Foglight Dashboard & Report Customization

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Quest

QUEST CONFIDENTIAL AND PROPRIETARY

Course Objectives

- During this course we will cover:
  - Build a CIO Dashboard step by step.
  - Build a CIO Report step by step.

What is WCF

- WCF stands for Web Console Framework
- Can be very easy (Drag and Drop)
- Can be very powerful and flexible
  - Many Components to choose
  - Kinds of Renderers for rendering
  - Support Java/Groovy to do anything
  - Easy to bind Monitoring Data Model
  - ...

Preparation

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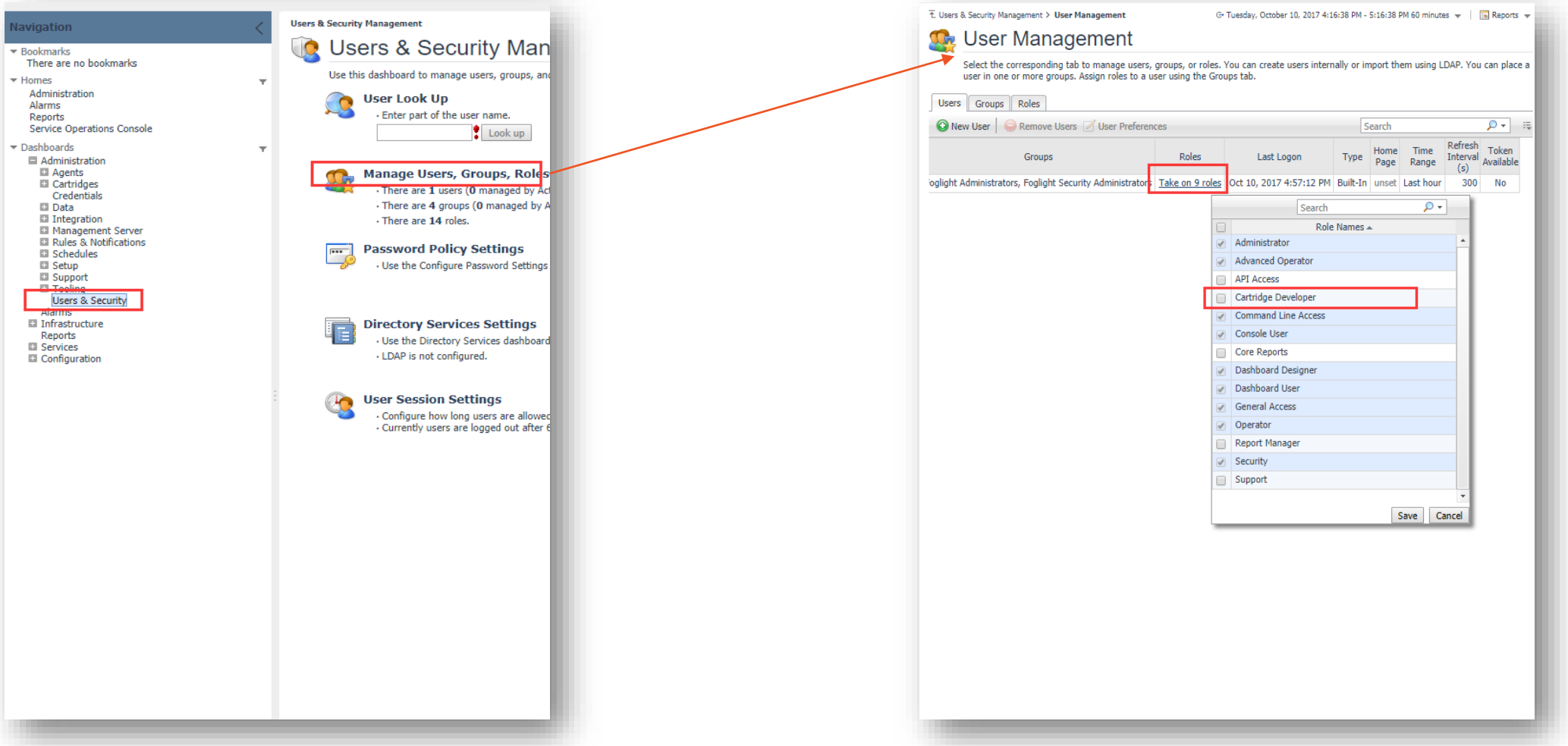
Preparation

Get Resources

- Get Resources from a Flash Disk or
- Download from Github: https://github.com/Foglight/DevCamp2017/tree/master/CIO_Dashboard

Preparation

Assign Developer Role



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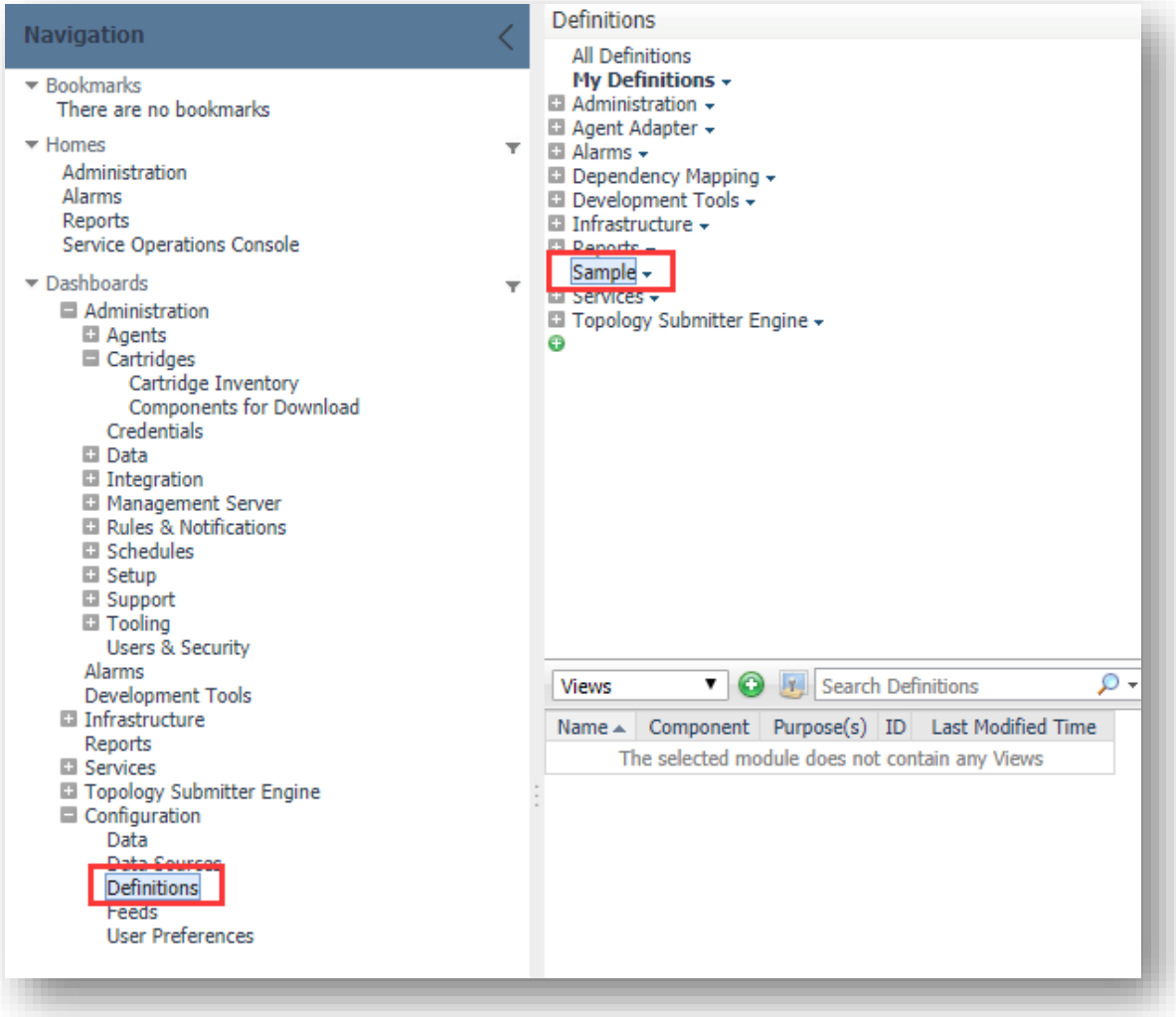
• Preparation

- Install cartridge “Topology-Helper-Tools-5_6_2.car”
- Install “CIO-Dashboard-Get-Started-1_0_0.car”.



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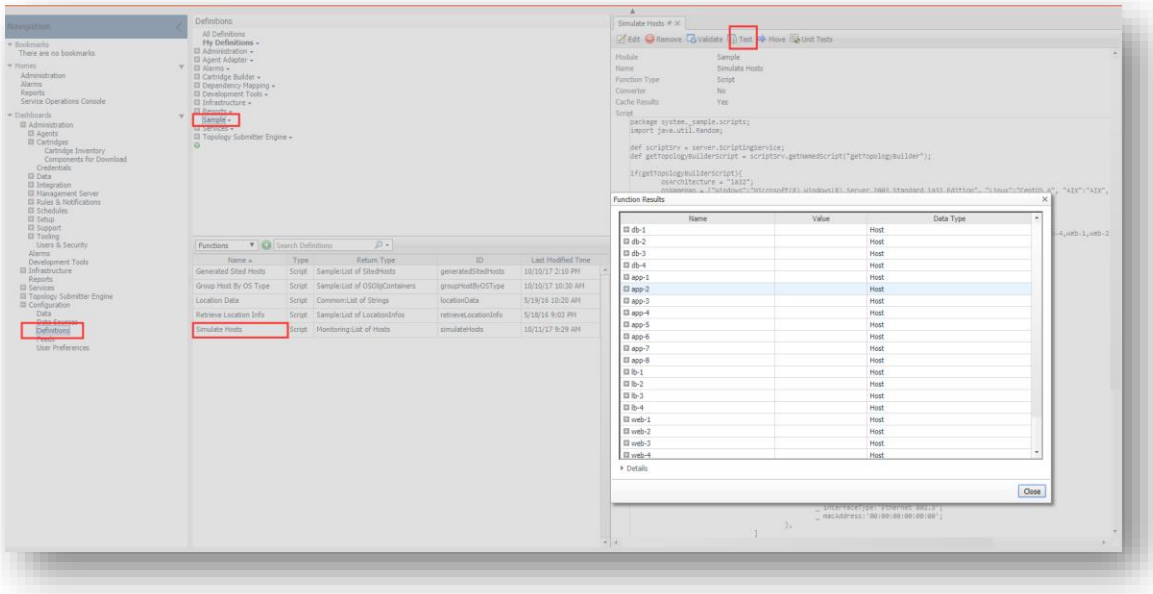
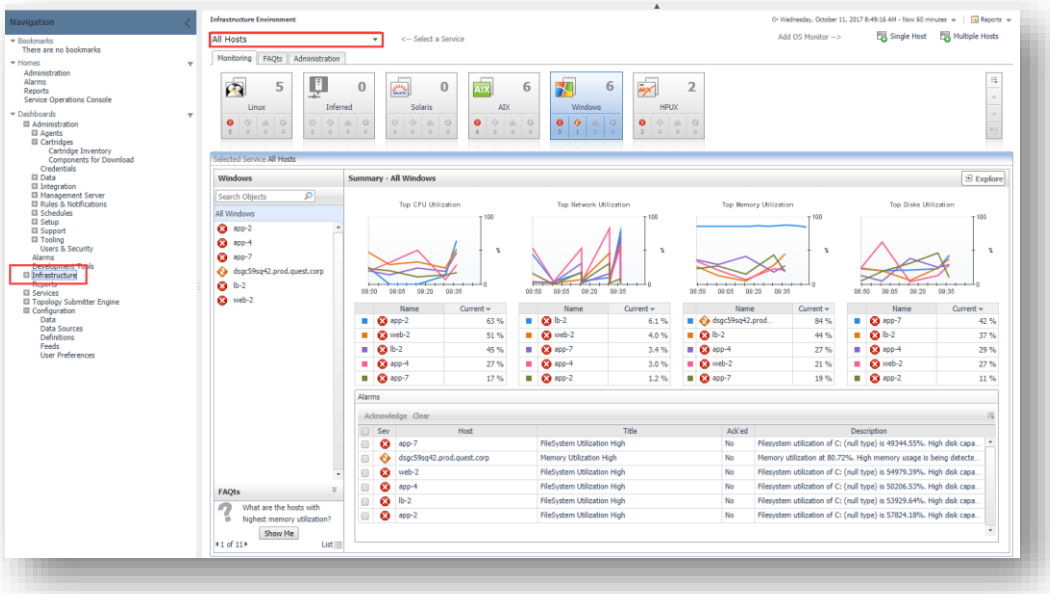
• Preparation

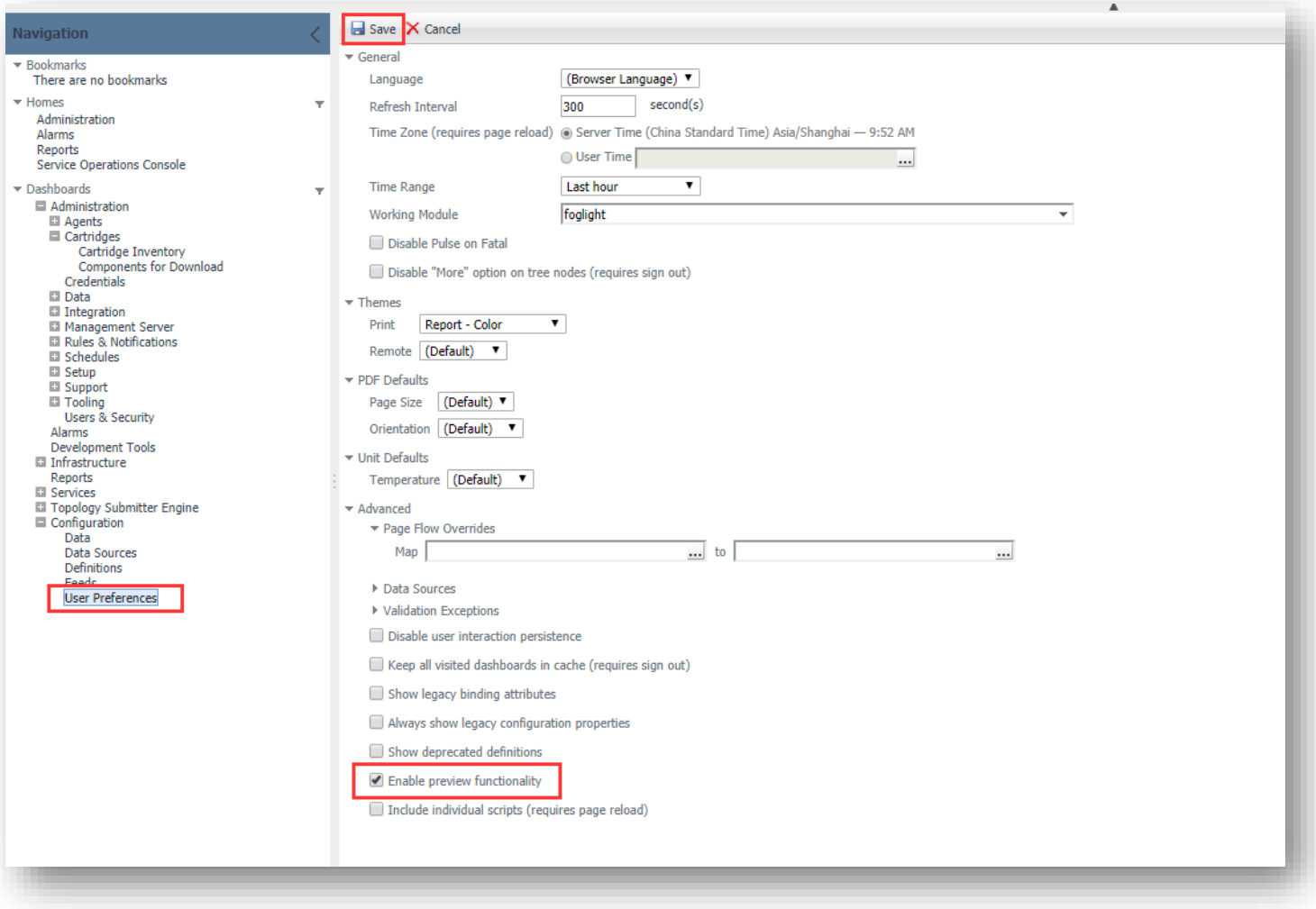
- Simulate Data and Verify
  - Run function: Sample → Function →*Simulate Hosts* →Test





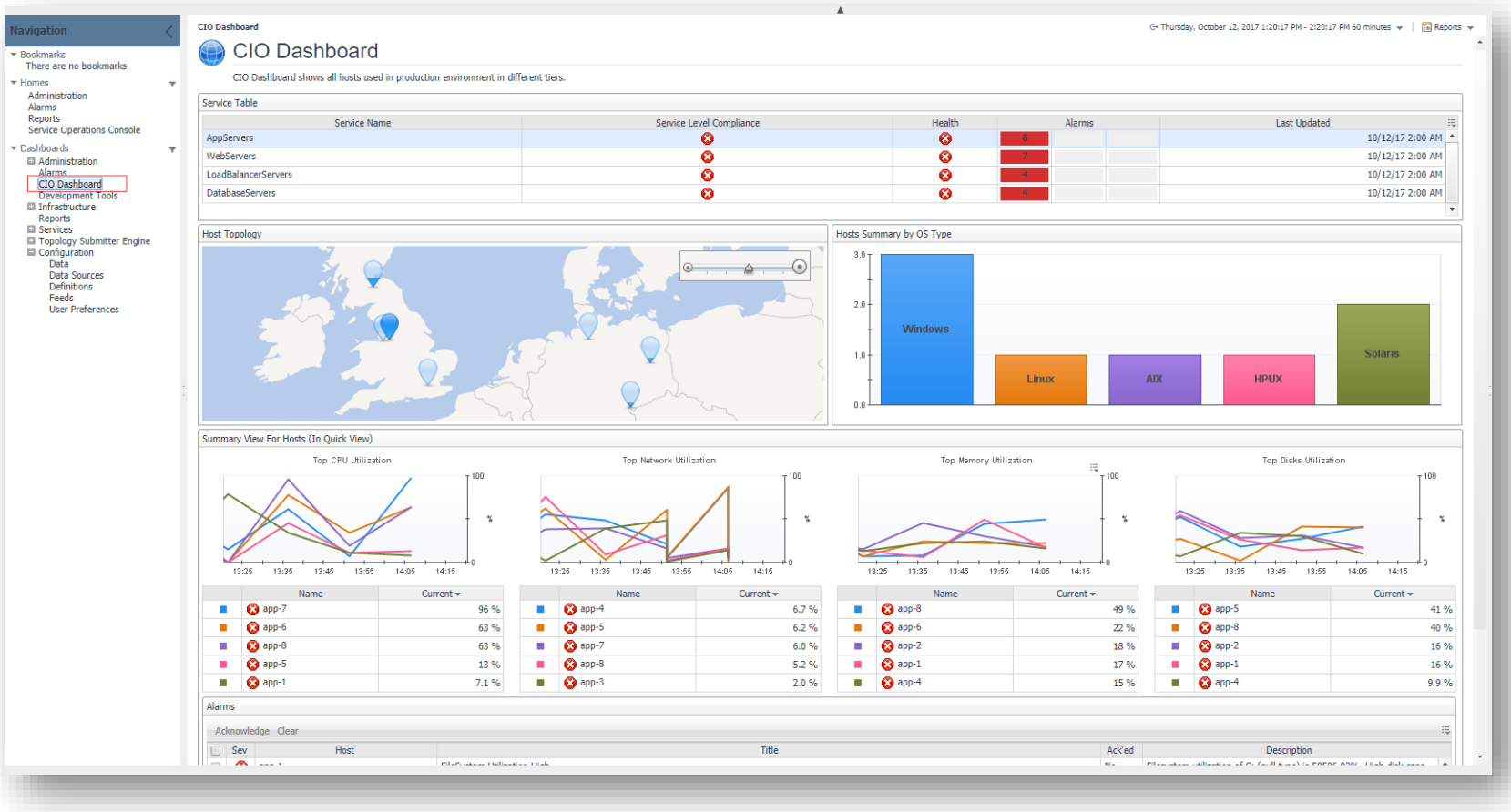
• Preparation

- Enable preview functionality to use Map



Use Case

- You have many hosts that have different applications running on.
- The applications belong to different tiers, Web, Database, App, etc.
- You want to know the health for each tier.
- Each tire is a service contains the hosts.



