System Monitor User Guide

Cisco IoT Data Connect - Edge and Fog Fabric (EFF) 1.0.1

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Conventions

This document uses the following conventions.

Convention	Indication
bold font	Menu options, menu and submenu names, window titles, tab names, button names, and icon names appear in **bold** font.
italic font	New or emphasized terms are in *italic* font.
string	A string is a nonquoted set of characters. If quotation marks are included around the string, the string includes the quotation marks.
`courier` font	Filenames, directory names, folder names, code, script, and text that you type appear in `courier` font.
< >	Nonprinting characters such as passwords are in angle brackets.

Note: Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the manual.

Caution: **Means *reader be careful.* In this situation, you might perform an action that could result in equipment damage or loss of data.**
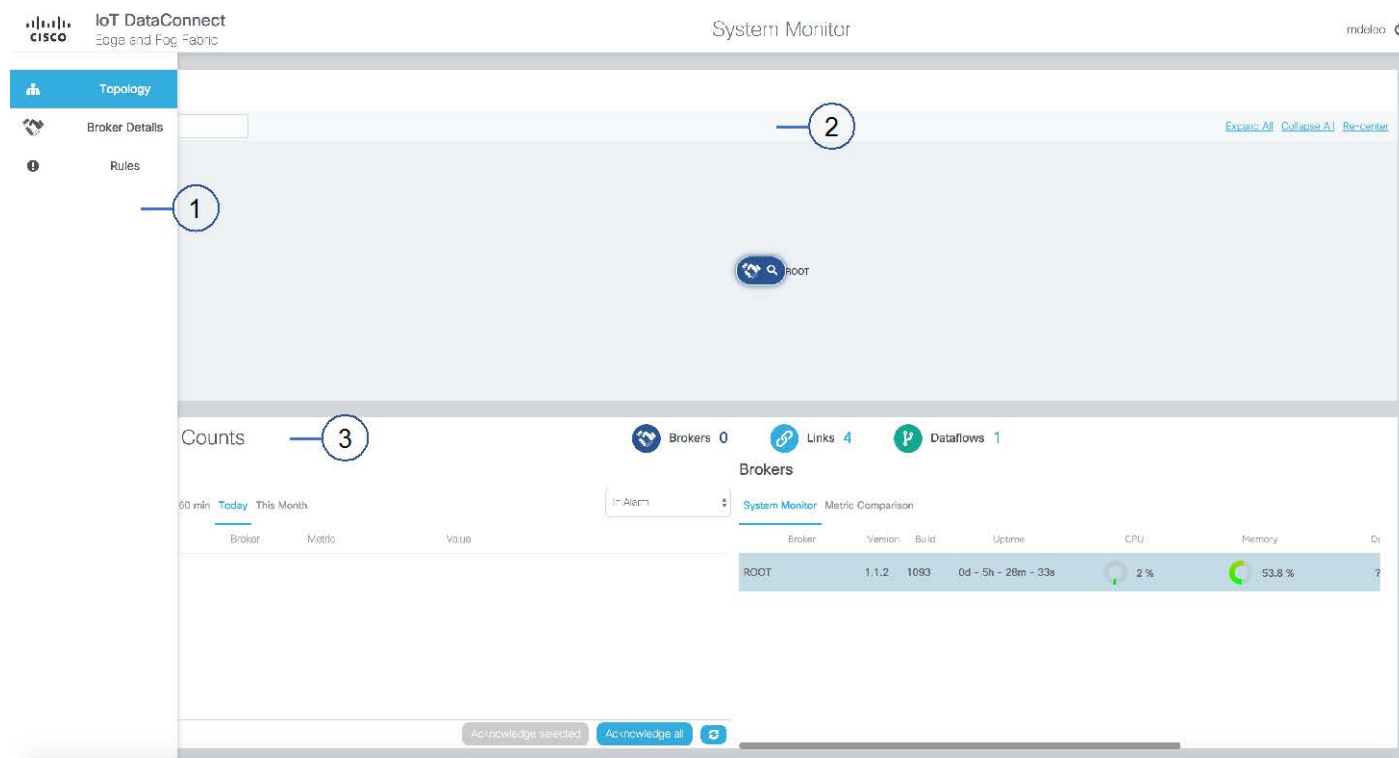
System Monitor Overview

This overview describes the System Monitor. It also explains its basic operations.

