Oracle® Communications Performance Intelligence Center

Dashboard Configuration Guide

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Oracle® Communications Performance Intelligence Center Dashboard Configuration Guide, Release 10.5.0

CAUTION: Use only the guide downloaded from Oracle Help Center.

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Chapter 1: About this Manual

Overview

Dashboard Configuration is a specific-purpose application that is part of Oracle® Communications Performance Intelligence Center system. The Dashboard Configuration application enables operators to view performance and quality indicators in real-time or using historical data, with a dynamic display of curves and graphs.

Performance or quality indicators, calculated with xDRs, are provided by the probes and/or defined with the KPI application. The data is stored into statistical sessions within remote applications such as Mediation or Data Record Storage server and managed using Centralized Configuration Manager (CCM). The following indicators can be displayed in Dashboard Configuration:

- SS7 network performance indicators according to ITU Q.752
- Customer traffic indicators based on ISUP and links analysis in real-time.
- Real-time indicators based on Traffic or IP service Quality monitoring.
- Load indicators on IN-transactions (per link and reprocessed for all links per SCP)
- INAP, MAP, CAP transaction efficiency, duration, operation, and global title
- Volume, efficiency, split of cause values for GPRS Session Management, Mobility Management, SMS management.

Using Dashboard Configuration enables you to see failures and overloads instantly. In addition, trends can be easily estimated according to the shape of the curve.

Scope and Audience

This user's manual provides information about the Dashboard Configuration application. It is designed to be both a beginners' guide to working with performance indicators as well as an intermediate and advanced user's reference to general concepts. This guide is designed around performing common tasks such as:

- Understanding Dashboard and panel layouts to create statistical sessions.
- Working with dashboards and panels
- Creating line charts, pie charts and bar graphs
- Modifying privacy settings to share your information with other users.

Take a few minutes to browse through these tasks and become acquainted with the layout of this guide to become familiar with the headings and subheadings that allow you to find the information you need.

General Information

You can find general information about Performance Intelligence Center, such as product overview, list of other guides, workstation requirements, login and logout procedures, user preference settings, in the Quick Start Guide. This document is available from the Portal menu or can be downloaded from Oracle Help Center (OHC).

Chapter 2: Understanding Dashboard Configurations

Overview

Dashboard is a specific-purpose application that is part of Performance Intelligence Center system.
Dashboard makes it possible for you to view performance indicators in real-time and from historical data with a display of curves and graphs. These indicators, calculated with message-based counters are provided by the probes and/or defined by the KPI application.
Data is stored in statistical sessions organized as matrix of column and line filter results. This matrix defines cells named KPI (Key Performance Indicators).
Dashboard is based on a dashboard concept, that is, a single-page display of multiple KPI's in associated charts and tables (set up in Panels), determined according to predefined layouts. Dashboard offers two main dashboard functions:

- Dashboard Editing - Allows you to configure a dashboard to display as an independent page and automatically refresh it in real-time.

Note: Accessible to users in the group nspPowerUser.

- Dashboard Display - Allows you to use global settings to display a dashboard, to specific properties of the KPI's used.

Note: Accessible to users in the group nspUser.

Dashboard's Functionality

Dashboard has two major functions, they are:

- Editing - enables you to perform the following:
    - Create a dashboard.
    - Create a panel (line chart, bar chart, pie chart or table)
    - Define xDRs to be displayed.
    - Data source as source session, column, and line
    - Display properties for a chart, like color, symbols, etc.
- Display - enables you to perform the following:
    - Leave a dashboard in a new page.
    - Print or save a dashboard page.
    - Zoom in or out to change the Reference Duration of the current view.
    - View historical data for a given date and time.
    - View the dashboard in real-time.

Accessing and Logging into Management Application

To access and log into Management Application, follow these steps:

- Open your Web browser.
- In the Address bar, type the following **Uniform Resource Locator (URL)** for Management Application: http://*management_server_IP*/nsp , where the management_server_IP is the IP address of Management server.

Note: Management Application only supports versions of IE 11.0 or later and Firefox 3.6 or later. Before using Management Application, turn off the browser pop up blocker for the Management Application site.

- The Management Application login screen opens.

Note: Before you can start Management Application, you must first have a userid and password assigned to you by your Management Application system administrator.

- Type your **username** assigned to you in the *Username* field.
- Type your **password** in the *Password* field.
- Click **OK.** The Management Application portal opens.

There are two entry points into the Dashboard application, the **Dashboard** icon under the **Application** label and the **Dashboard** icon under the **Configuration** label. The Dashboard application only allows the user to display predefined dashboards and use the dashboard toolbar. The Dashboard Configuration application allows you to create and configure dashboards.

