Dashboard Builder User Guide

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Revision History

S. No.	Published On	Version	Description	Approved By	Remarks

Contents

1   Overview

A new side menu is added to the dashboard tab in LDI Plus that gives a customizable dashboard view of the vital metrics at the device and fleet level. The new Dashboard Builder feature allows custom data queries and can display data in a variety of formats such as grids, different types of charts, gauges, and other visualizations. Additional to Dashboard Builder, we also are including several new dashboards called Dex Packs that can be added to the LDI Plus portal such as Windows 11 Migration.

Critical App Details

View the critical app details and current versions that are installed on the systems.

Machine Right Sizing

Shows the resource consumption of a device and makes a recommendation on re-sizing based on user needs.

What Is the End User Experience of My Estate

Answers the question of what groups of users have a worsening experience and what the issues are.

Windows Patch Details

The dashboard provides a breakdown of patched and unpatched systems, patch details, and install details for Windows KB.

Application Latency Service Map

This dashboard provides a group-based summary of application dependencies organized by domain and subnet to help trace potential issues with routing or latency.

Application Network Performance Overview

This dashboard summarizes application network consumption and performance for a selected group of devices. This can help illustrate potential sources of high bandwidth usage that may be problematic in scenarios with limited connectivity.

Asset Management and Location Summary

This dashboard summarizes the location of devices (using egress IP detection) with some asset details. This can help keep track of the physical location of distributed devices.

Collaboration Tool Details

The dashboard summarizes app average resource consumption and app usage over a selected period.

Digital Experience Unboxed by Group

The dashboard summarizes Digital Experience of the fleet that can be viewed by groups. The system provides information about categories, that impact Digital Experience, the issue, and sensor trends within the last few days.

End User Experience Trend by Group

This dashboard provides visibility into the health trend over the past thirty days with a focus on providing an analysis of the key impact sources over the course of the last month.

Selection of an individual day will provide a review of the user experience impacts for systems on that selected day.

Executive Group Comparison

This dashboard provides a quick, group-based summary of user experience and performance for devices.

Office 365 Application Performance Overview

This dashboard provides an overview of Office suite application usage and performance characteristics for the enterprise. Note that this dashboard does not require connection to the Office 365 API.

Remote Worker Performance Impact

Compare performance across multiple systems before and during remote work.

Target Application Network Performance

This dashboard identifies application network consumption and performance for a selected application for a group of devices. This can help illustrate potential sources of high bandwidth usage that may be problematic in scenarios with limited connectivity.

Workforce Connectivity Habits

This dashboard summarizes the security characteristics of connections made by a selected group of devices.

Hardware Refresh Dex Packs

This DEX Pack analyses health, age, CPU storage, C: Drive Storage, Memory, and other metrics to determine necessity of upgrading or replacing hardware. External monitor recommendations are also included in this pack.

Proactive Hardware Monitoring Dex Packs

Monitors hardware performance, issues, and inventory.

Windows 11 Migration Dex Packs

This DEX Pack is designed to assist with your journey to Windows 11. Determine hardware and application readiness, identify actions to take to get your estate ready, assess Windows 11 performance and monitor the progress of the rollout.

Vulnerability Dex Packs

This DEX Pack provides actionable data to determine the impacts, spread, and relative vulnerability throughout your enterprise.

Remote Working Dex Pack

This DEX Pack helps you understand the needs, work habits, and user experience of your remote workforce. Discover how remote workers connect to the corporate network, and assess how this connection impacts productivity, user experience, and security risk.

Proactive IT Dex Pack

A proactive IT support strategy can address many of the deficiencies of the reactive, break/fix model. Use this DEX Pack to gain greater visibility and insight into potential problems and act before problems cause significant downtime.

Green IT Dex Pack

This DEX Pack facilitates green computing by monitoring energy consumption. Use these dashboards to determine which groups, regions, and models have the highest environmental impact. This data covers a variety of systems, including printers and virtual machines. This DEX Pack guides decisions to reduce energy and printing costs.

Group Policy Dex Pack Lite

Shows group policy usage and compliance.

1.1. Create Custom Dashboard

Create Custom Dashboard helps you to create your own Dashboard. The user needs to enter the Dashboard Name, Description and Add Labels information and click on Save Dashboard button.
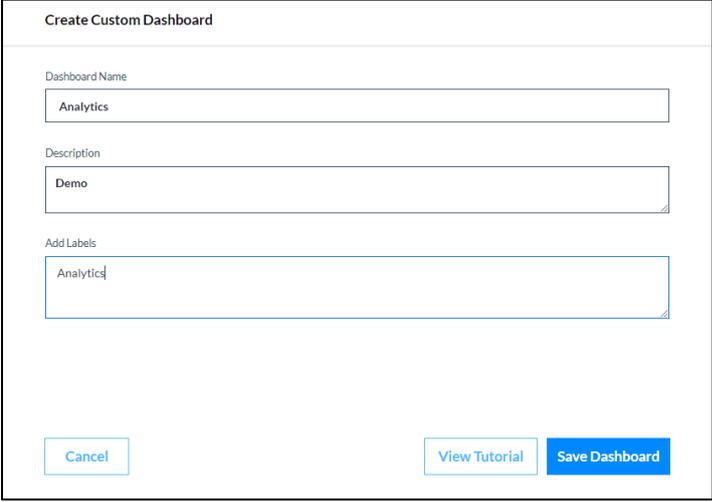
1.2. Dashboard Builder

1.1.1 Building LDI Dashboards

The LDI Dashboard Builder provides a means for IT professionals to easily create, save, share, and refine custom views of any of the data available to them in their enterprise in a way that is easily accessible to a viewer.

Dashboards are built by using a variety of data blocks and visualization objects on the Dashboard workspace, defining each object's properties, and linking them.

Dashboard Builder topics and tasks covered in this Guide include the following:

- Navigating the Dashboard Builder Workspace

- Building a basic dashboard

- Data Blocks and Visualization Objects - how to use each type of data block (such as a Query, SSRS, and Managed Data block) and visualization objects (such as grids, gauges, charts etc)

- Defining dashboard controls such as a Range Slider, a Timer, or a Focus Bar

- Defining drill downs to additional reports, websites, other LDI components, or other LDI dashboards

Navigating the Dashboard Builder Workspace

For information on how to access Dashboard Builder, see Accessing Dashboard Builder.

The Dashboard Builder includes the following elements:

- Toolbox - contains blocks you drag to the workspace and configure to get, display, and manipulate data. See Using Data Blocks and Visualization Objects for more information.

- Library - contains previously saved data queries for reuse in other dashboards. See Using the Library for more information.

- Workspace - drag blocks here from the Toolbox and Library to diagram your dashboard. See Creating a Basic Dashboard for more information.

- Properties - Provide properties for configuring each selected object on the Object tab, and provide basic properties for your dashboard on the Dashboard tab

- Toolbar - includes buttons for creating, opening, deleting, importing, exporting, and duplicating dashboards. See Using the Toolbar for more information.

You can manipulate blocks on the workspace as follows:

- Select multiple blocks on the workspace by holding down the Shift key and clicking on individual blocks to select them.

- Move and select a group of blocks on the workspace by clicking and holding down the mouse key while dragging to encapsulate the desired group of blocks. You can then drag the entire group of selected blocks to a different position on the workspace.

- Delete a block by selecting it and then pressing the Delete key. Click OK at the confirmation box or click Cancel.

- Duplicate a block by right-clicking it and selecting Duplicate.

Building a Basic Dashboard

Dashboards are built by dragging data blocks and visualization objects from the Toolbox to the workspace, defining each object's properties, and linking them to one another. Before you begin, familiarize yourself with the Dashboard Builder workspace.

Build a basic dashboard:

1. Drag a Query Data block to the workspace and define the Query Data block. The Query Data block retrieves data based on a SQL query and makes it available to a grid or other visualization objects. For users who are not completely familiar with writing SQL queries, the Query Data block also includes a Query Builder to help you build a SQL query to access LDI data.
2. Drag a visualization object block to the workspace (for example, a grid, gauge etc).
3. Connect the Query Data Block to the visualization object (grid, gauge, chart, etc) to supply data input to the visualization object.
4. Open the Input Bindings section, and if necessary, select an input. The Input Bindings section may be populated automatically if there is only one input for the type of object being linked.
5. Set the Properties for the visualization object on the Object tab (such as the Column Properties in the example above).
6. Optionally, supply an Order for where on the Dashboard you want the grid to display.

   Note: The LDI Dashboard Viewer allows you to move most objects and save the layout, but the Order parameter places the objects initially.

7. Optionally, rename the visualization object block in the Name field, and provide a Description. The name will appear in the visualization object's title bar when the dashboard is viewed.
8. Click the Apply button on the Dashboard tab to save your changes.

   Note: Changes made on the Dashboard workspace are saved automatically, but you must click the Apply button to save changes to dashboard Properties.

9. Optionally, select the Dashboard tab, then add a Name and Description. The dashboard name and description will display in any link to the dashboard, such as the Dashboard Browser. The Dashboard Summary Colour will be used in the Dash Link object when it displays a link to this dashboard.
10. Optionally, either select or define any search tags, categories, or personas you want to include with your dashboard.
11. If you wish to display your dashboard in Tile mode (suitable for mobile devices), select the Show dashboard in tile mode check box.
12. If you wish to restrict access to this Dashboard in the Dashboard Viewer select a security role (group or user) from the drop-down list in the Security Roles field. Leave this field blank if you wish all Dashboard Viewer users to have access to your

dashboard. (See Managing and Assigning Security Roles to Dashboards for more information).

13. Preview your dashboard to see how it displays in the Dashboard Viewer.

1.1.2   Sorting and Resizing Grid Columns

1. Sort grid columns in ascending or descending order, click the column header.
2. Remove the sorting and return to the original order, right-click the column header and select Remove sorting from the menu.
3. Resize grid columns, right-click the header of the column you wish to resize, and select Auto size column, or move your cursor over the right side of the column header you wish to resize to display a double-headed arrow. Pull and drag the column to the desired width. Your settings will automatically save for this dashboard for the next time you open it.

1.1.3   Interacting with Grids and Charts

Some grids and charts may be designed to accept user input by allowing interaction through:

- Sorting and resizing grid columns
- Hierarchical grid displays
- Drilldowns in cells
- Drop-down lists
- Focus bars
- Filtering data on charts using the legend, or sliders

Sorting and Resizing Grid Columns

1. To sort grid columns in ascending or descending order, click the column header.
2. To remove the sorting and return to the original order, right-click the column header and select Remove sorting from the menu.
3. To resize grid columns, right-click the header of the column you wish to resize, and select Auto size column, or move your cursor over the right side of the column header you wish to resize to display a double-headed arrow. Pull and drag the column to the desired width. Your settings will automatically be saved for this dashboard for the next time you open it.

Hierarchical Grid Displays

1. Some grids may be designed to display data hierarchically as shown below.
2. Click the plus icon to expand an item.
3. Use the minus item to collapse a node.

Drilldowns in Cells

Grids can be configured to drill-down when you double-click any cell below a column header that is marked by a blue dot. You can also drill-down from a series in a Chart by double-clicking on the series. Drilldowns can take you to LDI plus Resolve, LDI plus Site Visualizer, another LDI plus Dashboard, or a custom URL. In the example below, double clicking in the ID column of the highlighted row, displays detail on the bug.

Drop-down lists

Visualizations may include drop-down lists to allow the user to specify which data to display as shown in the example below.

Focus Bars

Graphs and charts may include a Focus Bar which allows you to narrow the range of focus and display a narrow range of data as shown in the example below.

1. Click and drag the focus bar to select a range.
2. If a range is selected you can drag the entire range to move it, or you can resize it from the left or right.
3. Revert from the focus area to the original display, click anywhere within the focus bar.

Filtering Data Using Legends or Sliders

For charts with legends, you can click one or more series in the legend to remove them from the display. Click on any deselected items to redisplay them.

For dashboard objects with range sliders, you can drag the sliders to narrow or enlarge the range of data to display. In some instances, as shown below, a range slider may control the colour coding.
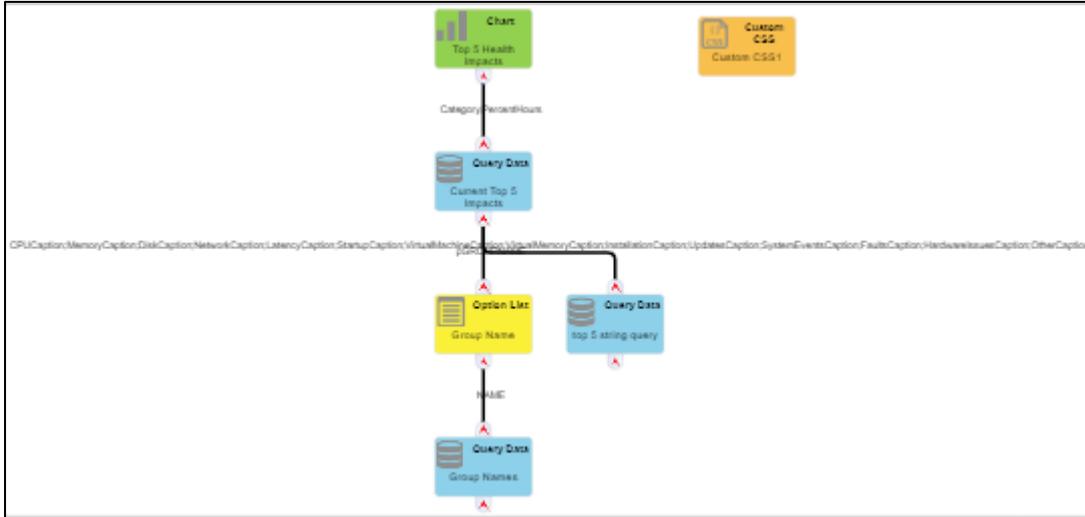
1.1.4   Hierarchical Grid Displays

Grids may be designed to display data hierarchically as shown below.

1. Click the plus icon to expand an item.
2. Use the minus item to collapse a node.

1.1.5   Drilldowns in Cells

Grids can be configured to drill-down when you double-click any cell below a column header that are marked by a blue dot. You can also drill-down from a series in a Chart by double-clicking on the series. Drilldowns can take you to LDI plus Resolve, LDI plus Site Visualizer, another LDI plus Dashboard, or a custom URL. In the example below, double clicking in the ID column of the highlighted row, displays detail on the bug. For more information on how to create a drill-down in Dashboard Builder see Defining Drilldowns.

Faults for specific version								
Time	FirstFaultTime	● SystemId	Count	ApplicationName	ApplicationVersion	ModuleName	ModuleVersion	FaultA
2023-02-15 20:09:28	2023-02-15 20:09:28	DESKTOP-9VU2VVJ	1	msteamsupdate.exe	23002.403.1788.1930	msteamsupdate.exe	23002.403.1788.1930	000000

1.1.6   Drop-down lists

Visualizations may include drop-down lists to allow the user to specify which data to display as shown in the example below.
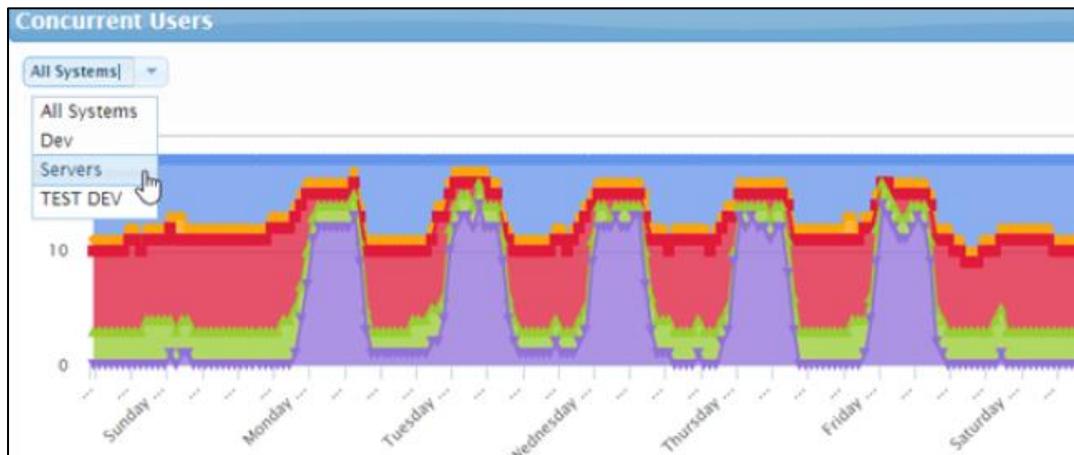
1.1.7   Focus Bars

Graphs and charts may include a Focus Bar which allows you to narrow the range of focus and display a narrow range of data as shown in the example below.

1. Click and drag the focus bar to select a range.
2. If a range is selected you can drag the entire range to move it, or you can resize it from the left or right.
3. Revert from the focus area to the original display, click anywhere within the focus bar.
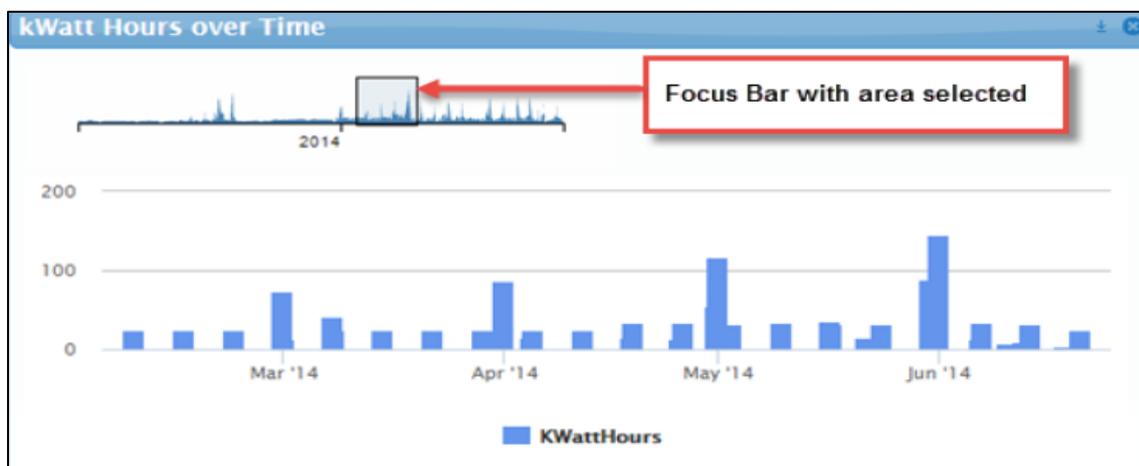
1.1.8   Filtering Data Using Legends or Sliders

For charts with legends, you can click one or more series in the legend to remove them from the display. Click on any deselected items to redisplay them.

For dashboard objects with range sliders, you can drag the sliders to narrow or enlarge the range of data to display. In some instances, as shown below, a range slider may control the colour coding.

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1.1.9 Navigating the Dashboard Builder Workspace

For information on how to access Dashboard Builder, see Accessing Dashboard Builder.

The Dashboard Builder includes the following elements:

- **Toolbox -** contains blocks you drag to the workspace and configure to get, display, and manipulate data. See Using Data Blocks and Visualization Objects for more information.
- **Library -** contains previously saved data queries for reuse in other dashboards. See Using the Library for more information.
- **Workspace -** drag blocks here from the Toolbox and Library to diagram your dashboard. See Creating a Basic Dashboard for more information.
- **Properties -** Provide properties for configuring each selected object on the Object tab, and provide basic properties for your dashboard on the Dashboard tab
- **Toolbar -** includes buttons for creating, opening, deleting, importing, exporting, and duplicating dashboards. See Using the Toolbar for more information.

