

Using the DeepSee Dashboard Designer

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About This Book

Important: This book is for DeepSee I. For information on DeepSee II, see [Getting Started with DeepSee II](#), which also lists the other books for DeepSee II.

This book describes how to create DeepSee dashboards and embed them in your applications. This book contains the following sections:

- [Introduction to the Dashboard Designer](#)
- [Creating Dashboards](#)
- [Adding Data Elements](#)
- [Adding Data Controls](#)
- [Adding Refresh Timers](#)
- [Adding Text and Graphics](#)
- [Adding Frames and Drop-down Menus](#)
- [Displaying Listing Fields and Other Source Data](#)
- [Adding Venn Diagrams](#)
- [Adding Post Actions](#)
- [Using the Dashboard Library](#)
- [Using Query Variables](#)
- [Adding Dashboards to Your Applications](#)

For a detailed outline, see the [table of contents](#).

For more information, see the following books:

- [Overview of DeepSee](#), an introductory guide for all users who are interested in learning about DeepSee.
- [DeepSee Model Design Guide](#), an introductory guide for implementers and business users.
- [DeepSee Developer Tutorial](#), a tutorial for implementers who are creating DeepSee models, pivot tables, and dashboards.
- [Using the DeepSee Connector](#), a guide for implementers who are using the DeepSee Connector to import externally stored data. Note that the DeepSee Connector is available only with Ensemble.
- [Using the DeepSee Architect](#), a guide for implementers who are setting up a DeepSee model for use in the Analyzer.
- [Using the DeepSee Analyzer](#), a guide for implementers and advanced users who want to create pivot tables to embed in applications — or who simply want to explore their data.
- [Expressions and Scripts in DeepSee](#), an implementer guide that describes the syntax and options for all formulas, expressions, and scripts supported in DeepSee. This book also lists all the locations where you can use these expressions and scripts.
- [DeepSee Site Configuration and Maintenance Guide](#), a guide for implementers and system administrators. This book describes how to configure and maintain a DeepSee site. It also includes a chapter that lists common problems and their solutions.

- [DeepSee User Guide](#), a user manual for your end users. This book describes how to work with deployed dashboards and pivot tables.

For general information, see the *InterSystems Documentation Guide*.

1

Introduction to the Dashboard Designer

Important: This book is for DeepSee I. For information on DeepSee II, see [Getting Started with DeepSee II](#), which also lists the other books for DeepSee II.

This chapter introduces the DeepSee Dashboard Designer, which you use to create dashboards that you can embed in your applications. This chapter discusses the following topics:

- [Purpose of the Dashboard Designer](#)
- [Required preparation before you can use the Dashboard Designer](#)
- [Summary of dashboard options](#)
- [How to log in to DeepSee](#)
- [How to access the Dashboard Designer from anywhere within DeepSee](#)
- [How to switch to another namespace](#)
- [How to exit the Dashboard Designer](#)

Be sure to consult *InterSystems Supported Platforms* for information on system requirements.

1.1 Purpose of the DeepSee Dashboard Designer

You use the DeepSee Dashboard Designer during an implementation process whose overall goal is to embed pivot tables in existing or new applications. Pivot tables provide real-time business intelligence (BI) — interactive tables and graphs with which your users can explore the data used in or generated by their applications.

The purpose of the Dashboard Designer is to create dashboards that display pivot tables, speedometers, and detail listings. Dashboards can include buttons, combo boxes, and other elements with which the user can control the display.

1.2 Required Preparation

Before you can use the Dashboard Designer, you (or someone else) must create the following elements:

- Pivot tables
- KPIs

- Detail listings

For information on creating pivot tables and KPIs, see [Using the DeepSee Analyzer](#). For information on creating detail listings, see [Using the DeepSee Architect](#).

1.2.1 Screen Resolution and Dashboard Size

DeepSee does not automatically resize dashboards based on monitor resolution, so it is important to know how dashboard sizes are determined and to plan accordingly for your users.

When you create a dashboard, you determine its width and height. The maximum possible size of a dashboard is determined by the screen resolution of the machine on which you use the Dashboard Designer, as follows:

Screen Resolution	Nominal Maximum Size (Approximate)
1140 x 900 pixels	14.5" x 8.5"
1280 x 800 pixels	13" x 7.25"
1280 x 720 pixels	13" x 7"
1024 x 768 pixels	10" x 7"
800 x 600 pixels	8" x 5.25"

The actual size of the dashboard is determined by the elements you place on it. That is, if the elements occupy only the top five and left seven inches, the dashboard is effectively five inches by seven inches.

You can also enable the dashboard to include scroll bars so that a user can see the entire dashboard even when viewing the dashboard on a computer with lower resolution. Users with sight problems sometimes decrease the resolution in order to magnify the display.

InterSystems recommends the following guidelines:





















- Find out the minimum screen resolution of the computers running your application.
If you have already established a minimum screen resolution for your application, use that value.
- Create the dashboards on a computer with that resolution.
Or use the preceding table as a reference and lay out elements on the dashboards in the appropriately sized upper left part of the screen.
- Enable the dashboards to include scroll bars to accommodate users who select a lower resolution.

1.3 Summary of Dashboard Options

This section summarizes what you can do in dashboards.

1.3.1 Available Elements

You can include any of the following elements in a dashboard:

Element Type	Button	Purpose	For Details
Label		A string, which can be the result of a Caché ObjectScript function call.	See “ Overview of Text and Graphic Elements. ”
Image		An image, which can be interactive.	
Picture box		An image, tiled repeatedly to fill the element.	
Button		A button that displays a string, which can be the result of a Caché ObjectScript function call. Can be interactive.	
Picture button		A button that displays a string and an image. Can be interactive.	
Drop-down menu		A button that displays a drop-down menu when clicked. Controls a frame.	See “ Adding Frames and Drop-down Menus. ”
Frame		A frame that contains a dashboard.	
Timer		A timer that can refresh one or more data elements.	See “ Adding Refresh Timers. ”
Timer control		A control with which the user can start and stop a timer.	
Pivot table		A pivot table.	See “ Overview of Data Elements. ”
Speedometer		A KPI (key performance indicator) displayed within a speedometer.	
Detail listing		A detail listing.	
Venn diagram		A Venn diagram.	See “ Adding Venn Diagrams. ”
Combo box		A drop-down list from which the user can select one item.	See “ Overview of Data Controls. ”
List box		A list from which the user can select one (or maybe more) item. Shown in a box.	
Text box		A box into which the user can type a value.	
Date picker		A control into which the user can type a date or can click a button to choose a date.	
Check box		A check box that the user can select or clear.	
Search box		A control into which the user can type a value or can click a button to search for a value in a list.	
Dashboard library object		An element that has been copied to the dashboard library.	See “ Using the Dashboard Library. ”

You can move and resize these elements as needed. You can place elements in front of each other, for example, if you want to display a label in front of a graphic. The Designer provides a couple of tools you can use to fine-tune the placement and size of the elements.

1.3.2 Links Among Elements

You can create links between elements for several purposes:

- You can specify a link between two elements so that one element filters the other one. For example, if a user selects a customer from a combo box, that selection can filter a pivot table or other data element.
- You can specify a link between two elements so that if the user selects or makes a change in one element, that refreshes the other one. For example, you can add a `Search` button that updates a pivot table or other data element.

Frequently, you combine the two preceding types of links. For example, if you have a filter link from a combo box list to for another object, you might also add a refresh link between these objects.

- You can specify a link between a timer control and a timer.

Not all elements can be used in links. But for any element that can be used this way, that element can participate in multiple links. It is quite common, for example, for a given combo box to control multiple data elements.

1.3.3 Setting Variables

In some cases, you can use one element to set the value of a variable.

This variable might used in another element, which you connect as a refresh target. See the chapter “[Using Query Variables](#).”

Or it might be used within a post action. See the chapter “[Adding Post Actions](#).”

1.3.4 Post Actions

You can configure a dashboard element so that when a user clicks the element, DeepSee performs one or more post actions after any filter and refresh actions. A post action does one of the following:

- Displays a dashboard, possibly in a new window.
- Displays a Web page in another browser window.
- Displays a small child window that displays the value of a KPI.
- Executes a Caché ObjectScript statement.

See the chapter “[Adding Post Actions](#).”

1.3.5 Runtime Parameters (Query Variables)

It is frequently necessary to be able to pass parameter values to a dashboard when opening it. DeepSee provides a mechanism known as *query variables*, which you can use to pass values to dashboards. This mechanism works as follows:

- You can refer to variables within any DeepSee filters, as well as within several kinds of labels in the dashboards.
- When your application opens a dashboard, it does so by accessing the URL for the dashboard, which can include values for any variables used in that dashboard.

See the chapter “[Using Query Variables](#).”

1.4 Logging In to DeepSee

To log in to DeepSee:

1. In Internet Explorer, go to the following URL:

`http://localhost:57772/csp/sys/bi/default.htm`

Where *localhost* is the server on which Caché is running, and 57772 is the port used by the web server.

If you have not yet specified a namespace, the system displays a page that prompts you for a namespace. Otherwise, the system displays the DeepSee login page.

2. If you are prompted for a namespace, type the name of the namespace you want to work in and then click **Logon to DeepSee**.

The system then displays the DeepSee login page.

3. If you are prompted for a namespace, type the name of the namespace you want to work in and then click **Logon to DeepSee**.

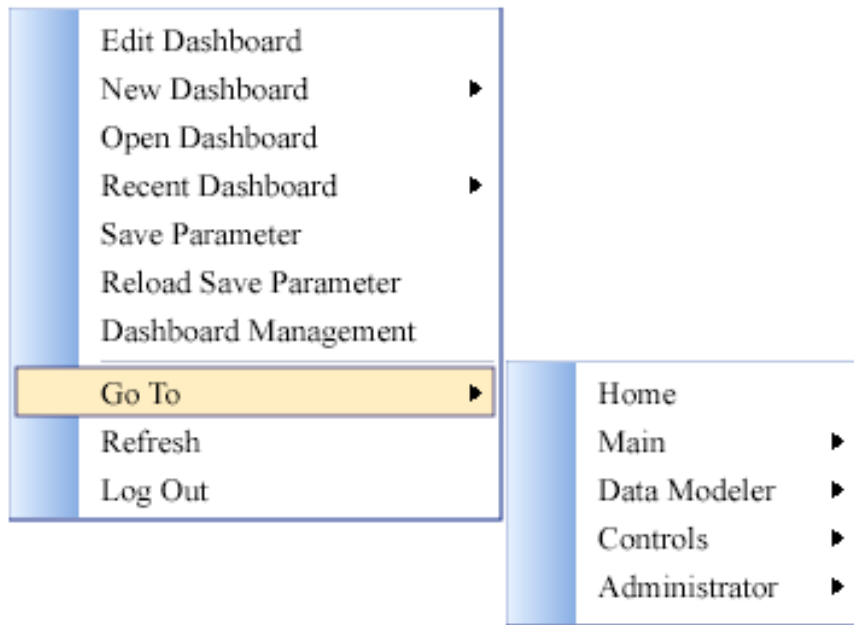
The system then displays the DeepSee login page.

4. On the DeepSee login page, enter a DeepSee username and password. For example, you can use the username `demo` with the password `demo`.
5. For **Role**, select `demo`.
6. Click **Login**.

DeepSee displays the home page, which depends upon the user ID you used to log in. The home page is either a DeepSee module or a dashboard. If the page is a DeepSee module, it has a row of buttons at the top as follows:



If the page is a dashboard, the context menu provides access to all the same options provided by these buttons, in addition to options that apply to dashboards:



1.5 Accessing the Dashboard Designer

You can access the Dashboard Designer either via an existing dashboard or by creating a new dashboard. This section describes the following:

- [How to display a dashboard from anywhere within DeepSee](#)
- [How to edit the dashboard you are viewing](#)
- [How to exit the Dashboard Designer](#)

For information on creating new dashboards, see the chapter “[Creating Dashboards](#).”

1.5.1 Displaying a Dashboard

If you are currently viewing a DeepSee module, do either of the following to display a dashboard:

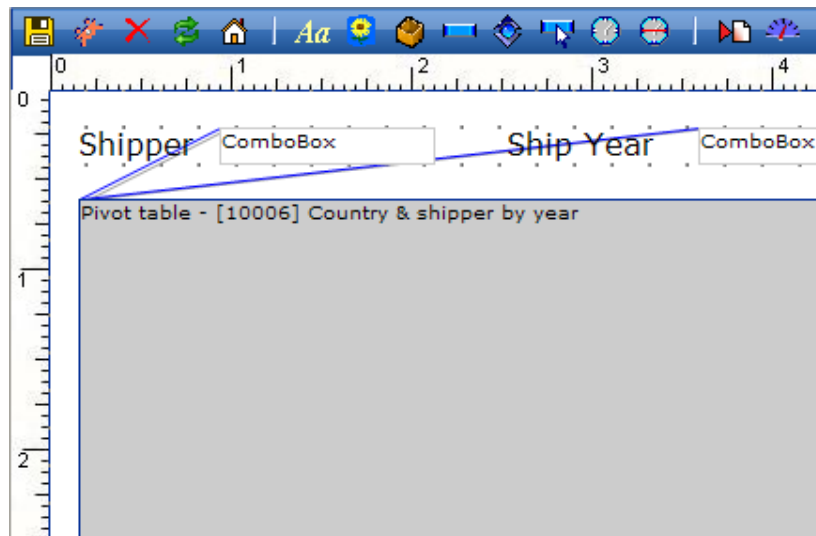
- Click **Main > Open Dashboard** and then click a dashboard.
- Click **Main > Recent Dashboard** and then click a dashboard.

If you are currently viewing a dashboard, do either of the following to display some other dashboard:

- Right-click and then click **Go To > Main > Open Dashboard**. Then click a dashboard.
- Right-click and then click **Go To > Main > Recent Dashboard**. Then click a dashboard.

1.5.2 Editing the Current Dashboard

To edit the dashboard you are currently viewing, right-click and then click **Edit Dashboard**. Depending on the dashboard, you may see something like the following:



1.6 Switching to Another Namespace

To switch to a different namespace:

1. Log out. To do so, do one of the following, depending on what you are currently viewing:
 - If you are currently viewing a DeepSee module, click **Log Off** in the upper right.
 - If you are currently viewing a DeepSee dashboard, right-click and then click the **Log Out** option.


The system logs you out of DeepSee.

2. Click **Switch Namespace**.
3. For **Namespace**, type the name of the namespace you want to work in.
4. Click **Logon to DeepSee**.

This displays a login page.

5. Log in as usual.

1.7 Exiting the Dashboard Designer

To exit the Dashboard Designer, click the Close button  in the upper right.

DeepSee closes the child browser window.

Important: DeepSee does not prompt you to save any changes. Any unsaved changes are discarded.

2

Creating Dashboards

This chapter describes the basics of creating dashboards. It discusses the following topics:


- [How to create a new dashboard](#)
- [How to edit a dashboard](#)
- [How to copy a dashboard](#)
- [How to enable the security options for a dashboard](#)
- [How to add an element](#)
- [How to edit an element](#)
- [How to copy an element](#)
- [How to delete an element](#)
- [How to delete a dashboard](#)
- [How to adjust the sizes and positions of dashboard elements](#)

2.1 Creating a New Dashboard

To create a new dashboard:

1. The way to start depends on your current location:
 - If you are currently viewing a dashboard (in view mode), right-click and then click **New Dashboard > Blank**.
 - If you are currently viewing a DeepSee module, click **Main > Open Dashboard**. Then click **New**.

DeepSee displays a dialog box where you specify the basic properties of the new dashboard.


2. For **Board Name**, type the name of this dashboard.
3. For **Folder**, click the Browse button  and select a folder to contain this dashboard.
4. Optionally specify the following properties:
 - **Remarks** — Specifies a description or comments for this dashboard for internal use.
 - **Back Color** — Specifies the background color for this dashboard, as well as the initial background color for any elements you add to it. To use this option, click it, choose a color, and then click **OK**.


- **Width** — Specifies the width of this dashboard. In practice, this specifies the maximum possible width of any background graphic.
- **Height** — Specifies the height of this dashboard. In practice, this specifies the maximum possible height of any background graphic.
- **Scrollable Dashboard** — Specifies whether this dashboard includes scroll bars when the browser window (or the containing dashboard frame) is too small to display all the contents of the dashboard. Select this option to enable the scroll bars.
- **Inherit Query Variable** — Enables this dashboard to receive pairs of variable names and their values as part of the URL that is used to open the dashboard (in a deployed system). See the chapter “[Using Query Variables](#).”
- **Font** — Specifies the initial typeface, font size, font color, and font size for any elements you add to this dashboard. To use this option, click **Font**, specify the details, and then click **OK**.

5. Click **OK**.

DeepSee then displays the dashboard in edit mode, in a child browser window.

6. Add elements to the dashboard as described in the following section.


7. Click the Save Dashboard button . Then click **OK**.

Or discard any unsaved changes by clicking the Refresh button .

8. Click the Close button  in the upper right.

DeepSee displays the new dashboard in view mode.

9. Refresh the browser window.

Note: When you view a dashboard in edit mode, you can edit only that dashboard. To edit another dashboard or to create a new one, you must first exit the editor by clicking the Close button  in the upper right.

Other dashboard options are discussed later in this book, as follows:

Option	Where Discussed
Subject Area and Detail Listing	Displaying Listing Fields and Other Source Data
Security	Enabling Security Options for a Dashboard
Board Background Picture	Adding a Background Image to a Dashboard
Appearance and Style	Ignore these options

2.2 Editing a Dashboard

To edit a dashboard:

1. Display the dashboard in view mode, as follows:
 - If you are currently viewing a different dashboard (in view mode), right-click and then click **Recent Dashboard** and then the dashboard name.

