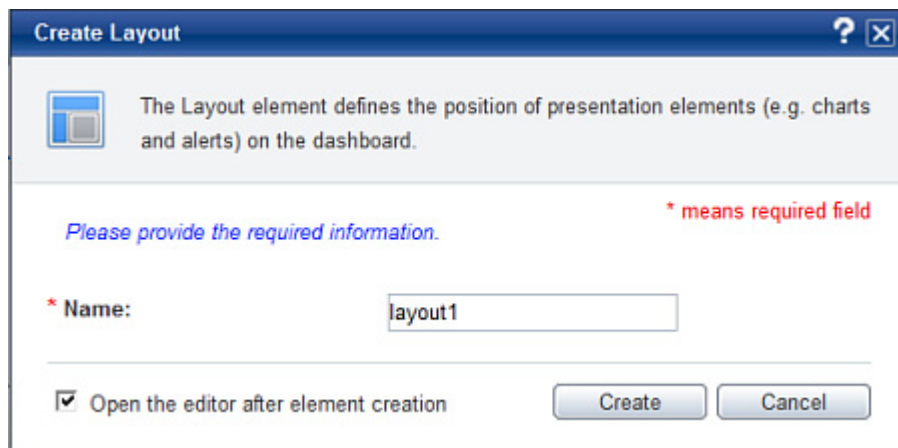
Figure 3-9 Create Layout dialog box

Creating dashboard profiles

Analytics displays custom views of the dashboard, referred to as *dashboard profiles*, which display specific business data to specific users, depending on their rights and permissions.

To create a dashboard profile:

1. From the menu bar, click **Action** > **New** > **Dashboard Profile** to display the **Create Dashboard Profile** dialog box.

TIP!

Use any of the following alternate methods to display the **Create Dashboard Profile** dialog box.

- Click the **Dashboard Profile** icon on the Studio Home.

- On the **Draft** tab, right-click **Dashboard Profiles**, and then click **Create New.**

---

2. In the **Name** box, replace the default text with a unique, meaningful name for the dashboard profile.

3. Ensure that the **Open the editor after element creation** check box is selected to display the element editor after the element has been created. Clear the check box if you do not want to display the element editor.

> **NOTE**
>
> It is recommended you edit an element's definition immediately after it has been created to configure the advanced settings for the element. Note that only the most basic and preliminary settings are configured when an element is created. Therefore, select the **Open the editor after element creation** check box to display the element editor and configure advanced settings.

4. Click **Create** to create the dashboard profile.

The new dashboard profile is listed in **Dashboard Profiles** on the **Draft** tab.

Figure 3-10 Create Dashboard Profile dialog box

Creating dashboard groups

The Analytics Studio provides you the option to organize dashboard users into groups and assign specific dashboard profiles to each group, depending on their role and responsibilities. These groups are referred to as *dashboard groups*.

To create a dashboard group:

1. From the menu bar, click **Action** > **New** > **Dashboard Group** to display the **Create Dashboard Group** dialog box.

> **NOTE**
>
> Use any of the following alternate methods to display the **Create Dashboard Group** dialog box.
>
> - Click the **Dashboard Group** icon on the Studio Home.
> - On the **Draft** tab, right-click **Dashboard Groups**, and then click **Create New**.

2. In the **Name** box, replace the default text with a unique, meaningful name for the dashboard group.

3. Ensure that the **Open the editor after element creation** check box is selected to display the element editor after the element has been created. Clear the check box if you do not want to display the element editor.

> **NOTE**
>
> It is recommended you edit an element's definition immediately after it has been created to configure the advanced settings for the element. Note that only the most basic and preliminary settings are configured when an element is created. Therefore, select the **Open the editor after element creation** check box to display the element editor and configure advanced settings.

4. Click **Create** to create the dashboard group.

The new dashboard group is listed in **Dashboard Groups** on the **Draft** tab.

Figure 3-11 Create Dashboard Group dialog box

Creating reports

You can collect dashboard metrics at regular intervals and store it for later reference as *reports*. These reports contain charts, alerts, and the data displayed on the Analytics Dashboard. Reports provide a dashboard-like view in a distributable and offline format.

To create a report:

1. From the menu bar, click **Action** > **New** > **Report** to display the **Create Report** dialog box.

> **NOTE**
>
> Use any of the following alternate methods to display the **Create Report** dialog box.
>
> - Click the **Report** icon on the Studio Home.
>
> - On the **Draft** tab, right-click **Reports**, and then click **Create New**.

2. In the **Name** box, replace the default text with a unique, meaningful name for the report indicative of the data and the time period it conforms to.

3. Ensure that the **Open the editor after element creation** check box is selected to display the element editor after the element has been created. Clear the check box if you do not want to display the element editor.

> **NOTE**
>
> It is recommended you edit an element's definition immediately after it has been created to configure the advanced settings for the element. Note that only the most basic and preliminary settings are configured when an element is created. Therefore, select the **Open the editor after element creation** check box to display the element editor and configure advanced settings.

4. Click **Create** to create the report.

The new report is listed in **Reports** on the **Draft** tab.
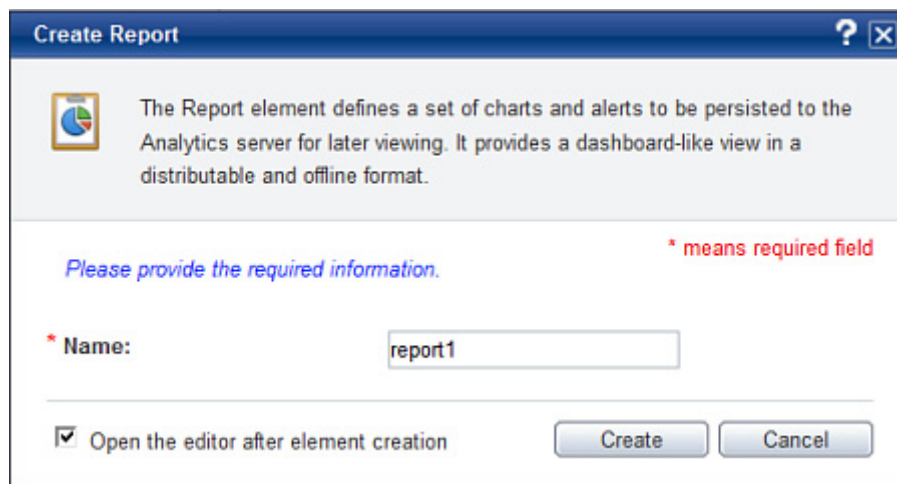
Figure 3-12 Create Report dialog box

Creating a functional chart

This is an alternative method to launch the Create a functional chart wizard. Refer to "Create a functional chart" for details.

Creating a functional alert

This is an alternative method to launch the Create a functional alert wizard. Refer to "Create a functional alert" for details.

Creating a functional dashboard view

This is an alternative method to launch the Create a functional dashboard view wizard. Refer to "Create a functional dashboard view" for details.

Using the Guide Tab

Another option for creating elements, besides the menu bar, is the **Guide** tab. However, as opposed to using the menu bar that allows you to create individual elements, the Guide tab allows you to create a functional set of related elements collectively and quickly.

Aligned in the Element Navigation panel, the **Guide** tab provides instructions on how to create and publish elements in the correct order. It provides four key steps for creating a functional set of all the elements required for business monitoring using Analytics:

1. Define charts

2. Define alerts

3. Define dashboard views

4. Publish elements

These steps contain wizards that assist and guide you through each procedure.
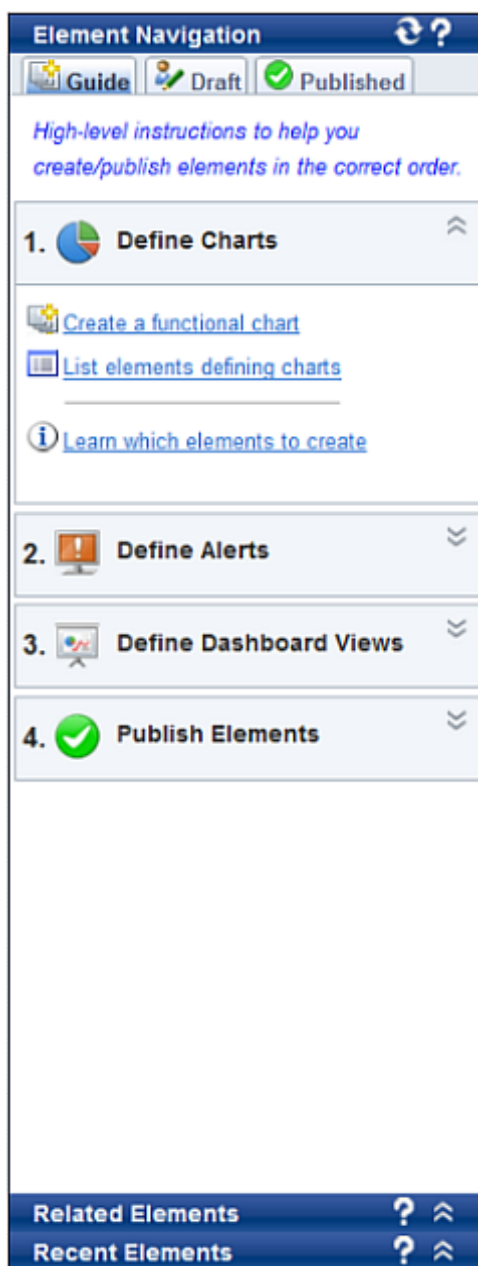
Figure 3-13 Guide tab

Define charts

The **Define Charts** area allows you to create a "functional" chart, which is a chart with all the related elements, such as the collection rules and events, which are referenced by the chart and act as the input parameters for a chart's configuration.

The **Define Charts** area provides the following options:

- Create a functional chart

- List elements defining charts

- Learn which elements to create
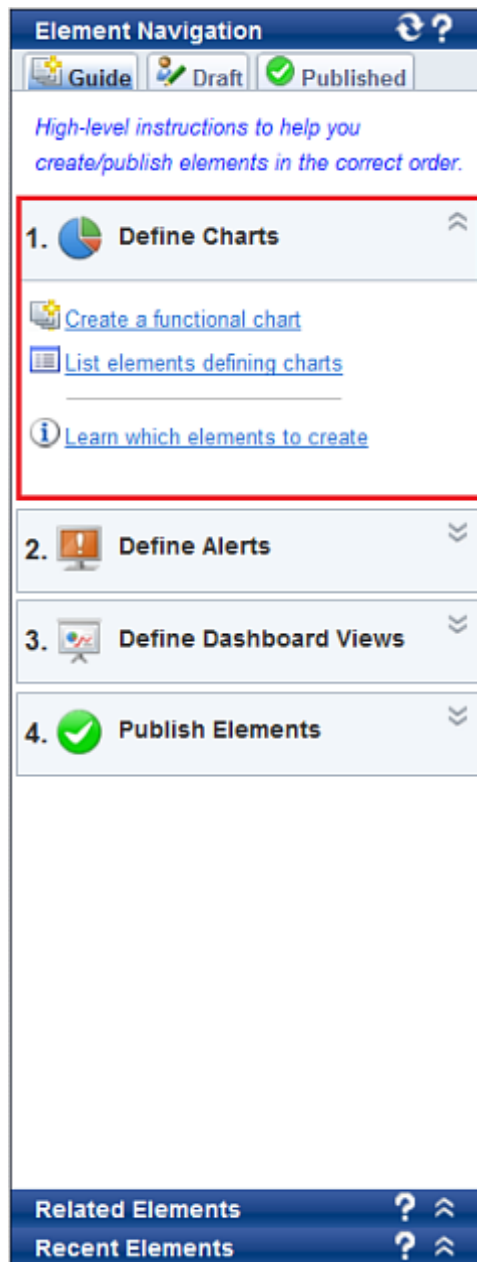
Figure 3-14 Guide tab with the Define Charts area highlighted

Create a functional chart

The **Create a functional chart** option launches a wizard that creates a chart along with all the other elements, such as the collection rule, event, and event attributes, which are required for a chart's configuration.

The Analytics Studio provides you the option to either use an existing, predefined data source, which includes a preconfigured connection, a predefined collection rule that collects specific data, and an existing event that stores that data, or create a new data source to collect and store data.

Use either of these methods, depending on your requirement:

- Create a functional chart by defining a new data source
- Create a functional chart using an existing data source

Create a functional chart by defining a new data source

To create a functional chart by defining a new data source:

1. On the **Guide** tab, in the **Define Charts** area, click **Create a functional chart**. Doing this launches the **Create a functional chart** wizard.

2. On the **New data source** page, click **Yes** to create a new data source.

3. Click **Next** to provide details of the new data source.

4. On the **Data source** page, configure the new data source.

- **Data source**

    Click **RDB** to collect data from a relational database (RDB).

> **NOTE**
>
> For demonstration purpose, this procedure uses an RDB data source as an example. Click **Text** in the **Data source** area to collect data from a text format data source, such as a CSV or FLAT file.

- **Connection**

    Select a connection that will enable access to the data source.

    – **Name**

        Specify a unique, meaningful name for the collection rule that will collect data from the new data source.

> **NOTE**
>
> The **Data Source** page displays additional options for setting up a text collection rule. Refer to "Editing text collection rules" for description of these options.
>
>

5. Click **Next** to specify the data to be collected by the collection rule.

6. On the **Data to be collected** page, click **Refresh** (⟳) to list the table schemas within the RDB data source.

NOTE

For a text collection rule, a different set of options is displayed on the **Data to be collected** page. Refer to "Editing text collection rules" for description of these options.

---

7. Drill-down the available schemas to display the tables with their respective columns.

TIP!

Narrow down your search for data source attributes by using the **Text Filter**. Specify the attribute name in the **Filter** box to filter specific attributes that match the given criteria.

---

8. Select the data source attributes to be collected by the collection rule, and click **Collect Data** to add the selected columns to the **Collected Data** area.

Figure 3-15 Create a functional chart dialog box - Data to be collected page

TIP!
Use the following options to simplify data source attributes selection:
- Simply select a data source attribute in the **Collected Data Value** area to edit it.
- Click **Remove** (■) to cancel the selection of a data source attribute in the **Collected Data Value** area.
- Click **Preview Collection** for a quick glance of the records stored in the selected data source.
- In addition to collecting data from predefined columns of a table, you can perform statistical calculations on these columns to derive custom attributes for data collection. For this, type the SQL expression signifying your collection criteria in the **Collected Data Value** box, select the data type for the resultant value from the **Data Type** list, and click **Add**.

9. Click **Next** to define a new event.

10. On the **Event settings** page, provide a unique, meaningful name for the event that will store the collected data.

NOTE
The collected data is stored in an event as event attributes, which are displayed on charts. As the name used by the collected data may not represent your business needs, you may edit the event attribute name to conform to your requirement. For this, simply select the event attribute and edit the name.

11. Click **Next** to define the chart.

12. On the **Chart settings** page, configure the chart to display the collected data as event attributes.

- **Name**

  Specify a unique, meaningful name for the chart.

- **Chart type**

  Select a chart that will best represent the collected data.

- **Category**

  Select the event attribute that will form the chart's category axis.

- **Series**

  Select the event attribute that will form the chart's series axis.

- **Data**

  Select the event attribute to be plotted as the key data on the chart.

Figure 3-16 Create a functional chart dialog box - Chart settings page

NOTE
The chart configuration options depend on the type of chart selected. For example, a pie chart requires the **Category** and **Data** to be configured, while a line chart requires **Category**, **Series**, and **Data** to be set up. Moreover, the event table chart type does not require any of these options to be configured. It only requires you to select the event attributes to be displayed in a tabular format.

13. Click **Finish** to create all the elements configured using the wizard, including the data source, the collection rule, the event, and the chart.

A message confirming the creation of all the elements is displayed.
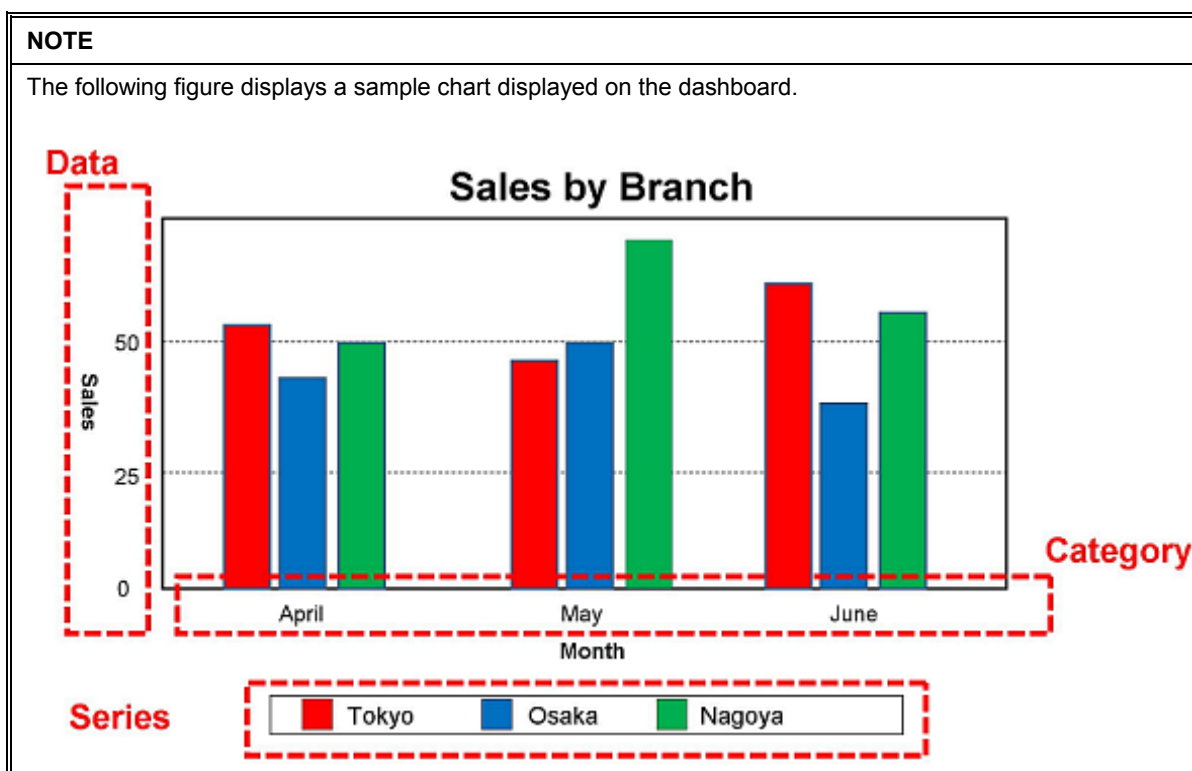
NOTE

The following figure displays a sample chart displayed on the dashboard.

Create a functional chart using an existing data source

To create a functional chart using an existing data source:

1. On the **Guide** tab, in the **Define Charts** area, click **Create a functional chart**. Doing this launches the **Create a functional chart** wizard.

2. On the **New data source** page, click **No** to use an existing data source.

3. Click **Next** to continue creating a functional chart.

4. On the **Event selection** page, select the event to be represented on the chart.

- **Event group**

   Select the event group for the event.

- **Event**

   Select the event.

   NOTE

   An event is an instance of data collected from a data source.

5. Click **Next** to define the chart.

6. On the **Chart settings** page, configure the chart.

- **Name**

   Specify a unique, meaningful name for the chart.

- **Chart type**

  Select a chart that will best represent the event data.

- **Category**

  Select the event attribute that will form the chart's category axis.

- **Series**

  Select the event attribute that will form the chart's series axis.

- **Data**

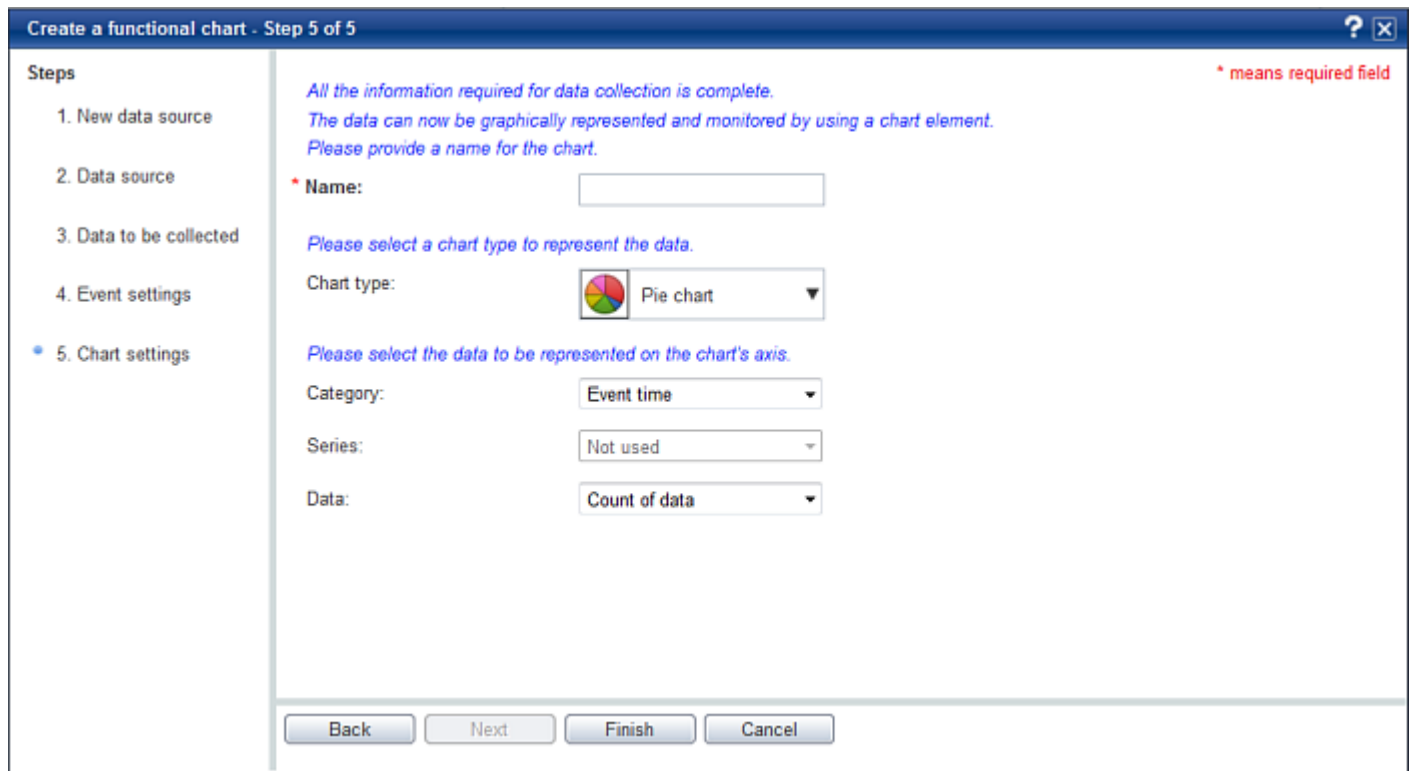 Select the event attribute to be plotted as the key data on the chart.

NOTE

The chart configuration options depend on the type of chart selected. For example, a pie chart requires the **Category** and **Data** to be configured, while a line chart requires **Category**, **Series**, and **Data** to be set up. Moreover, the event table chart type does not require any of these options to be configured. It only requires you to select the event attributes to be displayed in a tabular format.
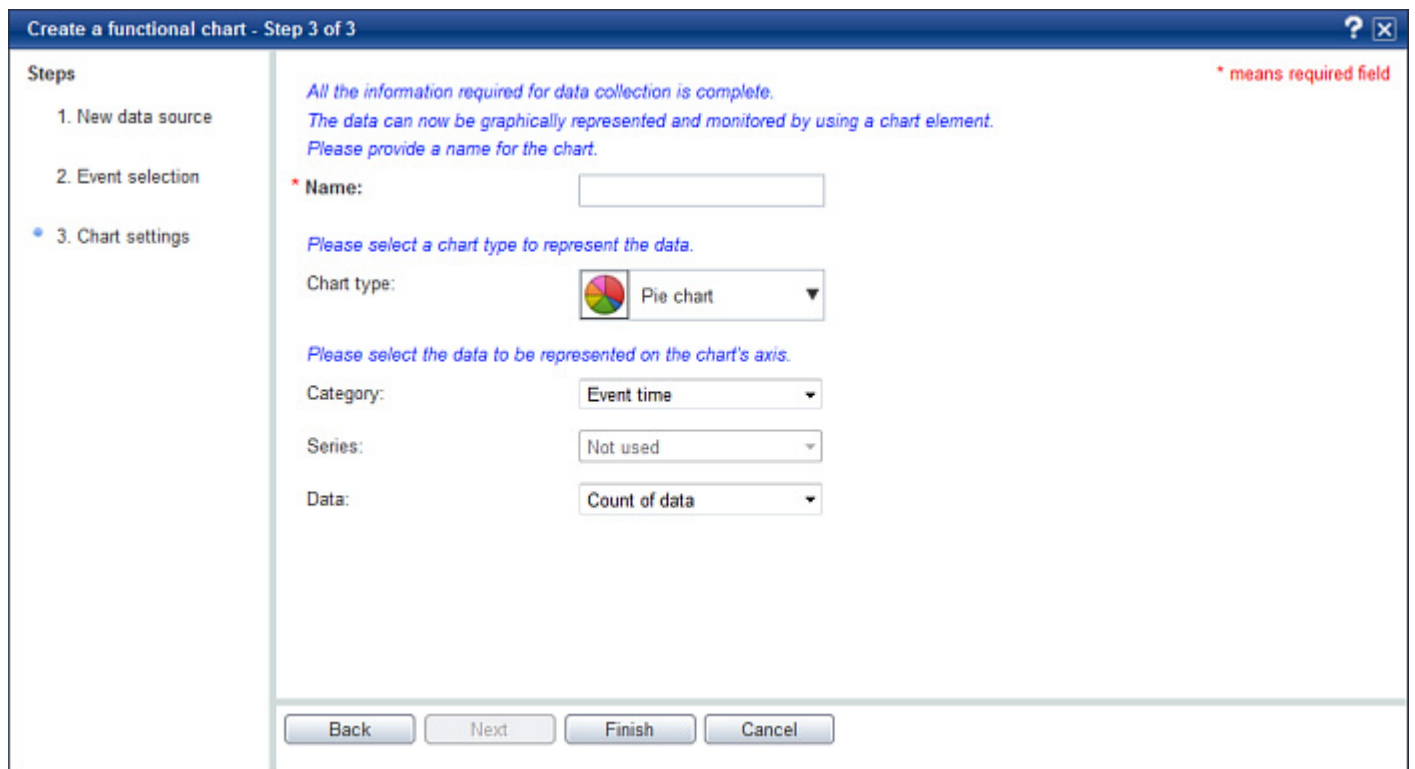
Figure 3-17 Create a functional chart dialog box - Chart settings page

7. Click **Finish** to create the functional chart.

A message confirming the creation of the chart is displayed.

NOTE

The following figure displays a sample chart displayed on the dashboard.
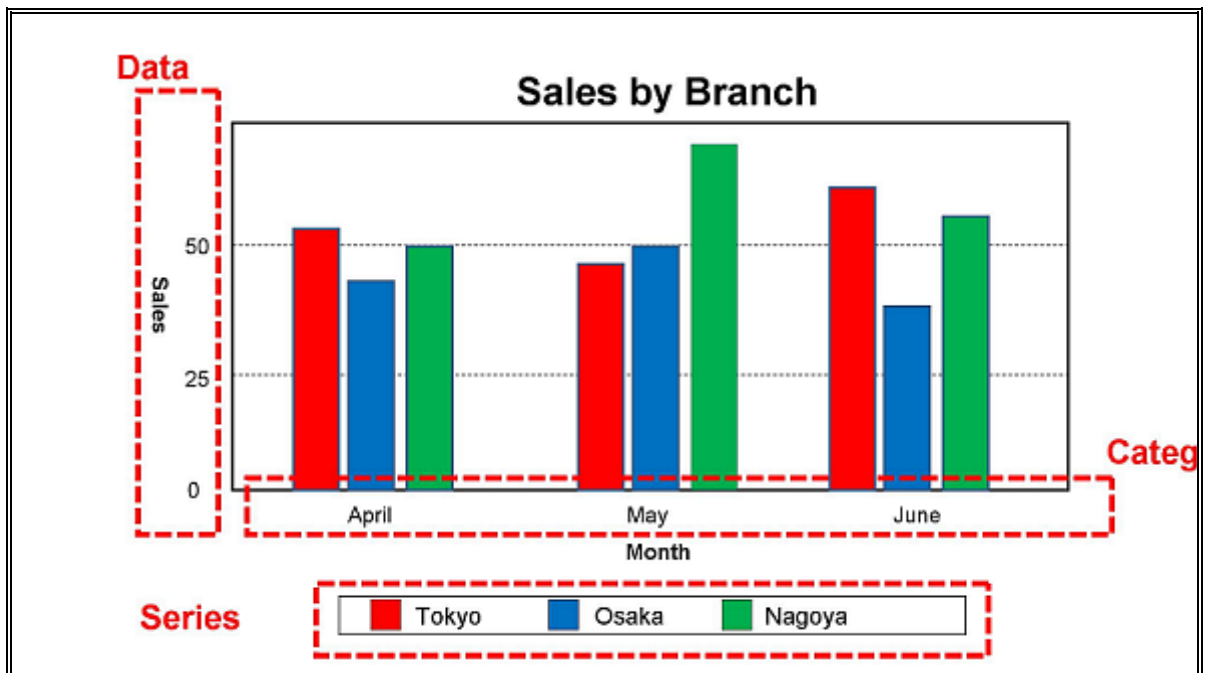
List elements defining charts

On the **Guide** tab, in the **Define Charts** area, click **List elements defining charts** to display the **Overview** page that lists all the charts defined in the Analytics Studio and all the elements, such as collection rules and events, which defined the charts' configuration.

For detail about how to use the **Overview** page, refer to "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

Learn which elements to create

As explained in "Studio Home" in Chapter 2, "Exploring the Analytics Studio GUI", all Analytics Studio elements are interdependent on each other and the Studio Home represents the correlation between these elements.

Each element displayed on the Studio Home acts as an input for another element and is required to complete the element's configuration. For example, a chart requires event details, while the event further references a collection rule's attributes for its configuration. This means that to create a chart, the event and the collection rule must be first created.

When using the **Guide** tab, depending on the element you are creating (a chart, an alert, or a dashboard view) click **Learn which elements to create** to identify the elements to be created. Doing this highlights the elements to be created on the Studio Home, disabling other elements (see figure 3-18). These highlighted elements are the elements that act as input parameters for the resultant element and must be created.

The following figure displays the elements to be created for a chart. This includes a data source, a connection, a collection rule, an event, and the chart itself.
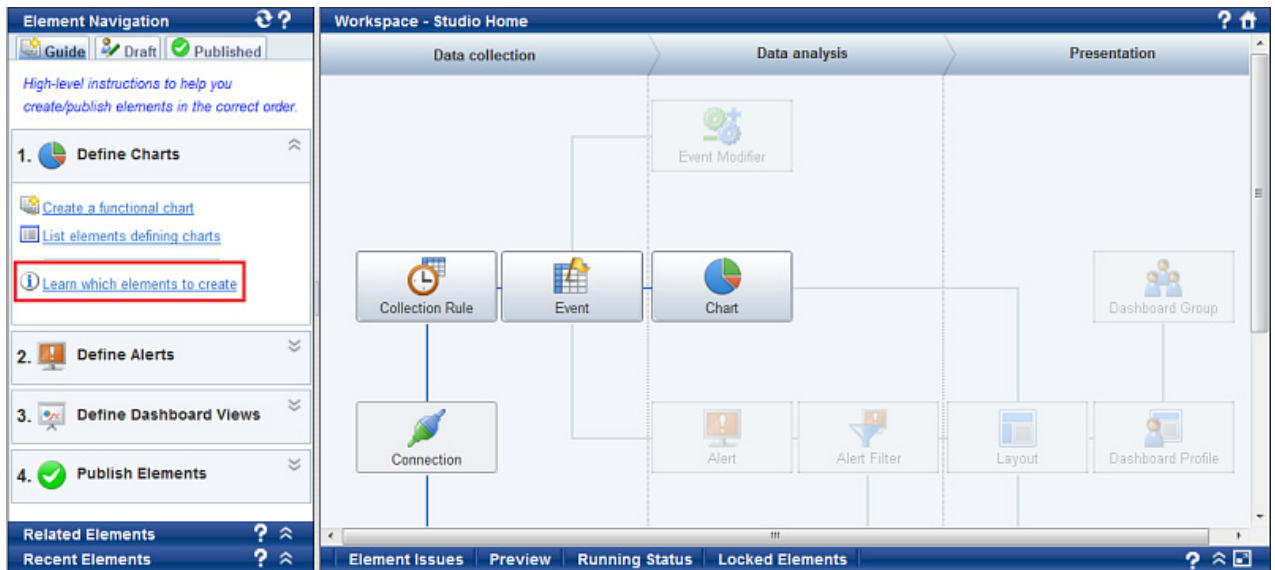
Figure 3-18 Studio Home on selecting "Learn which elements to create" in "Define Charts"

NOTE
You can click the element icons on the Studio Home to create individual elements. However, when using the **Guide** tab, it is recommend you create a functional set of related elements in a sequential manner using the wizards on the **Guide** tab,

Define alerts

The **Define Alerts** area allows you to create a "functional" alert, which is an alert with all the related elements, such as collection rule and events, referenced by the alert and act as the input parameters for an alert's configuration.