You can manipulate blocks on the workspace as follows:

- Select multiple blocks on the workspace by holding down the Shift key and clicking on individual blocks to select them.
- Move and select a group of blocks on the workspace by clicking and holding down the mouse key while dragging to encapsulate the desired group of blocks. You can then drag the entire group of selected blocks to a different position on the workspace.
- Delete a block by selecting it and then pressing the Delete key. Click OK at the confirmation box or click Cancel.

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- Duplicate a block by right-clicking it and selecting Duplicate.

Dashboards are built by dragging data blocks and visualization objects from the Toolbox to the workspace, defining each object's properties, and linking them to one another. Before you begin, familiarize yourself with the Dashboard Builder workspace.

To Build a basic dashboard:

1. Drag a Query Data block to the workspace and define the Query Data block as necessary. The Query Data block retrieves data based on a SQL query and makes it available to a grid or other visualization objects. For users who are not completely familiar with writing SQL queries, the Query Data block also includes a Query Builder to help you build a SQL query to access LDI plus data.
2. Drag a visualization object block to the workspace (for example, a grid, gauge etc).
3. Connect the Query Data Block to the visualization object (grid, gauge, chart, etc) to supply data input to the visualization object.
4. Open the Input Bindings section, and if necessary, select an input. The Input Bindings section may be populated automatically if there is only one input for the type of object being linked.
5. Set the Properties for the visualization object on the Object tab (such as the Column Properties in the example above).
6. Optionally, supply an Order for where on the Dashboard you want the grid to display.

   Note: The LDI plus Dashboard Viewer allows you to move most objects and save the layout, but the Order parameter places the objects initially.

7. Optionally, rename the visualization object block in the Name field, and provide a Description. The name will appear in the visualization object's title bar when the dashboard is viewed.
8. Click the Apply button on the Dashboard tab to save your changes.

   Note: Changes made on the Dashboard workspace are saved automatically, but you must click the Apply button to save changes to dashboard Properties.

9. Optionally, select the Dashboard tab, then add a Name and Description and select a Dashboard Summary Colour. The dashboard name and description will display in any link to the dashboard, such as the Dashboard Browser. The Dashboard Summary Colour will be used in the Dash Link object when it displays a link to this dashboard.
10. Optionally, either select or define any search tags, categories, or personas you want to include with your dashboard.
11. If you wish to display your dashboard in Tile mode (suitable for mobile devices), select the Show dashboard in tile mode check box.
12. If you wish to restrict access to this Dashboard in the Dashboard Viewer select a security role (group or user) from the drop-down list in the Security Roles field. Leave this field blank if you wish all Dashboard Viewer users to have access to your dashboard. (See Managing and Assigning Security Roles to Dashboards for more information).
13. Preview your dashboard to see how it displays in the Dashboard Viewer.

When you connect the Query Data block to the Grid, the column Properties for the grid display

1.1.11 Using the Library

Query Data blocks can be saved to the library for reuse in other dashboards. Changes made to a data query block in the library automatically updates every instance of that data query block used in other dashboards. Properties of a Library object can be previewed on the Object tab before placing on the Dashboard workspace.

Icons on the Query Data block indicate whether the block is linked to the library, has an external data source, or both:
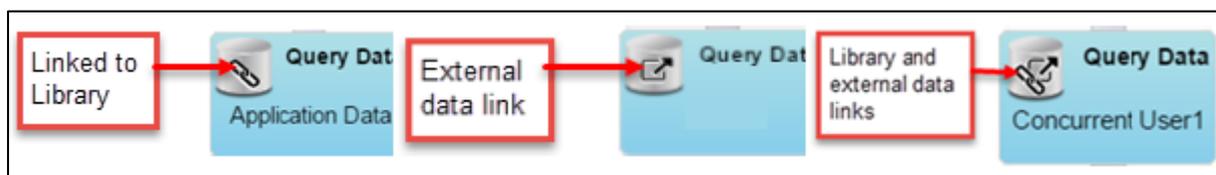
Note: Exercise caution when making changes to Query Data blocks in the library as this may affect other dashboards using the same library block. All dashboards that reuse a Query Data block from the library are linking to the same query, rather than creating a copy.

If you wish to modify a library query for your own use, best practice is to copy the SQL statement from the block in the library, paste it into a new Query Data block, and then amend the statement as you wish.

1. Save a Query Data block to the library for later use, or for another builder to use, right-click a defined query block on your workspace, and select Save to Library
2. Reuse a saved Query Data block, drag the block from the library to your workspace.
3. Delete a Query Data block from the library, select it and press the Delete key on your keyboard.

   Note: A Library Data Query block can be deleted. As a best practice, only delete a Query Data block if you are certain no one else has used it.

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If a query data block is deleted from the library, and is included in other dashboards, those instances will no longer be linked to the library. The data blocks will now operate independently.

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1.1.12   Using Data Blocks and Visualization Objects

Dashboards are built by dragging the following types of data blocks and visualization objects from the Toolbox to the workspace, defining each object's properties, and linking them. The following data blocks, and visualization objects are available for building dashboards:

Data Blocks		
Query Data	Query Data Query Data1	Retrieves data based on a SQL query and makes it available to a grid or other visualization objects. **For more information see** Defining a Query
SSRS Data	SSRS Data SSRS Data1	Retrieves data based on a SQL Server Reporting Services report. **For more information see** Defining a SSRS Data Block
Managed Data	Managed Data Managed Data1	Retrieves pre-defined data blocks that are not available through database queries. **For more information see** Error! Reference source not found.
Page Context	Page Context Page Context1	Exposes information about the current context. For example, the current username, time zone, and browser information. It can also be used to define page parameters that can be set from other dashboards or external links. **For more information see** Using a Page Context Data Block

Data Control Blocks		
Option List	Option List Option List1	Presents a list of options to the user through a drop-down list and have the selected item be made available as output. **For more information see** Defining an Option List
Date/Time	Date / Time Date / Time1	Presents a date/time picker to the user and have the selected date/time or selected time range be made available as output. **For more information see** Defining a Date/Time Control

Slider	Slider / Slider1	Presents a slide control to the user from which to select a single numeric value. **For more information see** Defining a Slider Control
Range	Range / Range1	Presents a slide control to the user from which to select a numeric value range. It differs from the Slider block as it can provide two values instead of one. It can also be used to assign colors to ranges in grids, gauges, bubble diagrams, and maps **For more information see** Defining a Range Control
Link Label	Value Link Label / Link Label1	Can show a combination of static and/or dynamic text, and optionally provide a web link when clicked on. It can display as simple text or as a button. **For more information see** Defining a Link Label
Text Entry	... Text Entry / Text Entry1	Displays a field into which users can type text to be used as an input to another object. **For more information see** Defining a Text Entry
Timer	Timer / Timer1	Generates an event at a specified interval, which can be used to refresh other blocks, like the Query Data block or the Date/Time block. **For more information see** Defining a Timer Control
Data Frame	Data Frame / Data Frame1	Transforms a data block by transposing row values into one or more columns or condensing multiple column values into a single column. Useful for creating array columns that call display Sparkline visualizations. **For more information see** Defining a Data Frame Control
Data Filter	Data Filter / Data Filter1	Filters the input of a data block and makes the results available as the output of the Data Filter block. **For more information see** Data Filter
Focus Bar	Focus Bar / Focus Bar1	Provides a way to zoom into a subset of data. **For more information see** Focus Bar Control

Visualization Objects		
Grid	Grid Grid1	Provides a way to show tabular or hierarchical data in grid. **For more information see** Grid
Chart	Chart Chart1	Shows data in standard graph formats such as line, bar, column, pie, and area. **For more information see** Defining a Chart
Gauge	Gauge Gauge1	Provides a way to highlight a single numerical value, such as CPU usage. Can attach a Slider to control ranges and colors. **For more information see** Defining a Gauge
Horizon Graph	Horizon Graph Horizon Graph1	Presents area graphs in a compact manner. Horizon graphs require a numerical or date-based domain and a numerical range and are best used to show patterns and exceptions over a set of data. **For more information see** Defining a Horizon Graph
Sankey Diagram	Sankey Diagram Sankey Diagram1	Shows volume flow between entities. Each entity is displayed as a rectangle, with the link between two entities having a width proportional to its value. **For more information see** Defining a Sankey Diagram
Heat Chart	Heat Chart Heat Chart1	Shows a single data dimension using two axes in a circular layout. This type of chart is useful for showing cyclic data such as hours of the day during the week and makes it easy to identify clustered data values such as periods of peak usage. **For more information see** Defining a Heat Chart

Map	Map Map1	Used to display maps with color-coded markers at specific latitude and longitude locations, or color-coded countries or regions. **For more information see** Defining a Map.
Bubble Diagram	Bubble Diagram Bubble Diagram1	Used to clearly shows relative relationships between data values, for example file sizes or number of hits on various web sites. If the data is hierarchically ordered, the Bubble Diagram can also show the parent/child relationships, such as applications that make up a package. **For more information see** Defining a Bubble Diagram
Matrix	Matrix Matrix1	Shows a series in a block-based matrix to display and view data points in relation to others. The bound data must have one column for the name values, and one or more columns that define the series, or axis data values. The output from the matrix will be the set of rows matched against the matrix-selected object names. **For more information see** Defining a Matrix
Dash Link	Dash Link Dash Link1	Displays a visual representation of another dashboard that links to the selected dashboard when clicked on by the user. **For more information see** Defining a Dash Link
Web Page	Web Page Web Page1	Allows the display of an external web page by entering a relevant URL. **For more information see** Defining a Web Page Link
Node Graph	Node Graph	Allows you to display hierarchical data in a node-based format. **For more information see** Defining a Node Graph
Comment	Comment Comment1	Allows you to enter comments about the design and construction of the dashboard onto the Dashboard. The comments are only visible in Dashboard Builder and have no impact on the display of a dashboard. **For more information see** Defining a Comment
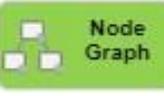
1.1.13 Linking Data Blocks and Visualization Objects

Visualization objects and data control blocks are linked by dragging from a block's output port to another block's input port to create a connector between the two blocks. When blocks are linked in this manner, properties from the input linked block become available on the output block's Properties pane (in the Input Bindings section and in the Column Properties section of a grid, for example).

Link a Data Block to a Visualization Object:

1. First select the visualization object to which you wish to connect.

2. Drag from the output port of the source block to the input port of the target block to create a connector.
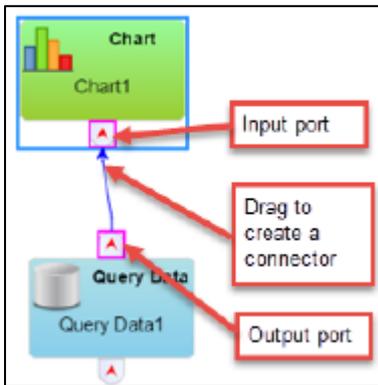
You can connect a single Query Data block to multiple visualization objects as shown in the example below:
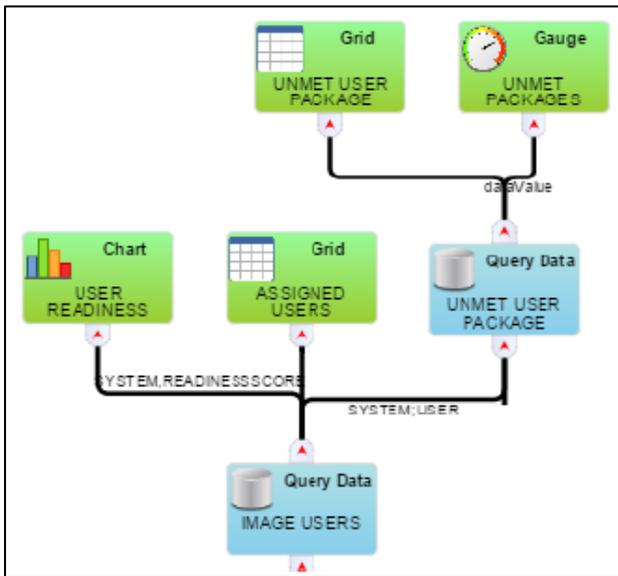
1.1.14 About Input Bindings

Input Bindings are created by linking objects to one another and provide a conduit for passing data between objects. They are critical for populating a dashboard with data.

For information on how to link objects see Linking Data Blocks and Visualization Objects.
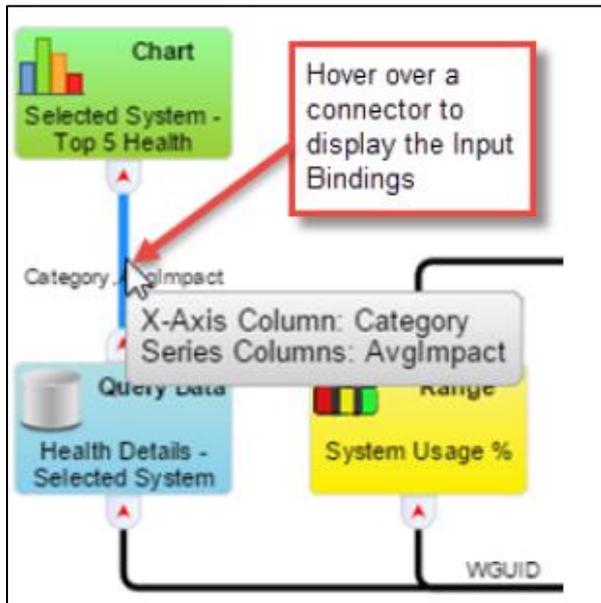
When you connect a data control block as input to visualization objects or other data control blocks, the Input Bindings section on Properties pane of the block to which you are linking is automatically populated with input options defined in your data object appearing under the source data block's name.

The example below shows input bindings available for a Gauge block as defined in the Query block. For more detailed information on selecting input bindings for a Gauge, see Defining a Gauge.

Note: A Query Data block can be connected to multiple visualization objects, selecting either the same or a different data value for display in a variety of different visualization objects (chart, gauge, grid, gauge etc).

The example below shows input data for a grid. For more information on selecting input data for a grid see Defining a Grid.
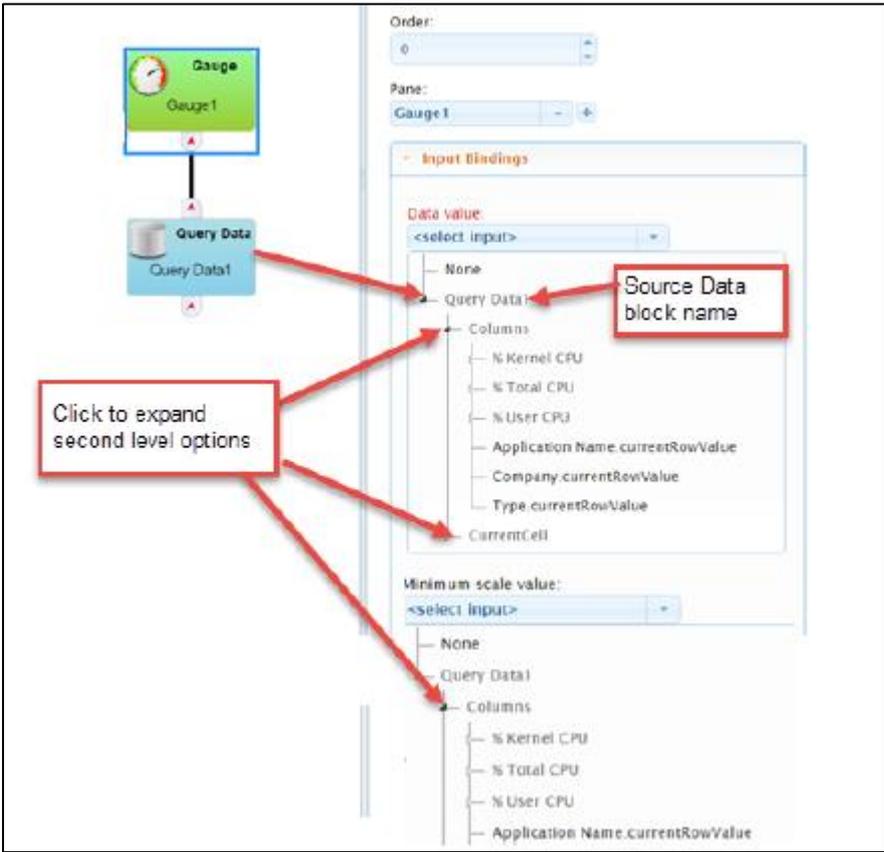
1.1.15   Defining a Query

Defining a Query Data Block

The Query Data block retrieves data based on a SQL query and makes it available to a grid or other visualization objects. For users who are not completely familiar with writing SQL queries, the Query Data block also includes a Query Builder to help you build a SQL query to access LDI plus data. Query Data blocks can be saved in the library for others to use.

Depending on how you define a Query Data block, icons will display on the block to indicate whether the block is linked to the library, has an external data source, or both:

To define a Query Data block:

1. Drag the Query Data Block from the Toolbox onto the workspace.

2. With the Query Block selected, the Object tab on the Properties pane becomes active and reflects configuration fields and information for a Query Data block.

3. Optionally rename the Query Data Block in the Name field and provide a Description. This is useful if you intend to save the Query Block in the Library for others to use.

4. Click the Expand Query box button. You can click this several times to expand the field as necessary.

5. Enter or paste a SQL query into the Query field or use the Query Builder (See Using the Query Builder for more information.)

6. Click the Test button to make sure the SQL statement is valid. A message displays stating either that the query is valid or invalid.

7. Click the Apply button to save your changes.

Using the Query Builder:

The Query Builder lets you select a single reporting view and allows you to choose the columns to be included in the query for a single view. You can also define filters to include only the rows you want in the results.

1. On the Object tab of the Query Data block, click the Query Builder button.

2. Select a view (from the LDI plus SQL database Available Views list.

3. Check the columns you want to include in the query and the number of rows to return.

    Note: It is recommended that you avoid large queries and limit the maximum

    number of rows to be returned. Clearing the number of rows to be set results in a

    limit of 10,000 being applied by the system.

4. Click the **Next** button. The **Add Filters** pane displays.

Defining Filters

To restrict the data to include only the rows you want in the results, use the Add Filters pane. For example, you may want to get only the records in which the % Total CPU is greater than or equal to 50.

1. To define a filter, click the Add Test button.

2. Select a data column from the left drop-down menu.

3. Select a condition from the middle drop-down menu.

4. Select either fixed value, or variable named from the right drop-down menu. If you selected variable named, enter a variable in the <enter variable> field. If you selected a fixed value, enter a comparison value.

5. Click the See Sample Results button to see the results.

    Note: The sample results are limited by the system to the top one hundred rows.

6. You can add additional Tests or Groups (using the Add Group button) to further refine your filter.

7. If you wish to delete a test or group, select the appropriate test or group, and click the Delete Selected button.

8. Click Done when complete. The SQL query is placed in the Query field. The Query Builder creates a SELECT statement, while using filters will create a WHERE clause. The Query defined by Query Builder option is checked, and the query text is not editable.

9. If you wish to edit this query and filters, click the Query Builder button again.

10. Change the query manually (outside of the Query Builder), deselect the Query defined by

    11.   Query Builder option.

    Note: If you deselect the "Query defined by Query Builder" option, you will no longer be able to make changes to that query using the Query Builder.

Adding a Parameter to a Query Data Block

The Dashboard Builder recognizes parameters that are marked with a special tag of @ {}. To add a parameter to a Query Data Block:

1. Select the Query Data Block in which you wish to add a parameter and mark the part of the SQL statement you wish to tag as a parameter with the @ {} tag. (For example, the Query SQL statement Total CPU>minCPU would be replaced Total CPU>@{pminCPU} making pminCPU the parameter).

2. When you are done, click the Apply button. The parameter you tagged (in this example pminCPU) appears in the Input Bindings section as the Query Data block is now expecting an input for that parameter.

3. You can now connect an input source to the Query Data block as desired (for example an Option List block to make the selection from the Option List the input source for the query).

