

Description: Brief configuration of Facility AnalytiX Viewer to diagnose and detect faults, data presentation, and drill down

OS Requirement: Server 2008 x64/Windows 7 x64/Vista x64/Server 2008 R2 x64/Windows 8 x64

General Requirement: SharePoint 2010 installation, IIS 6.0 or higher, Installation of AnalytiX, Microsoft SQL Server 2008R2, IE v7 or higher, Silverlight (Workbench Silverlight), understanding of Facility AnalytiX configuration

NOTE: An alternative would be to use PortalWorX SL to view Facility AnalytiX (A new feature in GENESIS64 10.7); refer to app notes.

Introduction

This document will provide a guide on how to create the Facility AnalytiX viewer in PortalWorX64 page, configure the chart and the drill down so you can view the faults, causes, and diagnostics of your facility. This will also require you to already have an active configuration for Facility AnalytiX in Workbench Silverlight. If you need more information about installation of the PortalWorX64, setting up the Facility AnalytiX configuration, or adding the web part in the PortalWorX64 for Facility AnalytiX, please refer to the product documentation.

Switching Viewer to Runtime/Configure

By default, when you add the Facility AnalytiX Viewer into your page, it will always be in Runtime mode. This is intended for normal users/operators so they will not be able to modify any of the charts' configurations. While developing the web parts, it is recommended to use the mode switch so you can easily switch between Runtime and Configure mode. To enable the Runtime/Configure mode, you need to click on the drop down menu of the web part on the top right, and select 'Edit Web Part'. The Facility AnalytiX Web Part property window will slide on the right side. Open 'Settings', and check 'Show Mode Switch'. After that click OK and you should see an icon now in your web part, like Figure 2.

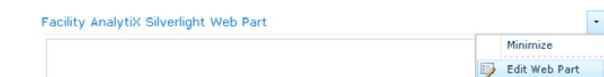


Figure 1 - Editing Facility AnalytiX Web Part

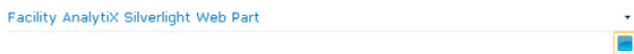


Figure 2 - Auto Switch mode

Creating Facility AnalytiX Item

The first thing you will see when you go to **Configure mode** of the web part (by clicking the Configure/Stop icon) is a Viewer tree and three tabs: General, Appearance, and Configuration.

- **General:** It will have the setting where you can configure your chart. You will also have a selection where you can set to override inherited asset (will be explained later) and override inherited time range (when you want to have customized time frame of the diagnostic chart)
- **Appearance:** Lets you customize the appearance of the viewer.
- **Configuration:** Let you customize the configuration which you got the data from.

When you right-click on the Viewer, you got many options for the viewer mode like you see on Figure 3. You can add chart, grid, tabs container, panel, or detail, and also an option to remove any of the items.

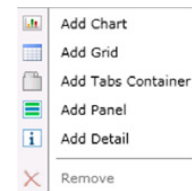


Figure 3 - Viewer options

In this application note, we are going to use the first two: Grid, and Chart with option to drill down.

Creating Grid Chart

1. Right-click on the **Viewer** and select **Grid**
2. In the **General** tab of the Grid, check on the **Override Inherited Assets** and select from **Specific Asset** that you want to use for the diagnostic.

NOTE: The other two options (Child of Inherited Asset and Child of Specific Asset) should be used if you bring over the configuration and/or asset list to the web part property window and these options will then be used to bring those assets from that list to the grid.