User Interface Overview

The user interface of the IoT Data Connect – EFF System Monitor contains three main pages. In the leftmost portion of the UI, a selector provides switching between 3 different views. The options are:

1. Topology – general system view of all brokers, links, dataflows as well as alerts generated by rules

2. Broker Details – detailed view of a specific broker, topology, alerts and the ability to configure monitoring of operational attributes

3. Rules – supports the creation and management of rules that monitor brokers and trigger alerts based upon a specific metric

Figure 1. System Monitor and View Selection

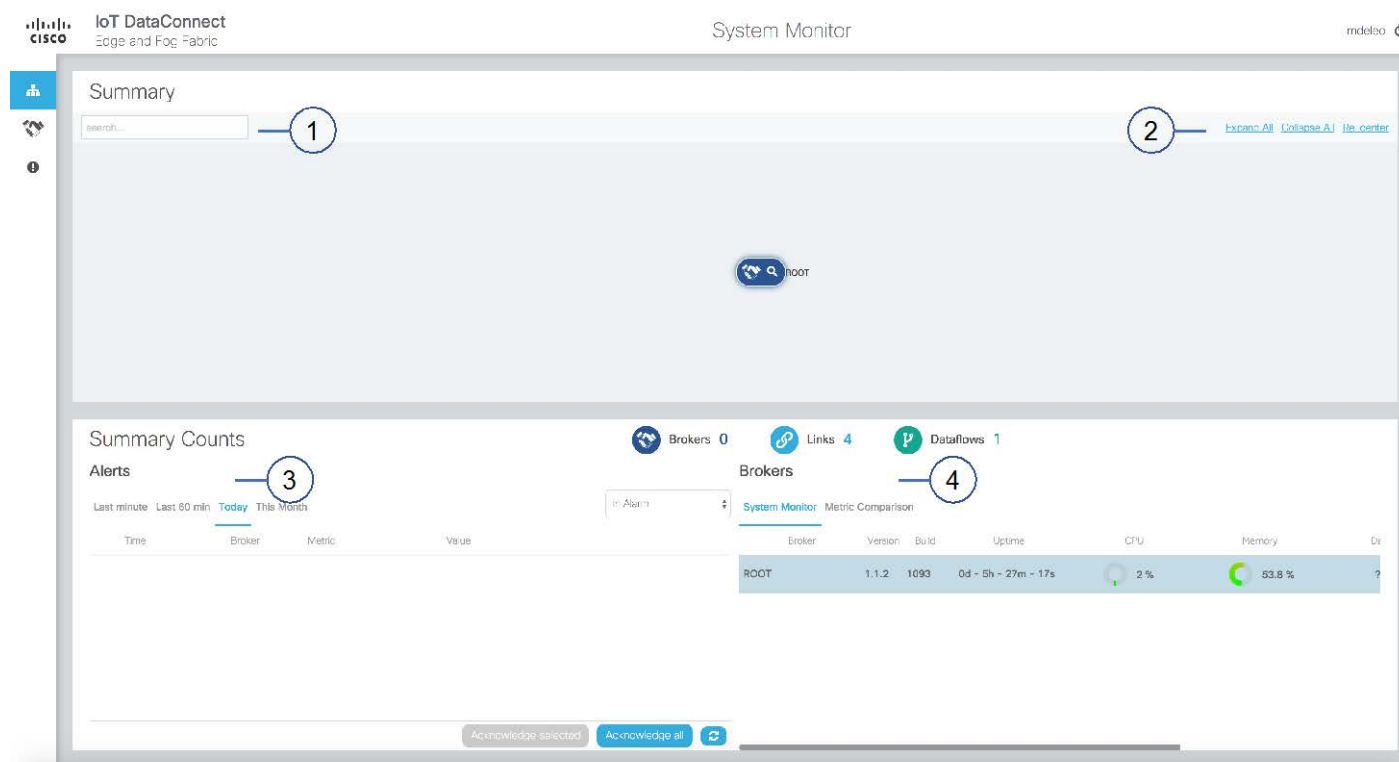| **1**	View Selection pane	**2**	Topology Map
3	Summary counts		

Figure 2. System Monitor View Selection

Selecting one of the options in the View Selection pane causes the graphical view to change.

Topology Page

Figure 2. System Monitor Topology Page

1	Search	**2**	Viewing options
3	Summary Counts – Alerts	**4**	Summary Counts – Brokers

Topology

A map of the topology tree of the system will appear. The topology provides different presentations through selection of the Expand All, Collapse All or Re-center options on the top right of the window. When all items are collapsed, only the brokers and their interconnections are shown. With Expand All, all the items and their connections appear on the map.

It is also possible to expand specific elements by clicking on the object. If there are sub-elements, they will be expanded and shown.

How to Search for a topology component

In the search field, you can introduce the name or prefix of a name of the component that you desire to view in the topology. The topology map dynamically updates the view and if a component is found, that object is placed in the center of the map.

To cancel a search, simply delete the contents of the search field.