    Note: When using Group in a parameter, you need to add a **|** as part of the statement for this parameter to work (for example GROUPNAME **= @{pGROUPNAME|Group}**).

1.1.16 Defining a SSRS Data Block

The SSRS Data block is designed to let you display data contained in LDI plus SQL reports of the Server Reporting Services (SSRS) type.

To define a SSRS Data block:

1. Drag the SSRS Data Block from the toolbox onto the workspace.

2. With the Query Block selected, the Object tab on the Properties pane becomes active and reflects configuration fields and information for a SSRS Data block.

3. Optionally rename the SSRS Data Block in the Name field and provide a Description.

4. Select a report from the Report list on the Object tab. Expand the report headings by clicking the plus (+) icon.

5. Open the Input Bindings section to determine if an SSRS report needs additional parameter input. If there are fields other than Refresh timer (which is always present), then additional input is required (as shown in the example below which requires IP Address).

6. If additional input is required, add an Option List block to the workspace, then connect the SSRS Data block so it is an input to the Option List block.

   Note: The SSRS Data block is unique in that the Option List that supplies parameter input can be populated by the same SSRS Data block.

7. Select the Option List block and open the Input Bindings section. Then select the appropriate Param attribute from the list.

   Note: If the SSRS report has multiple parameters, then there will be multiple Param attributes from which to choose.

8. Click the Apply button to save the changes. The Text column and Value column fields in the Values section on the Option List Properties pane are automatically populated. A link will also be made from the Option List block back to the SSRS Data block.

9. Optionally, select the SSRS Data block, open the Input Bindings section, and verify that the parameter input is using the Option List selected Item attribute as shown in the example below Attach a Visualization object, such as a grid for example.
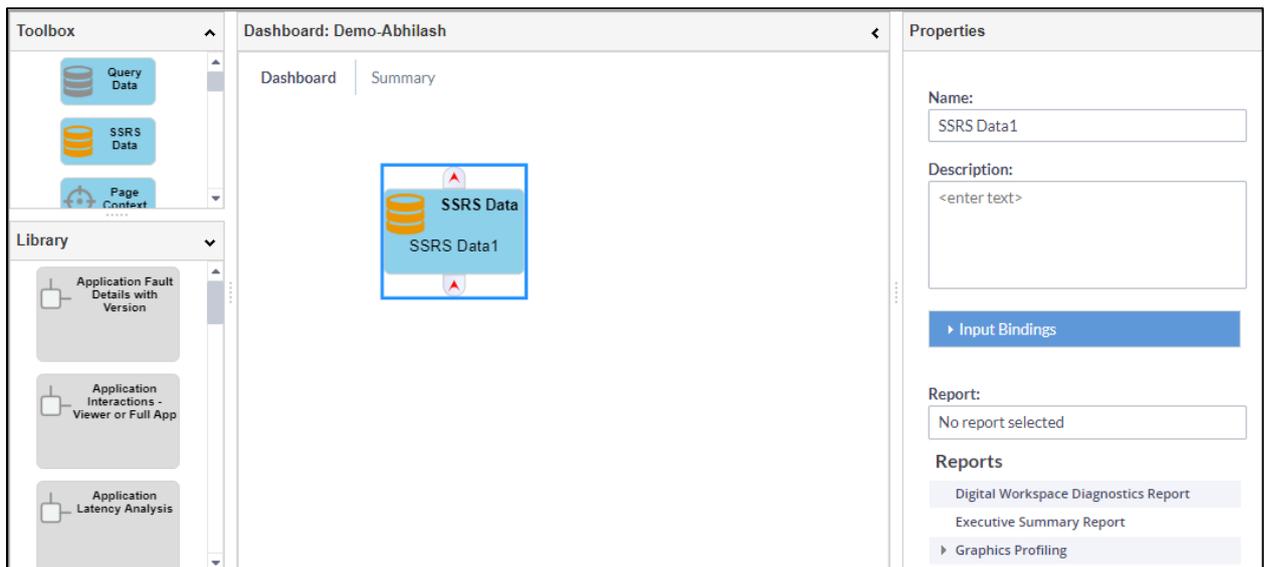
1.1.17　Using a Page Context Data Block

The Page Context data block serves two functions:

- Provides information about the current context, such as the username, master, time zone, and browser information
- Specifies parameters that are passed into the dashboard and used by other objects

To use the Page Context Data block to supply current context information:

1. Drag the Page Context Data block onto the workspace and connect it to another block (for example a Link Label Data Control block)

2. Provide an optional Name and Description for the Page Context Data block.

3. Select the Link Label Data Control block to which you linked the Page Context Data block and go to the Input Bindings for that block.

4. Select the appropriate Page Context attribute as the input. (For example, a username or master).

To use the Page Context Data block to specify parameters when drilling down to a second dashboard:

1. For the second dashboard to which you are drilling down, use a Query Data block and link it to a display object, for example a Grid block. In the example shown below, the query includes two parameters, @{SYSTEM} and @{USER}.

2. Drag a Page Context Data block to the workspace and connect it to the Query Data block so that its output is used as the input for the Query Data block.

3. On the Page Context Data block properties, add two parameters for the Dashboard to request (for example: System and User). This configures the dashboard to request information for these two parameters.

   Note: The parameter names you define in the Page Context block do not have to be the same as the parameter names defined in the SQL query.

4. Select the Query Data block and open the Input Bindings section. The parameters you defined in the Page Context Data block properties are displayed here. Point the Input Bindings to the appropriate output from the Page Context Data block (system and USER as shown in the example above).

5. Click the Apply button to save your changes.

6. Then on the first dashboard setup the drilldown that takes the user to the second dashboard. See Defining Drilldowns for instructions.
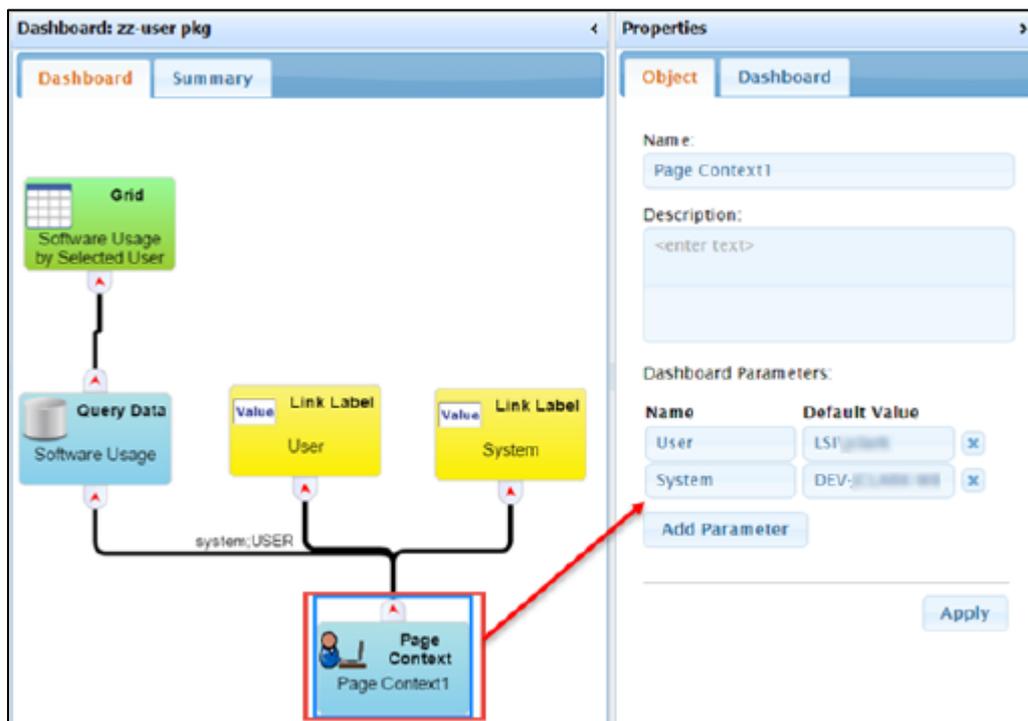
1.1.18 Defining an Option List

The Option List is used to present a drop-down list of options to the user and have the selected item be made available as output. The output can then be connected, for example, to the inputs of one or more Query Data blocks to supply values for parameters in the queries. The Dashboard shown below provides an Option List to allow the user to change the display in the chart based on a specific group of systems.

An option list can be filled in one of two ways:

- **Static Values -** manually create your own selection list
- **Dynamic Values -** The Option List takes its input from a column in a Query block. If the Option List items come from a Query Block that also has a grid bound to it, the selected item will update along with the selected row in the grid.

Creating an Option List Using Static Values

1. Drag an Option List block to your workspace.

2. Select the Option List block, and then select a dashboard Pane from the drop-down list into which you wish to place the list.

3. In the Values section, select Static

4. Click the Add Item button and enter your own Value and Text. Repeat this step for each option you wish to add to the list.

5. When you are done, click the Apply button to save your changes.

Creating an Option List Using Dynamic Values

1. Drag an Option List block to your workspace and connect it to a Query Data block.

2. Select the Option List block, and then select a dashboard Pane from the drop-down list into which you wish to place the list.

   3. LDI plus Dashboard automatically creates a default Pane, named Input, but this will not display on your dashboard if nothing is added to it.

   4. In the example below, the list will appear in the Concurrent Users pane on the displayed dashboard

5. Expand the Input Bindings section and select the inputs from which the list will retrieve its data.

6. Optionally, enter an Initial Selected Value.

7. Under Values select Dynamic to populate the list from the Query Data block (Groups in the example above)

8. Select the Text and Value column options (GROUPNAME in the example shown above). The Text field is what displays in the drop-down option list. The Value field is the information passed to the next block.

   Note: In this example, both Value and Text are coming from the same column (GROUPNAME), but these could be different columns.

9. Select the Query Data Block in which you wish to add a parameter and mark the part of the SQL statement you wish to tag as a parameter with the @ {} tag. (For example, the Query SQL statement GROUPNAME = 'All Systems', would be replaced with GROUPNAME = @ {pGROUPNAME|Group} making pGROUPNAME the parameter.

10. When you are done, click the Apply button. The parameter you tagged (in this example pGROUPNAME) appears in the Input Bindings section as the Query Data block is now expecting an input for that parameter.

In the Input Bindings for the Query **Data** block, select the **selected item** output of the Option List in the binding for the group parameter (as shown in the example below).

The dashboard now includes a drop-down list, and the selected item from this list determines which data is displayed.
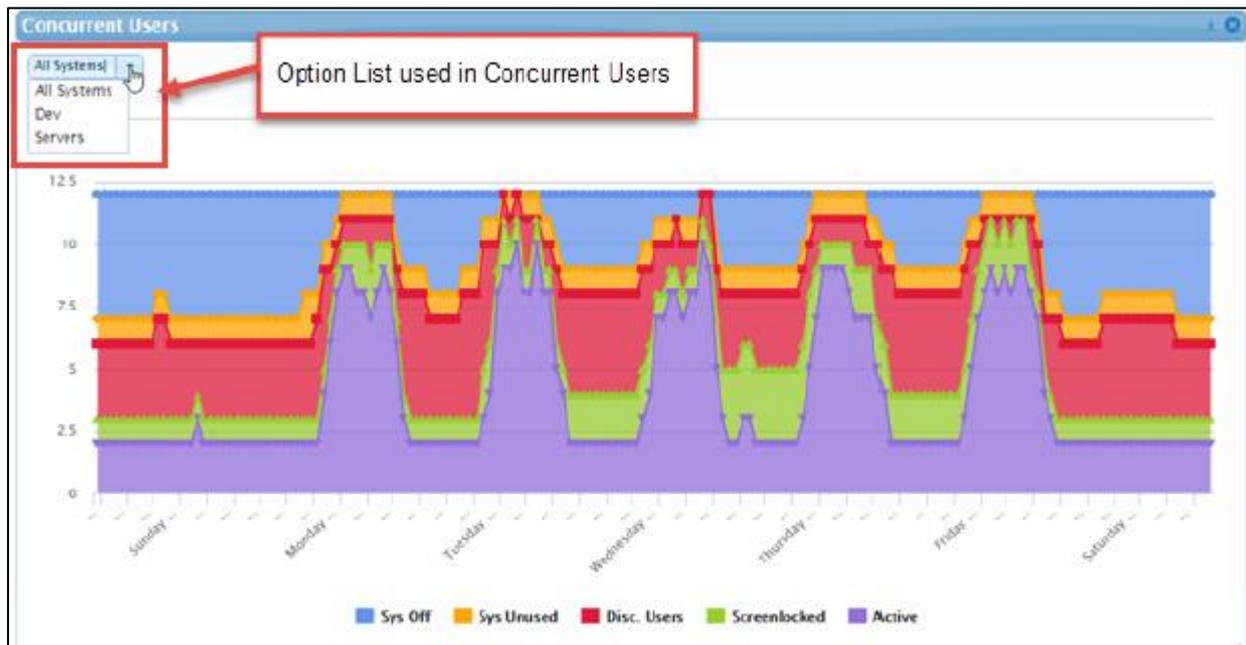
1.1.19 Defining a Date/Time Control

The Date/Time display object allows you to display a date/time picker on a dashboard and have the selected date/time be made available as output. The output can then be connected to the input of one or more Query Data blocks to supply values for parameters in the queries.

To define a Date/Time control:

1. Drag the Date/Time data block from the toolbox onto the workspace.

2. Select the Date/Time data block.

3. In the Date/Time block's Properties pane, optionally rename the Date/Time data block in the Name field and provide a Description.

4. Optionally select which order you wish this data block to appear on your dashboard either by typing in a value in the Order field, or by using the up and down arrows in that field.

5. Select a dashboard Pane from the drop-down list into which you wish to place the date/Time data block. The default is Input, but you can add a pane by clicking the + symbol to the right of the Pane field and naming the pane as you choose.

6. Optionally, in the Prompt field, enter a text prompt that you wish to appear to the left of the Date/Time selector (for example from/To).

7. If you wish to select a range of time, select the Range mode check box, then select a Default range from the drop-down list.

8. If you would rather select a single date/time in the Date/time picker, leave the Range Mode check box unchecked. Optionally, in the Relative field preselect a default time from the drop-down list, and/or click the calendar icon and select a default date.

9. To display only the date and time, select the Hide relative list in viewer check box. Leaving this unchecked will give the user the option of selecting a different relative period.

When you are done, click the **Apply** button to save your changes.

1.1.20   Defining a Slider Control

The Slider Control block is used to specify a single value and pass this on to other objects. In the example shown below, a slider can be used to specify the minimum % Total CPU value to display in a grid. When the user slides the marker to a different value, the grid updates to use the new minimum.

The query uses a parameter, @{lowerCPU} for the minimum value. The value for this parameter is supplied by the Slider block and specified in the Input Bindings section of the query block.

To setup the Slider block:

1. Start with a Query block and define it, as necessary.

    2. Drag the Slider block onto the workspace and connect it to a Query Data block

3. Specify the Pane in which to place the slider.

4. Optionally, provide some text in the Prompt field to display with the slider.

5. Specify the Minimum and Maximum slider values using either the fields in the Input Bindings or the manual settings. Settings in the Input Bindings will take precedence over manual entry.

6. Enter the Initial value for the slider. Select from the drop-down list if you want this to be an entered value, or a percent of max.

7. Click the Apply button.

8. Select the Query Data Block. In the Query section specify the parameter @{lowerCPU}. Then click the Apply button to save your changes.

9. Open the Input Bindings section for the Query Data block. The parameter you just specified in the Query section, should now be available as a field (lowerCPU). In this

field select the .value attribute from the drop-down list. (There could be more than one option depending on what parameters have been specified in the Query)

In the example shown above, the query uses a parameter, for the minimum value. The value for this parameter is supplied by the Slider block. When you are done, click the Apply button.

1.1.21   Defining a Range Control

The Range Control block is used to specify high and low values in a range and pass these on to other controls. It differs from the Slider Control block in that it can pass two values instead of one.

The Range Control can also be used to add colour-coding thresholds to grids, gauges, map, and bubble diagram objects. A single Range Control can be connected to multiple objects to allow it to control them in unison.

The example below shows a range slider with a colour gradient used to control a gauge.

The following Range Control topics are covered in this user guide:

- Setting up Values and Parameters for a Range Control
- Setting up a Basic Gradient Using a Range Control
- Setting up a 3-colour Gradient Using a Range Control
- Using a Range Control to Set a Colour Gradient in a Gauge
- Using a Range Control to Set a Colour Gradient in a Grid Setting up Values and Parameters for a Range Control

To setup values and parameters for a Range Control:

1. Drag the Range Control block onto the workspace and connect it to a Query Data block.

2. In the Range Control block's properties, specify the Pane in which to place the range slider.

3. Optionally, use the Prompt field to provide some text to display with the Range Control.

4. Specify the Minimum and Maximum values for the range using either the fields in the Input Bindings or the manual settings. Settings in the Input Bindings will take precedence over manual entry.

5. If you wish to set an initial value for the lower and upper range, click the arrow next to Initial Values (Optional) and enter the desired Initial lower range value and the Initial upper range value.

6. Select from the drop-down list if you want this to be an entered value, or a percent of max. Click the Apply button.

7. Then select the Query Data block and click on Input Bindings.

8. In the Query section, replace the relevant portion of the SQL statement with the parameters to which the Range Control block will be passing values using @ {} as shown in the example (@ {lowerCPU} and @{upperCPU}) below.

9. Click the Apply button to apply the parameters. The parameters will display in the Input Bindings section for the Query Data block.

10. Use the drop-down menu under the parameters displayed in the Input Bindings (lower CPU and upper CPU in the example above) to select the range values.

    Note: The <Range1>.values[0] = the lower range value, and <Range1>.values[1] = the upper range value where <Range1> = the name of the Range block.

When you are done, click the **Apply** button.

Setting up a Basic Colour Gradient Using a Range Control

The Basic Gradient option allows you to specify two colours, corresponding to the minimum and maximum values of the range object. LDI plus Dashboard will create a continuous gradient between these two colours to assign to the values between the low and high values as seen in the example below.

Note: The Range Control is automatically hidden in the viewer when displaying a basic colour gradient.

If you wish to set up a range slider with a basic colour gradient with a maximum and minimum colour for a grid, gauge, bubble diagram, or map:

1. Drag a Range Control block to your workspace for setting up colour gradients.

    Note: The Range Control for setting up colour gradients must be a different object than the Range Control used to set up parameter values.

2. Connect the Range Control block to the desired object (grid, gauge, bubble diagram, or map)

3. Select the Range Control block and in the Properties for the block, select the Basic gradient check box.

4. Specify the Minimum and Maximum values for the range using either the fields in the Input Bindings or the manual settings. Settings in the Input Bindings will take precedence over manual entry.

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5. Click the drop-down arrow next to Colours.

6. Click in the Minimum value colour field to display a colour selector and select the desired colour. Repeat this for the Maximum value colour field.

7. When you are done, click the Apply button.

   Note: In the Basic Gradient mode, a full-dial style of gauge will not show a gradient.

Setting up a 3-colour Gradient using a Range Control

To set up a 3-colour gradient:

1. Select the Range Control block.

2. In the Properties section, select the Pane in which the range slider should appear.

3. Click the drop-down in the Colours section to display options and click in the Lower range colour field to display a colour picker.

4. Select the desired colour, and then repeat the process for the Middle and Upper range colours.

5. If you wish to display the colours as a gradient, select the Show as gradients button.

6. When you are done, click the Apply button.

   Note: A full-dial style of gauge will not show a gradient. In the three-colour mode, it will display the distinct colour bands regardless of the Show as Gradient option. In the Basic Gradient mode, the full-dial gauge will not show any colour-coding.