Build Services

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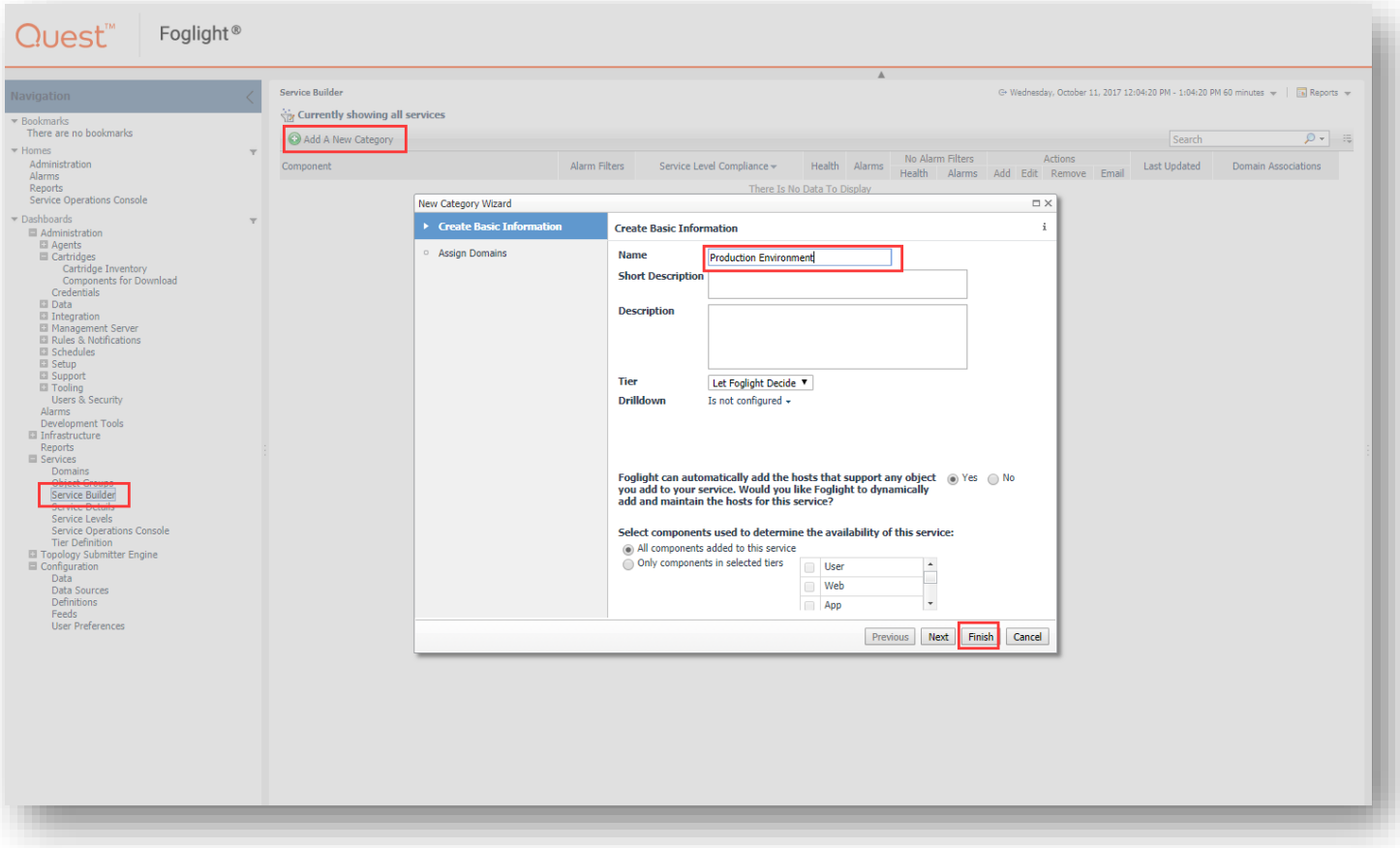
Lesson Objectives

- During this lesson we will cover:
  - Services Builder dashboard usage
  - Add root data for CIO dashboard

Build Services

Add a Category

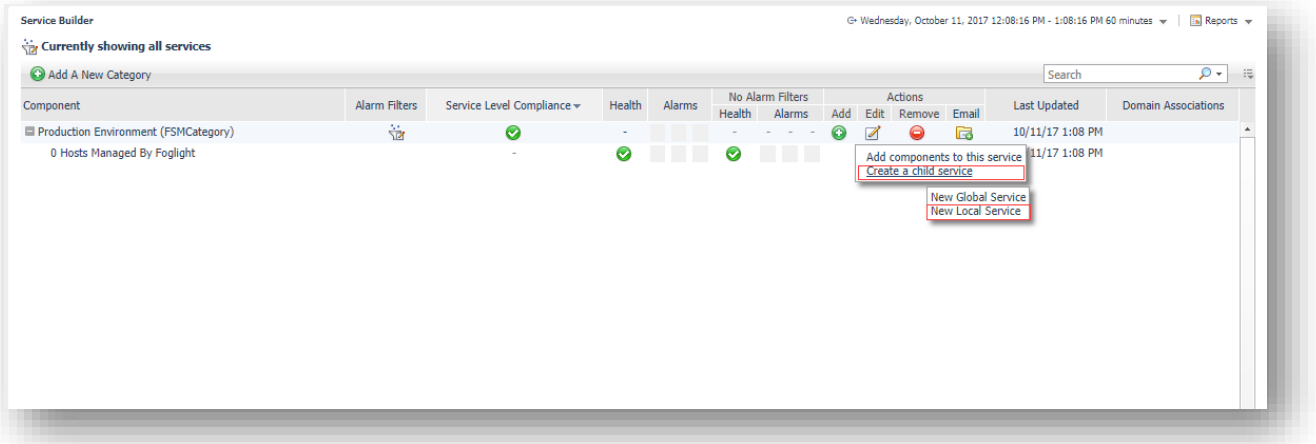
- Add a Service Category named “*Production Environment*”



Build Services

Add Child Services

- WebServers
- LoadBalancerServers
- AppServers
- DatabaseServers



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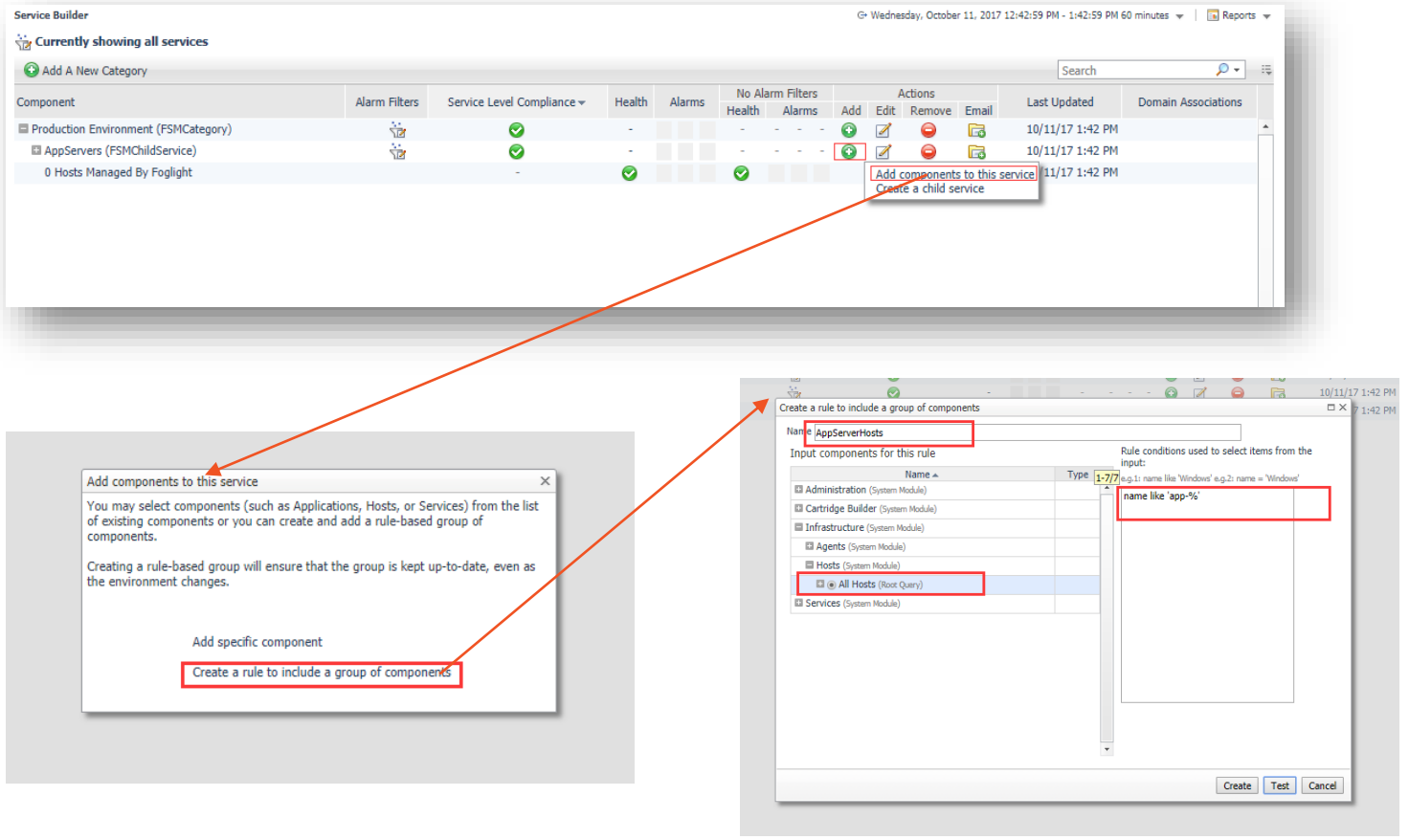
Build Services

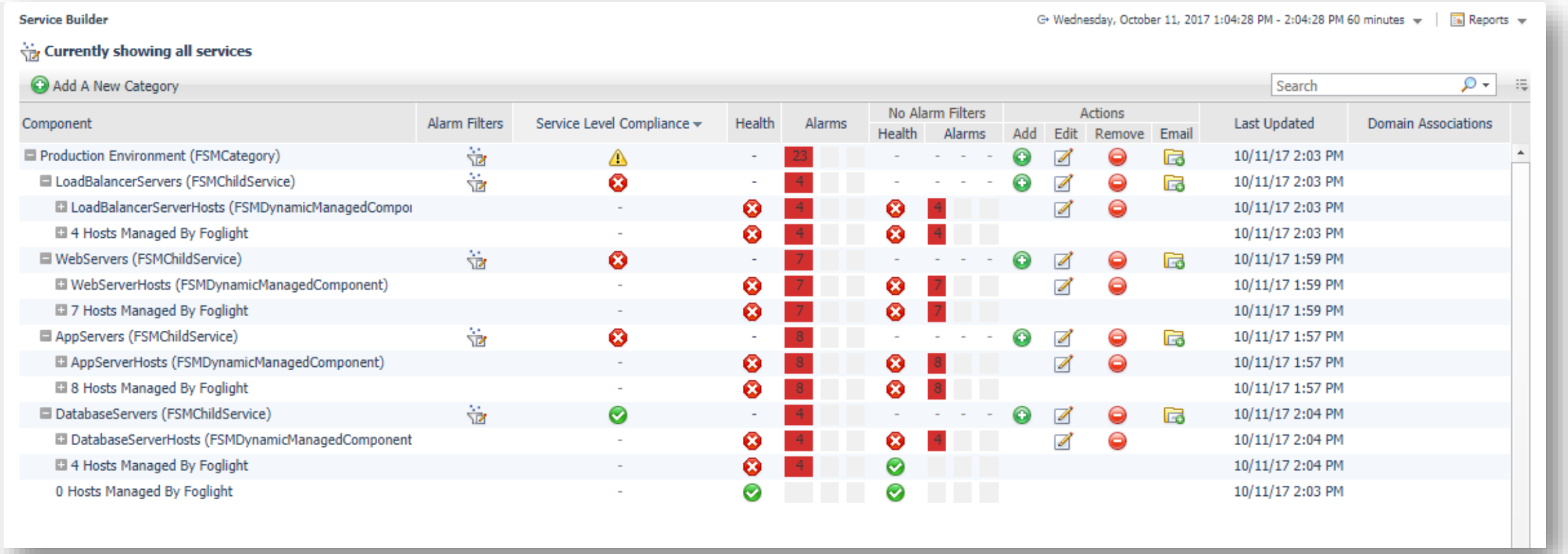
Add Child Service Components

- WebServers
  - name like ‘web-%'
- LoadBalancerServers
  - name like 'lb-%'
- AppServers
  - name like 'app-%'
- DatabaseServers
  - name like ‘db-%'



Build Service

The Whole Category Overview



Make the Dashboard

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Lesson Objectives

- During this lesson we will cover:
  - How to add a Query
  - How to add a View
  - How to use Layout

Make Service Table

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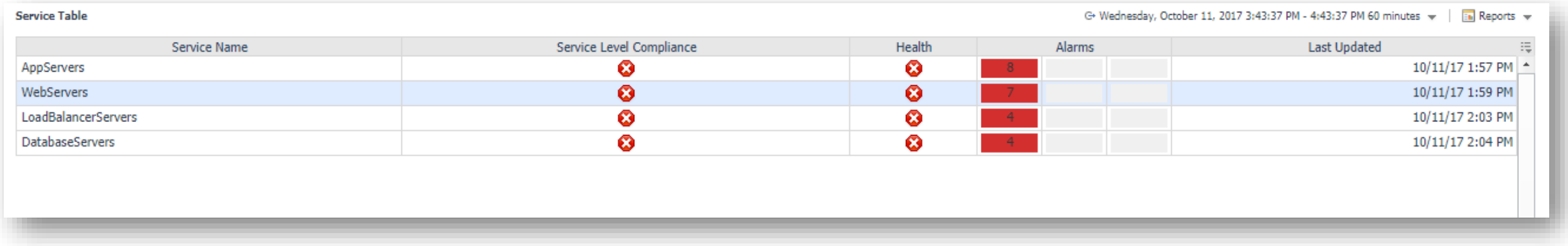
Goal for Service Table



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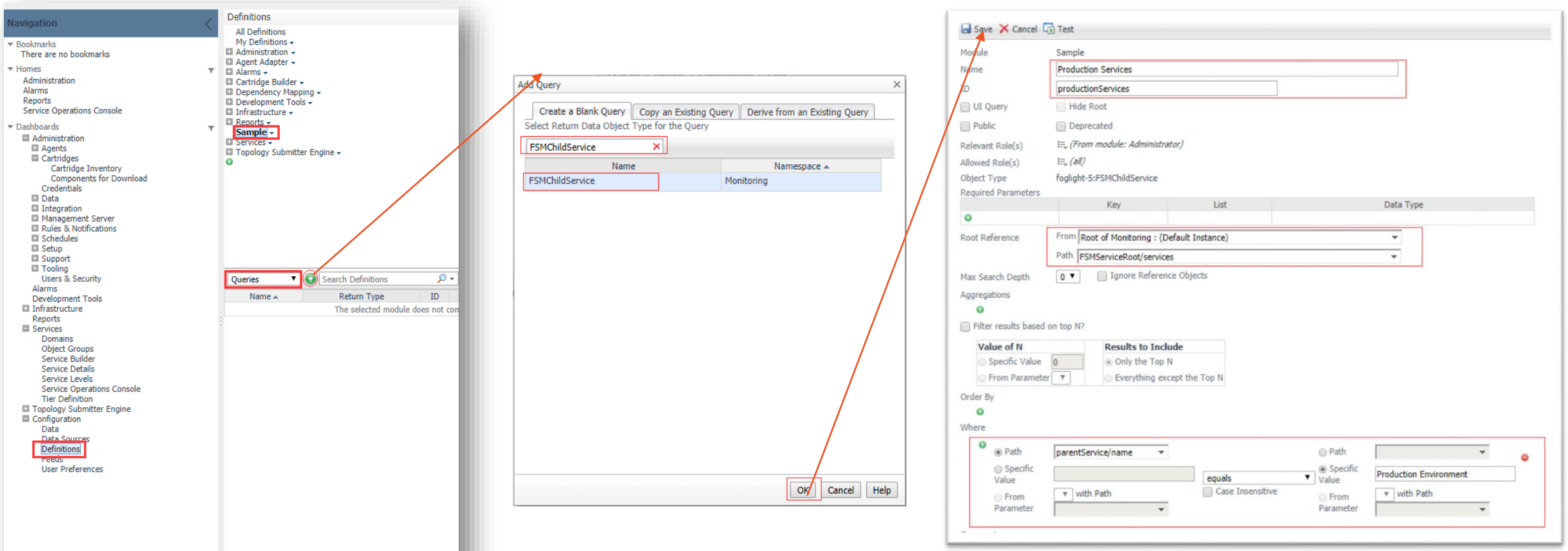
Add a Query



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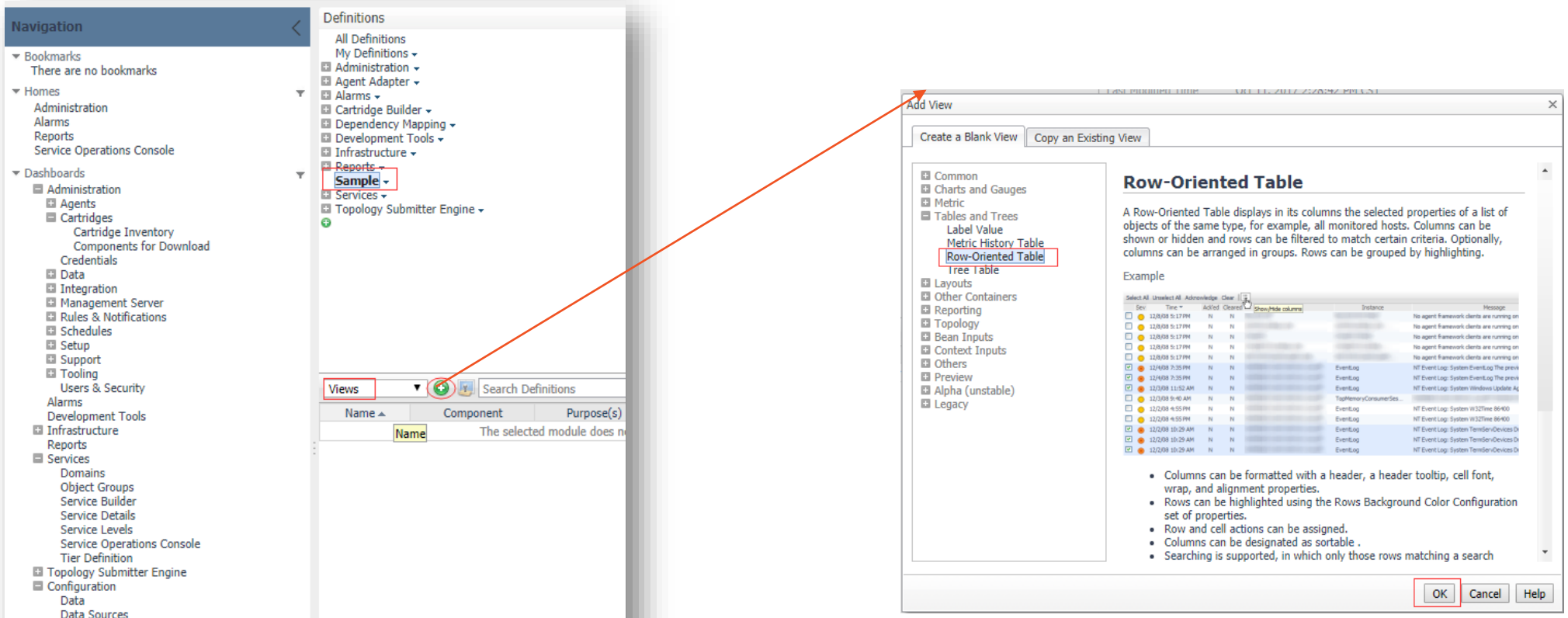
Add a Row-Oriented Table