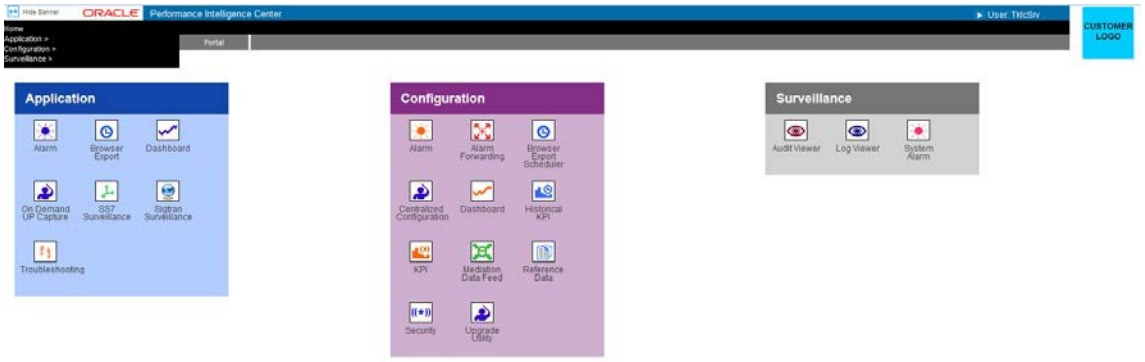


Figure 1: Management Application Portal with Dashboard Icon in Configuration

To configure or create a dashboard clicks the **Dashboard** icon under the Configuration heading. The Dashboard Main page opens displaying the Dashboard list.

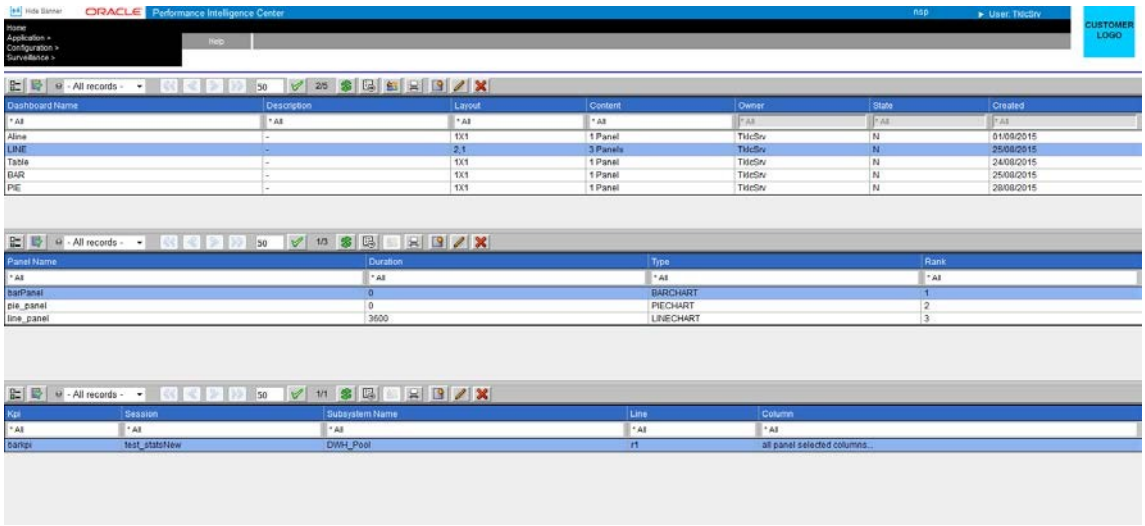


Figure 2: Dashboard Main Page

The Dashboard GUI

Dashboard has the same look and similar functionality as all applications in the Management Application Toolkit.

Note: Do not use the Function Keys (F1 through F12) when using the Management Application. Function keys work in unexpected ways. For example, the F1 key will not open Management Application help but will open help for the browser in use. The F5 key will not refresh a specific screen but will refresh the entire session and will result in a loss of any entered information.

Page Layout

The page is divided into the following:

- Links to applications, configuration applications and surveillance - located in the top left-hand corner. Menu bar - contains one menu:
  Help - has two options.
  - User Manual – user manual for Dashboard
  - About - that provides basic information about the current Dashboard release.
- Toolbar - that provides navigation and function buttons.
- Dashboard list - a table that lists the configured xDR sessions (in panels). For more information on using the Dashboard, see ***Using the Dashboard Toolbar.***

Dashboard Layout

As mentioned in the section above, Dashboards are presented in table format. The table has seven columns.

Dashboard Columns

- Dashboard Name - shows the name of the dashboard.
- Description - shows the description, (if any), of the dashboard.
- Layout - shows the panel configuration in *columns* and *rows,* for example, 1x3 means one column and three row layouts. 1,2 means one row has one column, and the second row has two columns. There are eight possible configurations.
- Content - shows how many panels are presently in the dashboard configuration.
- Owner - shows who created the dashboard.
- Created - shows when the dashboard was created.
- State – It shows State of the object (that can be obsolete, normal, or modified).

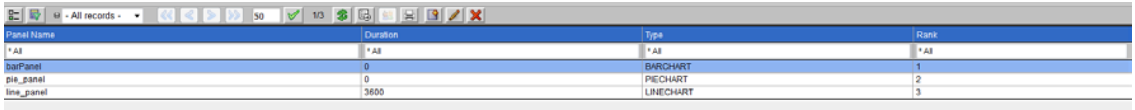
Dashboard Configuration GUI

The Dashboard Configuration GUI has all of the functionality of the Dashboard application (viewing dashboards) as well as the dashboard configuration and panel functionality.