Or right-click, click **Open Dashboard**, navigate to the dashboard, and then click **OK**.

- If you are elsewhere within DeepSee, click **Main > Open Dashboard** or **Main > Recent Dashboard**. Then proceed as described in the previous bullet.

2. Right-click and then click **Edit Dashboard**.

Tip: Be careful where you do this. If one dashboard is enclosed in another (via a frame), you could accidentally open a different dashboard than you expect.


DeepSee displays the dashboard in edit mode, in a child browser window.

3. Make changes as needed. Here you can do the following:

- [Add an element to the dashboard](#)
- [Edit an element](#)
- [Copy an element](#)
- [Delete an element](#)
- [Delete the dashboard](#)
- [Adjust the sizes and positions of dashboard elements](#)

These tasks are described later in this chapter.

4. Save the dashboard. To do so, click the Save Dashboard button  and then click **OK**.

Or discard any unsaved changes by clicking the Refresh button .

5. Click the Close button  in the upper right.

DeepSee displays the dashboard in view mode.

6. Refresh the browser window.

2.3 Copying a Dashboard

To copy a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this chapter.

2. Click the Duplicate Dashboard button .

DeepSee displays a dialog box that prompts you for information about the copy.

3. For **New Board Name**, type the name of this new dashboard.

4. For **Folder**, click the Browse button  and select a folder to contain this new dashboard.

5. Click **OK**.

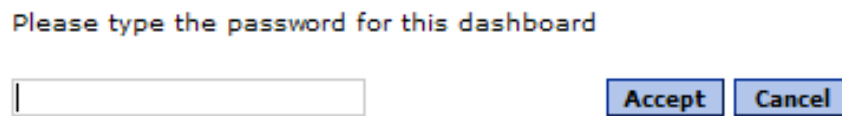
DeepSee makes this copy from the original dashboard as it was last saved. That is, if you open a dashboard in edit mode, make changes (but do not save them), and then use the copy option, the new dashboard reflects the original dashboard as it was before you made changes.

2.4 Enabling Security Options for a Dashboard

This section discusses how to enable the security options for a dashboard.


2.4.1 Adding a Password

You can require the user to enter a password in order to display a given dashboard. When the user tries to open the dashboard, DeepSee displays a dialog box like the following:




If the user does not enter the correct password, DeepSee displays the **Dashboard List** dialog box to prompt the user to open a different dashboard.

To add a password to a given dashboard:

1. Open the dashboard in edit mode, as described in [the previous section](#).
2. Click the Dashboard Properties button .
3. To require a password, specify both of the following properties:
 - **Prompt text** — Specifies prompt text to display when a user first accesses of this dashboard.
 - **Password** — Specifies the password needed to display this dashboard.
4. Click **OK**.

2.4.2 Encrypting a Dashboard


You can encrypt a dashboard. To do so:

1. Open the dashboard in edit mode, as described in [the previous section](#).
2. Click the Dashboard Properties button .
3. To encrypt the dashboard, make sure that **Encrypted** is selected; this check box is selected by default.
4. Click **OK**.

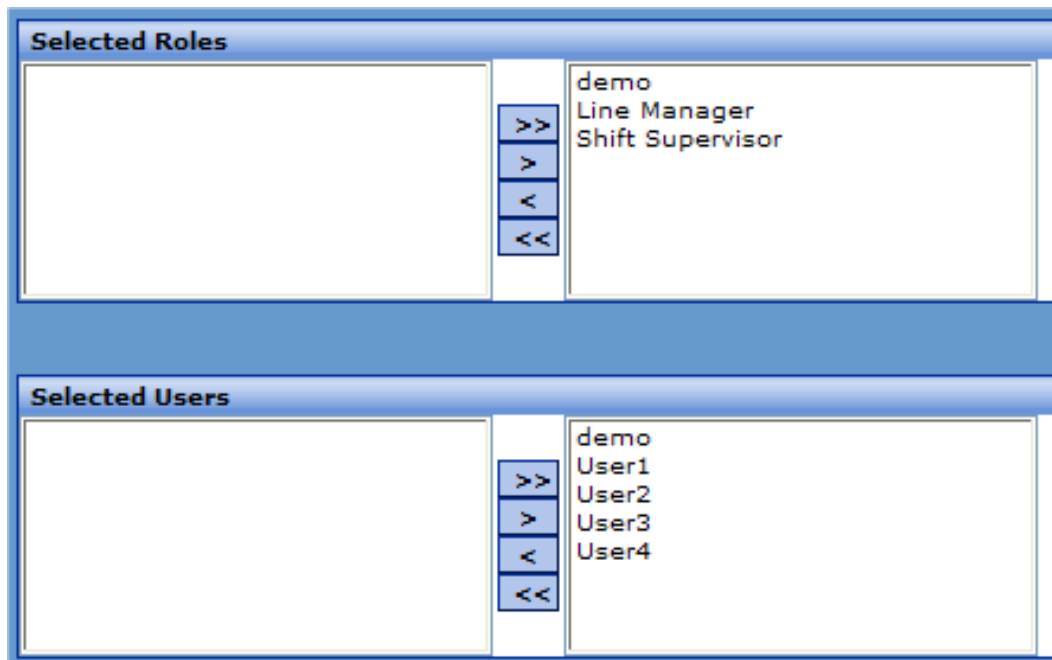
2.4.3 Restricting a Dashboard by Roles or Users

You can specify the roles, as well as the users, that are permitted to use a dashboard. To do so:

1. Open the dashboard in edit mode, as described in [the previous section](#).

2. Click the Dashboard Properties button .
3. Click **more...** in the **Security** section.

DeepSee displays a dialog box like the following:



The lists on the right show all the DeepSee roles and the DeepSee users.

4. To restrict this dashboard to specific roles, double-click those roles in the right-hand roles list. The roles are then copied to the **Selected Roles** list.
5. To restrict this dashboard to specific users, double-click those users in the right-hand users list. The users are then copied to the **Selected Users** list.
6. Click **OK**.

2.5 Adding an Element

To add an element to a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this chapter.
2. Click the button corresponding to the type of element you want to add. See the [following subsection](#) for a quick summary.

The system displays a dialog box in which you specify properties for the new element. The details depend upon the element and how you plan to use it.





















3. Click **OK**.

The new element is added in the upper left corner of the dashboard.

4. Drag and drop the element to the desired location.
5. Resize the element as needed.

2.5.1 Overview of the Dashboard Elements

The following table lists the elements you can add to a dashboard:

Element Type	Button	Purpose	For Information
Label		A string.	See “ Overview of Text and Graphic Elements. ”
Image		An image, which can be interactive.	
Picture box		An image, tiled repeatedly to fill the element.	
Button		A button that displays a string. Can be interactive.	
Picture button		A button that displays a string and an image. Can be interactive.	
Timer		A timer that can refresh one or more data elements.	See “ Adding Refresh Timers. ”
Timer control		A control with which the user can start and stop a timer.	
Pivot table		A pivot table.	See “ Overview of Data Elements. ”
Speedometer		A KPI displayed within a speedometer.	
Detail listing		A detail listing.	
Venn diagram		A Venn diagram	See “ Adding Venn Diagrams ”
Drop-down menu		A button that displays a drop-down menu when clicked. Controls a frame.	See “ Adding Frames and Drop-down Menus. ”
Frame		A frame that contains a dashboard.	
Combo box		A drop-down list from which the user can select one item.	See “ Overview of Data Controls. ”
List box		A list from which the user can select one (or maybe more) item. Shown in a box.	
Text box		A box into which the user can type a value.	
Date picker		A control into which the user can type a date or can click a button to choose a date.	
Check box		A check box that the user can select or clear.	
Search box		A control into which the user can type a value or can click a button to search for a value in a list.	
Dashboard library object		An element that has been copied to the dashboard library.	See “ Using the Dashboard Library. ”

2.6 Editing an Element

To modify an element of a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this chapter.
2. Now either:
 - Double-click the element.
 - Right-click the element and then click **Edit**.

The system displays a dialog box in which you specify properties for the new element. The details depend upon the element and how you plan to use it.

3. Click **OK**.

2.7 Copying an Element

To copy an element on a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this chapter.
2. Right-click the element and then click **Duplicate**.
3. The system immediately copies the element and places the copy directly in front of its original.
4. Drag and drop the copied element to the desired location.

If the original element is a refresh target or as a filtered object, those links are copied.

If the original element is a refresh trigger or as a filter, those links are not copied.

If the original element includes post actions, those are copied.

You can also copy elements to the dashboard library and reuse them on other dashboards; see the chapter “[Using the Dashboard Library](#).”

2.8 Deleting an Element


To remove an element from a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this chapter.
2. Now either:
 - Click the element and then press **Delete**.
 - Right-click the element and then click **Delete**.
3. The system immediately deletes the element.

You can also select multiple elements, so that you can delete them. To select them, left-click and hold while dragging; the selected elements are highlighted in orange. Then press **Delete**. The elements are immediately removed.

2.9 Deleting a Dashboard

To delete a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this chapter.
2. Click the Delete Dashboard button .
DeepSee prompts you for confirmation.
3. Click **OK**.
DeepSee then displays the **Dashboard List** dialog box to prompt you to open a different dashboard.



2.10 Adjusting Positions and Sizes of Elements

In addition to standard mouse gestures, the Dashboard Designer provides a couple of options to let you fine-tune the positions and sizes of elements on a dashboard:

- [You can display a grid that helps you align elements while editing a dashboard](#)
- [You can use the dashboard management tool to adjust all elements](#)
- [You can display and edit the size and position of a single element](#)
- [You can move elements backward and forward, when they are stacked](#)

2.10.1 Displaying the Grid

While you are viewing a dashboard in edit mode, you can display a grid of dots that can help you align elements with each other. To do this, you use an button in the toolbar. This button is shown as follows:


Button	Meaning
	The grid is currently hidden. Click this button to display the grid.
	The grid is currently shown. Click this button to hide the grid.

This grid is not visible when the dashboard is in display mode.

2.10.2 Adjusting All Elements


The dashboard management tool lets you easily adjust the position and size of every element on a dashboard. This is particularly useful when you want to make sure elements are lined up precisely with each other. To use this tool:

1. Open the dashboard in view mode.
2. Right-click and then click **Dashboard Management**. DeepSee then displays a dialog box with a table of all the elements on this dashboard, showing their names and their types.
3. For any element, edit any of the following options:

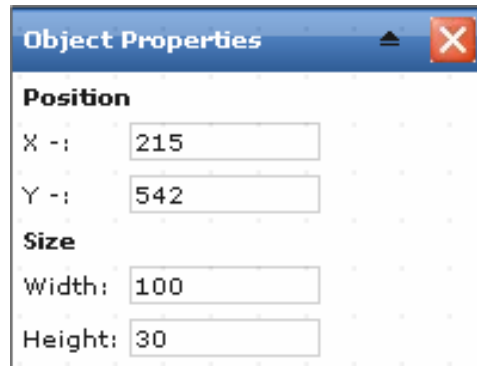
- **Top** — The position of the top edge of this element.
 - **Left** — The position of the left edge of this element.
 - **Width** — The width of this element.
 - **Height** — The height of this element.
 - **Auto Resize** — A check box that is enabled for graphic elements.
4. Optionally, to delete an element, click the table row corresponding to that element and then click **Delete Line**.
DeepSee prompts you for confirmation.
 5. Click **Save** and then click **OK**.
DeepSee then saves your changes and refreshes the dashboard so that you can check your work.
 6. When you are done, click the Close button  in the upper right.

2.10.3 Adjusting One Element

When you are creating or modifying a dashboard, you can move an element (by drag and drop) and resize it (by dragging its handles). In addition, you can display and edit the size and placement, as follows:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this chapter.
2. Click the Show Object Properties button .


DeepSee then displays a child window as follows:



3. Move this window to a convenient location, where it does not cover any elements.
4. Click an element on the dashboard.

The **Object Properties** window then displays details for that element. Here:

- **X** — Indicates the position of the top edge of this element.
 - **Y** — Indicates the position of the left edge of this element.
 - **Width** — Indicates the width of this element.
 - **Height** — Indicates the height of this element.
5. Optionally edit a value and then click another field in the **Object Properties** window. When you do so, the change is applied immediately.

When you no longer need the **Object Properties** window, click the Hide Object Properties button .

2.10.4 Moving Elements Backward and Forward

If you arrange dashboard elements on top of each other (typically to display elements in front of graphics), you may sometimes need to control which element is in front.

To adjust how far in front an element is, right-click it and then click one of the following:

- **Bring it forward**
- **Send it back**

3

Adding Data Elements




This chapter describes how to add elements that display data. It discusses the following topics:

- [An overview of the available data elements](#)
- [How to add a pivot table to a dashboard](#)
- [How to add a speedometer to a dashboard](#)
- [Details on the display properties of speedometers](#)
- [How to add a detail listing to a dashboard](#)

Also see the chapter “[Displaying Listing Fields and Other Source Data](#),” later in this book.

3.1 Overview of Data Elements

DeepSee dashboards can include any of the following data elements:

Element Type	Toolbar Button	Purpose
Pivot table		Displays a pivot table.
Speedometer		Displays a KPI within a speedometer.
Detail listing		Displays a detail listing.

For information on adding data controls that affect these data elements, see the chapter “[Adding Data Controls](#),” later in this book.

These data elements can belong to different subject areas, if you obey the following rules when defining the subject areas:

- Identify all the dimensions that are common across the subject areas. Typically, dimensions based on time and location are common, even for unrelated subject areas.


Other dimensions might or might not be common depending on whether the subject areas are related to each other in any meaningful sense. For example, suppose that one subject area represents transactions and another represents the customers who own the transactions. These two subject areas might have common dimensions such as customer, customer class, and so on.

- When you define those dimensions, ensure that the dimension names and sets of member names are the same in all relevant subject areas.

For an example of adding data elements from multiple subject areas, see the [DeepSee Developer Tutorial](#).

3.2 Adding a Pivot Table

To add a pivot table to a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Click the Add Pivot Table button .
DeepSee displays a dialog box in which you specify the details.
3. In the **List Of Pivot** section, expand folders as needed and click a pivot table.
4. Optionally specify the following properties:
 - **Normal Display** — Specifies a new title for the pivot table. By default, the pivot table uses the title specified in the Analyzer.
 - **Display** — Controls how this pivot table is initially displayed.
By default, the pivot table is initially displayed in tabular format. To use graph format initially, click the **Chart** option. The user can change the display format.
 - **Auto load** — If this option is selected, the pivot table automatically retrieves and displays the data.
You would clear this option only if you added another element to the dashboard to act as a refresh trigger for the pivot table.
 - **Filter** — Specifies an additional filter to apply to the data shown in the pivot table. Type a filter expression. For example:

```
[Allergies = bee stings]
```


Note that a filter expression can include Caché ObjectScript expressions; see the book [Expressions and Scripts in DeepSee](#). It can also include variables whose values are set at runtime; see the chapter “[Using Query Variables](#).”
5. Click **OK**.


The pivot table is added in the upper left corner of the dashboard.

3.3 Adding a Speedometer

A speedometer displays a KPI. To add a speedometer to a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Click the Add Speedometer button .

DeepSee displays a dialog box in which you specify the details.

3. For **KPI Override Setting** (at the bottom of the dialog box), click the Browse button  and select the KPI to display in this speedometer.

For information on defining KPIs, see [Using the DeepSee Analyzer](#).

4. Optionally specify the following:

- **Caption** — Specifies a caption for the speedometer.

You can type a Caché ObjectScript expression that refers to a user-defined function (function starting with \$\$); see the book [Expressions and Scripts in DeepSee](#). You can use the **\$\$VAR** function, which is also described in that book.

By default, the speedometer has no caption.

- **Filter** — Specifies an additional filter to apply to the data used in the KPI. Type a filter expression. For example:

```
[Allergies = bee stings]
```

Note that a filter expression can include Caché ObjectScript expressions; see the book [Expressions and Scripts in DeepSee](#). It can also include variables whose values are set at runtime; see the chapter “[Using Query Variables](#).”

- Specify display properties as described in the [following section](#).

5. Click **OK**.

The speedometer is added in the upper left corner of the dashboard.

Tip: You can also display a KPI by using a label element and the **\$\$KPI** function. See “[Adding a Label](#),” later in this book.

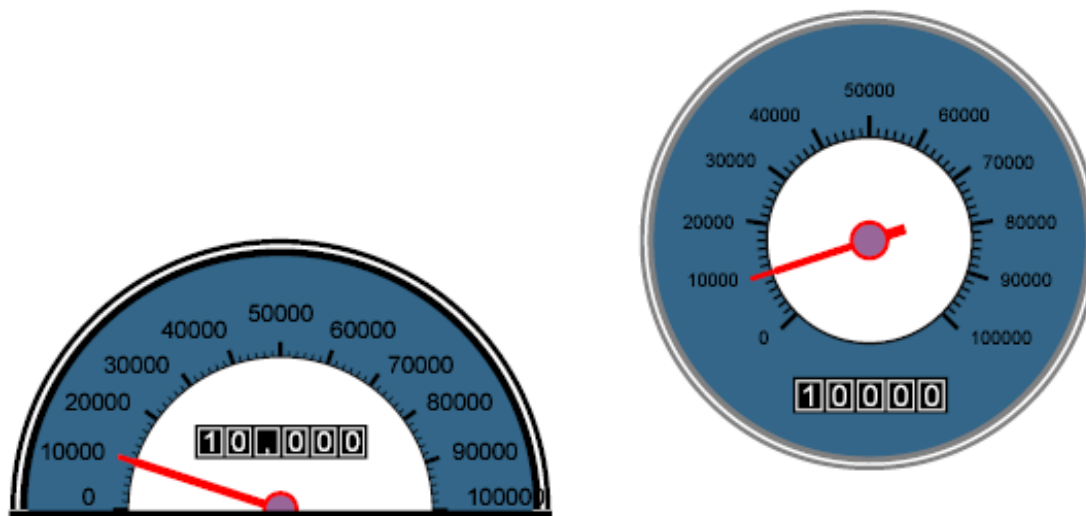
Also, instead of displaying a speedometer, you can display a label or an image and apply KPI display rules to override what is shown. See “[Using KPI Display Rules to Override Text or Graphics](#),” later in this book.