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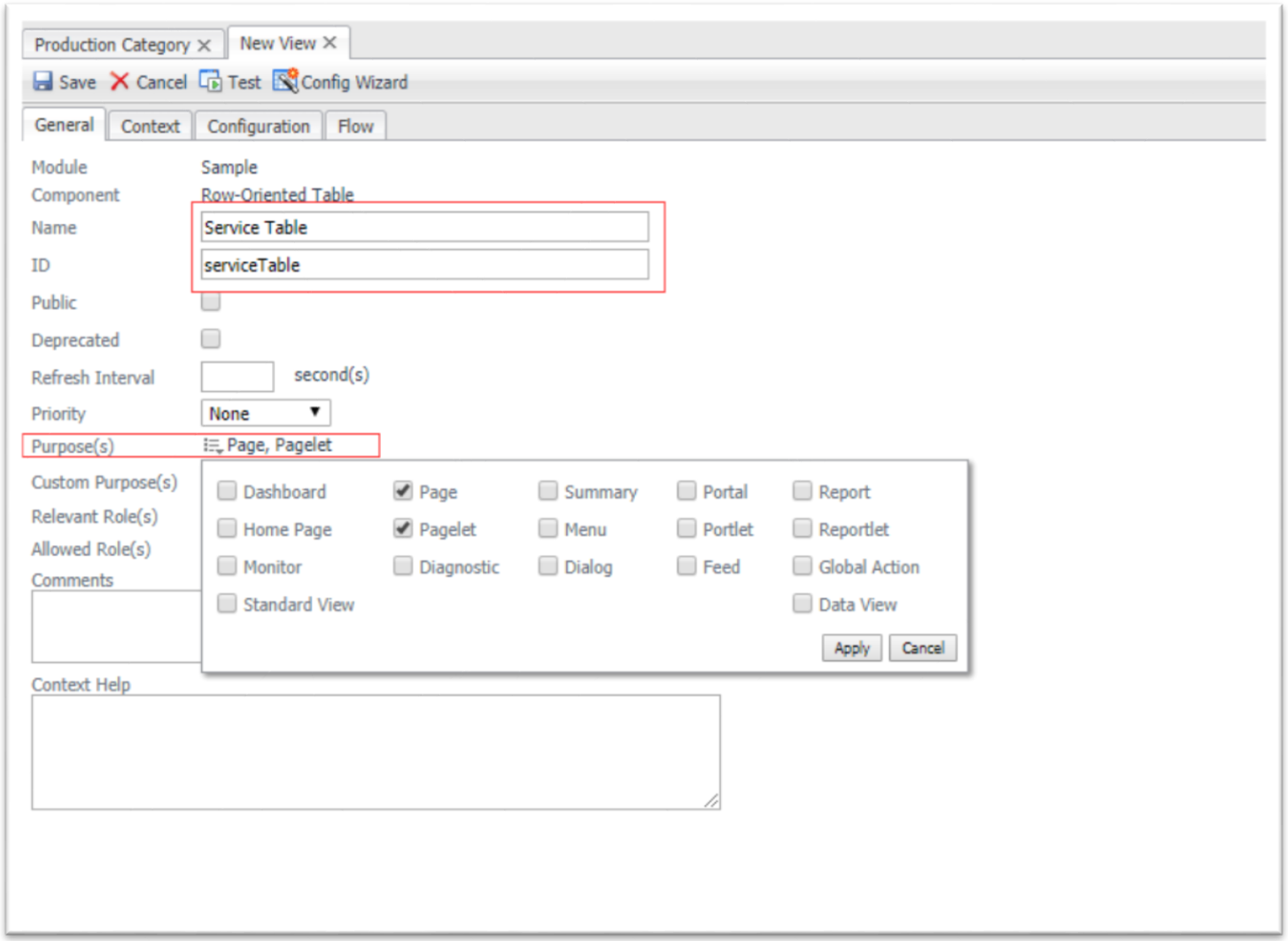
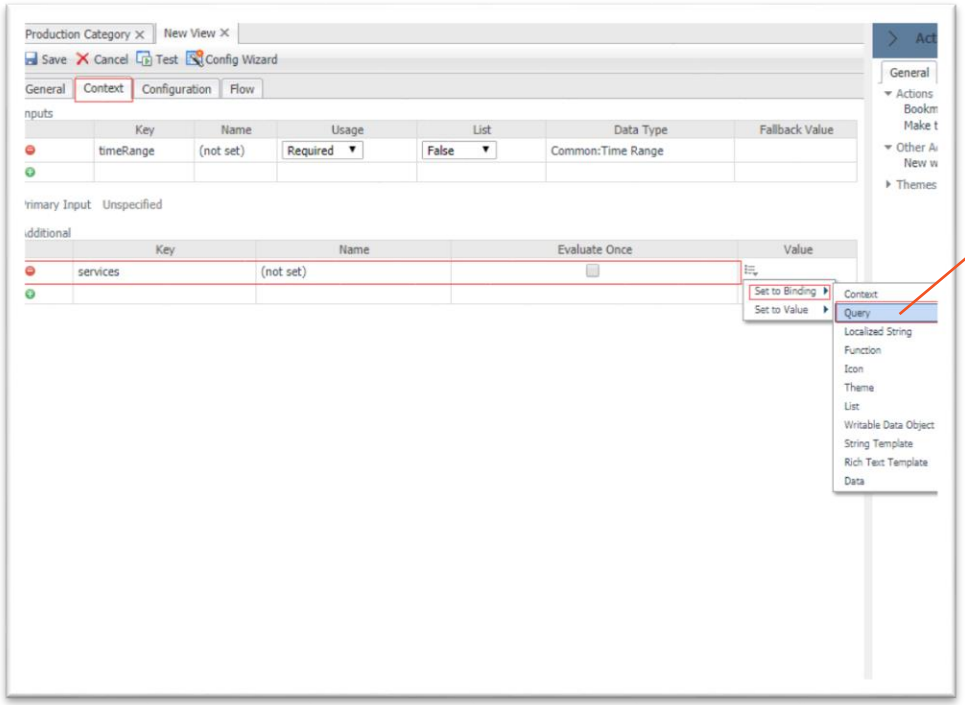
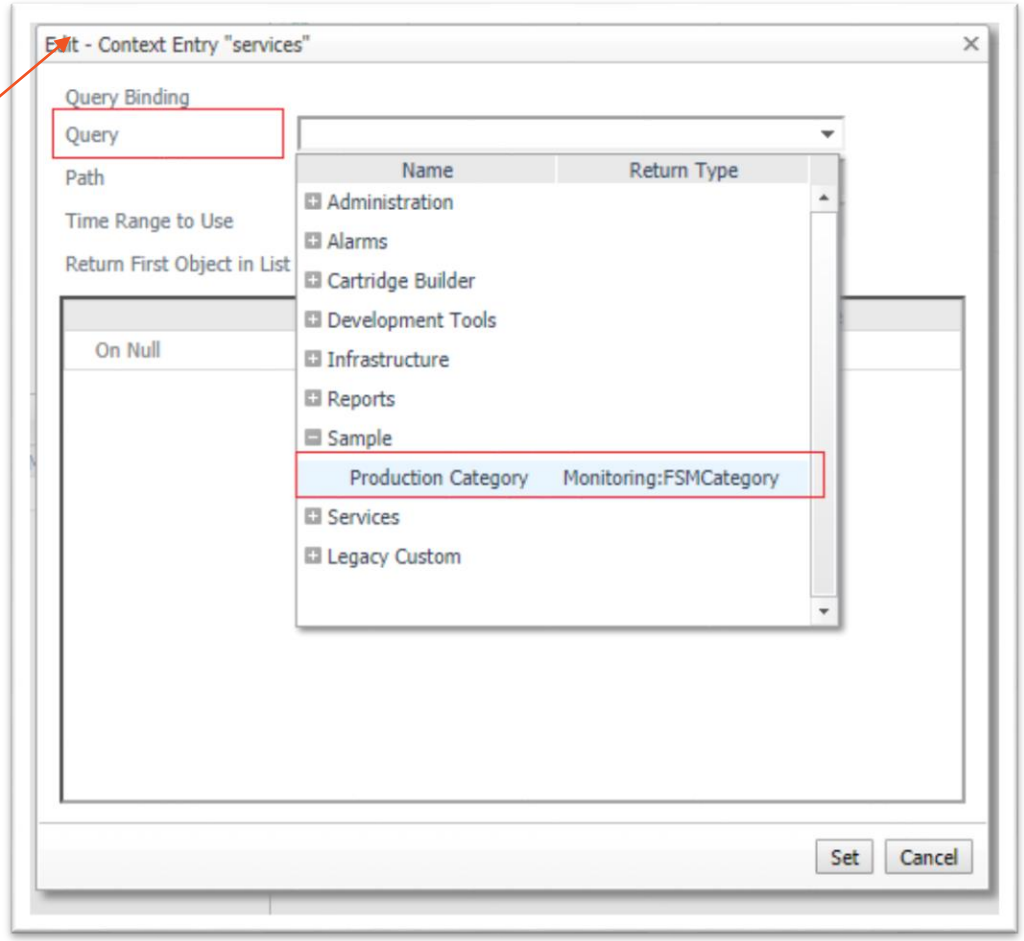
General Setup for Table



Context Setup for Table





Configurations for Table

- Configure Rows
- Configure Columns
  - ID
  - Value
  - Header
    - Localized String is recommended

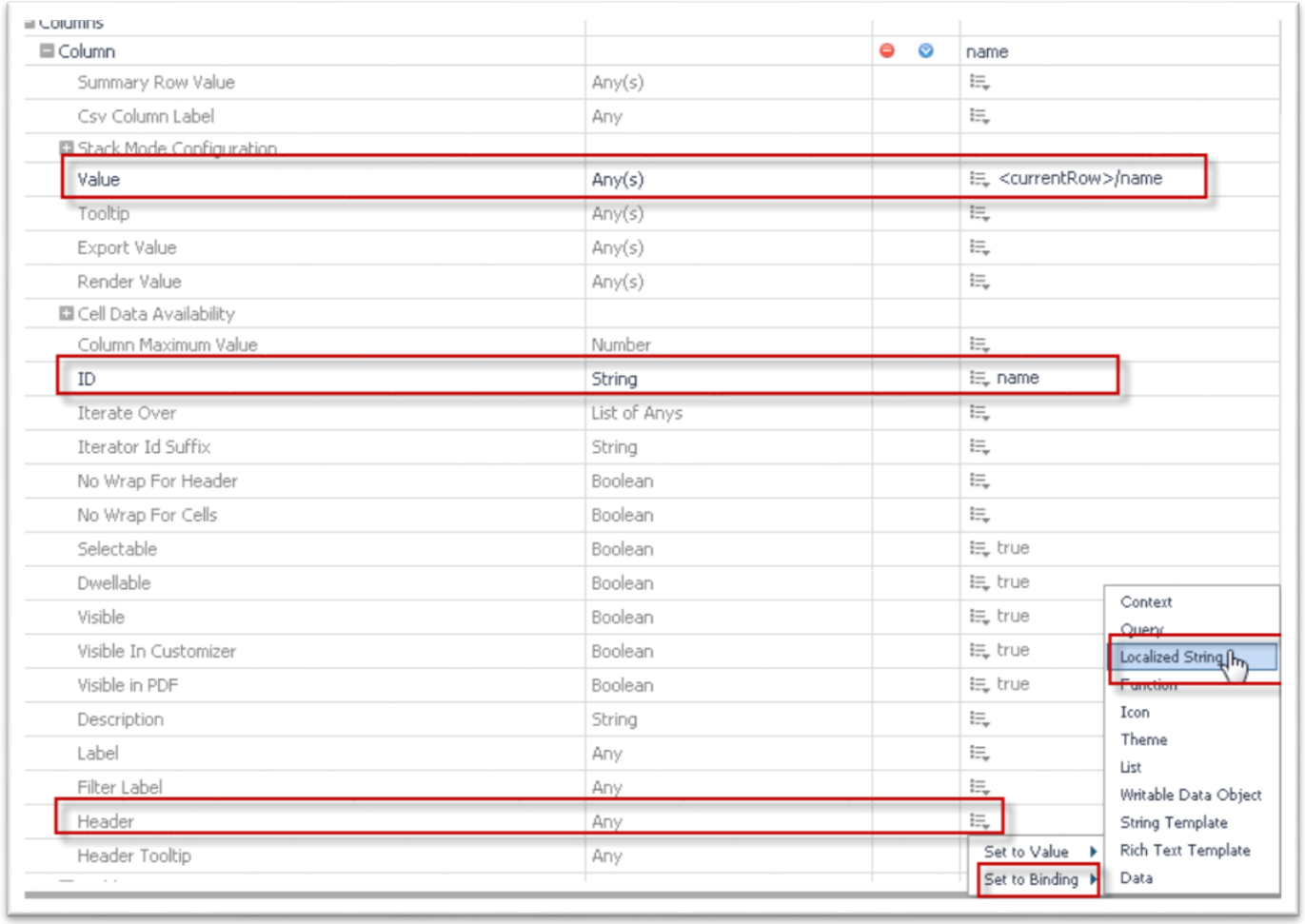
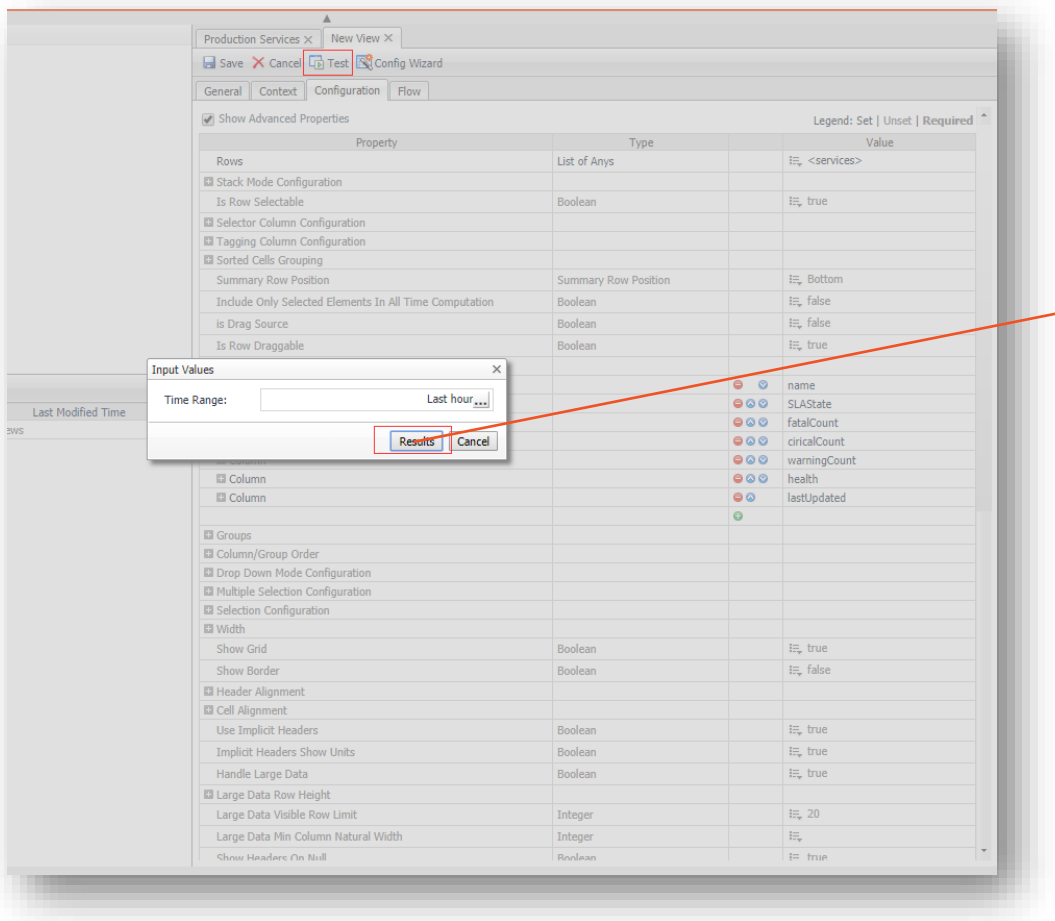
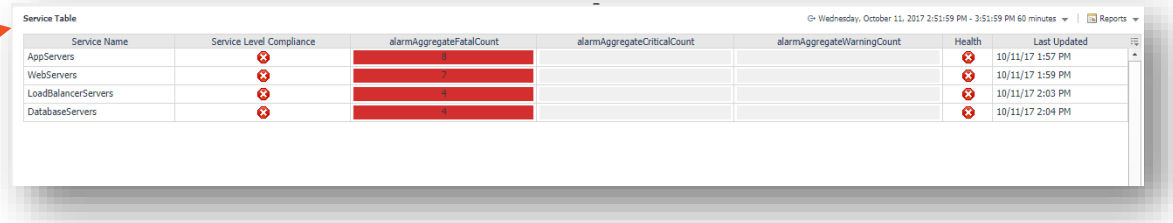


Table Column Configurations

- Name
  - Value: name
  - Id: name
  - Header: Service Name
- Service Level Compliance
  - Value: aggregateStateSeverity
  - Id: SLAState
  - Header: Service Level Compliance
- FatalCount
  - Value: alarmAggregateFatalCount
  - Id: fatalCount
- CriticalCount
  - Value: alarmAggregateCriticalCount
  - Id: criticalCount
- WarningCount
  - Value: alarmAggregateWarningCount
  - Id: warningCount
- Health
  - Value: aggregateState
  - Id: health
  - Header: Health
- Last Updated
  - Value: lastUpdated
  - Id: lastUpdated
  - Header: Last Updated

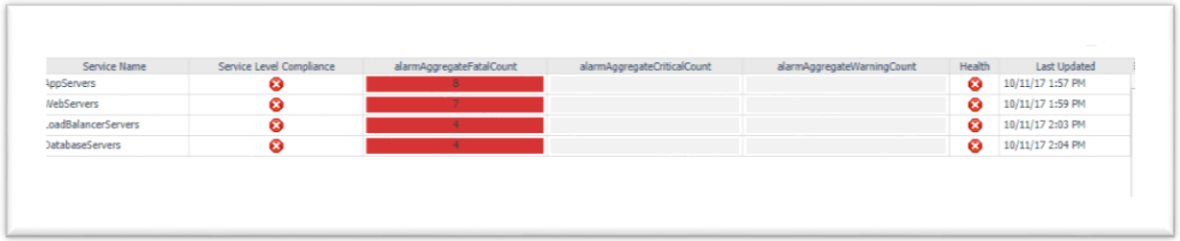
Test Service Table





Improve Service Table

- Add alignment for some column
- Group fataCount, criticalCount and warningCount as “Alarm”
- Change column order
- Add single row action(name: selectedService)



Service Name	Service Level Compliance	alarmAggregateFatalCount	alarmAggregateCriticalCount	alarmAggregateWarningCount	Health	Last Updated
AppServers	⊗	8			⊗	10/11/17 1:57 PM
WebServers	⊗	7			⊗	10/11/17 1:59 PM
LoadBalancerServers	⊗	4			⊗	10/11/17 2:03 PM
DatabaseServers	⊗	4			⊗	10/11/17 2:04 PM

Make Hosts Map

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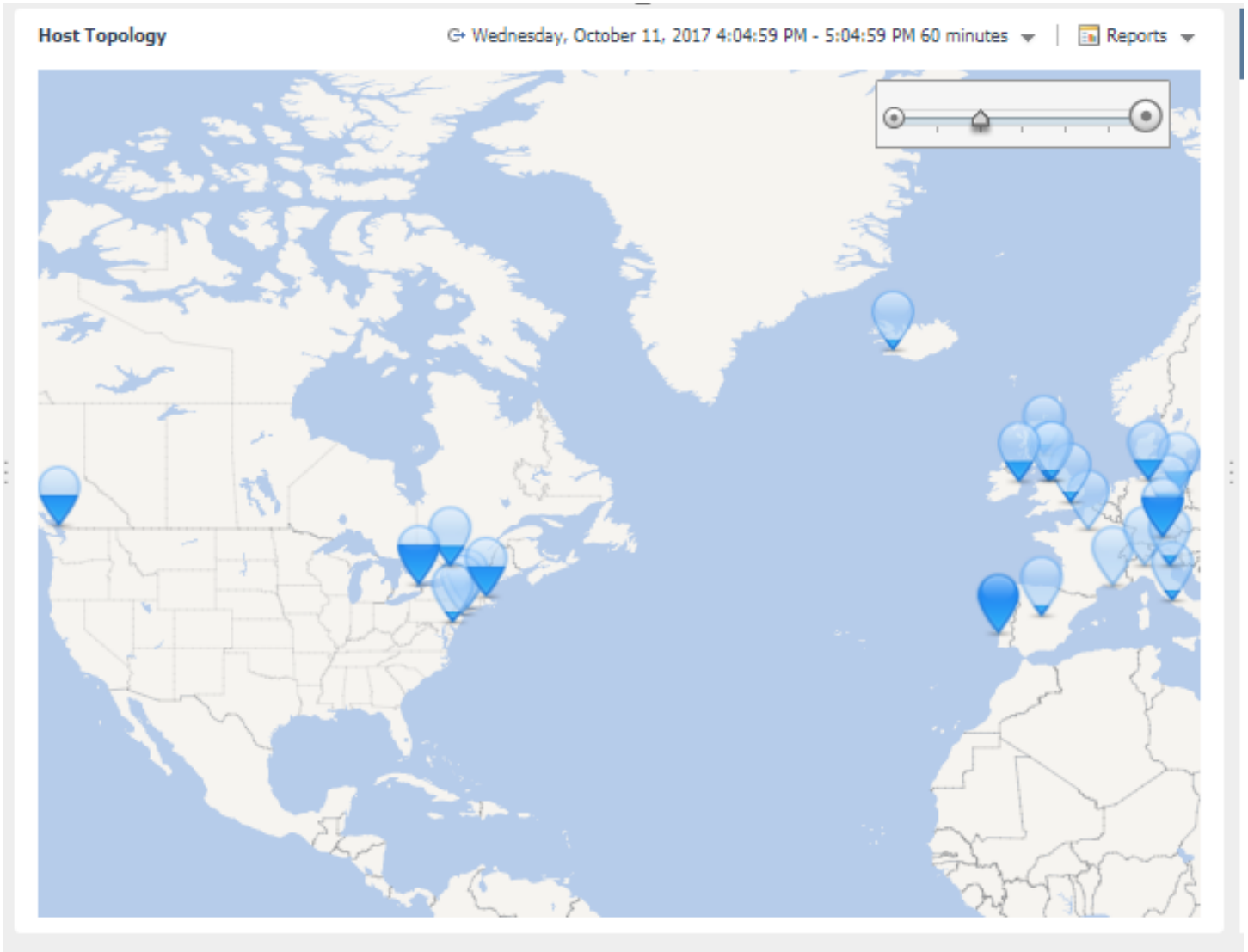
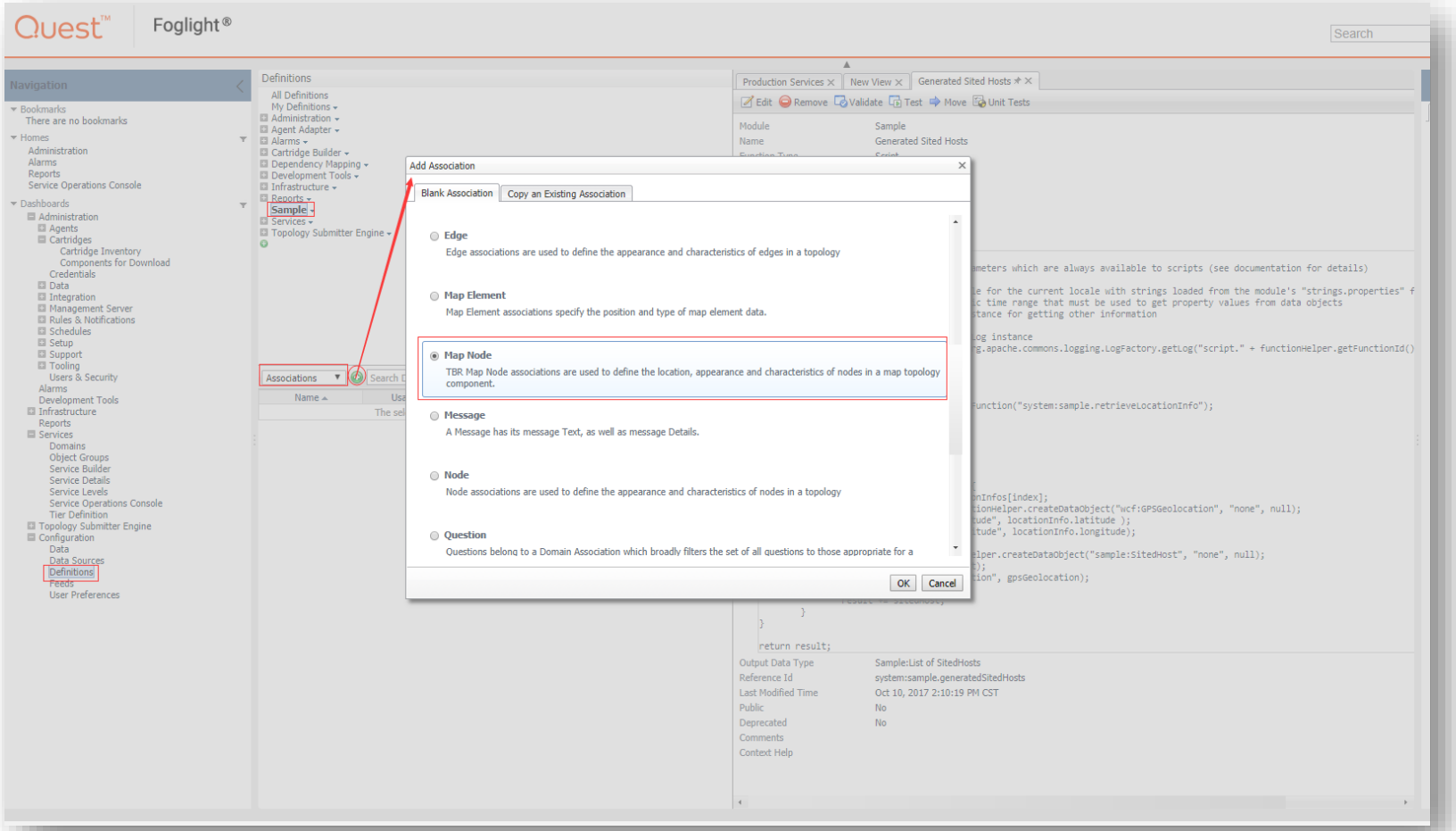
Goal for Hosts Map