Panel List Display

The Panel List Section also has a GUI and table format similar to the *Dashboard* page shown in *Figure 3: Panel List Section*.

Note: The Panel List display can only be accessed using the Dashboard Configuration application.



Panel Name	Duration	Type	Rank
* All	* All	* All	* All
barPanel	0	BARCHART	1
pie_panel	0	PIECHART	2
line_panel	3600	LINECHART	3

Figure 3: Panel List Section

Panel list configuration Symbol

The Panel List Section shows the current panel configuration in the upper right half of the page. This icon will change if the panel configuration changes.

View children Panel

Figure 4: Parent/Child Tables shows an example of the Panel List Section with Parent/Child tables.

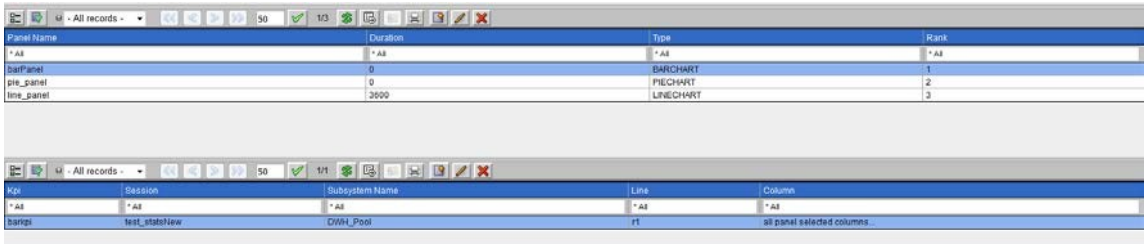


Figure 4: Parent/Child Tables

Panel list Table Layout

There are four columns in the Panel table.

- **Panel Name** - that shows the name of the panel.
- **Duration** - shows the time that will be measured.
- **Type** - shows the layout (table, line chart, bar chart, pie chart).
- **Rank** - will show what order the panel is in the whole configuration.

Chapter 3: Using Dashboard Configuration

Overview

This section describes the procedures used in Dashboard. These descriptions include:

- Viewing dashboards in historical and real-time display
- Using the zoom function
- Using the previous and next view

Working with Dashboards

This section describes the procedures used in creating, modifying, and deleting Dashboard dashboards.

Creating a Dashboard

To create a new dashboard follows these steps:

- In the dashboard list toolbar, click **Add record.**

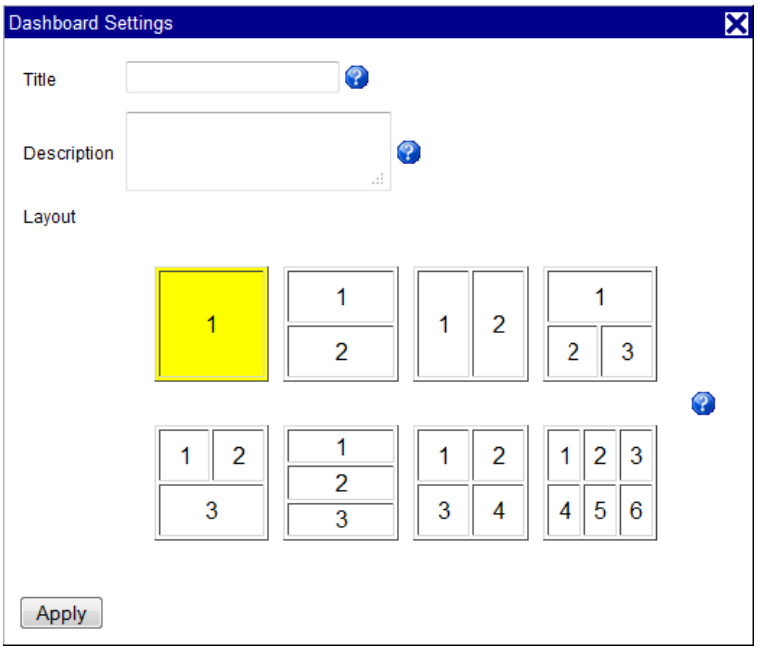


Figure 5: Add Dashboard Screen

The Add dashboard screen opens shown in *Figure 5: Add Dashboard Screen*.
The following table describes the attributes you choose on the Dashboard settings page:

- Type in the **Name** of the dashboard.

Note: Special characters are not allowed for title. Use only standard alphanumerical characters and "_" and "."

- (Optional) Type in a **Description** of the dashboard.
- Select the **Layout.**
- Click **Apply.** The dashboard record appears in the *Dashboard* page.
- Proceed to "***Panel display List***" in this new dashboard.

Modifying a Dashboard

Follow these steps to modify an existing dashboard.

- Select the **dashboard** to be modified.

- Click **Edit Dashboard** to open the *Dashboard Settings* screen.
- Make the necessary modifications.
- Click **Apply.**
  The changes are saved to the system.

Note: To view the changes in the table, click the Refresh button.

Deleting a Dashboard

Follow these steps to delete an existing dashboard.

- Select the **dashboard** to be deleted.
- Click **Delete.**
- Click **OK** at the prompt.
  The dashboard and all panels associated with that dashboard are deleted.