3.4 Speedometer Display Properties

This section describes the display properties for speedometers and shows examples for quick reference.

3.4.1 General

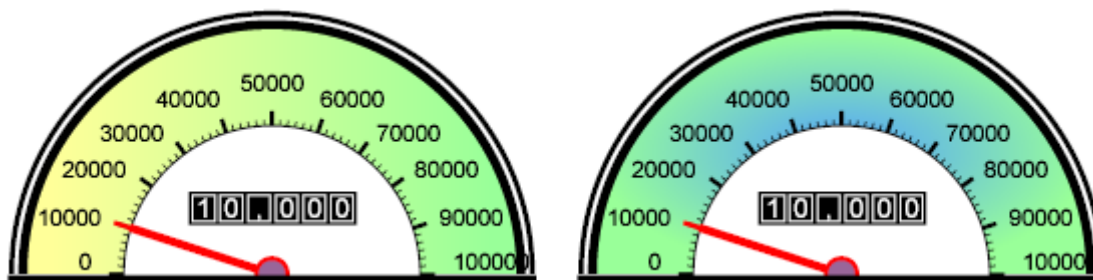
- **Appearance** — Specifies whether this speedometer is shown as a half-circle or as a circle. The following shows examples of each. Note that these speedometers have exactly the same width:



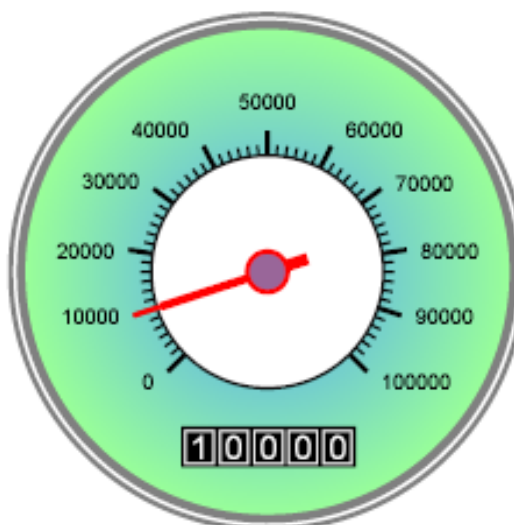
- **Outer Layout Type** — Controls the appearance of the outer region of the speedometer, which can be displayed either as a solid color (as in the preceding examples) or as a gradient. Select **None**, **Gradient vertical**, or **Gradient round** (radial gradient).

Tip: If you select one of the gradient options, be sure to use different colors for **Outer Layout left Color** and **Outer Layout right Color**.

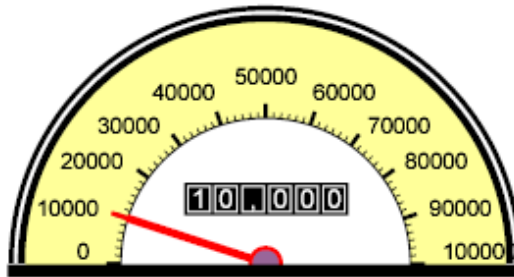
The following examples show the vertical gradient and the radial gradient.



The radial gradient option is more suitable with a round speedometer (rather than a half-circle). For example:



- **Outer Layout left Color** — Specifies the main color of the outer region of the speedometer. By default, this is dark blue. In the following example, it is yellow:

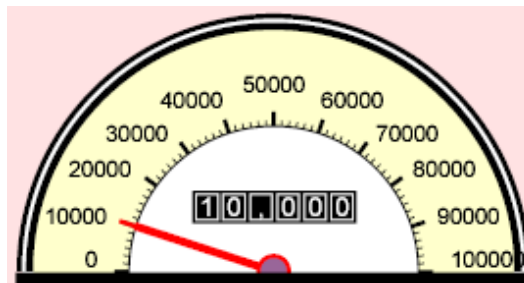


- **Outer Layout right Color** — Specifies the secondary color of the outer region of the speedometer. This color is used only if you are using one of the gradient options. By default, this is the same as the left color.
- **Inner Layout** — Specifies the color of the inner region of the speedometer. This area is white by default. In the following example, it is pale blue:

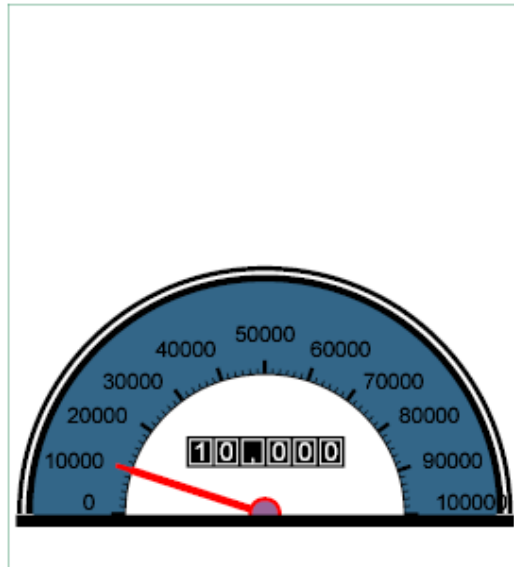


This option has no effect if you use the **Outer Scale** option (which removes the inner region of the speedometer).

- **Background Color** — Specifies the color of the background of the speedometer, the area outside of the speedometer. This area is white by default. In the following example, it is pink:



- **Background: Border Color** — Specifies the color of the border around the rectangle that encloses the speedometer. By default, there is no border. The following shows an example with a green border:



- **Meter Reading: Number Color** and **Meter Reading: Back Color** — Specify the colors of the numbers in the meter (shown in boxes in the examples). The default is white numbers on a black background. The following example shows a meter with black numbers on a white background.



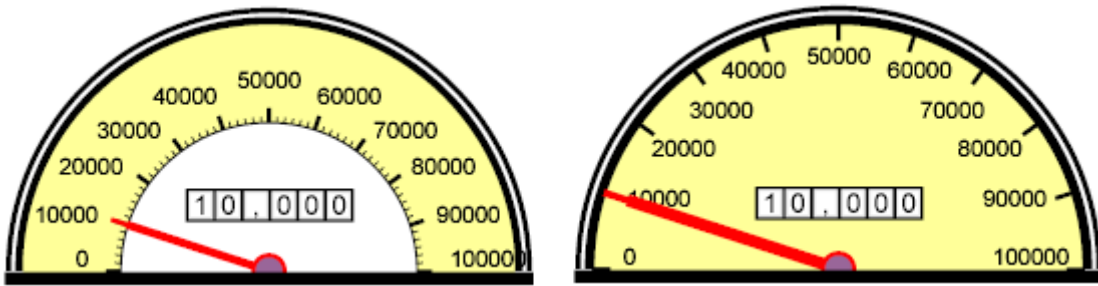
3.4.2 Arrow

- **Arrow Color** and **Arrow Circle Color**— Control the color of the arrow and the circle shown at its center, respectively. By default, the arrow is red, and the circle is purple. The following shows a variation with green and white:



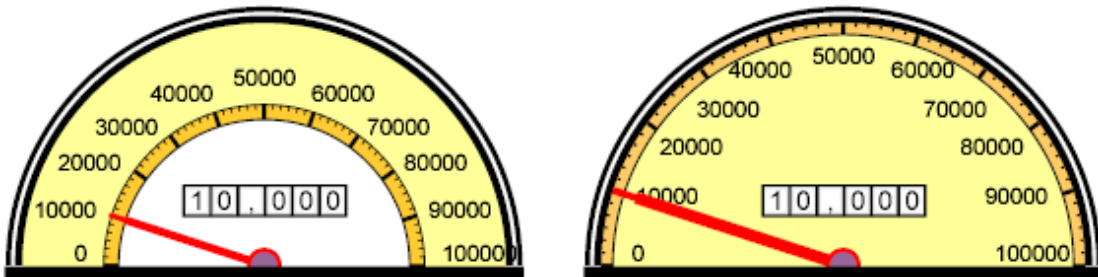
3.4.3 Scale

- **Scale Type** — Controls the placement of the scale. Select **Inner Scale** (the default) or **Outer Scale**. The following shows examples of each, with the default version on the left:

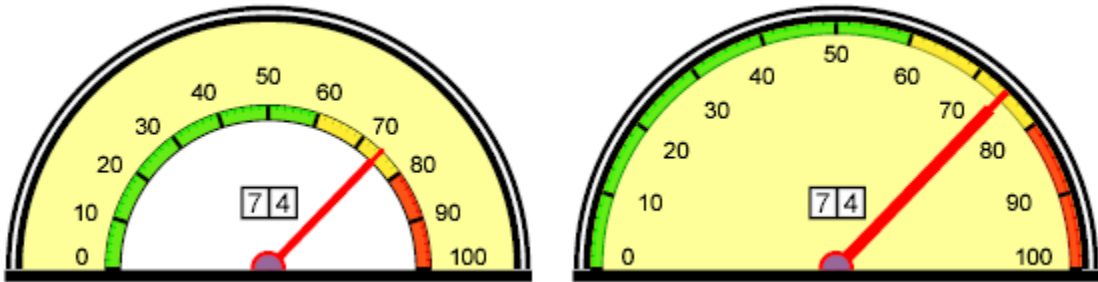


If you use **Outer Scale**, the speedometer does not have an inner region (and the color specified by **Inner Layout** is ignored).

- **Scale Colored** — If selected, this option displays the scale in a color that you choose (see **Scale Color**). By default, the scale is shown in the same color as the outer area of the speedometer.
- **Scale Color** — Specifies the color of the scale. The following examples show colored scales, both inner and outer versions.

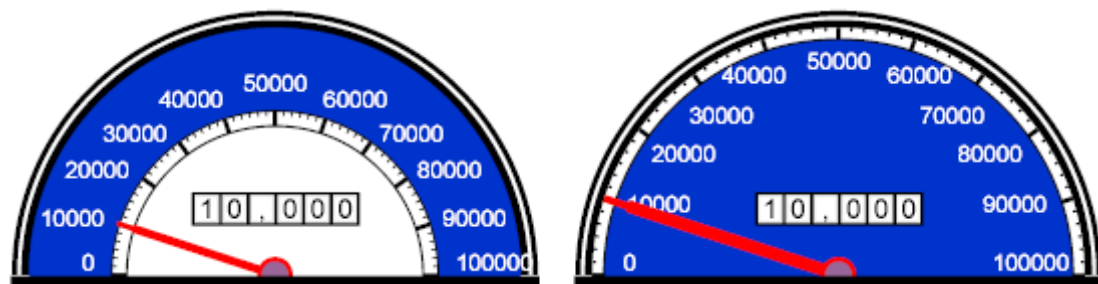


Note that if the KPI used in the speedometer has a set of ranges with display rules, those rules override the color you choose for the scale. For example:



You specify display rules for a KPI when you define it; see [Using the DeepSee Analyzer](#).

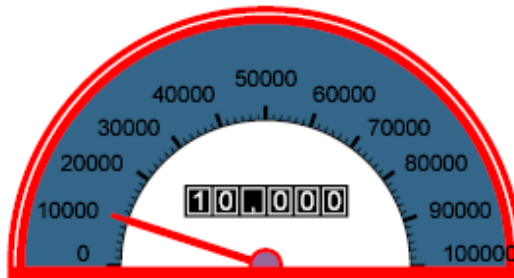
- **Label Color** — Specifies the color of the numbers of the scale (not the numbers in the meter). The default is black.
- In the following example, the scale numbers are white:



Here the scales are also colored white, to stand out better.

3.4.4 Border

- **Border Color** — Specifies the color of the border of the speedometer. By default, this is black. In the following example, it is red:



3.4.5 Effects

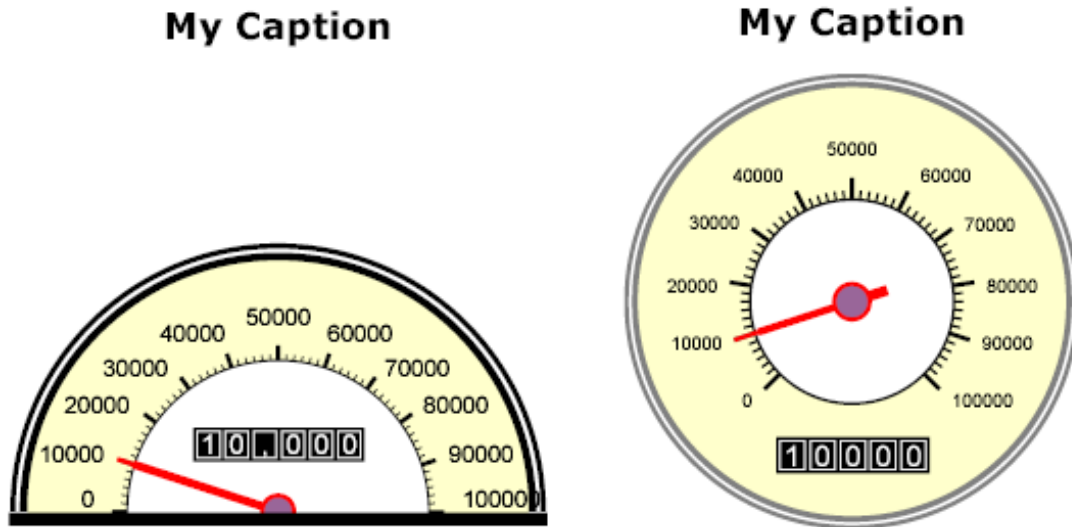
- **Lighting Effect** — If you select this option, the speedometer looks as if a light is shining on it, as follows:



Ignore the **Animation** option, which has no effect.

3.4.6 Heading

- **Caption** — Type a caption, if desired.
- **Font** — Click this to specify the typeface, font style, and font size of the caption. For example:




You cannot specify the position of the caption.

Tip: Within the **Font** option, the options for background and foreground color have no effect. If you want to specify these colors, or if you want to be able to control the caption position, then leave **Caption** blank. Instead, add a label to the dashboard and configure it as needed. See “[Adding a Label](#),” later in this book.

3.5 Adding a Detail Listing

To add a detail listing to a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Click the Add Detail Listing button .

DeepSee displays a dialog box in which you specify the details.

3. In the **List Of Detail Listing** section, expand folders as needed and click a detail listing.
4. Specify how to display the detail listing. To do so, click one of the following options for **Display**:
 - **Grid (page)** — Displays the rows one page at a time.
 - **Grid (List All)** — Displays all rows in a single, scrolling window.
5. Optionally specify the following:
 - **Name** — Specifies a caption for the detail listing.
By default, the detail listing uses the title specified in the Architect.
 - **Row Height** — Specifies the row height, if you want to adjust the default row height.
 - **Auto load** — If you select this option, the detail listing table automatically retrieves and displays the data, clear the **Auto load** check box. Otherwise, it does not do so. You would clear this option only if you added another element to the dashboard to act as a refresh trigger for the detail listing.
 - **Filter** — Specifies an additional filter to apply to the data shown in the detail listing. Type a filter expression. For example:

```
[Allergies = bee stings]
```

Note that a filter expression can include Caché ObjectScript expressions; see the book [Expressions and Scripts in DeepSee](#). It can also include variables whose values are set at runtime; see the chapter “[Using Query Variables](#).”

6. Click **OK**.

The detail listing is added in the upper left corner of the dashboard.

4







Adding Data Controls

This chapter describes how to add data controls to a dashboard. It discusses the following topics:

- [An overview of the data controls](#)
- [How to add a control](#)
- [How to configure a combo box](#)
- [How to configure a list box](#)
- [How to configure a text box](#)
- [How to configure a date picker](#)
- [How to configure a check box](#)
- [How to configure a search box](#)
- [Details on the default value options](#)
- [How to use a control as a filter for other dashboard elements](#)
- [How to delete links to a dashboard element](#)

4.1 Overview of Data Controls

In user interface design, the word *control* refers to an object with which the user interacts with the application. The Dashboard Designer provides many kinds of controls. In this book, *data controls* are the objects with which the user can control the data elements (pivot tables, speedometers, and detail listings). The data controls are as follows:

Control Type	Toolbar Button	Purpose
Combo box		User can select one item from the drop-down list.
List box		User can select one (or maybe more) item from the list shown in the box.
Text box		User can type a value.
Date picker		User can type a date or can click a button to choose a date.
Check box		User can select or clear the check box.
Search box		User can type a value or can click a button to search for a value in a list.

The following sections show examples of each of these data controls, in its default state. Note that none of the data controls include a built-in label; this enables you to add labels at any position.

You can use any of the data controls in either or both of the following ways:

- To filter a data element or another data control in the same dashboard.
For example, a user chooses a country, and that updates a pivot table.
- To set variables.
These variables might be used by data elements in the same dashboard. For example, a user types a number, and a pivot table that shows the top-ranked countries is updated to show that number of top countries.
Or they might be used within post actions. See the chapter “[Adding Post Actions](#).”