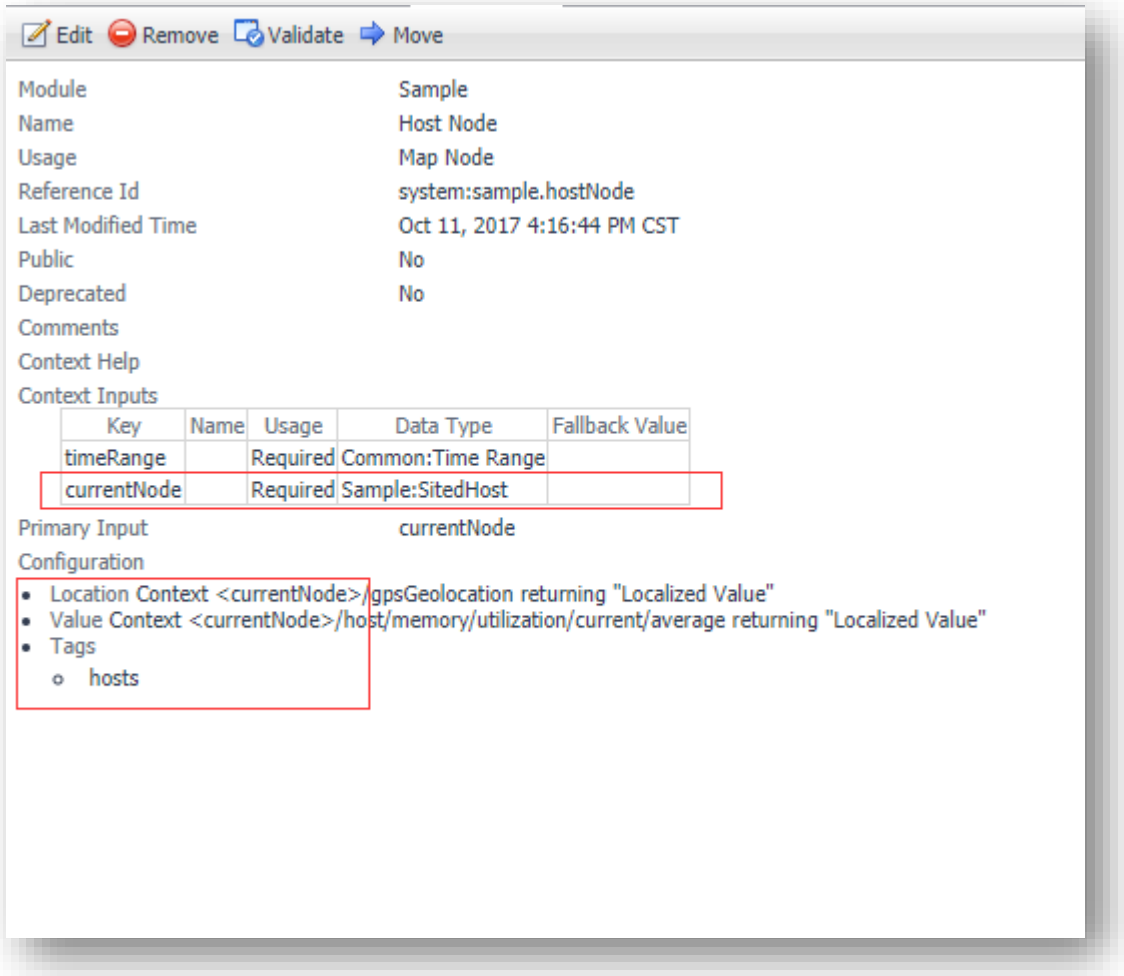
Add a Map Node Association

- Map Node Association
  - Used to provide latitude, longitude and value for each node associated with Map Topology Component.



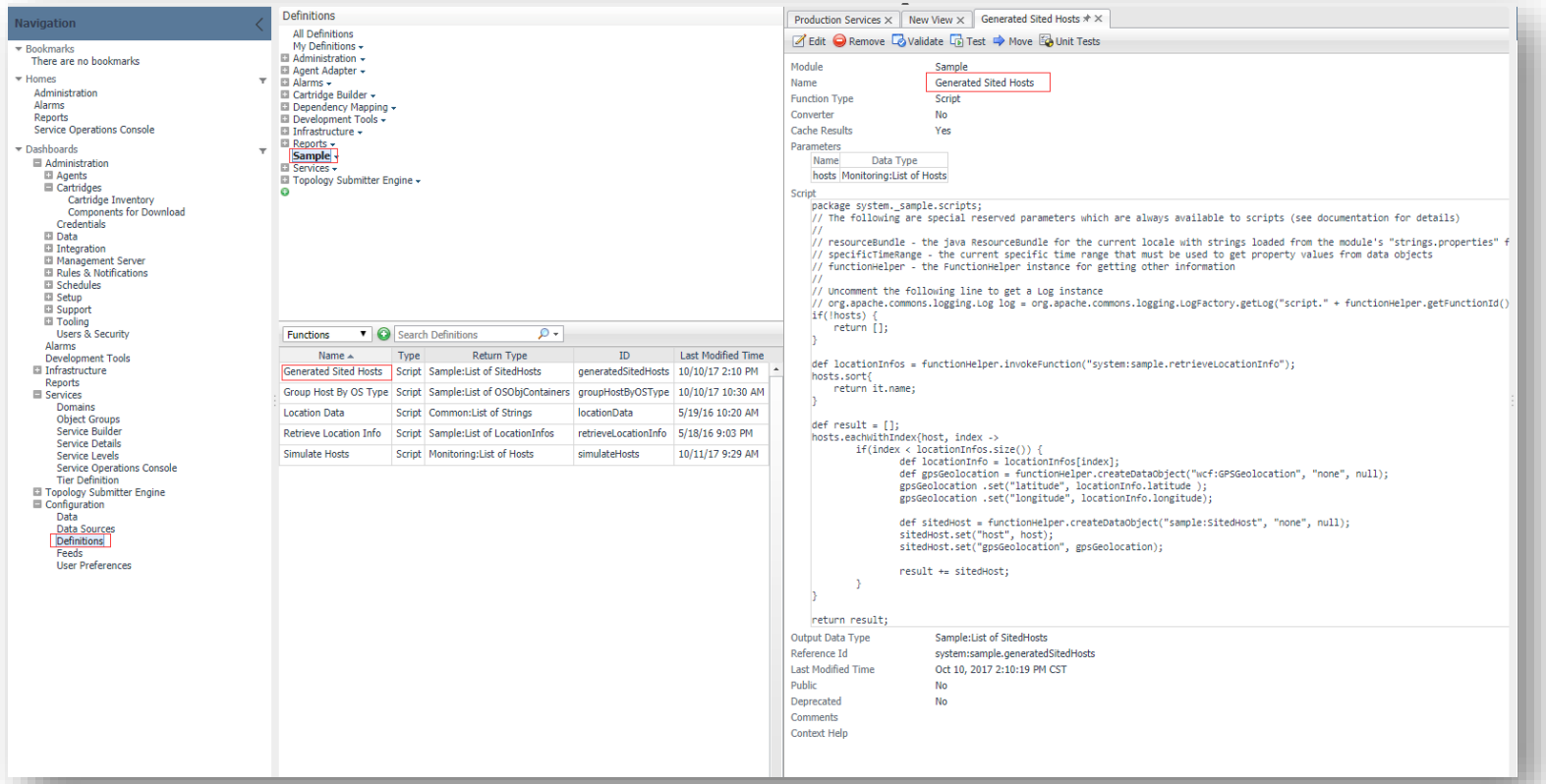
Configure Map Node Association

- Add a context with name “currentNode”, this is a convention.
- Tag is used to build the relationship with Map Topology.

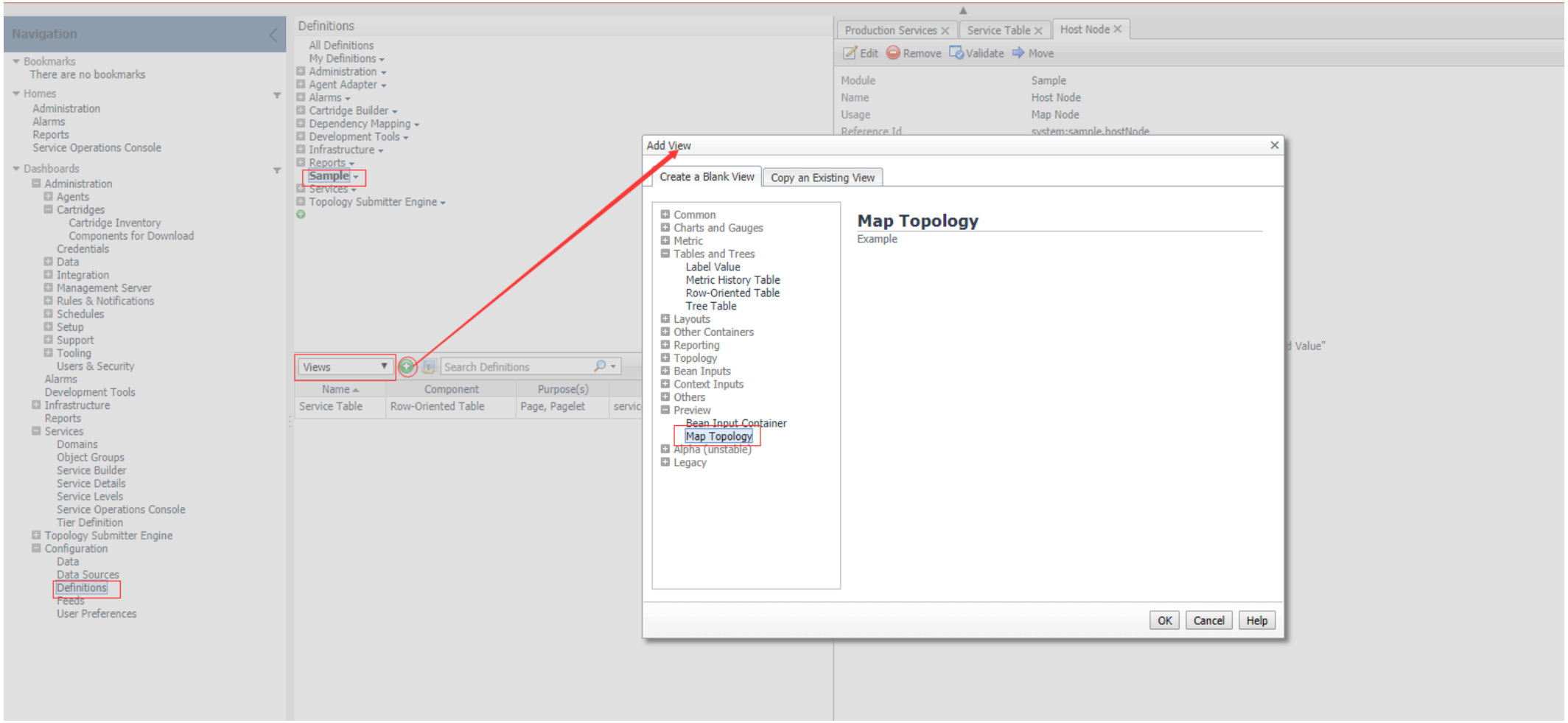


Add Types and Functions to Wrap Host with Geo Location

- We prepared the functions and types already.
- You could find them in *sample* module.

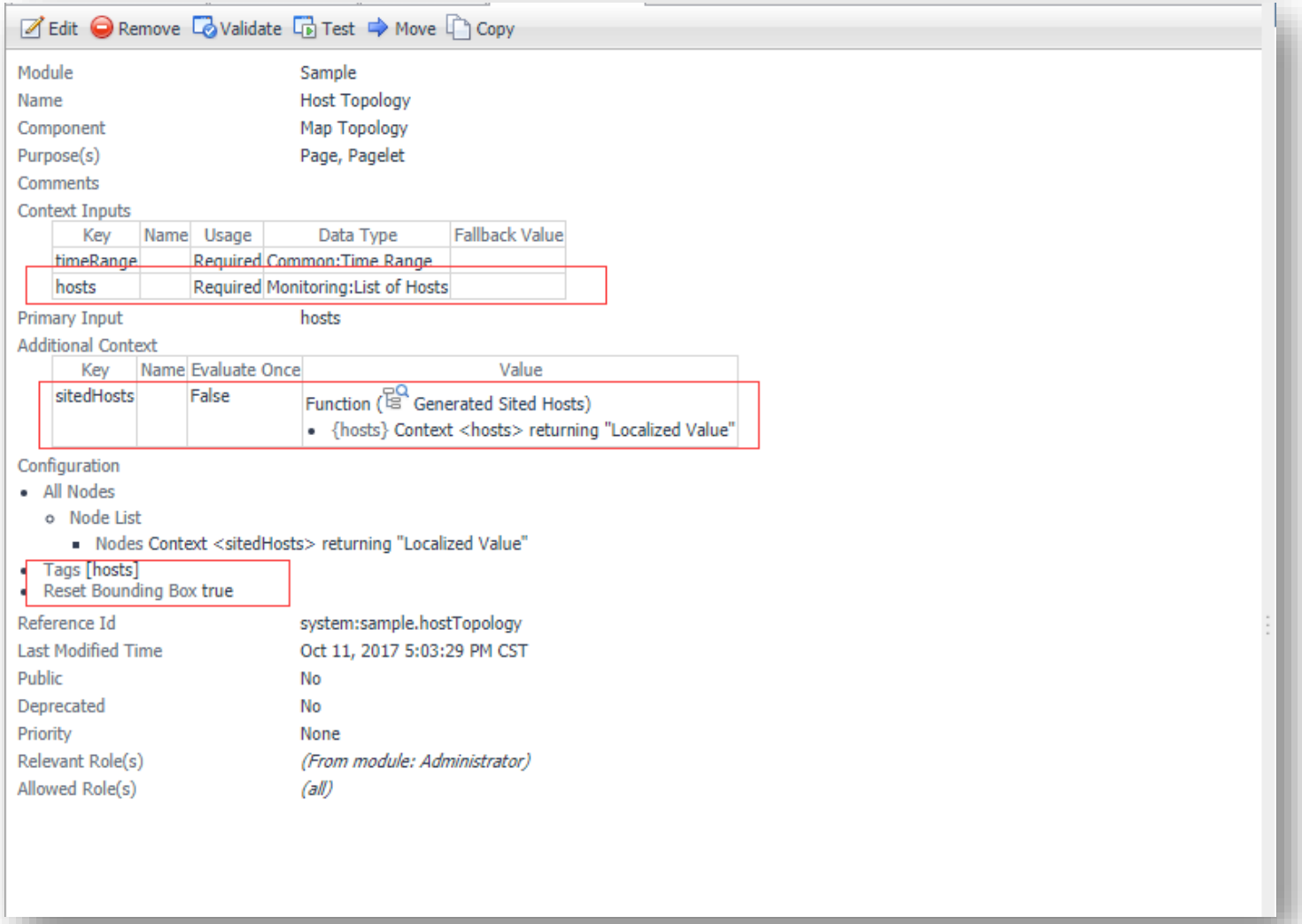


Add a Map Topology



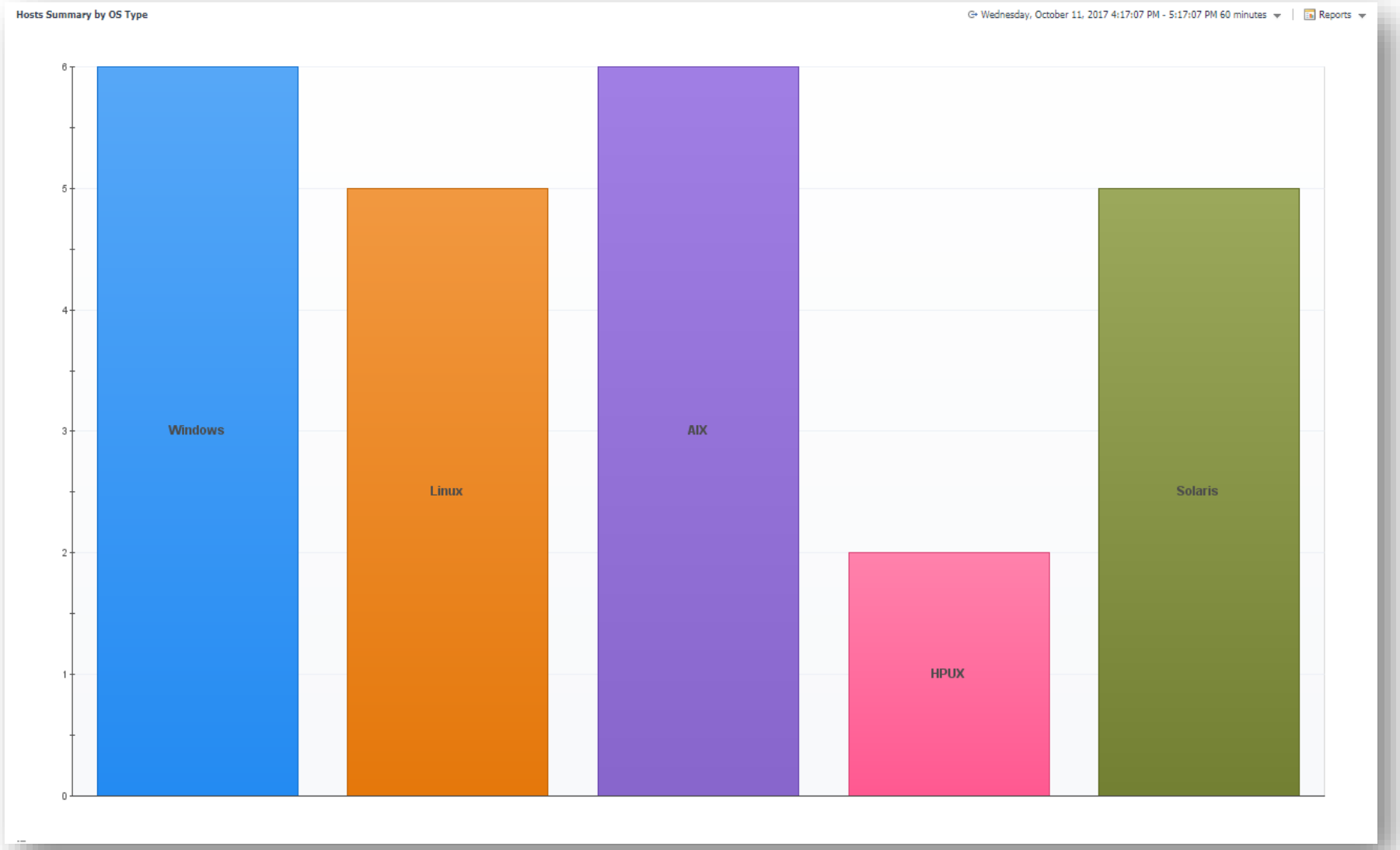
Configure the Map Topology

- Add context "*hosts*" as Input
- Invoke function "*Generate Sited Hosts*" to convert *hosts* to *sitedHosts*.
- Specify the tag which is the same with *Map Node Association*.
- Test after Save.