Summary Counts

The summary counts is divided into 2 windows, Alerts are on the left and Brokers are on the right.

Alerts

A list of alerts will appear under the Alerts title. Alerts will also appear on the topology map on the item generating the alert. The list details the time, broker, rule, metric and the value.

Alerts can be viewed based upon when the alert was generated by selecting Last Minute, Last 60-minutes, Today or This Month.

It is also possible to filter alerts based upon three criteria: All, In Alarm, or Unacknowledged.

An alert first status is In Alarm and can be changed to Acknowledged. The purpose is to allow historical alerts that were acknowledged to be differentiated from new alerts.

Acknowledging one or more alerts is done by selecting the button in the box next to the alert below the list "Acknowledge Select". If all alerts need to be acknowledged, the button "Acknowledge all" will accomplish this with one step.

Brokers

A list of the brokers will appear under the Brokers title.

Brokers can be viewed by selecting System Monitor or Metric Comparison.

By selecting System Monitor, the broker list shows the name, version, build, uptime, cpu, memory, data transfer rate and message transfer rate.

By selecting Metric Comparison, it is possible to configure 2 specific metrics to be displayed in the list for each broker:

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- To the left side of the list is a selector to choose among a list of metrics available to display on the left side of the broker name. There is an additional sliding selector left of the metric selector, which defines whether the metric is presented with the real-time value or a timed sequence histogram.

- In a similar manner, on the right side a selector chooses among a list of metrics available to display to the right side of the broker name. There is an additional sliding selector left of the metric selector, which defines whether the metric is presented with the real-time value or a timed sequence histogram.

Figure 3. Summary Brokers with Metric Comparison
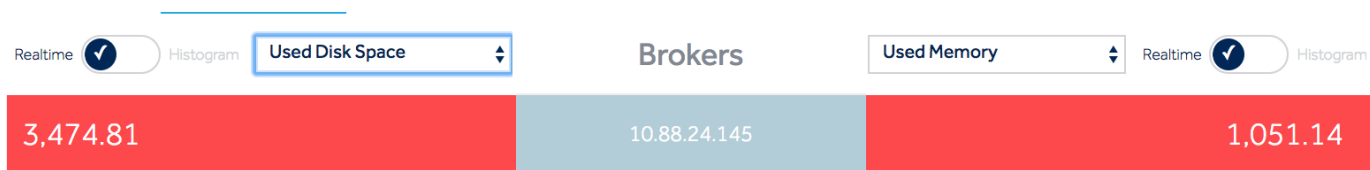
Broker Details Page

Figure 3. Broker Details Page

1	Topology Map of the specific broker	**2**	Metrics or Alerts Window

Topology Window

A map of the topology tree of the broker and its components will appear.

Metrics or Alerts Window

The Metrics or Alerts window has 2 sections. The top section is configurable and can display one or more metrics of the broker.

If a metric is selected in the top section, it also is added to the Live Trend graph at the bottom of the window. If more than one metric is selected, the scaling will be adjusted to allow for all values on the Live Trend graph.

To add a new metric, select the attribute and then the select "+"on the right. A new block below will show the real-time value of the element.

Inside each metric block the box can be deleted by selecting "⊗". The metric attribute can be changed by clicking "⇑".

Live Trend Graph

The Live Trend graph displays the selected metric on a single timeline. The timeline automatically compresses as more data points are added.

Rules Management Page

The Rules page is used to manage rules and alerts. The creation of an alert causes the system to monitor a metric value. If it reaches a set criteria, a new alert is registered. These alerts are presented in the topology graph as well as the alerts section of the Summary Counts window. Alerts for a specific broker can be viewed on the Broker Details page by selecting the Alerts option in the Metrics/Alerts window.

Adding a Rule

To add a new rule, select the "+" Add New Rule option at the top right of the window.

A new window will come up to define the specifics of the rule.

There are 3 types of rules:

1. Out of Range – this rule allows for comparison of a numeric value for a specific metric. It can be triggered if a value falls below or above a specified value.

2. Boolean – If a specific state occurs, such as a quarantined broker appearing, then an alert is generated.

3. String – If the string value matches the selected metric value, an alert is generated

At least one broker that the alert rule will be applied to must be selected.

When you want the rule to be active, select the slider to activate.

Selecting the "Add Rule" box completes the task of adding a rule.

For example:

Reviewing existing rules

All defined rules appear in the list. It shows date created, whom created the rule, the rule and a rule description.

A rule can be deleted by selecting the "X" on the right. This will remove the rule from the list. Take caution. No verification is done before removing the rule.

Rules can be active or inactive. If you need to change the state of the rule, select the slider to the right of the "X". If green it is active and will generate alerts.

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Obtaining documentation and submitting a service request

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http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

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