The **Define Alerts** area provides the following options:

- Create a functional alert

- List elements defining alerts

- Learn which elements to create
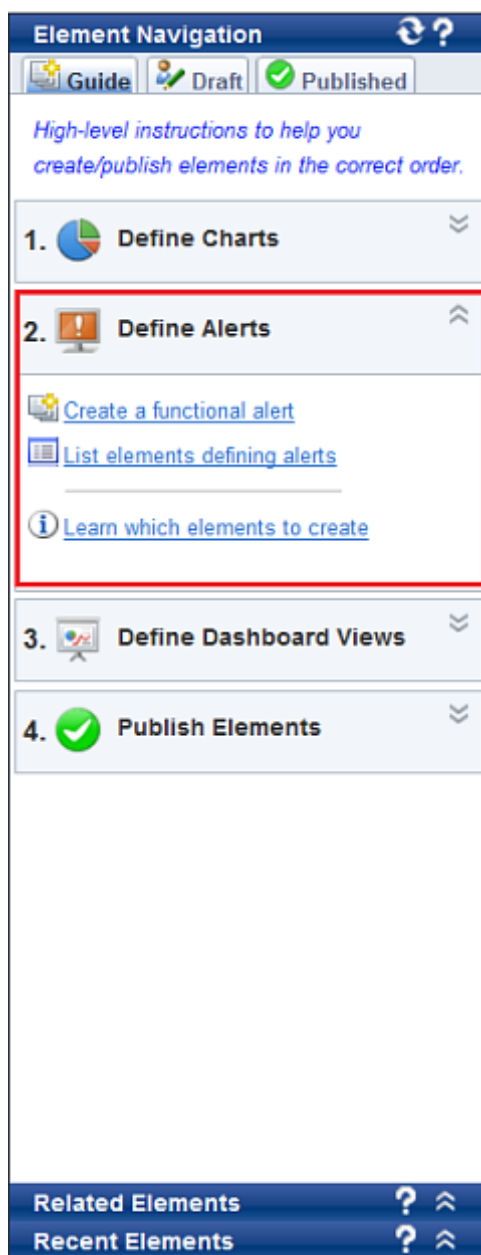
Figure 3-19 Guide tab with the Define Alerts area highlighted

Create a functional alert

The **Create a functional alert** option launches a wizard that creates an alert along with all the other elements, such as the collection rule, event, and event attributes, which are required for an alert's configuration.

The Analytics Studio provides you the option to either use an existing, predefined data source (a preconfigured connection, a predefined collection rule that collects specific data, and an existing event that stores that data), or create a new data source to collect and store data.

Use either of these methods, depending on your requirement:

- Create a functional alert by defining a new data source
- Create a functional alert using an existing data source

Create a functional alert by defining a new data source

To create a functional chart by defining a new data source:

1. On the **Guide** tab, in the **Define Alerts** area, click **Create a functional alert**. Doing this launches the **Create a functional alert** wizard.

2. On the **New data source** page, click **Yes** to create a new data source.

3. Click **Next** to provide details of the new data source.

4. On the **Data source** page, configure the new data source.

- **Data source**

  Click RDB to collect data from a relational database (RDB).

NOTE
For demonstration purpose, this procedure uses an RDB data source as an example. Click **Text** in the **Data source** area to collect data from a text format data source, such as a CSV or FLAT file.

- **Connection**

  Select a connection that will enable access to the data source.

- **Name**

  Specify a unique, meaningful name for the collection rule that will collect data from the new data source.

NOTE
The **Data Source** page displays additional options for setting up a text collection rule. Refer to "Editing text collection rules" for description of these options.

5. Click **Next** to specify the data to be collected by the collection rule.

6. On the **Data to be collected** page, click **Refresh** ( ) to list the table schemas within the RDB data source.

NOTE

For a text collection rule, a different set of options is displayed on the **Data to be collected** page. Refer to "Editing text collection rules" for description of these options.

---

7. Drill-down the available schemas to display the tables with their respective columns.

TIP!

Narrow down your search for data source attributes by using the **Text Filter**. Specify the attribute name in the **Filter** box to filter specific attributes that match the given criteria.

---

8. Select the data source attributes to be collected by the collection rule, and click **Collect Data** to add the selected columns to the **Collected Data** area.

Figure 3-20 Create a functional alert dialog box - Data to be collected page

TIP!
Use the following options to simplify data source attributes selection:
- Simply select a data source attribute in the **Collected Data Value** area to edit it.
- Click **Remove** (▨) to cancel the selection of a data source attribute in the **Collected Data Value** area.
- Click **Preview Collection** for a quick glance of the records stored in the selected data source.
- In addition to collecting data from predefined columns of a table, you can perform statistical calculations on these columns to derive custom attributes for data collection. For this, type the SQL expression signifying your collection criteria in the **Collected Data Value** box, select the data type for the resultant value from the **Data Type** list, and click **Add**.

9. Click **Next** to define a new event.

10. On the **Event settings** page, specify a name for the event that will store the collected data.

NOTE
The collected data is stored in an event as event attributes, which are displayed on charts. As the name used by the collected data may not represent your business needs, you may edit the event attribute name to conform to your requirement. For this, simply select the event attribute and edit the name.

11. Click **Next** to define the alert.

12. On the **Alert settings** page, configure the alert. In the **Name** box, specify a unique, meaningful name for the alert.

13. Click **Add expression** to add a condition that will trigger the alert.

14. Edit the default condition to meet your requirement.

- **Attribute**

  Select an event attribute that will be used during the alert detection phase.

- **Operator**

  Select an operator to specify the calculation method for the condition.

- **Value**

  Specify a value against which the event attribute will be compared.

- **Delete**

  Click the **Remove** (▧) icon to cancel the selection of a condition in the Attribute area.

Figure 3-21 Create a functional alert dialog box - Alert settings page

NOTE
You can specify one or more conditions, depending on your requirement.

15. In the **Condition** area, click either **AND** or **OR** to specify whether you want all or any of the conditions to be satisfied for the alert to be triggered.

16. In **Message**, specify the alert message.

Figure 3-22 Create a functional alert dialog box - Alert settings page

17. In **Type**, select an alert type, such as **Unknown**, **Information**, **Warning**, or **Critical**, to indicate the alert's severity.

18. Click **Finish** to create the functional alert.

A message confirming the creation of all the elements is displayed.

Create a functional alert using an existing data source

To create a functional alert by using an existing data source:

1. On the **Guide** tab, in the **Define Alerts** area, click **Create a functional alert**. Doing this launches the **Create a functional alert** wizard.

2. On the **New data source** page, click **No** to use an existing data source.

3. Click **Next** to continue creating a functional alert.

4. On the **Event selection** page, select the event you want to monitor using the alert.

- **Event group**

   Select the event group for the event.

- **Event**

   Select the event.

NOTE
An event is an instance of data collected from a data source.

---

5. Click **Next** to define the alert.

6. On the **Alert settings** page, configure the alert.

In the **Name** box, specify a unique, meaningful name for the alert.

7. Click **Add expression** to add a condition that will trigger the alert.

8. Edit the default condition to meet your requirement.

*   **Attribute**

    Select an event attribute that will be used during the alert detection phase.

*   **Operator**

    Select an operator to specify the calculation method for the condition.

*   **Value**

    Specify a value against which the event attribute will be compared.

*   **Delete**

    Click the **Remove** (■) icon to cancel the selection of a condition in the Attribute area.
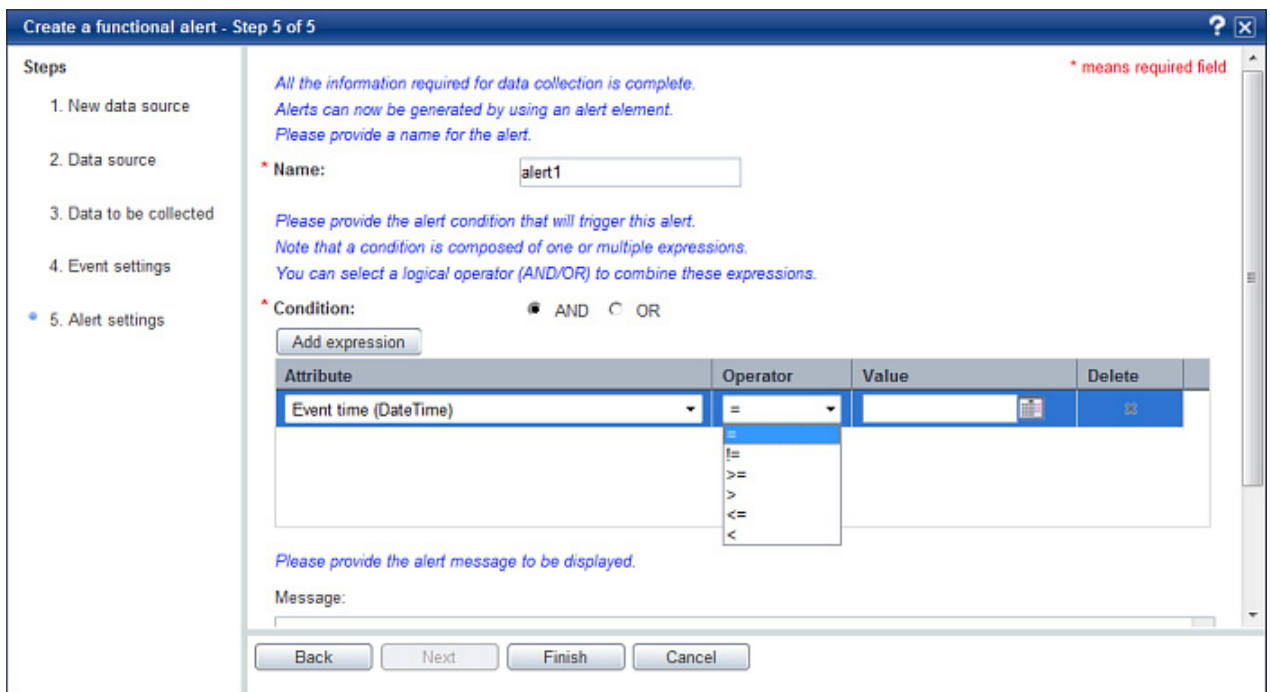

Figure 3-23 Create a functional alert dialog box - Alert settings page

NOTE
You can specify one or more conditions, depending on your requirement.

9. In the **Condition** area, click either **AND** or **OR** to specify whether you want all or any of the conditions to be satisfied for the alert to be triggered.

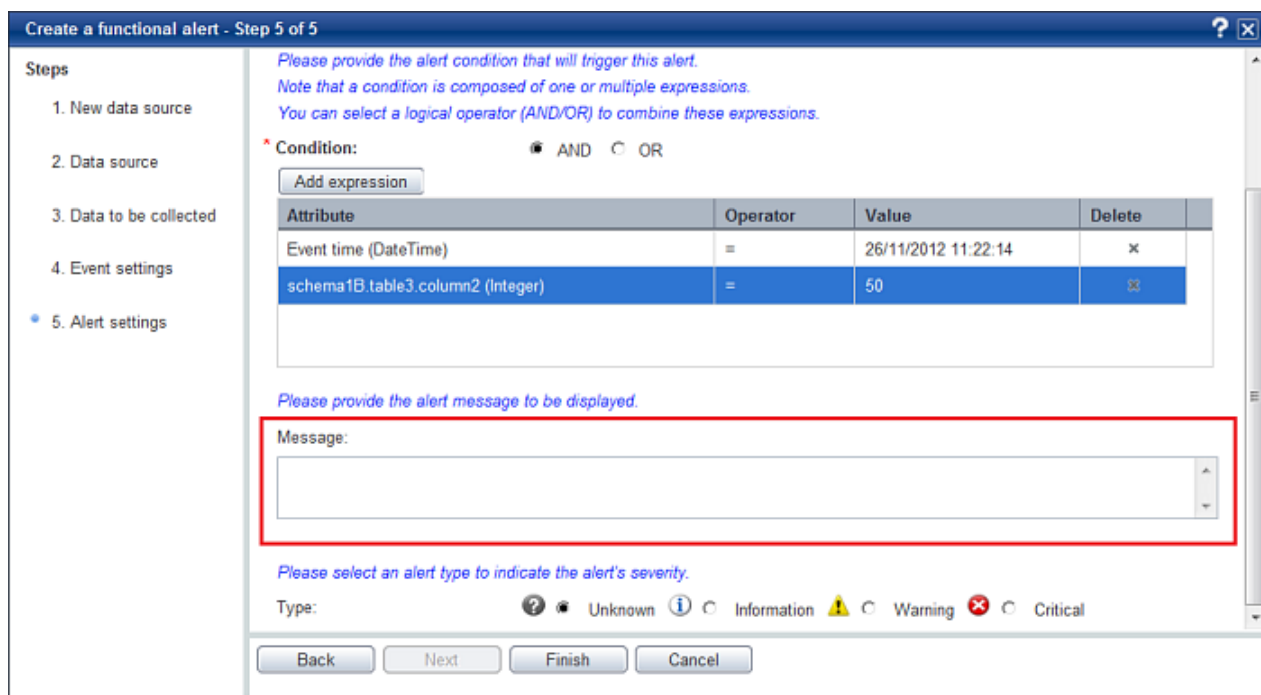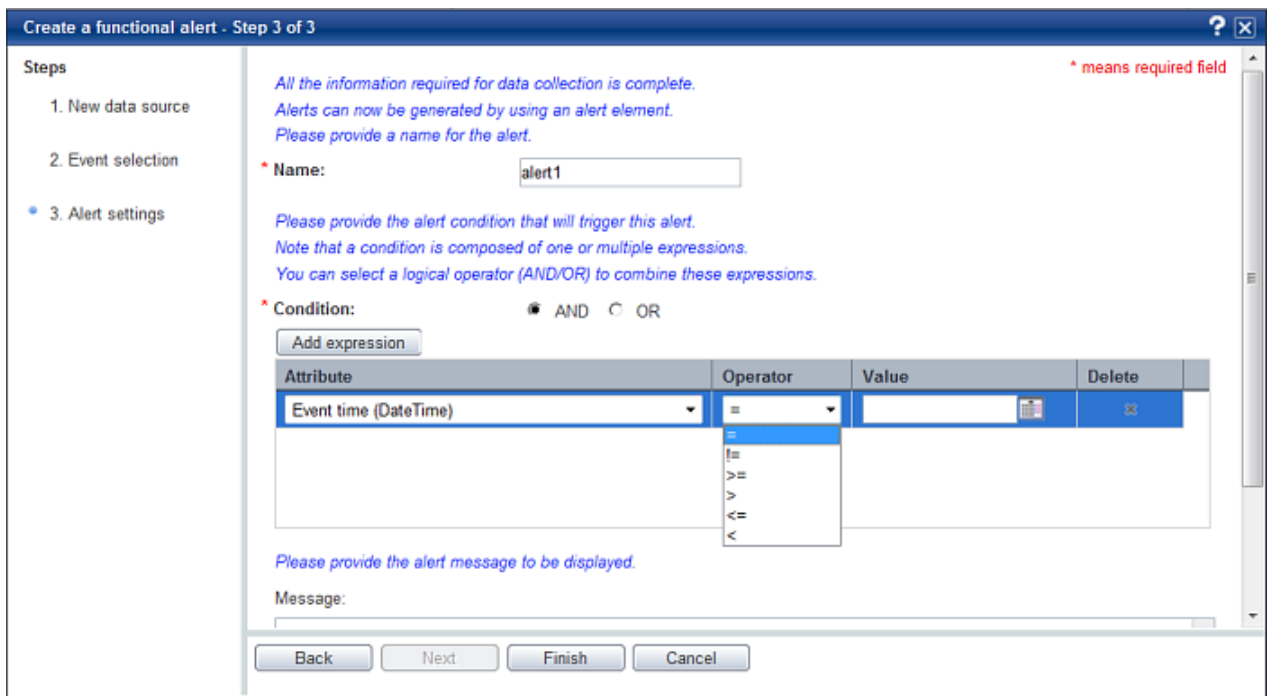10. In **Message**, specify the alert message.
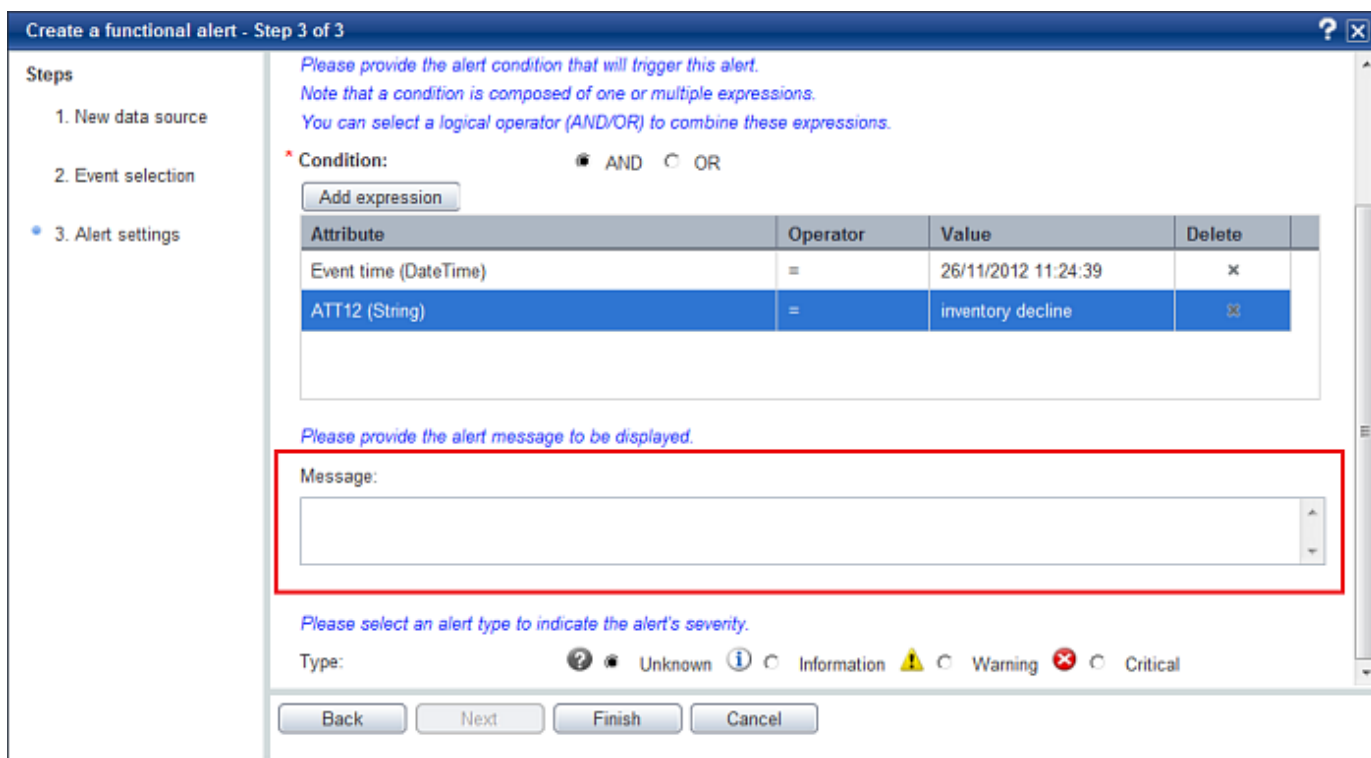
Figure 3-24 Create a functional alert dialog box - Alert settings page

11. In **Type**, select an alert type, such as **Unknown**, **Information**, **Warning**, or **Critical**, to indicate the alert's severity.

12. Click **Finish** to create the functional alert.

A message confirming the creation of the alert is displayed.

List elements defining alerts

On the **Guide** tab, in the **Define Alerts** area, click **List elements defining alerts** to display the **Overview** page that lists all the alerts defined in the Analytics Studio and all the elements, such as collection rules and events, which defined the alerts' configuration.

For detail about how to use the **Overview** page, refer to "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

Learn which elements to create

Refer to "Learn which elements to create" covered earlier in this chapter for details.

Define dashboard views

The **Define Dashboard Views** area allows you to create a "functional" set of presentation elements, referred to as a *dashboard view*, that control the display of analytical information on the Analytics Dashboard. This includes a layout, a dashboard profile, a dashboard group, including an alert filter, which is referenced by the dashboard view and act as the input parameters for the view's configuration.

The **Define Dashboard Views** area provides the following options:

- Create a functional dashboard view

- List elements defining dashboard views

- Learn which elements to create
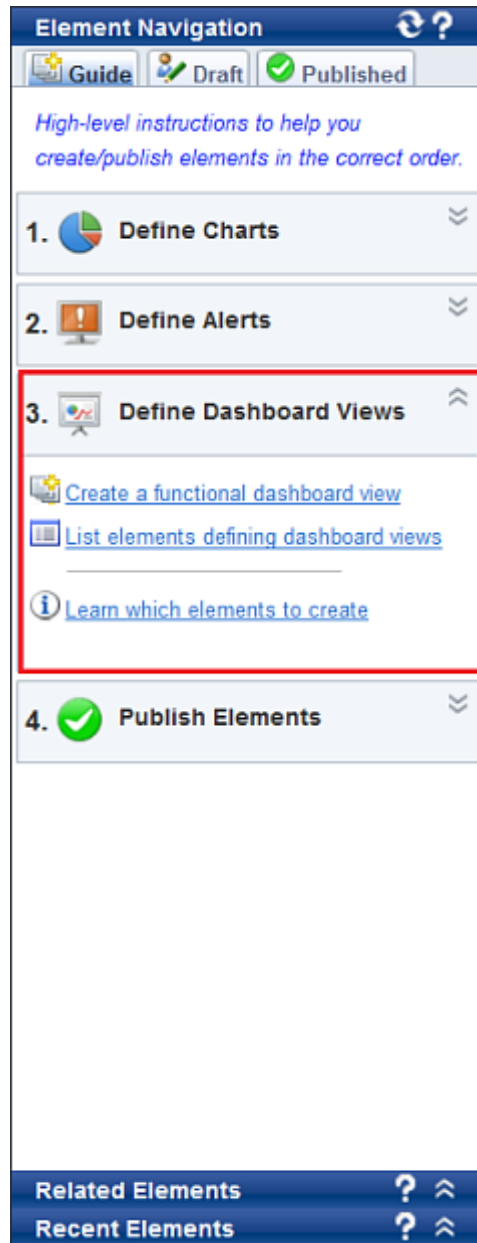
Figure 3-25 Guide tab with the Define Dashboard Views area highlighted

Create a functional dashboard view

To create a functional dashboard view:

1. On the **Guide** tab, in the **Define Dashboard Views** area, click **Create a functional dashboard view**. Doing this launches the **Create a functional dashboard view** wizard.

2. On the **Layout settings** page, specify a unique and meaningful name for the layout.

> **NOTE**
>
> A layout defines the position of Analytics Studio elements, such as alerts and charts, on the Analytics Dashboard.

3. In the **Available charts** list, select a chart you want to add to the layout and click **Add Selected** (►   ). Doing this positions the chart in the **Selected chart** list.

Figure 3-26 Create a functional dashboard view dialog box - Layout settings page

> **NOTE**
>
> You can add multiple charts to a layout. Use **Add All** (►►) to add all the available charts to a layout. Alternatively, use **Remove All** (◄◄) or **Remove Selected** (◄) to remove the selected charts.

4. Click **Next** to define the alert filter settings for the dashboard view.

5. On the **Alert filter settings** page, click either **Yes** or **No** to specify whether you want to display alerts in the layout.

6. Skip to step 8 if you do not want to display alerts in the layout, else provide a unique, meaningful name for the alert filter in the **Name** box.

7. In the **Available alerts** list, select the alert you want to add to the layout. Doing this positions the alert in the **Selected alerts** list.
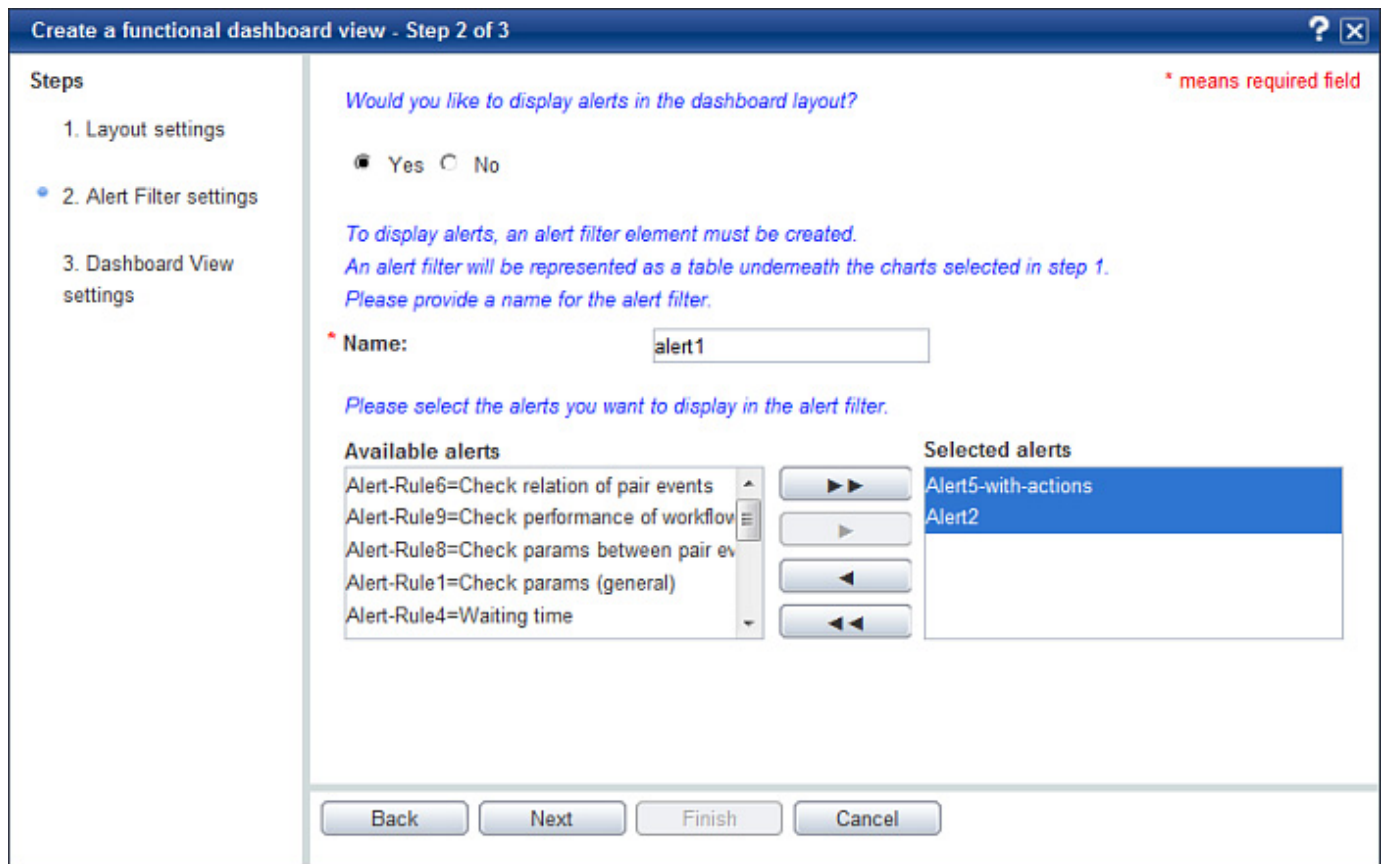
Figure 3-27 Create a functional dashboard view dialog box - Alert Filter settings page

8. Click **Next** to define the dashboard view settings.

9. On the **Dashboard view settings** page, provide a unique, meaningful name for the dashboard profile in the **Name** box.

10. Configure the dashboard group for the dashboard view.

    In the **Name** box, specify a unique, meaningful name for the dashboard group.

NOTE
The Analytics Studio provides you the option to organize dashboard users into groups and assign specific dashboard profiles to each group, depending on their role and responsibilities. These groups are referred to as "Dashboard Groups".

11. In the **Available users** list, select a user for the dashboard group and click **Add Selected** (▶). Doing this positions the user in the **Selected users** list.
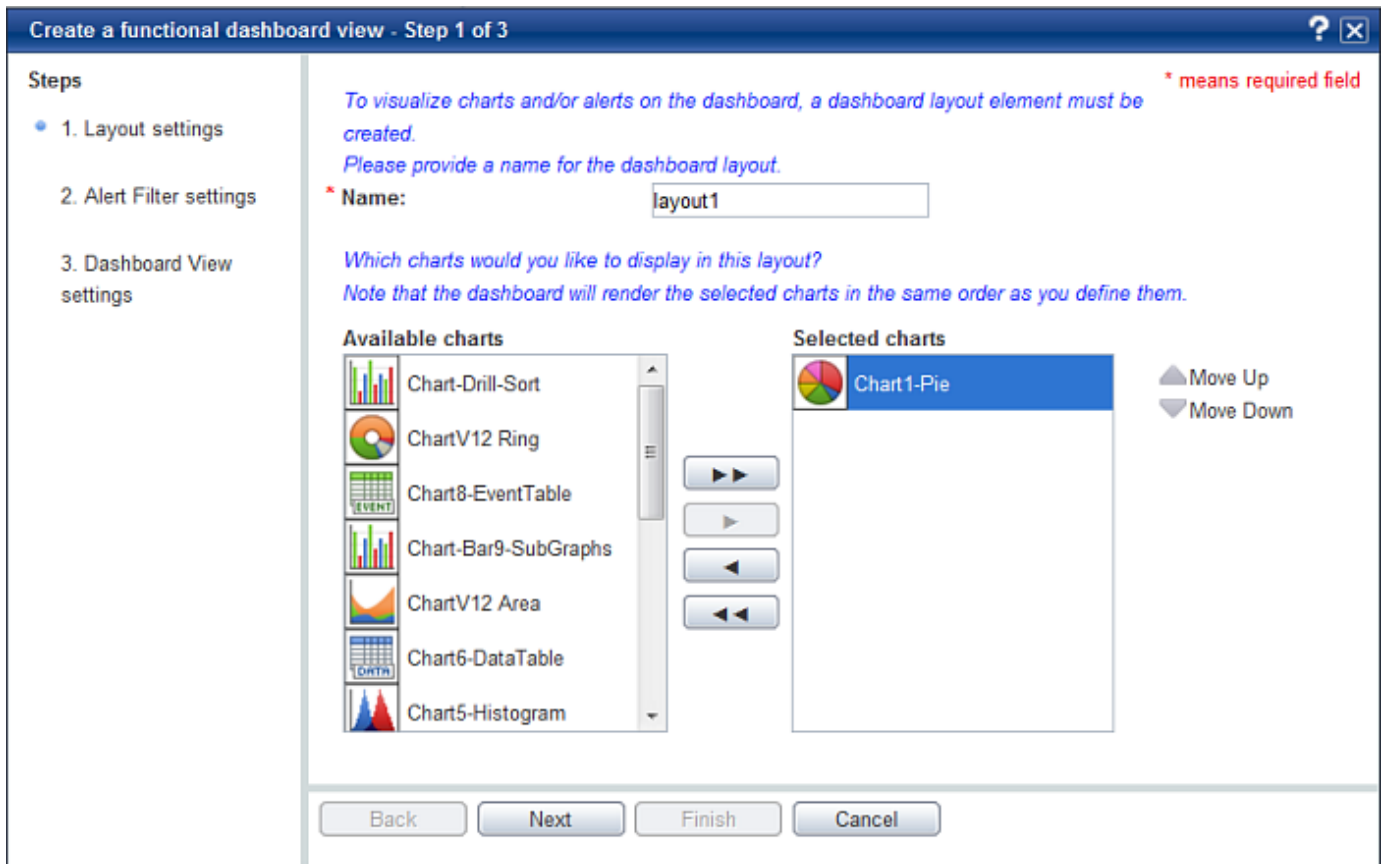
Figure 3-28 Create a functional dashboard view dialog box - Dashboard View settings page

---

NOTE

You can add multiple users to a dashboard group. Use **Add All** (►►) to add all the available charts to a dashboard group. Alternatively, use **Remove All** (◄◄) or **Remove Selected** (◄) to remove the selected users.

---

12. Click **Finish** to create the functional dashboard view.

A message confirming the creation of all the elements is displayed.

List elements defining dashboard views

On the **Guide** tab, in the **Define Dashboard Views** area, click **List elements defining dashboard views** to display the **Overview** page that lists all the presentation elements defined in the Analytics Studio and all the elements, such as alert filters, which defined the dashboard view's configuration.

For detail about how to use the **Overview** page, refer to "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

Learn which elements to create

Refer to "Learn which elements to create" covered earlier in this chapter for details.

Publish elements

After you have created all the functional elements, you need to publish the element for use in real-time business monitoring.

On the **Guide** tab, click the **Open** icon () for the Publish Elements area to display the following options that allow you to publish elements:

- List all elements
- Share elements
- Mark elements ready for approval
- Publish elements
- Learn Studio workflow

List all elements

Click **List all elements** in the **Publish Elements** area to display the All Draft Elements page with all the draft elements (in the "Being edited" state) configured in the Analytics Studio for use in business monitoring.

Refer to "Overview" in Chapter 2, Exploring the Analytics Studio GUI" for a detailed account of the Overview page.

Share elements

Click **Share elements** in the **Publish Elements** area to display the All Draft Elements page with all the draft elements (in the "Being edited" state) that can be further processed to the "Shared" state.

Refer to "Sharing Elements" for information on how to share elements.

Mark elements ready for approval

Click **Mark elements ready for approval** to display the All Draft Elements page with the all the draft elements (in the "Shared" or "Shared (published)" states) that can be further processed to the "Ready" state.

Refer to "Readying Elements" for information on how to mark elements as ready for publishing.

Publish elements

Refer to "Publishing Elements" for information on how to publish elements.

Learn Studio workflow

Click **Learn Studio Workflow** to display the Analytics Studio workflow diagram that illustrates the different elements processing states through which an element sequentially progresses so that it can be functional for use in real-time business monitoring.