4.2 Adding a Data Control

To add a data control to a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Click the button for the type of control you want to add. See “[Overview of Controls](#).”
DeepSee displays a dialog box in which you specify the details.
3. Configure the control as needed, by setting its properties, as described in the following sections.
4. Click **OK**.
The control is added in the upper left corner of the dashboard.
5. Drag and drop the control to the desired location.
6. Resize the control as needed.

4.3 Using Combo Boxes

A *combo box* is a drop-down list, as follows:




The user clicks the arrow on the right and then clicks a list member.

To configure a combo box, specify its properties as follows:

1. Optionally type a name into **Name**. This name is not visible in the dashboard but is useful when you edit the dashboard.
2. Create the list that this combo box uses. To do so, do one of the following:
 - Create a list of dimension members, as described in the [following subsection](#). If you are using the user's selection as a filter, you must create the list this way.
 - Manually create a list, as described in the [subsection after that](#).

3. Optionally do some or all of the following:

- Specify a default list member. To do so, click the Browse button  next to **Default Value**.

Then type a Caché ObjectScript expression into **Caché Scripts**. Typically you type a number or an unquoted string. For example:

```
ant bites
```

The expression must evaluate to one of the items in the list you created; otherwise it is not shown.

Then click **OK**.

- Specify whether the list is populated when the dashboard is accessed. To disable the default population, clear the **Load records Onload** check box.

You would do this only if you included another control that used this control as its refresh target. For example, one combo box would give the user a choice of ZIP codes. When the user selected a ZIP code, the ZIP code combo box would refresh the city combo box.

4. If you are using the user's selection as a filter, optionally choose a comparison operator for use in the filter. By default, the filter uses the equals operator. For example, suppose the combo box lists birth years. If the user selects the birth year 2005, data is shown for the birth year equal to 2005. You can instead use other comparison operators:
 - Greater than (>)
 - Greater than or equal to (>=)
 - Less than (<)
 - Less than or equal to (<=)
 - Equal to (=)

5. If you are using the user's selection to set a variable on this dashboard, enter the name of that variable into **Store In Variable**.

See the chapter "[Using Query Variables](#)." Also see the section "[Passing Values to Post Actions](#)."

6. Click **OK**.
7. If you are using the user's selection as a filter, link the combo box to the element that it filters. See "[Using a Control to Filter a Dashboard Element](#)," later in this chapter.

Note: Ignore the **Custom** and **Post-Loading Scripts** options.

4.3.1 Creating a List of Dimension Members

For combo boxes (as well as list boxes and search boxes, both discussed later), you can create a list of dimension members that the control uses. The steps are similar for all three controls:

1. For **Subject Area**, select a subject area and click **OK**. The dimensions in the subject area are then displayed within **Dimensions**.
2. For **Dimensions**, double-click a dimension.

When you do so, the system puts your subject area and dimension name into **Schema** (subject area) and **Dimension** on the right. The box below **Condition** now displays all currently existing members of this dimension.

3. Optionally do some or all of the following:

- Control whether the list includes the special first line.

By default, the first line in the combo box or a list box is a blank line, and this line corresponds to all members (no filtering). To remove this first line, clear the **First Line Display** check box.

To specify a title for the first line (such as All), type a value into the unlabeled box to the right of **First Line Display**.

Note: This option applies only to combo boxes and list boxes.

- Restrict the set of members in the list. To do so, double-click the name of each member you want to include. When you do so, the member is added to the unlabeled box below **Sort Order**.

If this box is empty (the default), all members of this dimension are included in the list (unless they are filtered out due to the user's permissions).

To clear this box, click **Clear**.

- Specify how the list items are sorted. To do so, click a value for **Sort Order**. Be sure to use a sorting type that is appropriate for this dimension. For example, if the dimension has text values, numeric sorting has no effect.
- Specify a filter to apply to the list of dimension members. To do so, type a filter expression into **Filter**. For example:

```
[Home ZIP = 34577]
```

For example, if the list of dimension members is the set of home cities, and you specify the preceding filter, the user sees only the home cities within the given ZIP code.

Note: This option applies only to combo boxes and list boxes.

Note that a filter expression can include Caché ObjectScript expressions; see the book [Expressions and Scripts in DeepSee](#). It can also include variables whose values are set at runtime; see the chapter “[Using Query Variables](#).”

4.3.2 Create a List Manually

For combo boxes (as well as list boxes and search boxes, both discussed later), you can manually create the list of items that the control uses. To do so:

1. Type a list item into the box beneath **Condition**:

2. Click the >> button. The value you typed is then copied to the unlabeled box beneath **Sort Order**.
3. Repeat these steps as necessary until you have added all list elements:

4. Optionally specify whether the list includes the special first line.

By default, the first line in the combo box or a list box is a blank line, and this line corresponds to all members (no filtering). To remove this first line, clear the **First Line Display** check box.

To specify a title for the first line, type a value into the unlabeled box to the right of **First Line Display**.

Note: This option applies only to combo boxes and list boxes.

4.4 Using List Boxes

A *list box* is a box that contains a list of items, as follows:



The box automatically includes scroll bars if necessary (depending on the size of the box and the number of items).

List boxes are quite similar to combo boxes but can support multi-select. To configure a list box, specify its properties in the same way as for a combo box, with the following differences:

- For a list box, the only comparison operator you can use is the equals operator, so no choice is given.
- For a list box, you can enable the user to select multiple list elements at once. To do so, click **Allow Multi Select**.
- If the list box accepts multiple values, you can specify a list of default values, by using the following syntax:

```
value 1^value 2^value 3^...
```

For example:

```
ant bites^bee stings
```

4.5 Using Text Boxes

A *text box* is a plain box into which a user can type a value, as follows:




To configure a text box, specify its properties as follows:

1. Optionally type a name into **Name**. This name is not visible in the dashboard but is useful when you edit the dashboard.
2. If you are using the user's entry as a filter, select the dimension to which the filter refers. To do so:
 - a. For **Subject Area**, select a subject area and click **OK**. The dimensions in the subject area are then displayed within **Dimensions**.
 - b. For **Dimensions**, double-click a dimension.

When you do so, the system puts your subject area and dimension name into **Schema** (subject area) and **Dimension** on the right.

3. If you are using the user's entry as a filter, optionally choose a comparison operator for use in the filter. By default, the filter uses the equals operator. For example, suppose the text box uses the birth year dimension. If the user types the value 2005 into the text box, data is shown for the birth year equal to 2005. You can instead use other comparison operators:
 - Greater than (>)
 - Greater than or equal to (>=)
 - Less than (<)

- Less than or equal to (\geq)
 - Equal to ($=$)
4. Optionally do some or all of the following:
- Specify a default value to show in the text box. To do so, click the Browse button  next to **Default Value**. Then type a Caché ObjectScript expression into **Caché Scripts**. Typically you type a number or an unquoted string. For example:

```
ant bites
```


The expression can evaluate to anything but must be consistent with your validation script, if you add one. Then click **OK**.
 - Specify a validation script. To do so, type one or more Caché ObjectScript statements into **Validation Scripts**. These statements can use and set the variable *val*, which contains the current value of the text box control.
 - Specify options to control the appearance of the text as it is being typed in. To do so, click the **Customize** tab and set some or all of the following options:
 - **Font** — Click this to choose the typeface, size, and style. Ignore the other options, which are not used in this case.
 - **Fore Color** — Click this to choose the color of the text.
 - **Back Color** — Click this to choose the background color of the text box control.
 - **CAPS lock on all entry** — Click this to convert all text to upper case.
 - **Alignment** — Click an option to control the alignment of the text within the text box control.
 Ignore the **Border** setting.
5. If you are using the user's selection to set a variable on this dashboard, enter the name of that variable into **Store In Variable**.
See the chapter "[Using Query Variables](#)." Also see the section "[Passing Values to Post Actions](#)."
6. Click **OK**.
7. If you are using the user's entry as a filter, link the text box to the element that it filters. See "[Using a Control to Filter a Dashboard Element](#)," later in this chapter.

Note: Ignore the **Sort Order**, **Custom**, and **Post-Loading Scripts** options.

4.6 Using Date Pickers

A *date picker* includes a plain box into which a user can type a date in the format *DD/MM/YYYY* or *DD/MM/YY* (where *DD* is a two-digit day, *MM* is a two-digit month, *YY* is a two-digit year, and *YYYY* is a four-digit year). It also includes a check box and a button with which the user can open a dialog box for choosing a date, as follows:



If you use this element as a refresh trigger, the trigger is activated only if the check box is selected; otherwise the element is ignored.

To configure a date picker, specify its properties as follows:

1. Optionally type a name into **Name**. This name is not visible in the dashboard but is useful when you edit the dashboard.
2. If you are using the user's entry as a filter, select the date dimension to which the filter refers.

To do so:


- a. For **Subject Area**, select a subject area and click **OK**. The dimensions in the subject area are then displayed within **Dimensions**.
- b. For **Dimensions**, double-click a date dimension.

Note: To use the date picker, be sure to select the base date dimension name (for example `Birth Date`). Do not use the variants `Birth Date Year`, `Birth Date Quarter`, `Birth Date Month`, and so on.

When you do so, the system puts your subject area and dimension name into **Schema** (subject area) and **Dimension** on the right.

3. If you are using the user's entry as a filter, optionally choose a comparison operator to use in the filter. By default, the filter uses the equals operator. For example, suppose the date picker uses the `Birth Date` dimension. If the user selects the date 06/01/1980, data is shown for that date. You can instead use other comparison operators:

- Greater than (`>`)
- Greater than or equal to (`>=`)
- Less than (`<`)
- Less than or equal to (`<=`)
- Equal to (`=`)

4. Optionally specify a default value to show in the date box. To do so, click the Browse button  next to **Default Value**.

Then type a date-valued Caché ObjectScript expression into **Caché Scripts**. The expression should evaluate to a string with the format `DD/MM/YYYY` or `DD/MM/YY` (where `DD` is a two-digit day, `MM` is a two-digit month, `YY` is a two-digit year, and `YYYY` is a four-digit year). For example:

`15/06/08`

Then click **OK**.

5. If you are using the user's selection to set a variable on this dashboard, enter the name of that variable into **Store In Variable**.

See the chapter [“Using Query Variables.”](#) Also see the section [“Passing Values to Post Actions.”](#)

6. Click **OK**.
7. If you are using the user's entry as a filter, link the date picker to the element that it filters. See [“Using a Control to Filter a Dashboard Element,”](#) later in this chapter.

Note: Ignore the **Sort Order**, **Custom**, and **Post-Loading Scripts** options.

4.7 Using Check Boxes

A *check box* looks like this:



Each state of the check box (cleared or selected) corresponds to a value.

To configure a check box, specify its properties as follows:

1. Optionally type a name into **Name**. This name is not visible in the dashboard but is useful when you edit the dashboard.
2. If you are using this check box as a filter, select the dimension to which the filter refers.


To do so:

- a. For **Subject Area**, select a subject area and click **OK**. The dimensions in the subject area are then displayed within **Dimensions**.
- b. For **Dimensions**, double-click a dimension.

When you do so, the system puts your subject area and dimension name into **Schema** (subject area) and **Dimension** on the right.

3. Specify the values associated with the selected and cleared states. To do so, type values into **Checked** and **Unchecked**.

If you are using the check box as a filter, these values must be equal to the names of members of the dimension you selected previously.

4. Optionally configure the default state of the check box:
 - a. Click the Browse button  next to **Default Value**.
 - b. Type a Caché ObjectScript expression into **Caché Scripts**. This expression must evaluate to one of the values that you typed in the previous step.
 - c. Click **OK**.

If you do not do this, the check box is cleared by default.

5. If you are using the user's selection to set a variable on this dashboard, enter the name of that variable into **Store In Variable**.

See the chapter "[Using Query Variables](#)." Also see the section "[Passing Values to Post Actions](#)."


6. Click **OK**.
7. If you are using the user's selection as a filter, link the check box to the element that it filters. See "[Using a Control to Filter a Dashboard Element](#)," later in this chapter.

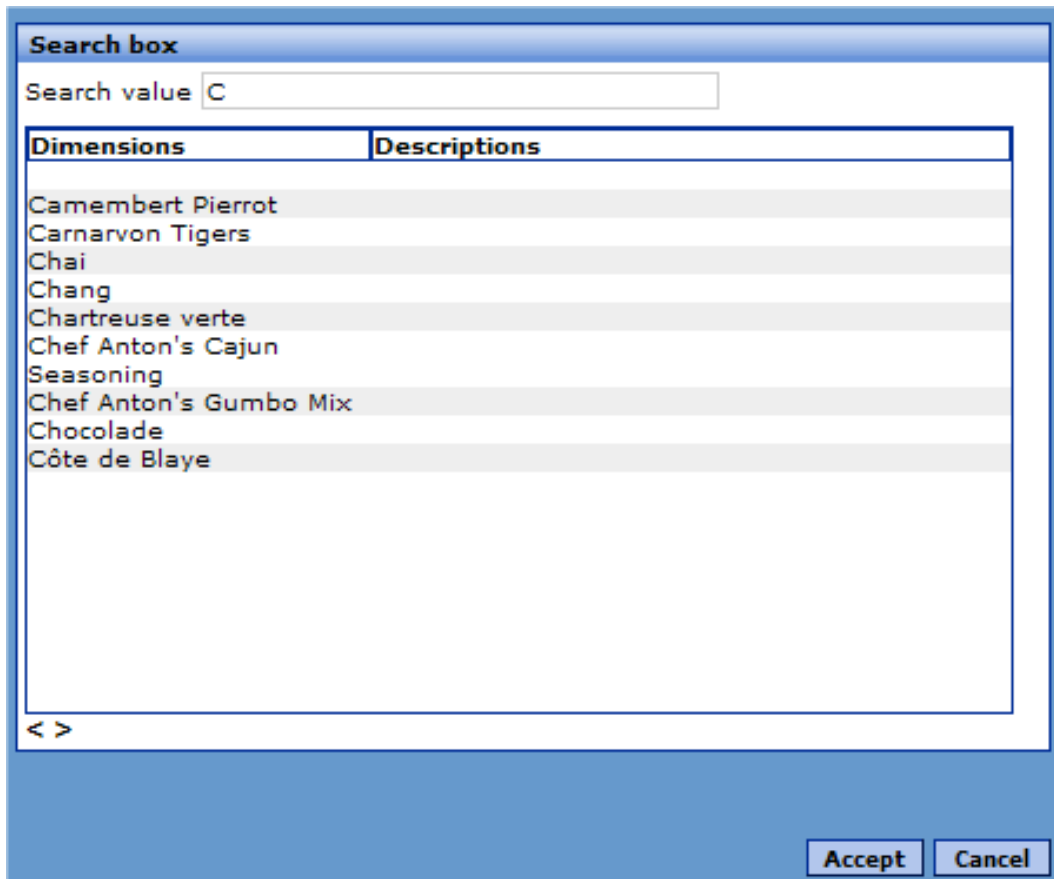
Note: Ignore the **Custom** and **Post-Loading Scripts** options.

4.8 Using Search Boxes

A *search box* is meant to help the user find an item in a list, typically in a very long list. It includes a plain box into which a user can type a value, as well as an button that displays a search dialog box, as follows:




To use this control, the user optionally types a value into the box and then clicks the Search button . The search dialog box then displays all the list items that start with the same characters; the comparison is case-sensitive. For example:



The user then clicks a list item and clicks **Accept** to select it.

To configure a search box, specify its properties as follows:

1. Optionally type a name into **Name**. This name is not visible in the dashboard but is useful when you edit the dashboard.
2. Create the list that this search box uses. To do so, do one of the following:
 - Create a list of dimension members, as described in “[Creating a List of Dimension Members](#),” earlier in this chapter. If you are using the user’s selection as a filter, you must create the list this way.
 - Manually create a list, as described in “[Creating a List Manually](#),” earlier in this chapter.
3. Optionally specify the default list element. To do so, click the Browse button  next to **Default Value**.

Then type a Caché ObjectScript expression into **Caché Scripts**. Typically you type a number or an unquoted string. For example:

```
bee stings
```

Then click **OK**.

4. If you are using the user's selection to set a variable used on this dashboard, enter the name of that variable into **Store In Variable**.


See the chapter "[Using Query Variables](#)." Also see the section "[Passing Values to Post Actions](#)."

5. Click **OK**.
6. If you are using the user's selection as a filter, link the search box to the element that it filters. See "[Using a Control to Filter a Dashboard Element](#)," later in this chapter.

Note: Ignore the **Custom** and **Post-Loading Scripts** options.

4.9 Specifying Default Values

For data controls, you can specify a default value, as noted in the earlier sections of this chapter. You do this when you add or edit the data control in the dashboard.

Click the Browse button  next to **Default Value**. Then you can specify **Default Value Type** and the corresponding details:

- **Quick Script** is the default type. If you use this, enter a Caché ObjectScript expression into **Caché Scripts**. Typically you type a number or an unquoted string. For example:

```
bee stings
```

If the control accepts multiple values, you can specify a list of default values, by using the following syntax:

```
value 1^value 2^value 3^...
```

For example:

```
ant bites^bee stings
```

- **Data Object** refers to the value of a source field in the database. For information on using this type, see the chapter "[Displaying Listing Fields and Other Source Data](#)," later in this book.
- **Listing fields** refers to the value of a detail listing field. See the chapter "[Displaying Listing Fields and Other Source Data](#)," later in this book.

Do not use the type **Caché Script Object**.

4.10 Using a Control to Filter Another Dashboard Element

You can use any of the controls to filter any number of data elements or other controls in the same dashboard.

Note that filters do not affect frames, except for frames that are loaded as detail lists (see the chapter “[Displaying Listing Fields and Other Source Data](#)”).