Using the Dashboard Toolbar

You can use the dashboard toolbar to zoom in and out (to change the reference duration), choose the display date, view previous and next time periods in historical data, and chose the real-time or historical view.

Choosing a Date

You can choose a date to display information from a historical record by doing the following:

- Select the **history** button. The date input screen appears.
- Enter the date and time or select it from the calendar tool.
- Click **OK.** The information in the chart is updated to display historical data for the new date. **Note:** If the display period of a graph includes the time when there is a switch between Daylight Savings Time and Standard Time the data after the change may be offset by one hour.

Viewing in Real-time

If you are currently viewing historical data, you can switch to the real-time display by doing the following:

- Select the **real-time** button.
- The information in the chart is updated with the real-time data.

Note: When a dashboard is first opened its default viewing mode is real-time.

Note: If the display period of a graph includes the time when there is a switch between Daylight Savings Time and Standard Time the data after the change may be offset by one hour.

Using the Zoom function

When viewing data as a line chart, you can zoom in or out to change the time duration for the current view. You can zoom in to 1% of the current configured duration and out to 400% of the current configured duration. To use the zoom function does the following:

- Select the zoom in button to see shorter time duration, or the **zoom out** button to see a larger duration. Each successive click of the zoom in or out button will result in the view being updated one increment shorter or larger.
- The information in the chart is updated with the new time duration and the new reference duration is displayed in the toolbar.
- To reset the zoom factor to the configured duration, select the "**reset zoom"** button. **Note:** The zoom function is only available with the line chart view.

Using the Previous and Next view

When viewing a dashboard, you can modify the view to show previous data or next data (in historical view). To use the previous and next function do the following:

- Select the **previous** button or **next** button to see the previous or next data.

Note: If you are currently in real-time mode selecting previous will change the view to historical mode and automatic refresh will not happen.

- For line chart views, the view will shift by 3/4 of the current time duration to display the previous or next data in the view. For Data Tables, Pie Charts and Bar charts, the view will shift to the previous or next period.
- To get back to the real-time view select the **real-time** button.

Note: If the new calculated date is greater than current time, the dashboard switches back to real-time mode, refreshing data automatically every period.

Working with Panels

Panel display List

Once you have created a dashboard, you can create panels to obtain the information from xDR sessions.
Note: xDR sessions are discovered using Centralized Configuration Manager. Refer to the Centralized Configuration Guide for information on managing xDR sessions.

These panels will supply the data for you to view, organize, and report.
Note: Statistics sessions must already be created in KPI. Refer to the KPI Configuration Guide for information on managing statistics sessions.

Panels are the basic component of a dashboard. There are four types of panels available in Dashboard:

- Line charts (multiple session allowed)
- Bar chart (one session only)
- Pie chart (one session only)
- Table

Follow these steps to display a panel.

- Select the dashboard that will have the panel(s).
  Figure 6: Selected Dashboard shows a dashboard page with a dashboard selected, also display its associated panels.

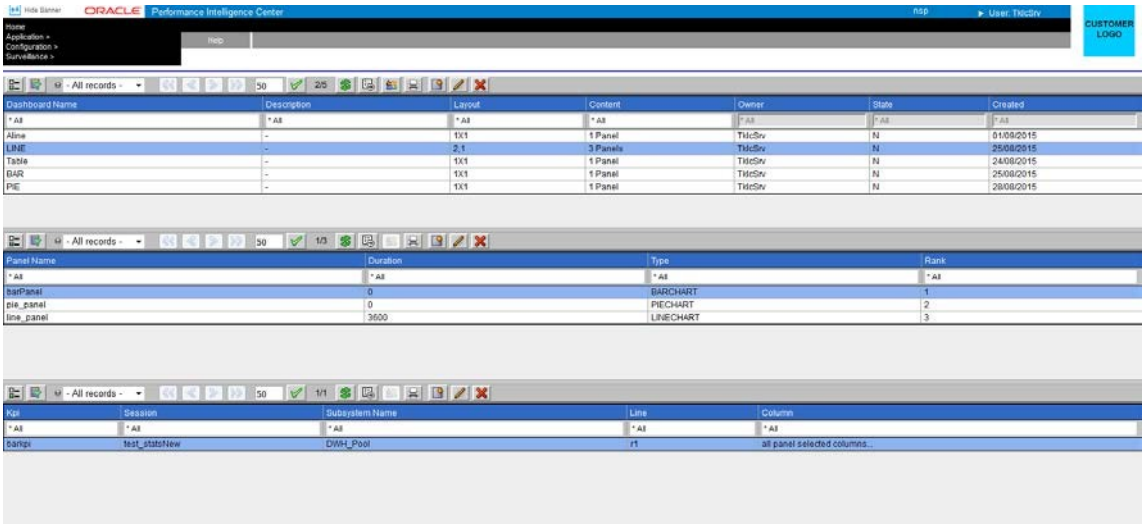


Figure 6: Selected Dashboard

Note: New dashboards show "No Panel" in content column

- Click the **content link** in the *Content* column. The *Panel List Section* opens.