Using a Range Data Control to set Colour Thresholds for Gauges

If you wish to set up a range data block to control colour thresholds for gauges:

1. Set up values and parameters for the range control.

2. Connect the Range Control Block to retrieve inputs from a Query Data Block, and output to a Gauge block.

3. Select the Range Data Control block.

4. In the Properties section, select the Pane in which the range slider should appear (in this case the gauge makes the most sense), or you can hide the Range control in the viewer using the Hide Slider check box.

5. Open the Input Bindings section for the Range block and select the Minimum and Maximum slider values of the range using the min and max properties of the column that the Range block will be colouring (as shown in the example below for Minimum Slider Value).

6. Set up either a basic colour gradient or set up a 3-colour gradient. 7. Select the Gauge block and open the Input Bindings section.

7. In the Scale colour thresholds field, select the Range1.thresholds output from the Range block (where Range1 is the actual name of the Range block). This allows the Gauge to use the colour threshold settings defined in the Range block.

8. When you are done, click the Apply button.

   Note: Gradients in gauges can only display from left to right.

Using a Range Data Control to Set Colour Thresholds for Grids

You can use a Range Data Control to colour code a column in a grid and allow users to optionally change the threshold as shown in the example below.

To set up a Range Data Control to colour code a cell in a grid:

1. Set up values and parameters for the range control.

2. Connect the Range Control Block to retrieve inputs from a Query Data Block, and output to a Grid block.

3. Select the Range Data Control block.

4. In the Properties section, select the Grid as the Pane in which the range slider should appear.

5. If you do not want the user to be able to change the colour ranges, check the Hide Slider option.

6. Set up either a basic colour gradient or set up a 3-colour gradient.

7. Select the Grid block and open the Input Bindings section.

8. In the Column Properties section of the Grid Properties, select the column to be colour coded from the drop-down list.

9. In the Data colour drop-down list, select the thresholds output from the Range Control block.

10. Once you have selected a Data colour option the Colour value column will display a list of all available numeric columns to use to calculate the colour. If the current column is numeric, this will be selected by default as the Colour value column.

11. If the current column is non-numeric, select a numeric column from the Column value column field drop-down list on which to base the colour-coding value.

12. When you are done, click the Apply button.
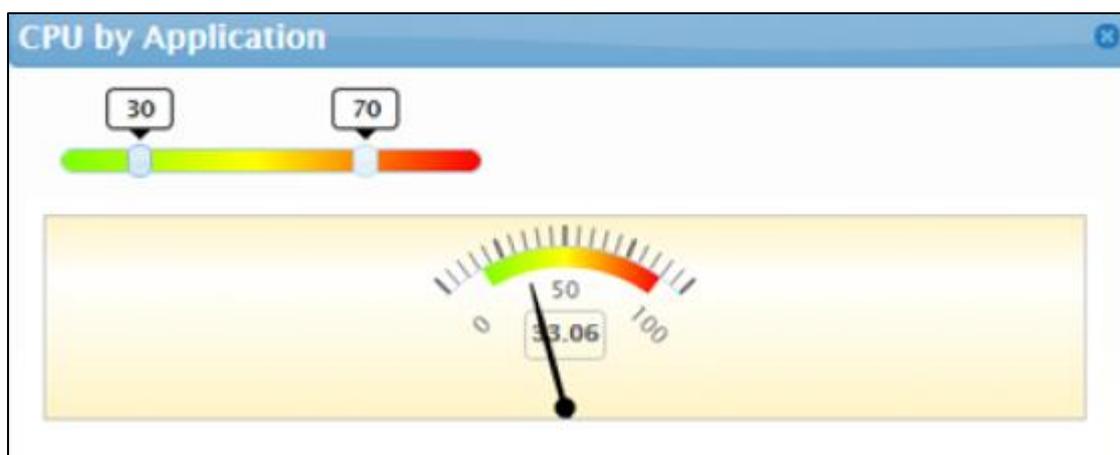
1.1.22   Defining a Link Label

The Link Label Data Control can be used as follows:

- Show static text
- Provide a link to a URL
- Display static text with an input from another source appended to that text
- Display the data from another source

Displaying Static Text

1. Drag the Link Label Data Control block onto the workspace.

2. On the Properties pane for the Object, optionally give the Link Label Object a Name and Description.

3. In the Pane field, select or add a Pane in which you want the Link Label to appear.

4. Type the text to display into the Static label text field and leave the Link URL field blank.

5. Optionally, de-select the check mark next to the Show border option so the text will appear without a line around it. Alternately, you can select Show as button if you want the label to appear as a button.

6. Specify a Font size in pixels for the text.

7. When you are done, click the Apply button.

Creating a link to a URL

1. Drag the Link Label block onto the workspace.

2. Type the text to display on the link into the Static label text field.

3. Type or paste the URL for the link into the Link URL field.

4. Optionally, check the Show as button option if you want the link to display as a button with text. 5. Specify a Font size in pixels for the text.

5. When you are done, click the **Apply** button.

Displaying Data from Another Source

You can display data from another source as text. For example, if you connect a Page Context Data block to a Link Label Data Control block, you can choose to display the current username; browser language; or time zone:

1. Drag a Link Label Data Control block onto the workspace.

2. Drag a Page Context Data block to the workspace and connect it to the Link Label Data Control block.

3. Select the Link Label Data Control block and open the Input Bindings section in the Object pane.

4. When you are done, click the Apply button. The current username will display as text in the dashboard pane.

   Note: If you have text in the Static Label Text field the dynamic content will be appended.

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CUSTOM DASHBOARD PACK   Custom

Demo-Abhilash

User Manual

Created On 03-21-2023 07:11 AM

✎ **Edit this information**

1.1.23   Defining a Text Entry

The Text Data Control block displays a field into which users can type text to be used as an input to another object. Examples include providing a search entry field connected to a Query data block, or a value entry field instead of using a fixed value for a Data Filter as shown in the example below.

To define a text entry field as input to a Data filter:

1. Drag a Data Filter Control block to the workspace and connect a defined Query Data block to it as input.

2. Drag a Text Data Control block to the workspace and connect it as an input to the Data Filter Control block.

3. Select the Data Filter Control, and edit it to include a variable, the value of which will come from the Text Entry Filter.

4. In the Text Data Control block properties, select the Pane in which to display the text field. In the example above, this is the Grid.

5. Optionally, enter text to use as a Prompt, and specify the Default content for the field.

6. You can also open the Input Bindings section and select the Initial Value to populate the field from another source. To do this, you need to connect the Text Entry Control block to another Data source. For example, you could choose to present an Option list as the initial value so that the user can either select an option or override it by entering text.

7. Click the Apply button to save your changes.

ApplicationName	%KernelCPU	%UserCPU	%TotalCPU	Ty
Visual C# Command Line Compiler	16.36	74.6	90.97	6
ReportConverter	0.15	78.21	78.37	3
Software Removal Tool	17.24	60.29	77.53	3
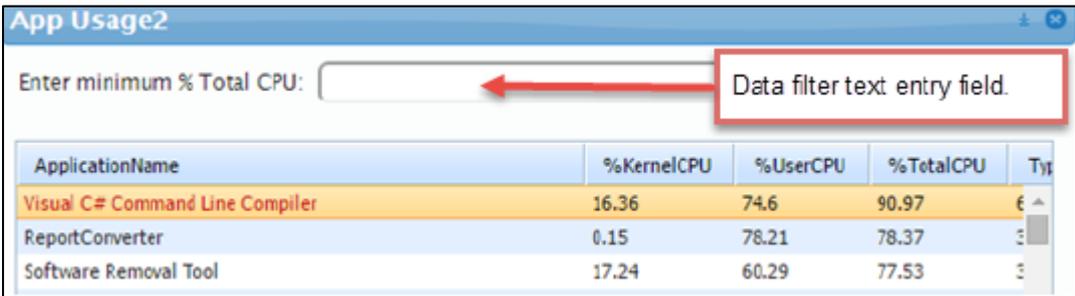
1.1.24 Defining a Timer Control

The Timer control block is used to cause an action to occur at regular intervals. Most commonly, this will be used to refresh a query or a Date / Time block that is using the relative option. For example, you may have a grid that displays currently active alarms for a selected system, and you want the grid to refresh every 5 minutes.

The other action the Timer Control can be used for is to advance through different rows of data in a grid at the time interval specified and display corresponding data for each row in a linked visualization object.

To set up a Timer Control:

1. Drag a Query Data block to the workspace and define the Query Data block, as necessary.

2. Drag a Timer Control block to the workspace.

3. Connect the Timer Control block as input to a Query Data block.

4. Enter the desired Timer Interval (seconds) or use the up and down arrows to change the time.

5. Select the Query data block and open the **Input Bindings** section.

6. If you are using a Timer Control block to refresh data, select the Timer input from the drop-down list in the Refresh timer field.

7. If you are using the Timer Control block to advance through different rows of data in a grid at the time interval specified and display corresponding data for each row, select the Timer Input in the Current Row timer field.

8. Click the Apply button to save your changes.
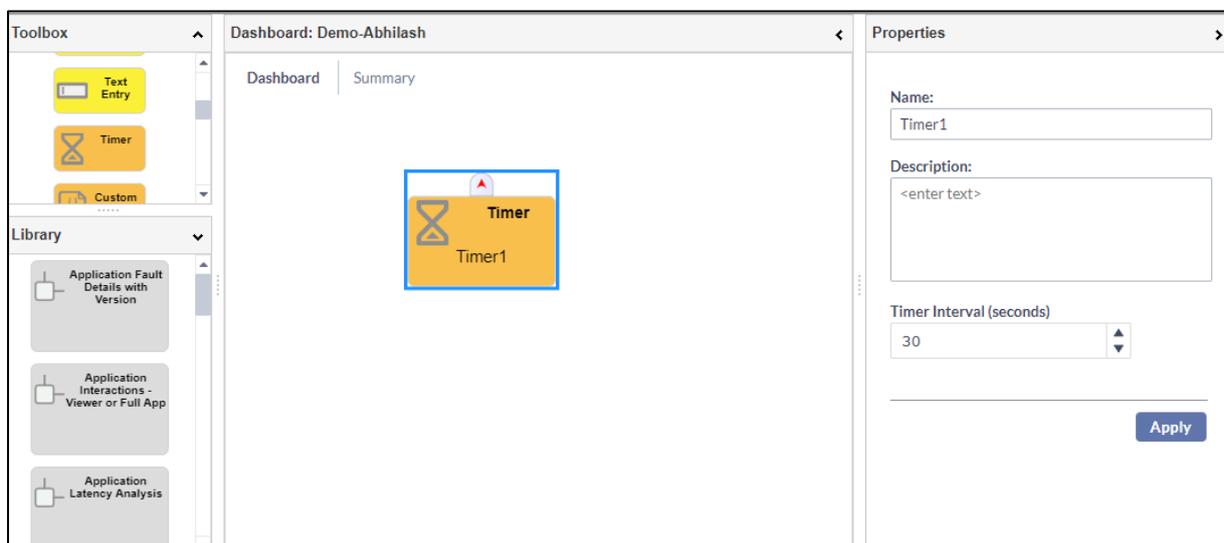
1.1.25 Defining a Data Frame Control

The Data Frame Control is used to transform data from one or more rows into either an array of data values or a series of columns. The Data Frame takes the values from the specified Value Column(s) and translates them based on the Frame Column. All other

columns are effectively treated as group-by columns. This transformation is usually required for input to a Sparkline visualization.

Note: The Data Frame Control block in LDI plus Dashboard version 8.0 (and above) includes the option of two data frame modes - Transpose and Condense. If you are using LDI plus Version 7.2 or lower, follow instructions for Defining a Data Frame Control (LDI plus 7.2)

1. Drag a Query Data block to the workspace and define the Query Data block as necessary.

    2. Add a Data Frame Control to the workspace and connect a Query Data block as input to the Data Frame Control.

    Note: The Data Frame Control object will not appear when you view the dashboard.

3. In the Mode field select either Transpose or Condense from the drop-down list.

Transpose Mode

   1. Select **Transpose Mode** to take the different rows value columns and choose to:

   2. Check **Create a new column for each frame** to convert the different rows' value columns into new columns for each frame (index) value:

OR

- Concatenate them into a single array column:
- Select a Frame Column from the drop-down list (the columns are defined in a visualization object, such as the grid in the example above). The Frame Column is the index column around which the data will be transformed.
- Specify Value Columns. This is the column whose values will be concatenated or placed into a series of columns. Select a Value Column from the drop-down list. If you selected Create a column for each frame in Transpose mode, click the Apply button, otherwise continue with step 4 below.
- To add another Value Column, click the Add Value Column button to select another value column. Repeat this step for each Value Column you wish to add.
- When you are done, click the Apply button.

Condense Mode

- Select Condense Mode if you wish to concatenate individual column values into a single array column:
- Enter a name of your choice in the Condensed column name field.
- In the Choose columns list place a check mark in columns you wish to concatenate in the Condensed column (These values are defined in the linked Query data block).
- When you are done, click the Apply button.

A Sparkline presents multiple rows of data into an array of those data values in a single row.
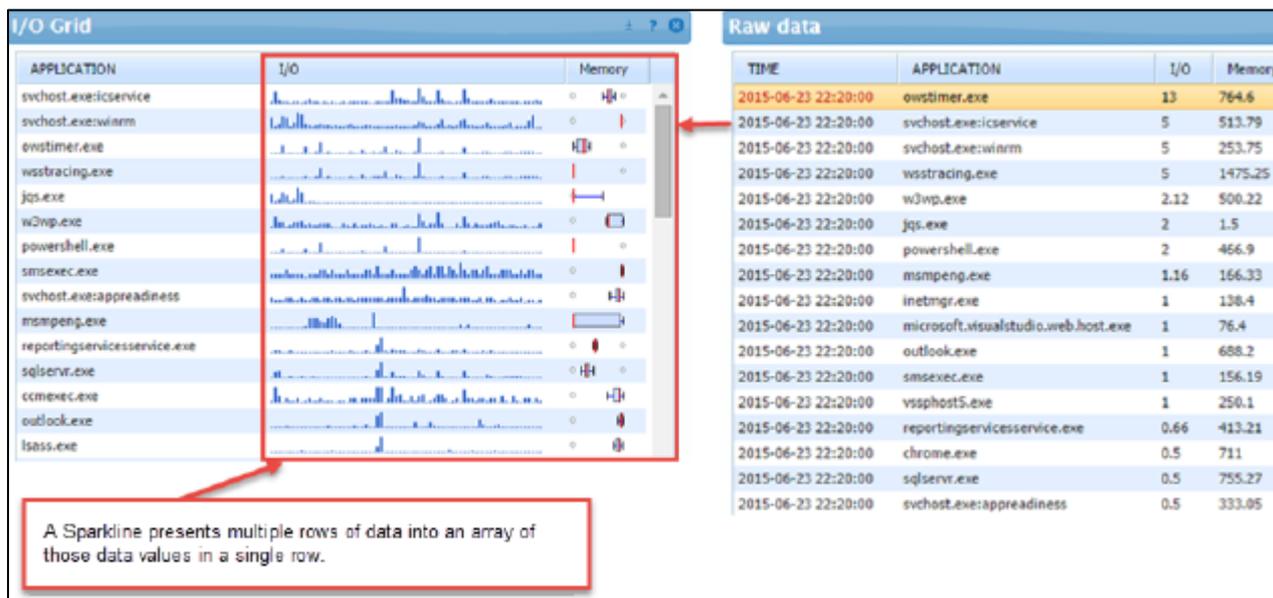
1.1.26   Defining a Data Frame Control (LDI plus Version 7.2)

The Data Frame Control is used to transform a single column value from multiple rows into an array of those data values in a single row. This is required for input to a Sparkline visualization. The Data Frame takes the values from the specified Value Column and translates them based on the Frame Column. All other columns are effectively treated as group-by columns.

To prepare the data in a Grid where you want to use a Sparkline visualization, you will usually need to include a Data Frame object between a Query   Data control and a Grid block.

1. Drag a Query Data block to the workspace and define the Query Data block as necessary.

2. Add a Data Frame Control to the workspace and connect a Query Data block as input to the Data

   3. Frame Control.

   Note: The Data Frame Control object will not appear when you view the dashboard.

4. Select a Frame Column from the drop-down list (the columns are defined in a visualization object, such as the grid in the example above). The Frame Column is the index column around which the data will be transformed. In the example above, this is TIME.

5. Specify Value Columns. This is the column whose values will be concatenated. Select the first Value Column from the drop-down list.

6. Click the Add Value Column button to select another value column and repeat this step for each Value Column you wish to add.

7. When you are done, click the Apply button.

8. Continue with step 4 in Defining a Sparkline.

A Sparkline presents multiple rows of data into an array of those data values in a single row.
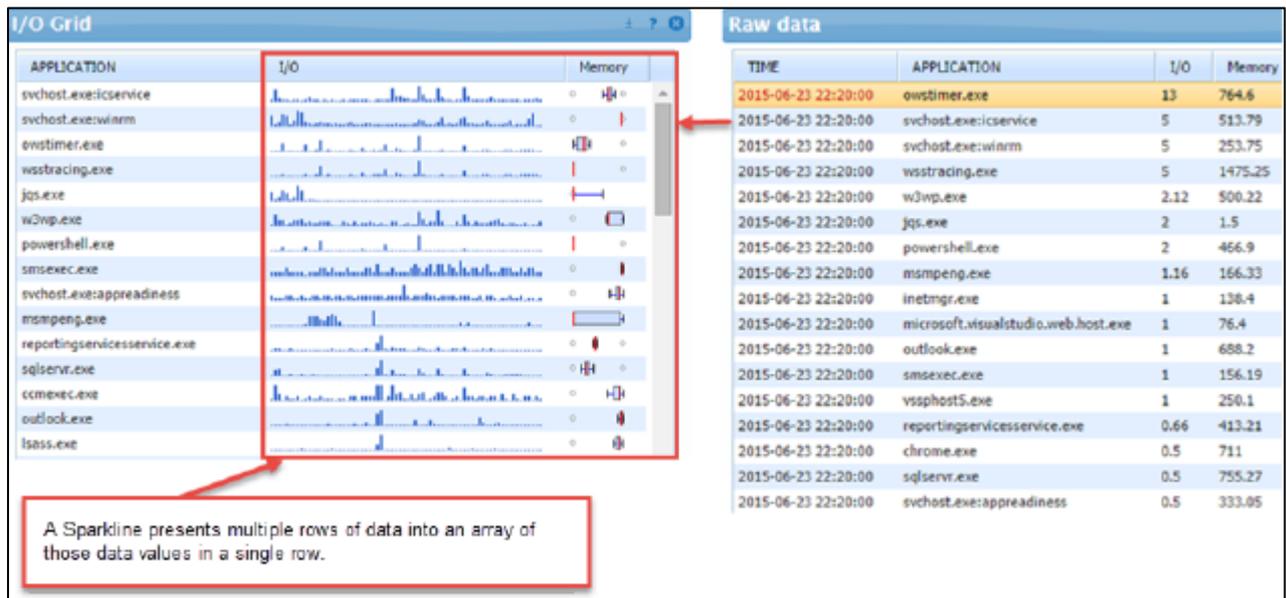
1.1.27 Focus Bar Control

A Focus Bar provides a way to zoom into a section of a chart to view detail level data. The user can select a portion of the focus bar and the associated chart will recalibrate to show only the selected range as shown in the example below.

For more information on how to use a focus bar in a dashboard see "Interacting with Grids and Charts."

To set up a focus bar on a chart:

1. Start with a dashboard set up to display a chart. This will have a Query Data block and a Chart block defined.

2. Drag a Focus Bar Control block to your workspace and place it between the Query Data and Chart blocks.

3. Connect the Query Data block as an input to the Focus Bar block, and then connect the Focus Bar block as an input to the Chart block.

4. In the Focus Bar's properties, select the same Pane from the drop-down list as that in which the Chart will appear.

5. From the drop-down list in the Focus column field, select the column that contains the values that you want the user to be able to zoom in on.