To use a control to filter a data element or another control:

1. Configure the control as described earlier in this chapter, following the instructions for using the control as a filter.
2. Specify the control as the refresh trigger and as a filter. To do so, do both of the following, in either order:
 - Right-click the control and then click **Set as Refresh Trigger**.
 - Right-click the control and then click **Set as Filter**.
3. Specify the other element as the refresh target and as the filtered object. To do so, do both of the following, in either order:
 - Right-click the element and then click **Set as Refresh Target**. When you do so, a gray line is drawn between the control and the other element.
 - Right-click the element and then click **Apply Filter to this object**. When you do so, a blue line is drawn between the control and the other element.

These lines are visible only when you view the dashboard in edit mode.

4.11 Deleting Links to a Dashboard Element

After you have created links between dashboard elements, you cannot delete them individually. You can instead delete all links to an element as follows:

1. Right-click it and then click **Delete all links to object**.

5


Adding Refresh Timers

You can add timers to a dashboard; typically you do this to refresh (reload) data at periodic intervals. This chapter discusses the following:

- [How to add a timer to a dashboard](#)
- [How to use a timer as a refresh trigger](#)
- [How to add a timer control to a dashboard](#)

5.1 Adding a Timer

To add a timer to a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Click the Add Timer button .
DeepSee displays a dialog box in which you specify the details.
3. Optionally type a name into **Name**.
4. Optionally type a description into **Description**. This is not visible in the dashboard.
5. For **Interval**, type the refresh interval, in seconds.
6. If you want to display this timer on the dashboard, click **Display Timer Information**. In this case, the timer is displayed as follows:



When the remaining time is five seconds or less, the timer displays the remaining time in red font.

7. Click **OK**.

The timer is added in the upper left corner of the dashboard.

8. Drag and drop the timer to the desired location.
9. Resize the timer as needed.

5.2 Using a Timer as a Refresh Trigger

By default, a timer does not affect any other element on the dashboard. You can specify which elements it updates; to do so, you use it as a refresh trigger for those elements, as follows:

1. Right-click the timer and then click **Set as Refresh Trigger**.
2. Right-click a data element (or a label) and then click **Set as Refresh Target**.

When you do so, a gray line is drawn between the timer and the element. This line is visible only when you view the dashboard in edit mode.

You might choose to refresh a label if that label displays a Caché ObjectScript expression that you want to rerun periodically.

5.3 Adding and Connecting a Timer Control

A *timer control* is a button with which the user can start and stop a timer. Note that a timer control can affect multiple timers, as you choose.

To add a timer control to a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.

2. Click the Add Timer Control button .

DeepSee displays a dialog box in which you specify the details.

3. Optionally do some or all of the following:
 - Edit the value in **Start Timer Caption**, which is the caption of the button to start the timer. The default is *Start Timer*.
 - Edit the value in **Stop Timer Caption**, which is the caption of the button to stop the timer. The default is *Stop Timer*.
 - Click **Font** and then select a different font for the start/stop button.
 - Click **Fore Color** and then select a different color of font for the start/stop button.
 - Click **Back Color** and then select a different background color for the start/stop button.
4. Click **OK**.

The timer control is added in the upper left corner of the dashboard.

5. Drag and drop the timer control to the desired location.
6. Resize the timer control as needed.

7. Right-click the timer control and then click **Set as Timer Control**.
8. Right-click a timer and then click **Apply Timer Control**.

When you do so, a gray line is drawn between the timer control and the timer. This line is visible only when you view the dashboard in edit mode.

The following shows an example of a timer and a timer control:



6

Adding Text and Graphics

This chapter describes how to add text and graphics to a dashboard. It discusses the following topics:






- [An overview of text and graphic elements](#)
- [How to add a background image to a dashboard](#)
- [How to remove a background image from a dashboard](#)
- [How to add a label](#)
- [How to add an image](#)
- [How to add a picture box](#)
- [How to add a button](#)
- [How to add a picture button](#)
- [How to group multiple picture buttons](#)
- [How to use KPI display rules to control the appearance of a label or image](#)

For information on loading image files into the DeepSee library for use in dashboards, see the [DeepSee Site Configuration and Maintenance Guide](#).

6.1 Overview of Text and Graphic Elements

You can specify a background image for a dashboard to display.


You can also include the following text and graphic elements in a dashboard; note that some of these elements can be interactive:

Element Type	Toolbar Button	Purpose	Interactive?
Label		Displays a string, which can be the result of a Caché ObjectScript function call.	No
Image		Displays an image.	Yes *
Picture box		Displays an image, tiled repeatedly to fill the element.	No
Button		Adds a button that displays a string, which can be the result of a Caché ObjectScript function call.	Yes *
Picture button		Adds a button that displays a string and an image.	Yes *

* See “[Configuring an Image, Button, or Picture Button to Control a Frame](#),” later in this book.

6.2 Adding a Background Image to a Dashboard

To add a background image to a dashboard:

- Optionally load the image file into the DeepSee library. For information, see the [DeepSee Site Configuration and Maintenance Guide](#).
- Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
- Click the Dashboard Properties button .
DeepSee displays a dialog box in which you specify the details.
- Do one of the following:
 - Select an image file that has been loaded into DeepSee. To do so, either type the image ID into **Image List** or click the button next to that field and then select an image. This action inserts a pointer on this dashboard to that stored image.
 - Select an external image file. To do so, click **Browse**, navigate to the file, and click **OK**. This action loads the file into the database and uses it on this dashboard.
- Optionally choose a value for **Picture Position**, one of the following:
 - Left Top** (the default)
 - Left Center**
 - Left Bottom**
 - Center Top**
 - Center Center**
 - Center Bottom**
 - Right Top**
 - Right Center**

- **Right Bottom**
- **Tile**

Ignore the **Stretch** and **Zoom** options.


6. Click **OK**.

The image is displayed in the specified position.

Note that unlike the other objects in the dashboard, you cannot manipulate this one directly. To move the image, you must edit the dashboard properties. To resize the image, you must edit the image file.

6.3 Removing a Background Image from a Dashboard

To remove a background image to a dashboard:


1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Click the Dashboard Properties button .

DeepSee displays a dialog box in which you specify the details.
3. Do one of the following:
 - To remove the pointer to a stored image, click **Clr**.
 - To remove an image that was loaded from a file, click **Clear**.
4. Click **OK**.

The image is displayed in the specified position.

6.4 Adding a Label

To add a *label* to a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Click the Add Label button .

DeepSee displays a dialog box in which you specify the details.

3. Type the text of the label into **Normal Display**.

Or type a Caché ObjectScript expression that refers to a user-defined function (function starting with \$\$); see the book [Expressions and Scripts in DeepSee](#). You can use the **\$\$KPI** or **\$\$VAR** function, which are also described in that book.

The label can have multiple lines.

4. Optionally specify the following:
 - **Font** — Click this and then specify the typeface, font style, and font size. You can also choose underline or strike-through effects. Ignore the color options and alignment, which have no effect.

- **Fore Color** — Click this and then select the color of the text.
- **Back Color** — Click this and then select the color of the background of the label. Or select **Back Style Transparent** to make this background transparent.
- **Default** — Click this and then type a default value. This is useful when you use a function call within **Normal Display**.
- **Alignment** — Click an option to specify how the text is aligned within the label.
- **Scrollbar** — Select this to add a vertical scroll bar to the right side of the label.

5. Click **OK**.


The label is added in the upper left corner of the dashboard.

Other options are discussed later in this book, as follows:

Option	Where Discussed
Default	Displaying Listing Fields and Other Source Data
KPI Override Setting and KPI Filter	Using KPI Display Rules to Override Text or Graphics
3D Appearance, Border, Store In Variable, and DashboardID	Ignore these options


6.5 Adding an Image

To add an *image* to a dashboard:

1. Optionally load the image file into the DeepSee library. For information, see the [DeepSee Site Configuration and Maintenance Guide](#).
2. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
3. Click the Add Image button .

DeepSee displays a dialog box in which you specify the details.
4. Do one of the following:
 - Select an image file that has been loaded into DeepSee. To do so, either type the image ID into **Image List** or click the button next to that field and then select an image. This action inserts a pointer on this dashboard to that stored image.
 - Select an external image file. To do so, click **Browse**, navigate to the file, and click **OK**. This action loads the file into the database and uses it as this dashboard element.

The dialog box displays a preview of the image.

5. Optionally specify the following:
 - **Upon Clicked** — Specifies the image to display when the user clicks the image. Click the Browse button  next to **Upon Clicked** and choose a image as described previously. If you use this option, make sure that the image has the same dimensions as the main image.
 - **Tool Tip Text** — Specifies the tooltip to display when the user hovers the pointer over the image.

You can type a Caché ObjectScript expression that refers to a user-defined function (function starting with \$\$); see the book *Expressions and Scripts in DeepSee*. You can use the **\$\$KPI** function, which is also described in that book.

- **Auto Resize** — If you select this, the image object is resized to fit the image as soon as you click **OK**.

6. Click **OK**.

The image is added in the upper left corner of the dashboard.



Other options are discussed later in this book, as follows:

Option	Where Discussed
DashboardID	Configuring an Image, Button, or Picture Button to Control a Frame
KPI Override Setting and KPI Filter	Using KPI Display Rules to Override Text or Graphics
On Click Grouping	Grouping Images and Picture Buttons
Default Value, Set Value, 3D Appearance, and Border	Ignore these options

6.6 Adding a Picture Box

A *picture box* displays an image, which is tiled repeatedly to fill the area of the picture box.

To add a picture box to a dashboard:

1. Optionally load the image file into the DeepSee library. For information, see the *DeepSee Site Configuration and Maintenance Guide*.
2. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
3.  Click the Add Picture Box button . DeepSee displays a dialog box in which you specify the details.
4. Do one of the following:
 - Select an image file that has been loaded into DeepSee. To do so, either type the image ID into **Image List** or click the button next to that field and then select an image. This action inserts a pointer on this dashboard to that stored image.
 - Select an external image file. To do so, click **Browse**, navigate to the file, and click **OK**. This action loads the file into the database and uses it as this dashboard element.

The dialog box displays a preview of the image.


5. Optionally select **Auto Resize**. If you do so, the image object is resized to fit the image as soon as you click **OK**.
6. Click **OK**.

The picture box is added in the upper left corner of the dashboard.

Note: Ignore the **Default Value**, **DashboardID**, **3D Appearance**, and **Border** options.

6.7 Adding a Button

To add a *button* to a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Click Add Button .

DeepSee displays a dialog box in which you specify the details.

3. Type the text of the button into **Normal Display**.

Or type a Caché ObjectScript expression that refers to a user-defined function (function starting with \$\$); see the book *Expressions and Scripts in DeepSee*. You can use the \$\$KPI or \$\$VAR function, which are also described in that book.

4. Optionally specify the following:

- **Font** — Click this and then specify the typeface, font style, and font size. You can also choose underline or strike-through properties. Ignore the color options and alignment, which have no effect.
- **Fore Color** — Click this and then select the color of the text.
- **Back Color** — Click this and then select the color of the background of the button.
- **Back Style Transparent** — Click this to make this background transparent. If you do, the background color is ignored.

5. Click **OK**.

The button is added in the upper left corner of the dashboard.

Note: For information on **DashboardID**, see “[Configuring an Image, Button, or Picture Button to Control a Frame](#),” later in this book.


Ignore the **3D Appearance** option.

Also see “[Adding a Drop-down Menu to a Dashboard](#),” later in this book.

6.8 Adding a Picture Button

A *picture button* is a button that includes both an image and a caption. You specify the position of both of these elements.

To add a picture button to a dashboard:

1. Optionally load the image file into the DeepSee library. For information, see the *DeepSee Site Configuration and Maintenance Guide*.
2. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
3. Click Add Picture Button .

DeepSee displays a dialog box in which you specify the details.

4. Type the caption of the button into **Caption**.

5. Specify the main image used on the picture button. To do so, click the **Normal Display** tab and then do one of the following:
 - Select an image file that has been loaded into DeepSee. To do so, either type the image ID into **Image List** or click the button next to that field and then select an image. This action inserts a pointer on this dashboard to that stored image.
 - Select an external image file. To do so, click **Browse**, navigate to the file, and click **OK**. This action loads the file into the database and uses it as this dashboard element.

The **Normal Display** tab displays a preview of the image.

6. Optionally specify the following:
 - **Upon Clicked** — Specifies the image to display when the user clicks the picture button. Click the tab and choose a image as described previously. The tab shows a preview of the image. If you use this option, make sure that the image has the same dimensions as the main image.
 - **Mouse Over** — Specifies the image to display when the user hovers the pointer over the picture button. Click the tab and choose a image as described previously. The tab shows a preview of the image. If you use this option, make sure that the image has the same dimensions as the main image.
 - **Font** — Specifies the typeface, font style, and font size for the caption. You can also choose underline or strike-through properties. Ignore the color options and alignment, which have no effect. Click this and specify the options.
 - **Fore Color** — Click this and then select the color of the caption text.
 - **Auto Resize** — If you select this, the picture button is resized to fit the image as soon as you click **OK**.
 - **Picture Position** — Specifies the position of the image within the picture button. Click an option.
 - **Caption Position** — Specifies the position of the caption within the picture button. Click an option.
7. Click **OK**.

The picture button is added in the upper left corner of the dashboard.

Other options are discussed later in this book, as follows:

Option	Where Discussed
DashboardID	Configuring an Image, Button, or Picture Button to Control a Frame
On Click Grouping and On Click Startup	Grouping Images and Picture Buttons
Back Color, Border Width, Set Value, Appearance, and Style	Ignore these options

Ignore the other options for this object.

6.9 Grouping Images and Picture Buttons

When you create multiple images, you can group them so that only one is selected at any given time. That is, if the user clicks one of them, any previously selected image is automatically deselected.

The same is true when you create multiple picture buttons.

To group images or picture buttons:




1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Do the following to each image or picture button:
 - a. Double-click the image or picture button in the dashboard.
 - b. For **On Click Grouping**, type a string that identifies the group.
Be sure to use the identical string (including case) in all other picture buttons in this group.
 - c. Click **OK**.
3. Optionally configure one of the images or picture buttons so that it is automatically selected when the dashboard is open. To do so, select **On Click Startup** for that item.

Note that the only purpose of the group is to control which group member is selected at any given time.

6.10 Using KPI Display Rules to Override Text or Graphics

For labels and images, you can use the KPI override feature, which uses the display rules defined in a KPI and applies them to the object. A KPI consists of two elements:


- A measure or a formula.
- A set of *display rules*. Each display rule specifies a range of values and has an associated display options. The display options can include font size, typeface, color, and so on. The following example shows three rules:

From Value	To Value	Foreground Color	Background Color	Font Name
	60		 #00FF00	Arial
60	80		 #FFFF33	Arial
80			 #FF0000	Arial

Each range of values can also have an associated image.

For labels, you can use KPI display rules to override the text display options that the label uses. Similarly, for images, you can use KPI display rules to override the image that is used. In either case, you select a KPI. When the dashboard is shown, the system evaluates the KPI, determines which display rule to use, and overrides the default label or image as appropriate.

To apply KPI display rules to a label or image:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Double-click the label or image in the dashboard.
3. For **KPI Override Setting**, click the Browse button  and select a KPI.
4. Optionally, to filter the data used to evaluate the KPI, type a filter expression into **KPI Filter**. For example:

[Tested? = Yes]

Note that a filter expression can include Caché ObjectScript expressions; see the book [Expressions and Scripts in DeepSee](#). It can also include variables whose values are set at runtime; see the chapter “[Using Query Variables](#).”

5. Click **OK**.

For information on defining KPIs, see [*Using the DeepSee Analyzer*](#).

7

Adding Frames and Drop-down Menus

This chapter describes how to add frames and drop-down menus to a dashboard. It discusses the following topics:

- [An overview of frames](#)
- [How to add a frame to a dashboard](#)
- [How to configure an image, button, or picture button to control a frame](#)
- [How to create shortcuts that open dashboards](#)
- [How to add a drop-down menu to a dashboard](#)
- [How to display a Web page in a frame](#)

7.1 Overview of Frames, Frame Controls, and Drop-down Menus

A dashboard can include frames. A *frame* is a rectangular area that typically displays another dashboard; it can also display a Web page. For example:

Logged in as: user1
12 August 2009 06:32:07PM

Diagnoses

Diagnosis Details

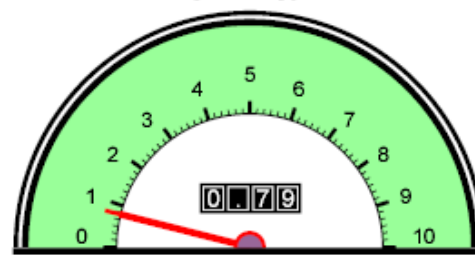
Geographic Details

Age Details

Alerts

Group A
Group B
None

Average Allergy Count



Patient Count by Diagnosis				Level 0 of 0	
	0-29	30-59	60+		
<i>Diagnoses</i>	Patient Count	Patient Count	Patient Count		
CHD	4	83	242		
asthma	301	299	103		
diabetes	29	254	277		
osteoporosis			226		

In this example, the buttons on the left control the frame on the right.

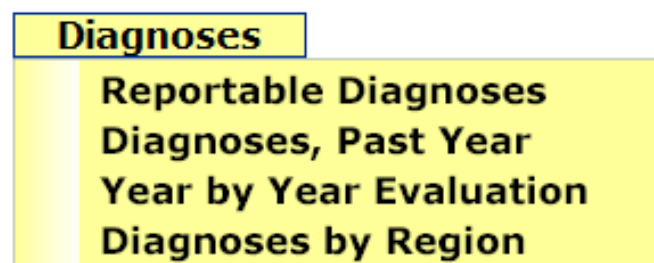
You position and resize the frame as needed.