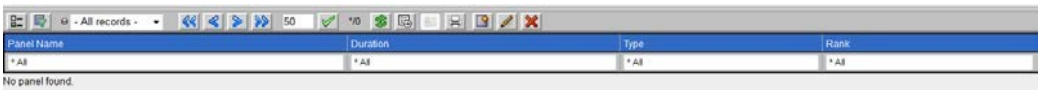


Figure 7: Panel List Section

- Click Add

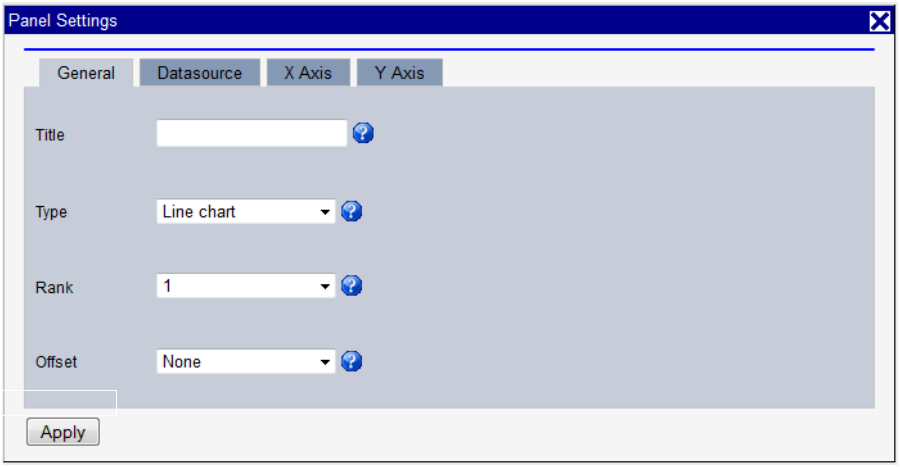


Figure 8: Panel Settings Screen-General Tab

The *Panel Settings* screen opens shown in Figure 3-4.
In this step you can begin to add panel records with different graphic layouts.

Using the Previous and Next view

When viewing a dashboard, you can modify the view to show previous data or next data (in historical view). To use the previous and next function do the following:

- Select the **previous** button or **next** button to see the previous or next data.

Note: If you are currently in real-time mode selecting previous will change the view to historical mode and automatic refresh will not happen.

- For line chart views, the view will shift by 3/4 of the current time duration to display the previous or next data in the view. For Data Tables, Pie Charts and Bar charts, the view will shift to the previous or next period.
- To get back to the real-time view select the **real-time** button.

Note: If the new calculated date is greater than current time, the dashboard switches back to real-time mode, refreshing data automatically every period.

Adding a line Chart Pane

Follow these steps to add a table panel record.

- Type in the **Name.**
- Select the graphic outlay to **Line Chart.**
- Select the **Rank.**
  This is the position where the Panel is located in the dashboard.
- Select the **Offset** time.
  This option is used to compare current data to past data in another panel.
- Click **Continue.**
  The screen changes to show the *Data source* tab. This screen has the discovered xDR sessions that have been discovered using the *Centralized* Configuration *Manager* (CCM). For more information on discovering xDR sessions see *Centralized* Configuration *Guide.*
- Select the **session.**

- Click **Use this session as data source.**
  The screen changes to show the data source on the bottom on the screen.
- Select the **X-axis** tab.

The screen displays the x-axis parameters.

  - Select the **X grid** (vertical grid).
  - Select the **Time scale** (X duration).
  - Defines the time range of X-Axis for a line chart. Last date/time or Current date/time will be selected. The duration unit is one hours.
- Click the **Y Axis** tab to open the Y Axis screen.
- Set the **attributes** on the *Y axis* tab of the line chart panel configuration window.

Attribute	**Description**
Y-grid	Displays a horizontal grid if checked
Scale name	Displays a title for the default (left) y-axis, and selects a scale by name if an optional scale is defined (default is "left")
Auto scale	Allows the software to calculate the default (left) y-axis range. Otherwise, minimum, and maximum values should be filled in.
Minimum scale value	Defines the minimum value of the default (left) y-axis range.
Maximum scale value	Defines the maximum value of the default (left) y-axis range.
Second scale	Displays an optional right y-axis in the chart
Second scale name	Displays a title for the optional right y-axis and selects a scale by name (default is "right")
Auto scale	Allows the software to calculate the optional right y-axis range. Otherwise, minimum, and maximum values should be filled in.
Minimum second scale value	Defines the minimum value of the optional right y-axis range.
Maximum second scale value	Defines the maximum value of the optional right y-axis range.

Table 1: Y-Axis Attribute Descriptions

- Click the **Labels** tab to apply a label to the session. Labels are available if the session contains additional text fields for KPI TOP.

- Select the appropriate **data columns** and enter the **formatting string** that specifies how the values will be separated. The recommended syntax for the formatting string is **%n$s** and an invalid syntax may lead to no displayed values. If the formatting syntax is not defined, the values will be separated by spaces.
When entering the formatting string, use the syntax.