Refer to "Understanding the Analytics Studio Workflow" for details on the Analytics Studio workflow.
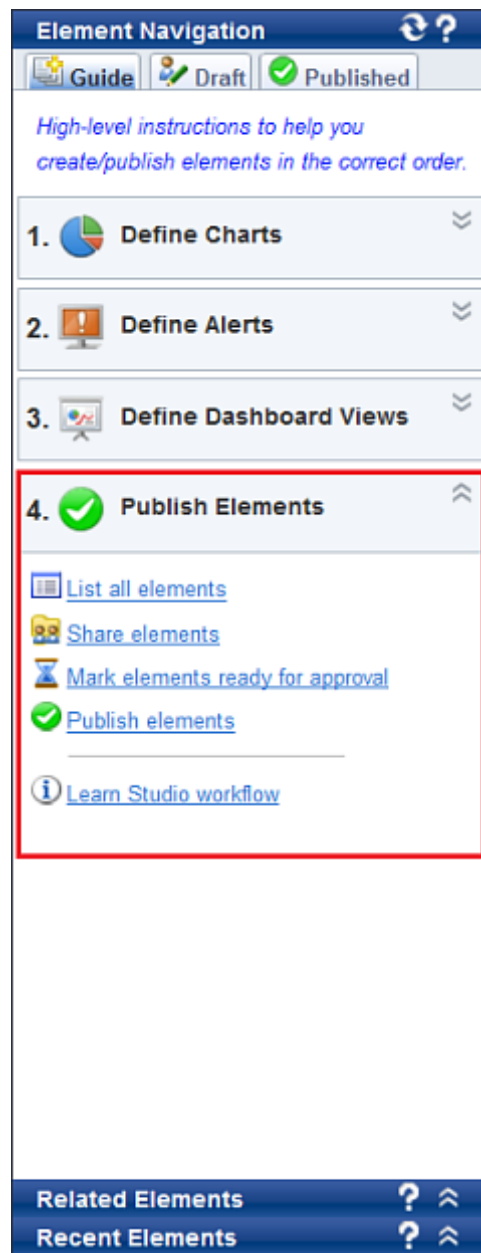
Figure 3-29 Guide tab with the Publish Elements area highlighted

Editing Elements

When you create an element, you define its most basic definition. The element definition, at this stage is not complete. To complete the definition and create a fully operational element, you need to edit the element and update its definition to embed the relevant functionality. Refer to the following procedures for details.

- [Editing Connections](#)

- [Editing Collection Rules](#)

- [Editing Event Groups](#)

- [Editing Events](#)

- [Editing Event Modifiers](#)

- [Editing Alerts](#)

- [Editing Alert Filters](#)

- [Editing Charts](#)

- [Editing Layouts](#)

- [Editing Dashboard Profiles](#)

- [Editing Dashboard Groups](#)

- [Editing Reports](#)

Editing Connections

Connections can be edited using the Management Console. Only users with administrative privileges can edit connections. For details, refer to the *Interstage Business Process Manager Analytics V12.1 Management Console Guide*.

You may, however, view a connection's definition using the **Published** tab in the Analytics Studio.
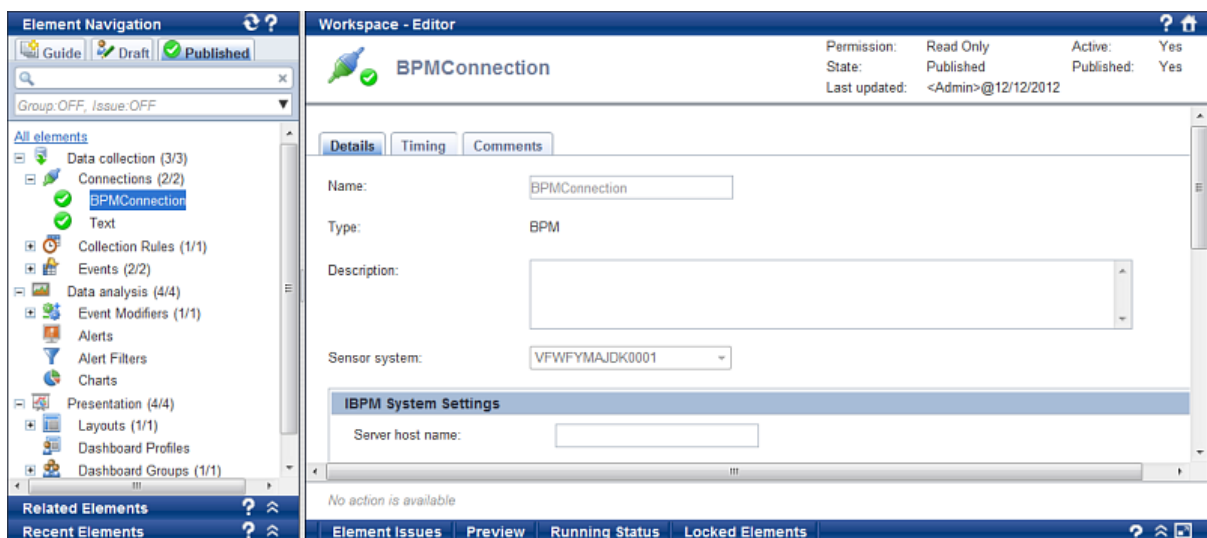
Figure 3-30 Published tab with a connection selected

Editing Collection Rules

Refer to the following procedures for details about editing collection rules.

- [Editing RDB collection rules](#)

- [Editing text collection rules](#)

- [Editing BPM collection rules](#)

Editing RDB collection rules

To edit an RDB collection rule:

1. On the **Draft** tab, select the RDB collection rule you want to edit.

    Doing this displays the Editor with the **Details** tab selected by default.

NOTE
The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

2. Ensure the element is in the "Being edited" or "Being edited (Published)" states to begin modifying the element's definition.

NOTE
You can only edit elements that are in the "Being edited" or "Being edited (Published)" states. If the element you want to edit is not in any of these states, change its current state. Refer to "View or edit an element's definition" in "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

3. In the **Name** box, review the name of the collection rule to ensure it meets your requirement.

    Edit the name, if required.

4. Review the collection rule type, RDB, specified in **Type**.

This value cannot be edited. It is defined when the collection rule is created.

5. In the **Description** box, specify a brief description for the collection rule.

6. Review the connection used by the collection rule to connect to the data source in **Connection**.

    This value cannot be edited.

7. Click the **Data Collection tab** to specify the data source attributes to be captured by the collection rule.
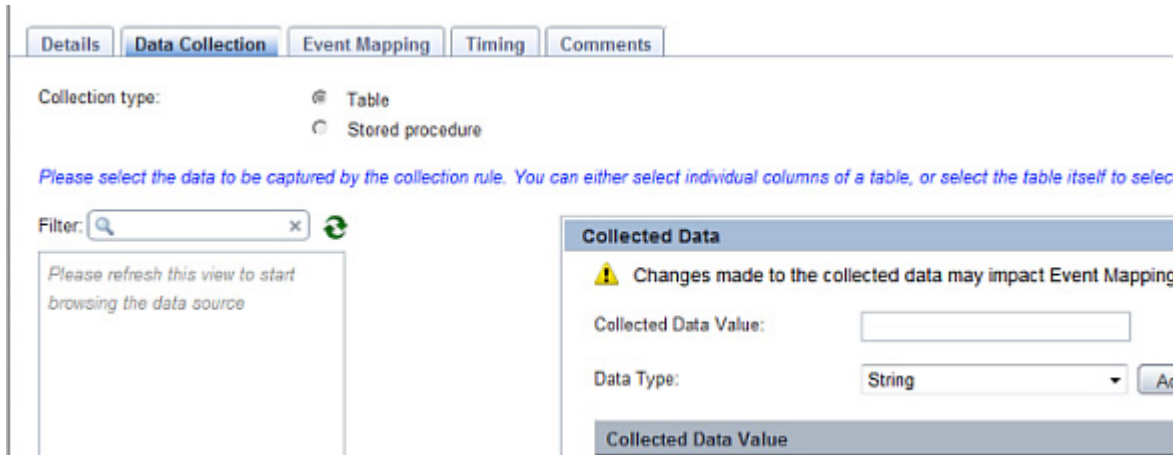
8. Review **Collection type** for the type of relational database object referenced by the collection rule for data collection.

    This value cannot be edited.

NOTE

For demonstration purposes, this procedure uses **Table** as the destination relational database object.

---

9. Click **Refresh** (⟳) to list the table schemas within the destination data source.

NOTE

In case of stored procedures, selecting **Refresh** displays the stored procedure schemas within the destination data source.

TIP!

Narrow down your search for data source attributes by using the **Text Filter**. Specify the attribute name in the **Filter** box to filter specific attributes that match the given criteria.

---

10. Drill-down the available schemas to display the tables with their respective columns.

11. Select the column to be referenced by the collection rule, and click **Collect Data** to add the selected column to the **Collected Data** area.
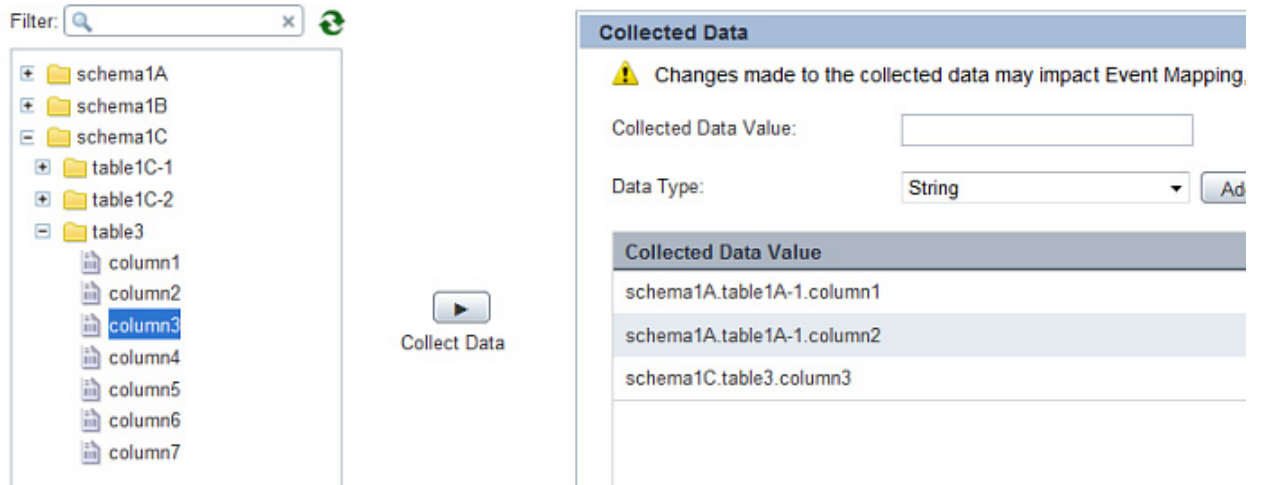
NOTE

You may add multiple columns to the **Collected Data** area. Additionally, to cancel a selection, click the **Remove** (⬛) icon for the selected column.

TIP!

In addition to collecting data from predefined columns of a table, you can perform statistical calculations on these columns and tables to derive custom attributes for data collection. Use any of the following options to set custom data collection criteria.

- In the **Collected Data** area, specify the SQL expression signifying your collection criteria in the **Collected Data Value** box, select the data type for the resultant value from the **Data Type** list, and then click **Add**.

- Set an SQL condition on the data source tables in the **Table** area.

- In the **Collection Condition** area, provide an SQL expression to define a data collection condition for the collection rule. You can specify conditions on tables, columns within the table, and even the position of data.

12. Select either of the following as the **Date used for event occurrence**.

- **Collection Date**

  Uses the actual date and time when the data is collected

- **User defined data**

  Specify a custom datetime type for the collected data

13. If required, you can set additional criteria for the data capture methods used by the collection rule in the **Collection Management** area.

- **Management type**

  – **Master data**

    Includes data that is regularly updated, such as inventories and summaries

  – **Transaction data**

    Includes data that is regularly inserted, such as sales and transaction records

  – **None**

    No criteria is applied for filtering the destination source data

- **Monitor type**

  – **Add difference records**

Collects only the newly added data

– **Easy mirroring**

Mirrors all business data except the deleted data

– **All history**

Collects both the newly added and the updated data

– **None**

No monitor type is applied to the event associated with the collection rule
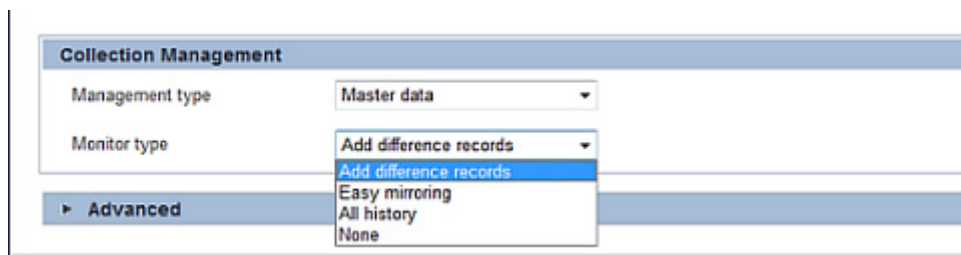
14. Click **Advanced** to configure additional settings for filtering the records to be collected.

Refer to "Records Difference Settings" in Appendix A, "Additional Configuration Parameters" for details.
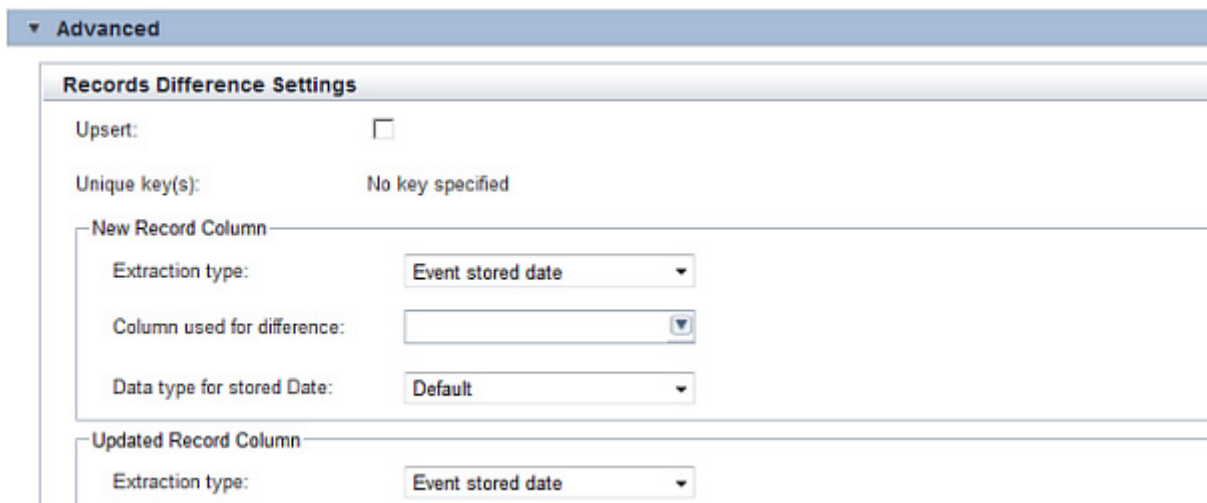
15. Click the **Event Mapping** tab to set an event for the collection rule.

16. In the **Event to Map** area, specify details of the event that will store the data captured by the collection rule.

• **Event Group**

Select the event group for the event.

• **Event**

Select the event.

Doing this displays the event's attributes.

IMPORTANT!

- One RDB or text collection rule can be mapped with only one event. However, a BPM collection rule can be mapped with multiple events.

- You can only select "general events" for storing the collected data. Analytics does **not** permit using predefined events for storing data collected by the RDB or text collection rules.

---

17. Select the event attributes to store the collected data.

    Ensure you select appropriate attributes compatible with the data source attributes selected in step 11 above.

Each event attribute comprises the following details:

- **Attribute**

  Name of the event attribute

- **Data Type**

  Data type of the event attribute, such as String, Integer, or Boolean

- **Unique Key**

  Indicates whether an event attribute acts as a unique key for the event; is only applicable to general events

---

NOTE

A unique key is an event attribute that controls data insertion, rejection, and update in an event. An event can have multiple unique keys where each key is identified by an index number, such as 1, 2, and so on, indicative of the priority of the keys during data update.

- **Mapping Type**

  Enables you to map event attributes with the collected data

  – **None**

  Indicates that the event attribute will not be used for storing the collected data

  – **Constant**

  Enables you to specify any custom value to be stored as a constant in the event attribute; selecting this option displays the **Value** box where you can specify a custom value

  – **Collected data**

  Enables you to assign a data source attribute to the event attribute; selecting this option displays the **Value** box to select the appropriate data source attribute

> **TIP!**
>
> To automate event:attribute mapping, use **Set Default Mapping** that maps event attributes with their respective destination data source attributes, considering both entities have the same name and data type.
>
> The following figure depicts the default mapping for a sample general event.
>
>
>
> Additionally, use **New Event** to define a new event with attributes that have the same name and data type as the destination data source attributes. These new event attributes are automatically mapped with their respective destination data source attributes.
>
> The following figure displays a new event, P_Details, with the P_ID, P_Name, P_Cost, and P_Expiry event attributes automatically mapped with their respective destination data source attributes of the same name and data type.
>
>

18. Click the **Timing** tab to define a schedule for collection rule execution.

- **Execution time (HH:mm:ss)**

    Specify the time for executing the collection rule in the HH:mm:dd format.

- **Recurrence**

  Select any of the following options to specify the date and recurrence interval for collection rule execution.

  – **Custom**

    Executes the collection rule on a user-defined date at the time specified in **Execution time (HH:mm:ss)**

    ▪ **Start date**

      Click the **Open Calendar** ( ) icon to select a start date for collection rule execution

    ▪ **Interval**

      Specify the recurrence time interval for collection rule execution in Interval

  – **Daily**

    Executes the collection rule every day at the time specified in **Execution time (HH:mm:ss)**

  – **Weekly**

    Select the check box for the day of the week to execute the collection rule at the time specified in **Execution time (HH:mm:ss)**; clear the check box, otherwise

  – **Monthly**

    Executes the collection rule on a specific day every month at the time specified in **Execution time (HH:mm:ss)**

    ▪ **Day of month**

      Select a value from 1 to 31 to specify the day for collection rule execution.

  – **Yearly**

    Executes the collection rule at a specific date and time every year

    ▪ **Execution date**

      Select a date and month in Execution date to execute the collection rule

19. Click the **Comments** tab to view the history of the actions performed on the collection rule.

20. Click **Save,** positioned at the bottom of the Editor, to apply the revised settings to the collection rule.

Editing text collection rules

To edit a text collection rule:

1. On the **Draft** tab, select the text collection rule you want to edit.

   Doing this displays the Editor with the **Details** tab selected by default.

> **NOTE**
>
> The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

2. Ensure the element is in the "Being edited" or "Being edited (Published)" states to begin modifying the element's definition.

> **NOTE**
>
> You can only edit elements that are in the "Being edited" or "Being edited (Published)" states. If the element you want to edit is not in any of these states, change its current state. Refer to "View or edit an element's definition" in "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

3. In the **Name** box, review the name of the collection rule to ensure it meets your requirement.

   Edit the name, if required.

4. Review the collection rule type, File, specified in **Type**.

   This value cannot be edited. It is defined when the collection rule is created.

5. In the **Description** box, specify a brief description for the collection rule.

6. Review the connection used by the collection rule to connect to the data source in **Connection**.

   This value cannot be edited.

7. Specify details of the destination file to be referenced by the collection rule in the **Target File Settings** area.

- **Extraction method**

  Specify the criteria for identifying the destination file(s) in the data source.

  – **Specify the file name**

    Enables the collection rule to reference files with a specific name

  – **Specify the partial file name**

    Enables the collection rule to reference files with names that match the given file name pattern

  – **Specify the directory only**

    Enables the collection rule to reference all files within a specific directory

  – **Specify the file name to update**

    Collects data from a specific file in the data source that is regularly updated

- **Upsert (when there is no update target record do insert)**

  Select this check box to insert a new record if the record does not exist or update existing records in the Analytics database. This option is only displayed if Specify the file name to update is selected as the extraction method.

- **Directory**

  Specify the absolute path of the directory to be monitored.

- **File name pattern**

  – If you selected **Specify the file name** as the extraction method, provide the complete name of the destination file.

  – If you selected **Specify the partial file name** as the extraction method, provide a file name pattern using wildcards.

- **File format**

  Select a file format for the destination file.

  – **CSV**

    Separates data by commas; when a comma is included in the character string enclosed with a double quotation, it is treated as a character

  – **FLAT**

    Contains a fixed start position, size, and number of data items; the record length is also fixed (line feeds and other information used to divide records is also included in the record length)

  – **Comma (,)**

    Delimits data by commas

  – **Dot (.)**

    Delimits data by dots

  – **Colon (:)**

    Delimits data by colons

  – **Semicolon (;)**

    Delimits data by semicolons

  – **Tab**

    Delimits data by tab

> **NOTE**
>
> File formats, except FLAT, use line feed codes to delimit event lines. As a result, if the final event line does not contain a line feed code, the event is not collected.

- **Character set**

  Select a character set for the destination file: UTF-8, US-ASCII, ISO-8859-1, Shift_JIS, or EUC-JP.

> **NOTE**
>
> Use the non-BOM file if the encoding type of the text file is UTF-8.

- **Ignore header (first line) at runtime**

  Select this check box to ignore the header or the first line of the destination file during data collection.

8. Click the **Data Collection tab** to specify the data source attributes to be captured by the collection rule.
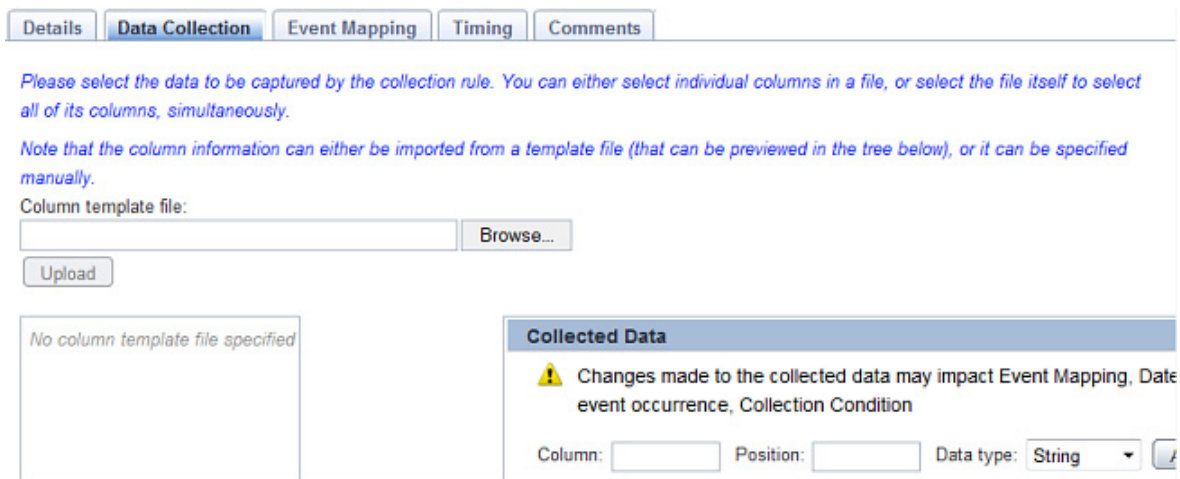
9. Click **Browse** to select a template from your local machine that resembles the destination file's structure.

10. Click **Upload** to display the columns of the template.

11. Select the column to be referenced by the collection rule, and click **Collect Data** to add the selected column to the **Collected Data** area.

TIP!
You may add multiple columns to the **Collected Data** area. Additionally, to cancel a selection, click the **Remove** (▨) icon for the selected column.

TIP!
In case you do not have a template for importing columns, use the **Collected Data** area to add columns. 1. Specify a name for the column in the **Column** box. 2. In the **Position** box, specify a numeric value indicative of the column's position in the destination file. 3. Select an appropriate data type for the column from the **Data type** list. 4. Click **Add** to save the column's definition.
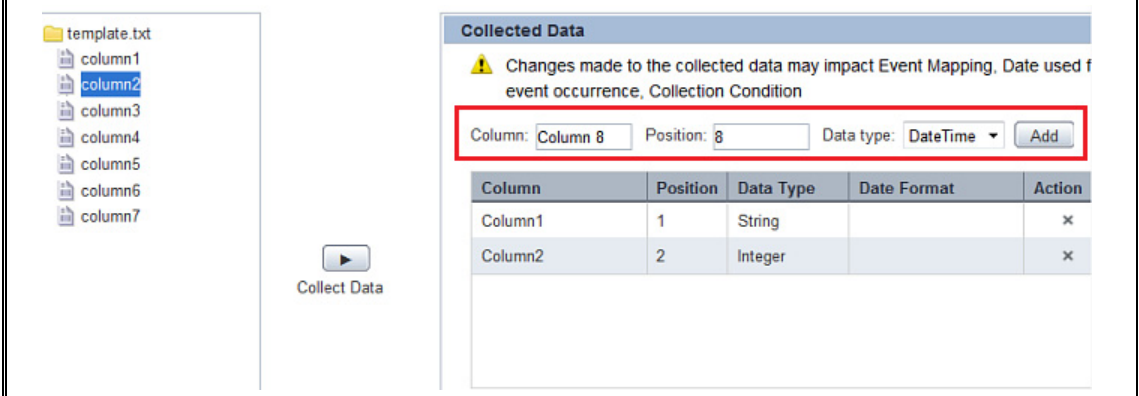
12. If required, specify an SQL expression to define a data collection condition for the collection rule in the **Collection Condition** area.

Refer to "Example of how to set calculations for event modifiers" for information on how to define a collection condition.

13. Set the date stamp for the collected data using the **Date used for event occurrence**.

- **Collection Date**

Uses the actual date and time when the data is collected

- **User defined data**

Specify a custom datetime type for the collected data; additionally, you may click the **Open Editor** icon ( ) to display the **Joint Value Editor** dialog box that provides the following option to provide a custom value

– **Separator character**

Select a special character, such as a hyphen (-), space, or a colon (:) to separate the collected data.

– **Collected data**

Select the destination file attributes to be separated by special characters.

– **Add**

Use this button to add the destination file attributes to be separated by the selected separator character.

– **Preview Value**

Use this button to display the destination file attributes separated by the selected character indicating how the collected data will appear when stored in an event.

– **Datetime Format**

Select a datetime format to stamp the collected data.
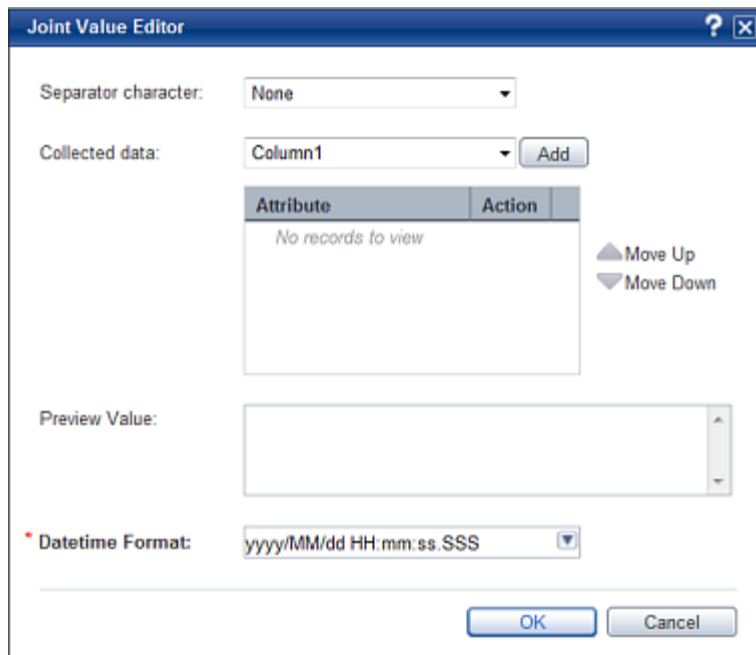
14. Click the **Event Mapping** tab to set an event for the collection rule.

15. In the **Event to Map** area, specify details of the event that will store the data captured by the collection rule.

- **Event Group**

  Select the event group for the event.

- **Event**

  Select the event.

  Doing this displays the event's attributes.

IMPORTANT!

- One RDB or text collection rule can be mapped with only one event. However, a BPM collection rule can be mapped with multiple events.

- You can only select "general events" for storing the collected data. Analytics does **not** permit using predefined events for storing data collected by the RDB or text collection rules.

---

16. Select the event attributes to store the collected data.

    Ensure you select appropriate attributes compatible with the data source attributes selected in step 11 above.

Each event attribute comprises the following details:

- **Attribute**

  Name of the event attribute

- **Data Type**

  Data type of the event attribute, such as String, Integer, or Boolean

- **Unique key**

  Indicates whether an event attribute acts as a unique key for the event; is only applicable to general events

> **NOTE**
>
> A unique key is an event attribute that controls data insertion, rejection, and update in an event. An event can have multiple unique keys where each key is identified by an index number, such as 1, 2, and so on, indicative of the priority of the keys during data update.

- **Mapping Type**

  Enables you to map event attributes with the collected data

  – **None**

  Indicates that the event attribute will not be used for storing the collected data

  – **Constant**

  Enables you to specify any custom value to be stored as a constant in the event attribute; selecting this option displays the **Value** box where you can specify a custom value

  – **Collected data**

  Enables you to assign a destination data source attribute to the event attribute; selecting this option displays the **Value** box to select the appropriate destination data source attribute

  – **Joint collected data**

  Enables you to embed special characters, such as hyphens or semicolons, to separate the collected data when stored in an event

  Selecting **Joint collected data** displays the **Open Editor** icon ( ), which in turn, displays the **Joint Value Editor** dialog box that provides the following options:

  - **Separator character**

    Select a special character, such as a hyphen (-), space, or a colon (:) to separate the collected data.

  - **Collected data**

    Select the destination file attributes to be separated by special characters.

  - **Add**

    Use this button to add the destination file attributes to be separated by the selected separator character.

  - **Preview Value**

    Use this button to display the destination file attributes separated by the selected character indicating how the collected data will appear when stored in an event.

  - **Datetime Format**

    Select a datetime format to stamp the collected data.

TIP!

To automate event:attribute mapping, use **Set Default Mapping** that maps event attributes with their respective destination data source attributes, considering both entities have the same name and data type.

The following figure depicts the default mapping for a sample general event.

Additionally, use **New Event** to define a new event with attributes that have the same name and data type as the destination data source attributes. These new event attributes are automatically mapped with their respective destination data source attributes.

The following figure displays a new event, P_Details, with the P_ID, P_Name, P_Cost, and P_Expiry event attributes automatically mapped with their respective destination data source attributes of the same name and data type.

17. Click the **Timing** tab to define a schedule for collection rule execution.

Refer to "Editing RDB collection rules" for description of the available options.
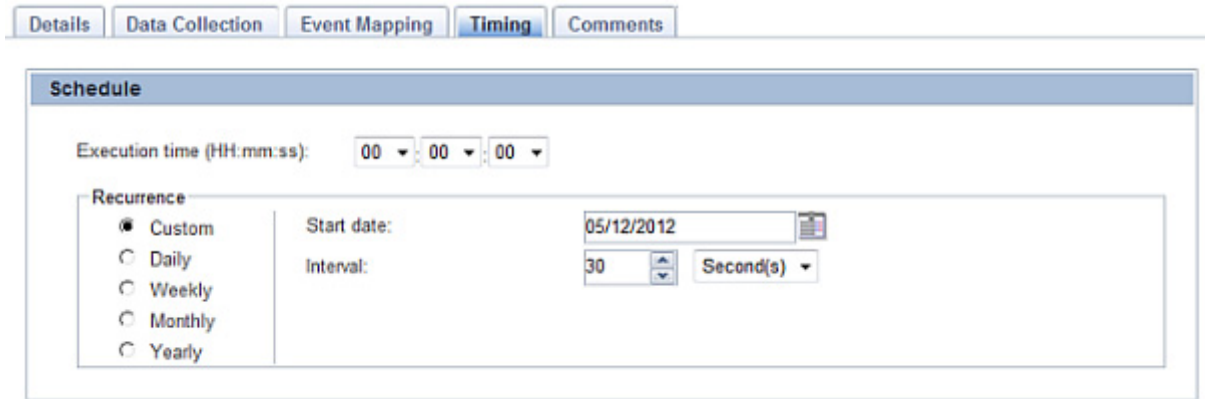
18. Click the **Comments** tab to view the history of the actions performed on the collection rule.

19. Click **Save**, positioned at the bottom of the Editor, to apply the revised settings to the collection rule.

Editing BPM collection rules

BPM collection rules are predefined in the Analytics Studio.

To edit a BPM collection rule:

1. On the **Draft** tab, select the BPM collection rule you want to edit.

Doing this displays the Editor with the **Details** tab selected by default.

NOTE
The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

2. Ensure the element is in the "Being edited" or "Being edited (Published)" states to begin modifying the element's definition.

NOTE
You can only edit elements that are in the "Being edited" or "Being edited (Published)" states. If the element you want to edit is not in any of these states, change its current state. Refer to "View or edit an element's definition" in "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

3. In the **Name** box, review the name of the collection rule to ensure it meets your requirement.

   Edit the name, if required.

4. Review the collection rule type, BPM, specified in **Type**.

   This value cannot be edited. It is defined when the collection rule is created.

5. In the **Description** box, specify a brief description about the collection rule.

6. Review the connection used by the collection rule to connect to the data source in **Connection Used**. This value cannot be edited.

7. By default, the **Active maintenance flow at runtime** check box is selected, which enables collection of past events.

   Clear this check box if you do not want to collect past events, and go to step 9.

NOTE
For BPM systems, collection rules can be configured to capture current as well archived data.

8. If you selected the **Active maintenance flow at runtime** check box, configure additional options for past events collection in the **Past event collection settings (for maintenance flow)** area.

- **Collect past events**

  Click either **On** or **Off** to enable or disable the collection of past events for a specific period.

- **Collection period**

  Click either **Specify the start and end** or **Specify start** to specify the period for collecting past events.

- **Start date**

  Click the **Open Calendar** (📅) icon to specify the start date for past event collection.

- **End data**

  Click the **Open Calendar** (📅) icon to specify the end date for past event collection.

9. Click the **Data Collection tab** to specify the data source attributes to be captured by the collection rule.

10. Click **Refresh** () to list the process definitions of the destination system.

TIP!
Narrow down your search for data source attributes by using the **Text Filter**. Specify the attribute name in the **Filter** box to filter specific attributes that match the given criteria.

11. Drill-down the available process definitions to display their respective applications, processes, and user-defined attributes (UDAs).

12. Select the UDAs to be referenced by the collection rule, and then click **Collect Data** to add the selected attributes to the **Collected Data** area.

    Alternatively, you can select an application, a process, or a process version to select multiple UDAs, simultaneously.