You can use frames in any of the following ways:

- As a static element that displays another dashboard, resulting in a more complex visual layout.
- As a dynamic element controlled by an image, button (as shown in the preceding example), or picture button. These objects are known as *frame controls*, in this book.

When you add a frame control to a dashboard, you associate it with a specific dashboard. When the user clicks a given frame control, the frame is refreshed to show the dashboard associated with that frame control.


- As a dynamic element controlled by a *drop-down menu*. A drop-down menu is initially displayed as a button. When the user clicks the button, DeepSee displays a list as shown here. Each item in the drop-down menu corresponds to a dashboard or other DeepSee module.




When the user clicks an item in the drop-down menu, the frame is refreshed to show the dashboard or module associated with that item.

7.2 Adding a Frame

To add a frame to a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Click the Add Frame button .

DeepSee displays a dialog box in which you specify the details.
3. Optionally do some or all of the following:
 - For **Default Dashboard**, click the Browse button  and then click the name of a dashboard.
 - For **Bottom Margin**, type a number that specifies the bottom margin of this frame, relative to the window. For example, use 0 to make the frame flush with the bottom of the browser window.
 - For **Right Margin**, type a number that specifies the right margin of this frame, relative to the window. For example, use 0 to make the frame flush with the right edge of the browser window.

If you do not specify **Bottom Margin** and **Right Margin**, the frame is not resized automatically when the browser window is resized. Instead, the frame keeps the dimensions to which you resize it manually in the Dashboard Designer.

4. Click **OK**.


The frame is added in the upper left corner of the dashboard.

For information on the other frame options, see the next topic.

7.3 Configuring an Image, Button, or Picture Button to Control a Frame

To configure an image, button, or picture button to control a frame:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Double-click the image, button, or picture button object in the dashboard.

DeepSee displays a dialog box in which you specify the details.
3. For **Dashboard Id**, click the Browse button  and then click the name of a dashboard.
4. Click **OK**.
5. Right-click the object that you just edited or added and select **Set as Refresh Trigger**.
6. Right-click the frame and select **Set as Refresh Target**.

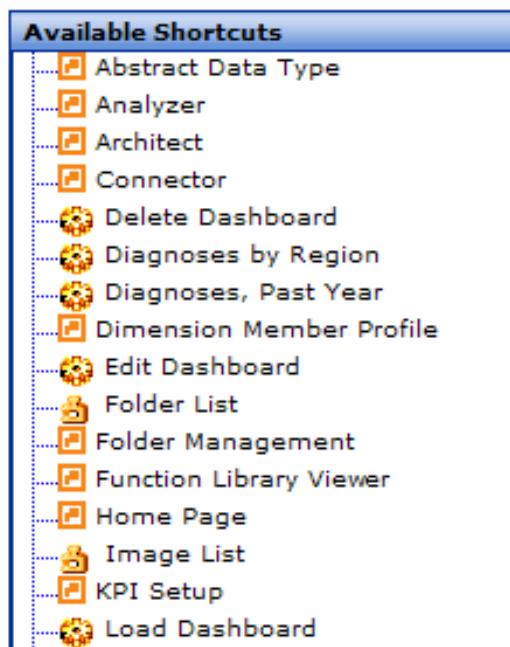
When you do so, a gray line is drawn between the frame and the object you just edited. This line is visible only when you view the dashboard in edit mode.
7. Optionally save the dashboard.

7.4 Defining Shortcuts That Open Dashboards

If you plan to add drop-down menus, you must first define *shortcuts* that open each desired dashboard or other module. To do this:

1. If you plan to create shortcuts for dashboards, make a note of the IDs of those dashboards.
2. Then:
 - If you are currently viewing a DeepSee module, click **Administrator > Shortcut Management**.
 - If you are currently viewing a dashboard, right-click and then click **Go To > Administrator > Shortcut Management**.

At the left, DeepSee displays a list of the available shortcuts. For example:



The right area displays details for the shortcut you select on the left. For example:

Shortcut Maintenance

Name :

Description :

Action Type :

☐ Call a Module
 ☐ Open a Component
 ☐ A Function
 ☒ Group of Shortcut

Select one or more shortcuts for your group.

Abstract Data Type Administrator Analyzer Architect Connector Controls Data Modeler Delete Dashboard Diagnoses Diagnoses by Region Diagnoses, Past Year	Reportable Diagnoses Diagnoses, Past Year Year by Year Evaluation Diagnoses by Region
---	--

On this page, you can add shortcuts, redefine shortcuts, or delete shortcuts.

The area below the radio buttons displays different details, depending on the **Action Type**.

3. Either click a shortcut in the list or click **New** in the bottom right.
4. Specify details for this shortcut as follows:
 - **Name** — Specify the title of the shortcut, to display in menus or on buttons as appropriate.
 - **Description** — Optionally type any comments.
 - **Action Type** — Click one of the following:
 - **Call a Module** — Use this to call a DeepSee module.

If you select this, type the URL for the DeepSee CSP page into **URL**. For example, to display a dashboard, use a URL of the following form:

```
http://localhost:57772/csp/sys/bi/speedLogin.csp?$NAMESPACE=
NS&usr=username&pwd=password&role=rolename&dbId=10026
```

Where:

- 57772 is the port number for which your Caché or Ensemble server is configured.
- NS is the namespace in which you defined the dashboard.
- username is a DeepSee user name.
- password is the corresponding password.
- rolename is the DeepSee role to use.
- 10026 is the ID of the dashboard.

Do not include the line break shown here.

- **Open a Component** — Use this to open the image list, folder list, or pivot list.

If you select this, select one of the following from the drop-down menu: **Image List**, **Folder List**, or **Pivot List**.

- **A function** — Use this for options related to dashboards.

If you select this, select one of the following from the drop-down menu: **Open a new dashboard**, **Open up the dashboard list**, **Recent dashboard list**, **Edit the dashboard** or **Delete the dashboard**.

- **Group of Shortcuts** — Use this to create a submenu of shortcuts.

If you select this, DeepSee displays two boxes. The left one lists the available shortcuts, and the right one lists the shortcuts in this group. Double-click a shortcut to copy it from the left list to the right one. Or click the >> button.

To remove a shortcut from the right list, click it and then click the << button.

To change the order of the shortcuts in the right list, click a shortcut in that list and then click the up or down arrow button as appropriate.

5. Click **Save** to save your changes.

7.5 Adding a Drop-down Menu to a Dashboard

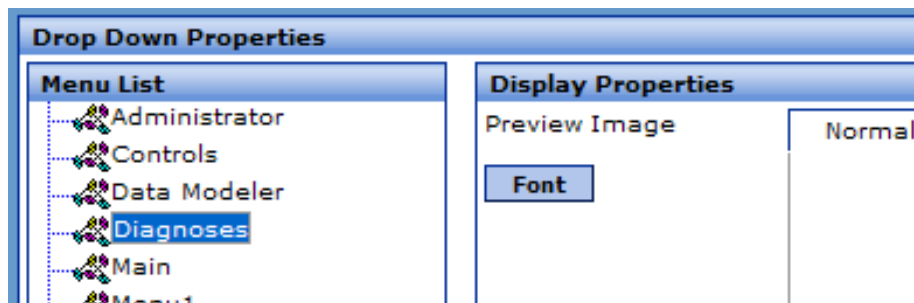
To add a drop-down menu to a dashboard:

1. Create the individual shortcuts to include in the drop-down menu. See the [previous section](#).
2. Create a shortcut that groups those individual shortcuts. See the [previous section](#).
3. Find the dashboard to which you want to add the drop-down menu. Open it in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.

4. Click the Add Drop-down Menu button .

DeepSee displays a dialog box in which you specify the details. The **Menu List** area lists all the shortcuts that are groups of other shortcuts.


5. In **Menu List**, click the shortcut that groups the shortcuts (created in step 2). For example:



The system highlights the shortcut in the list but does not otherwise update the dialog box.

6. Optionally specify the following:
 - **Normal Display** — Specifies the appearance of the drop-down menu in normal mode.

To specify the typeface, font size, font style, and font color, click **Font** and then specify the details.

To choose an image, click the Browse button  next to **Image List** and then click an image. Or click **Browse...** and then click an image file.

- **On mouse over** — Specifies the appearance of the drop-down menu when the user hovers the pointer over it.

By default, the drop-down menu appears the same as in normal mode. To customize its appearance when the user hovers the pointer over it, click the **On mouse over** tab and then specify the details as described in the previous bullet.

7. Click **OK**.
8. Right-click the drop-down menu and select **Set as Refresh Trigger**.
9. Right-click the frame and select **Set as Refresh Target**.


When you do so, a gray line is drawn between the frame and the drop-down menu. This line is visible only when you view the dashboard in edit mode.

10. Optionally save the dashboard.

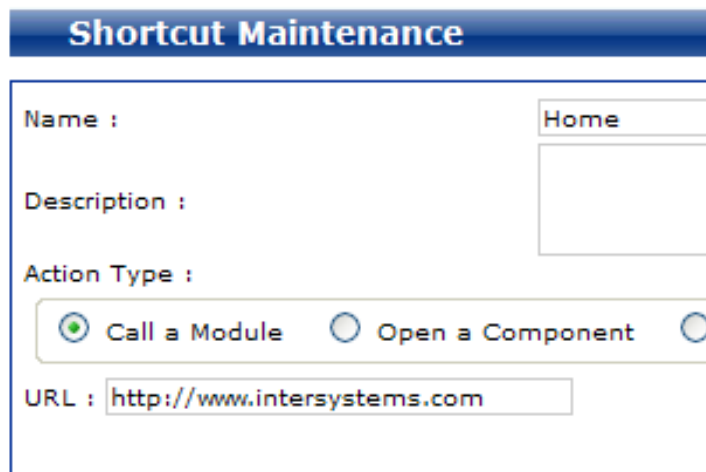
A drop-down menu has a border, which cannot be removed. To hide this border, set the dashboard background color to the color #002D96 (a dark blue).

7.6 Displaying a Web Page in a Frame

You can embed Web pages in your dashboards by displaying the Web pages within frames. The process is as follows:

1. First, define a shortcut that acts as a logical name for the URL of the Web page. To do so:
 - a. Click the Close button  in the upper right of the Dashboard Designer.
 - b. Right-click and then click **Go To > Administration > Shortcut Management**.
 - c. Type a name into **Name** so that you can identify this shortcut later.
 - d. Click **Call a Module**.
 - e. For **URL**, type the complete URL to use.

For example:



Shortcut Maintenance


Name : Home

Description :

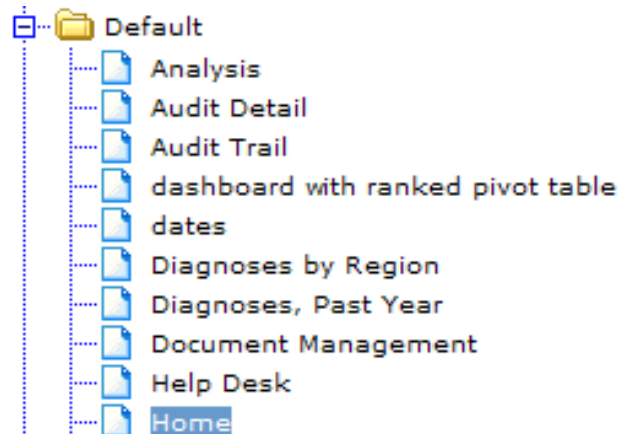
Action Type :

☒ Call a Module ☐ Open a Component ☐

URL : http://www.intersystems.com

- f. Click **Save**.
2. Return to the Dashboard Designer.
3. Add a frame to your dashboard as described earlier in this chapter. When you do, specify the frame properties as follows:
 - a. Click the Browse button  next to **Default Dashboard**.
 - b. Expand the **Default** folder.

This folder lists all shortcuts and dashboards that you have defined. For example:



- c. Click the shortcut you created and then click **OK**.

8

Displaying Listing Fields and Other Source Data

This chapter describes how to create dashboards that display listing fields (or other lowest-level, source data). It discusses the following topics:

- [An overview](#)
- [How to use the Detail Listing Dashboard wizard](#) to create a dashboard that displays listing fields
- [How to manually create a dashboard to display listing fields or other source data](#)

Also see the section “[Adding a Detail Listing](#),” earlier in this book.

8.1 Overview of Displaying Source Data on Dashboards

You can create dashboards that display listing fields or other source data. For example:

Dashboard with Detail Listing

Doctor Group Home ZIP

Basic Details i	
Patient ID	SUBJ_100301 Age 20
Patient ID	SUBJ_100302 Age 12
Patient ID	SUBJ_100303 Age 81
Patient ID	SUBJ_100304 Age 9
Patient ID	SUBJ_100305 Age 21
Patient ID	SUBJ_100306 Age 35

This dashboard initially displays data for the entire subject area (this is configurable). The user selects members from any or all of the combo boxes and then clicks **Search**. The dashboard then filters the display appropriately. The bottom of the dashboard (not shown) displays buttons with which the user can page ahead and back, if there are too many items to display on one page.

DeepSee provides a wizard to help you display source data like this, or you can create the dashboards manually. See the sections “[Using the Detail Listing Dashboard Wizard](#)” and “[Manually Creating Dashboards to Display Source Data](#).”

8.2 Using the Detail Listing Dashboard Wizard

The Detail Listing Dashboard wizard helps you quickly create a dashboard that displays detail listing fields. The wizard creates two dashboards, one of which is used within the other one. The primary dashboard (with the secondary dashboard embedded) looks like the example shown in [the previous section](#).

To use the Detail Listing Dashboard wizard and create a dashboard like this:

1. Display any dashboard (in view mode).
2. Right-click and then click **New Dashboard > By Wizard**.

DeepSee displays a dialog box where you choose the kind of dashboard to create.




3. Click **Detail Listing Dashboard**.

DeepSee then displays the first page of the wizard.

4. On the first page of the wizard, specify the following details:

- For **Board Name**, type the name of the primary dashboard.

The name of the secondary dashboard will be the same as the primary one, with (Detail) added to the end.

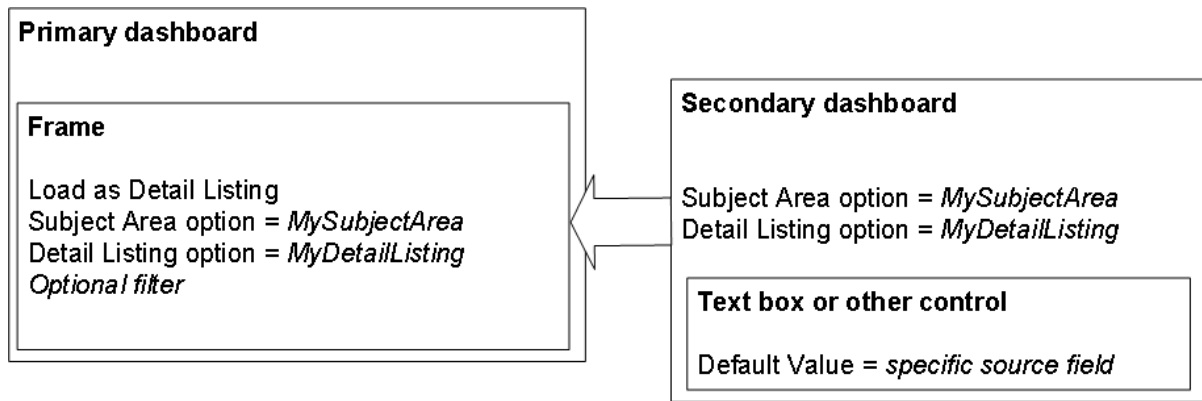
- For **Dashboard Title**, type the title to display on the primary dashboard. This title is added as a label element.
 - For **Folder**, click the Browse button  and select a folder to contain the two dashboards.
 - For **Remarks**, type an optional description or comments for internal use.
 - For **Subject Area**, click the Browse button  and then click a subject area. This selection controls your choices for the detail listing.
 - For **Detail Listing**, click the Browse button  and then click the detail listing to use.
5. Click **Next**.
DeepSee then displays a list of the dimensions in the selected subject area. You choose the dimensions by which the user can filter the displayed detail listing.
 6. Double-click each dimension that you want to filter on. The dimension is added to the **Selected Filter(s)** list.
The order in which you add the dimensions controls the order in which the corresponding filters are displayed (left to right).
 7. Click **Next**.
DeepSee then displays a list of all the listing fields in your selected detail list.
 8. Double-click each listing field that you want to display. The listing field is added to the **Selected Data Object(s)** list.
The order in which you add the listing fields controls the order in which they are displayed (left to right).
 9. Click **Next**.
DeepSee displays a table of the selected listing fields.
 10. Optionally edit the captions for the listing fields. To do so, type a value into **Caption** for the corresponding entry in this table.
 11. Click **Finish** and then click **OK**.
DeepSee creates the specified dashboards and then displays the primary dashboard in view mode.

8.3 Manually Creating Dashboards to Display Source Data

To manually create dashboards to display source data, do the following in either order:

- [Create the primary dashboard](#), which includes a suitably configured frame.
- [Create the secondary dashboard](#), which displays one or more source data fields as default values within controls.

The following figure sketches the basic requirements.



Because the primary dashboard refers to the secondary dashboard, you may find it simpler to create the secondary dashboard first, so that you do not need to reopen and re-edit the primary dashboard. The following sections provide the details.