6. From the drop-down list in the Preview column field, select the column that you want to display in the focus bar. Usually this is one of the columns used as a series in the chart.

7. Click the Apply button to save your changes.
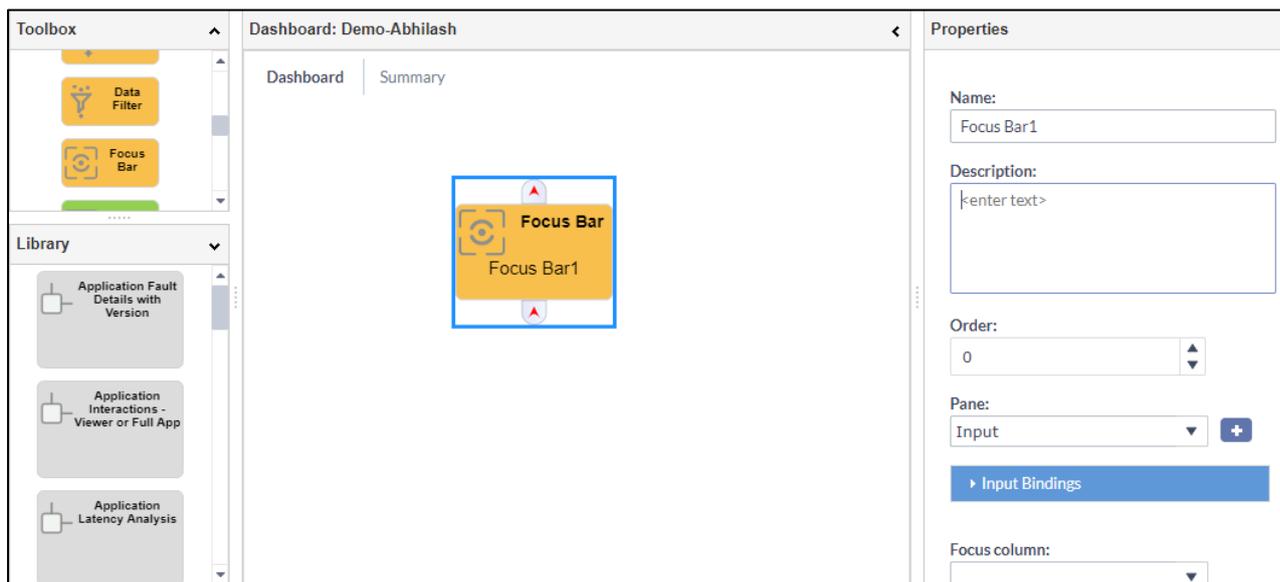
1.1.28　Data Filter

The Data Filter Data Control block allows you to filter the output of a data control block to only the data you really want to display in the results. Parameter values can be supplied to the Data Filter block by attaching inputs such as the Option List or Date/Time Data Control blocks and binding the parameters to the outputs of those blocks. This enables you to use a single Data block to connect to a number of Visualization Object blocks with each of those displaying a subset of the data returned by the Data block.

When defining values you can use a fixed value, or you can make the filters dynamic by using a variable for the test value. When you use variables in the filter definition, they are then available for linking to other blocks in the Dashboard Builder. For example, if you want to display everything after a certain date in your dashboard, add a filter against a Date/Time column and define the variable as "start date". Once saved, the Query Data block can be bound to a Date/Time Control block using the "Start Date" as input to the Data Query block. The value entered by the user will be substituted into the query at query time.

1. Start by dragging either a Query Data block or a SSRS Data block to the workspace.

2. Drag a Data Filter Control block to the workspace and connect the Query Data block to it as input.

3. Select the Data Filter block to display its properties. In the Filter section, click the Edit Filter button to display the Filter Builder

4. Define a filter, click the Add Test button.

5. Select a data column from the left drop-down menu.

Select a condition from the middle drop-down menu

1. Select either fixed value, or variable named from the right drop-down menu.

2. If you selected variable named, enter a variable in the <enter variable> field. If you select fixed value, enter a value.

3. You can add additional Tests or Groups (using the Add Group button) to further refine your filter.

4. If you wish to delete a test or group, select the filter line and click the Delete Selected button.

   Note: New tests or groups of tests are added after the currently selected test or group. If you wish to move the order of a test or group, you can drag and drop the test or group to the desired location.

5. Click the Done button. The filter definitions display in the Filter section of the Data Filter's properties pane.

6. Drag a visualization object, such as a grid, to the workspace and connect it to the output of the Data Filter Control block.

7. Select the visualization object (for example, a grid), and open the Input Bindings section. Then select the filter Data you wish to pass from the drop-down list.

8. When you are done, click the Apply button to save your changes.
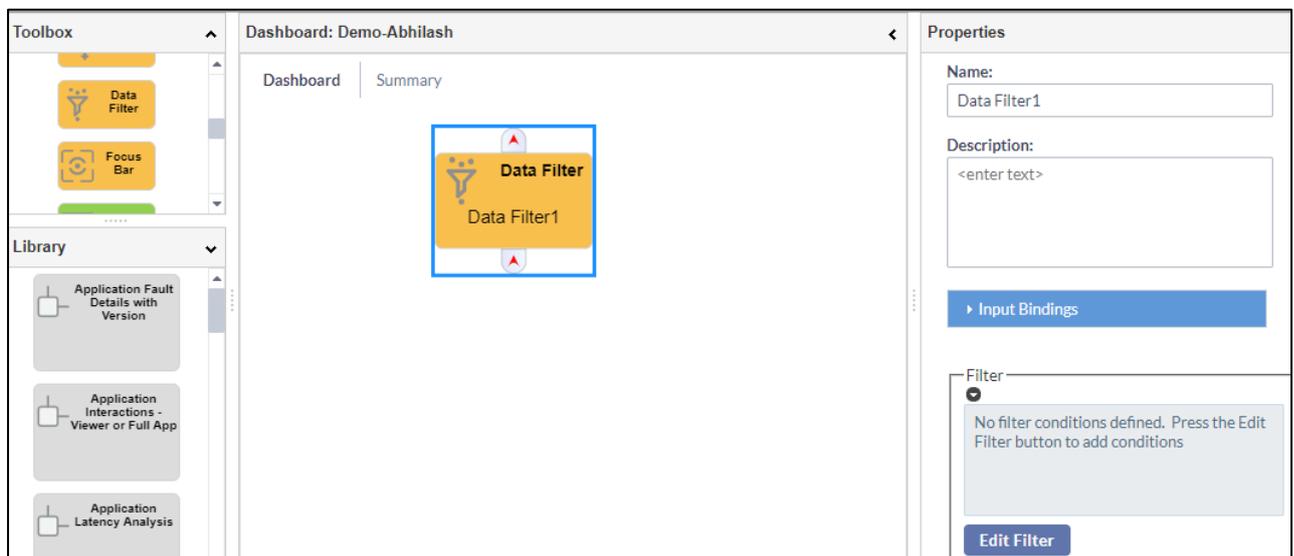
1.1.29   Grid

The Grid block provides a way to show tabular or hierarchical data in grid:

1. Drag a Query Data block to the workspace and define the Query Data block as necessary.

2. Drag the Grid block from the Toolbox into the workspace.

3. Link the Query Data block with the Grid by connecting the Query Data block's output port to the Grid block's input port. Once you do this, the Column Properties section will be available for selection in the Grid's Properties.

4. Optionally, Name the Grid block and provide a Description. The name will appear in the grid pane's title bar when the dashboard is viewed.

5. Optionally, supply an Order for where on the Dashboard you want the grid to display.

   Note: The LDI plus Dashboard Viewer allows you to move most objects and save the layout, but the Order parameter places the objects initially.

6. If you want to hide any of the columns from the user, select the column from the drop-down list, and check the Hide Column option. The data from this column will still be available for other blocks to use but will be invisible to the user in this grid.

7. You can rename the column using the Column Caption field. This will only affect how the column displays in the grid.

8. Click the Apply button to save your changes.
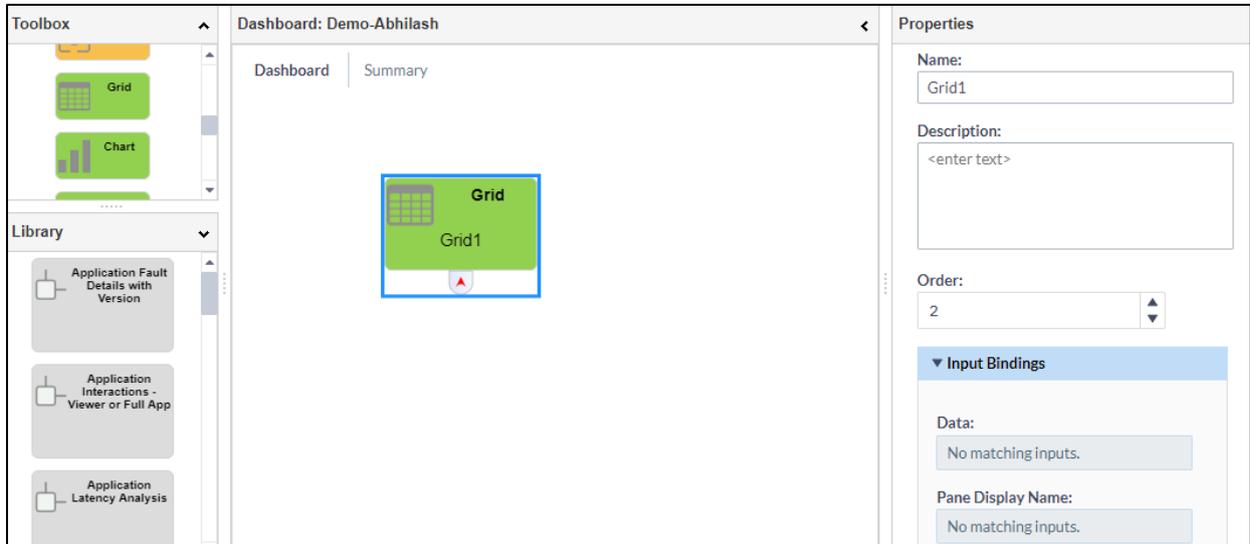
1.1.30   Adding a Sparkline to a Grid

A Sparkline is a visualization in which a simple graph is rendered inside of a grid cell. It is used to present the general shape of a variation (typically over time) in some measurement in a simple and highly condensed way. To create a Sparkline, you start with a defined grid object, and use a Data Frame Control between a Query Data block and the grid to transform a single column value from multiple rows into an array of those data values in a single row. The example below shows trends in I/O and Memory for different applications.

To create a Sparkline:

1. Drag a Query Data block to your workspace.

2. Drag a Data Frame Control to your workspace and connect the Query Data block as input to the Data Frame Control.

   Note: The Data Frame Control object will not appear when you view the dashboard.

3. If you are using LDI plus Version 7.2 or lower, follow instructions in the topic Defining a Data

   4.Frame Control (LDI plus 7.2). If you are using LDI plus 8.0 or above, in the Mode field select Transpose.

5. Select a Frame Column from the drop-down list (the columns are defined in a visualization object, such as the grid in the example above). The Frame Column is the index column around which the data will be transformed.

6. Specify Value Columns. This is the column whose values will be concatenated or placed into a series of columns. Select a Value Column from the drop-down list.

7. To add another Value Column, click the Add Value Column button to select another value column. Repeat this step for each Value Column you wish to add.

8. When you are done, click the Apply button.

9. Add a Grid block to your workspace and connect it to the Data Frame Control so that the Data

10. Frame's output is the input to the grid. The grid presents the information you wish to use in a

11. Sparkline in a vertical fashion with one record or row for each time stamp. In the example shown above, there a time stamp record for each unique application, and every record has one value for I/O and one value for Memory.

12. In the Grid block's Column Properties section, select one of the columns to be used for the Sparkline, (I/O in the example below)

13. Select the Sparkline type from the drop-down list.

14. Repeat steps 4 - 7 for each Sparkline column you wish to display in the grid.

15. Click the Apply button to save your changes.
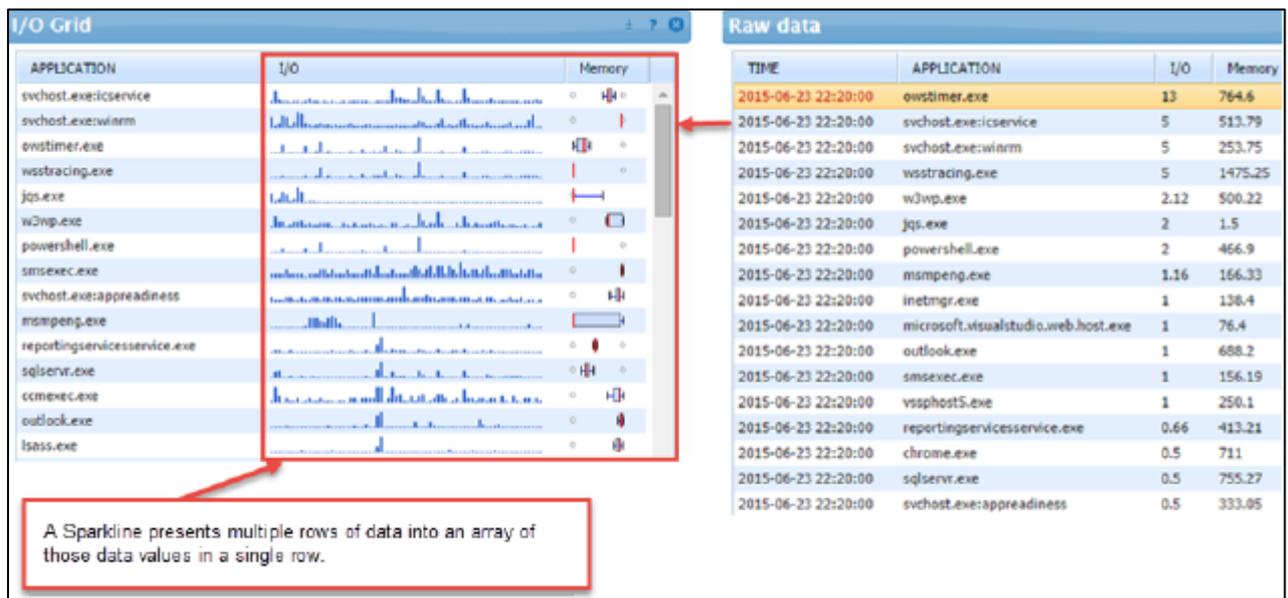
1.1.31 Defining a Chart

A Chart is used to show data in standard graph formats such as line, bar, column, pie, and area. To add a chart (or a graph) to a dashboard:

1. Drag a Query Data block to the workspace and define the Query Data block, as necessary.

2. Drag the Chart block from the Toolbox onto your workspace.

3. Link the Query Data block with the Chart by connecting the Query Data block's output port to Chart block's input port.

4. Optionally, Name the Chart block and provide a Description. The name will appear in the chart pane's title bar when the dashboard is viewed.

5. Optionally, supply an Order for where on the Dashboard you want the chart to display.

6. Select a default chart series type from the Default series type field for the series data. See Available Chart Series Types for more detailed information.

7. Select a data column for the chart from the Category column drop down field. The data columns are determined by the SQL query you are using in the Query Data block.

8. For each numeric column that you want to chart, click the Add Series button.

   Note: If you choose not to add a series the system will create a series for every numeric column.

9. Optionally, select a Colour for each series. If you do not select a colour, the system will assign default colours to each series.

10. When you are done, click the OK button.

11. Optionally enter a Category axis label, and Y-Axis label.

12. Click Apply to save your changes.

13. If you wish to add a drill-down from a series on the chart, see Defining Drilldowns from more information.
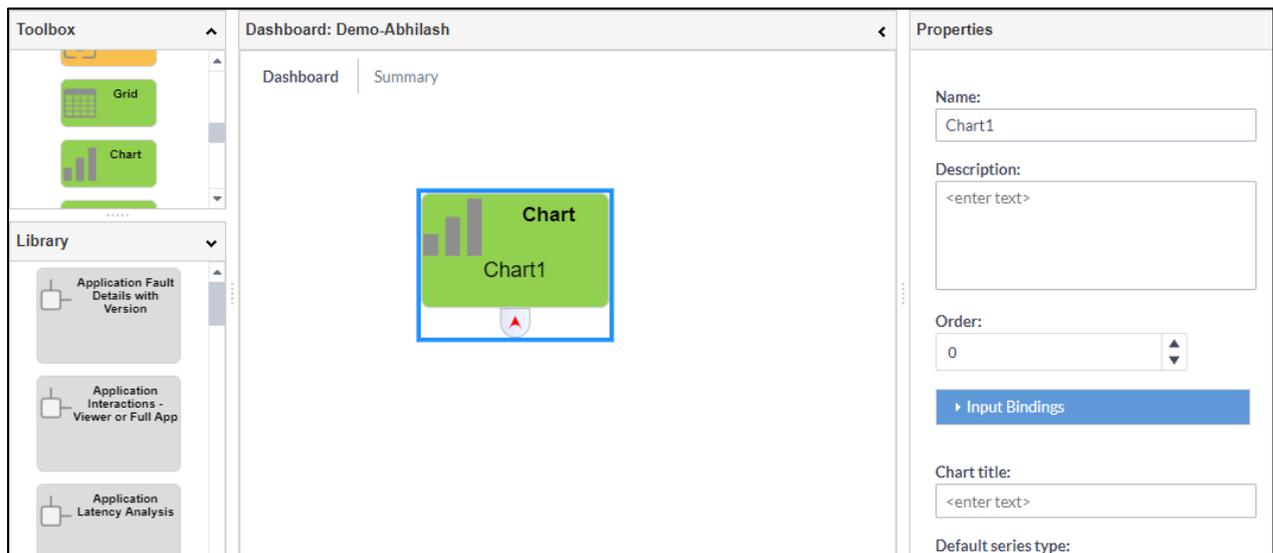
1.1.32 Available Chart Series Types

The following chart types (examples of which are shown below) are available for use in a series when defining a Chart in LDI plus Dashboard:

- **Line -** Useful for comparing non-cyclical data for showing trends over periods of time
- **Column -** Useful for comparing several items in a specific range of values
- **Bar** - Useful for comparing several categories of data. Most often used for a single point in time
- **Area -** Useful for clearly illustrating the magnitude of change between two or more data points
- **Stacked line** - Useful for analysing data with different units of measure
- **Stacked column -** Useful for comparing items in a specific range of values as well as showing the relationship of individual sub-items with the whole
- **Stacked bar -** Useful for comparing more complex categories of data

- **Stacked area -** Useful for comparing data that changes over time and where relative and absolute differences matter
- **Pie -** Useful for representing the distribution or proportion of each data item over a total value
- **Scatter -** Useful for showing correlations between two sets of values
- **Spline -** A curved line chart that draws a fitted curve through data points. Useful for showing smooth gradual changes instead of spikes

1.1.33   Defining a Gauge

Gauges are dials or meters that enable the dashboard user to visualize an item/s data value. Gauges can only show one value at a time and so generally show either an average value, or a value from a selected row.

Note: Blocks that are connected to the same Query data block can communicate certain information with one another, for example the currently selected row.

To define a gauge:

1. Drag a Query Data block to the workspace and define the Query Data block as necessary.
2. Drag the Gauge block from the Toolbox into the workspace.
3. Link the Query Data block with the Gauge by connecting the Query Data block's output port to the Gauge block's input port.
4. Optionally, Name the Gauge block and provide a Description. The name will appear in the gauge pane's title bar when the dashboard is viewed.
5. Optionally, supply an Order for where on the Dashboard you want the gauge to display.

   Note: The LDI plus Dashboard Viewer allows you to move most objects and save the layout, but the Order parameter places the objects initially.
6. Open the Input Bindings section and select an input from the Data value drop-down list. The first level Data value option is the data source (Query Data1 in the example

below). The second level contains Columns, Current Cell column, or the value of the first column in a selected row.