13. Click the **Event Mapping** tab to set an event for the collection rule.

14. In the **Process definition** area, select the process definition to be mapped with the event.

    Note that you need to create an event for each process definition you select.

15. Select the event attributes to store the collected data.

    Ensure you select appropriate attributes compatible with the data source attributes selected in step 12 above.

    Each event attribute comprises the following details:

- **Attribute**

  Name of the event attribute

- **Data Type**

  Data type of the event attribute, such as String, Integer, or Boolean

- **Mapping Type**

  Enables you to map event attributes with the collected data

  – **None**

    Indicates that the event attribute will not be used for storing the collected data

  – **Constant**

    Enables you to specify any custom value to be stored as a constant in the event attribute; selecting this option displays the **Value** box where you can type a custom value

  – **Collected data**

    Enables you to assign a data source attribute to the event attribute; selecting this option displays the **Value** box to select the appropriate destination data source attribute

Please select the process definition to be mapped to an event

Process definition:

tenant1.Application1.Process1

Event Group: EventGroup1

Event: Sample_BPM_Event

Use the table below to define how the collected sensor data is mapped to attributes of the selected Event

Event 'Sample_BPM_Event'		Data from Sensor	Set Default Mapping
Attribute	**Data Type**	**Mapping Type**	**Value**
uda1	String	Collected data	uda1 (version: 1.0, 2.0)
uda2	String	Collected data	uda2 (version: 1.0, 2.0)
uda3	String	Collected data	uda3 (version: 2.0)

NOTE

To automate event:attribute mapping, use **Set Default Mapping** that maps output event attributes with their respective input event attributes, considering both entities have the same name and data type.

The following figure depicts the default mapping for a sample general event.

Use **New Event** to define a new event with attributes that have the same name and data type as the destination data source attributes. These new event attributes are automatically mapped with their respective destination data source attributes.

The following figure displays a new *general event*, P_Details, with the P_ID, P_Name, P_Cost, and P_Expiry event attributes automatically mapped with their respective destination data source attributes of the same name and data type.

16. Click the **Timing** tab to define a schedule for current and archived data (past events) collection by the collection rule.

- **IBPM Flow Schedule**

  Allows you to configure a schedule for collecting current data

- **IBPM Maintenance Flow Schedule**

  Allows you to configure a schedule for collecting past data

  Refer to "Editing RDB collection rules" for description of the available options.

17. Click the **Comments** tab to view the history of the actions performed on the collection rule.

18. Click **Save**, positioned at the bottom of the Editor, to apply the revised settings to the collection rule.

Editing Event Groups

An event group's definition only comprises a list of events it stores. An event group does not have additional specifications. Therefore, there are no specific settings for an event group that you can edit.

To reorganize events within an event group, you need to modify the event's definition to assign a new group to the event. You can, however, rename event groups to indicate the type of events they store.

To rename an event:

1. On the **Draft** tab in the Element Navigation pane, right-click the event group, and then click **Rename**.

   The **Rename Event Group** dialog box is displayed.

2. In the **New name** box, specify a new name for the event group.

3. Click **OK** to save the revised settings
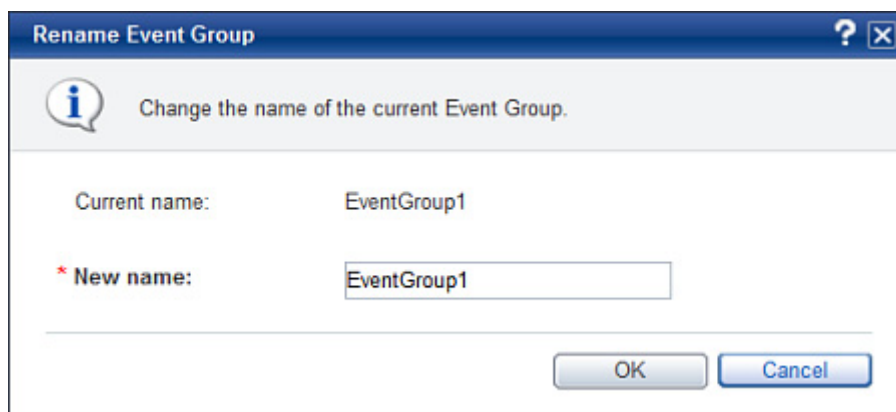
Editing Events

To edit an event:

1. On the **Draft** tab, select the event you want to edit.

   Doing this displays the Editor with the **Details** tab selected by default.

NOTE

The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

---

2. Ensure the element is in the "Being edited" or "Being edited (Published)" states to begin modifying the element's definition.

NOTE

You can only edit elements that are in the "Being edited" or "Being edited (Published)" states. If the element you want to edit is not in any of these states, change its current state. Refer to "View or edit an element's definition" in "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

---

3. In the **Name** box, review the name of the event to ensure it meets your requirement.

4. Review the event type for this event in **Event Type**. This cannot be edited.

5. In the **Description** box, specify a brief description about the dashboard profile

6. In the **Event Group**, select an event group for the event.

7. Define the event attributes in the **Attributes** area.

- **Name**

  Specify a name for the event attribute.

> **NOTE**
>
> By default, the system automatically generates event attributes names in a consecutive order, such as *ATT1*, *ATT2*, and so on. You can, however, provide meaningful names to the event attributes indicative of the data they store.

- **Type**

  Select a data type for the attribute

  – **String**

    Indicates that the attribute stores alphanumeric values

  – **Integer**

    Indicates that the attribute stores Integer values

  – **Real**

    Indicates that the attribute stores Real data type values

  – **DateTime**

    Indicates that the attribute stores date and time values

  – **Date**

    Indicates that the attribute only stores date values

  – **Time**

    Indicates that the attribute only stores time values

  – **Boolean**

    Indicates that the attribute stores Boolean values of TRUE and FALSE

8. Click **Add** to apply the event attribute to the event. You can add multiple attributes to an event.

   All event attributes are qualified by the following parameters:

- **Name**

  Name of the event attribute

- **Data Type**

  Data type of the event attribute, such as String, Integer, or Boolean

- **Size or Scale**

  Maximum data that can be stored by the event attribute; is only applicable to event attributes of the String and Real data type

- **Time**

  Select this check box to display the time-related data of the event attribute as the primary category in chart settings

- **Group**

  Select this check box to display the group attribute as the primary category in chart settings

- **KPI**

  Select this check box to display the data stored by the event attribute as the primary category in chart settings

- **Unique Key**

  Is only applicable to event attributes identified as unique keys; contains a numeric index value, such as 1, 2, and so on, indicative of the priority of a key during a data update

NOTE
A unique key is an event attribute that controls data insertion, rejection, and update in an event. An event can have multiple unique keys.

- **Label Substitution Map**

  Select a value from the given list to assign a label to the event attribute

IMPORTANT!
Analytics uses "labels" to enforce data security by displaying the label for the event attribute instead of the actual data on the Analytics Dashboard. Labels are configured using the Management Console.
You can assign labels to event attributes of the String and Integer data type only.

- **Action**

  Select the **Remove** (◼) icon to delete an event attribute

Name:		General Event #1						
Event Type:		General						
Description:								
Event Group:		EventGroup1						

Attributes

Name: ATT8   Type: String   256   [Add]   [Extract Attributes from Collection Rule ...]

Name	Data Type	Size or Scale	Time	Group	KPI	Unique	Label	Action
ATT1	String	256	☐	☐	☐		Map 1	✕
ATT2	Integer		☐	☐	☐	✔1	Map 2	
ATT3	Real	2	☐	☐	☐			✕

NOTE

An alternate method of adding event attributes to an event is importing event attributes from collection rules.

1. Click **Extract Attributes from Collection Rule** to display the **Extract Attributes from Collection Rule** dialog box.

2. From the **Collection Rule type** list, select the type, such as RDB or Text, for the collection rule.

3. From the **Collection Rule name** list, select the collection rule whose event attributes you want to import. Doing this displays the event attributes used by the collection rule.

4. Click **Extract** to add the collection rule attributes to the event.

---
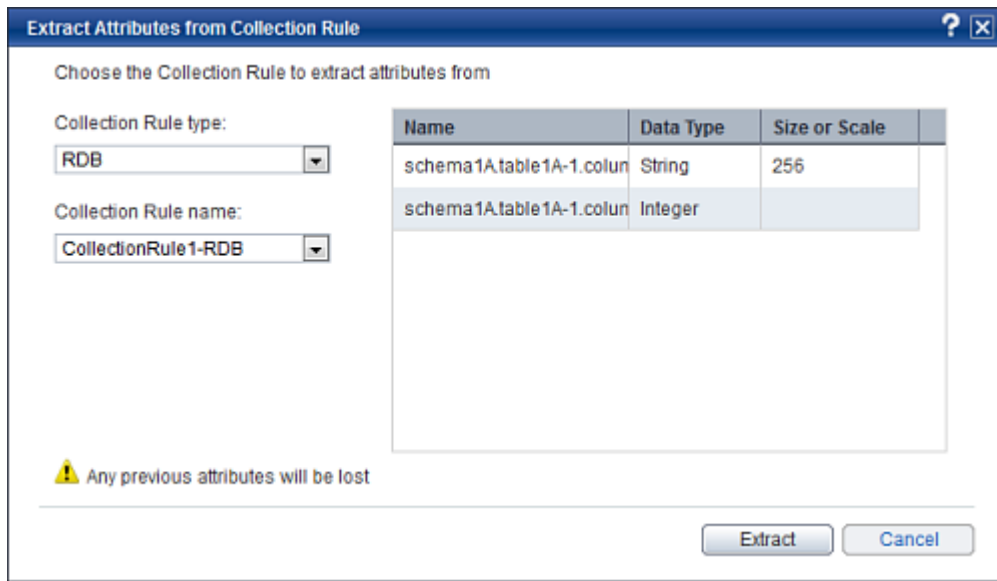
9. Click **Advanced** to configure additional event settings.

10. In the **Alert Rule Parameters** area, configure the time settings for alerts.

- **Expire**

  Lifespan of the alert; time period for which the alert remains active

- **Delay**

  Time period between two consecutive alerts
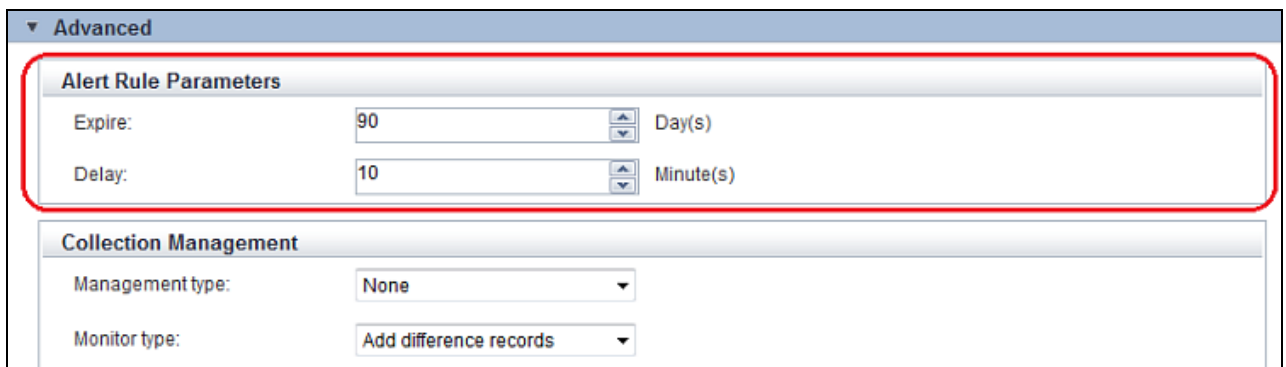
11. For general events, the Analytics Studio displays the **Collection Management** area that allows you to configure additional data storage settings for the event attribute.

- **Management type**

  – **Master data**

    Includes data used for updating, such as inventories and summaries

  – **Transaction data**

    Includes data that is added, such as sales and transaction records

  – **None**

    No criteria is applied for filtering the destination source data

- **Monitor type**

  – **Add difference records**

    Only the newly added data is collected

  – **Easy mirroring**

    Mirrors the business data except deleted data

  – **All history**

    Both the newly added and the updated data are collected (the latter is collected as new data)

  – **None**

    No monitor type is applied to the event

NOTE
The **Collection Managemen**t area is not displayed for statistical or Alert Summary (business) events.

12. Configure the **unique** key configuration for the event in the **Unique Key Setting** area.

NOTE
A unique key is an event attribute that controls data insertion, rejection, and update in an event. An event can have multiple unique keys where each key is identified by an index number, such as 1, 2, and so on, indicative of the priority of the keys during data update. Unique key settings can only be configured for general events.

- **Upsert**

  Select this check box to update the event, for example, insert a new record if the record does not exist or update already existing records.

- **Unique key**

  Select an event attribute from the given list, and click **Add** to identify it as a unique key for the event. All unique keys identified for the event are collectively listed and qualified by the following parameters:

  – **Index**

    Numeric value indicative of the priority of the event attributes during data update

  – **Name**

Name of the event attribute identified as the unique key

– **Action**

Click the **Remove** (▨) icon to delete a unique key

IMPORTANT!
Changing the unique key will cause all event-related data to be lost.

Unique Key Setting

☐ Upsert (when there is no record to update do insert)

Unique key: [ATT1 ▼] [Add]

Index	Name	Action	
1	ATT2	×	△ Move Up ▽ Move Down

⚠ Changing the unique key settings will remove all related Event data

TIP!
For the selected unique keys, use the **Move Up** and **Move Down** buttons to adjust their priority while data update. Additionally, click the **Remove** (▨) icon to delete the selected key.

13. For statistical events, the Analytics Studio displays the **Statistics Period Settings** area that provides options to set the period for event calculation.

• **Start time**

Select the **Open Calendar** (📅) icon to set the calculation start date and time for the event

• **Cycle time**

Set the calculation cycle at which each event calculation unit starts

• **Period**

Set the calculation unit specified for the event

Statistic Period Settings

Start time:	26/10/2011 14:40:45	📅
Cycle time:	1 ▲▼	Month(s) ▼
Period:	1 ▲▼	Month(s) ▼

14. Click the **Comments** tab to view the history of the actions performed on the event.

15. Click **Save** to apply the revised settings to the event.

Editing system events

Analytics supports some predefined events, referred to as system events, which are configured by the Administrator in the Management Console or are created "on-the-fly" during collection rule creation.

The following table lists these system events with their description. For editing system events, refer to "Editing Events".

Table 3-2 Analytics System Events

Event name	Description
Alert Count System	Records the number of alert occurrences for each event group and event in the Analytics system
Dynamic BPM Event	Stores BPM system information
Process Discovery (system)	Stores Process Discovery system information

NOTE
You cannot delete system events.

Editing Event Modifiers

Refer to the following procedures for details about editing event modifiers.

- Editing statistical event modifiers
- Editing alert summary (business) event modifiers

Editing statistical event modifiers

To edit a statistical event modifier:

1. On the **Draft** tab, select the event modifier you want to edit.

   Doing this displays the Editor with the **Details** tab selected by default.

> **NOTE**
>
> The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

2. Ensure the element is in the "Being edited" or "Being edited (Published)" states to begin modifying the element's definition.

> **NOTE**
>
> You can only edit elements that are in the "Being edited" or "Being edited (Published)" states. If the element you want to edit is not in any of these states, change its current state. Refer to "View or edit an element's definition" in "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

3. In the **Name** box, review the name of the event modifier to ensure it meets your requirement. Edit the name, if required.

4. Refer to **Type** for the event modifier type; whether it is a "statistical" event modifier or an "Alert Summary (business)" event modifier. This value cannot be edited.

5. In the **Description** box, specify a brief description about the event modifier.

6. Specify details of the source or input event to be manipulated by the event modifier.

- **Input Event Group**

  Select the event group to which the event belongs.

- **Input Event**

  Select the event to be manipulated by the event modifier.

7. Configure the **Attribute Conditions** area to apply conditions on input event attributes and filter specific data for calculation by the event modifier.

8. Click the **Event Mapping** tab to configure the input event attribute and output event attribute mapping for the event modifier.

9. In the **Event to Map** area, specify details of the output statistical event that will store the results of the calculation performed by the event modifier.

- **Output Event Group**

  Select the event group to which the statistical event belongs.

- **Output Event**

  Select the output statistical event.

Selecting the output event details displays the attributes for that event.

10. Map the output event attributes with the input event attributes.

Each event attribute is qualified by the following details:

- **Attribute**

  Name of the event attribute

- **Data Type**

  Data type of the event attribute, such as String, Integer, or Boolean

- **Mapping Type**

  Enables you to map the output event attributes with the collected data

  – **Constant**

    Enables you to specify any custom value to be stored as a constant in the output event attribute; selecting this option displays the **Value** box where you type a custom value

  – **Statistical function**

    Is only applicable to event attributes of the Integer data type; selecting this option displays the **Open Editor** icon ( ), which in turn, displays the **Statistical Function Editor** dialog box with the following options:

    ▪ **Attributes from input Event**

      Select source or input event attributes to be manipulated by the event modifier

    ▪ **Functions**

Select the arithmetic operations, such as **Sum**, **Average**, **Min**, **Max**, or **Std Deviation**, to be performed on the source or input event attributes

▪ **Operators**

Select the appropriate arithmetic operators to specify the calculation method

▪ **Expression**

Displays the statistical function that has been defined; is an editable field where you can type your own custom expression

▪ **OK**

Use this button to apply the calculation method to the event modifier
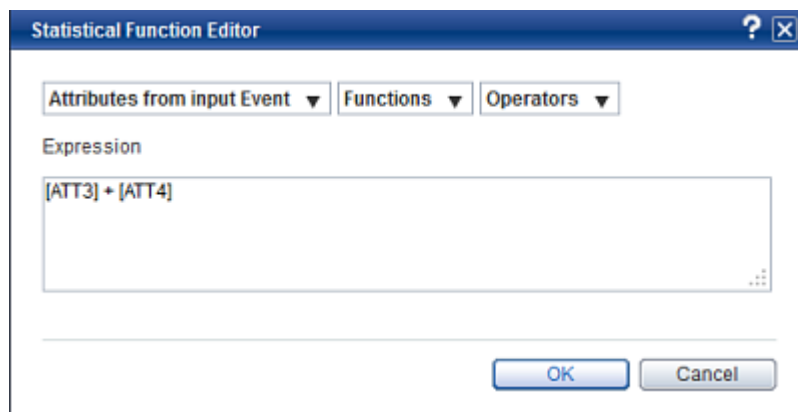
– **Event Counting**

Calculates the number of times the input event occurred

– **Group by attribute**

Sets grouping attributes to enable calculations

– **None**

Indicates that the output event attribute will not be used for storing the collected data

Event 'Statistical Event #1'		Data from Input Event	Set Default Mapping
Attribute	Data Type	Mapping Type	Value
ATT1	String	Constant	40
ATT2	Integer	Group by attribu	ATT2
ATT3	Real	Statistical functi	[ATT4] * [ATT5]
ATT4	DateTime	Constant	30/11/2012 18:20:15
ATT5	Date	Constant	30/04/2013
ATT6	Time	Group by attribu	ATT6

NOTE

To automate event:attribute mapping, use **Set Default Mapping** that maps output event attributes with their respective input event attributes, considering both entities have the same name and data type. The following figure depicts the default mapping of four attributes of an output event with their respective input event attributes.

Use **New Event** to define a new event with attributes that have the same name and data type as the input event attributes selected for an event modifier. Alternatively, you can provide custom names to the event attributes, depending on your requirement.

Note that the new event attributes are automatically mapped to the input event attributes, considering the name and the data type of the new event attributes is the same as the input event attributes.

The following figure displays a new general event with event attributes automatically mapped with their respective input event attributes of the same name and data type.

11. Click the **Timing** tab to set the calculation period of the event modifier.

- **Auto calculation**

   Automatically executes the calculation according to the time when the event is generated

- **Schedule**

   Provides options to define a schedule for the event modifier's calculation

   – **Execution time (HH:mm:ss)**

   Select appropriate values to specify the time in the HH:mm:dd format for report generation.

   – **Recurrence**

   Select any of the following options to define the date and recurrence interval for report generation.

   - **Custom**

      Generates the report on a user-defined date at the time specified in **Execution time (HH:mm:ss)**; click the **Open Calendar** (   ) icon in **Start date** to select a start data for report generation, and then specify the periodic time interval for report generation in **Interval**

   - **Daily**

      Generates the report every day at the time specified in **Execution time (HH:mm:ss)**

   - **Weekly**

      Generates the report on specific days of the week at the time specified in **Execution time (HH:mm:ss)**; select the check box for the day of the week when you want to generate the report; clear the check box, otherwise

   - **Monthly**

      Generates the report on a specific day of the month at the time specified in **Execution time**; select a value from 1 to 31 in **Day of month** to specify the day for report generation

   - **Yearly**

      Generates the report at a specific date and time every year; select a date and month to generate the report in **Execution date**

12. Click **Advanced** to configure additional settings for the event modifier's calculation period.

13. From the **Number of units** box, select a numeric value to indicate the number of calculation units for the event modifier.

    Additionally, select the **short time rules execution** check box to make the calculation unit that is less than the unit number as the scope of calculation. Select this check box if specifying "0" as **Number of units**. Refer to "Example of how to set the calculation target period" for details.

14. Click the **Comments** tab to view the history of the actions performed on the event modifier.

15. Click **Save** to apply the revised settings to the event modifier.

Editing alert summary (business) event modifiers

To edit the Alert Summary (business) event modifier:

1. On the **Draft** tab, select the event modifier you want to edit.

   Doing this displays the Editor with the **Details** tab selected by default.

NOTE
The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

2. Ensure the element is in the "Being edited" or "Being edited (Published)" states to begin modifying the element's definition.

> **NOTE**
>
> You can only edit elements that are in the "Being edited" or "Being edited (Published)" states. If the element you want to edit is not in any of these states, change its current state. Refer to "View or edit an element's definition" in "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

3. In the **Name** box, review the name of the event modifier to ensure it meets your requirement. Edit the name, if required.

4. Refer to **Type** for the event modifier type; whether it is a "statistical" event modifier or an "Alert Summary (business)" event modifier. This value cannot be edited.

5. In the **Description** box, specify a brief description about the event modifier.

6. In the **Alert** list, select the alert to be monitored by the event modifier. Doing this displays the event related to the selected alert.

<div align="center">

Alert: Alert6-with-condition ▼

Related Event: General Event #1

</div>

7. Configure the **Attribute Conditions** area to apply conditions on input event attributes and filter specific data for calculation by the event modifier.

8. Click the **Event Mapping** tab to configure the input event attribute and output event attribute mapping for the event modifier.

9. In the **Event to Map** area, specify details of the output Alert Summary (business) event that will store the results of the calculation performed by the event modifier.

- **Output Event Group**

  Select the event group to which the Alert Summary (business) event belongs.

- **Output Event**

  Select the output Alert Summary (business) event.

  Doing this displays the attributes for that event.

10. Selecting the output event details displays the attributes for that event.

    Each event attribute is qualified by the following details:

- **Attribute**

  Name of the event attribute

- **Data Type**

  Data type of the event attribute, such as String, Integer, or Boolean

- **Mapping Type**

  Enables you to map the output event attributes with the collected data

  – **Group by attribute**

    Sets grouping attributes to enable calculations

NOTE

To automate event:attribute mapping, use **Set Default Mapping** that maps output event attributes with their respective input event attributes, considering both entities have the same name and data type. The following figure depicts the default mapping of four attributes of an output event with their respective input event attributes.

Use **New Event** to define a new event with attributes that have the same name and data type as the input event attributes selected for an event modifier. Alternatively, you can provide custom names to the event attributes, depending on your requirement.

Note that the new event attributes are automatically mapped to the input event attributes, considering the name and the data type of the new event attributes is the same as the input event attributes.

The following figure displays a new general event with event attributes automatically mapped with their respective input event attributes of the same name and data type.

11. Click the **Timing** tab to set the calculation period of the event modifier.

- **Auto calculation**

  Automatically executes the calculation according to the time when the event is generated

- **Schedule**

  Provides options to define a schedule for the event modifier's calculation

  – **Execution time (HH:mm:ss)**

    Select appropriate values to signify the time in the HH:mm:dd format for report generation.

  – **Recurrence**

Select any of the following options to define the date and recurrence interval for report generation.

- **Custom**

  Generates the report on a user-defined date at the time specified in **Execution time (HH:mm:ss)**; click the **Open Calendar** (⊞) icon in **Start date** to select a start data for report generation, and then specify the periodic time interval for report generation in **Interval**

- **Daily**

  Generates the report every day at the time specified in **Execution time (HH:mm:ss)**

- **Weekly**

  Generates the report on specific days of the week at the time specified in **Execution time (HH:mm:ss)**; select the check box for the day of the week when you want to generate the report; clear the check box, otherwise

- **Monthly**

  Generates the report on a specific day of the month at the time specified in **Execution time**; select a value from 1 to 31 in **Day of month** to specify the day for report generation

- **Yearly**

  Generates the report at a specific date and time every year; select a date and month to generate the report in **Execution date**

12. Click **Advanced** to configure additional settings for the event modifier's calculation period.

13. From the **Number of units** box, select a numeric value to indicate the number of calculation units for the event modifier.

    Additionally, select the **short time rules execution** check box to make the calculation unit that is less than the unit number as the scope of calculation. Select this check box if specifying "0" as **Number of units**. Refer to "Example of how to set the calculation target period" for details.

14. Click the **Comments** tab to view the history of the actions performed on the event modifier.

15. Click **Save** to apply the revised settings to the event modifier.

Example of how to set the calculation target period

This example provides sample configurations to explain the calculation target period specified in the **Define Calculation Rules** window.

Case1: Calculations on events occurring within the calculation period

Item	Value
Starting time	01-Apr-2006 09:00
Calculation unit	14 hours
Calculation cycle time	1 day
Collection time	01-May-2006 14:00

When the calculation period is configured as above, calculation will be performed on events that occur within the periods indicated by bars in the diagram below:
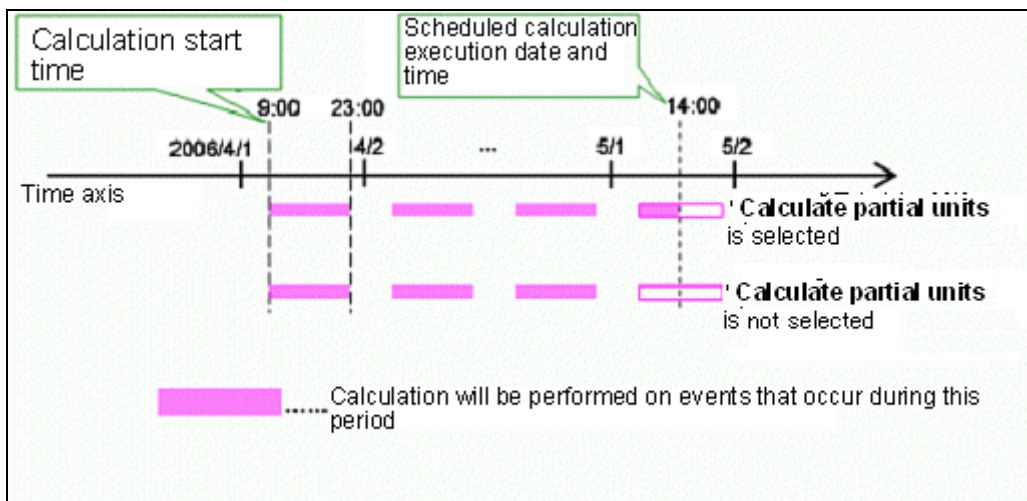
In this example, a calculation will be performed at 14:00 on May 1. Events between 9:00 and 14:00 on May 1 will be included in the calculation only if **Calculate partial units** is selected in the **Calculation Rules** window.

Case 2: Calculating daily sales between 9:00 and 12:00 over the previous month

Item	Value
Starting time	01-04-2006 09:00
Calculation unit	14 hours
Calculation cycle time	1 day
Collection time	02-May-2006 02:00

When the calculation period is configured as above, calculation will be performed on events that occur within the periods indicated by bars in the diagram below:
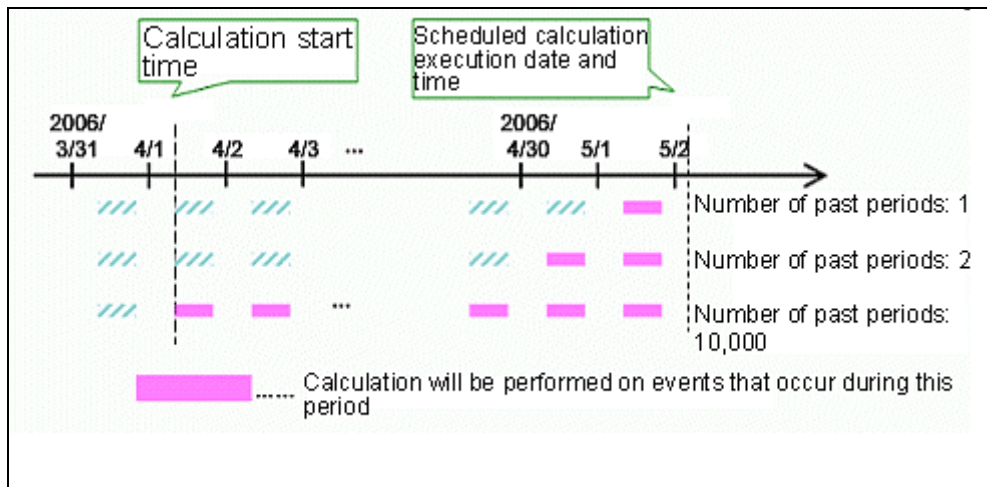
In this example, a calculation will be performed at 2:00 on May 2, and will produce different results according to the value for **Number of units** in the **Calculation Rules** window:

- If value is 1, only events occurring up to the final calculation period (9:00 to 23:00 on May 1) will be included in the calculation.

- If value is a sufficiently large number, events occurring during all calculation periods after **Start time of calculation** will be included in the calculation.

Example of how to set calculations for event modifiers

This example uses the scenario described in Section 4.3.2, "Event Calculation (Arithmetic Calculations) in the *Overview Guide* to explain how to set calculations for event modifiers.

Use the **Event Mapping** tab of the event modifier to define an expression to calculate the cost:price ratio based on the sales and the cost price.
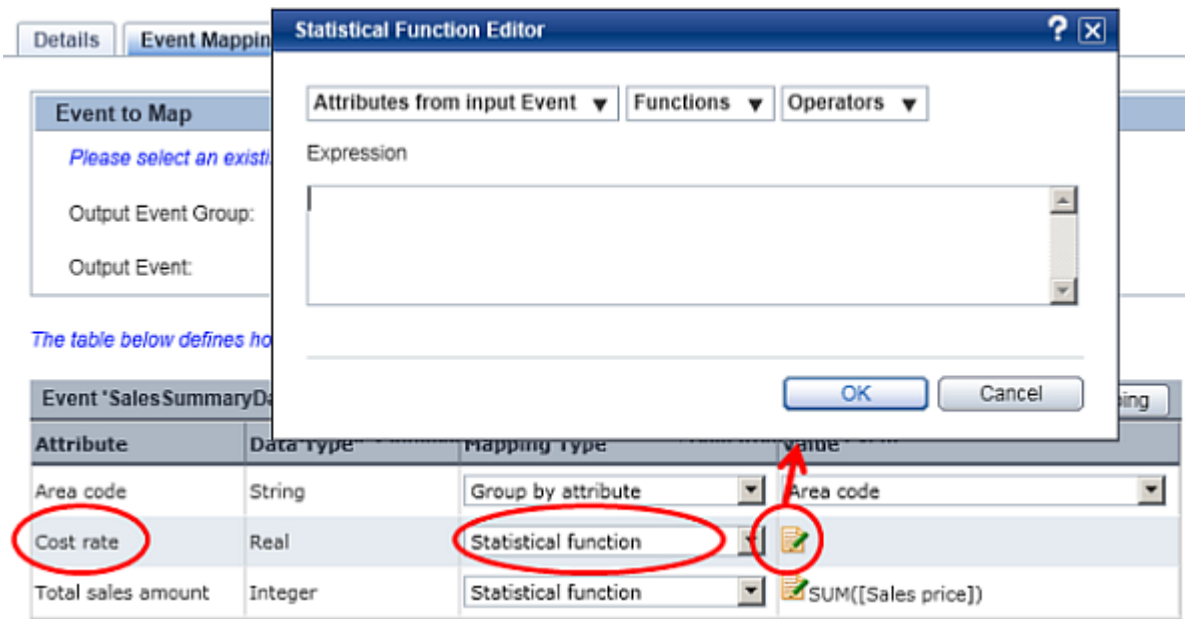
In the **Statistical Function Editor**, select appropriate values from the **Attributes from input Event**, **Functions**, and **Operators** list to generate the calculation expression.
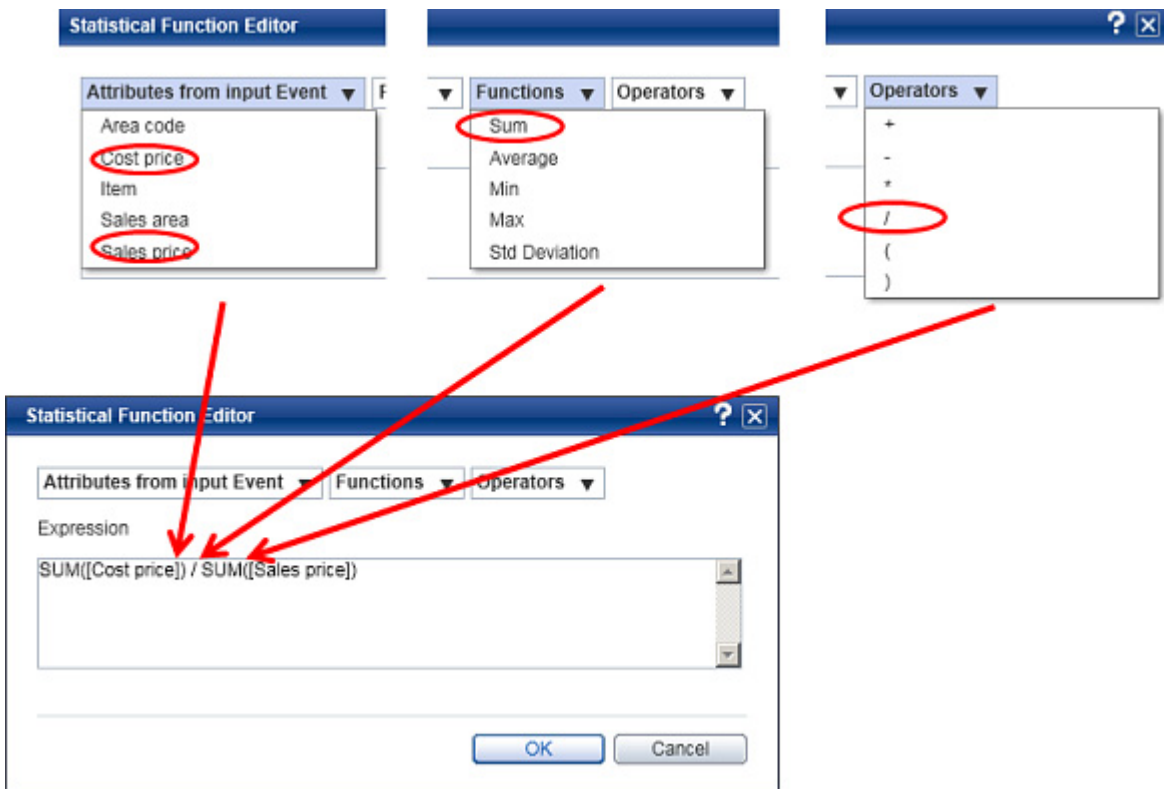
Example of how to calculate events (arithmetic calculations)

This example explains how to calculate events using the scenario described in Section 4.3.2, "Event Calculation (Arithmetic Calculations) in the *Overview Guide*.