8.3.1 Creating the Secondary Dashboard




The secondary dashboard displays one or more listing fields, typically with labels and typically arranged in a row, like the following example:

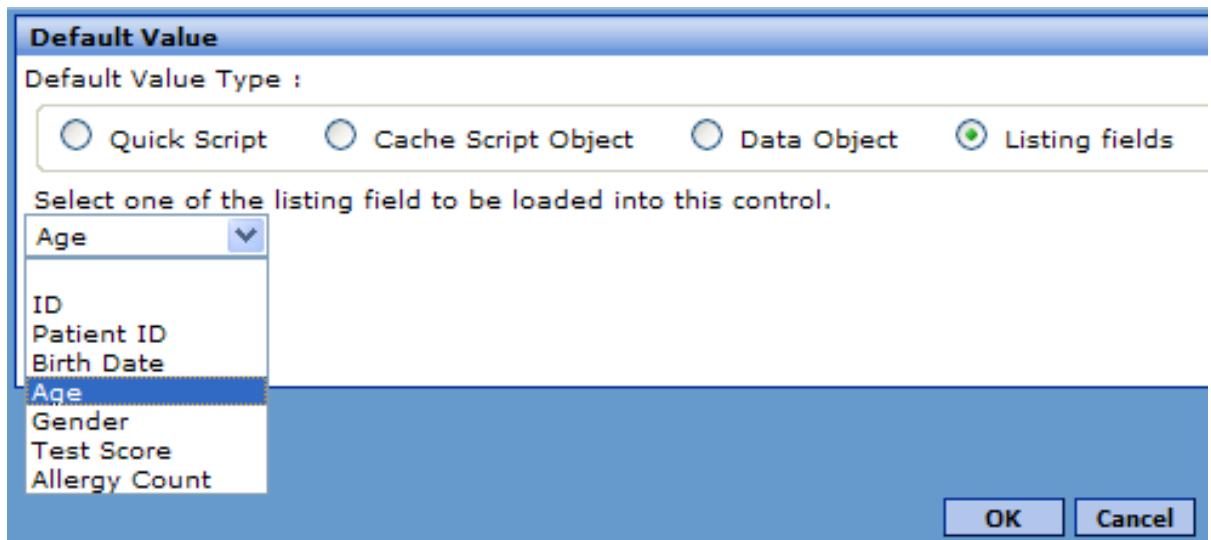
Patient ID **Age**

To create the second dashboard:


1. Create a new, blank dashboard, as described in “[Editing a Dashboard](#),” earlier in this book.

Tip: You may find it useful to follow a naming convention. For example, the name of a given secondary dashboard could be the same as the primary dashboard, with (Detail) appended to it. This is the convention followed by the DeepSee dashboard wizard discussed earlier in this chapter.

2. For the new dashboard, specify the detail listing for this dashboard to use:
 - For **Subject Area**, click the Browse button  and then click a subject area. This selection controls your choices for the detail listing.
 - For **Detail Listing**, click the Browse button  and then click the detail listing.
3. Add an object that displays the value of a listing field. You use a label or any of the data controls.
 - a. Click the button for the type of object you want to add. See “[Overview of Controls](#).” Or use a label object (). DeepSee then displays a dialog box on which you configure this object.
 - b. Click **Default Value** or **Default**. (The option name depends on the object you use.) DeepSee displays a dialog box.
 - c. Now do one of the following:
 - To display a listing field, click **Listing fields**.
The dialog box displays a drop-down list of all the listing fields in the detail listing that this dashboard uses.



Choose a listing field and then click **OK**.

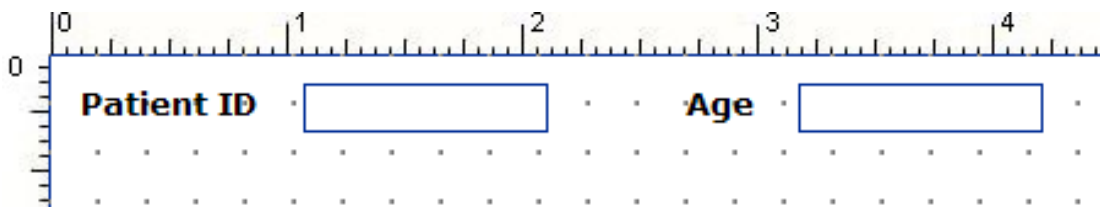
- To display some other source field, click **Data Object**. Then click the Browse button . The dialog box displays the hierarchy of source data fields in this subject area. Navigate to and click the desired field and then click **OK**.

- Click **OK** to close the dialog box for the object.
 - Reposition the new object and resize it.
 - If needed, add a suitable label object and place it appropriately nearby.
- Repeat the preceding step as needed.

Tip: Because this dashboard is displayed repeatedly as rows in a frame, it is a good idea to arrange the dashboard elements in short, wide rectangle.

- Save the dashboard.

The result might be something like the following (which uses text boxes to display the source data):



8.3.2 Creating the Primary Dashboard

The primary dashboard contains a frame that displays the secondary dashboard. It can (and usually does) also contain controls that filter the contents of the secondary dashboard.

To create the primary dashboard:

- Create a new, blank dashboard, as described in “[Editing a Dashboard](#),” earlier in this book.
- Add a frame to the dashboard, as described in “[Adding a Frame](#),” earlier in this book.



3. When you add the frame, specify the following details:

- **Default Dashboard** — Optionally choose a dashboard such as the secondary dashboard you created in the previous section.

This step is not technically required, because you could instead [use images, buttons, or picture buttons to control which dashboard the frame displays](#). See the chapter “[Adding Frames and Drop-down Menus](#),” earlier in this book.

- **Load as detail listing** — Select this option.
- **Number of rows** — The secondary dashboard is shown repeatedly as rows within the frame. Specify the number of rows to show at a time; the primary dashboard includes buttons to page through all the rows.
- **Row height** — Specify the height for each row.

Tip: The wizard discussed in the previous section sets **Row height** to 35.

- **Subject Area** — Click the Browse button  and then click a subject area. This selection controls your choices for the detail listing.
- **Detail Listing** — Click the Browse button  and then click the detail listing for this frame to use.
- **Filter** — Optionally specify a filter to control which source data this frame accesses. To do so, specify a filter expression, for example:

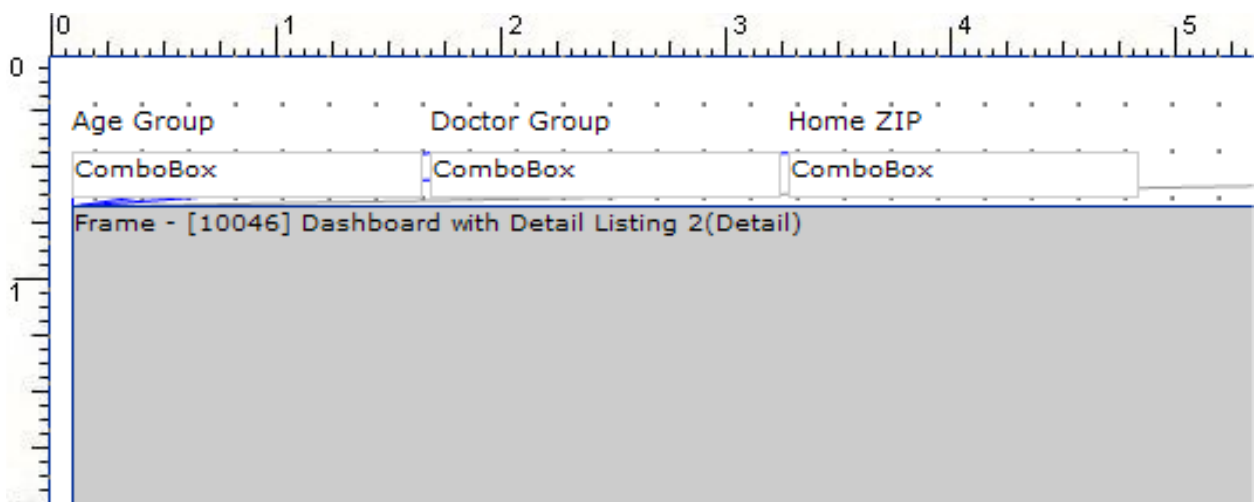
```
[Gender = Female]
```

If you do not specify a filter, the frame accesses all records in the subject area.

Note that a filter expression can include Caché ObjectScript expressions; see the book [Expressions and Scripts in DeepSee](#). It can also include variables whose values are set at runtime; see the chapter “[Using Query Variables](#).”

4. Optionally add controls to act as additional filters for the frame. See “[Using a Control to Filter Another Dashboard Element](#),” earlier in this book.
5. Add labels as needed.
6. Save the dashboard.

The result might be something like the following:



9

Adding Venn Diagrams

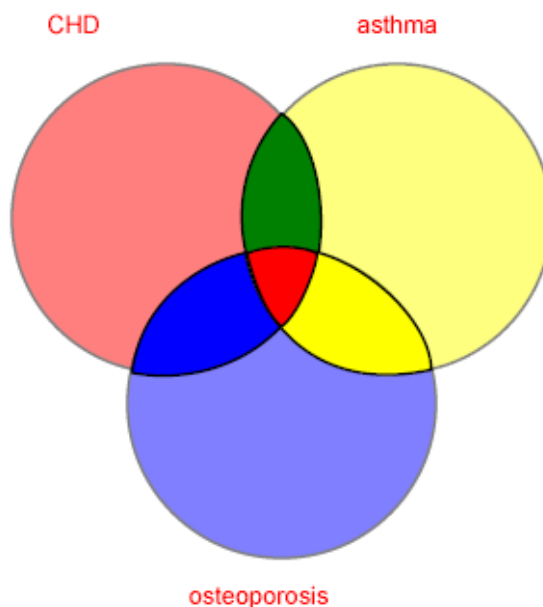
This chapter describes how to add Venn diagrams to your dashboards. It discusses the following topics:

- [An overview of Venn diagrams in DeepSee](#)
- [How to define a Venn diagram](#)
- [How to add a Venn diagram to a dashboard](#)

You cannot use a Venn diagram as the target of a filter or a refresh action.

9.1 Overview of Venn Diagrams

DeepSee provides a simple capability for creating Venn diagrams, which you can include in dashboards. A Venn diagram is assumed to have three main groups, which are shown as circles with labels, for example:



In a dashboard, you can display a Venn diagram instead as a table:

Sample	
CHD	335
asthma	677
[CHD] AND [asthma]	17
osteoporosis	214
[CHD] AND [osteoporosis]	31
[asthma] AND [osteoporosis]	19
[CHD] AND [asthma] AND [osteoporosis]	2

9.2 Defining Venn Diagrams

You define Venn diagrams in a separate part of DeepSee and then you add them to dashboards as needed.

First, configure DeepSee to give you access to Venn diagram setup. To do so:

- First:
 - If you are currently viewing a dashboard (in view mode), right-click and then click **Go to > Administrator > Shortcut Management**.
 - If you are elsewhere within DeepSee, click **Administrator > Shortcut Management**.
- In the **Available Shortcuts** list, scroll to and double-click **Data Modeler**.
- In the left list, scroll to and double-click **Venn Diagram Setup**. This adds **Venn Diagram Setup** to the list on the right, which is the list of shortcuts within the **Data Modeler** shortcut.
- Click **Save**.
- If needed, log out and log in again to see the change.


The preceding setup is necessary only once.

To define a Venn diagram:

- First:
 - If you are currently viewing a dashboard (in view mode), right-click and then click **Go to > Data Modeler > Venn Diagram Setup**.
 - If you are elsewhere within DeepSee, click **Data Modeler > Venn Diagram Setup**.

The left area of the page then displays the folders stored in DeepSee, along with any Venn diagrams that currently exist.

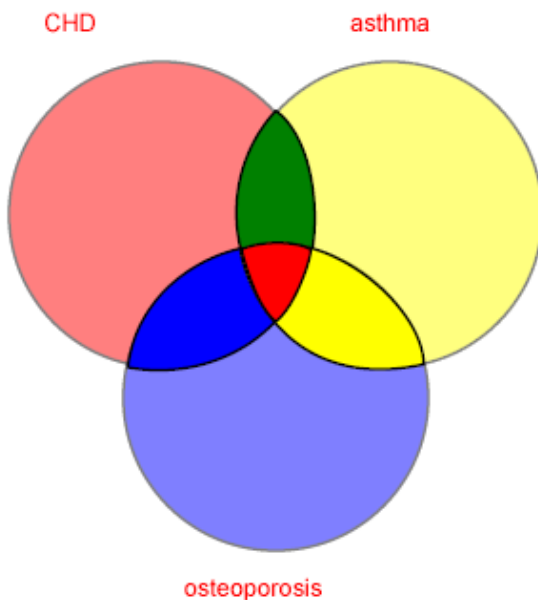
The right area of the page displays details for the selected Venn diagram, if any.

2. Click **Clear** to ensure that the right area is cleared.
3. Specify the following basic details for the new Venn diagram:
 - **Name** — Specify a name.
 - **Schema** (subject area) — Click a subject area from this drop-down list.
 - **Folder** — Click the Browse button  and select a folder to contain the Venn diagram.
 - **Color Schema** — Click this and either select an existing chart theme or create and select a new one. For information, see the section “[Defining and Using Chart Themes](#)” in *Using the DeepSee Analyzer*.
4. In the table below the basic details, specify the name and definition of each of the three main groups in this Venn diagram. In each row, specify the following:
 - **Query Caption** — Specify a name for this group.
 - **Query** — Specify a filter expression that defines this group. For example:

[Diagnoses = CHD]

Note that a filter expression can include Caché ObjectScript expressions; see the book *Expressions and Scripts in DeepSee*. It can also include variables whose values are set at runtime; see the chapter “[Using Query Variables](#).”

5. Optionally **View** to preview this Venn diagram. If you do, the preview is shown in the bottom area of the page. For example:





Condition	Results
CHD	335
asthma	677
CHD AND asthma	17
osteoporosis	214
CHD AND osteoporosis	31
asthma AND osteoporosis	19
CHD AND asthma AND osteoporosis	2

6. Click **Add** to add this Venn diagram.

9.3 Adding a Venn Diagram to a Dashboard

To add a Venn diagram to a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Click the Add Venn Diagram button .
DeepSee displays a dialog box in which you specify the details.
3. In **List of Venn Diagrams**, navigate to and click the desired Venn diagram.
4. Optionally specify the following additional details:
 - **Normal Display** — Specify a caption to use when the Venn diagram is shown in table format. The default is to use the name contained in the definition of the Venn diagram (see previous section).
 - **Display** — Click **Table** or **Diagram** to specify the initial appearance of this Venn diagram on this dashboard.
 - **Color Schema** — Click the Browse button  and either select an existing chart theme or create and select a new one. For information, see the section “[Defining and Using Chart Themes](#)” in *Using the DeepSee Analyzer*.
The default is to use the color scheme contained in the definition of the Venn diagram (see previous section).
5. Click **OK**.

The Venn diagram is added in the upper left corner of the dashboard.

10

Configuring Post Actions

You can configure a dashboard element so that when a user clicks the element, DeepSee performs one or more *post actions*, which typically display additional windows of data. This chapter describes the types of post actions and how to configure them. It contains the following topics:

- [An overview of the post actions you can configure](#)
- [How to add a post action](#)
- [Details for the different types of post actions](#)
- [How to pass values to post actions](#)
- [How to delete a post action](#)

10.1 Overview of Post Actions

You can configure a dashboard element so that when a user clicks the element, DeepSee performs one or more post actions, of the following types:

- **Dashboard** — Displays a dashboard, possibly in a new window.
Tip: For example, you could redisplay the same dashboard, in order to reset it.
- **Web Page** — Displays a Web page in another browser window.
- **KPI Drill Down** — Displays a small child window that displays the value of a KPI.
- **Scripts** — Executes one or more Caché ObjectScript statements.

Post actions occur after any filter and trigger actions.

You can configure post actions for any of the following dashboard elements: labels, images, buttons, picture buttons, and text boxes.

10.2 Adding a Post Action

To add a post action to a dashboard element:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Right-click the element and then click **Post Action**.

DeepSee displays a dialog box in which you specify the details. The top area displays a table of the post actions that have been configured for this element if any. Use the bottom area to add new ones or delete existing ones.

3. Click one of the following:
 - **Dashboard** — Displays a dashboard, possibly in a new window.
 - **Web Page** — Displays a Web page in another browser window.
 - **Scripts** — Executes one or more Caché ObjectScript statements.
 - **KPI Drill Down** — Displays a small child window that displays the value of a KPI.

Ignore **Detail Listing** and **Workflow**.

The bottom part of the dialog box then displays fields that are appropriate for your selection.

4. Specify the details as appropriate for the post action you chose. See the following section.
5. Click **Add**. This adds an entry to the table at the top of the dialog box.
6. To add more items, click **Clear** and then repeat the preceding steps.
7. Click **OK** to close the dialog box.


10.3 Details for Different Types of Post Actions

This section describes the details you provide for the different types of post actions.

Ignore the post action of type **Workflow**, which is not supported in DeepSee.

10.3.1 Options for Displaying Another Dashboard

If you choose **Dashboard**, specify the details as follows:

- **Dashboard** — Specify the dashboard to display. To do so, click the Browse button , select the dashboard, and click **OK**.
- **Open in New Window** — Select this to display the dashboard in a new browser window. Or clear this to reuse the current browser window.
- **Full Screen** — Select this to maximize the browser window. Or clear this to leave the browser window size unchanged.

10.3.2 Options for Executing Caché ObjectScript

If you choose **Scripts**, specify the details as follows:

- For **Caché Scripts**, type in a Caché ObjectScript statement.
To clear your entry, click **Clear**.