7. You can choose to set the Minimum scale value and Maximum scale value by selecting an external source from the drop-down lists in the Input Bindings section, or you can enter these values manually in the Minimum value and Maximum value fields in the section near the bottom of the Properties pane. The default manual values are 0 and 100.

   Note: If you choose to set the Minimum and Maximum scale value fields under Input Bindings, these will take precedence over setting these values manually, and the Minimum value and Maximum value fields will disappear.

8. Optionally, enter a Gauge title which will appear above the gauge.

9. Optionally, enter a Gauge label to appear on the gauge.

10. Select a Gauge type from the drop-down list: full dial; half dial, or meter.

11. Optionally, specify colour thresholds to paint a colour band on the gauge scale. See Using a Range Data Control to Set Colour Thresholds for Gauges for detailed information.

12. When you are done, click the Apply button to save your changes.
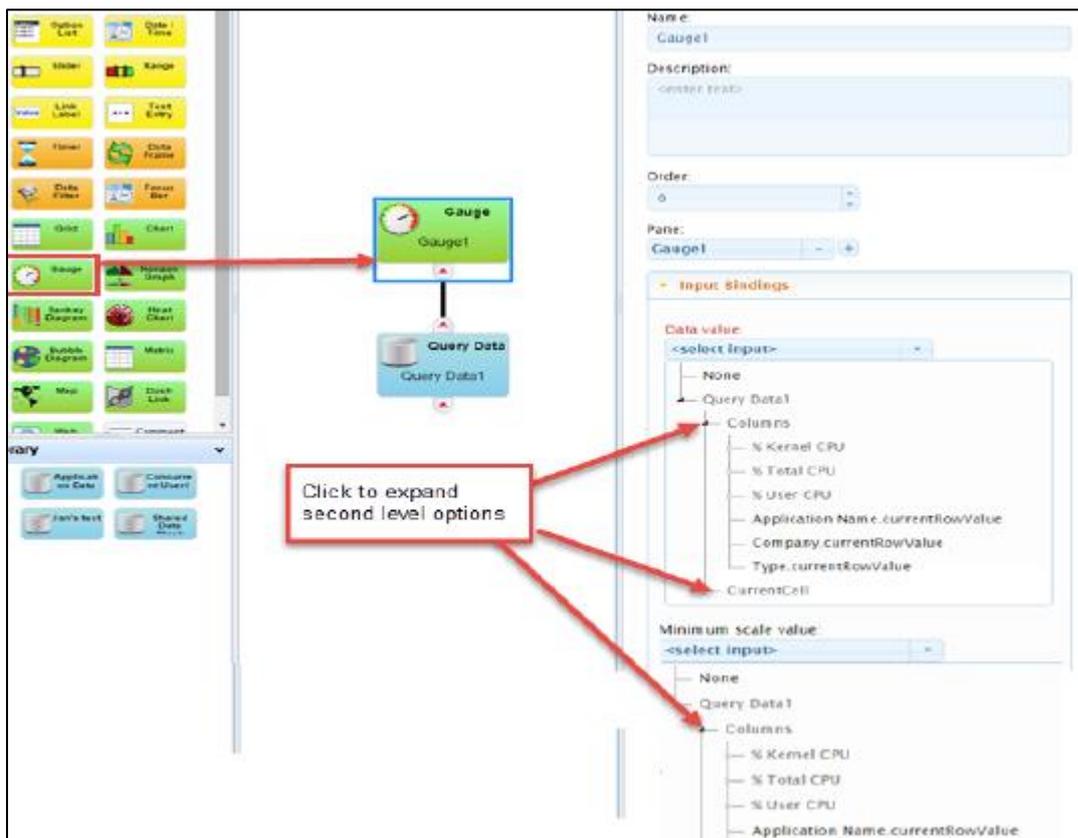
1.1.34 Defining a Horizon Graph

A Horizon Graph provides a way to see how an item's value changes over time, in a compact space. A single-series area graph is divided into equal height bands based on the range of the data. These bands are then condensed into a single layer, with darker colours signifying increased distance from the base line. An example of a Horizon Graph is shown below:

To set up a Horizon Graph:

1. Drag a Query Data block to the workspace and define the Query Data block as necessary.

2. Drag the Horizon Graph block from the Toolbox into the workspace.

3. Link the Query Data block with the Horizon Graph by connecting the Query Data block's output port to the Horizon Graph block's input port.

4. Optionally, Name the Horizon Graph block and provide a Description. The name will appear in the Horizon Graph pane's title bar when the dashboard is viewed.

5. Optionally, supply an Order for where on the Dashboard you want the Horizon Graph to display.

6. In the Series section, select a Column for which to display data and optionally enter a Label for the column. If you wish to use the series mean as the base (zero) value, select Mean as Base to the right of the series line.

7. If you wish to include another series, click the Add Series button, and repeat step 5 as necessary.

8. Click the down arrow to the left of the Display Properties to see the various display options.

9. Either key in or use the up and down arrows to select the number of Bands you wish to display in the graph.

10. Select a Display type:

    a **Mirror -** Both the positive and negative values extend up from the X-axis

    b **Offset -** The negative values extend down from the top of the chart

11. Select an Interpolation style: n Linear

    a Spline

    b Step

12. If you wish to use the default positive (green) and negative (red) colours, select the Use default colours check box.

13. If you wish to select your own colours, click on the coloured square next to Positive colour, and Negative colour, and select your colour of choice for each of these.

14. Optionally, choose to Display the axes, or leave this check box unchecked if you do not wish to display the axes.

15. When you done, click the Apply button to save your changes.

When you connect the Query Data block to the Horizon Graph block, the Series properties are available for selection.
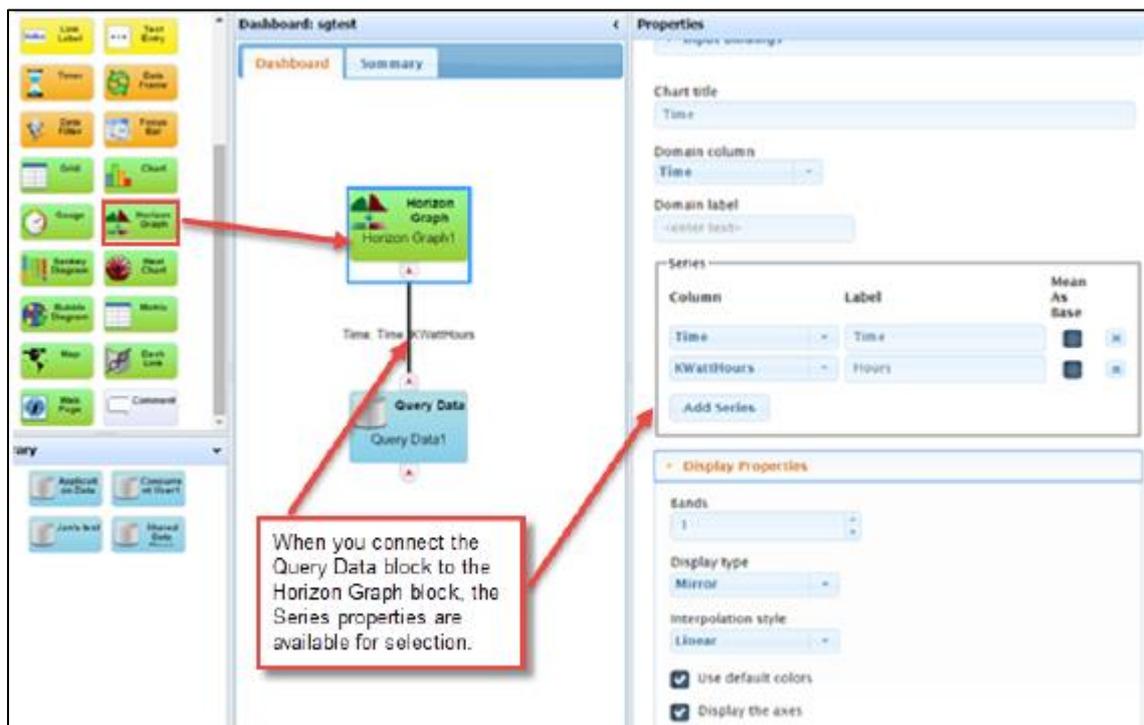
1.1.35   Defining a Sankey Diagram

A Sankey diagram is useful for showing volume flow between entities such as the volume of data transfer between entities on a network. Each entity is displayed as a rectangle with the link between two entities having a width proportional to its value. In the example of data transfer on a network, the larger the data transfer, the greater the width of the link.

To define a Sankey diagram:

1. Drag a Query Data block to the workspace and define the Query Data block as necessary.

2. Drag the Sankey Diagram block from the Toolbox into the workspace.

3. Link the Query Data block with the Sankey Diagram by connecting the Query Data block's output port to the Sankey Diagram block's input port.

4. Optionally, Name the Sankey Diagram block and provide a Description. The name will appear in the Sankey diagram pane's title bar when the dashboard is viewed.

5. Optionally, supply an Order for where on the Dashboard you want the Sankey diagram to display.

   Note: The LDI plus Dashboard Viewer allows you to move most objects and save the layout, but the Order parameter places the objects initially.

6. Select a Source, Target and Value input from their respective drop-down lists. These are required inputs.

7. Optionally enter a Value label. This text will be appended to the numeric values displayed when a user hovers over the Sankey diagram in the dashboard.

8. Define from which link the volume colour is to be derived by selecting one of the following Link colour options:

a **None** - all volume flows will display as black/Gray

b **Source Colour** - all volume flows will display as the colour of their respective source blocks

c **Target Colour** - all volume flows will display as the colour of their respective target blocks

d **Gradient** - all volume flows will display as colour gradients of their source and target blocks respectively

e **Reverse Gradient** - all volume flows will display as reverse gradients of their source and target blocks

9. A Reverse input may be selected to reverse the link orientation of a row when the Reverse value evaluates as false. If you wish to reverse the link orientation of the row, select the Allow link flow reversal check box, and then select the input from the Reverse on field.

10. When you are done, click the Apply button to review your changes.
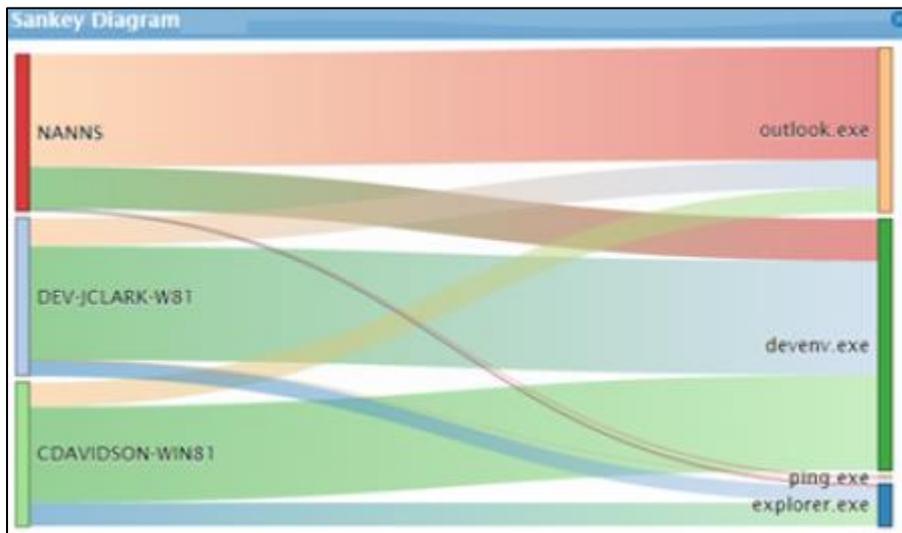
1.1.36   Defining a Heat Chart

Shows a single data dimension using two axes in a circular layout. This type of chart is useful for showing cyclic data such as hours of the day during the week and makes it easy to identify clustered data values such as periods of peak usage. The example below shows Active Users hours during the week.

To define a heat chart:

1. Drag a Query Data block to the workspace and define the Query Data block as necessary.

2. Drag the Heat Chart block from the Toolbox into the workspace.

3. Link the Query Data block with the heat Chart by connecting the Query Data block's output port to the Heat Chart block's input port.

4. Optionally, Name the Heat Chart block and provide a Description. The name will appear in the Heat Chart's pane's title bar when the dashboard is viewed.

Note: The LDI plus Dashboard Viewer allows you to move most objects and save the layout, but the Order parameter places the objects initially.

5. Open the Input Bindings section and select an input from the Data field's drop-down list.

6. From the Segment label column field's drop-down list select the data with which to define the pie-like wedges of the Heat Chart.

7. From the Radial label column field's drop-down list select the data with which to define the concentric circles of the Heat Chart.

8. From the Data value column field's drop-down list select the data with which to control the colour of the segments at the intersections of the two axes of the segments and the concentric circles.

9. When you are done, click the Apply button to save your changes.
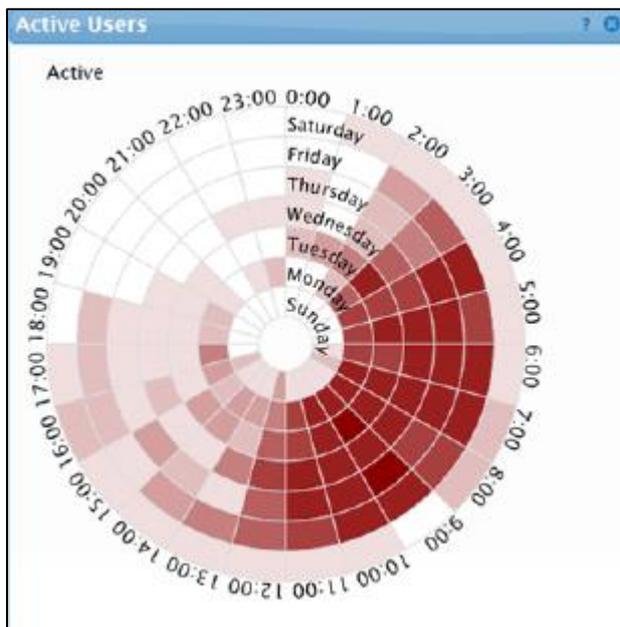
1.1.37   Defining a Bubble Diagram

A Bubble Diagram displays items using bubble size and colour to represent two values, for example file sizes, the number of hits on various website, or the active time for application usage as shown in the examples below.

Bubble Diagrams can also be used to:

- Clearly show the relative relationships between data values
- Display hierarchies if the data block is configured for it. Hierarchies display as bubbles within bubbles. If the data is hierarchically ordered, the Bubble Diagram can also show the parent/child relationships, such as applications that make up a package.
- Show two dimensions of data simultaneously by tying the size and colour of the bubble to input data - for example memory usage of an application driving the size of the bubble, and CPU usage driving the colour. Control the thresholds and

colours used to colour the bubbles you can set up and attach a Range Control to the Bubble Diagram to set the ranges and colours.

To define a bubble diagram:

1. Drag a Query Data block to the workspace and define the Query Data block, as necessary.

2. Drag the Bubble Diagram block from the Toolbox into the workspace.

3. Link the Query Data block with the Bubble Diagram block by connecting the Query Data block's output port to the Bubble Diagram block's input port.

4. Optionally, Name the Bubble Diagram and provide a Description. The name will appear in the Bubble Diagram pane's title bar when the dashboard is viewed.

5. Optionally, supply an Order for where on the Dashboard you want the Bubble Diagram to display.

   Note: The LDI plus Dashboard Viewer allows you to move most objects and save the layout, but the Order parameter places the objects initially.

6. Open the Input Bindings section and select an input from the Data drop-down list.

7. Select a data type from the Label column field's drop-down list to display as labels on the bubbles in the diagram.

8. Select a value from the Size value column field's drop-down list with which to drive the bubble size.

9. Select a value from the Colour value column field's drop-down list with which to drive the bubble's colour.

10. Optionally, you can choose to attach and set up a Range Slider block to control colour thresholds, see Defining a Range Control for more information. After setting up a Range Slider block, select the Bubble Diagram block, and optionally, select Colour parent nodes by threshold.

11. If you wish to set up a Hierarchical bubble diagram, see Setting Up a Hierarchy for more information.

12. When you are done, click the Apply button to save your changes.
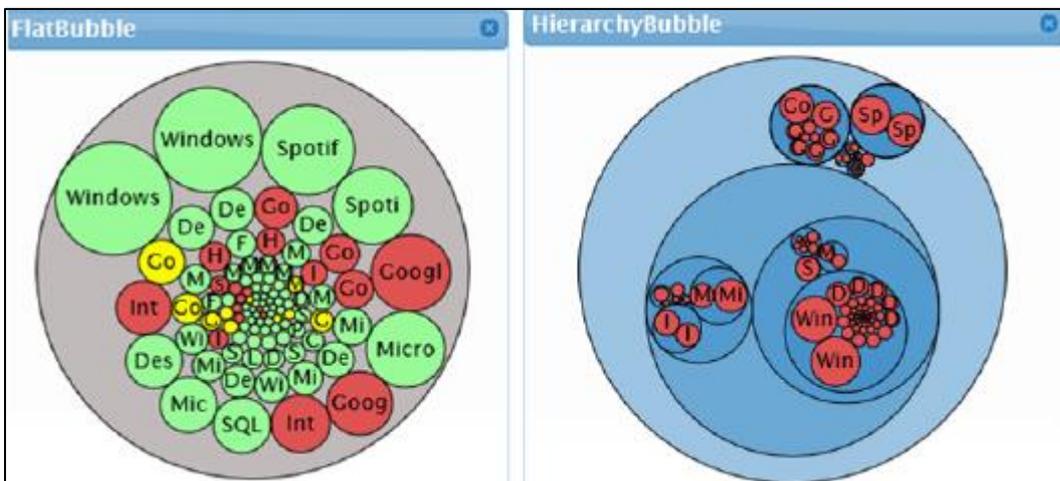
1.1.38   Defining a Matrix

The Matrix object shows two or more sets of series in a block-based matrix to display data points in relation to others. The bound data must have one column for the Name values, and one or more columns that define the Series, or axis data values. The output from the matrix is the set of rows matched against the matrix-selected object names. In the example below, % Kernel CPU, % User CPU, and % Total CPU readings are compared against each other.

To add a Matrix to a dashboard:

1. Drag a Query Data block to the workspace and define the Query Data block, as necessary.

2. Drag the Matrix block from the Toolbox onto your workspace.

3. Link the Query Data block with the Matrix by connecting the Query Data block's output port to Matrix block's input port.

4. Optionally, Name the Matrix block (at the top of the Object pane) and provide a Description. The name will appear in the matrix pane's title bar when the dashboard is viewed.

5. Optionally, supply an Order for where on the Dashboard you want the matrix to display.

6. In the Name field select the category of data you wish to display from the drop-down list. This is a required field. The example above uses Application Name (displayed in the legend for the dashboard when viewed).

7. In the Series section, select a column for which to display data.

8. If you wish to display additional Series, click the Add Series button, and then select a column another from the drop-down list. Repeat this step for each Series you wish to add.