This example calculates the cost rate from the sales price and cost price, and sets an expression using event attributes on the **Event Mapping** tab of the event modifier Editor.

Editing Alerts

To edit an alert:

1. On the **Draft** tab, select the alert you want to edit.
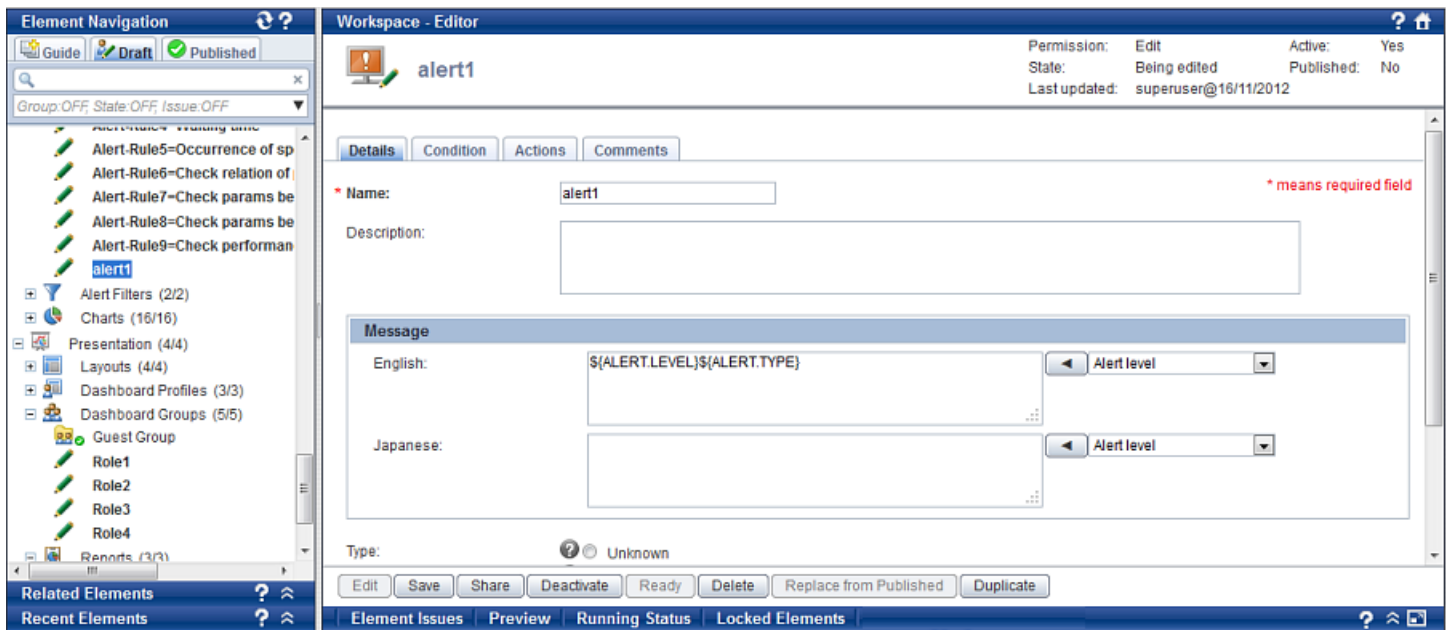
   Doing this displays the Editor with the **Details** tab selected by default.

> **NOTE**
>
> The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

2. Ensure the element is in the "Being edited" or "Being edited (Published)" states to begin modifying the element's definition.

> **NOTE**
>
> You can only edit elements that are in the "Being edited" or "Being edited (Published)" states. If the element you want to edit is not in any of these states, change its current state. Refer to "View or edit an element's definition" in "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

3. In the **Name** box, review the name of the alert to ensure it meets your requirement.

4. In the **Description** box, specify a brief description about the alert.

5. Define the alert message in the **Message** area.

- **English**

  Select a value, which will comprise the alert message, from the drop-down list, and click to add the value to the box

- **Japanese**

  Select a value, which will comprise the alert message, from the drop-down list, and click to add the value to the box

NOTE

Refer to "Alert Message Specification" in the Appendix A, "Additional Configuration Parameters" for the information that can be included in an alert message.

6. Ensure the correct alert type, such as **Unknown**, **Information**, **Warning**, or **Critical**, is specified for the alert in **Type**.

7. In the **Level (0-100)** box, select an appropriate value to rate the severity of the alert from 0 through 100. The default alert level is 100.

8. Click **Advanced** to configure additional settings for the alert.

9. Configure **External URLs** to open external web pages. You can use this option to provide additional information about the alert message.

- **Label**

  Specify meaningful text that will act as the subject or label for the URL

- **URL**

  Type the URL; up to five URLs can be added

10. Configure the **Related Chart/Layout** options:

- **Chart/Layout**

  Select a layout or chart from the given list to add it to the alert

- **Key for Alert Filter**

  Specify the event attribute to filter the alert data on a chart, in case a chart is specified as the related chart

Related Chart/Layout

Chart/Layout:	Chart1-Pie
Key for Alert Filter:	ATT1

11. Use the **Frequency Control** area to configure the frequency of the alert.

- **Ignore Alerts occurring during subsequent**

  Specify a numeric value to indicate a time period when the alert, if triggered, will be ignored

- **Attributes indicating same Alert**

  For alert suppression, select keys (event attributes) to judge whether two alerts are the same

Frequency Control

Ignore Alerts occurring during subsequent   2   Hour(s)
Note: If the value is 0, no occurrence will be ignored.

Attributes indicating same Alert:

Available		Selected
ATT2	▶▶	ATT1
ATT3	▶	
ATT4	◀	
ATT5	◀◀	
ATT6		

12. Click the **Condition** tab to define the condition for the event data monitored by the alert.

- **Event Group**

  Select the event group that contains the event being monitored by the alert

- **Event**

  Select the event

- **Condition**

  Define the condition for the event data being monitored by the alert

Details	**Condition**	Actions	Comments

Rule type: Check parameters (general Event)

Target Event

Event Group:	EventGroup1
Event:	General Event #1
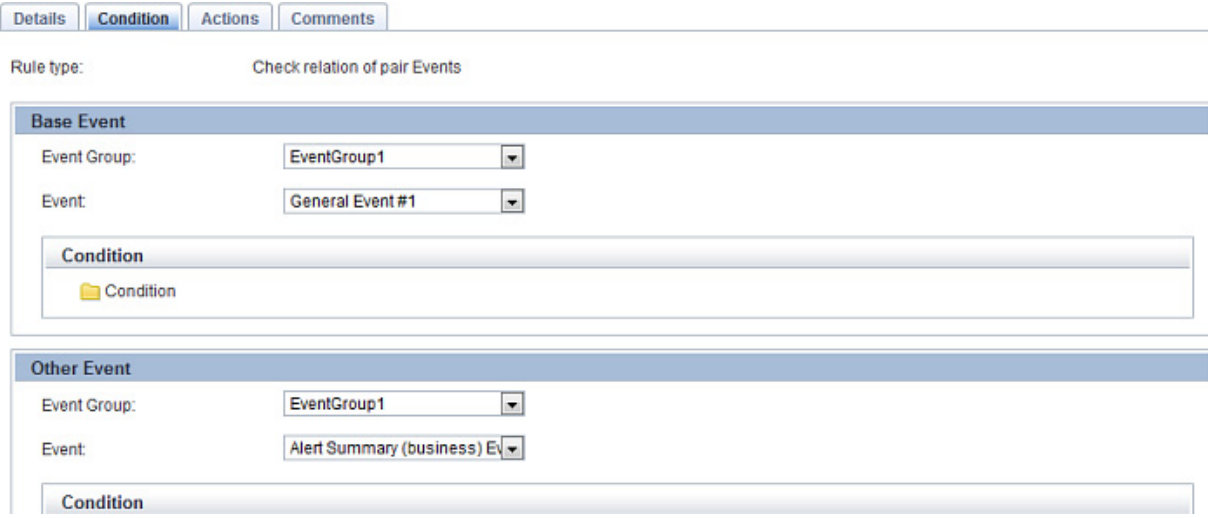
Condition
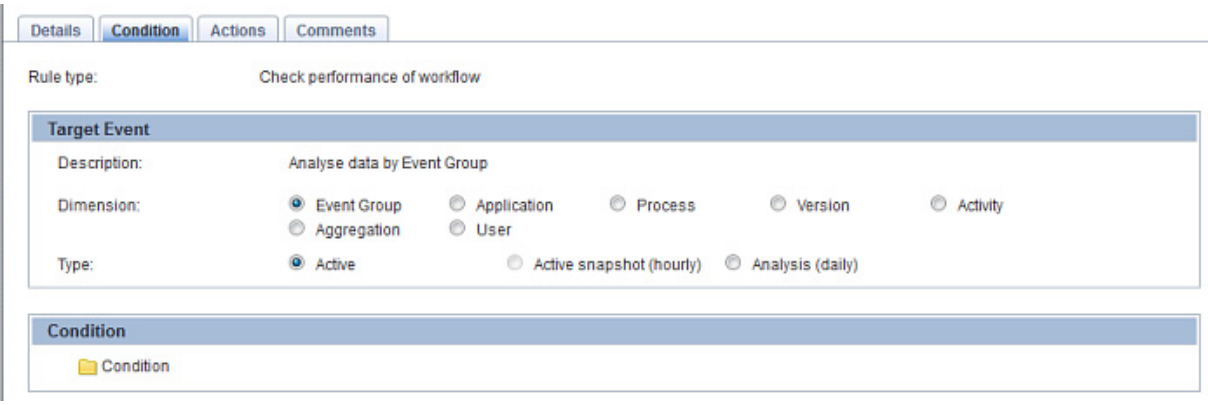
📁 Condition

> **NOTE**
>
> For the **Check relation of pair Events** rule type and **Check parameters between pair Events (general Event)**, the **Condition** tab displays the **Base Event** and **Other Event** specifications. For each of these event types, you need to specify an event group and the respective event to be monitored by the alert.
>
> Additionally, you need to configure the **Pair Attribute** and **Period Condition** settings.
>
> | Details | Condition | Actions | Comments |
> | --- | --- | --- | --- |
>
> Rule type: Check relation of pair Events
>
> **Base Event**
>
> Event Group: EventGroup1
>
> Event: General Event #1
>
> **Condition**
>
> 📁 Condition
>
> **Other Event**
>
> Event Group: EventGroup1
>
> Event: Alert Summary (business) Ev
>
> **Condition**
>
> Additionally, for the **Check performance of workflow** rule type, the **Condition** tab displays BPM parameters for configuration. Refer to the Appendix A, "Additional Configuration Parameters" for details.
>
> | Details | Condition | Actions | Comments |
> | --- | --- | --- | --- |
>
> Rule type: Check performance of workflow
>
> **Target Event**
>
> Description: Analyse data by Event Group
>
> Dimension: ⦿ Event Group   ○ Application   ○ Process   ○ Version   ○ Activity
>   ○ Aggregation   ○ User
>
> Type: ⦿ Active   ○ Active snapshot (hourly)   ○ Analysis (daily)
>
> **Condition**
>
> 📁 Condition

13. Click the **Actions** tab to set a function, such as automatically deliver mail or start a BPM process when an alert occurs.

14. In the **Name** box, specify a meaningful name for the action.

15. From the **Type** list, select either **Email** or **BPM** to specify the action that needs to be taken when the alert triggers.

    Selecting **Email** sends an email when the alert triggers, while selecting **BPM** will initiate a BPM process.
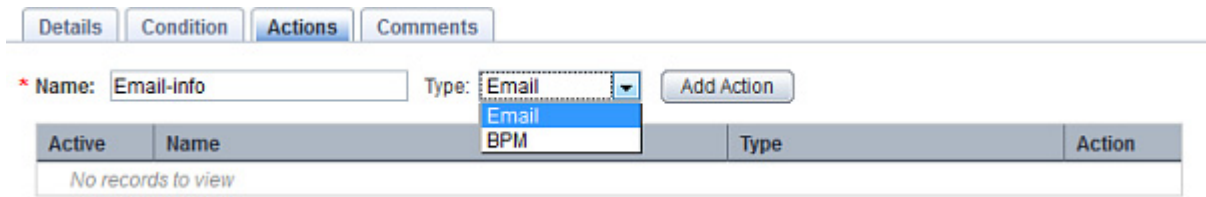
16. Click **Add Action** to add the action to the alert.

> **NOTE**
>
> You can add multiple actions for an alert.

17. Configure additional settings for each action. Refer to Appendix A, "Additional Configuration Parameters" for details.

18. Click the **Comments** tab to view the history of the actions performed on the alert.

19. Click **Save** to apply the revised settings to the alert.

Example of how to set calculations for alerts

This example uses the scenario described in Section 4.3.3, "Evaluating Alerts (Parameter Evaluation)" in the *Overview Guide* to explain how to set calculations as alert conditions.

Set the following items in the **Condition Editor** to calculate the amount of sales from the number of units sold and the unit price, causing an alert to be issued if 1500 is not reached.
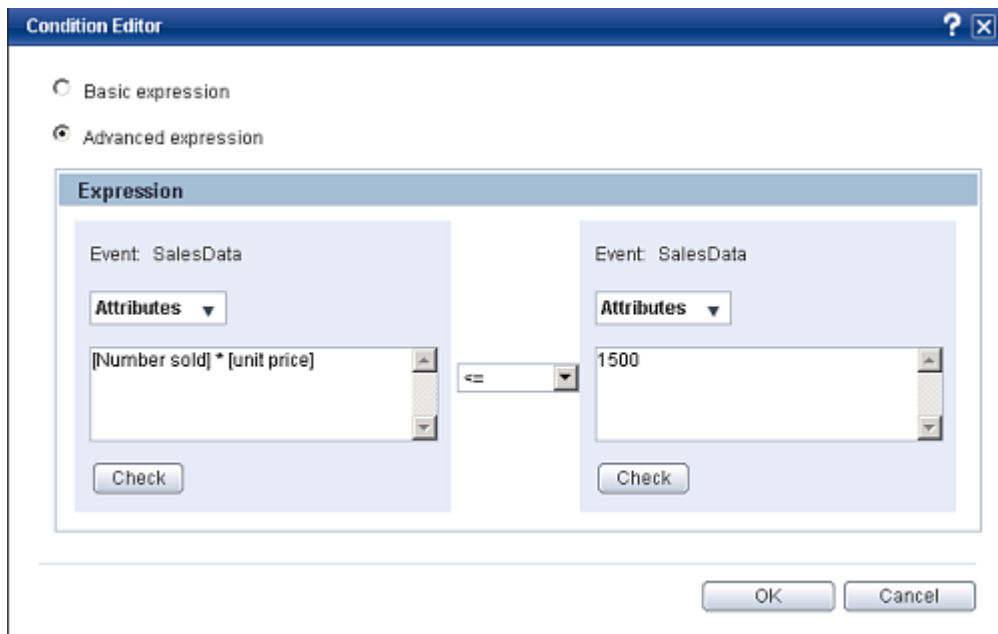
Item	Value
Condition type	Advanced expression
Left-hand side expression	[Number sold] * [unit price]
Right-hand side expression	1500
Operator	Less than or equal to (<=)

Editing Alert Filters

To edit an alert filter:

1. On the **Draft** tab, select the alert filter you want to edit.

    Doing this displays the Editor with the **Details** tab selected by default.

NOTE

The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

---

2. Ensure the element is in the "Being edited" or "Being edited (Published)" states to begin modifying the element's definition.

NOTE

You can only edit elements that are in the "Being edited" or "Being edited (Published)" states. If the element you want to edit is not in any of these states, change its current state. Refer to "View or edit an element's definition" in "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

---

3. In the **Name** box, review the name of the alert filter to ensure it meets your requirement.

4. In the **Description** box, specify a brief description about the alert filter.

5. Add alerts to the alert filter.

    In the **Alert(s)** area, select an alert from the **Available** list and click **Add Selected** (▶).
    Doing this positions the alert in the **Selected** list.
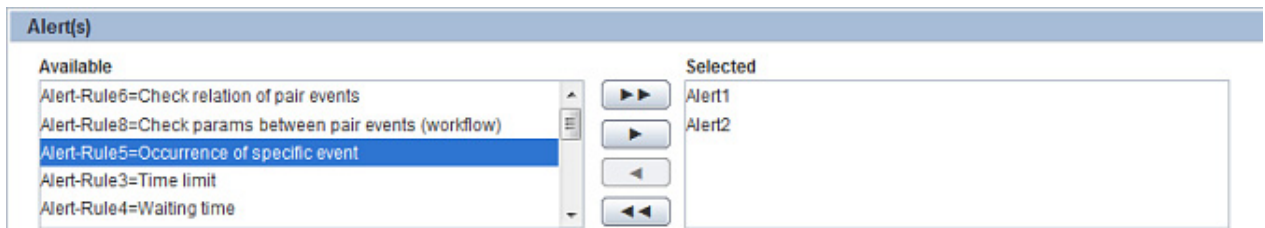
> **TIP!**
>
> You can add multiple alerts to an alert filter. Use **Add All** (![►►]) to add all the available alerts to an alert filter. Alternatively, use **Remove All** (![◄◄]) or **Remove Selected** (![◄]) to remove the selected alerts.

6. Define the specification of alerts stored within the alert filter in the **Filter Parameters** area.

*   **Maximum number of alerts**

    Select a value to denote the number of alerts that can be stored in the alert filter; default is 50

*   **Alert status**

    Only alerts with the selected status will be displayed on the dashboard; you must select more than one status

*   **Alert type**

    Drag the slider to indicate the range of alerts, such as Unknown, Information, Warning, or Critical, to be stored within the alert filter

*   **Alert level**

    Drag the slider to define the range of severity level for alerts within the alert filter
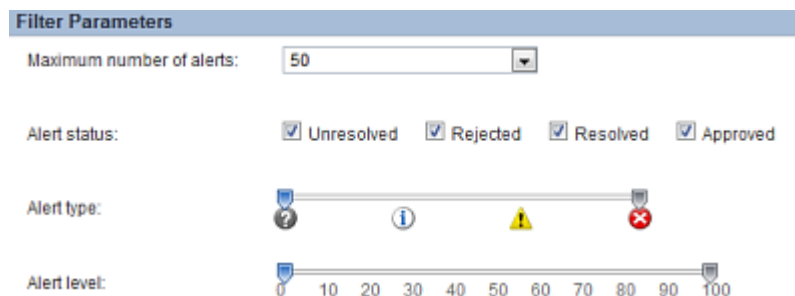
7. Click **Advanced** to configure additional settings for the alert filter.

*   **Alert occurrence time**

    Select any of the following values to sort alerts within the alert filter.

    –   **All**

        Displays all alerts stored within the alert filter

    –   **Today**

        Displays alerts that triggered on the current day

    –   **This week**

        Displays alerts that triggered in the current week

– **This month**

  Displays alerts that triggered in the current month

– **Specify period**

  Displays alerts that triggered in a specific time period; specify an appropriate **For the past** value.

8. In the **Alert Summary** area, set the threshold values for the color indicators displayed in the Alert Summary on the dashboard.

    Note that the threshold value signifies the total number of alerts, which if triggered collectively, will cause the relevant color to be displayed in the Alert Summary.


9. Click the **Comments** tab to view the history of the actions performed on the alert filter.

10. Click **Save** to apply the revised settings to the alert filter.

Editing Charts

To edit a chart:

1. On the **Draft** tab, select the chart you want to edit.
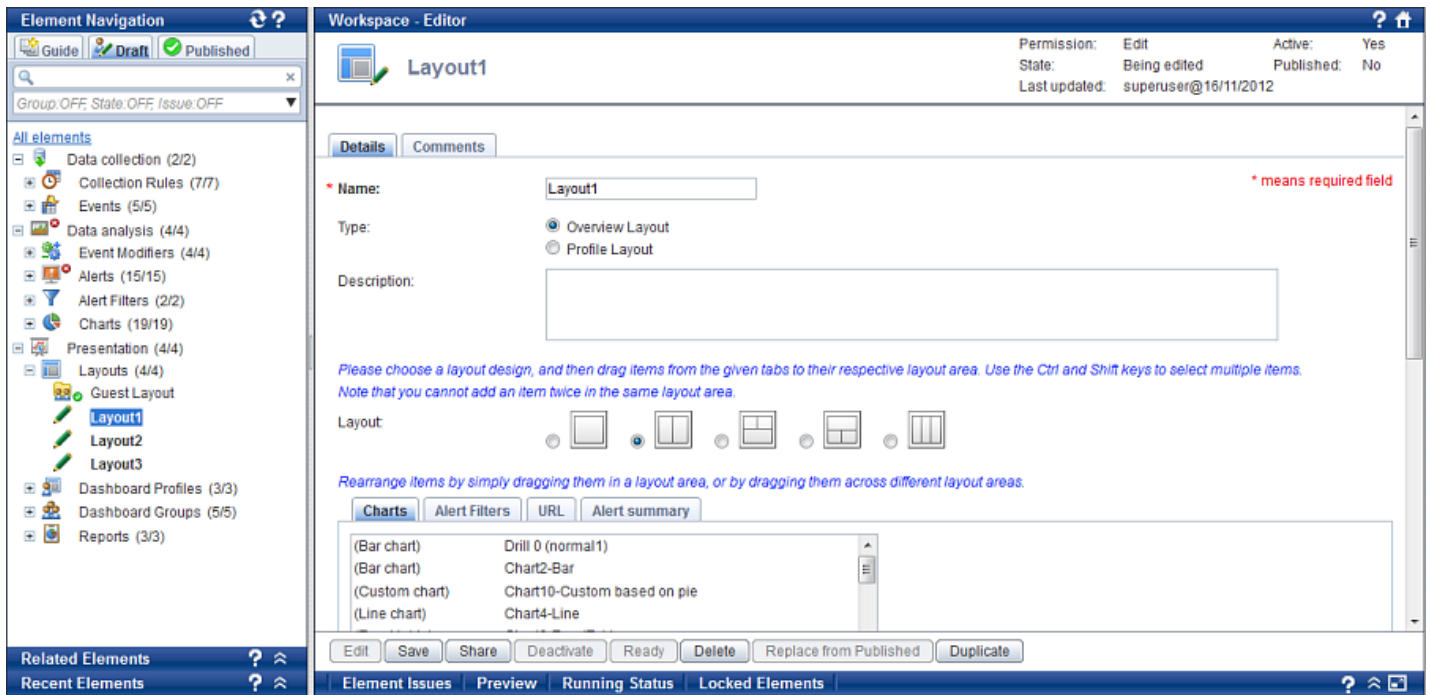
    Doing this displays the Editor with the **Details** tab selected by default.

NOTE

The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

2. Ensure the element is in the "Being edited" or "Being edited (Published)" states to begin modifying the element's definition.

NOTE

You can only edit elements that are in the "Being edited" or "Being edited (Published)" states. If the element you want to edit is not in any of these states, change its current state. Refer to "View or edit an element's definition" in "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

3. In the **Name** box, review the name of the chart to ensure it meets your requirement.

NOTE

The **Details** tab also provides the **Drilling Chart** option, but this cannot be edited. This setting is configured when the chart is initially created. Though this option is disabled, in case of drilling charts (as shown below), you may select the parent chart to view its definition.

4. In the **Description** box, specify a brief description about the dashboard profile.

5. Ensure the chart format selected in **Chart type** meets your requirement.

   If required, select an appropriate chart ideal for the data you want to represent on the Analytics Dashboard; for example, tabular data or information in chronological order may be best represented through an Event Table, whereas for volumetric data, such as monthly sales, a Pie Chart is more appropriate.
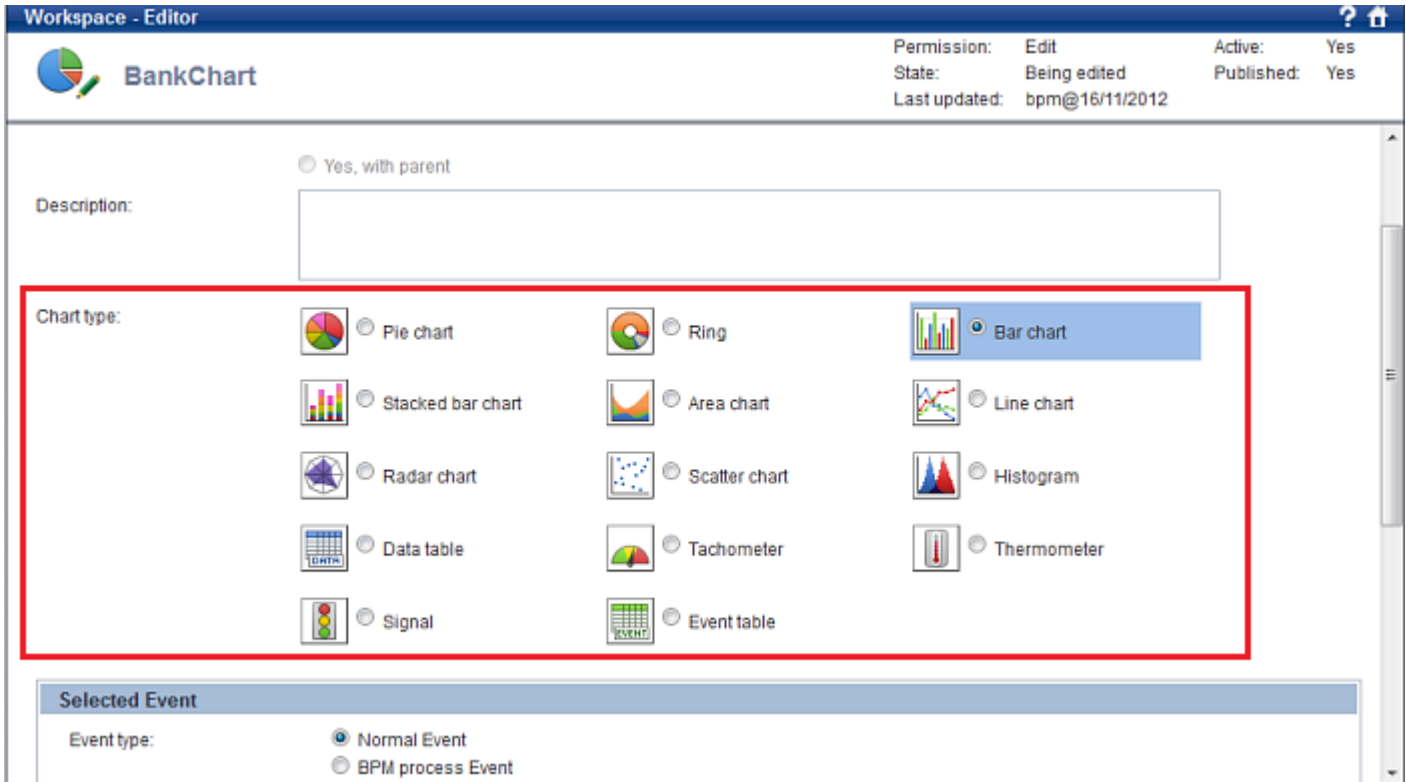
6. Select the event to be represented on the chart in the **Selected Event** area.

- **Event type**

  Select either **normal Event** or **BPM process Event** to indicate the type of event.

- **Event Group**

  Select the event group that contains the event to be represented on the chart.

- **Event**

  Select the event from the list.
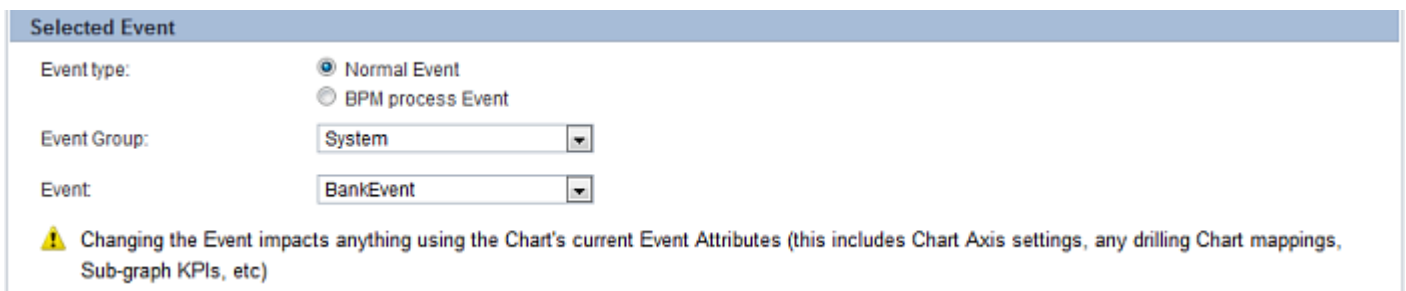
> **IMPORTANT**
>
> Changing the event not only impacts the data displayed on the chart, but also, affects the properties of its nested chart.

> **NOTE**
>
> If you selected **BPM process Event** as the event type, refer to Appendix A, "Additional Configuration Parameters" for its configuration options.

7. In the **Chart Axis** area, define the chart's axis.

- **Category**

    Select the event attribute that will form the chart's category (x) axis.

- **Series**

    Select the event attribute that will form the chart's series (y) axis.

- **Data**

    Select the event attribute to be plotted as the key data on the chart.

- **Label format**

    Allows you to assign a format to the values displayed on the chart's axis: Category, Series, and Data

    – **None**

        Indicates that the label does not require a unit

    – **Date**

        Displays values in date format

    – **Time**

        Displays values in time format

    – **Percent**

        Specifies the percentage symbol (%) as the unit for the label

    – **Custom**

        Allows you to specify a custom unit to the label; the following characters may be used to specify a format:

        - For date/time format: YYYY, MM, DD, EEE, hh, mm, ss

        - For numeric format: 0, #, . where "0" signifies a digit and is used if a value does not exists, "#" signifies a digit and is used if a numeric value exists, and "." signifies a decimal point

            For example, a sample value of 765.0980 uses the custom format of ####.0000. Similarly, a sample datetime value of 20/11/2012 21.15.30 uses the custom format of DD/MM/YYY EEE hh:mm:ss.

> **IMPORTANT!**
>
> Label formats are **not** applicable to event attributes of the String and Boolean data types.

8. Click **Advanced** to manipulate the axis data to be represented on the chart using mathematical operations.

- **Operation type (for same category value)**

  Select either **Sum**, **Average**, **Maximum**, or **Minimum** to specify the calculation method to be used for the axis data

- **Operation for data attribute**

  Define the mathematical operation to be performed on the axis data before it is displayed in the chart; the default operator is multiply (*), while the default operand is 1.0.

9. Click the **Data Range** tab to configure the range and scope of the event data to be represented on the chart.

10. In the **Period of Each Step** area, select any of the following options to specify the data range to be displayed on the chart.

- **Latest data**

  Allows you to display the most recent event attribute data on the chart

- **Past point data**

  Allows you to specify a date in the past to extract event attribute data specific to that date; select the **Open Calendar** ( ) icon to choose a date and time; default is the current system date and time

- **Grid range**

  Allows you to set a time period that includes the time of onset; specify the time period for extracting the event attribute data

- **Period**

  Enables you to specify a data range for display on the chart by setting the current date as the end date of displayed data

- **Step start**

  Allows you to specify the data to be displayed by setting a date as the starting point

- **Step start and end date**

  Allows you to select a start and end date for filtering specific data to be displayed on the chart
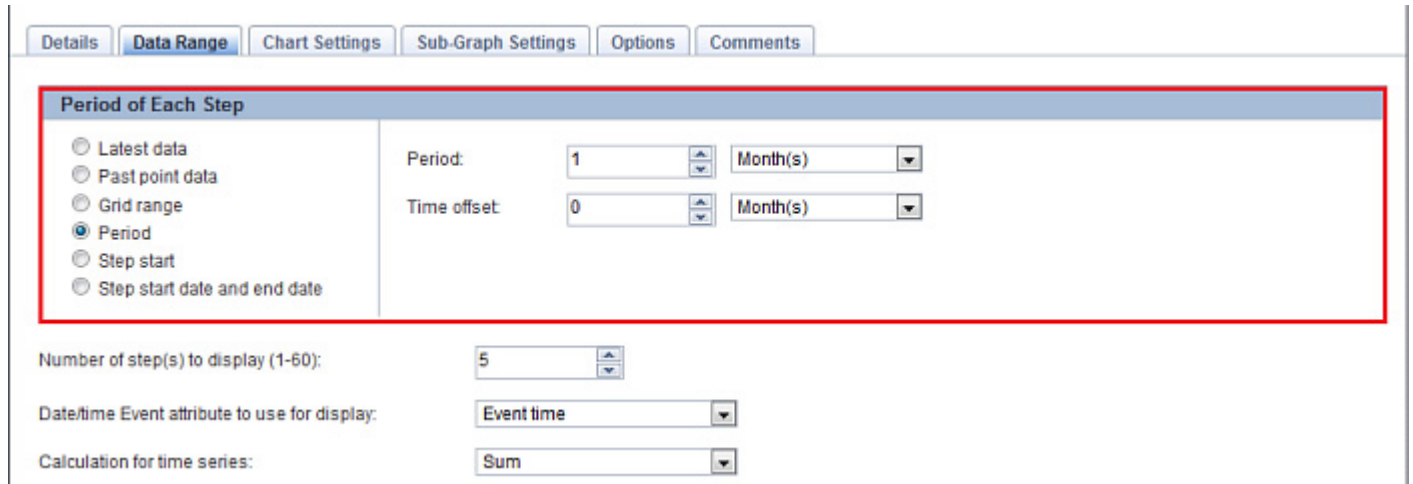
11. Select a value from the **Number of step(s) to display** box to denote the number of steps in the period slider in the Analytics Dashboard.