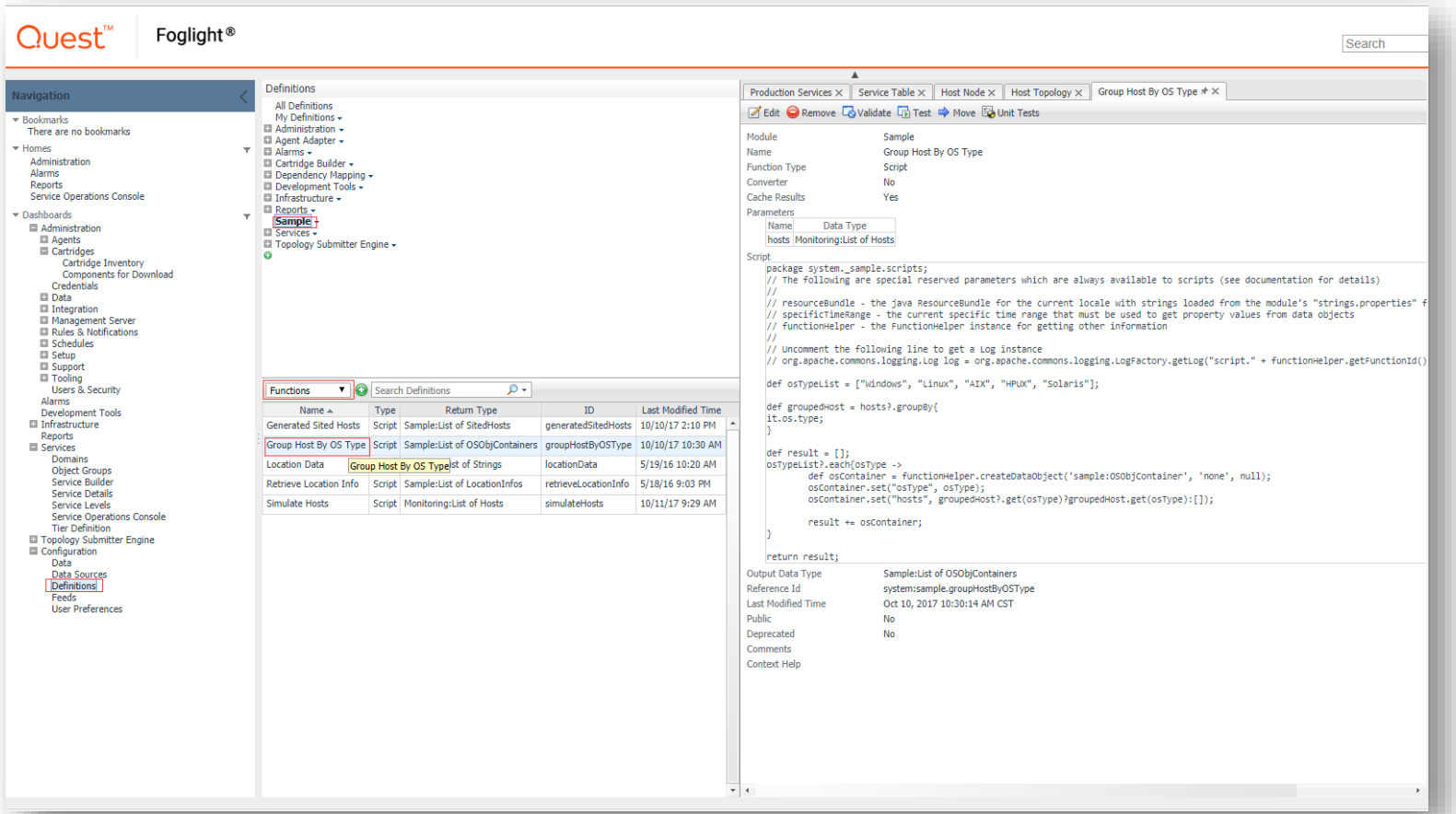
Make Hosts by OS Type Bar Chart

Goal for Hosts by OS Type Bar Chart



Add Type and Functions to Wrap Hosts by OS Types

- We prepared the functions and types already, could be used directly.



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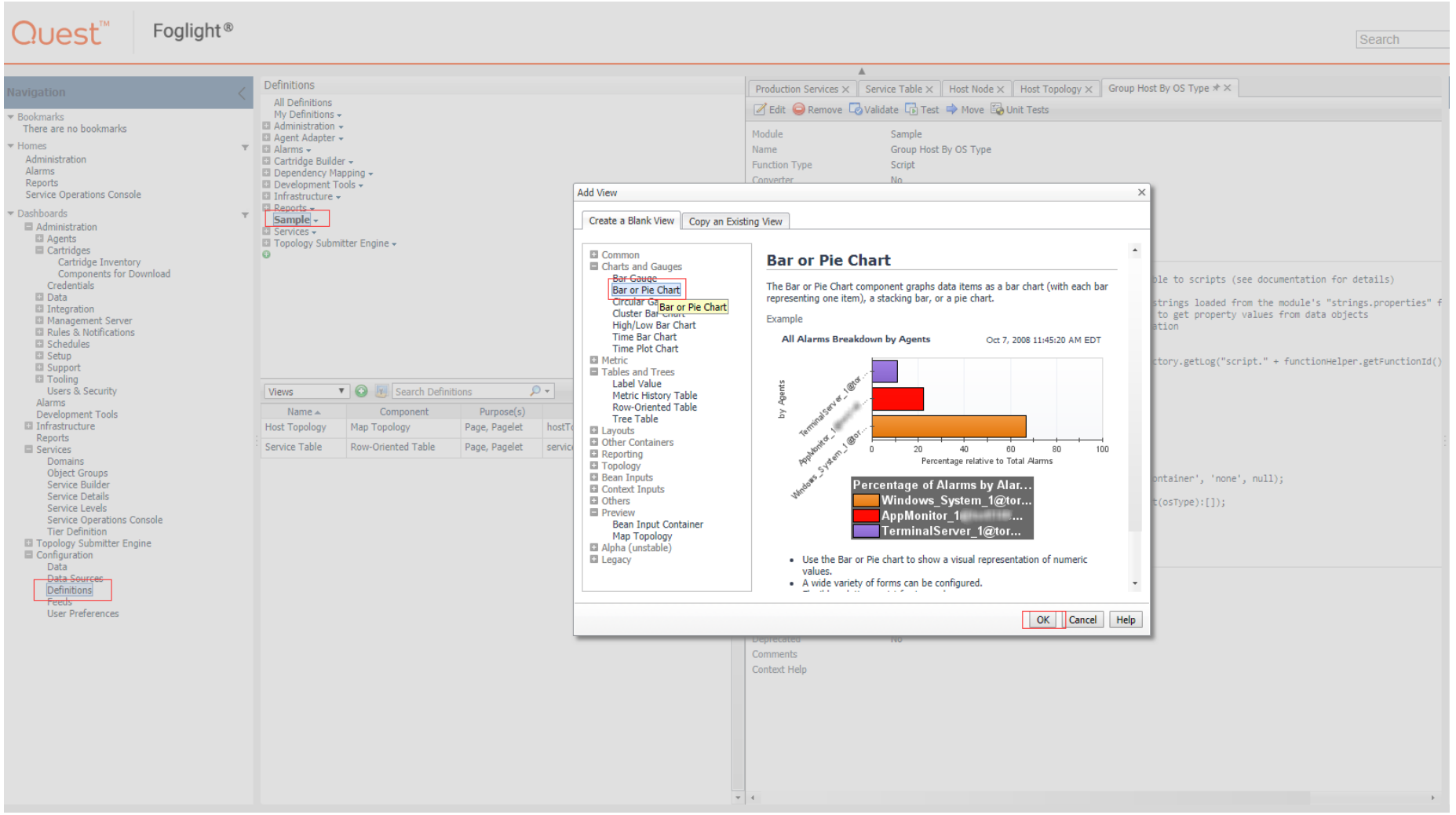
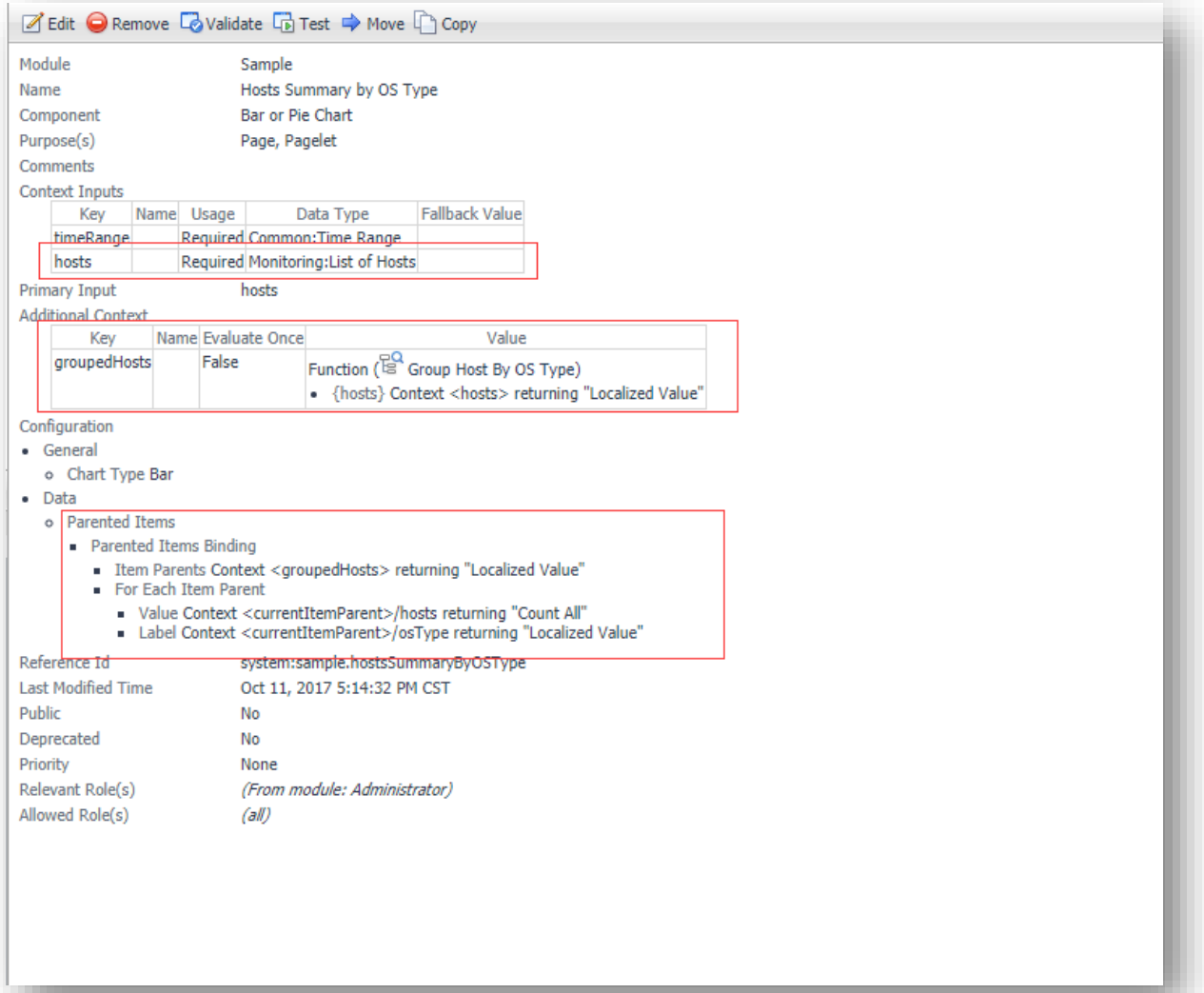
Add a Bar or Pie Chart



Configure the Bar or Pie Chart

- Add context hosts as Input
- Invoke function "*Group Host by OS Type*" to group the hosts by OS.
- Configure "*Parent Items*"



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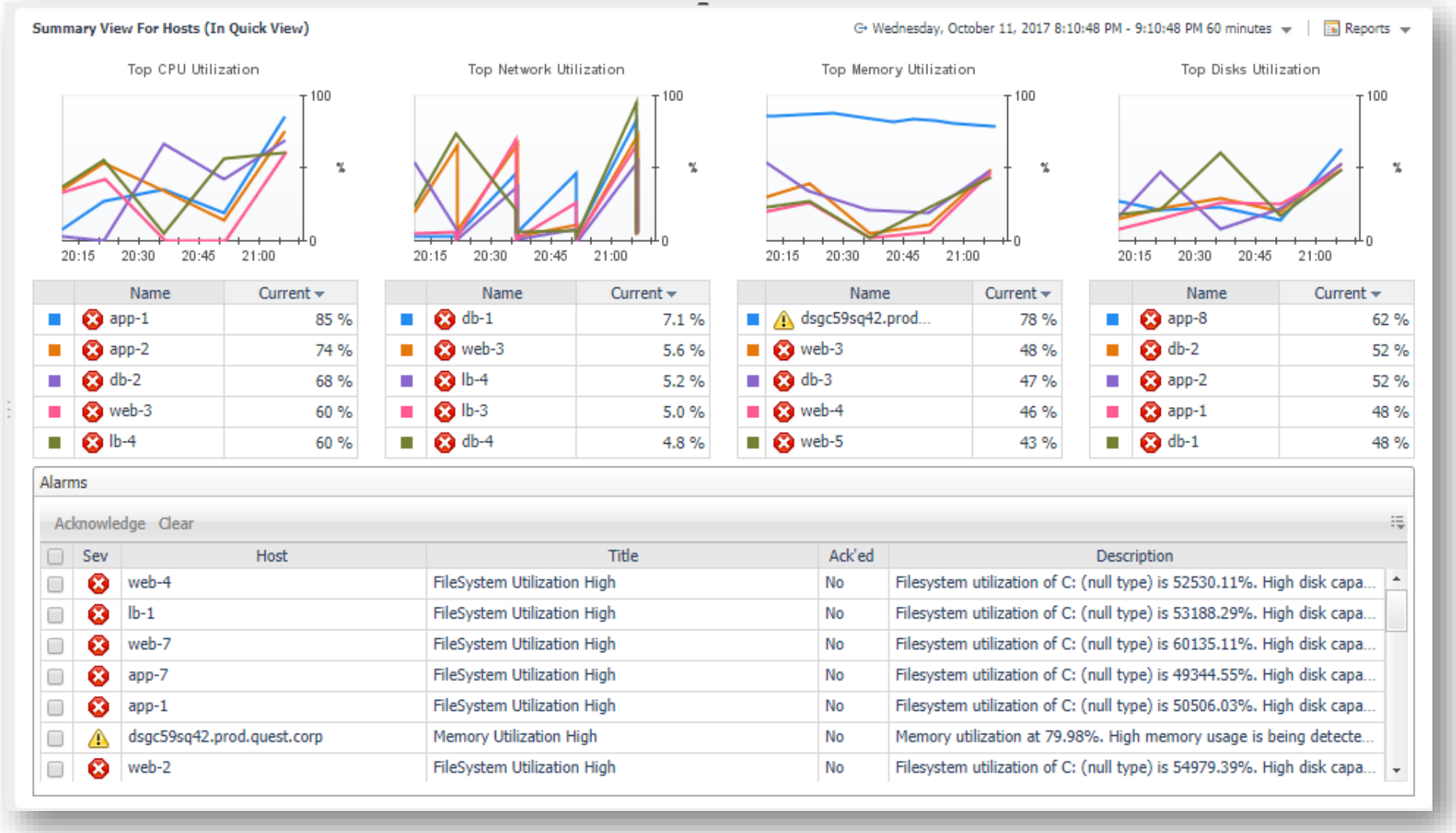
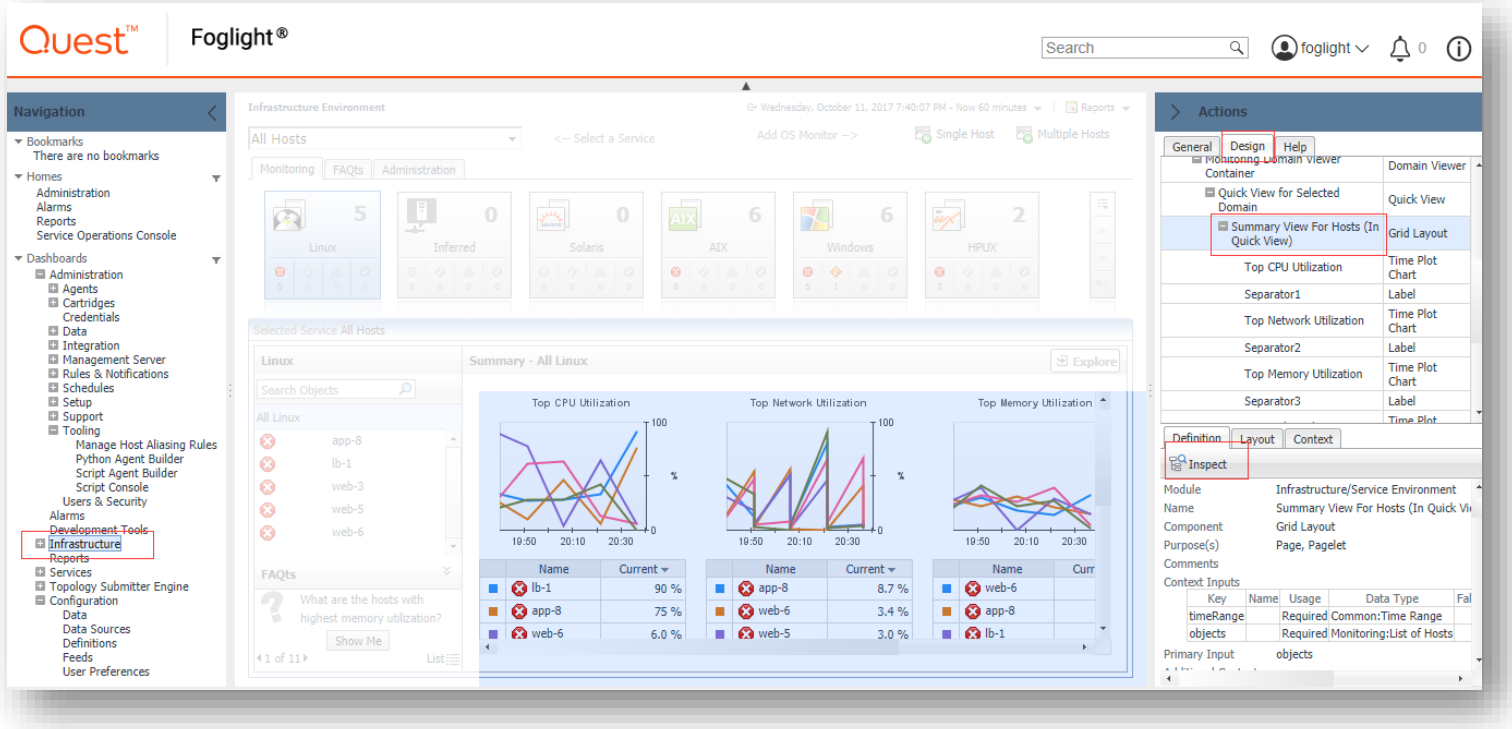
Copy Resources Summary View

Goal for Resource Summary



Locate Resource Summary View within IC

- Use WCF Investigation (Design Tab) to locate the View.
- Inspect into the View to edit.



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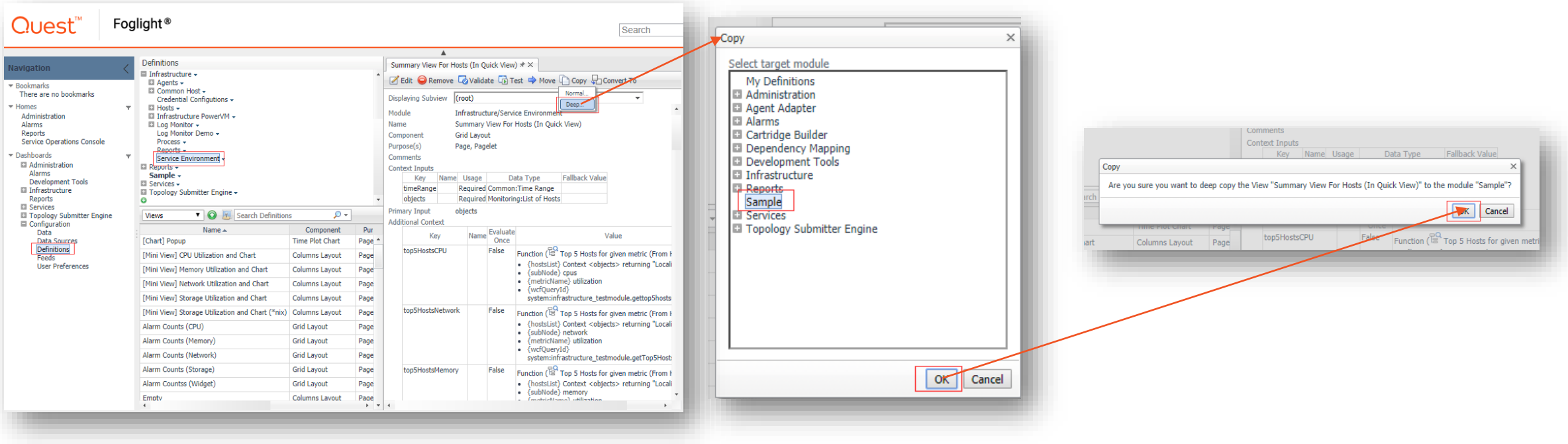
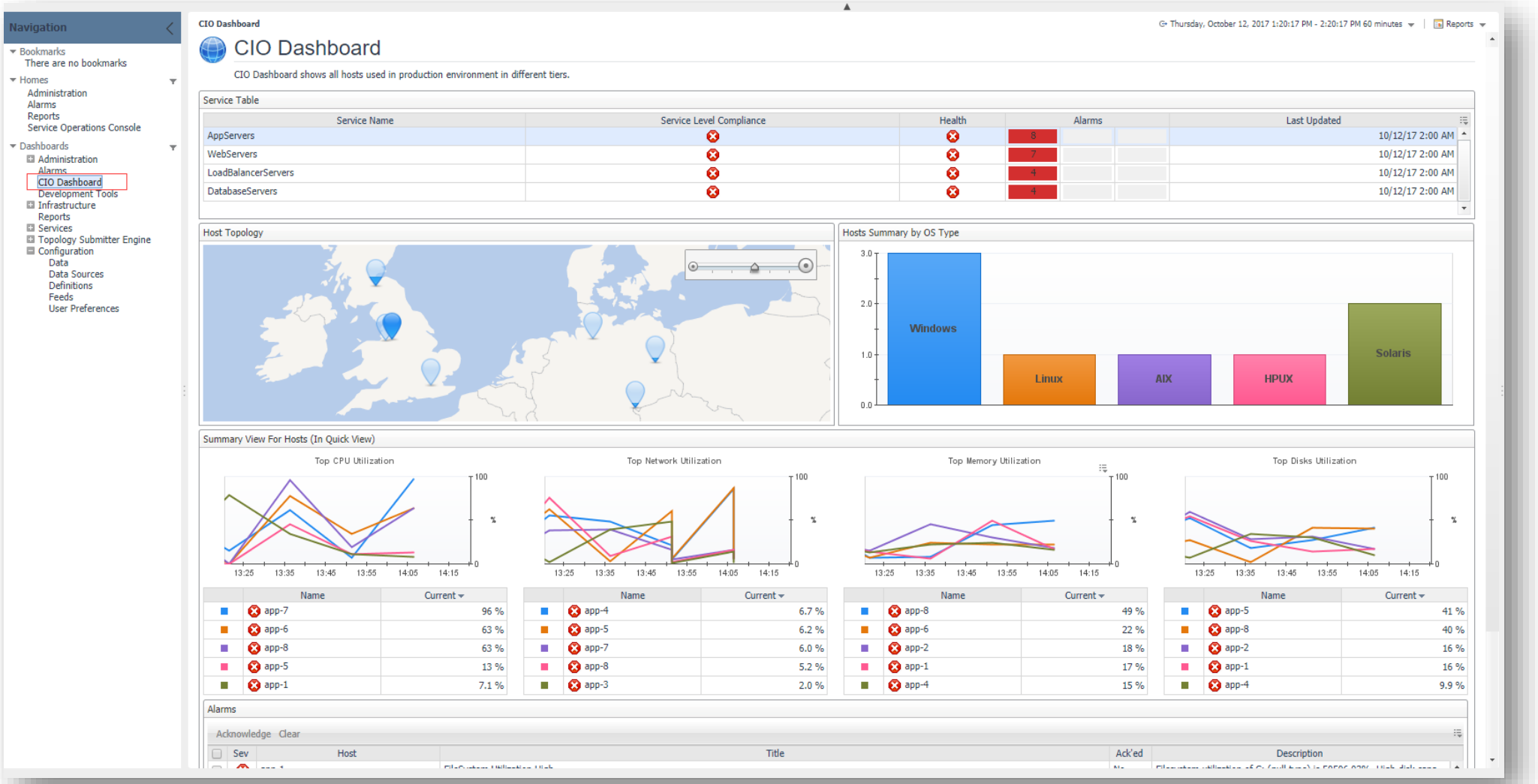
Copy Resource Summary from IC



