System Monitor User Guide

Kinetic - Edge & Fog Processing Module (EFM) 1.7.0

Revised: July 18, 2019

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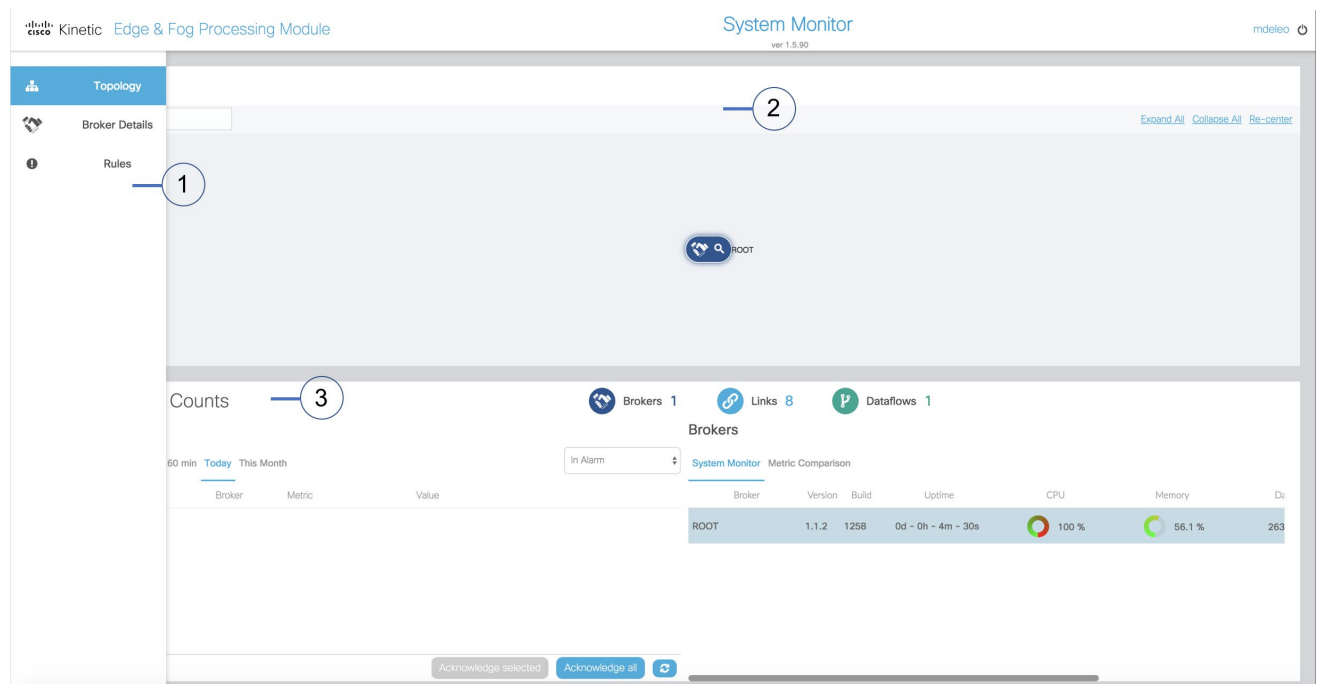
System Monitor overview

This overview describes the System Monitor and explains its basic operations.

User interface overview

The user interface of the Kinetic–EFM System Monitor contains three main pages. In the leftmost portion of the user interface, a selector provides switching between three different views:

1. **Topology**—General system view of all brokers, links, and 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 on a specific metric.
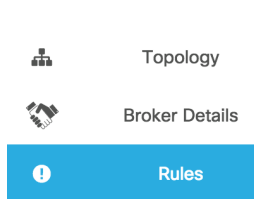
Figure 1. System Monitor and View Selection