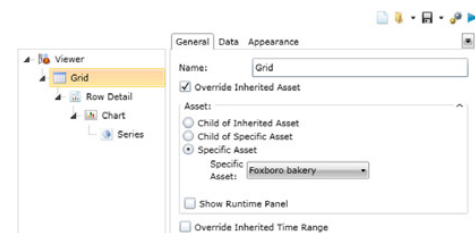
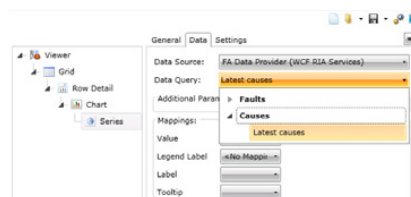


Figure 4 - Choosing Asset

3. Go to **Data** tab of the **Grid** item, and choose the appropriate **Data Query**. We would select the '**Faults**' for this section as it will be used against the cause matrix to show all of the faults that have been recorded so far. You can also modify the grid columns (to customize what you

The screenshot shows the Tableau Desktop interface with the 'Data' tab selected in the Properties pane. The 'Data Source' is 'FA Data Provider (WCF RIA Services)'. The 'Data Query' is 'Faults'. The 'Include Child Items' checkbox is checked. The 'Asset Filter' is 'Faults'. The 'Grid Columns' are 'Faults', 'Summaries', 'Distributions', and 'Causes'.

4. We will now add a Row Detail to the **Grid** by right-clicking on Grid and select '**Add Row Detail**'. You can customize the general appearance of this item.
5. We will now add a chart for the grid (for the fault/cause diagnostic) by right clicking on '**Row Detail**' and select '**Add Chart**'. You can then select any chart mode/type that you want. For this example, Radial type is selected.
6. Finally, we want to add Series to the chart. Right-click on the **Chart** and select '**Add Series**'. Go to the **Data** tab of the Series and select the '**Data Query**' to be '**Latest causes**' as we want to compare the faults to the symptoms and get a diagnostic of the facility. What we will have is the cause chart showing possibilities of causes affected by different symptoms.



7. At any point where you are configuring the data, you can always customize the mappings to show value as rank or text, hide/show legend, labeling, and/or tooltip.
8. After all this, you can click on the Configure/Stop icon so that the web part will switch to **Runtime/Play** icon/mode. You will see that for each fault that is recorded, there is a (+) column that you can expand to show the diagnostic of the causes/symptoms.

Creating Chart with Drill-down

We will also take a look at creating a chart with a drill down capability. The chart in this example will show distribution of asset and can drill down to see specific asset faults and its children.

1. While editing the web part right-click on the **Viewer** and select **'Add Chart'**.
2. For this simple example, we are going to have a **'Linear'** chart so select that under the mode for the chart item.
3. We also want to select the **Drill-Down** to be the **Asset** so we can drill down based on the asset.

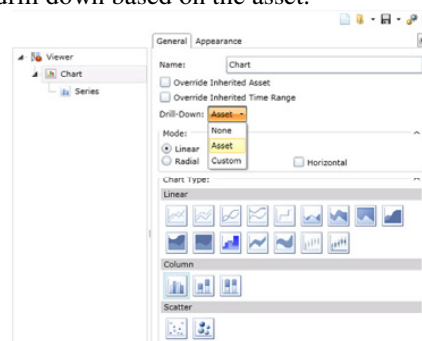


Figure 8 - Drill-Down option in Chart

NOTE: If you do not combine AnalytiX control with Navigator web part you should check on the Override Inherited Assets and select from Specific Asset that you want to show for this chart.

- Right-click on the **Chart** and select 'Add Series'. Go to the **Data** tab, and we will select the **Data Query** to be 'Summary by Asset' under **Faults** so the chart will show asset summary that will be drillable.

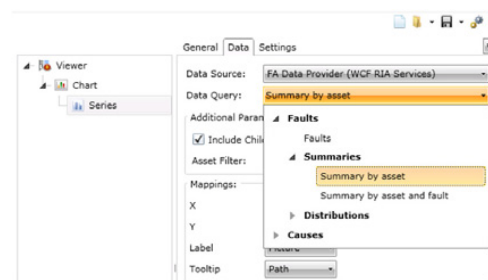


Figure 9 - Summary by Asset

5. Go to **Runtime**, and you can see the chart of the specified assets (which has the faults recorded). When you click on any of the asset, it will drill down to that asset category, showing the asset and all of its children's faults. You can drill even deeper by clicking on the children bar, if it has more children. The indication of where you are in the chart is located at the top of the chart.