Construct CIO Dashboard

Goal for CIO Dashboard



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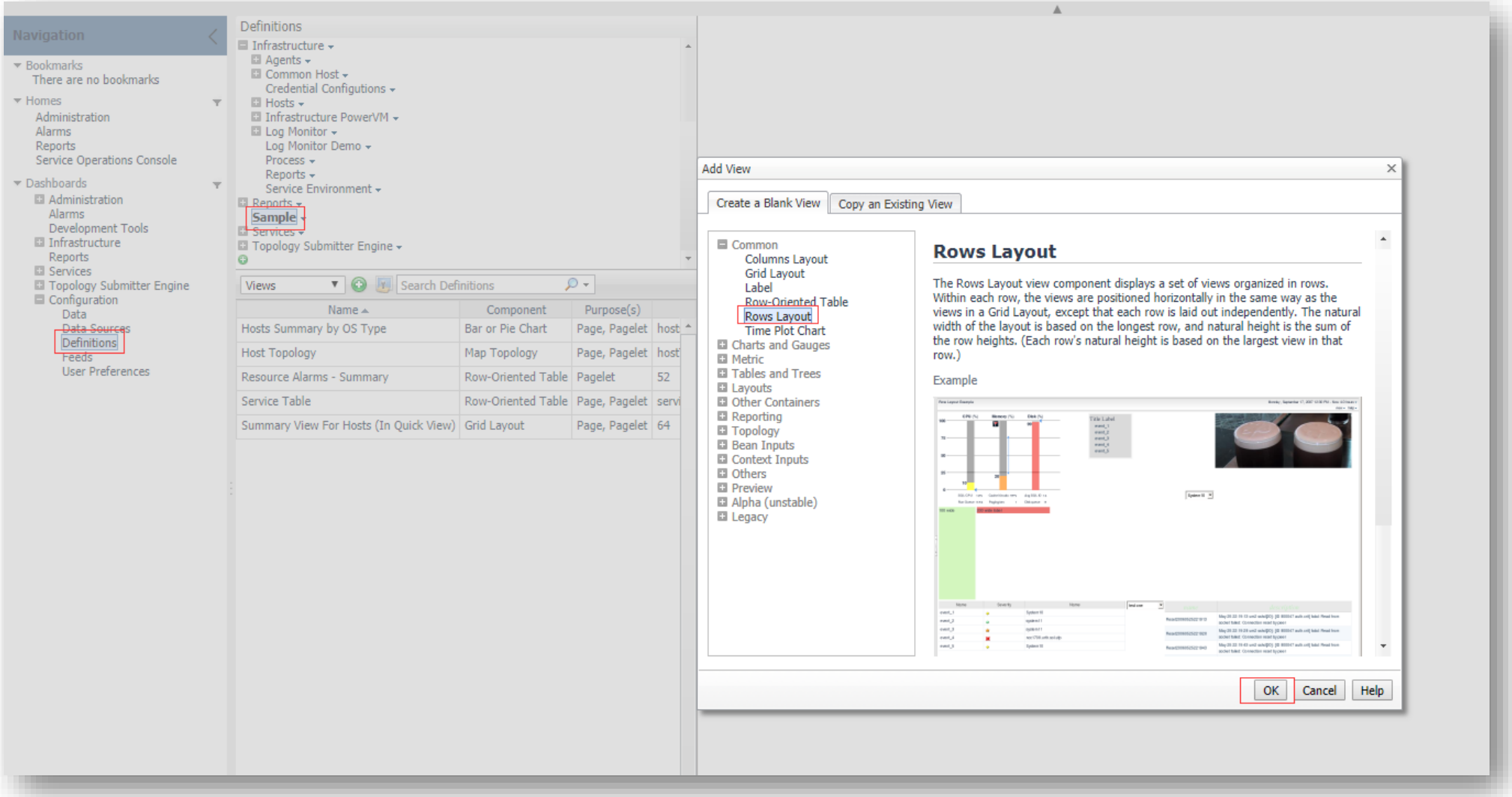
Add a Rows Layout



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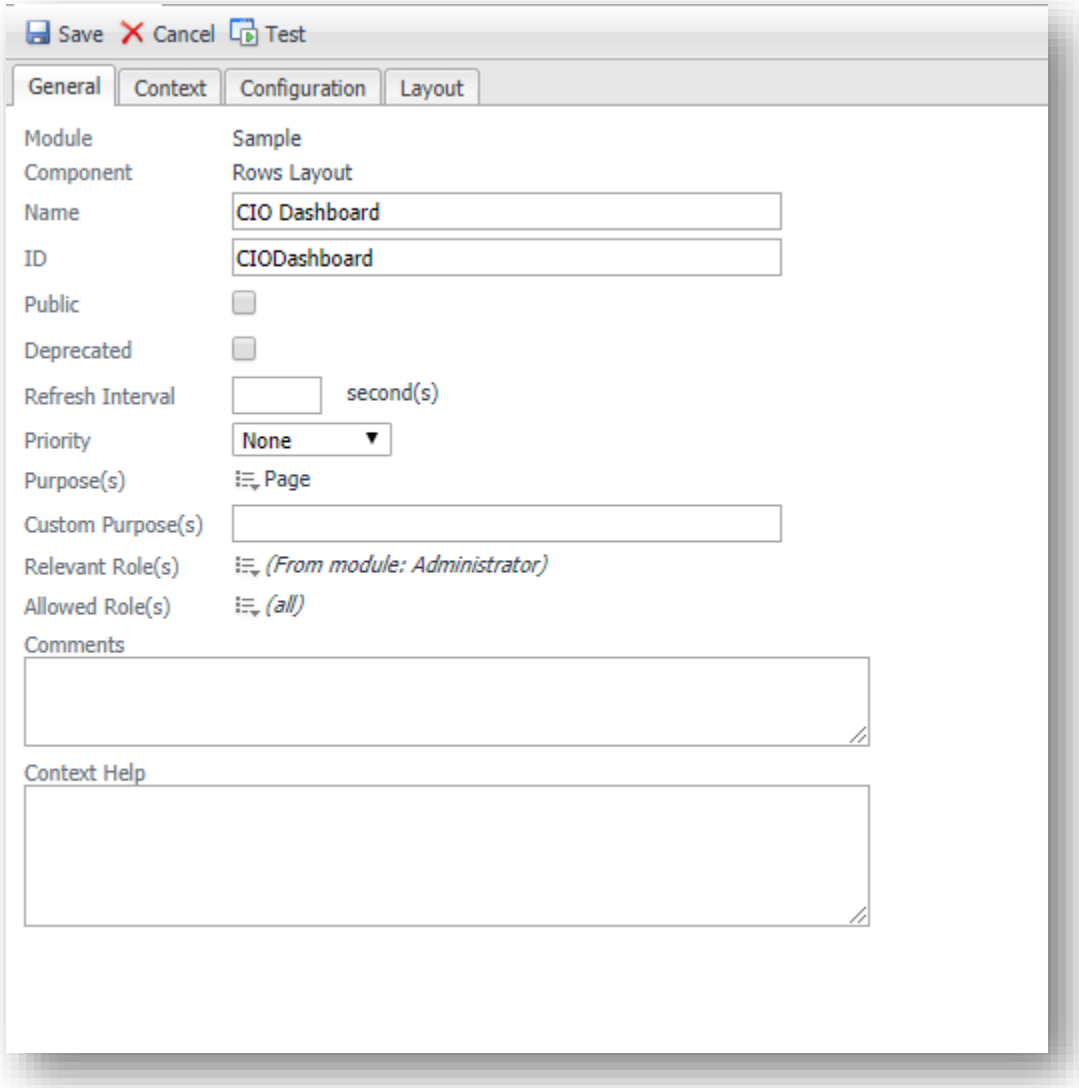
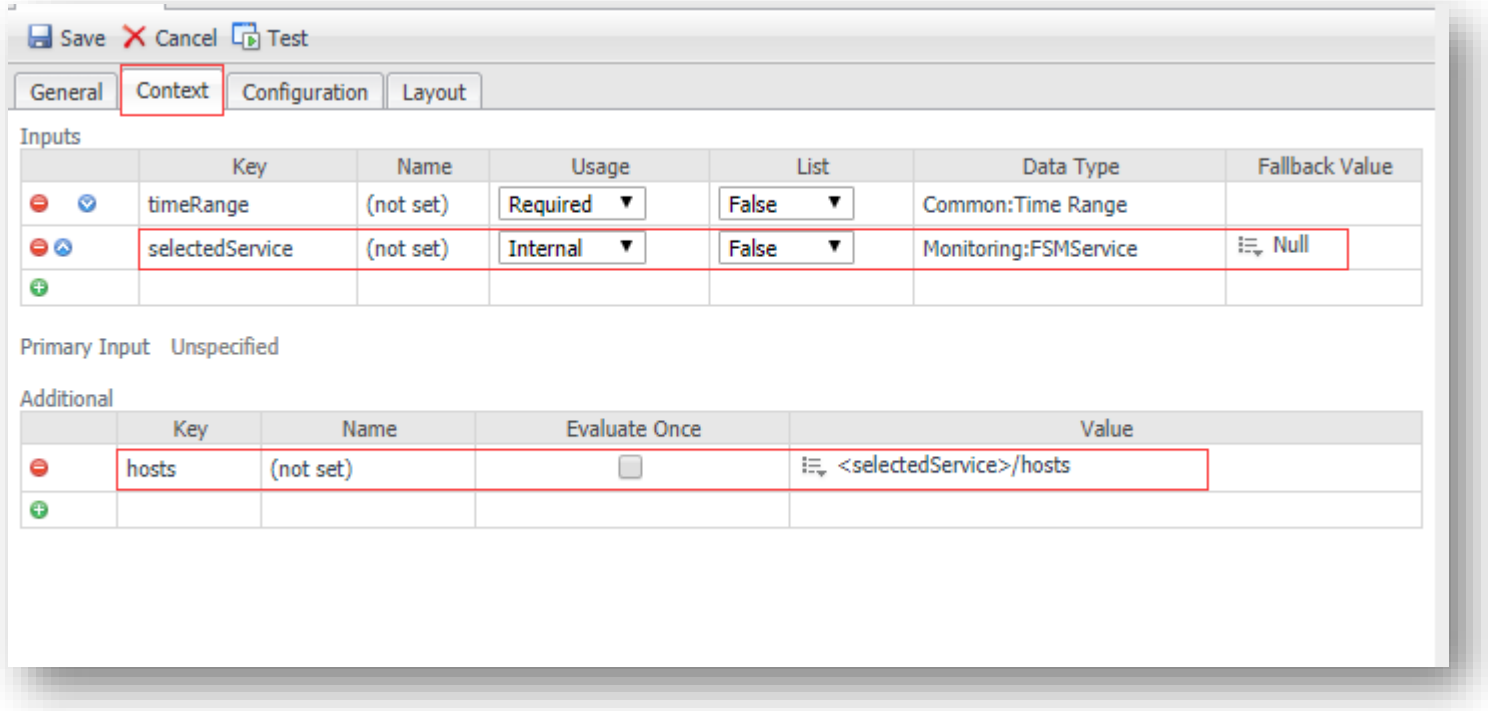
General Setup for Layout

- Name: CIO Dashboard
- Purpose: Page



Context Setup for Layout

- *selectedService*: this context is used to pass the value of selected service in *Service Table*.
- *hosts*: values are from the *selectedService*, and it is required by views '*Host Topology*' and '*Hosts Summary by OS Type*'.



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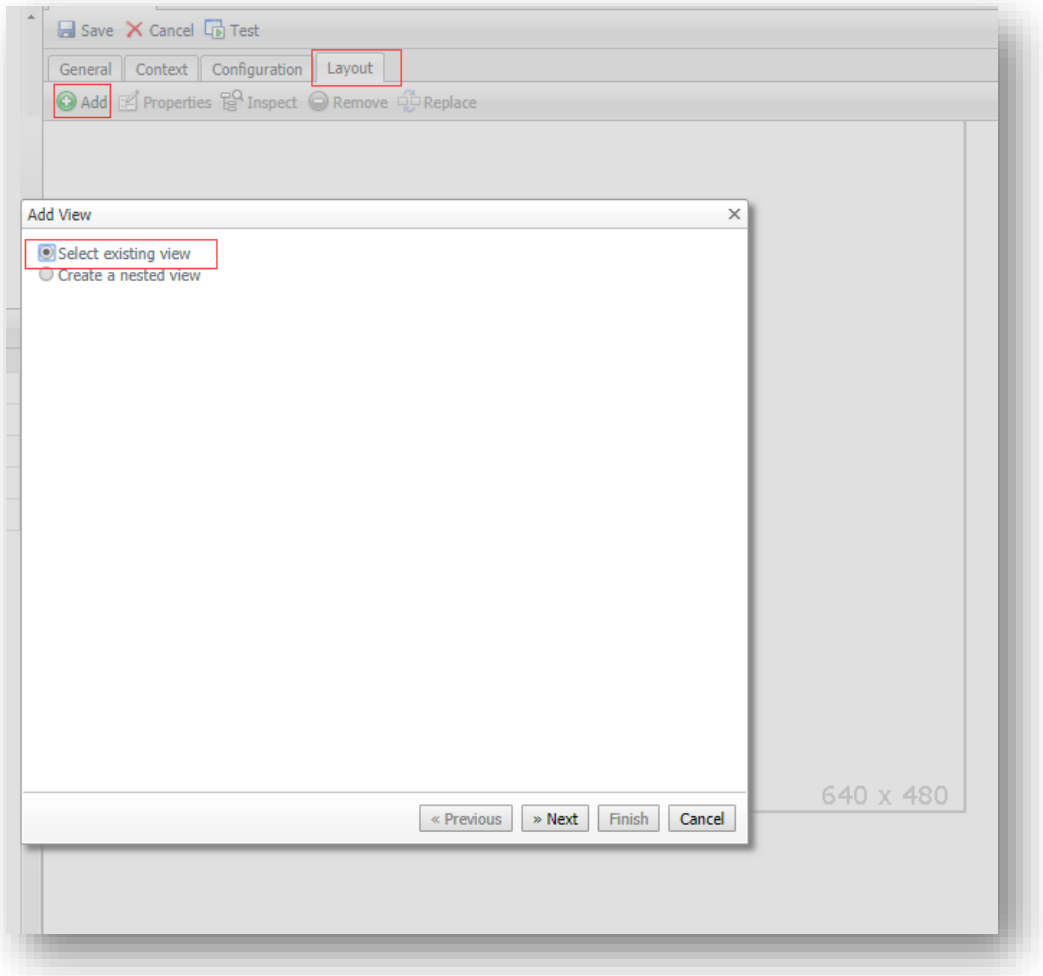
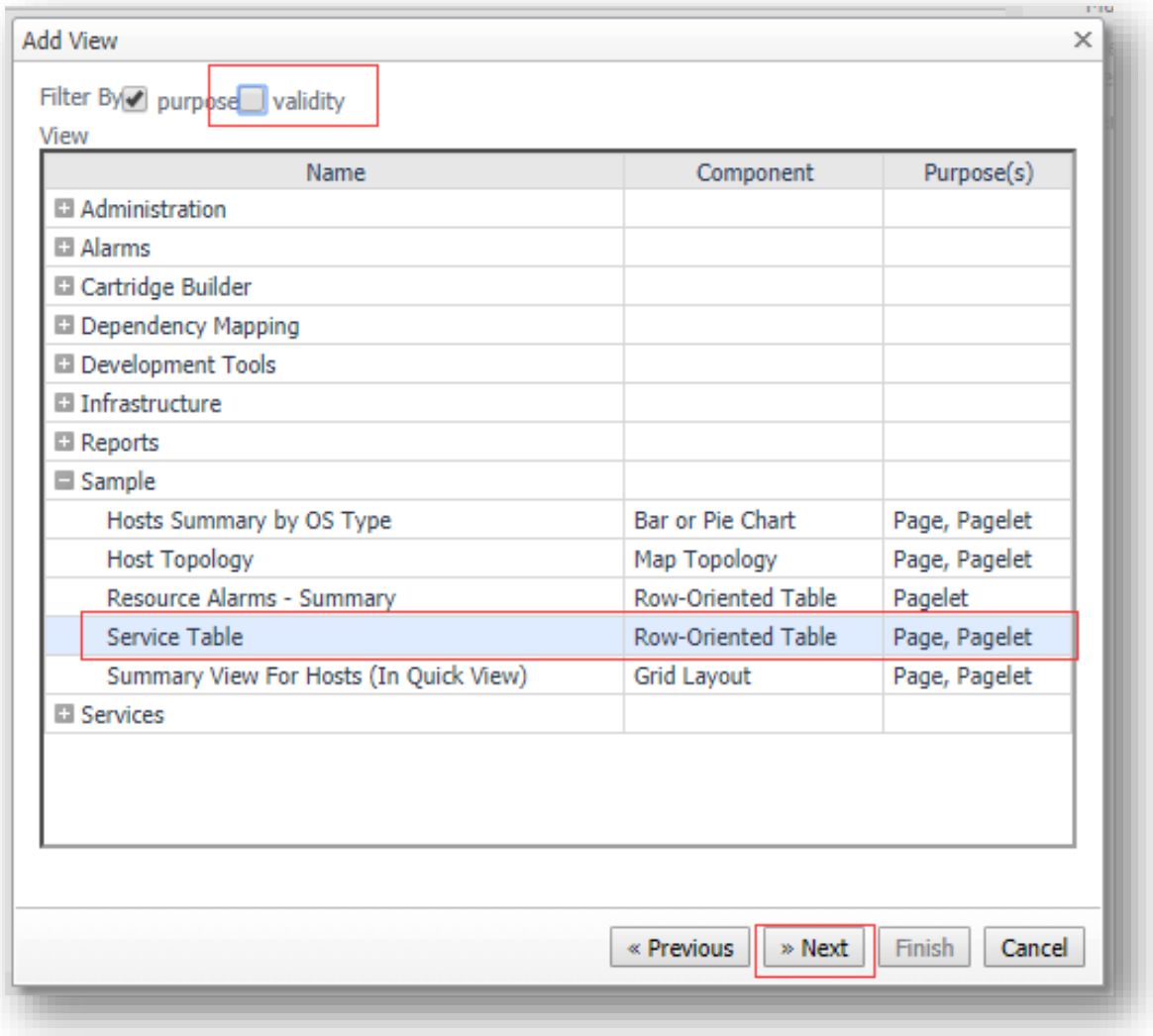
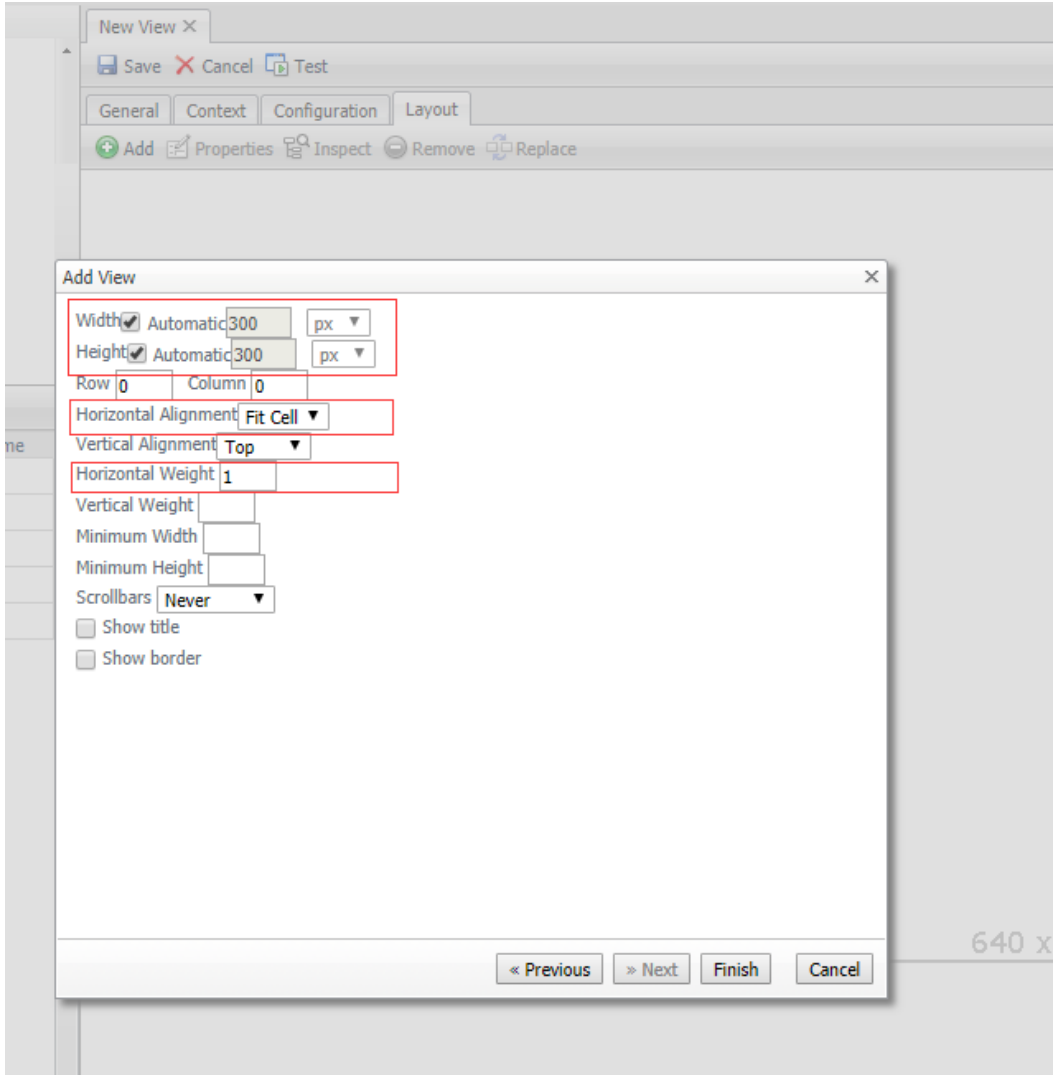
Add Service Table to Layout – Step 1