9. When you are done, click the Apply button to save your changes.
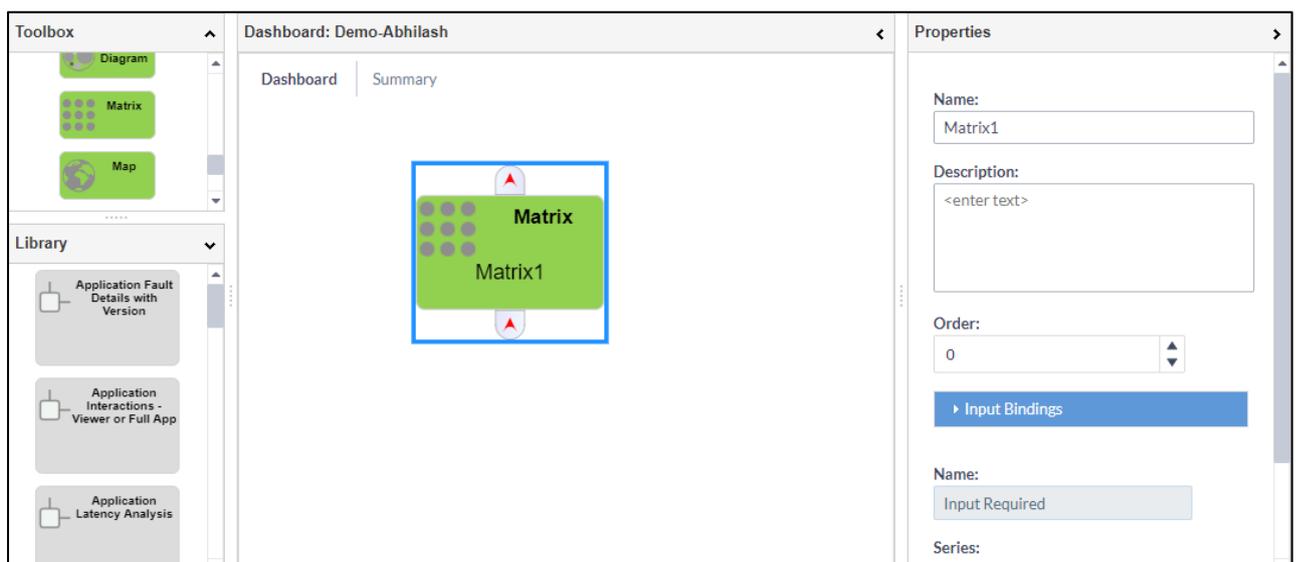
1.1.39 Defining a Map

The Map block allows you to display data on a map with colour-coded markers at specific latitude and longitude locations (as shown in the example below), or colour-coded countries or regions.

To define a map visualization:

1. Drag a Query Data block to the workspace and define the Query Data block, as necessary.

2. Drag the Map block from the Toolbox into the workspace.

3. Link the Query Data block with the map by connecting the Query Data block's output port to the map block's input port. Once you do this, the Column Properties section will be available for selection in the Map block's Properties.

4. Optionally, Name the Map block and provide a Description. The name will appear in the map pane's title bar when the dashboard is viewed.

5. Optionally, supply an Order for where on the Dashboard you want the map to display.

   6. The LDI plus Dashboard Viewer allows you to move most objects and save the layout, but the Order parameter places the objects initially.

7. Choose how you want data displayed on the map by selecting one of the following options from the Location Type field's drop-down list:

   a Latitude/Longitude - shows data displayed as coloured markers at locations specified by latitude and longitude

   b Country - shows data by colouring entire countries

   c State/Province/Region - shows data by colouring country subdivisions using the two-letter postal code as the ID

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Displaying Data by Latitude and Longitude

If you selected Latitude/Longitude as the Location Type the following fields display:

1. From the Label Column field's drop-down list, select the label for the column data you wish to display when hovering over markers on the map.

2. From the Latitude Column field's drop-down list, select the column that contains the location's latitude in decimal format (e.g., 40.77)

3. From the Longitude Column field's drop-down list, select the column that contains the location's longitude in decimal format.

4. From the Marker Size Column, select the column that contains the data that will visually be represented by marker size.

5. From the Marker Shape field's drop-down list select the marker shape you wish to display

    a   (Options include Circle, Cross, Diamond, Square, Triangle, Bar, and 3d Bar)

6. When you are done, click the Apply button to save your changes.

Displaying Data by Country

If you selected Country as the Location Type the following fields display:

1. From the Label Column field's drop-down list, select the label for the column data you wish to display when hovering over countries on the map.

2. From the Country Column, select the column that contains the two-letter ISO 3166 country code.

3. From the Colour Value Column, select the data column you for which you wish to display colour values.

4. When you are done, click the Apply button to save your changes.

5. To display colour gradients, attach and set up a Range Slider Control. See Defining a Range Control for more information.

Displaying Data by State/Province/Region

If you selected State/Province/Region as the Location Type the following fields display:

1. From the Label Column field's drop-down list, select the label for the column data you wish to display when hovering over State/Province/Regions on the map.

    Note: The State/Province/Region setting currently only supports US States and Canadian Provinces

2. From the Country Column, select the column that contains the two-letter ISO 3166 country code.

3. From the State/Province/Region Column, select the column that contains the two-letter postal code ID representing the subdivision of a country.

4. From the Colour Value Column, select the data column you for which you wish to display colour values.

5. When you are done, click the Apply button to save your changes.

6. To display colour gradients, attach and set up a Range Slider Control. See Defining a Range Control for more information.
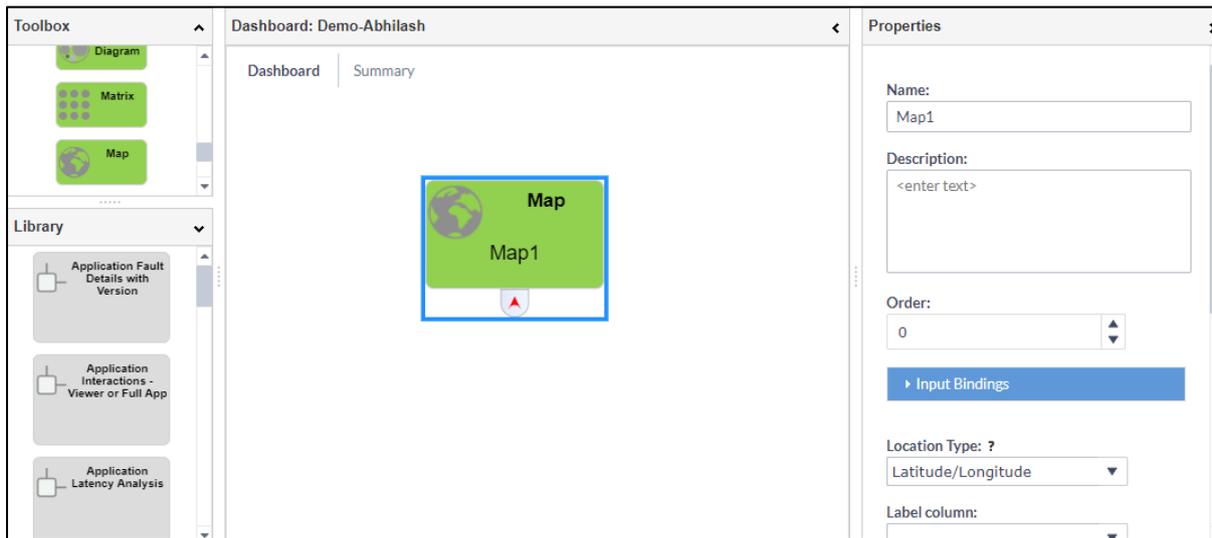
1.1.40 Defining a Dash Link

A Dash Link blocks displays a visual representation of another dashboard that links to the selected dashboard. Clicking on the representation opens the other dashboard. You can include a Dash Link block in any of your dashboards. Dash Links are used to create a summary dashboard.

To define a Dash Link:

1. Drag a Dash Link block from the Toolbox to your workspace.

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2. Optionally, Name the Dash Link block and provide a Description. The name will appear in the Dash Link pane's title bar when the dashboard is viewed.

3. Optionally, supply an Order for where on the Dashboard you want the Dash Link to display.

4. Select the Dashboard to which you wish to link from the Dashboard drop-down list.

5. Optionally choose to display the dashboard name by clicking the Show Dashboard Name check box.

6. Select a Display Mode from the drop-down list:

   • Show description and summary or snapshot (default)

   • Show description only

   • Show summary only

   Note: If you do not define Summary Data for your dashboard, a stylized thumbnail will display for the Dash Link pane.

7. When you are done, click the **Apply** button to save your changes.
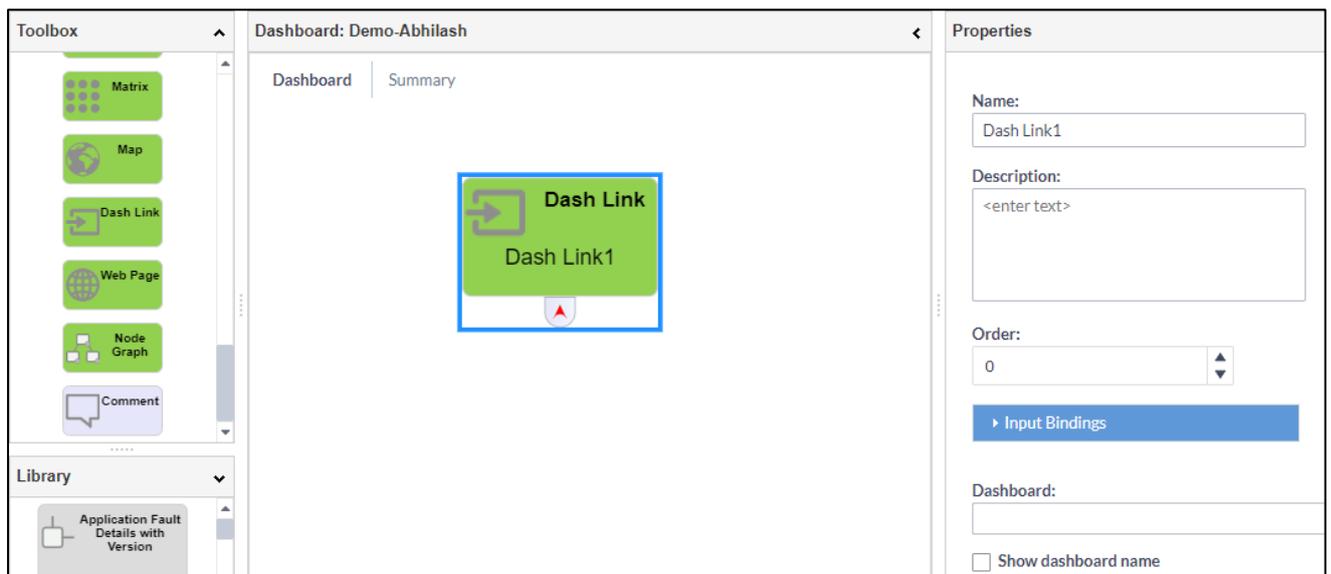
1.1.41 Defining a Web Page Link

The Web Page block allows you to display a web page in a pane on your dashboard by entering a relevant URL.

To define a Web Page block:

1. Drag the Web Page block from the Toolbox onto your workspace.

2. Optionally, Name the Web Page block and provide a Description. The name will appear in the Web Page pane's title bar when the dashboard is viewed.

3. Optionally, supply an Order for where on the Dashboard you want the web page to display.

4. If you want to enter additional static text at the top of the web page, enter the test you wish to display in the Static label text field. Optionally, specify a font size in the Font size (pixels) field.

5. Enter, or cut and paste the URL of the web page you wish to display in the Link URL field.

6. When you are done, click the Apply button to save your changes.
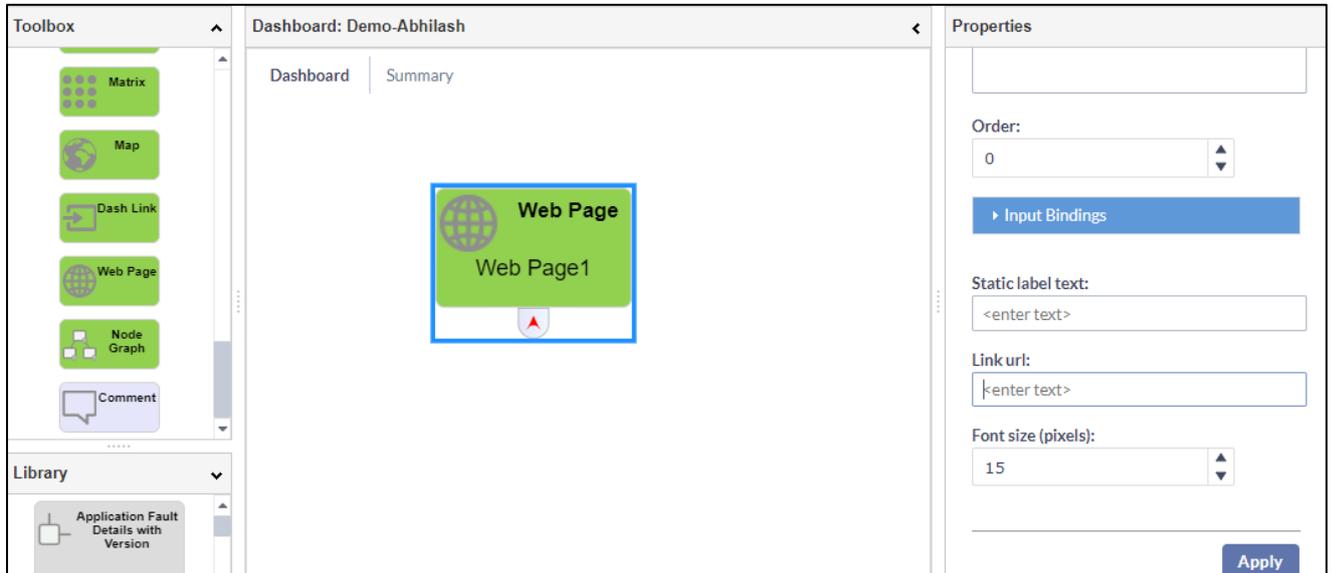
1.1.42   Defining a Node Graph

A Node graph presents hierarchical data in a node-based format.

To define a node graph object:

7. Drag a Node Graph object onto the workspace.

8. Drag a **Query Data block** to the workspace and create a SQL query that specifies one of the following table formats both of which are recognized by the Node Graph object:

- **ID/parentID** - the source table is a relational table with two columns: one specifies the row's ID and the other, the parent's ID
- **Hierarchy** - a specialized SQL query that creates a table in a hierarchical format.

9. Link the Query Data block with the Node Graph by connecting the Query Data block's output port to the Node Graph block's input port.

10. Optionally, **Name** the Node Graph block and provide a **Description**. The name will appear in the Node Graph pane's title bar when the dashboard is viewed.

11. Optionally, supply an **Order** for where on the Dashboard you want the Node Graph to display.

    Note: The LDI plus Dashboard Viewer allows you to move most objects and save the layout, but the Order parameter places the objects initially.

12. Select the appropriate option from the ID value column drop-down list.

13. Select the appropriate option from the Parent ID value column drop-down list.

Note: If the **ID value column** and the **Parent ID value column** are not specified in the Node Graph properties, then the hierarchical format is assumed.

14. From the **Label** column drop-down select the column that contains text to be used as the label for the node.

15. From the **Colour value column** drop-down, select the column to be used for colour coding (e.g., **Status**). This colour coding is specified in the example shown above using the **Range** control object. The **Range Control object** specifies the thresholds and colours. Links and dots on images in a Node Graph display can be coloured based on colour range thresholds. The link above the image and dot on the image will have the same colour.

16. Select a value from the **Image value column** drop-down. Images in the Node graph are specified in two parts. The Image value column in the Node Graph properties points to the column that contains one of the following twelve recognized text strings:

   - "desktop"
   - "laptop"
   - "monitor"
   - "peripheral"
   - "printer"
   - "server"
   - "serverDatabase"
   - "switch"
   - "thinClient"
   - "user"
   - "virtualDesktop"
   - "wan"

Note: If no text string is specified, or if the string is not one of the above recognized strings, then the Desktop image will be used, unless the Dashboard finds the "server" string, in which case the Server image will be used.

17. When you are done click the **Apply** button to save your changes.
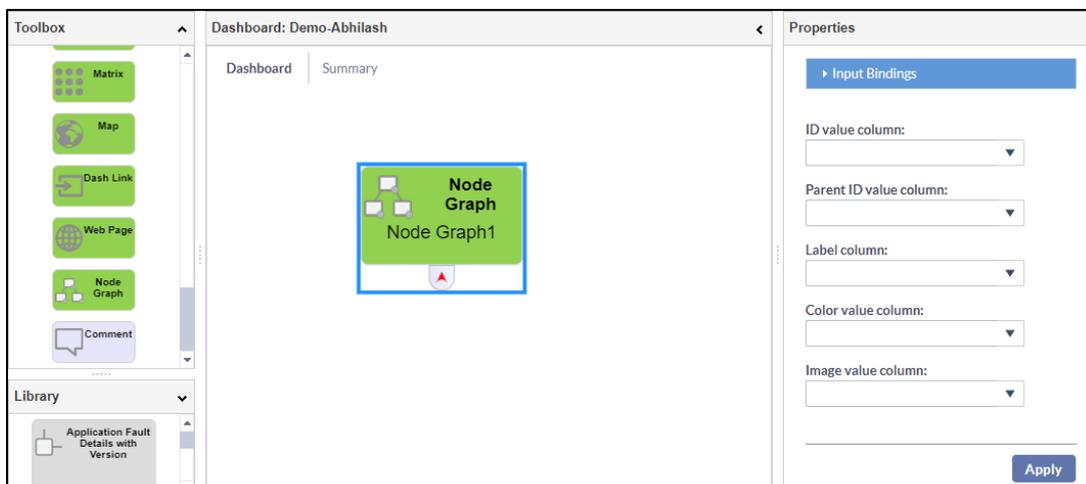
1.1.43 Defining a Comment

The Comment block provides a way for the dashboard designer to make notes about the design and construction of the dashboard. The comments are only visible in Dashboard Builder and have no impact on the display of a dashboard.

To add a comment:

1. Drag a Comment Block from the Toolbox to the Dashboard workspace.

2. Optionally, provide a Name for the Comment.

3. Enter a Description.

4. Click the Apply button to save your comment.
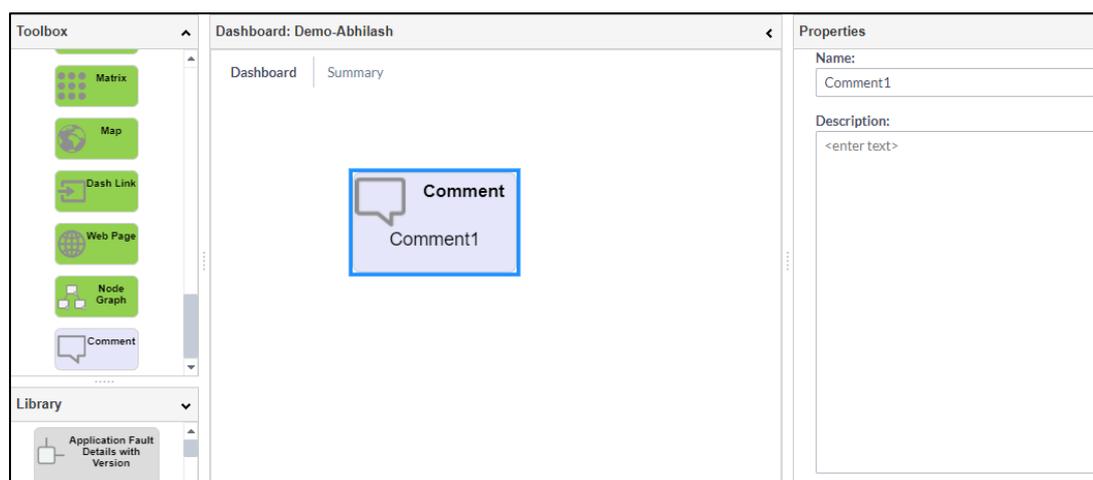
1.1.44 Other Setup Options

Information on the following setup options in Dashboard Builder is included in this section:

- **Defining tags** or keywords to enable users to find your dashboard more easily in a search
- **Defining drilldowns** from grids to LDI plus Resolve, LDI plus Site Visualizer, another LDI plus dashboard, or a custom URL
- **Connecting to a LDI plus child system**
- **Connecting to an external SQL database**
- **Forcing a dashboard to always display in Tile Mode**
- **Hiding source information from the user**
- **Setting up a hierarchical display**
- **Creating a summary dashboard**

1.1.45 Defining Tags

You can attach or add new keyword tags to dashboards to enable users to find groups of dashboards more easily when searching in the Dashboard Viewer.