1	View Selection pane	2	Topology Map
3	Summary counts		

Kinetic – EFM
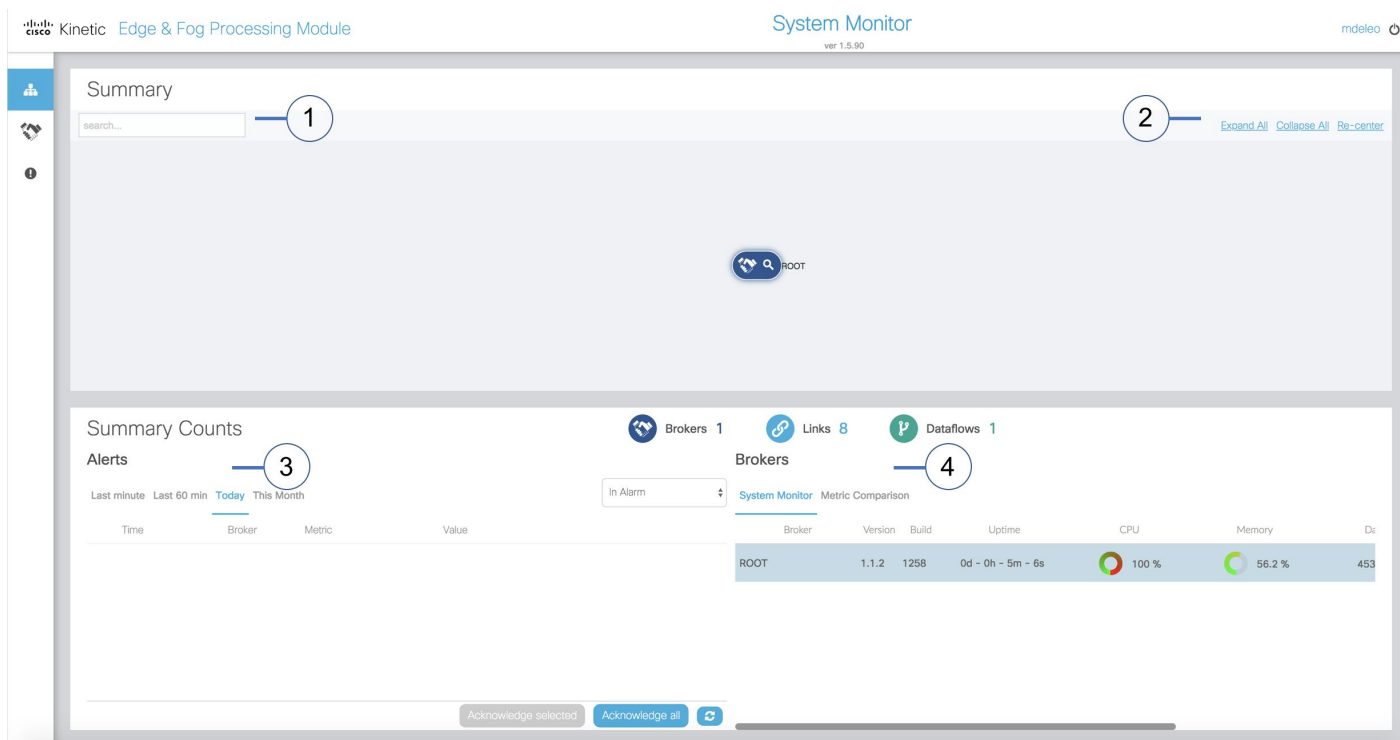**System Monitor User Guide**

System Monitor overview

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 is displayed. Selecting the **Expand All**, **Collapse All**, or *Re-center* option at the top right of the window displays different information.

- When **Collapse All** is selected, only the brokers and their interconnections are displayed.

- When **Expand All** is selected, all the items and their connections are displayed on the map.

It is also possible to expand specific elements by clicking on the object. If sub-elements exist, they are expanded and displayed.

Searching for a topology component

In the **Search** field, you can enter the name or prefix of a name of the component that you want 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 two windows: **Alerts** is on the left and **Brokers** is on the right.

Alerts

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

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

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

An alert first status is **In Alarm** and can be changed to **Acknowledged**, which allows users to differentiate historical alerts that were acknowledged from new alerts.

Acknowledging one or more alerts is done by clicking the button in the box next to the alert below the list **Acknowledge Select**. If all alerts need to be acknowledged, click the button **Acknowledge all**.