Add Service Table to Layout – Step 2

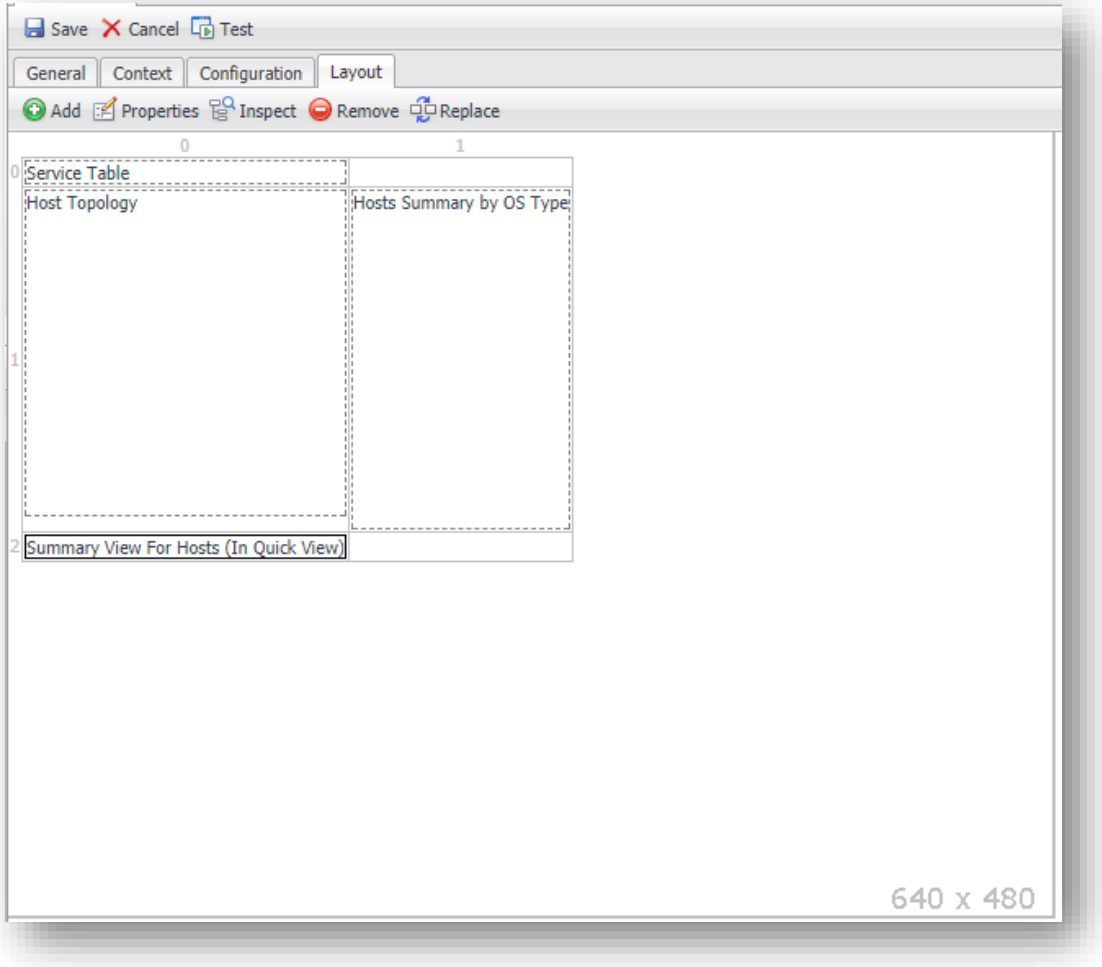


Add Service Table to Layout – Step 3



Add Service Table to Layout – Step 4

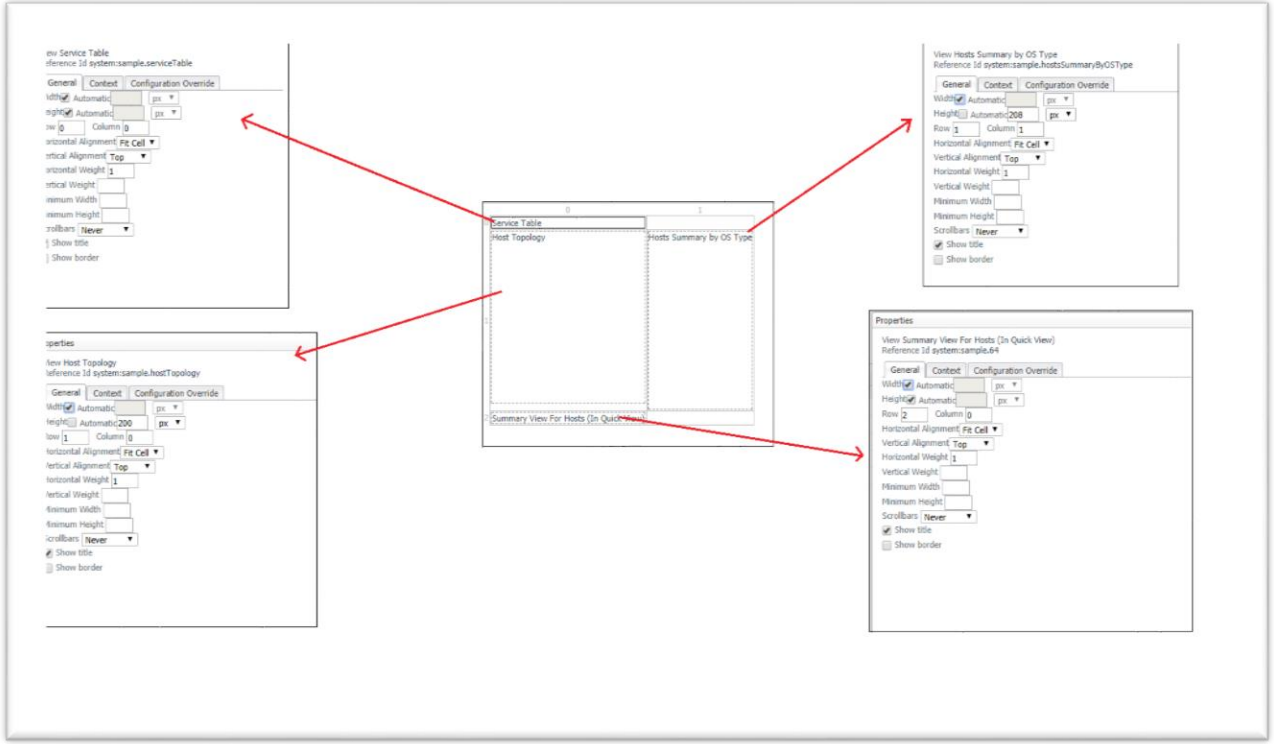
- Add other views to Layout in the same way
  - *Host Topology*
  - *Host Summary by OS Type*
  - *Summary View For Hosts (In Quick View)*
- Note, the input of *Summary View For Hosts (In Quick View)* is *objects*, which is not match with any context of this Layout, should convert context *hosts* to *objects* when adding this view.

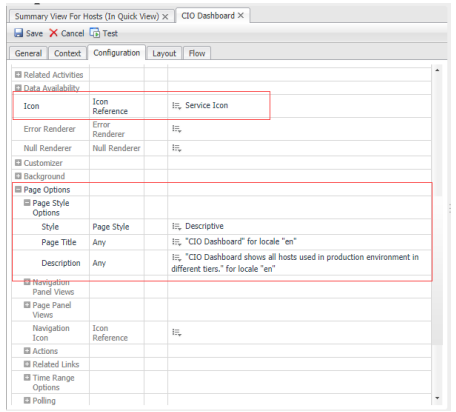


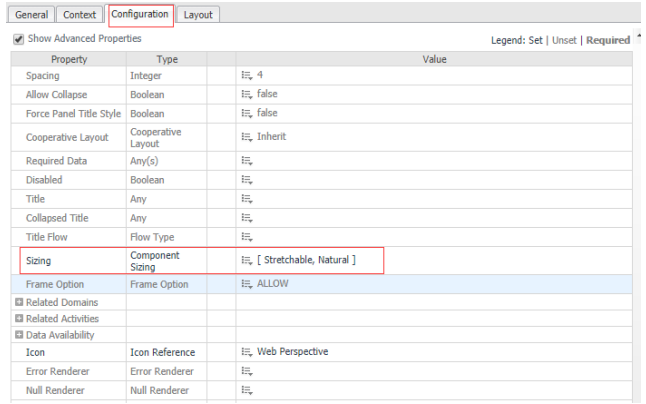
Adjustments for Contained Views

- Specify following properties for each view in Layout
  - Width
  - Height
  - Row
  - Column
  - Alignments
  - Weight: means how much space it should occupy compared with other views.
  - Show Title

- Add a Page Title
- Give a *Nature* height for Sizing
- Bind '*CIO Dashboard*' to module as Main View so that a dashboard link appears in Navigation panel.
- Finally, change module name to 'CIO Dashboard'.







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Make a Report Template

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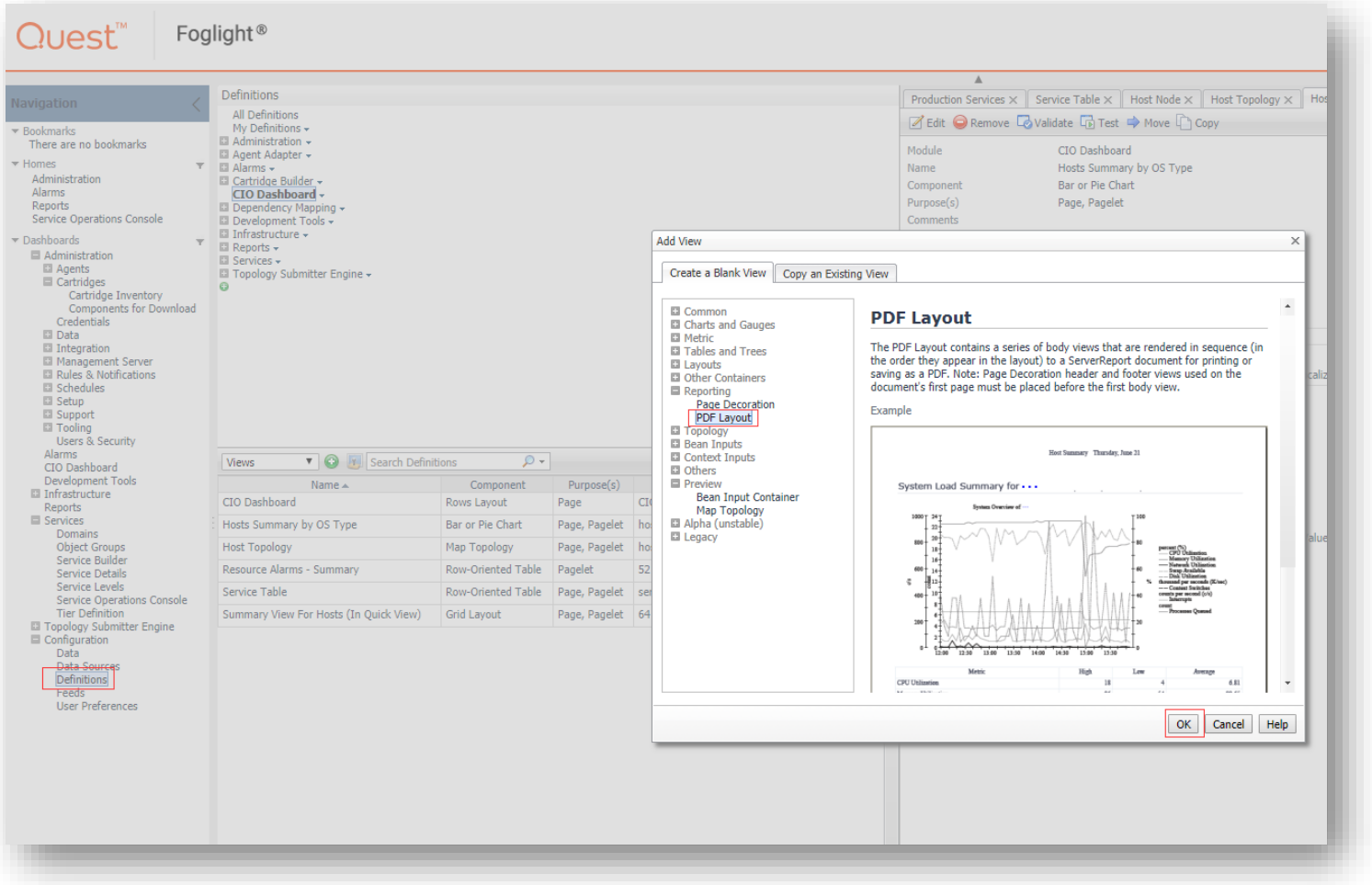
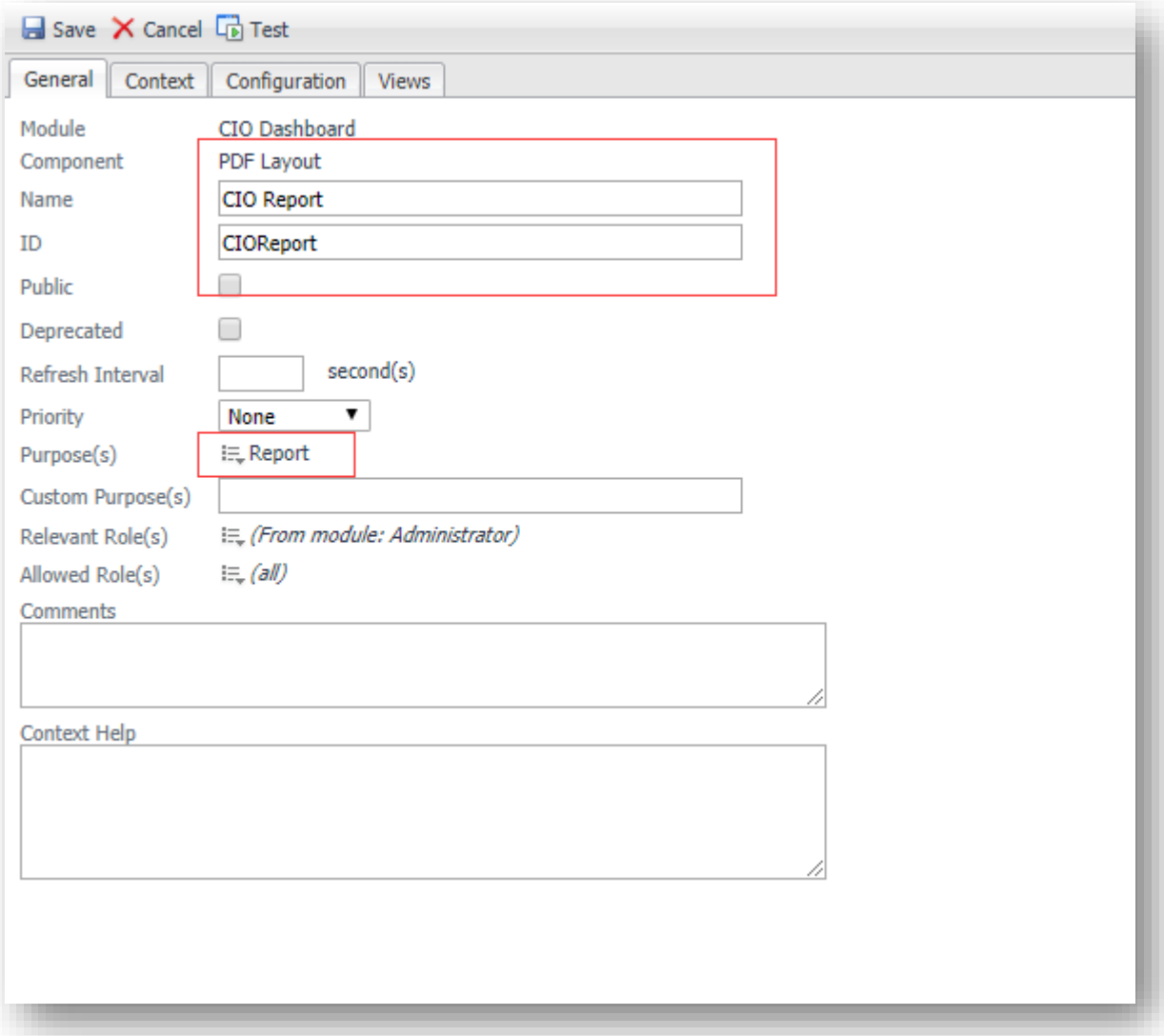
Add a PDF Layout

- PDF Layout is a PDF template that contains the reportlets.



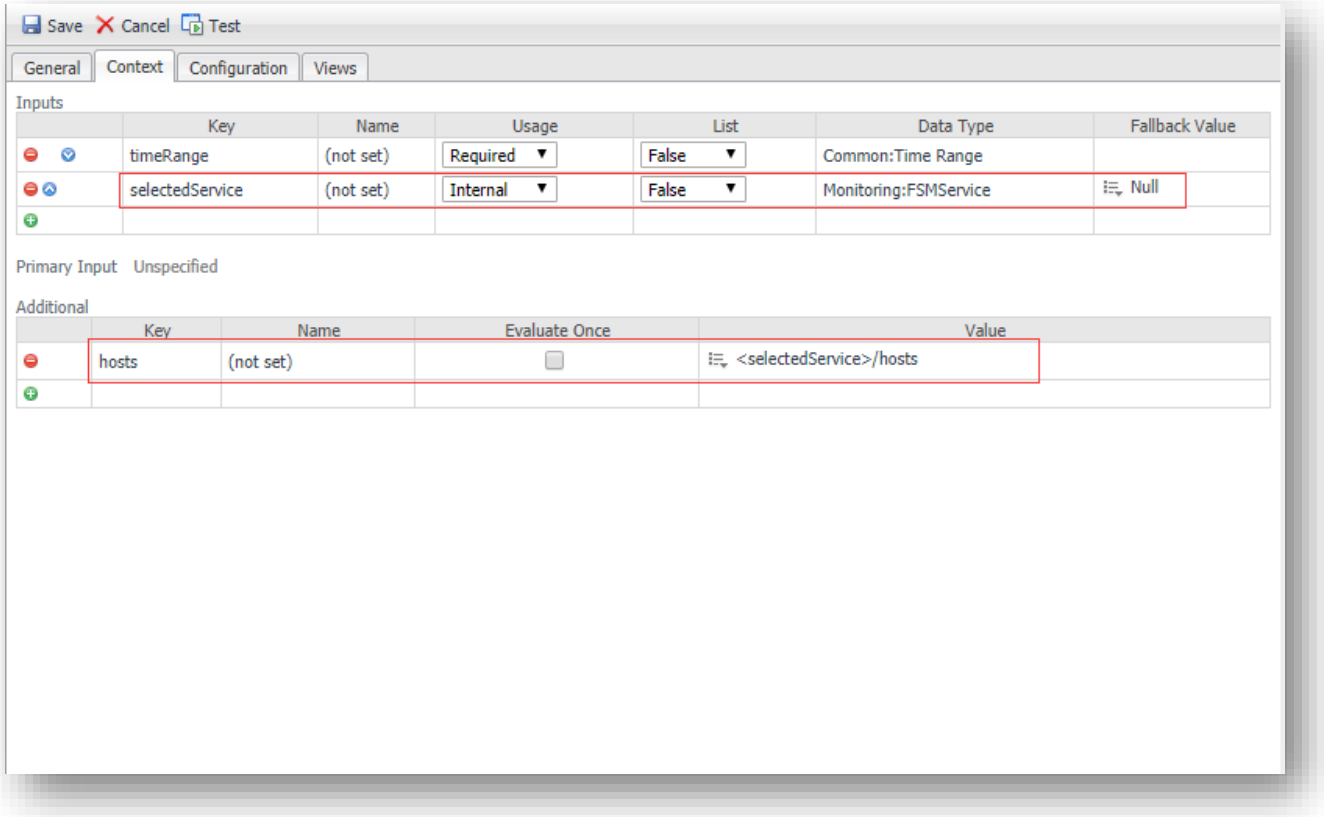
General Setup for PDF Layout

- Purpose: Report



Context Setup for PDF Layout

- Add context *selectService* and additional context *hosts* as Rows Layout does.
- In addition, add context *pageNumber* for PDF footer.