12. From the **Date/time Event attribute to use for display** box, select the base time for the data range. The default value is "Event time", which implies the time when the event occurred. You may change this default with a *DateTime* event attribute.

13. If the data type of the event attribute selected as the chart's category is not of the DateTime/Date/Time type, the **Calculation for time series** box is displayed.

    Select a mathematical operation, such as Sum, Average, Maximum, or Minimum, from the **Calculation for time series** box to calculate the time series for display on the period slider.
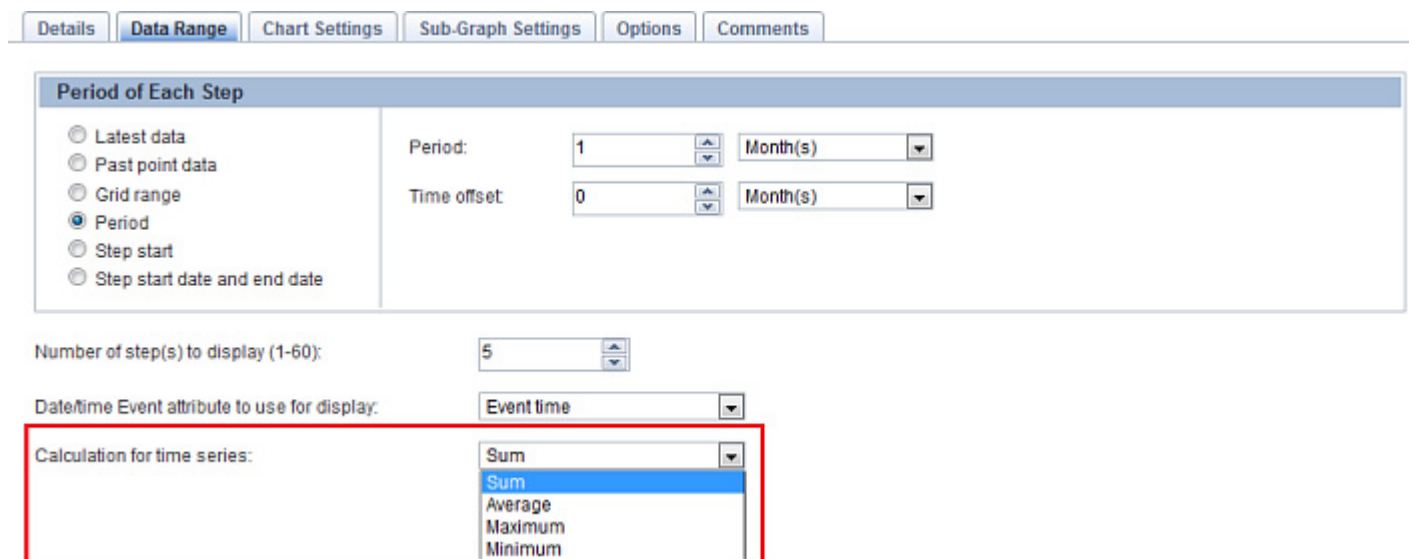
14. Click the **Drilling Parameters** tab to specify drill-down capabilities of the chart. This tab is only available for drill-down or nested charts.
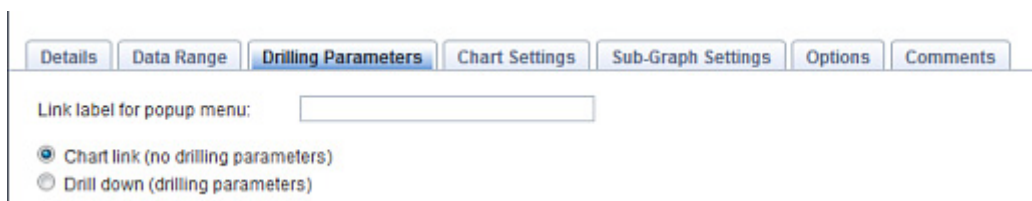
15. Set the drill-down parameters for the chart.

- **Link label for popup menu**

  Specify the display name of the popup menu that appears on drilling down a target on the Analytics Dashboard. The element name will be displayed if an empty value is specified.

- **Chart link**

  Select this option to create a link to the parent chart.

- **Drill down**

  Select this option to display the chart by inheriting the parent chart parameter values. Specify the data to be inherited in the **Drilling Parameters** area.
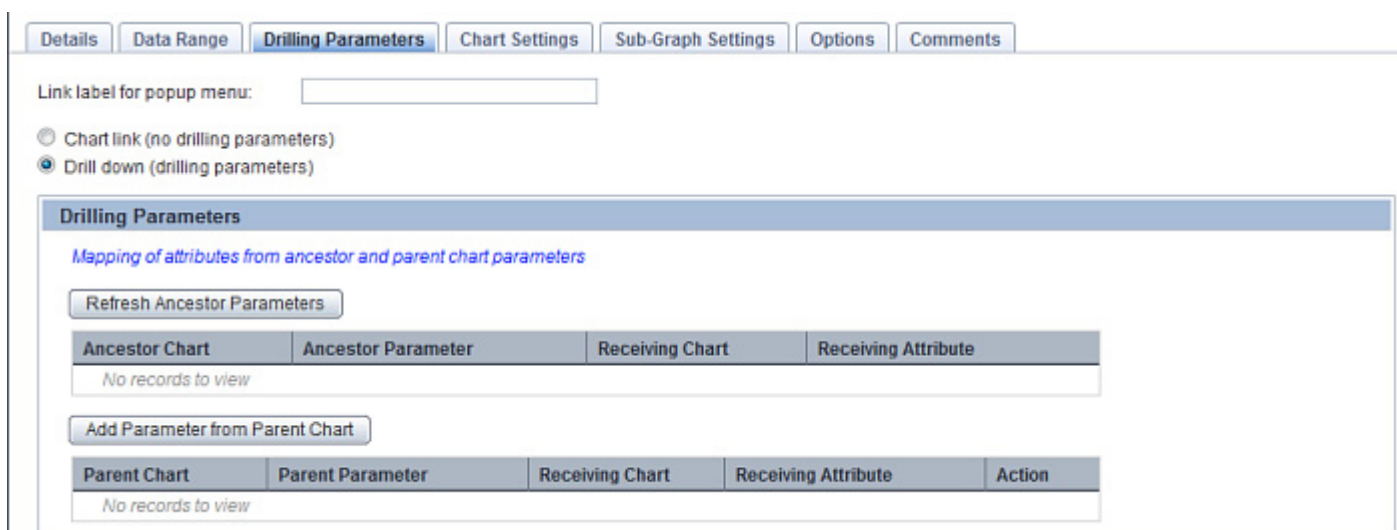
16. Click the **Chart Settings** tab to configure the display settings for the chart.

17. Configure the following settings in the **View Detail** area.

- **Refresh interval**

  Specify a time interval in minutes to refresh the displayed view of the chart

- **Title**

  Provides options to set the chart title

  - **Display**

    Select this check box to display a title for the chart.

  - **Text**

    Type the chart title.

  - **Color (hex)**

Select the **Open Color Palette** (■◣) icon to display a color palette; choose an appropriate color for the chart title.

- **Display Size**

  Provides options to configure the chart size

  – **Fixed size**

    Select this check box to set specific dimensions for the chart.

  – **Width**

    Select a numeric value to set the chart width in pixels.

  – **Height**

    Select a numeric value to set the chart height in pixels.

Details	Data Range	Drilling Parameters	**Chart Settings**	Sub-Graph Settings	Options	Comments

View Detail

| Refresh interval: | 5 | ▲▼ Minute(s) |

Title

Display:	✓
Text:	ChildChart
Color (hex):	000000	■◣

Display Size

Fixed size:	✓
Width:	450	▲▼ Pixels
Height:	300	▲▼ Pixels

NOTE

Use the **Preview** tab of the Quick Panel to view how the resultant chart may appear on the Analytics Dashboard. Edit the chart settings to adjust the chart style according to your requirement.

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18. Configure the following settings in the **Style** area.

NOTE

For demonstration purposes, this procedure configures settings for a bar chart. The style settings vary for different chart types. Refer to Appendix A, "Additional Configuration Parameters" for all the style settings supported by Analytics Studio.

- **Display legend**

  Shows a legend for the chart; is selected by default; clear the check box if you do not require a legend

- **Display data values**

  Shows data values in the chart; is selected by default; clear the check box if you do not want to show data values

NOTE
For line charts, the data values are not displayed in the Analytics Dashboard whether the **Display data values** check box is selected or not.

- **Direction of plot**

  Select either **Vertical** or **Horizontal** to set the direction of plot in a chart

- **Horizontal axis**

  Provides options to define the horizontal axis of the chart

  – **Display name of axis**

    Select this check box if you want to specify a name for the horizontal axis of the chart. Type the name in the adjacent box that appears.

  – **Display labels on axis**

    Select this check box to use labels on the horizontal axis.

- **Vertical axis**

  Provides options to define the vertical axis of the chart

  – **Display name of axis**

    Select this check box if you want to specify a name for the vertical axis of the chart. Type the name in the adjacent box that appears.

  – **Upper bound**

    Select the check box, and then select an Integer value to specify the upper bound value for the horizontal axis. Alternatively, you can also type a value in the **Upper bound** box.

  – **Lower bound**

    Select the check box, and then select an Integer value to specify the lower bound value for the horizontal axis. Alternatively, you can also type a value in the **Lower bound** box.

19. In the **Threshold** area, click **Add** to configure the threshold line for your chart.

- **Display name**

   Type a name for the threshold line; default is Threshold

- **Value**

   Set an Integer value for the threshold line

- **Line type**

   Set a line style for the threshold line

- **Line width**

   Set the line width

- **Line color (hex)**

   Select the **Open Color Palette** (◼️◣) icon to select a line color

- **Action**

   Click the **Remove** (◼️) icon to delete a threshold line

   You can add multiple threshold lines depending on your requirement.

20. Click the **Sub-graph Settings** tab to define several charts as overlays.

NOTE
You can define sub-graph charts for *Bar* and *Line* charts only.

21. Select the **Share vertical axis** check box to share the vertical axes of the sub graph and base graph.

22. Select the **Add** button to add a sub-graph.

23. In the **Sub-Graph** area, select either **Bar chart** or **Line chart** as the chart type for the sub-graph chart.

24. In the **KPIs** area, assign event attributes to the sub-graph chart.

- **Category**

  Select the event attribute to be designated as the chart's category

- **Series**

  Select the event attribute to be designated as the chart's series

- **Data**

  Select the event attribute whose data is to be displayed on the chart

25. Using the **Label Format** box, assign a unit to the event attributes selected as the chart's axis properties (Category, Series, and Data).

- **None**

  Indicates that the label does not require a unit

- **Time**

  Displays values in time format

- **Percent**

  Specifies the percentage symbol (%) as the unit for the label

- **Custom**

  Allows you to specify a custom unit to the label; the following characters may be used to specify a format:

  – For date/time format: YYYY, MM, DD, EEE, hh, mm, ss

– For numeric format: 0, #, . where "0" signifies a digit and is used if a value does not exists, "#" signifies a digit and is used if a numeric value exists, and "." signifies a decimal point

For example, a sample value of 765.0980 uses the custom format of ####.0000. Similarly, a sample datetime value of 20/11/2012 21.15.30 uses the custom format of DD/MM/YYY EEE hh:mm:ss.

NOTE

You cannot assign a label format for event attributes of the *String* and *Boolean* data types.

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26. Click **Advanced** to configure additional settings for the chart.

27. In the **Calculation by time** series, select a mathematical operation (**Sum**, **Average**, **Maximum**, or **Minimum**) to calculate the time series for display on the period slider.
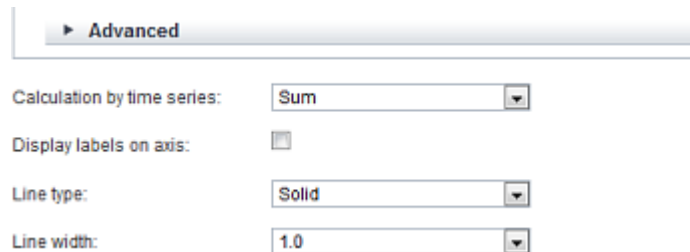
28. Select the **Display labels on axis** check box to add a title for the subgraph.

29. Select the **Display data values** check box to show data values in the chart.

30. In the **Line type** list, click either **Solid** or **Dotted** to specify the line style for the chart

31. In the **Line width** list, select a value to specify the line width.

32. Click the **Options** tab to configure additional options for the chart.

33. In the **Sort** settings area, configure the following options for filtering specific event data to be displayed on the chart.

- **Sorted**

  Select this check box to perform a sort.

- **Sort key**

  Select an event attribute that will be used as the criteria for the sort.

- **Sort order**

  Select either **Ascending** or **Descending** to identify the sort order.

34. From the **Event Condition** area, specify the condition for filtering the events to be visualized.

35. In the **Control Plot Volume** area, configure the following options to set the number of plots for the chart category or series.

- **Max number of plots for category**

    – For date value on Category

    To specify the number of plots below the specified upper bound, the grain degree is adjusted

    – For string or number value on Category

    Narrow the Category only to the item that is a high-ranking data value

- **Max number of plots for series**

    – For date value on Series

    Do not correct the Series

    – For string or number value on Series

    Narrow the Series only to the item that is a high-ranking data value.

36. In the **Compare by Time Series**, configure the following options to set the longitudinal data divided at a constant cycle.

- **Compare**

    Select this check box to set the longitudinal data divided at a constant cycle.

- **Comparison cycle**

  Specify the cycle time for dividing time series.

- **Display scope**

  Specify the time for horizontal display range.

Compare by Time Series

Arrange the longitudinal data divided at a constant cycle as two or more Charts. Specify time attribute for the category. The series setting is disregarded.

Compare:	☑
Comparison cycle:	1 Year(s)
Display scope:	1 Month(s)

37. Click the **Comments** tab to view the history of the actions performed on the chart.

38. Click **Save** to apply the revised settings to the chart.

NOTE

The following figure displays a sample chart displayed on the dashboard.
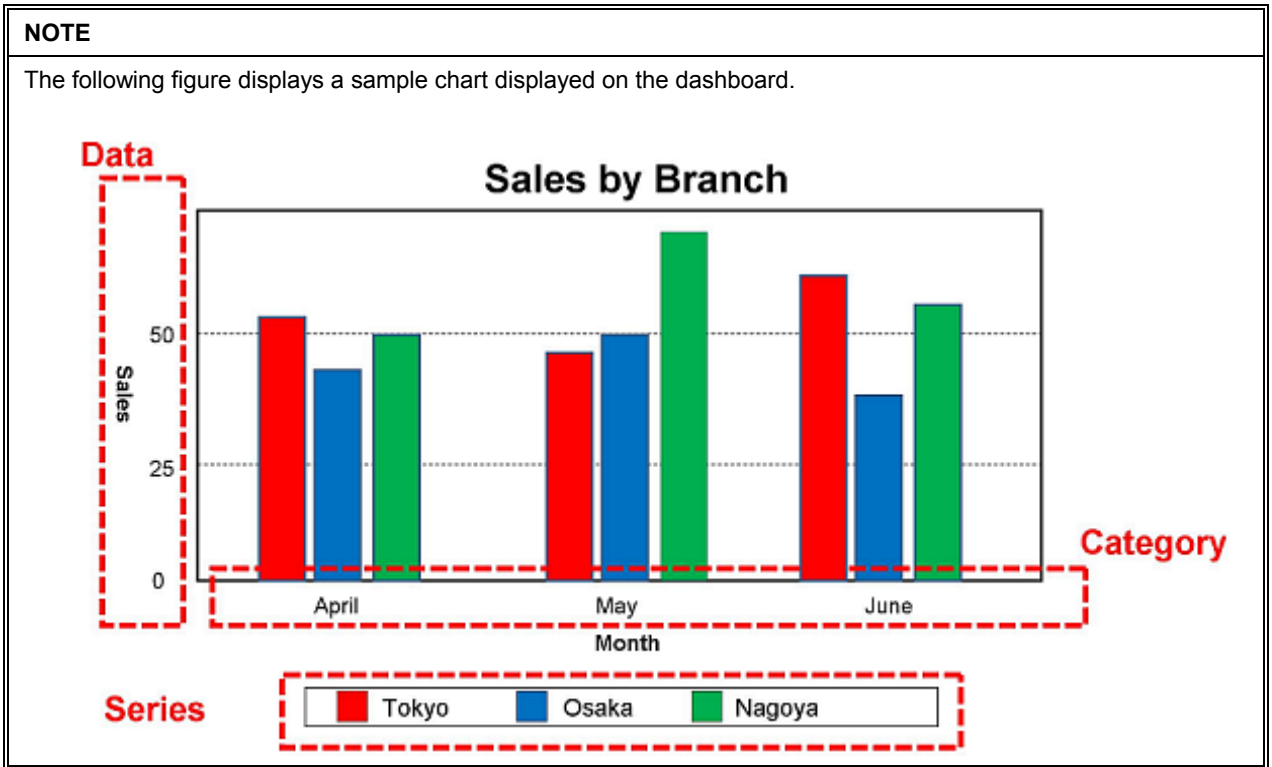
Editing Layouts

To edit a layout:

1. On the **Draft** tab, select the layout you want to edit.

   Doing this displays the Editor with the **Details** tab selected by default.
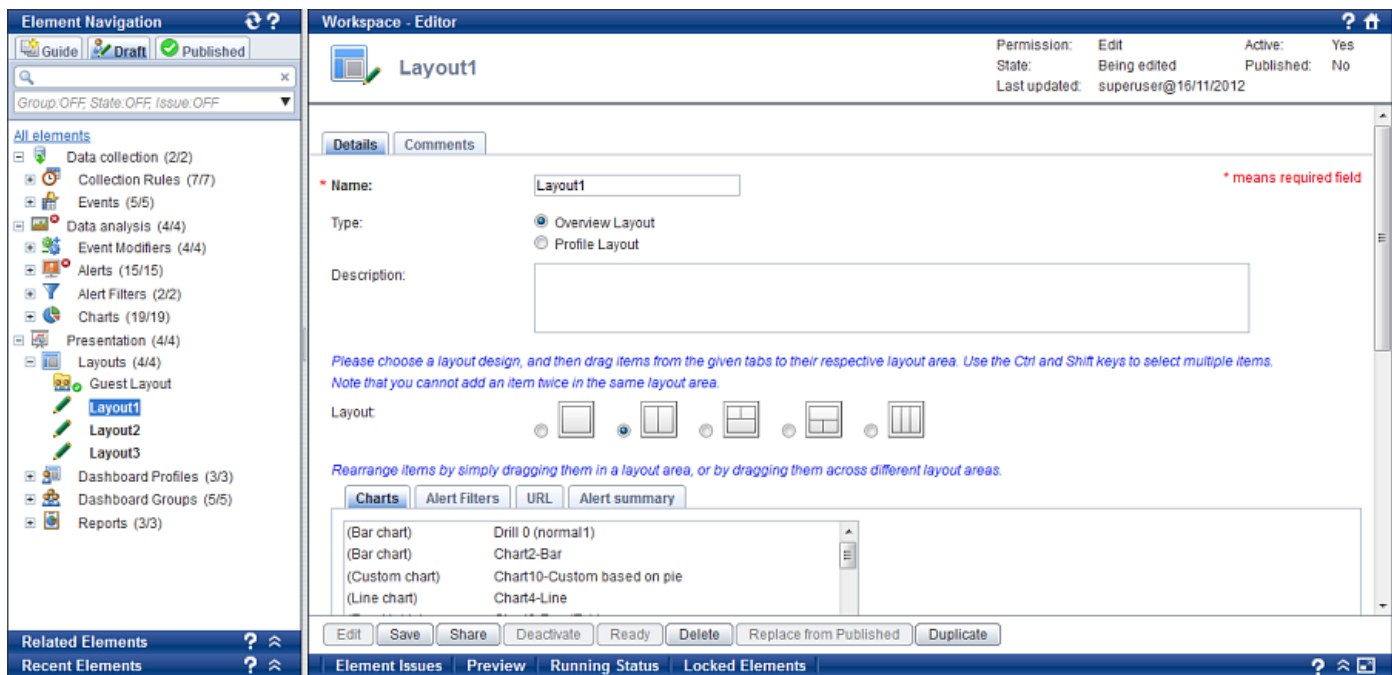
NOTE

The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

---

2. Ensure the element is in the "Being edited" or "Being edited (Published)" states to begin modifying the element's definition.

NOTE

You can only edit elements that are in the "Being edited" or "Being edited (Published)" states. If the element you want to edit is not in any of these states, change its current state. Refer to "View or edit an element's definition" in "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

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3. In the **Name** box, review the name of the layout to ensure it meets your requirement.

4. In the **Type** area, select any of the following values to specify the type of layout.

- **Overview Layout**

    Is used for dashboard groups

- **Profile Layout**

    Is used for dashboard profiles

5. In the **Description** box, specify a brief description about the layout.

6. In the **Layout** area, choose an appropriate shape for the layout. The default shape is **One area**.

Layout shape	Name
	One area

Layout shape	Name
	Two areas (columns)
	Three areas (split top)
	Three areas (split bottom)
	Three areas (columns)

Selecting a layout shape displays its corresponding areas in the bottom pane. For example, selecting the "Two areas (columns)" layout shape displays **Layout Area 1** and **Layout Area 2**.
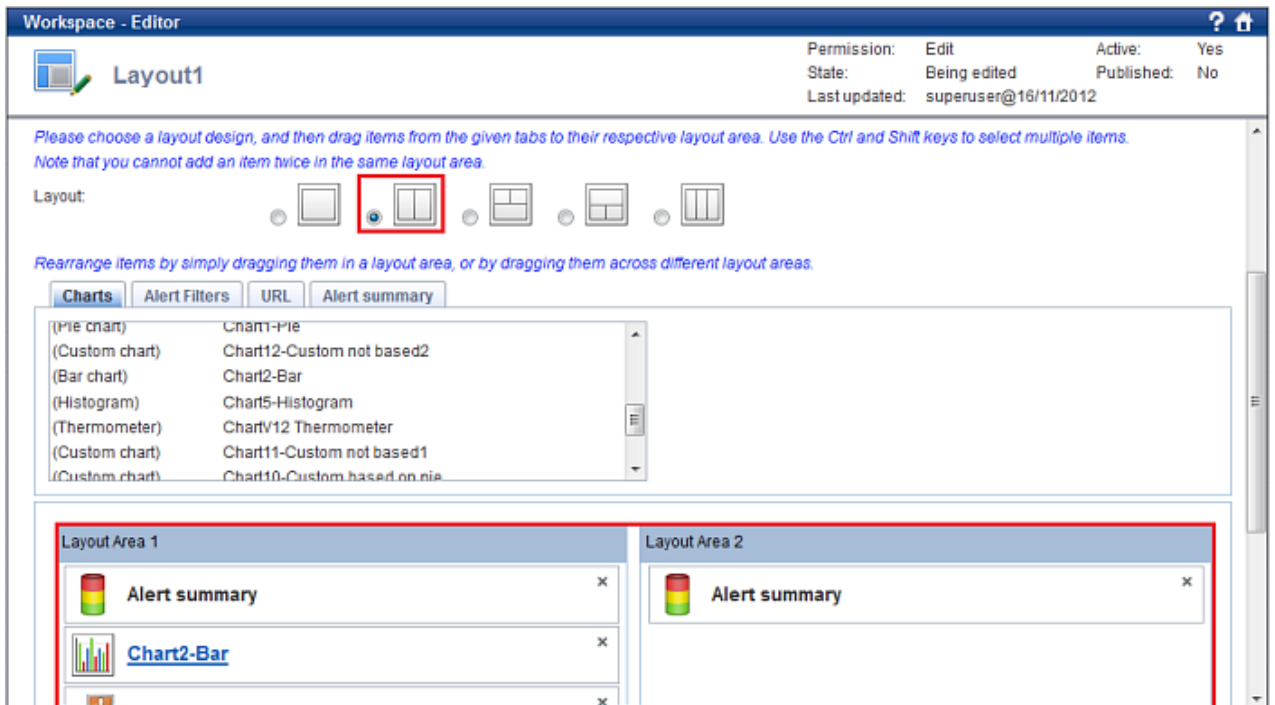
7. Click the **Charts** tab, and then drag the chart you want to display on the Analytics Dashboard to the relevant layout area.
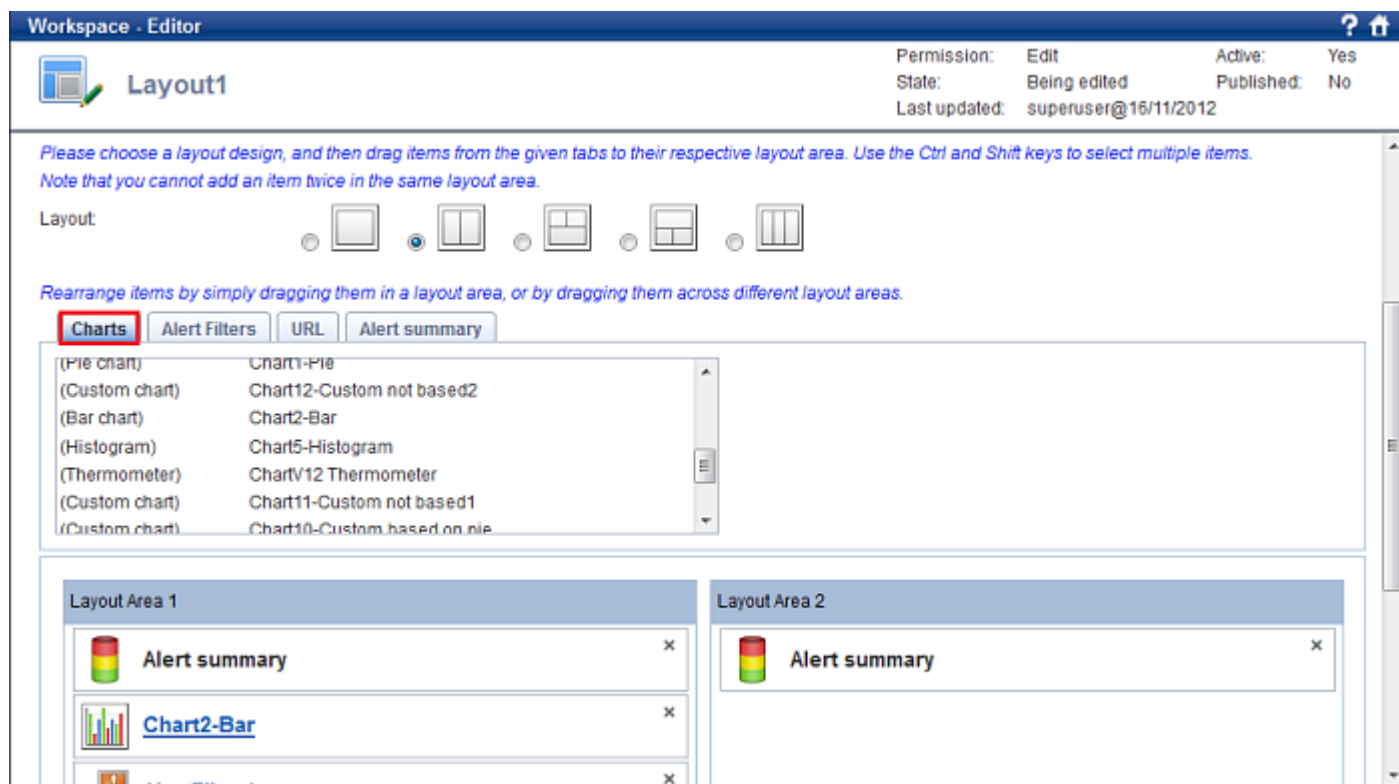
NOTE
The Analytics Studio elements are displayed in the same order and position on the Analytics Dashboard as specified when configuring the layout.

8. Click the **Alter Filters** tab, and then drag the alert filter you want to display on the Analytics Dashboard to the relevant layout area.

9. Click the **URL** tab to add an external URL that provides additional details about metrics displayed on the Analytics Dashboard.

    Add the following information, and then drag the URL to the relevant layout.

- **Label**

    Specify an appropriate title for the URL indicative of the subject it provides information on.

- **URL**

    Specify the URL.

10. Click the **Alert Summary** tab, and drag the **Alert summary** icon to the relevant layout area.

NOTE
Alert Summary can only be added to Overview layouts.

11. Repeat steps 7-10 to add elements to other layout areas.

12. Click the **Comments** tab to view the history of the actions performed on the layout.

13. Click **Save** to apply the revised settings to the layout.

NOTE

Use the **Preview** tab of the Quick Panel to view how the resultant layout may appear on the Analytics Dashboard.

Editing Dashboard Profiles

To edit a dashboard profile:

1. On the **Draft** tab, select the dashboard profile you want to edit.

   Doing this displays the Editor with the **Details** tab selected by default.

NOTE

The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

---

2. Ensure the element is in the "Being edited" or "Being edited (Published)" states to begin modifying the element's definition.

NOTE

You can only edit elements that are in the "Being edited" or "Being edited (Published)" states. If the element you want to edit is not in any of these states, change its current state. Refer to "View or edit an element's definition" in "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

---

3. In the **Name** box, review the name of the dashboard profile to ensure it meets your requirement.

4. In the **Description** box, specify a brief description about the dashboard profile.

5. Next, apply layouts to the dashboard profile.

    In the **Layout(s)** area, select a layout from the **Available** list and click **Add Selected** (▶).
    Doing this positions the layout in the **Selected** list.

TIP!
You can add multiple layouts to a dashboard profile. Use **Add All** (▶▶) to add all the available layouts to a dashboard profile. Alternatively, use **Remove All** (◀◀) or **Remove Selected** (◀) to remove the selected layouts.

6. Add alert filters for the dashboard profile.

    In the **Alert Filter(s)** area, select an alert filter from the **Available** list and click **Add Selected**
    (▶). Doing this positions the alert filter in the **Selected** list.

TIP!
You can add multiple alert filters to a dashboard profile. Use **Add All** (▶▶) to add all the available alert filters to a dashboard profile. Alternatively, use **Remove All** (◀◀) or **Remove Selected** (◀) to remove the selected alert filters.

7. In the **Columns to Display** area, select any of the following check boxes to specify the columns to be displayed on the Analytics Dashboard.
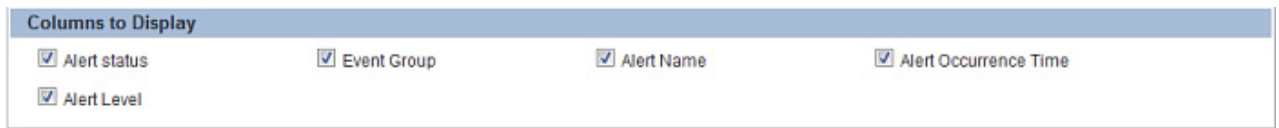
By default, all options in the **Columns to Display** area are selected. Clear the check box for the option you do not want to display on the dashboard.

8. In the **Process Scope of View** area, define the data source for retrieving metrics for display on the dashboard.

- **Scope**

  Select either Event or Event Group to identify the data source

- **Available**

  Lists the events or event groups defined in the Analytics system; select an item from the

  Available list, and click **Add Selected** (▶) to apply it to the dashboard profile

- **Selected**

  Lists the events/events groups identified for retrieving data for display on the Analytics Dashboard
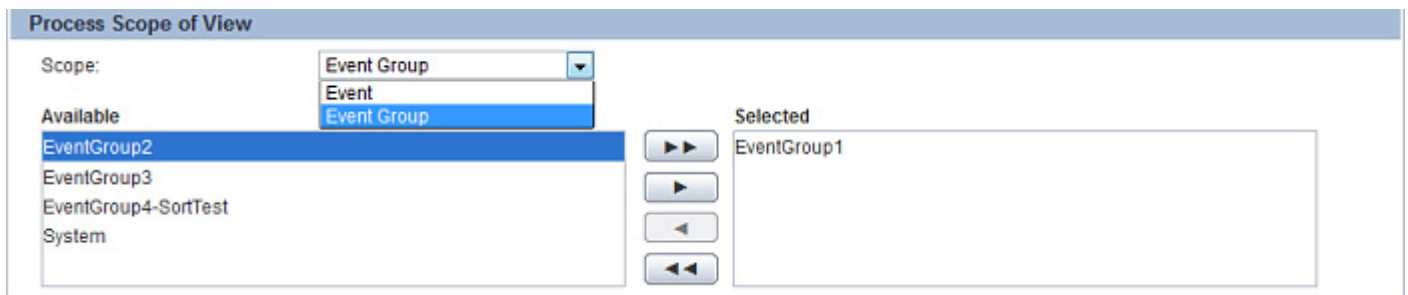
TIP!
You can add multiple events or event groups to a dashboard profile. Use **Add All** (▶▶) to add all the available events or event groups to a dashboard profile. Alternatively, use **Remove All** (◀◀) or **Remove Selected** (◀) to cancel the selection.

9. Click the **Direct Display URLs** tab to configure additional display settings for the dashboard profile.

- **Element**

  Name of elements added to the dashboard profile, such as alert filters and layouts

- **URL**

  Location of the alert filters and layouts that enables direct access to these elements when viewed using a Web browser

- **Toolbar**

  Select the **Display toolbar** check box to display a toolbar on the dashboard with options to, for example, export or print data.