Brokers

A list of the brokers is displayed under the **Brokers** title. Brokers can be viewed by selecting **System Monitor** or **Metric Comparison**.
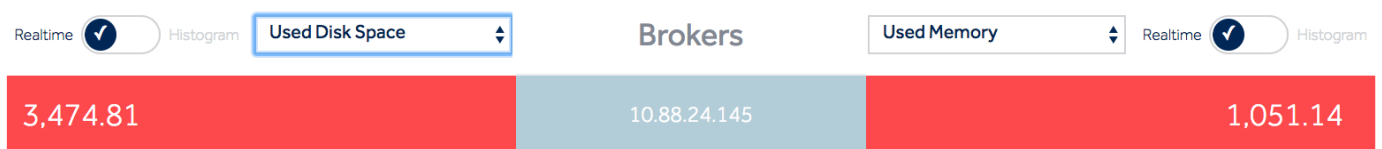
- When you select **System Monitor**, the broker list shows the name, version, build, uptime, CPU, memory, data transfer rate, and message transfer rate.
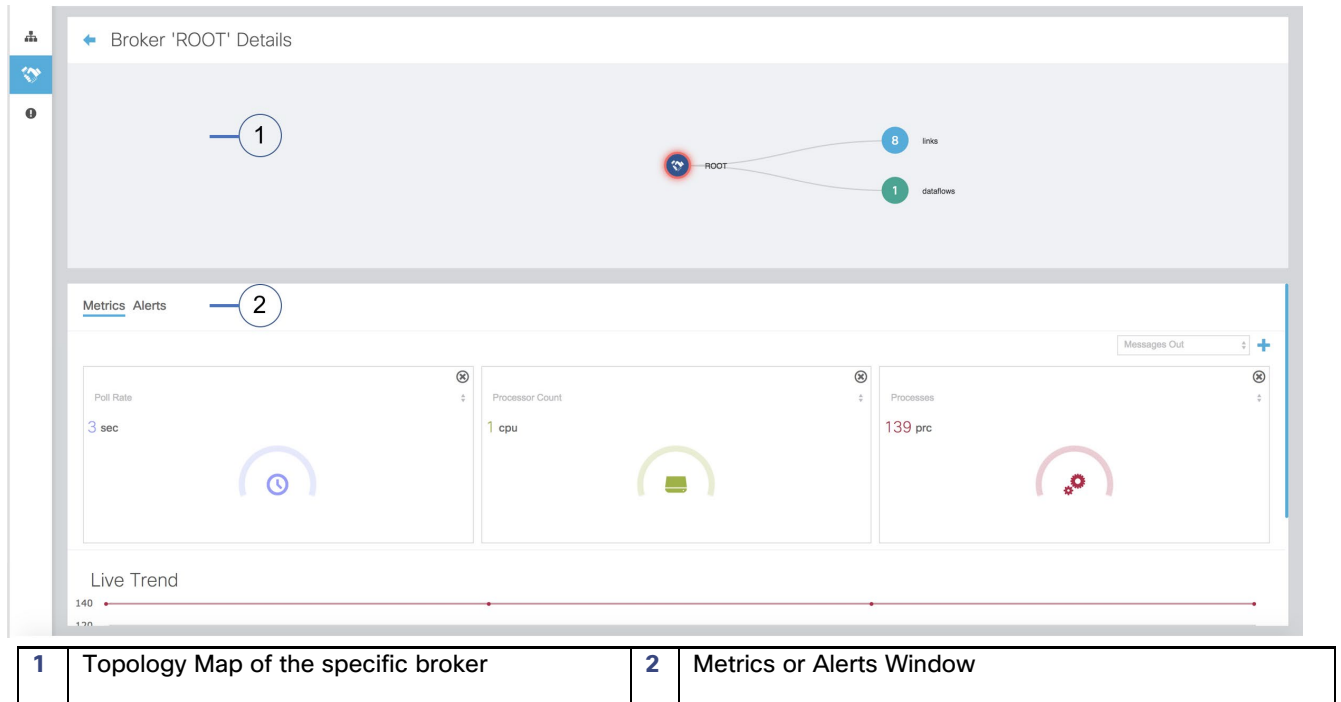
- When you select **Metric Comparison**, it is possible to configure two specific metrics to be displayed in the list for each broker:

- 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. An additional sliding selector to the left of the metric selector defines whether the metric is presented with the real-time value or a timed sequence histogram.

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

Figure 3. Summary Brokers with Metric Comparison

Realtime ✓ Histogram	Used Disk Space ⇕	Brokers	Used Memory ⇕	Realtime ✓ Histogram
3,474.81		10.88.24.145		1,051.14

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 is displayed.

Metrics and Alerts windows

The Metrics and Alerts windows have two 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, choose the attribute and then click the **"+"** on the right. A block will display 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 displayed 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 opens where you define the specifics of the rule.

Three types of rules exist:

- **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.

- **Boolean**—If a specific state occurs, such as a quarantined broker appearing, then an alert is generated.

- **String**—If the string value matches the selected metric value, an alert is generated.

You must select at least one broker to which the alert rule will be applied.

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

Clicking the **Add Rule** box completes the task of adding a rule.

For example:

Reviewing Existing Rules

All defined rules are displayed in the list, which shows date created, who created the rule, the rule, and a rule description.

A rule can be deleted by clicking the "X" on the right. This will remove the rule from the list. **Be careful** as no verification is performed before removing the rule.

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

Obtaining documentation and submitting a service request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

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

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