%[col_index$][width][.precision]conversion

where:

  - The optional col_index is a decimal integer indicating the position of the argument in the selected column list. The first column is referenced by the second by "2$", and so on.
  - The optional width is a non-negative decimal integer indicating the minimum number of characters to be written to the output.
  - The optional precision is a non-negative decimal integer usually used to restrict the number of characters.
  - The required conversion is a character indicating how the argument should be formatted. A lowercase "s" returns the string as it is and an uppercase "S" returns the string in upper case letters.

- Click **Apply** to save changes. The panel appears in the Panel list.

Adding a bar Chart Pane

To set the display parameters for a bar chart, follow these steps:

- Type in the **Name.**
- Select the graphic outlay to **Bar Chart.**
- Select the **Rank.**
  This is the position where the Panel is located in the dashboard.
- Select the **Offset** time.
  This option is used to compare current data to past data in another panel.
- Click **Continue.**

The screen changes to show the Datasource tab. This screen has the discovered xDR sessions that have been discovered using the Centralized Configuration Manager (CCM).

- Select the **session.**
- Click **Use this session as data source.**
  The screen changes to show the data source on the bottom on the screen.
- To add more sessions, repeat previous steps.
- Click the **X-Axis** tab to open the Panel Settings screen.
- Set the **X-grid** attributes on the screen.
  - Select **x grid.**
    If selected a vertical grid is displayed.
- Select Values
  - Select **Lines** (fields) that display the X-Axis values as the line selection in the statistics session.
  - Select **Columns** that display the X-Axis values as the column selection in the statistics session-with simple count

Note: The X axis selections are defined in discrete values. The legend items are applied to each value in the selection.

- Click the **Y-Axis** tab to open the attribute screen.
- Select the **attributes** for the Y-axis.
- Click the **Labels** tab to apply a label to the session. Labels are available if the session contains additional text fields for KPI TOP.
- Select the appropriate **data columns** and enter the **formatting string** that specifies how the values will be separated. The recommended syntax for the formatting string is **%n$s** and an invalid.

syntax may lead to no displayed values. If the formatting syntax is not defined, the values will be separated by spaces.

When entering the formatting string, use the syntax

%[col_index$][width][.precision]conversion

where:

- The optional col_index is a decimal integer indicating the position of the argument in the selected column list. The first column is referenced by the second by "2$", and so on.
- The optional width is a non-negative decimal integer indicating the minimum number of characters to be written to the output.
- The optional precision is a non-negative decimal integer usually used to restrict the number of characters.
- The required conversion is a character indicating how the argument should be formatted. A lowercase "s" returns the string as it is and an uppercase "S" returns the string in upper case letters.

- Click **Apply** to save your settings. The panel record is saved to show a bar chart.

Setting Pie Chart Parameters

To set the display parameters for a bar chart, follow these steps:

- Click **Add** in the *Panel List* page.
- Type in the **Name.**
- Select the graphic outlay **Pie** as the type.
- Select the **Rank.**
  This is the position where the Panel is located in the dashboard.
- Select the **Offset** time.
  This option is used to compare current data to past data in another panel.
- Click **Continue.**

The screen changes to show the *Data source* tab. This screen has the discovered xDR sessions that have been discovered using the Centralized Configuration Manager (CCM).

- Select the **session.**
- Click **Use this session as data source.**
  The screen changes to show the data source on the bottom on the screen.
- To add more sessions, repeat steps 7-8.
- Select the **Values** tab.
  The screen changes to show the columns for the panel.
- Set the **line** or **column** values.
  - Line values define the pie slices as columns for a line to be selected in the line list of the statistics session.
  - Column values define pie slices as lines for a column to be selected in the column list of the statistics session.
- Click the **Labels** tab to apply a label to the session. Labels are available if the session contains additional text fields for KPI TOP.
- Select the appropriate **data columns** and enter the **formatting string** that specifies how the values will be separated. The recommended syntax for the formatting string is **%n$s** and an invalid syntax may lead to no displayed values. If the formatting syntax is not defined, the values will be separated by spaces.
- When entering the formatting string, use the syntax

  %[col_index$][width] [.precision] conversion

  where:
  - The optional col_index is a decimal integer indicating the position of the argument in the selected column list. The first column is referenced by the second by "2$", and so on.
  - The optional width is a non-negative decimal integer indicating the minimum number of characters to be written to the output.

- The optional precision is a non-negative decimal integer usually used to restrict the number of characters.
- The required conversion is a character indicating how the argument should be formatted. A lowercase "s" returns the string as it is and an uppercase "S" returns the string in upper case letters.

- Click **Apply.**

The settings are saved to the panel list.

Unselecting (deleting) Data Sources

You can unselect an xDR session in a Panel record by follow these steps.

- Select the **Panel record** to be modified.
- Click **Modify.**
- Click the **Data source** tab.
- Click **unselect** but the xDR session you want to delete.
- Click **Apply.**

The changes are saved to the system.

Modifying a Panel Record

Follow these steps to modify a panel record.

- Select the **Panel record** to be modified.
- Click **Modify.**
- Make the appropriate changes.
- Click **Apply.**

The changes are saved to the system.

Deleting a Panel Record

Follow these steps to delete a panel record.

- Select the **Panel record** to be modified.
- Click **Delete.**
- Click **OK** at the prompt. The record is deleted.