10.3.3 Options for Displaying a Web Page


If you choose **Web Page**, specify the details as follows:

- For **URL**, type in the URL of the Web page to open.
To clear your entry, click **Clr**.

Ignore the **Load a doc** option, which does not apply to DeepSee.

10.3.4 Options for Displaying a KPI Drill-down

If you choose **KPI Drill Down**, specify the details as follows:

- For **KPI**, type in the ID of the KPI to display. Or click the Browse button , click the KPI, and then click **OK**.
- For **Filter**, optionally type a filter expression. This filters the data used to evaluate the KPI. For example:

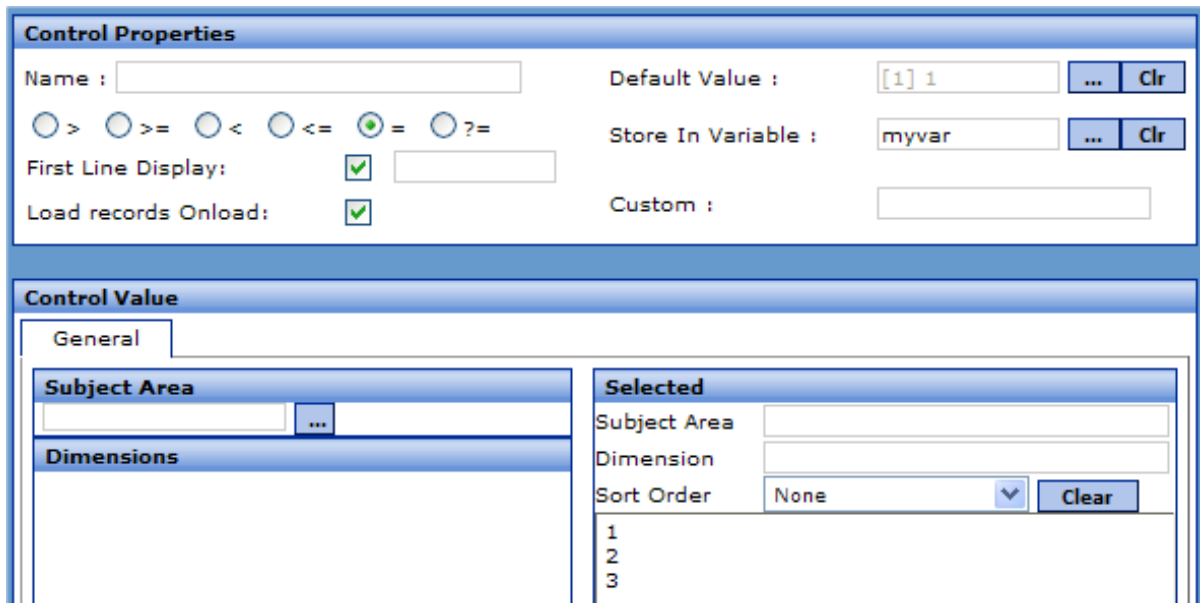
[Tested? = Yes]

Note that a filter expression can include Caché ObjectScript expressions; see the book *Expressions and Scripts in DeepSee*. It can also include variables whose values are set at runtime; see the chapter “Using Query Variables.”

For information on defining KPIs, see *Using the DeepSee Analyzer*.

10.4 Passing Values to Post Actions

To pass a value to a post action, configure a control to save its value to a variable. For example:



The image shows two overlapping dialog boxes from the DeepSee Dashboard Designer. The top dialog is titled "Control Properties" and contains fields for "Name", "Default Value" (set to "[1] 1"), "Store In Variable" (set to "myvar"), and checkboxes for "First Line Display" and "Load records Onload". The bottom dialog is titled "Control Value" and has a "General" tab. It contains a "Subject Area" field, a "Dimensions" list, and a "Selected" section with a "Subject Area" field, a "Dimension" dropdown, a "Sort Order" dropdown (set to "None"), and a "Clear" button.

Then the variable you set (*myvar* in this case) is available for use in the post action.

10.5 Deleting a Post Action

To delete a post action from a dashboard element:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Right-click the element and then click **Post Action**.
DeepSee displays a dialog box in which you specify the details.
3. In the upper area, click the row corresponding to the post action you want to delete.
4. Click **Delete**. DeepSee immediately removes the post action.
5. Click **OK** to close the dialog box.

11

Using the Dashboard Library

The DeepSee Designer provides a simple mechanism for you to save dashboard elements so that you can reuse them elsewhere. This chapter discusses the following topics:

- [How to copy an element to the dashboard library](#)
- [How to use a library object in a dashboard](#)
- [How to delete objects from the library](#)

11.1 Adding an Element to the Dashboard Library

To add an element to the dashboard library:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
2. Right-click the element and then click **Add to Dashboard Library**.


DeepSee immediately copies the element, as is, to the dashboard library and assigns it an internal identifier.

The copy includes any [post actions](#) defined for this element. This copy does not, however, include any [links](#).

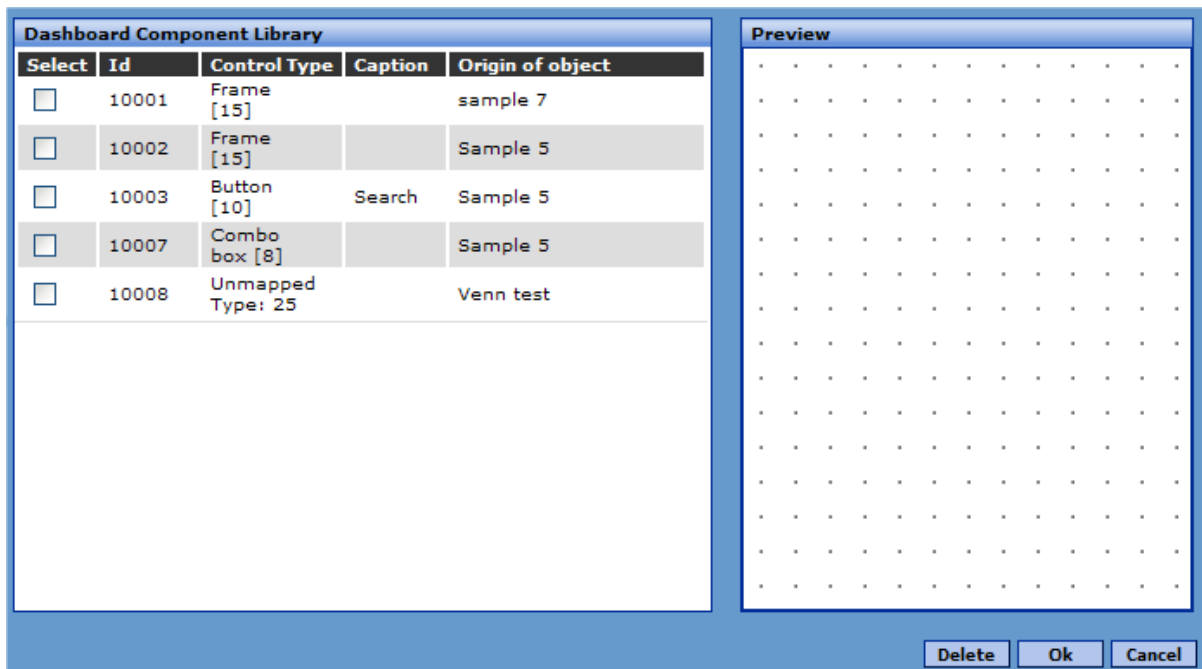
11.2 Using a Library Object in a Dashboard

To add a library object to a dashboard:

1. Open the dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
- 2.

Click the Add Library Object button .

DeepSee displays a dialog box that lists all the objects in the dashboard library.




- Click the row that contains the object you want to add. When you do, a preview is shown in the right pane.
- Click **OK**.

The object is added in the upper left corner of the dashboard.

11.3 Deleting Objects from the Dashboard Library

To delete an object from the dashboard library:

- Open any dashboard in edit mode, as described in “[Editing a Dashboard](#),” earlier in this book.
- Click the Add Library Object button . DeepSee displays a dialog box that lists all the objects in the dashboard library.
- Click the **Select** option in the row for each object you want to delete.
- Click **Delete**.
- Click **OK**.

12

Using Query Variables

Query variables are variables used on DeepSee dashboards (and in filter expressions throughout DeepSee) that affect what DeepSee displays. This chapter discusses the following:

- [Overview](#)
- [The most commonly used system variables](#)
- [How to configure a dashboard control to set a variable](#)
- [How to use query variables](#)
- [An example that uses a system query variable](#)
- [An example that uses a query variable in a filter](#)
- [An example that uses a query variable in a label](#)

12.1 Overview of Query Variables

There are two kinds of query variables:

- Your own custom query variables, which are simply variables that you use within any filter expression.
- System query variables, which are used by some of the DeepSee dashboard elements.

In either case, you can set the value of the variable in either of the following ways:

- Configure a control on the dashboard so that when a user chooses or enters a value, DeepSee saves that value into the variable. See the section “[Using a Control to Set a Variable](#),” later in this chapter.

For example, a ranked pivot table uses the variable `zzRANKCNT`, which controls how many top- or bottom-ranked items to display. Suppose that a dashboard includes a pivot table that ranks the top ten sales regions by default. You could add a combo box that listed the numbers 5, 10, 15, and 20, and you could use the user’s selection to control the number of top-ranked sales regions that are shown. That is, the user could select 20, and then the pivot table would display the top 20 sales regions.

- Pass a value for the variable within the URL that you use to invoke the dashboard. To do so, you append the following to the URL:

```
&MyVar=Value
```

For example, suppose that a dashboard includes a pivot table that includes the following filter expression.

```
[Sales Region = {salesregion}]
```

When you open the dashboard from your application, you include the following string.

```
&salesregion=Northern
```

For the complete URL needed to access a dashboard, see the chapter “[Adding Dashboards to Your Applications](#).”

Then, at runtime, DeepSee evaluates the variable and substitutes that value.


If you use both mechanisms, note that the value established by the control takes precedence; DeepSee ignores the value passed via the URL.

Important: DeepSee includes a utility to set default values for query variables; this is called the Query Variable module. InterSystems recommends that you ignore this module, which does not provide sufficient functionality.

12.2 Most Common System Query Variables

This section lists the most commonly used system query variables:


- *zzRANKCNT* — Used by ranked pivot tables. This variable specifies the number of top- or bottom-ranked items to display. Specify an integer. The default is specified in the pivot table definition.
- *zzRANKORD* — Used by ranked pivot tables. This variable specifies whether to rank top or bottom items. Specify either TOP or BOTTOM. The default is specified in the pivot table definition.

To see all the system query variables and online documentation for them, add a control (such as a combo box) and click the Browse button  next to **Store In Variable**. Note that check boxes do not provide this button.

12.3 Configuring a Control to Set a Variable

To use a control (a combo box, list box, text box, date picker, check box, or search box) so that it sets a variable used by a data element in the same dashboard:

1. Configure the control as follows:

- a. For **Store In Variable**, either type the variable name or click the Browse button  and then select a system query variable.

Note: For check boxes, the properties dialog box does not include a Browse button for variables, so type the variable instead.

- b. Click **OK**.

The dialog box is closed and the variable is displayed in **Store In Variable**.

2. Specify the control as the refresh trigger. To do so, right-click the control and then click **Set as Refresh Trigger**.
3. Specify the data element as the refresh target. To do so, right-click the data element and then click **Set as Refresh Target**.

When you do so, a gray line is drawn between the control and the data element. This line is visible only when you view the dashboard in edit mode.

You can use this mechanism to set either a system query variable or your own query variable.

12.4 Using Query Variables

You can use the value of a query variable in either or both of the following ways:

- In the dashboard, include a pivot table that uses that variable. For example, a ranked pivot table uses the `zzRANKCNT` variable (and others).
- In the dashboard, within a label, button caption, or speedometer caption, use the following syntax:

```
$$VAR(variable_name)
```

At runtime, DeepSee looks up the definition of the variable and evaluates it. Or if a value has been passed in for this variable, DeepSee uses that value.

- In the dashboard, include a data element that uses a filter expression that refers to the variable directly. In the filter expression, use the following syntax:

```
[DimensionName = {variable_name}]
```

Or:

```
[DimensionName = {COS expression that includes variable_name}]
```

In this case, you can provide a default value as follows:

```
[DimensionName = {$GET(variable_name,default_value)}]
```

At runtime, when DeepSee examines the filter expression, it checks for any variables. Then it substitutes the definition of the variable and evaluates it. Or if a value has been passed in for this variable, DeepSee uses that value.

12.5 Example: Controlling the Ranking of a Pivot Table

In this example, we create a combo box with which the user selects a number. The same dashboard includes a pivot table that uses ranking. Depending on which number the user selects, the pivot table is updated to show a different number of top-ranked elements. To set up a dashboard with these elements (assuming that you have a suitable data model):

1. Create a pivot table that uses ranking. See [Using the DeepSee Analyzer](#).

For example, this pivot table could display the top five allergies.

2. Create a new empty dashboard.
3. Add the pivot table to the dashboard.
4. Add a combo box to the dashboard. For this combo box:
 - Manually define the list members as 5, 10, 15, and 20.
 - For **Store In Variable**, select the variable `zzRANKCNT`

5. Connect the combo box and the pivot table. Use the combo box as the refresh trigger, and use the pivot table as the refresh target.

When the user selects a list member, DeepSee sets the `zzRANKCNT` variable equal to that value and then updates the pivot table correspondingly.

12.6 Example: Using a Query Variable to Filter a Pivot Table

In this example, we use a query variable to filter a pivot table.

1. Create a new empty dashboard.
2. Add a pivot table to the dashboard. For the filter expression, use the following:

```
[ Allergies = {allergyvar}]
```

12.7 Example: Controlling a Label

In this example, we set a variable that is displayed in a label.

1. Create a new empty dashboard.
2. Add a combo box to the dashboard. For this combo box:
 - Select the `Patients` subject area and then select the `Patient Group` dimension.
 - For **Store In Variable**, type a variable name such as `MyVar`
3. Add a label to the dashboard. For this label:
 - Specify **Normal Display** as `$$VAR(MyVar)`
 - Specify **Default** as `All Patient Groups`
4. Connect the combo box and the label. Use the combo box as the refresh trigger, and use the label as the refresh target.

13

Adding Dashboards to Your Applications

This chapter discusses the basics of adding dashboards to your applications.

13.1 Enabling a Dashboard to Receive Values for Query Variables

By default, a dashboard is not configured to receive values for query variables passed in as part of the URL. To configure the dashboard to receive these values, select the **Inherit Query Variable** option for the dashboard; see “[Creating a New Dashboard](#),” earlier in this book.

13.2 Adding Dashboards to Your Applications

To add DeepSee dashboards to your applications, do the following:

1. Create a DeepSee user with suitable permissions. To do this, you would typically:
 - a. Create a DeepSee role that has permission to display dashboards and detail listings, and no other back-end tools.
 - b. Create a DeepSee user that uses that role.

For details on creating DeepSee users and roles, see the *[DeepSee Site Configuration and Maintenance Guide](#)*.

2. Within your application, add a link that uses a URL of the following form:

```
http://localhost:57772/csp/sys/bi/speedLogin.csp?$NAMESPACE=
NS&usr=username&pwd=password&role=rolename&dbId=10026
```

Where:

- *57772* is the port number for which your Caché or Ensemble server is configured.
- *NS* is the namespace in which you defined the dashboard.
- *username* is a DeepSee user name.
- *password* is the corresponding password.
- *rolename* is the DeepSee role to use.

- *10026* is the ID of the dashboard.

Do not include the line break shown here.

When the dashboard is displayed, the URL shown in the browser address bar does not include the namespace name or the login details.

Note: Depending upon your application, you might need to use `&` or `&` rather than `&` in order for your application to compile. For example:

```
http://localhost:57775/csp/sys/bi/speedLogin.csp?NAMESPACE=
ENSEMBLE&amp;usr=demo&amp;pwd=demo&amp;role=demo&amp;dbId=10026
```

In this URL, you can also include strings of the following form:

```
&MyVar=Value
```

Where *MyVar* is the name of a query variable, and *Value* is the value to use for that query variable.

13.3 Security Settings for Internet Explorer

To enable the use of DeepSee dashboards while providing a secure environment, try the following settings in Internet Explorer. To access these options, click **Tools > Internet Options** in Internet Explorer, click the **Security** tab, and then edit the details for the applicable zone.

- **.NET Framework** — Select **Disable** for all options.
- **.NET Framework-reliant components** — Select **Disable** for all options.
- **ActiveX controls and plug-ins** — Select **Enable** for the following options:
 - **Allow Scriptlets**
 - **Binary and script behaviors**
 - **Run ActiveX controls and plug-ins**

Select **Disable** for the others.

- **Downloads** — Select **Disable** for all options.
- **Enable .NET Framework Setup** — Select **Disable**.
- **Microsoft VM** — Select **Disable** for all options.
- **Miscellaneous** — Select **Enable** for the following options:
 - **Allow script-initiated windows without size or position constraints**
 - **Use Phishing Filter**
 - **Use Pop-up Blocker**

Select **Prompt** for the following options:

- **Display mixed content**
- **Drag and drop or copy and paste files**
- **Launching programs and files in an IFRAME**

- **Submit non-encrypted form data**

Select **High safety** for **Software channel permissions**.

Select **Disable** for the others.

- **Scripting** — Select **Enable** for the following options:

- **Active scripting**
- **Scripting of Java applets**

Select **Disable** for the others.

- **User Authentication > Logon** — Select **Prompt for user name and password**.

Your settings might need to be different, depending on your environment.

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