To add tags to a dashboard:

1. With the dashboard open on your workspace, select the Dashboard tab.

2. To select from a list of already defined tags, simply place your cursor in the Tags field, and select the appropriate tag from the list.

3. To create a new tag, click the plus icon to the right of the Tags field.

4. Enter a name for the new tag in the pop-up dialog box, and click the OK button, or click the Cancel button.

5. When you are done, click the Apply button to save your changes.
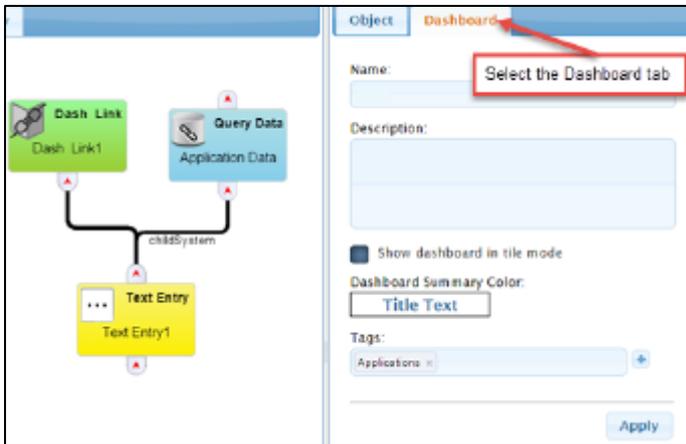
1.1.46 Defining Categories

You can attach or add new categories to dashboards to enable users to find groups of dashboards more easily when searching in the Dashboard Viewer.

To add categories to a dashboard:

1. With the dashboard open on your workspace, select the Dashboard tab.

2. To select from a list of already defined categories, either place your cursor in the Category field, begin typing a category name, and select from the displayed list, or use the drop-down list to select the appropriate category.

3. To create a new category, click the plus icon to the right of the Category field.

4. Enter a name for the new category in the pop-up dialog box, and click the OK button, or click the Cancel button.

5. When you are done, click the Apply button to save your changes.
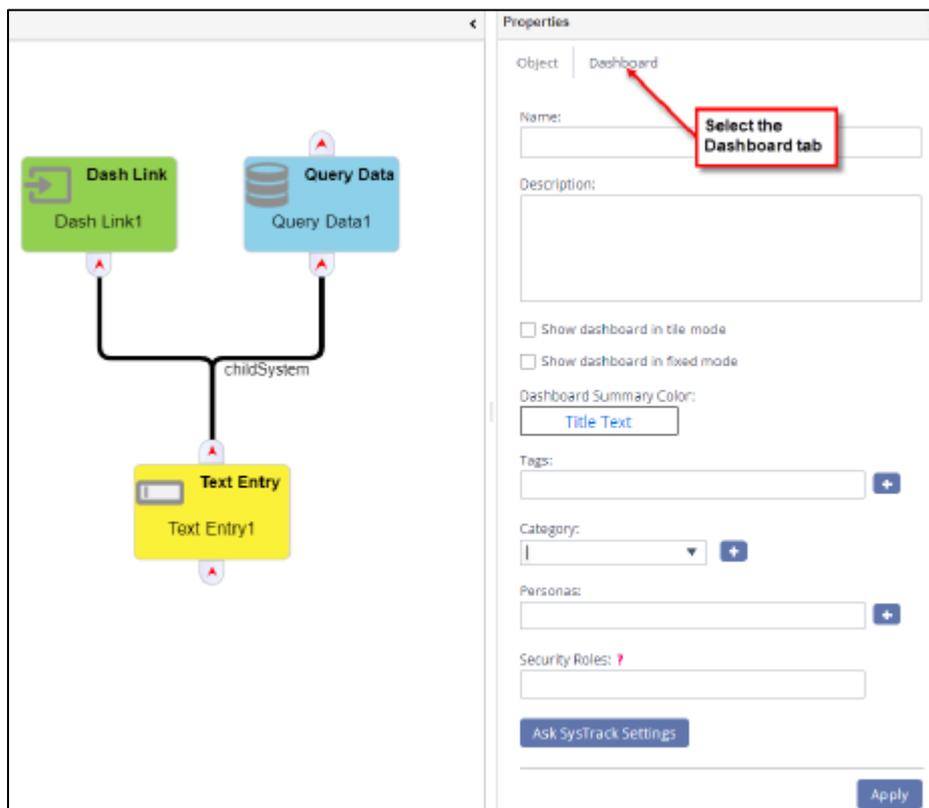
1.1.47   Defining Personas

You can attach or add new personas to dashboards to enable users to find groups of dashboards more easily when searching in the Dashboard Viewer.

To add personas to a dashboard:

1. With the dashboard open on your workspace, select the Dashboard tab.

2. To select from a list of already defined personas, simply place your cursor in the Personas field, and select the appropriate persona from the list.

3. To create a new persona, click the plus icon to the right of the Personas field.

4. Enter a name for the new persona in the pop-up dialog box, and click the OK button, or click the Cancel button.

5. When you are done, click the Apply button to save your changes.
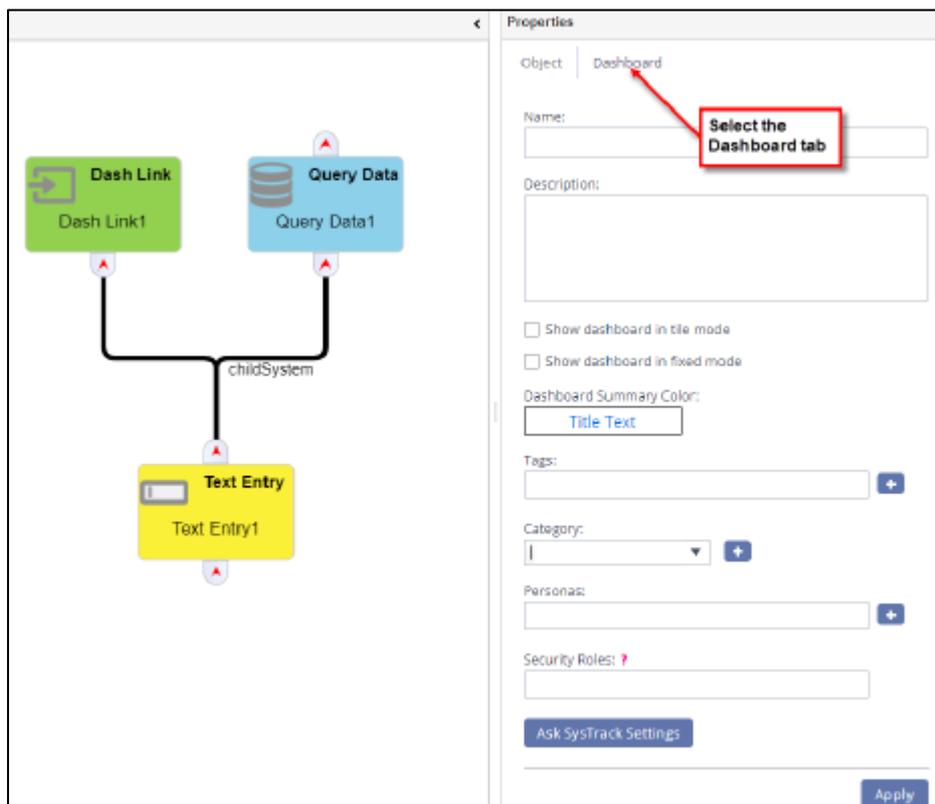
1.1.48 Defining Drilldowns

Grids and Charts can be configured to drill down and display one of the following:

- **LDI plus Resolve**
- **LDI plus Site Visualizer**
- **A LDI plus Dashboard**
- **A Custom URL**

If a drilldown is activated for a column in the grid, a blue circle appears in the column header.

To define a drilldown:

1. Select the Query Data block containing the data for the grid or chart.
2. From the Object tab, for LDI plus release 8.0 and above, click the Column Settings button, (or for LDI plus 7.2, click the Drilldown button).
3. Check the Enabled option in the Drilldown Definition section.
4. Select the Drilldown Type from the drop-down menu (Custom, Resolve, Site Visualizer, or Dashboard).
5. Select the column that contains the system name to which you want to drill down.

Faults for specific version

Time	FirstFaultTime	● SystemId	Count	ApplicationName	ApplicationVersion	ModuleName	ModuleVersion
2023-02-15 20:09:28	2023-02-15 20:09:28	DESKTOP-9VU2VVJ	1	msteamsupdate.exe	23002.403.1788.1930	msteamsupdate.exe	23002.403.1788.193

1.1.49 Configuring a Drill-Down to LDI plus Resolve

1. Select Resolve as the Drilldown Type.

2. Select the column that contains the system name to which you want to drill down.

3. Select the LDI plus Resolve page you wish to open (. e.g., Overview, Black Box, Health etc.). The Drilldown URL tied to your current selections displays.

4. Click the Done button to complete the setup.

Configuring a Drill-down to LDI plus Site Visualizer

1. Select Site Visualizer as the Drilldown Type.

2. Specify the column that contain the name of the Master Server name. If your data does not contain Master Server information, you can select Use the current server.

3. Specify the column that contains the Group name. If your data does not include the Group name, you can select Use All Systems Group.

4. Select the dataset, (e.g., Software Packages) that you want to have preselected when Site Visualizer opens. The Drilldown URL tied to your current selections displays.

Configuring a Drill-down to another LDI plus Dashboard

1. Select Dashboard as the Drilldown Type.

2. Select the name of the dashboard you wish to open. The Drilldown URL tied to your current selections displays.

Configuring a drill-down to Specific Information on another LDI plus Dashboard

To connect to a specific place on another dashboard (for example, system data for a specific user), your destination dashboard must have parameters in the SQL query and be configured to accept external information via a Page Context block. For more information see Defining a Page Context Data Block.

1. Select Dashboard as the Drilldown Type.

2. Select the name of the dashboard you wish to open. The Drilldown Definition will include a Dashboard Parameters section.

3. Select the dashboard parameter from the Set dashboard parameter drop-down menu.

4. From the two values from column drop-down menu, select where the value for that parameter should come from, or key in a static value.

5. Click the Add Parameter button.

6. Repeat steps 3 through 5 above for each parameter you wish to add to the Drilldown URL.

Configuring a Drill-Down to a Custom URL

The Custom option opens a URL when the user double-clicks the cell in the grid. To set up a drilldown to a custom URL:

1. Select Custom as the Drilldown Type.

2. Enter or cut and paste the URL into the Drilldown URL field.

3. You can insert the value of a cell from the selected row into the URL so that when a user double-clicks a cell in the grid to drilldown, the contents of the cell will be passed along with the URL:

   a Place the cursor where you want to insert the value.

   b Select the column and click the Insert button. The inserted value is marked with @ {<inserted value>}.
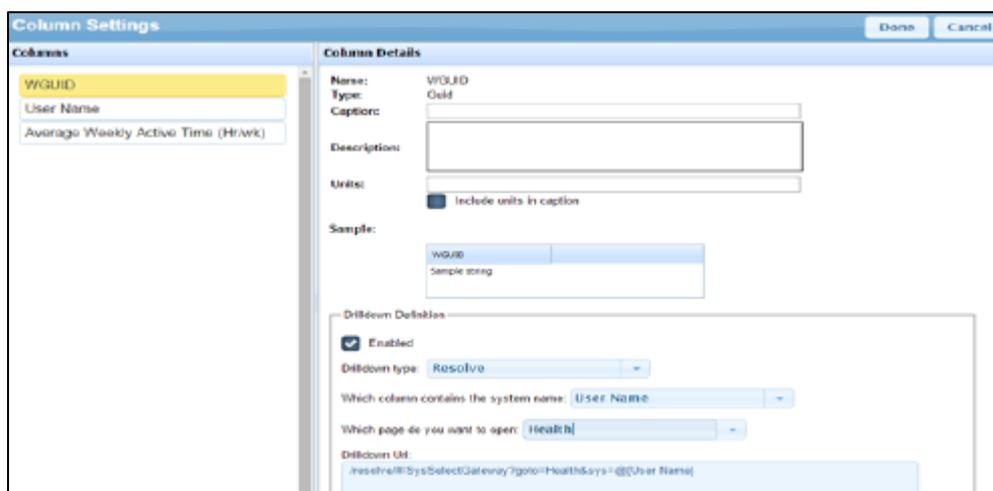
1.1.50   Defining Column Details

Column display settings for Grids can be edited or defined from the Query Data Block's Object pane as follows:

1. On the Object tab of the Query Data block, click the Column Settings button. Columns defined for the Query will display in the left-hand pane.

2. Select the column you wish to customize or edit from the Columns pane.

3. If you want to change the column header enter the desired text in the Caption field.

4. If you want to customize the tool tip for your new column header, enter a Description. This will appear when a user hovers over the column header.

5. If you want to include a unit of measure for numeric data enter it in the Units field.

6. If you want the unit of measure to be added to the column header, click the Include units in caption check box.

7. Optionally use the up and down arrows to the right of the Decimal places field to specify how many decimal places you wish to display in a numeric column.

8. If you wish to restore the column settings to the default settings, click the Restore Defaults button.

9. Repeat steps 1 -7 for each column you wish to customize.

10. Click the Done button to save your changes and return to the Dashboard you were editing.
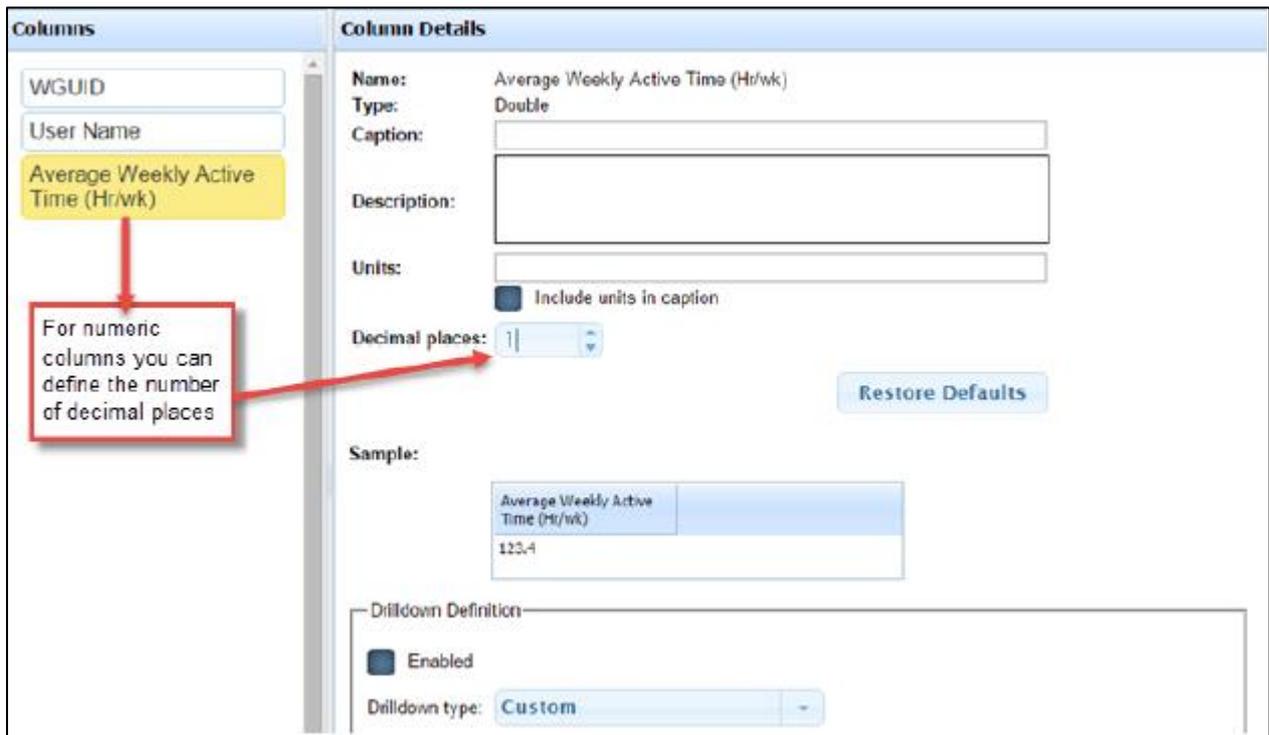
1.1.51   Connecting to a LDI plus Child System

You can connect to a LDI plus child system's local JET database and run the SQL query defined in a Dashboard Query block against that database.

To connect to a LDI plus Child system:

1. Select the relevant Query block. In the Properties panel, open the Connection String section.

2. Deselect the Use LDI plus database option.

3. Click the Agent button, then specify the child system in the System field.

4. When you are done, click the Apply button to save your changes.
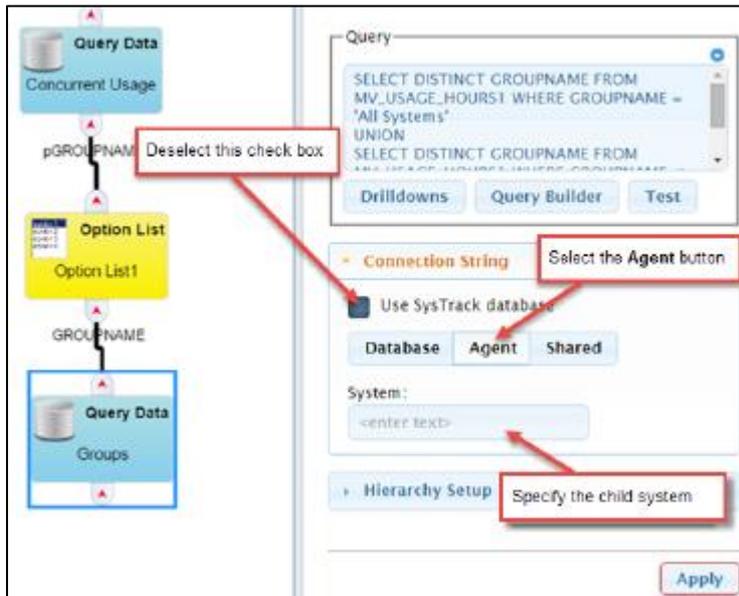
1.1.52 Creating a Summary Dashboard

You can create a summary dashboard composed of dash link panes each of which links to a specific dashboard as shown in the example below.

You can choose to display the following on a summary Dash Link pane:

- Alternate between displaying a description of the dashboard and a stylized thumbnail
- Alternate between displaying a dashboard description and summary data from a grid, chart, or gauge

Display only summary data from a Grid, Chart, or Gauge with no alternating description

Create a Summary Dashboard for each of your linked dashboards as follows:

1. Define a Dash Link block on your workspace for each dashboard to which you wish to link.

2. Optionally, display summary data on a Dash Link pane:

   a   Open the dashboard to which you wish to link, and click the Summary tab.

   b   Using the Data blocks available (Query Data, Managed Data, Grid, Chart, or Gauge blocks) in the Summary tab Toolbox, build a dashboard for the summary information that you wish to display.

   c   If you do not define Summary Data for your dashboard, a stylized thumbnail will display for the Dash Link pane.

   Note: You can use multiple data blocks (Grid, Chart and Gauge) and have the Summary Dashboard pane cycle between these multiple data sets.

3. If you wish to display a description for your dashboard link, enter a description in the Description field on the Dashboard tab for the dashboard to which you are linking (as shown below).

   4. If you do not enter a Description for the dashboard, then the Dash Link block will only show the summary data.

5. Optionally, click the Dashboard Summary Colour button to select a colour to use as the background colour for the Dashboard Link Pane.

6. Click Apply to save your changes.

7. Repeat steps 2 - 5 for each dashboard to which you wish to link from a Dash Link block.