Creating legend Items

For a charting panel, some legend items need to be defined in order to apply graphic properties specific to that item, such as color, symbol, etc.

These properties are applied to these two items:

- A precise KPI (line chart or pie chart) - which is a key point indicator identified by a column and a line in the selected statistics session (in panel definition)
- A KPI set (bar chart) - which are key point indicators identified by a line or a column and respectively selected columns or lines of a session (in panel definition)

Displaying a legend item List

Each charting panel has children records associated with it. To display an item list, follow these steps:

- Select the **record.**
- KPI section or child list section gets displayed corresponding to Panel.

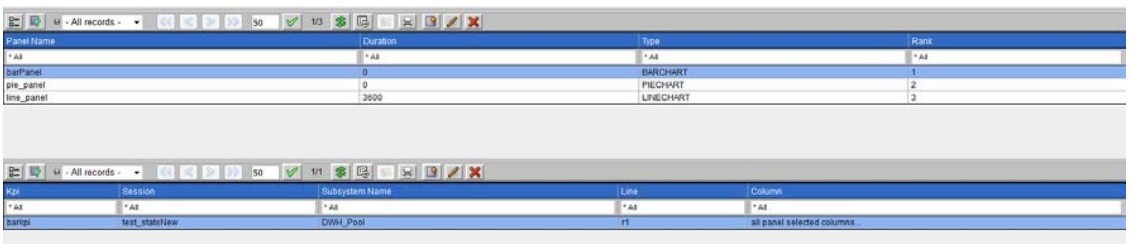


Figure 9: Child Records List Section

Defining KPI Data Sources

Follow these steps to define a KPI data source.

- In a child record, click **Add record** to open the KPI configuration screen.

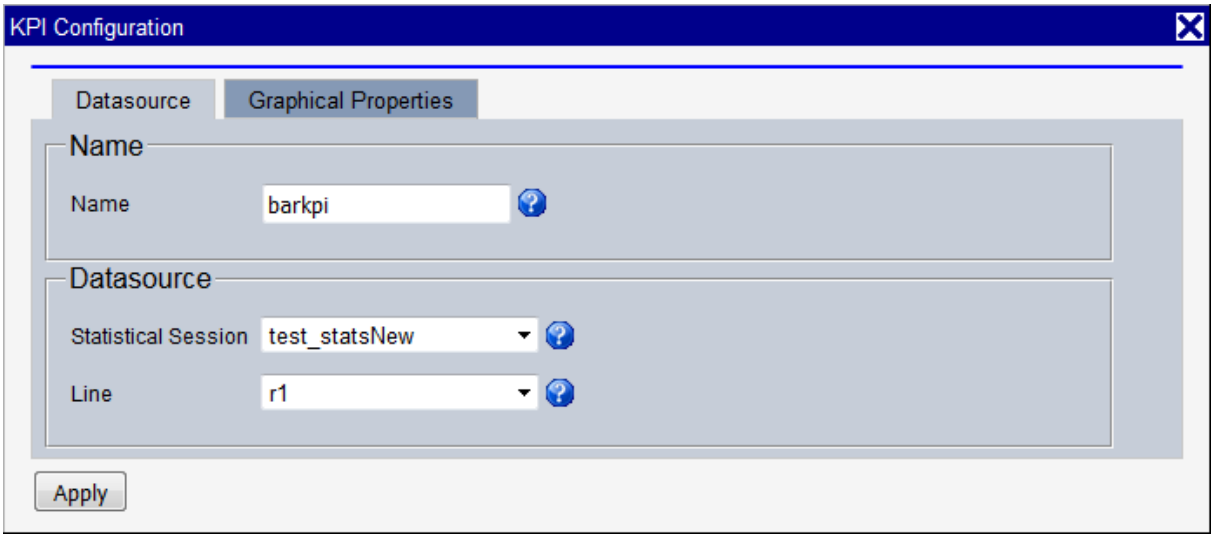


Figure 10: KPI Configuration Screen

Note : Only the numerical KPI field will be listed here , for example IMEI type (which can contains 'A','B',..) will not appear here

- Select the **Datasource** tab and set the following attributes that are described in following table.

Attribute	**Description**
Name	Name to be displayed in the legend for this KPI
Statistical Session	Selects a statistical session if multiple sessions have been selected in the panel settings (only for a line chart)
Line	Selects a line in the statistical session. This attribute does not appear for bar charts or pie charts if the line values have been defined in the panel settings.
Column	Selects a column in the statistical session. This attribute does not appear for bar charts or pie charts if the column values have been defined in the panel settings

Table 2: Xdr Configuration Settings

Note: Special characters are not allowed for name. Use only standard alphanumerical characters and "_" and "."

- Select Graphical properties tab to open this screen shown in Figure 11: Graphical Properties Tab.