- **Copy URL to Clipboard**

  Select the **Copy** button to copy the given URL.

10. Click the **Process Performance Parameters** tab to define settings for the Process Performance menu displayed on the Analytics Dashboard when the dashboard is integrated with the Analytics Console. This Process Performance menu has two submenus: Monitor and Analysis.

- **Layout for monitor**

  Assign the existing KPI layout to the Monitor screen of Process Performance.

- **Layout for analysis**

  Assign the existing KPI layout to the Analysis screen of Process Performance.

- **Display range**

  Specify the data range to be analyzed for business performance; this setting is enabled in the Analysis mode.

- **For the past**

  Specify the time period for the analysis.
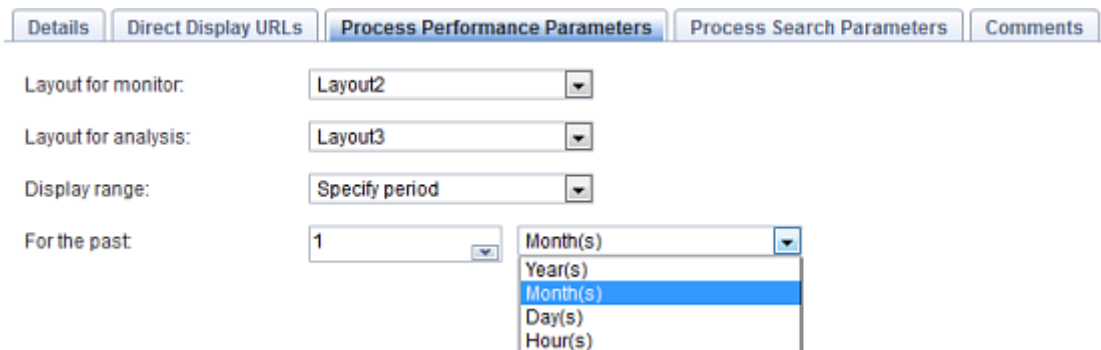
11. Click the **Process Search Parameters** tab to configure settings to enable search of BPM processes on the Analytics Dashboard.

- **Search Key Attributes**

  Specify the UDA of the business process defined in the Analytics Studio and/or select predefined conditions from the **BPM Event(s)**/**Available Attribute(s)** boxes; the selected items are displayed as search conditions on the Analytics Dashboard

- **System Parameters**

  Select the system parameters to be displayed as search conditions on the Analytics Dashboard

- **Search Results Display Format**

  Specify the parameters and attributes for the results display on the Search result screen

12. Click the **Comments** tab to view the history of the actions performed on the dashboard profile.

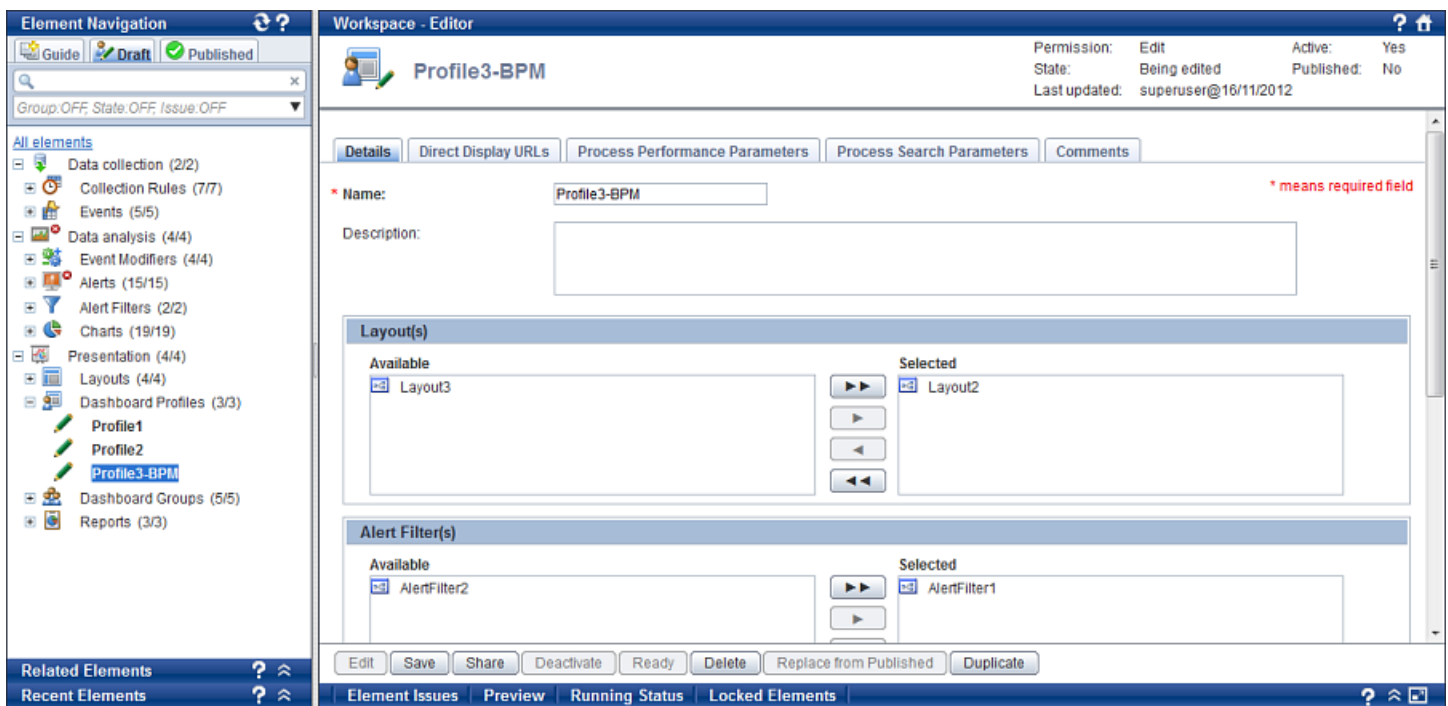13. Click **Save** to apply the revised settings to the dashboard profile.

Editing Dashboard Groups

To edit a dashboard group:

1. On the **Draft** tab, select the dashboard group you want to edit.

   Doing this displays the Editor with the **Details** tab selected by default.

NOTE

The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

---

2. Ensure the element is in the "Being edited" or "Being edited (Published)" states to begin modifying the element's definition.

NOTE

You can only edit elements that are in the "Being edited" or "Being edited (Published)" states. If the element you want to edit is not in any of these states, change its current state. Refer to "View or edit an element's definition" in "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

---

3. In the **Name** box, review the name of the dashboard group to ensure it meets your requirement.

4. In the **Description** box, specify a brief description about the dashboard profile.

5. In the **Overview Layout** list, select the overview layout to be applied to the dashboard group.

IMPORTANT!

You can only apply *Overview* layouts to dashboard groups.

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6. Ensure that the **Allow label substitution** check box is selected to display labels for event attributes shown on the dashboard. Clear the check box to disable the use of labels.

IMPORTANT!

Analytics uses the concept of "label substitution" to enforce data security by displaying the label for the

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> event attribute instead of the actual data on the Analytics Dashboard. Labels are configured using the Management Console.

7. Add users to the dashboard group.

    In the **Users(s)** area, select a user from the **Available** list and click **Add Selected** (▶). Doing this positions the user in the **Selected** list.
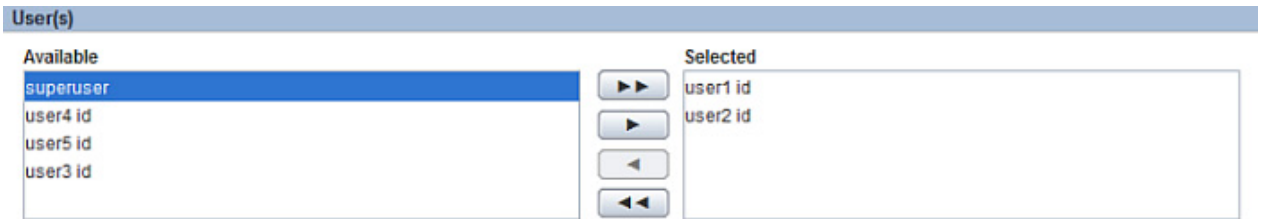
> **TIP!**
>
> You can add multiple users to a dashboard group. Use **Add All** (▶▶) to add all the available users to a dashboard group. Alternatively, use **Remove All** (◀◀) or **Remove Selected** (◀) to remove the selected users.

8. Select dashboard profiles for the dashboard group. This allows you to control the information that will be visible to users on the Analytics Dashboard.

    In the **Profile(s)** area, select a dashboard profile from the **Available** list and click **Add Selected** (▶). Doing this positions the dashboard profile in the **Selected** list.
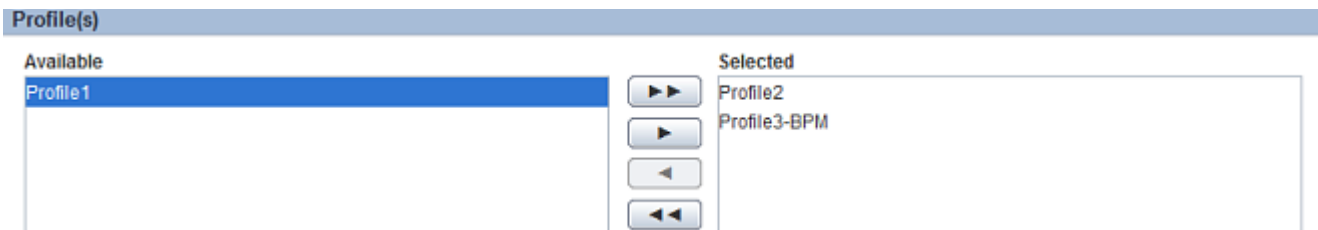
> **TIP!**
>
> You can add multiple profiles to a dashboard group. Use **Add All** (▶▶) to add all the available dashboard profiles to a dashboard group. Alternatively, use **Remove All** (◀◀) or **Remove Selected** (◀) to remove the selected profiles.

9. In the **Dashboard Menu Settings** area, select the check box for the menus you want to display on the Analytics Dashboard for users in this dashboard group.

    By default, all menu options are selected. Clear the check box for the menus you do not want to display on the Analytics Dashboard.

Dashboard Menu Settings

☑ Display Overview menu
☑ Display Alert menu
☑ Display Search menu
☑ Display Business Reports menu
☑ Display Process Performance menu

10. In the **Permissions** area, select the check box for the permission you want to assign to the users of this dashboard group for using the Analytics Dashboard.

- **Can edit Charts**

  Select this check box to allow dashboard group users to edit charts.

- **Can resolve Alerts**

  Select this check box to allow dashboard group users to resolve alerts.

- **Can approve Alerts**

  Select this check box to approve or reject the resolution of alerts.

Permissions

☑ Can edit Charts
☑ Can resolve Alerts
☐ Can approve Alerts

11. Click the **Comments** tab to view the history of the actions performed on the dashboard group.

12. Click **Save** to apply the revised settings to the dashboard group.

Editing Reports

To edit a report:

1. On the **Draft** tab, select the report you want to edit.
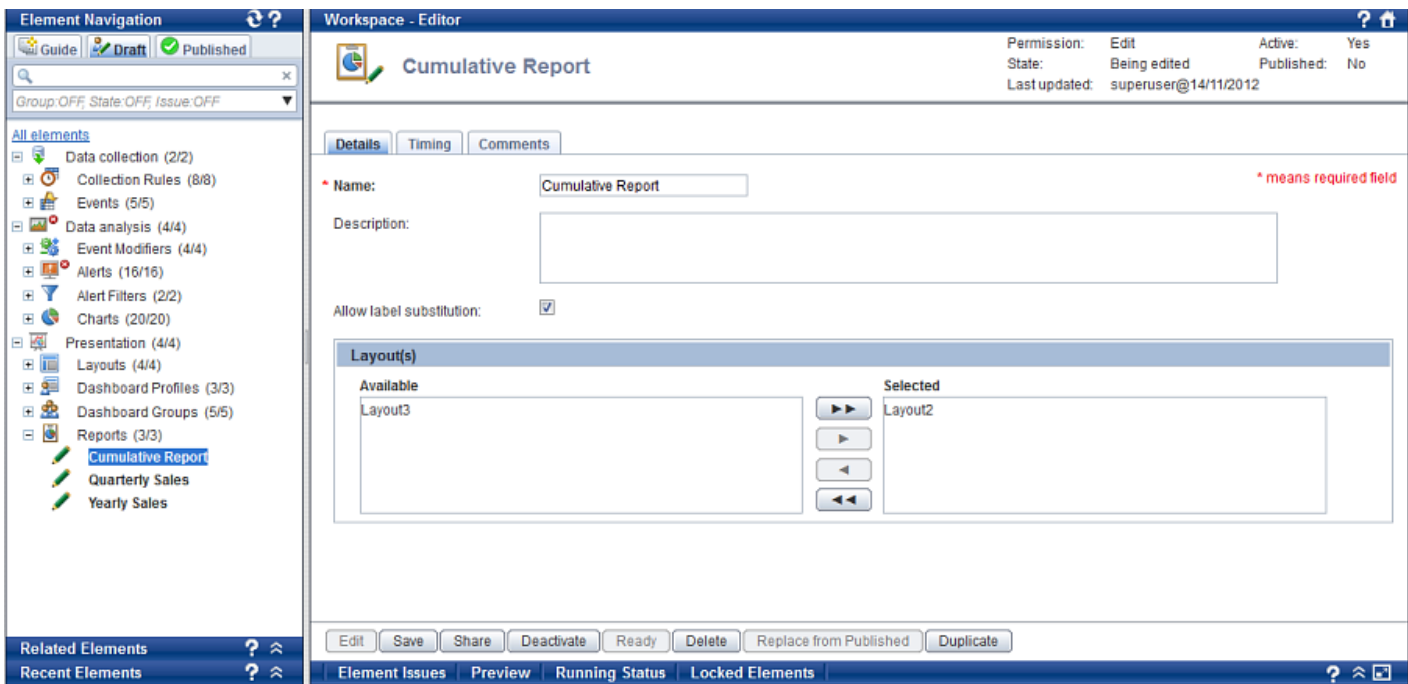
   Doing this displays the Editor with the **Details** tab selected by default.

NOTE

The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

2. Ensure the element is in the "Being edited" or "Being edited (Published)" states to begin modifying the element's definition.

NOTE

You can only edit elements that are in the "Being edited" or "Being edited (Published)" states. If the element you want to edit is not in any of these states, change its current state. Refer to "View or edit an element's definition" in "Overview" in Chapter 2, "Exploring the Analytics Studio GUI".

3. In the **Name** box, review the name of the report to ensure it meets your requirement.

4. In the **Description** box, specify a brief description explaining the nature of the report.

5. Ensure the **Allow label substitution** check box is selected to display labels for event attributes in a report. Clear the check box to disable the use of labels.

NOTE

Analytics uses the concept of *labels* to enforce data security by displaying the label for an event attribute instead of the actual data. Labels can be configured using the Management Console.

6. In the **Layout(s)** area, select a layout from the **Available** list and click **Add Selected** (▶). Doing this positions the layout in the **Selected** list.
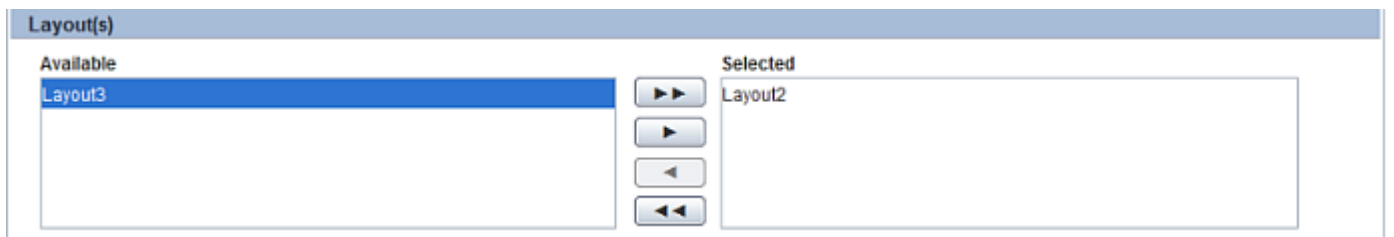
> **TIP!**
>
> You can add multiple layouts to a report. Use **Add All** (►►) to add all the available layouts to a report. Alternatively, use **Remove All** (◄◄) or **Remove Selected** (◄) to remove the selected layout.

7. Click the **Timing** tab to define a schedule for report generation.

- **Execution time (HH:mm:ss)**

  Select appropriate values to signify the time in the HH:mm:dd format for report generation.

- **Recurrence**

  Select any of the following options to define the date and recurrence interval for report generation.

    – **Custom**

      Generates the report on a user-defined date at the time specified in Execution time (HH:mm:ss)

        ▪ **Start date**

          Click the **Open Calendar** (▦) icon to select a start data for report generation.

        ▪ **Interval**

          Specify the periodic time interval for report generation.

    – **Daily**

    Generates the report every day at the time specified in **Execution time (HH:mm:ss)**

    – **Weekly**

    Generates the report on specific days of the week at the time specified in **Execution time (HH:mm:ss)**; select the check box for the day of the week when you want to generate the report; clear the check box, otherwise

    – **Monthly**

      Generates the report on a specific day of the month at the time specified in **Execution time (HH:mm:ss)**

        ▪ **Day of month**

          Select a value from 1 to 31 to specify the day for report generation.

    – **Yearly**

    Generates the report at a specific date and time every year

        ▪ **Execution date**
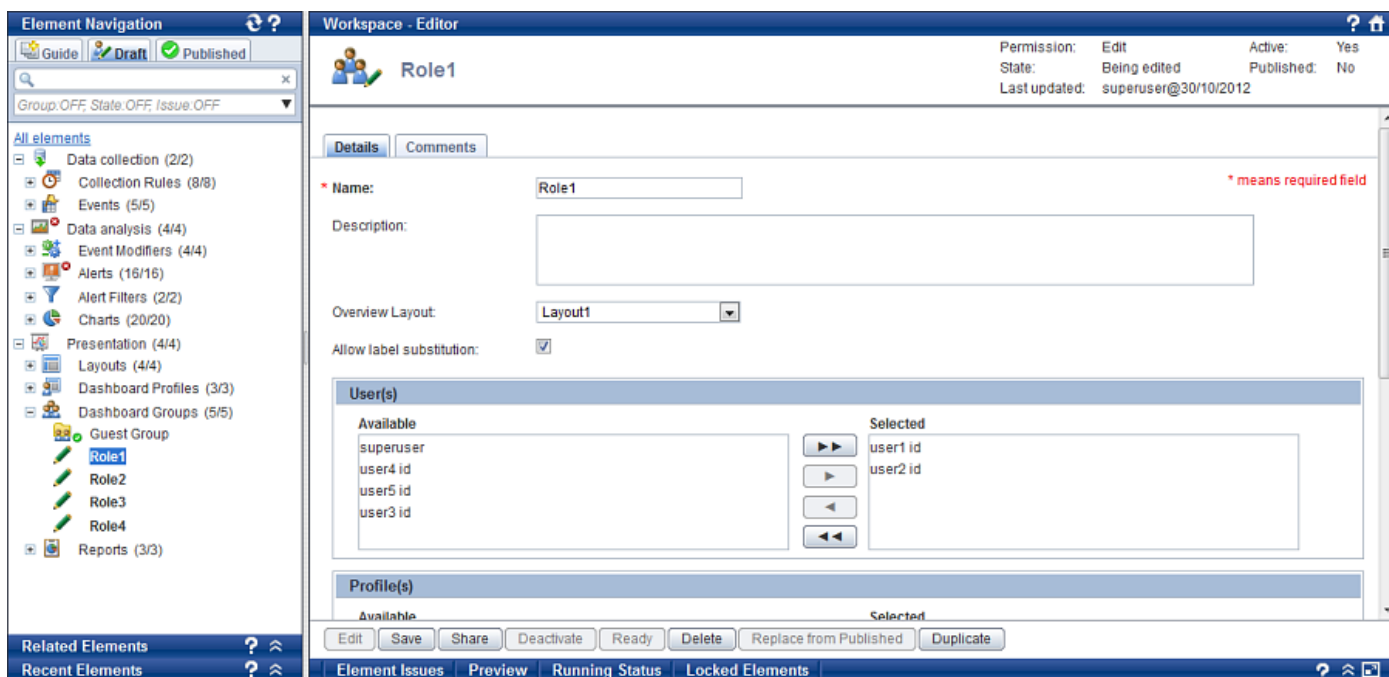
          Select a date and month to generate the report.

8. Click the **Comments** tab to view the history of the actions performed on the report.

9. Click the **Save** button to save the revised settings for the report.

NOTE

- The generated reports are saved in the following folder along with the index reference file:
 	
 <installation working directory>/ibpmm_data/report/dest
 	
 where *<installation working directory>* is the directory where Analytics is installed.
 	
 On Windows: C:/ibpmm_data/report/dest
 	
 On Linux or Solaris: /var/opt/FJSVibpma/report/dest
 	
 - Index reference file (RSS 2.0 format):
 	
   ▪ File name: reportList.xml
 	
   ▪ File composition:
 	
   -   Report title
 	
   -   Link to show Reports
 	
   -   Generated date
 	
   -   Description

Duplicating Elements

The Analytics Studio allows you to copy an existing element's definition and create a new element of the same type and the same definition.

Depending on your requirement, you may either:

- [Duplicating a Single Element](#)

- [Duplicating Multiple Elements Simultaneously](#)

Duplicating a Single Element

To duplicate an element:

1. Select an element on the **Draft** tab in the Element Navigation pane to display its definition.

TIP!
The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

2. Click **Duplicate** positioned at the bottom of the Editor.

3. In the **Duplicate - Confirmation** dialog box, click **Yes** to create a copy of the selected element.

    Doing this displays the "Duplicate operation has been successful." message.

NOTE
When duplicating a parent chart with drill-down child charts, the Analytics Studio provides you the option to duplicate child charts as well. Select the **Also duplicate child drilling Charts** check box to duplicate child charts along with the parent chart. Clear the check box if you do not want to duplicate child charts.
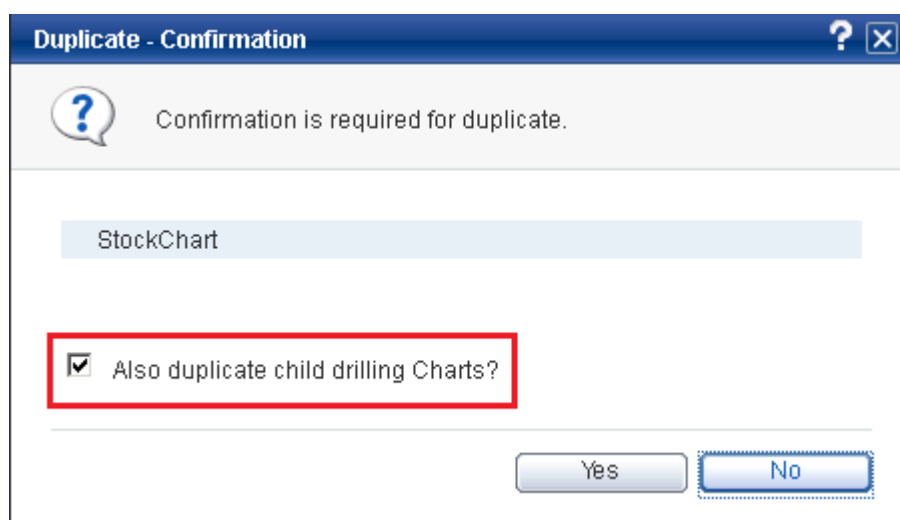
4.   Click **OK** to close the message.

The new duplicate element is listed on the **Draft** tab named "Copy of *<name_of_the_element>*."

You can edit the default name of the duplicate element to provide a more meaningful name. Additionally, you may edit the duplicate element's configuration according to your requirement.

TIP!

A quick alternative for duplicating an element's definition is to right-click the element on the **Draft** tab, and then click **Duplicate**.

Duplicating Multiple Elements Simultaneously

To duplicate multiple elements:

1.   On the **Draft** tab in the Element Navigation pane, select the parent node, such as Collection Rules, Events, or Alerts, for the elements you want to duplicate.

2.   Click **DUPLICATE multiple elements** from the list at the upper left corner of the Overview page.

     A list of elements in the "Being edited" or "Shared" states is displayed.

3.   Select the check boxes for elements you want to duplicate, and then click **Duplicate**.

4.   In the **Duplicate - Confirmation** dialog box, click **Yes** to create a copy of the selected element.

     Doing this displays the "Duplicate operation has been successful." message.

5.   Click **OK** to close the message.

The duplicate versions of the selected elements are listed on the **Draft** tab named "Copy of *<name_of_the_element>*."

You can edit the default names of duplicate elements to provide more meaningful names. Additionally, you may edit duplicate elements' definitions according to your requirement.

Deleting Elements

You can delete an element you no longer require for business monitoring.

Only elements in the "Being edited", "Shared", and "Shared (Published)" states can be deleted. Moreover, on deletion, draft elements (elements whose definition is currently being edited) are readily deleted from Analytics, while published elements (elements implemented by Analytics for business monitoring) are only marked for deletion. This is because they are currently being used by Analytics, and deleting them might impact the operations of other related elements. To permanently remove a published element, its deletion needs to be approved by an advanced Analytics Studio user with appropriate rights and permissions.

Refer to the following procedures for information on how to delete elements.

- Deleting Draft Elements ("Being Edited"/"Shared" States)

- Deleting Published Elements ("Shared (Published)" State)

NOTE

If there is a hierarchy of elements you want to delete, you need to use the *bottom-up approach*. For example, you cannot delete a parent chart that has drill-down child charts. For this, you need to first delete the child charts, and then delete the parent chart.

Similarly, you cannot delete an event group directly. You need to first delete the events within that event group, and then delete the event group.

NOTE

Sometimes you might need to delete related elements of an element to completely remove it from the system. For example, in case of events, you must delete all the related elements to remove an event from the system. On the other hand, in case of charts, you need not delete related elements.

The thumb rule is that if an element impacts the functionality of its related elements, you must delete the related elements as well to completely remove the element from the system.

Deleting Draft Elements ("Being Edited"/"Shared" States)

- Deleting a single draft element

- Deleting multiple draft elements simultaneously

Deleting a single draft element

To delete a single element:

1. Select the element on the **Draft** tab in the Element Navigation pane to display its definition.

2. Click **Delete** positioned at the bottom of the Editor.

3. In the **Delete - Confirmation** dialog box, click **Yes** to delete the element.

    The "Delete operation has been successful." message is displayed.

4. Click **OK** to close the message.

The deleted element is removed from the Analytics Studio and is no longer listed on the **Draft** tab.

> **TIP!**
>
> For quick deletion, right-click the element on the **Draft** tab, and then click **Delete**.

Deleting multiple draft elements simultaneously

To delete multiple draft elements simultaneously:

1. On the **Draft** tab in the Element Navigation pane, select the parent node, such as Collection Rules, Events, or Alerts, for the elements you want to delete.

2. Click **DELETE multiple elements** from the list at the upper left corner of the Overview page.

   A list of elements that can be deleted is displayed.

3. Select the check boxes for elements you want to delete, and then click **Delete**.

4. In the **Delete - Confirmation** dialog box, click **Yes** to delete the element.

   The "Delete operation has been successful." message is displayed.

5. Click **OK** to close the message.

The deleted elements are removed from the Analytics Studio and are no longer listed on the **Draft** tab.

Deleting Published Elements ("Shared (Published)" State)

- [Deleting a single published element](#)
- [Deleting multiple published elements simultaneously](#)

Deleting a single published element

To delete a single published element:

1. Select the element on the **Draft** tab in the Element Navigation pane to display its definition.

2. Click **Delete** positioned at the bottom of the Editor.

3. In the **Delete - Confirmation** dialog box, click **Yes** to delete the element.

> **TIP!**
>
> As a best practice, specify a brief explanation for deleting the element in the **Comment** box.

   The "Delete operation has been successful." message is displayed.

4. Click **OK** to close the message.

> **TIP!**
>
> For quick deletion, right-click the element on the **Draft** tab, and then click **Delete**.

> **TIP!**
>
> The **Delete** button changes to **Cancel Delete** when an element is deleted. Click **Cancel Delete** to revoke deletion for an element, and revert it to its previous "Shared (Published)" state.

On deletion, a published element transitions to the "Deleted" state and is represented by the icon.

5. Click the **Guide** tab in the Element Navigation pane, and then click the **Open** icon in the **Publish Elements** area.

6. Click **Publish elements** to display the All groups page.

7. Refer to the **Number of elements for deletion** column to identify the group that contains deleted elements, and then browse through the **Elements in group** list to confirm the group that contains the deleted element.

8. Select the check box for the relevant group, and then click **Publish elements**.

9. In the **Publish - Confirmation** dialog box, click **Yes** to publish the selected group of elements.

> **TIP!**
>
> As a best practice, specify a brief explanation for deleting the element in the **Comment** box.

The deleted element is removed from the Analytics Studio and is no longer listed on the **Draft** tab.

> **IMPORTANT**
>
> Only users with "Publisher" rights can delete published elements.

Deleting multiple published elements simultaneously

To delete multiple published elements simultaneously:

1. On the **Draft** tab in the Element Navigation pane, select the parent node, such as Collection Rules, Events, or Alerts, for the elements you want to delete.

2. Click **DELETE multiple elements** from the list at the upper left corner of the Overview page.

   A list of elements that can be deleted is displayed.

3. Select the check boxes for elements you want to delete, and then click **Delete**.

4. In the **Delete - Confirmation** dialog box, click **Yes** to delete the element.

> **TIP!**
>
> As a best practice, specify a brief explanation for deleting the element in the **Comment** box.

The "Delete operation has been successful." message is displayed.

5. Click **OK** to close the message.

6. Click the **Guide** tab in the Element Navigation pane, and then click the **Open** icon in the **Publish Elements** area.

7. Click **Groups** to display the All groups page.

8. Refer to the **Number of elements for deletion** column to identify the group that contains deleted elements, and then browse through the **Elements in group** list to confirm the group that contains the deleted elements.

9. Select the check box for the relevant group(s), and then click **Publish elements**.

10. In the **Publish - Confirmation** dialog box, click **Yes** to publish the selected group(s) of elements.

TIP!
As a best practice, specify a brief explanation for deleting the element in the **Comment** box.

The deleted elements are removed from the Analytics Studio and are no longer listed on the **Draft** tab.

IMPORTANT
Only users with "Publisher" rights can delete published elements.

Deactivating and Activating Elements

The Analytics Studio allows you to temporarily disable elements that you do not require for business monitoring. You may, however, enable these elements later, if required.

Only elements in the "Being edited" and "Being edited (Published)" states can be deactivated. Moreover, on deactivation, draft elements (elements whose definition is currently being edited) are readily deactivated from Analytics, while published elements (elements implemented by Analytics for business monitoring) are only marked for deletion. This is because they are currently being used in Analytics, and deactivating them might impact the operations of other related elements. Therefore, in case of published elements, their deactivation needs to be approved by an advanced Analytics Studio user with appropriate rights and permissions.

Refer to the following procedures for information on how to deactivate and activate elements.

- Deactivating/Activating Draft Elements ("Being Edited" State)

- Deactivating/Activating Published Elements ("Being Edited (Published)" State)

NOTE
The Analytics Studio only allows certain elements to be deactivated/activated, including: - Collection rules   - Event modifiers   - Alerts   - Report

Deactivating/Activating Draft Elements ("Being Edited" State)

Deactivating a draft element

To deactivate a draft element:

1. Select the element on the **Draft** tab in the Element Navigation pane to display its definition.

TIP!
The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

2. Click **Deactivate** positioned at the bottom of the Editor.

   The "Deactivate operation has been successful." message is displayed.

3. Click **OK** to close the message.

A deactivated element appears gray and is italicized. Additionally, note that the **Deactivate** button changes to **Activate**.

> **TIP!**
>
> For quick deactivation, right-click the element on the **Draft** tab, and then click **Deactivate**.

Activating a draft element

To enable or activate an element that has been deactivated:

1. Select the element on the **Draft** tab in the Element Navigation pane to display its definition.

2. Click **Activate** positioned at the bottom of the Editor.

   The "Activate operation has been successful." message is displayed.

3. Click **OK** to close the message.

Note that the **Activate** button changes to **Deactivate** on activating an element.

> **TIP!**
>
> For quick activation, right-click the deactivated element on the **Draft** tab, and then click **Activate**.

Deactivating/Activating Published Elements ("Being Edited (Published)" State)

Deactivating a published element

To deactivate a published element:

1. Select the element on the **Draft** tab in the Element Navigation pane to display its definition.

> **TIP!**
>
> The Analytics Studio provides multiple ways to select an element. You can use the Element Navigation pane, the Overview page, and or the Related Elements and Recent Elements panels.

2. Click **Deactivate** positioned at the bottom of the Editor.

   The "Deactivate operation has been successful." message is displayed.

3. Click **OK** to close the message.

   A deactivated published element appears gray and is italicized. Additionally, note that the **Deactivate** button changes to **Activate**.

> **TIP!**
>
> For quick deactivation, right-click the element on the **Draft** tab in the Element Navigation pane, and then click **Deactivate**.

4. Click the **Guide** tab in the Element Navigation pane, and then click the **Open** icon in the **Publish Elements** area.

5. Click **Groups** to display the All groups page.

6. Browse through the **Elements in group** list to confirm the group that contains the deactivated element.

7. Select the check box for the relevant group, and then click **Publish elements**.

8. In the **Publish - Confirmation** dialog box, click **Yes** to publish the selected group of elements.

TIP!
As a best practice, specify a brief explanation for deactivating the element in the **Comment** box.

A message confirming deactivation of the relevant element is displayed and its usage is temporarily stopped in Analytics.

IMPORTANT
Only users with "Publisher" rights can deactivate published elements.

Activating a published element

To enable or activate a published element that has been deactivated:

1. Select the element on the **Draft** tab in the Element Navigation pane to display its definition.

2. Click **Activate** positioned at the bottom of the Editor.

    Doing this displays the "Activate operation has been successful." message.