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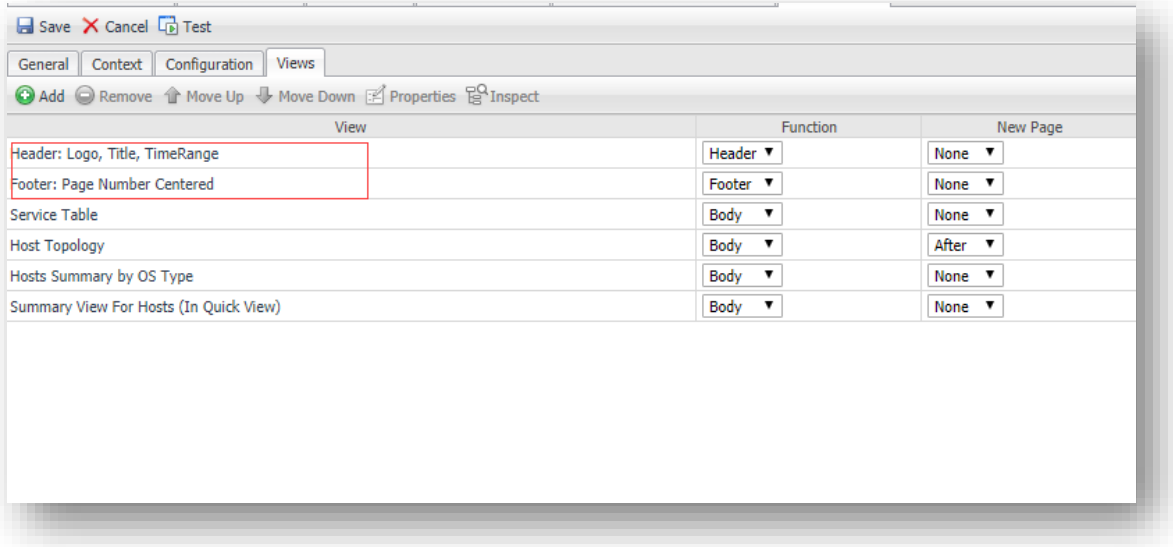
Add Reportlet to PDF Layout

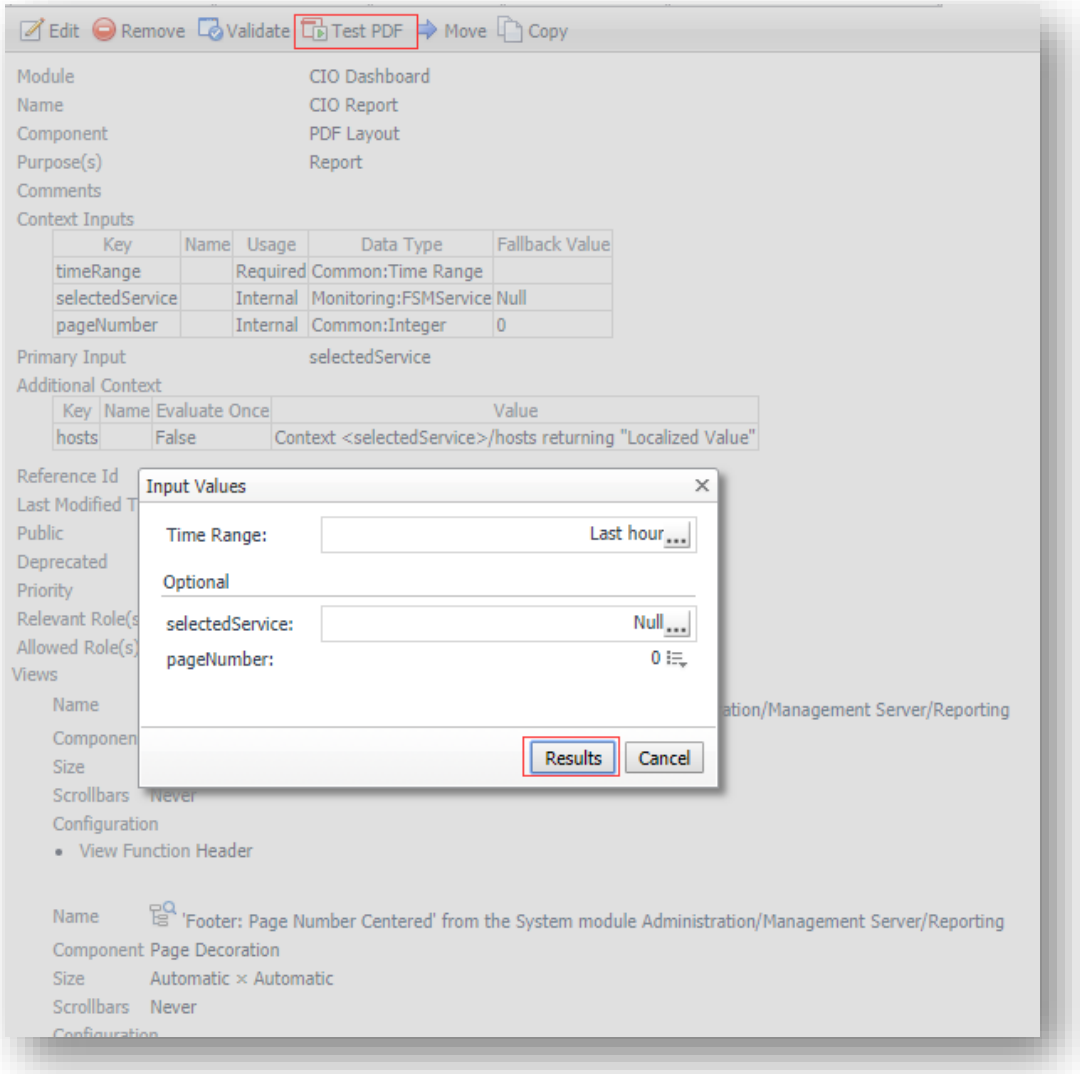
- Add following views to Layout
  - Service Table
  - Host Topology
  - Hosts Summary by OS Type
  - Summary View For Hosts(In Quick View)
  - Page Header
  - Page Footer
- Page Header and Page Footer should be ahead of other views.
- It's recommended that all contained views have fixed width and height.
- Don't forget convert *hosts* to *objects* for Summary View For Hosts(In Quick View).

- Page header and footer could use existing ones under module *Administration/Management Server/Reporting*



Quest

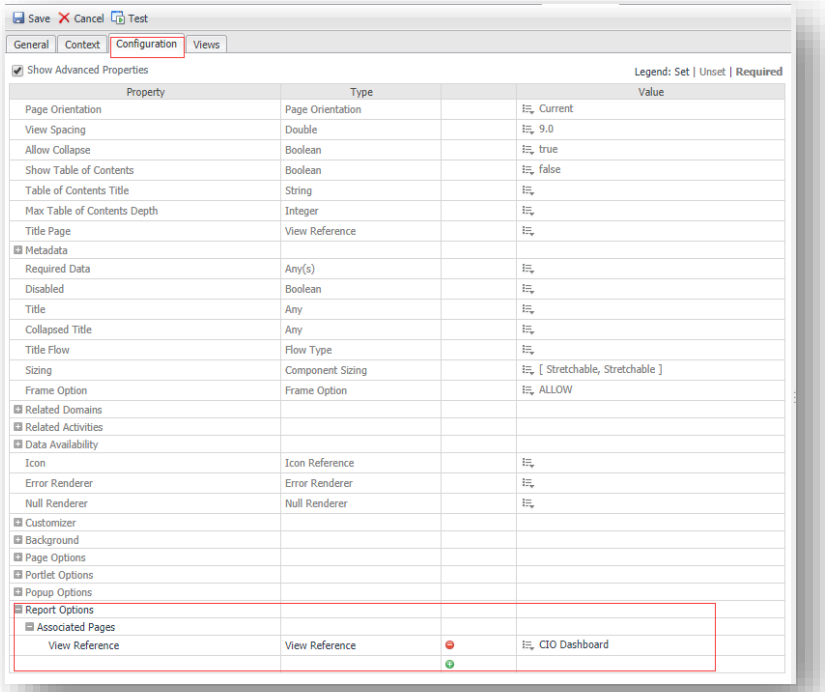
Test CIO Report

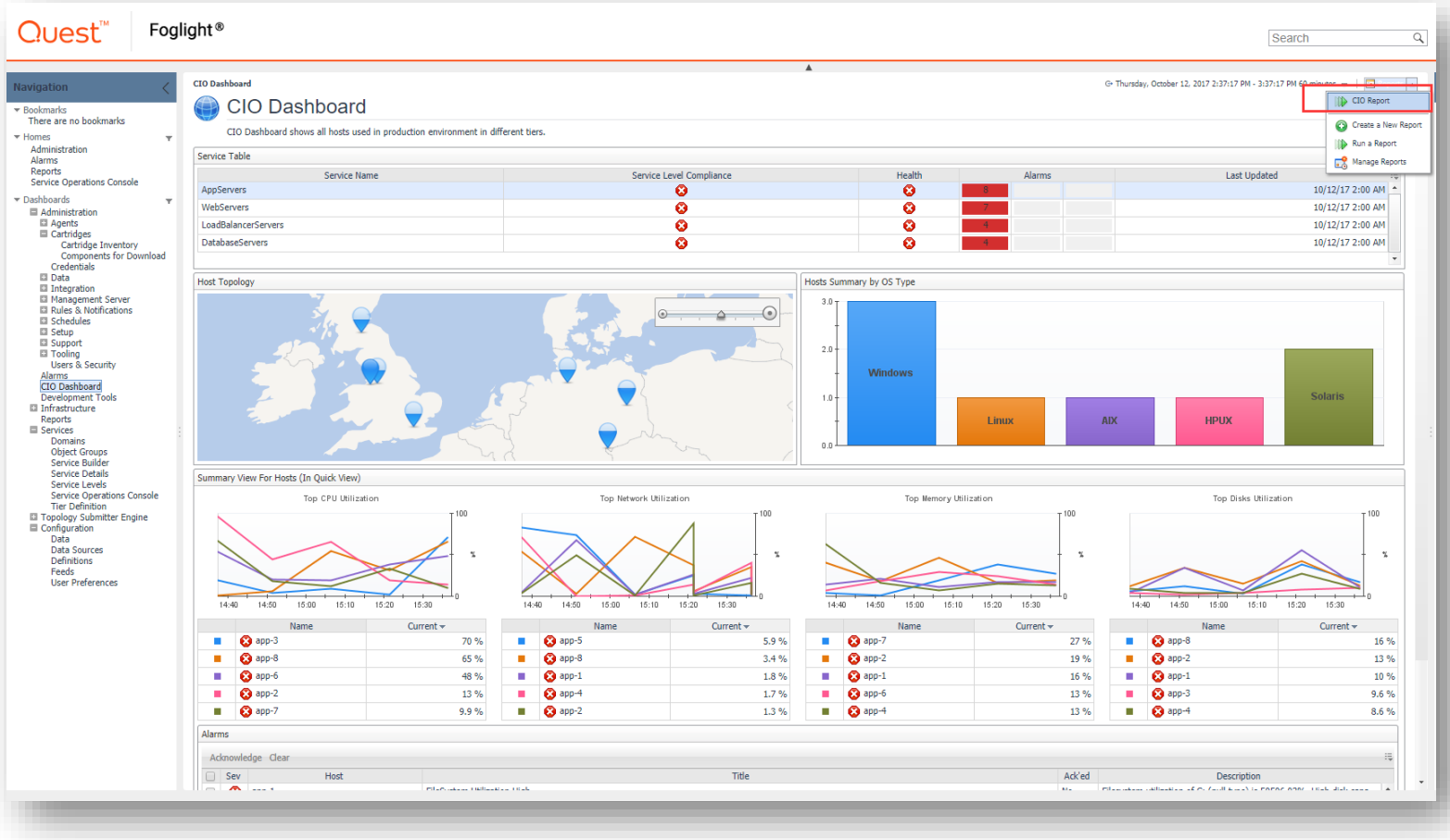


Quest

Associate CIO Report to CIO Dashboard

- Edit the *Configuration* of CIO Report
- Configure the *Report Options*





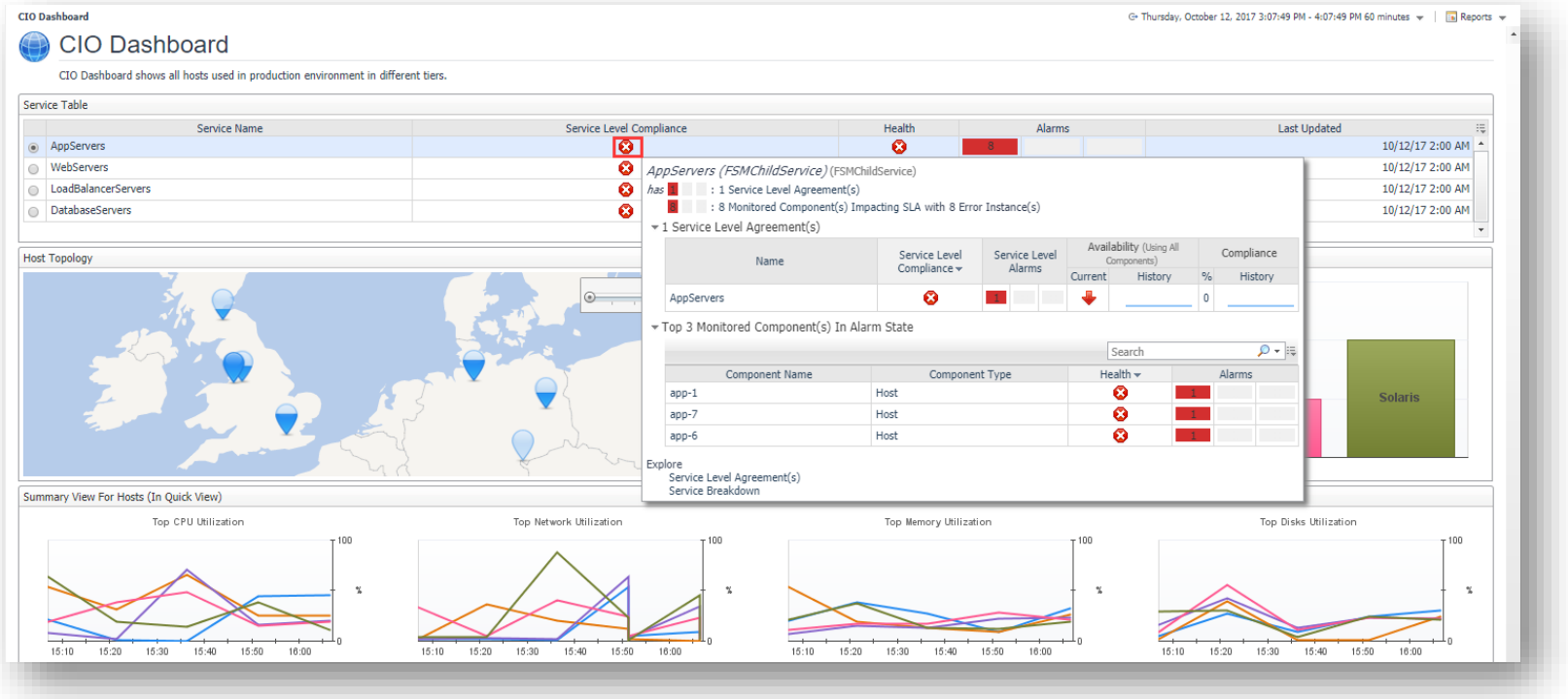
Quest

Next Steps

- Add actions to following places
  - SLA Detail
  - Health Detail
  - Alarm Detail
  - Map improvement – Bubble select & Dwell

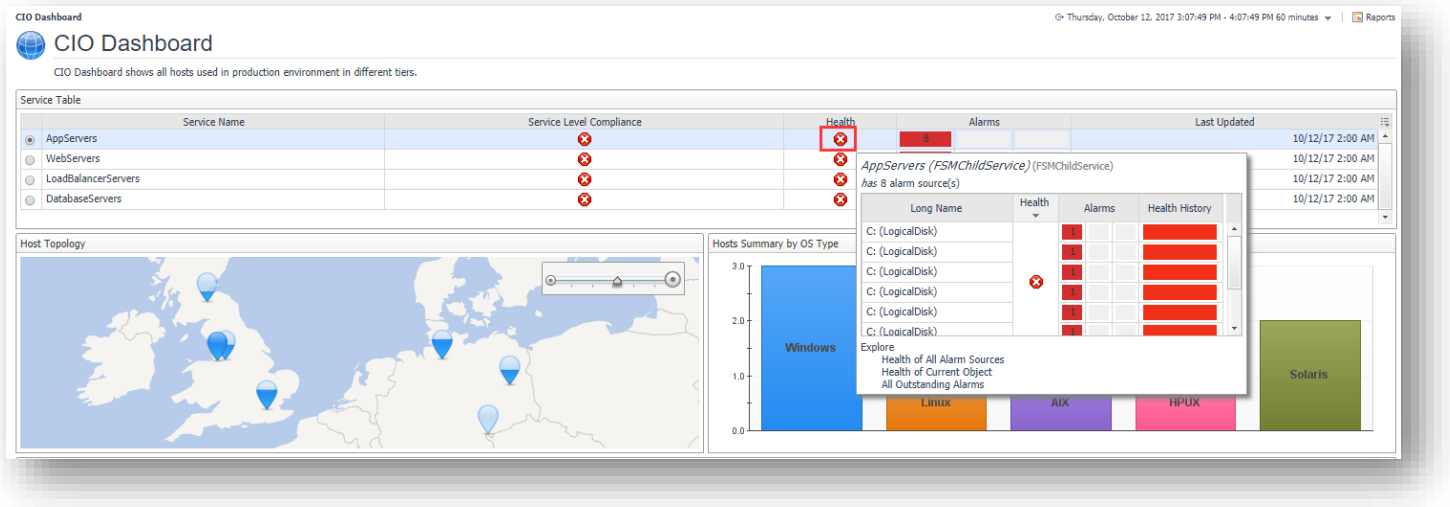
SLAState Select Action

Edit Service Table -> Flow, Popup *Services/Explorer/FSMService Service Level Compliance Summary*



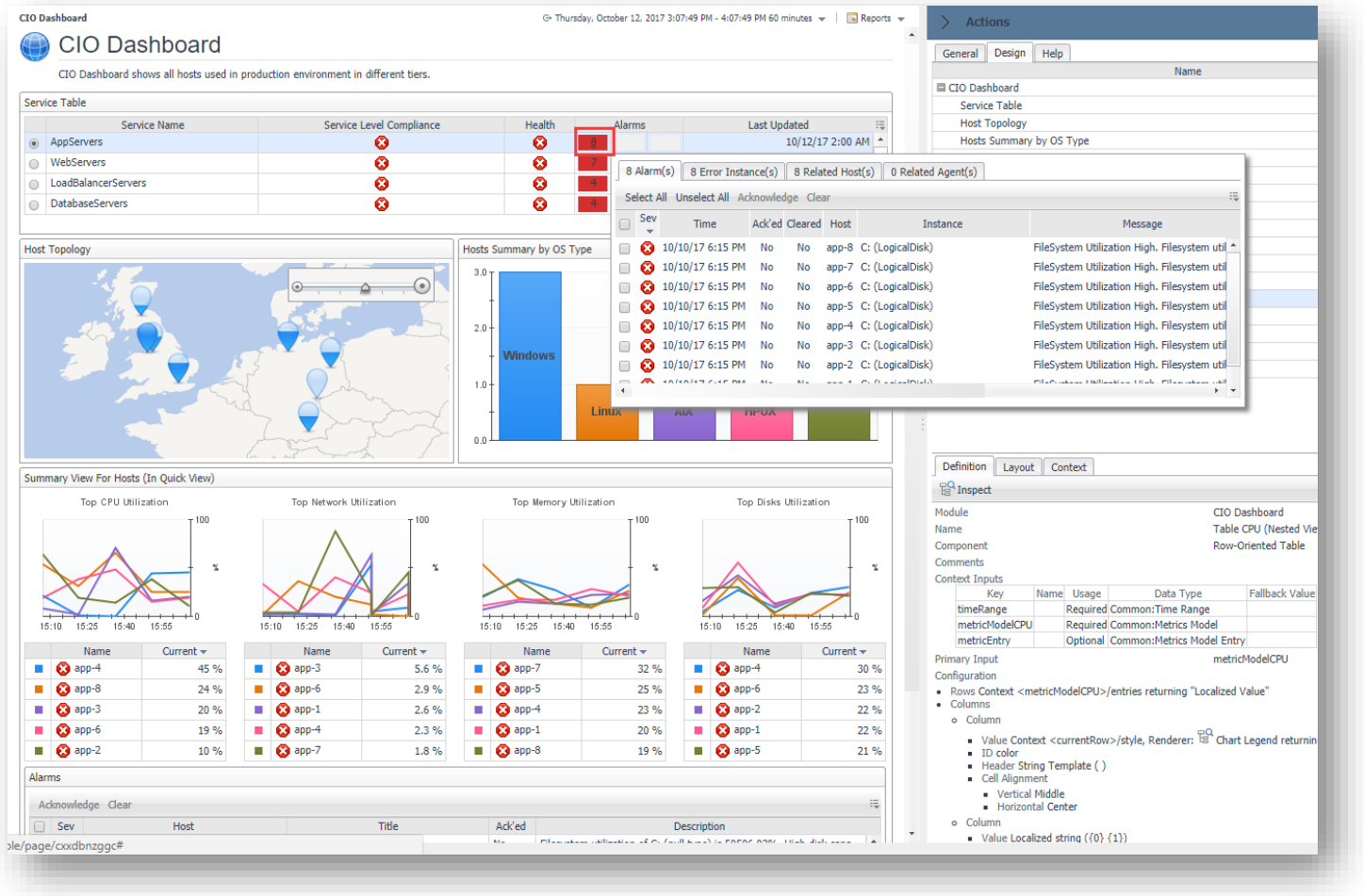
Service Health Select Action

Edit Service Table -> Flow, Popup
Administration/Management Server/Commons/Topology Object aggregateState Summary



Alarm Count Select Action

Edit Service Table -> Flow, Popup *Alarms/Alarm List As Popup (TopologyObject)*



Host Topology Bubble Actions

Edit Association *Host Node*

- Popup *Infrastructure/Hosts/Host/Host Summary with Status* when Dwell
- Next to Page *Infrastructure/Hosts/Host Monitor* when Select