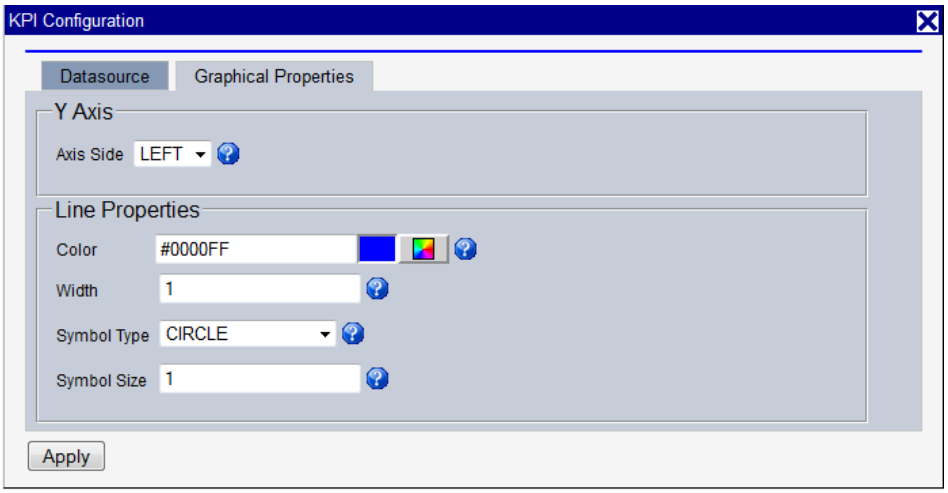


Figure 11: Graphical Properties Tab

- Select the **graphic attributes** for the data source described in **Error! Reference source not found.**.

Attribute	**Description**
Axis side	If an optional second Y axis has been defined (only for bar charts or line charts), you may select which axis to use.
Color	Selects color
Width	Defines line thickness (only for line charts)
Symbol type	Defines the symbol used at the value location
Symbol size	Defines the symbol size in pixels

Table 3: Attribute Descriptions

- Click **Apply** to save your settings.

Modifying the panel Order

If you would like the information of a specific record organized differently, you can modify the panel order. In this way the most pertinent information is presented first. To change the panel order, follow these steps.:

- Select the **record** you want by using the *Navigation* buttons.
- Click **Edit Panel** to open the panel shown in *Figure 12: Panel Settings Screen.*

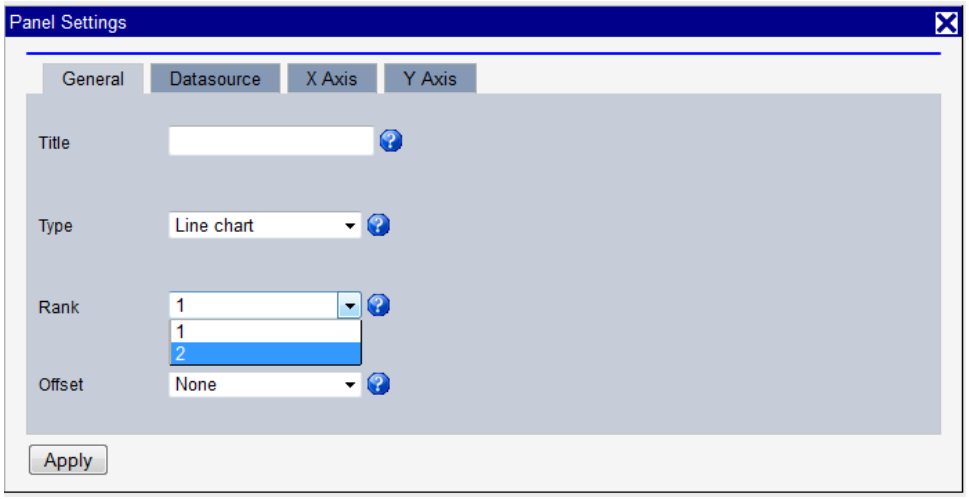


Figure 12: Panel Settings Screen

- Select the **new position** of the panel by using the corresponding attribute.
- Click **Apply** to save your settings.

Note: If the new rank is below the old one, every panel in between will be automatically shifted up. Otherwise, panels between these ranks will be automatically shift down.

Modifying privacy Settings

In order to modify access rights of a dashboard, follow these steps:

- Select the **record** you want by using the *Navigation* buttons.
- Click **Roles,** the *Change Privacy* page opens.
- Give the following **access privileges** according to registered roles.
    - x : allows to display dashboard
    - w : allows to modify settings
    - r: allows to view dashboard in list and corresponding settings lists.

Note: A user belongs to one or more groups, each of these being mapped to one or more roles (by default one group=one role).

Printing the Dashboard

To print dashboard:

- Select the web browser **Print menu** (right click for context menu).
- Follow the web browser standard instructions for printing a document.

Appendix A: My Oracle Support

MOS (https://support.oracle.com) is your initial point of contact for all product support and training needs. A representative at Customer Access Support (CAS) can assist you with MOS registration.

Call the CAS main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at http://www.oracle.com/us/support/contact/index.html.
When calling, make the selections in the sequence shown below on the Support telephone menu:

1. Select 2 for New Service Request
2. Select 3 for Hardware, Networking and Solaris Operating System Support
3. Select 2 for Non-technical issue

You will be connected to a live agent who can assist you with MOS registration and provide Support Identifiers. Simply mention you are a Tekelec Customer new to MOS.

MOS is available 24 hours a day, 7 days a week.