3. Click **OK** to close the message.

Note that the **Activate** button changes to **Deactivate** on activating an element. The element is now functional and has resumed operations in Analytics.

TIP!
For quick activation, right-click the element on the **Draft** tab, and then click **Activate**.

Sharing Elements

When an element's definition is complete and no more changes are required, you need to "*share*" it before you can publish it for real-time use.

Refer to the following procedures for information on how to share elements.

- Sharing a Single Element

- Sharing Multiple Elements of the Same Type Simultaneously

- Sharing Varied Elements Simultaneously

NOTE
Only elements in the "Being edited" state represented by the ✏ icon can be shared. In case of charts, you cannot share a parent drilling chart unless you share its child charts.

Sharing a Single Element

To share a single element:

1. Select the element on the **Draft** tab in the Element Navigation pane to display its definition.

2. Click **Share** positioned at the bottom of the Editor.

    The "Share operation has been successful." message is displayed.

3. Click **OK** to close the message.

The "Shared" element is listed on the **Draft** tab with the 👥 icon.

TIP!
Click **Edit** to revoke the "Shared" state of an element, and revert it to its previous "Being edited" or "Being edited (Published)" state.

Sharing Multiple Elements of the Same Type Simultaneously

To share multiple elements of the same type, for example, multiple collection rules, simultaneously:

1. On the **Draft** tab in the Element Navigation pane, select the parent node, such as Collection Rules, Events, or Alerts, for the elements you want to share.

2. Click **SHARE multiple elements** from the list at the upper left corner of the Overview page.

    A list of elements that can be shared is displayed.

3. Select the check boxes for elements you want to share, and then click **Share**.

    The "Share operation has been successful." message is displayed.

4. Click **OK** to close the message.

The "Shared" element is listed on the **Draft** tab represented by the 👥 icon.

Sharing Varied Elements Simultaneously

Use either of the following methods to share varied elements simultaneously:

- [Share several individual elements simultaneously](#)
- [Share a group of related elements](#)

Share several individual elements simultaneously

To share multiple elements of different element types, such as a collection of events, alerts, and collection rules, simultaneously:

1. Click the **Guide** tab in the Element Navigation pane, and then click the **Open** icon in the **Publish Elements** area.

2. Click **Share elements** to display the All Draft Elements page.

   This page lists all the draft elements configured in the Analytics Studio that are currently in the "Being edited" state and can be further processed to the "Shared" state.

3. Select the check boxes for the elements you want to share, and then click **Share**.

The "Shared" elements are listed on the **Draft** tab represented by the 👥 icon.

Share a group of related elements

You can also share a group of related elements with interdependent specifications using the following procedure.

1. Click the **Guide** tab in the Element Navigation pane, and then click the **Open** icon in the **Publish Elements** area.

2. Click **Publish elements** to display the All groups page.

3. Browse through the **Elements in group** list to confirm the group(s) that contains the elements you want to share.

4. Select the check box for the relevant group(s), and then click **Share elements**.

The "Shared" elements are listed on the **Draft** tab represented by the 👥 icon.

Readying Elements

After you have "Shared" an element (see "Sharing Elements"), you need to designate it as "Ready" for a review of its definition before it can be published for use in a real-time Analytics environment.

Refer to the following procedures for information on how to designate an element as "Ready".

- Designating a Single Element as "Ready"

- Simultaneously Designating Multiple Elements of the Same Type as "Ready"

- Simultaneously Designating Varied Elements as "Ready"

NOTE

For an element to be designated "Ready", it must be in the "Shared" state represented by the 👥 icon.

Designating a Single Element as "Ready"

To designate a single element as "Ready":

1. Select the element on the **Draft** tab in the Element Navigation pane to display its definition.

2. Click **Ready** positioned at the bottom of the Editor.

3. In the **Ready - Confirmation** dialog box, click **Yes** to designate the element as "Ready".

TIP!

As a best practice, provide a brief explanation in the **Comment** box explaining why the element should qualify as "Ready".

The "Ready operation has been successful." message is displayed.

4. Click **OK** to close the message.

A "Ready" element is represented by the ⌛ icon. Note that the **Ready** button, positioned at the bottom of the Editor, changes to **Cancel Ready**.

TIP!

When an element is designated "Ready", the **Ready** button changes to **Cancel Ready**. Click **Cancel Ready** to revoke the "Ready" state of an element and revert it to its previous "Shared" or "Shared (Published)" state.

Simultaneously Designating Multiple Elements of the Same Type as "Ready"

To "Ready" multiple elements of the same type, for example, multiple events, simultaneously:

1. On the **Draft** tab in the Element Navigation pane, select the parent node, such as Collection Rules, Events, or Alerts, for the elements you want to share.

2. Click **Mark multiple elements READY for approval** from the list at the upper left corner of the Overview page.

    A list of elements in the "Shared" state are displayed.

3. Select the check boxes for elements you want to designate as "Ready", and then click **Ready**.

4. In the **Ready - Confirmation** dialog box, click **Yes** to designate the element as "Ready".

TIP!

As a best practice, provide a brief explanation in the **Comment** box explaining why the element should qualify as "Ready".

The "Ready operation has been successful" message is displayed.

The "Ready" elements are listed on the **Draft** tab represented by the ⧗ icon.

Simultaneously Designating Varied Elements as "Ready"

Use either of the following methods to share varied elements simultaneously:

*   "Ready" several individual elements simultaneously
*   "Ready" a group of related elements

"Ready" several individual elements simultaneously

To "Ready" multiple elements of different types, such as a collection of events, alerts, and collection rules, simultaneously:

1. Click the **Guide** tab in the Element Navigation pane, and then click the **Open** icon in the **Publish Elements** area.

2. Click **Mark elements ready for approval** to display the All Draft Elements page.

    This page lists all the elements configured in the Analytics Studio that are currently in the "Shared" or "Shared (Published)" states and can be further processed to the "Ready" state.

3. Select the check boxes for the elements you want to mark as "Ready", and then click **Ready**.

4. In the **Ready - Confirmation** dialog box, click **Yes** to designate the element as "Ready".

TIP!

As a best practice, provide a brief explanation in the **Comment** box explaining why the element should qualify as "Ready".

The "Ready" elements are listed on the **Draft** tab represented by the ⧗ icon.

"Ready" a group of related elements

You can also mark a group of related elements with interdependent specifications as "Ready" by using the following procedure.

1. Click the **Guide** tab in the Element Navigation pane, and then click the **Open** icon in the **Publish Elements** area.

2. Click **Publish elements** to display the All groups page.

3. Browse through the **Elements in group** list to confirm the group(s) that contains the elements you want to share.

4. Select the check box for the relevant group(s), and then click **Mark elements ready**.

The "Shared" elements are listed on the **Draft** tab represented by the ⌛ icon.

Publishing Elements

After an element has been designated "Ready" (see "Readying Elements"), it needs to be published for use in real-time business monitoring.

NOTE

All Analytics Studio elements are interdependent on each other. For example, to be functional, an alert filter requires alert details, which in turn, uses event properties. Therefore, to enforce data integrity, the Analytics Studio enables publishing of related elements, with interdependent specifications, collectively as a "group".

Elements that are not related to any other elements are referred to as "Non-grouped elements". Such elements cannot be published because they do not satisfy the conditions for publishing. To publish non-grouped elements, add the necessary relations for these elements. Additionally, elements that are not referenced by other elements can be deleted by publishing them.

To publish elements:

1. Click the **Guide** tab in the Element Navigation pane, and then click the **Open** icon in the **Publish Elements** area.

2. Click **Publish elements** to display the All groups page.

   The All groups page lists groups for all the elements defined in the Analytics Studio and provides the following details for each group.

Column name	Description
Group	Name of the group
Number of elements	Total number of elements in a group
Number of elements with error	Number of elements with an erroneous definition
Number of elements for deletion	Number of elements designated for deletion
Elements in group	List of elements in a group

TIP!

Select a column header, such as **Number of elements** or **Number of elements with error**, to sort its contents in the ascending or descending order.

---

3. The groups listed on the All groups page may not necessarily be in the "Ready" state.

   To display groups containing elements designated as "Ready", select the **Only display elements that can be published** check box.

> **TIP!**
>
> You may review an element's definition by selecting the element in the **Elements in group** column.
>
> Additionally, if an element's definition is not satisfactory, you may reject the element from being published.
>
> 1. Select the check box for the group(s) that contains the erroneous element, and click **Reject elements**.
>
> 2. Click **Yes** in the **Reject-Confirmation** dialog box.
>
> Optionally, you may specify the reason for rejecting the group in the **Comment** box.
>
> Doing this transitions all the elements in the selected group to the "Rejected" or "Rejected (Published)" state. The rejected elements are listed on the **Draft** tab represented by the 🚫 icon.

4.   Select the check box for the relevant group(s), and then click **Publish elements**.

5.   In the **Publish - Confirmation** dialog box, click **Yes** to publish the selected group(s).

> **TIP!**
>
> As a best practice, specify a brief explanation for the group being published in the **Comment** box.

A message stating that the group has been successfully published is displayed.

A published element is represented by the ✅ icon and is listed on the **Draft** and **Published** tabs.

> **NOTE**
>
> Even though the Analytics Studio publishes elements in a group, it does not allow elements with erroneous definitions to be published. In this case, it displays an error message listing the elements that could not be published.

Chapter 4

Importing/Exporting Elements

The Analytics import/export feature allows you to migrate elements from one environment to another and reuse elements. The element's definition is exported as an exchange file. If the exchange file is uploaded to the migration destination environment, the element is restored and becomes reusable.

The procedure for migrating an element is as follows:

1. Output the elements to be migrated as an exchange file by using the export feature.
2. Upload the exchange file to the migration destination environment.
3. Select the elements you want to import from the exchange file, and import them.
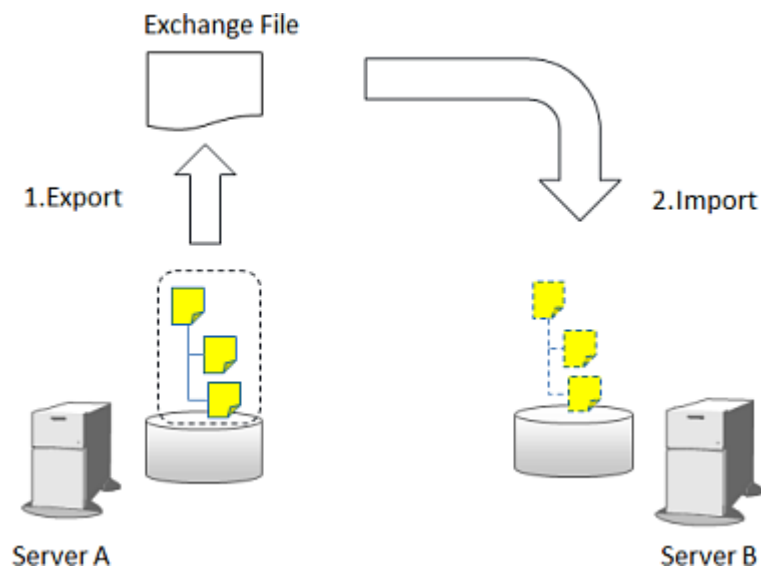
NOTE
All Analytics Studio users can use the export feature, but only those who are authorized to create elements can import them.

Exporting Elements

Use the following procedure to export elements:

1. On the menu bar, click **Tools** > **Export Elements** to display the **Export Elements** dialog box.

2. Select the target elements from the **Available elements** box, and click the **Add Selected** (▶) button. Doing this adds the elements to the **Selected elements** area.
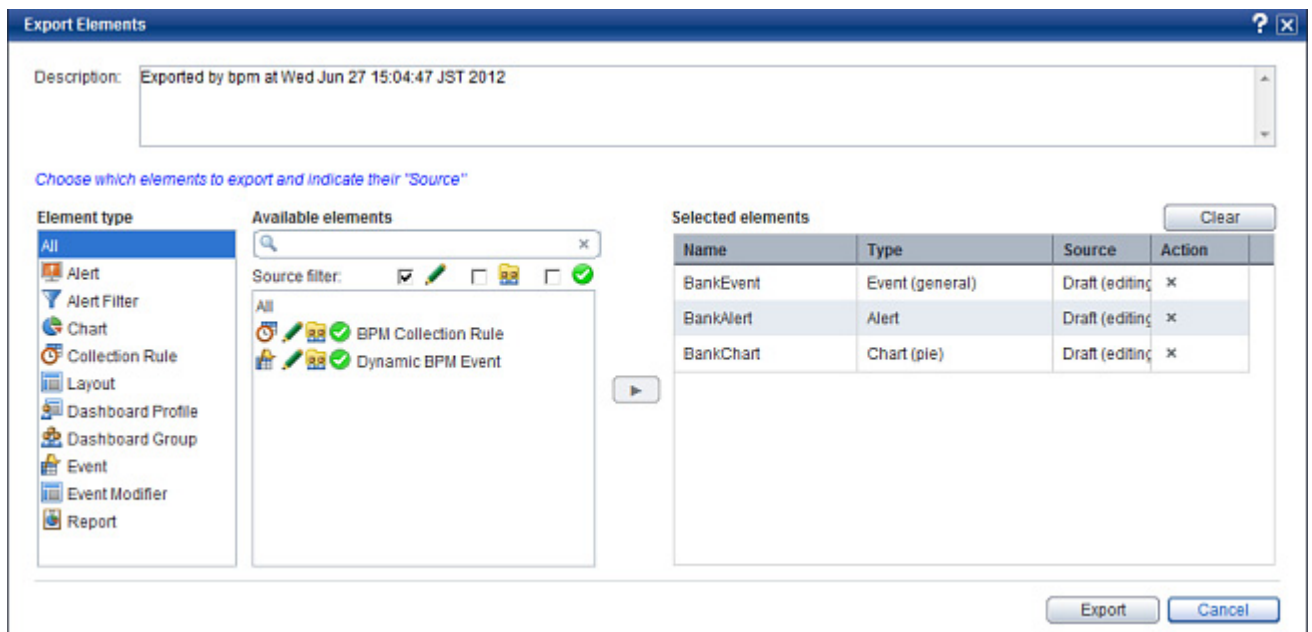
3. Click **Export**.

4. A dialog box that displays the name of the exchange file as a hyperlink appears. Click the file name to download the file, and save it with an appropriate name.

NOTE	

NOTE

- Exchange files are generated with a default name that uses the following file name format:

  EXPORT_[*YYYYMMDDHHMM*].aar

- Any element can be exported. However, you need to select one of the following sources, depending on the state of the element:

  - Draft (editing): This includes elements in the "Being edited" and "Being edited (Published)" states.

  - Draft (shared): This includes elements in the "Shared", "Ready", "Rejected", "Shared (Published)", "Ready (Published)", Rejected (Published), and "Deleted" states.

  - Published: This includes elements in the "Published" state.

Importing Elements

Use the following procedure to import elements:

1. On the menu bar, click **Tools** > **Import Elements** to display the **Import Elements** wizard.

2. In the **Select exchange file** page, click **Browse** in the **Exchange file** area to select the exchange file and click **Upload**.
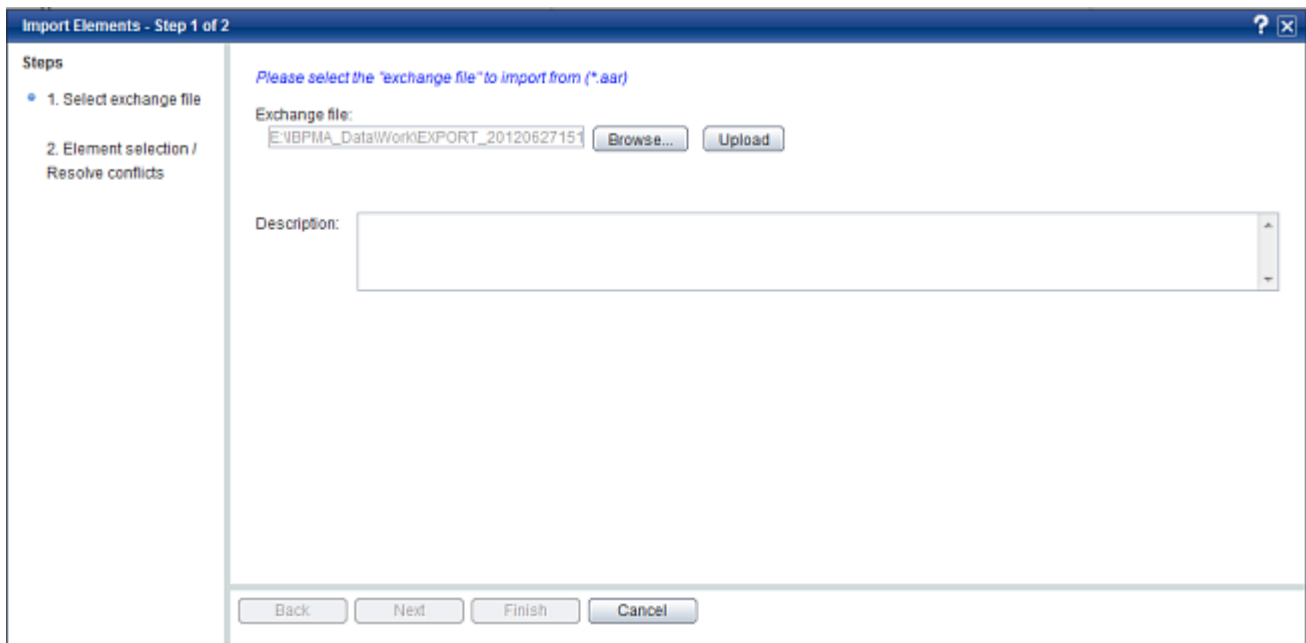
3. When the upload is complete, the export details of the file are displayed in the **Description** box and **Next** is enabled.

4. Click **Next** to continue importing elements.

5. In the **Element selection / Resolve conflicts** page, select the elements to be imported and click **Finish** to begin the import.

NOTE
- Imported elements are created in the "Being edited" state.
- In case, an element with the same name as the imported element already exists or if the user does not have the permission to create an element, an error icon appears in the **Issue** column on the **Element selection / Resolve conflicts** page of the Import Elements wizard. To rectify the error, point to the error icon to view the error description and take appropriate action. For example, specify a unique name, if required.
- It is possible to collectively resolve all duplicate name conflicts by using the **Options** area. Select the **Overwrite all** check box to overwrite existing elements with the elements being imported. Alternatively, you may specify an arbitrary prefix in the **Prefix for new name** box and click **Set** to assign a prefix to the new names of all elements being imported.

Import Log

The results of an import are output to the following log:

<AnalyticsServerDeploymentDirectory>\log\import.log

Information such as the import result, type, and new name of the imported element is recorded.

Output example:

```
BPMA21102: Import process started. exchange file name:(EXP_1XMAPGAPDG)
BPMA21101: Element(Bank Event) import completed.( Element type : EVENT )
BPMA21101: Element(Bank Chart) import completed.( Element type : CHART )
BPMA21101: Element(Bank Layout) import completed.( Element type : DASHBOARD_LAYOUT )
BPMA21101: Element(Bank Group) import completed.( Element type : DASHBOARD_ROLE )
BPMA21103: Import process ended. exchange file name:(EXP_1XMAPGAPDG)
```

Appendix A

Additional Configuration Parameters

This appendix lists some additional configuration parameters for Analytics Studio Elements.

RDB Collection Rule Configuration Parameters

The section covers **Data Collection** settings for RDB collection rules.

Collection Management Parameters

The **Collection Management** area provides options (see Table A-1 below) to set additional criteria for the data capture methods used by the collection rule.
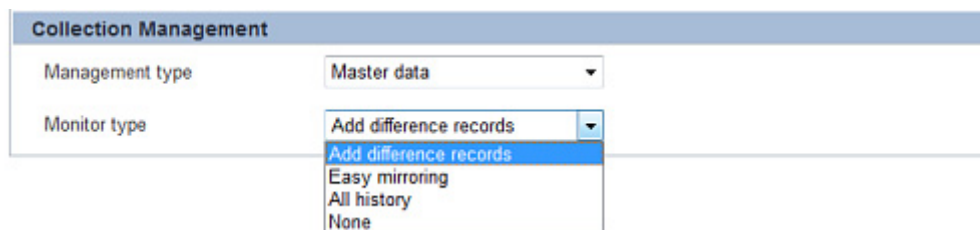
Figure A-1 Collection Management parameters (for RDB collection rules)

Table A-1 Collection Management parameters

Parameter	Value	Description
Management Type	**Master data**	Includes data used for updating, such as inventories and summaries
	Transaction data	Includes data that is added, such as sales and transaction records
	None	No criteria is applied for filtering the target source data
Monitor Type	**Add difference records**	Only the newly added data is collected
	Easy mirroring	Mirrors the business data except deleted data
	All history	Both the newly added and the updated data are collected (the latter is collected as new data)
	None	No monitor type is applied to the event

Records Difference Settings

Figure A-2 Record Difference Settings (for RDB collection rules)

Table A-2 Record Difference Settings

Setting	Value	Description
Upsert		Select this check box to insert a new record if the record does not exist or update existing records in the Analytics database.
Unique key(s)		Lists the unique keys associated with the collection rule
New Record Column	**Extraction type**	Specifies the incremental extraction key column type to use when performing an incremental extraction - **Event stored date**: Incremental collection is performed based on the column specified in Column used for difference - **Sequential data**: Incremental collection is performed based on the column specified in Column used for difference

Setting	Value	Description
	Column used for difference	- Specifies a column that will be used to compare the time when a task was previously executed and the current execution time, and then, use this information as a condition for filtering the records to be collected - Different column data types can be set for different extraction types, for example, "Event registration time: Datetime type" or "Sequential data: Real number type, integer type, string type"
	Data type for stored Date	Specifies the data type for **Column used for difference** collection - Default - Timestamp with local timezone - Timestamp with timezone
Updated Record Column	**Extraction type**	Refer to the above description for **New Record Column**.
	Column used for difference	Refer to the above description for **New Record Column**.
	Data type for stored Date	Refer to the above description for **New Record Column**.
Time delay		- Allows the search to go back the specified interval into the past when a collection condition is executed - Business data is not always registered with a business database in accordance with its time stamp; by setting a time delay, it is possible to reduce the risk of missing records that should be collected

Setting	Value	Description
Start of collected data		Is used to specify conditions for filtering out business records during the initial operation - **ALL**: Collects all data targeted for extraction - **Specified date**: Collects target data that is dated no earlier than the specified date and time; can be set only when the extraction type in "New record column" is set to Event stored date - **Sequential data**: Collects target data that exceeds the specified sequential data value; can be set only when the extraction type in "New record column" is set to Sequential data

Alert Configuration Parameters

This section covers additional alert configuration parameters.

Alert Message Specification

The following tables provide the information that can be included in an alert message for different alert types.

- Y: Can be used

- N: Cannot be used

When specified, the names of variables will be displayed.

Table A-3 Alert message specification - I

	Rule type: Check parameters (general Event) Monitor type: -	Rule type: Check parameters (workflow Event) Monitor type: Process	Rule type: Check parameters (workflow Event) Monitor type: Activity
Alert name	Y	Y	Y
Alert type	Y	Y	Y
Alert occurrence time	Y	Y	Y
Alert level	Y	Y	Y
Event name	Y	Y	Y
Event type	Y	Y	Y
Event group name	Y	Y	Y
Event occurrence time	Y	Y	Y
Event attribute value	Y	Y	Y
Process name	N	Y	Y
Activity name	N	N	Y
Assignee	N	N	N
Activity ID	N	N	Y
Application name	N	Y	Y
Transition name	N	N	N
Calendar name	N	Y	Y (*1)
Process ID	N	Y	Y
Process instance ID	N	Y	Y
Process instance name	N	Y	Y
Target activity ID	N	N	N
Target activity name	N	N	N
Process version	N	Y	Y

	Rule type: Check parameters (general Event) Monitor type: -	Rule type: Check parameters (workflow Event) Monitor type: Process	Rule type: Check parameters (workflow Event) Monitor type: Activity
Work time	N	N	N

*1: Can be used only when the activity ends

Table A-4 Alert message specification - II

	Rule type: Check relation of pair Events Monitor type: -	Rule type: Check parameters between pair Events (general Event) Monitor type: -	Rule type: Check parameters between pair Events (workflow Event) Monitor type: Process	Rule type: Check parameters between pair Events (workflow Event) Monitor type: Activity
Alert name	Y	Y	Y	Y
Alert type	Y	Y	Y	Y
Alert occurrence time	Y	Y	Y	Y
Alert level	Y	Y	Y	Y
Event name	Y	Y	Y	Y
Event type	Y	Y	Y	Y
Event group name	Y	Y	Y	Y
Event occurrence time	Y	Y	Y	Y
Event attribute value	Y	Y	Y	Y
Process name	N	N	Y	Y
Activity name	N	N	N	Y
Assignee	N	N	N	N
Activity ID	N	N	N	Y
Application name	N	N	Y	Y
Transition name	N	N	N	N
Calendar name	N	N	Y	Y (*1)
Process ID	N	N	Y	Y
Process instance ID	N	N	Y	Y
Process instance name	N	N	Y	Y

	Rule type: Check relation of pair Events Monitor type: -	Rule type: Check parameters between pair Events (general Event) Monitor type: -	Rule type: Check parameters between pair Events (workflow Event) Monitor type: Process	Rule type: Check parameters between pair Events (workflow Event) Monitor type: Activity
Target activity ID	N	N	N	N
Target activity name	N	N	N	N
Process version	N	N	Y	Y
Work time	N	N	N	N

*1: Can be used only when the activity ends

Table A-5 Alert message specification - III

	Rule type: Occurrence of a specific Event Monitor type: Process	Rule type: Occurrence of a specific Event Monitor type: Subprocess	Rule type: Occurrence of a specific Event Monitor type: Activity	Rule type: Occurrence of a specific Event Monitor type: System activity	Rule type: Occurrence of a specific Event Monitor type: Transition	Rule type: Occurrence of a specific Event Monitor type: Vote
Alert name	Y	Y	Y	Y	Y	Y
Alert type	Y	Y	Y	Y	Y	Y
Alert occurrence time	Y	Y	Y	Y	Y	Y
Alert level	Y	Y	Y	Y	Y	Y
Event name	Y	Y	Y	Y	Y	Y
Event type	Y	Y	Y	Y	Y	Y
Event group name	Y	Y	Y	Y	Y	Y
Event occurrence time	Y	Y	Y	Y	Y	Y
Event attribute value	Y	Y	Y	Y	Y	Y
Process name	Y	Y	Y	Y	Y	Y
Activity name	N	Y	Y	Y	Y	Y
Assignee	N	N	N	N	N	N

	Rule type: Occurrence of a specific Event Monitor type: Process	Rule type: Occurrence of a specific Event Monitor type: Subprocess	Rule type: Occurrence of a specific Event Monitor type: Activity	Rule type: Occurrence of a specific Event Monitor type: System activity	Rule type: Occurrence of a specific Event Monitor type: Transition	Rule type: Occurrence of a specific Event Monitor type: Vote
Activity ID	N	Y	Y	Y	Y	Y
Application name	Y	Y	Y	Y	Y	Y
Transition name	N	N	N	N	Y	Y
Calendar name	Y	Y	Y (*1)	N	N	N
Process ID	Y	Y	Y	Y	N	N
Process instance ID	Y	Y	Y	Y	N	N
Process instance name	Y	Y	Y	Y	N	N
Target activity ID	N	N	N	N	Y	Y
Target activity name	N	N	N	N	Y	Y
Process version	Y	Y	Y	Y	N	N
Work time	N	N	N	N	Y	N

*1: Can be used only when the activity ends

Table A-6 Alert message specification - IV

	Rule type: Time limit Monitor type: Process	Rule type: Time limit Monitor type: Activity	Rule type: Waiting time Monitor type: Process	Rule type: Waiting time Monitor type: Activity	Rule type: Check performance of workflow Monitor type: -
Alert name	Y	Y	Y	Y	Y
Alert type	Y	Y	Y	Y	Y
Alert occurrence time	Y	Y	Y	Y	Y
Alert level	Y	Y	Y	Y	Y
Event name	Y	Y	Y	Y	Y
Event type	Y	Y	Y	Y	Y
Event group name	Y	Y	Y	Y	Y

	Rule type: Time limit Monitor type: Process	Rule type: Time limit Monitor type: Activity	Rule type: Waiting time Monitor type: Process	Rule type: Waiting time Monitor type: Activity	Rule type: Check performance of workflow Monitor type: -
Event occurrence time	Y	Y	Y	Y	Y
Event attribute value	Y	Y	Y	Y	Y
Process name	Y	Y	Y	Y	N
Activity name	N	Y	N	Y	N
Assignee	N	N	N	N	N
Activity ID	N	Y	N	Y	N
Application name	Y	Y	Y	Y	N
Transition name	N	N	N	N	N
Calendar name	Y	Y (*1)	Y	Y (*1)	N
Process ID	Y	Y	Y	Y	N
Process instance ID	Y	Y	Y	Y	N
Process instance name	Y	Y	Y	Y	N
Target activity ID	N	N	N	N	N
Target activity name	N	N	N	N	N
Process version	Y	Y	Y	Y	N
Work time	N	N	N	N	N

*1:   Can be used only when the activity ends

Event Configuration Parameters

If you selected **Check performance of workflow** as the rule type for the alert, the Analytics Studio displays additional configuration parameters described in the following table. These parameters are displayed on the **Condition** tab in the Editor.

Figure A-3 Target Event settings (for "Check performance of workflow" alerts)

> **NOTE**
>
> In the following table, **Dimension** refers to fields in a workflow event that are used in calculation, and **Type** refers to the calculation mode for the alert.

Table A-7 Event configuration parameters

Parameter	Value	Description
Dimension	**Event Group**	Indicates that the data is to be analyzed according to event groups
	Application	Indicates that the data is to be analyzed according to applications
	Process	Indicates that the data is to be analyzed by processes
	Version	Indicates that the data is to be analyzed by the version of the business processes
	Activity	Indicates that the data is to be analyzed by activities
	Aggregation	Indicates that the data is to be analyzed by aggregation
	User	Indicates that the data is to be analyzed by users
Type	**Active**	- Calculates activated processes - Calculated data with this mode type is displayed on the Process Performance view of the Monitor mode in the Analytics Dashboard
	Active snapshot (hourly)	- Snapshot of values calculated with the Active mode per hour - Calculated data with this mode type is displayed on the chart on the Process Performance view of the Monitor mode in the Analytics Dashboard - Is not applicable to Business process and Application dimension types
	Analysis (daily)	- Calculates completed processes per day - Calculated data with this mode type is displayed on the Process Performance view of the Analysis mode in the Analytics Dashboard

Alert Action Configuration Parameters

Table A-8 Alert action general details

Parameter	Description
Name	Name of the alert action
Description	Brief description of the alert action
Success message	Message displayed when the issue notified by the alert has been successfully resolved
Failure message	Message displayed when the issue notified by the alert has not been resolved

Table A-9 Email action configuration parameters

Parameter	Description
Recipient(s)	Email address of the recipient; add multiple email addresses, if required
Subject	Select one or more parameters from the list to specify the subject of the email
Body	Select one or more parameters from the list to specify the content for the email
Advanced	
Language	Select a language for the email
Encoding	Select any of the following values to specify the character set for your email - UTF-8 - ISO-2022-JP - US-ASCII - ISO-8859-1
Display recipient(s)	Select either **Display as 'undisclosed-recipients'** or **Display as normal (e.g. xxx@yyy.com)** to hide or display the email address of recipients in the email

Table A-10 BPM action configuration parameters

Parameter	Description
Action template	Set the alert parameters to be sent to the Interstage BPM server. The server will forward them to a new process instance to start.
Message Destination Settings	Set system parameters (Display Detailed result, Host name or IP, User name, Password, BPM tenant, Application, Process name, and Process Version).

Chart Configuration Parameters

This section covers additional chart configuration parameters.

Event Configuration Parameters

If you selected **BPM process Event** as the event type for a chart, you need to configure specific workflow event-related settings. Refer to "Event Configuration Parameters" for details.

Chart Settings

The **Style** settings vary for different chart types. The following table lists additional style settings for different chart types supported by the Analytics Studio.

Table A-11 Additional chart configuration parameters

Parameter	Description
Direction	- Select either **Red when < low threshold** or **Red when > high threshold** to set the threshold color - Is only applicable to Tachometer and Signal charts
Low threshold	- Set a low threshold value for the tachometer - Is only applicable to Tachometer, Thermometer, and Signal charts
High threshold	- Set a high threshold value for the tachometer - Is only applicable to Tachometer, Thermometer, and Signal charts
Display previous data	- Select this check box to display previous data in the chart - Is only applicable to Tachometer charts
Signal type	Select either **One light** or **Three lights** to define the number of lights to be displayed on the signal chart
Line type	- Select either **Solid** or **Dotted** to specify the line style for the chart - Is only applicable to Area Charts, Radar Charts, and Line Charts
Line width	- Select a value to specify the line width - Is only applicable to Area Charts, Radar Charts, and Line Charts
Number of partitions	- Set a numeric value to specify the number of partitions in a chart - Is only applicable to Histograms
Orientation	- Set either **Categories in rows** or **Categories in columns** to set the format of the chart; default is **Categories in rows** - Is only applicable to Data Table charts
Header Row	- Set the background and foreground colors for the header row - Select the **Open Color Palette** button ( ) to choose a color - Is only applicable to Data Table charts

Parameter	Description
Header Column	- Set the background and foreground colors for the header column - Select the **Open Color Palette** button ( ) to choose a color - Is only applicable to Data Table charts
Data	- Set the background and foreground colors for the data represented on the chart - Select the **Open Color Palette** button ( ) to choose a color - Is only applicable to Data Table charts
Background color (hex)	- Set the background color for the chart - Select the **Open Color Palette** button ( ) to choose a color - Is only applicable to Event Table charts
Foreground color (hex)	- Set the foreground color for the chart - Select the **Open Color Palette** button ( ) to choose a color - Is only applicable to Event Table charts
Maximum display rows	- Select a value to specify the number of rows in the chart - Is only applicable to Event Table charts