Users Guide

Table of Contents

Chapter 1. OpenNMS Dashboard

In Network Operation Centers *NOC* an overview about issues in the network is important and often described as *Dashboards*. Large networks have people (Operator) with different responsibilities and the *Dashboard* should show only information for a given *monitoring context*. Network or Server operator have a need to customize or filter information on the *Dashboard*. A *Dashboard* as an At-a-glance overview is also often used to give an entry point for more detailed diagnosis through the information provided by the monitoring system. The *Surveillance View* allows to reduce the visible information by selecting rows, columns and cells to quickly limit the amount of information to navigate through.

1.1. Dashboard Components

The *Dashboard* is built with five components:

- *Surveillance View*: Allows to model a *monitoring context* for the *Dashboard.*

- *Alarms*: Shows unacknowledged *Alarms* which should be escalated by an *Operator*.

- *Notifications*: Shows outstanding and unacknowledged notifications sent to *Engineers*.

- *Node Status*: Shows all ongoing network *Outages*.

- *Resource Graph Viewer*: Shows performance time series reports for performance diagnosis.

The following screenshot shows a configured *Dashboard* and which information are displayed in the components.

Figure 1. Dashboard with configured surveillance view and current outage

The following section describe the information shown in each component. All other components display information based on the *Surveillance View*.

1.1.1. Surveillance View

The *Surveillance View* has multiple functions.

- Allows to model the *monitoring context* and shows service and node *Outages* in compact matrix view.

- Allows to limit the number of information in the *Dashboard* by selecting rows, columns and cells.

The following screenshots show all possible selections in the *Surveillance View*.

Figure 2. Information displayed from all nodes matching the surveillance view

Figure 3. Information displayed from nodes in the selected row

Figure 4. Information displayed from nodes in the selected column

Figure 5. Information displayed from nodes in the selected cell

1.1.2. Alarms

The *Alarms* component gives an overview about all unacknowledged *Alarms* with a severity higher than *Normal(1)*. Acknowledged *Alarms* will be removed from the responsibility of the *Operator*. The following information are shown in:

Figure 6. Information displayed in the Alarms component

1. *Node*: Node label of the node the *Alarm* is associated.

2. *Log Msg*: The log message from the *Event* which is the source for this *Alarm*. It is specified in the event configuration file in `<logmsg />`

3. *Count*: Number of *Alarms* deduplicated by the reduction key of the *Alarm*.

4. *First Time*: Time for the first occurrence of the *Alarm*.

5. *Last Time*: Time for the last occurrence of the *Alarm*.

The *Alarms* component shows the 5 latest *Alarms* and allows with pagination to navigate to older *Alarms*.

1.1.3. Notifications

To inform people on a duty schedule notifications are used and force action to fix or reconfigure systems immediately. In *OpenNMS* it is possible to acknowledge notifications to see who is working on a specific issue. The *Dashboard* should show outstanding notifications in the *NOC* to provide an overview and give the possibility for intervention.

Figure 7. Information displayed in the Notifications component

1. *Node*: Label of the monitored node the notification is associated with.

2. *Service*: Name of the service the notification is associated with.

3. *Message*: Message of the notification.

4. *Responder*: User name who acknowledged the notification

5. *Response Time*: Time when the user acknowledged the notification

The *Notifications* component shows the last 8 unacknowledged notifications and allows with pagination to navigate to older unacknowledged notifications.

1.1.4. Node Status

An acknowledged *Alarm* doesn't mean necessarily the outage is solved. To give an overview information about ongoing *Outages* in the network, the *Dashboard* shows an outage list in the *Node Status* component.

Figure 8. Information displayed in the Node Status component

1. *Node*: Label of the monitored node with ongoing outages.

2. *Current Outages*: Number of services on the node with outages and total number of monitored services, e.g. with the natural meaning of *"3 of 3 services are affected"*.

3. *24 Hour Availability*: Availability of all services provided by the node calculated by the last 24 hours.

The *Node Status* component shows the last 5 ongoing *Outages* and allows with pagination to navigate to older *Outages*.

1.1.5. Resource Graph Viewer

To give a quick entry point diagnose performance issues a *Resource Graph Viewer* allows to navigate to time series data reports which are filtered in the context of the *Surveillance View*.

Figure 9. Show time series based performance with the Resource Graph Viewer

It allows to navigate sequentially through resource graphs provided by nodes filtered by the *Surveillance View* context and selection and shows one graph report at a time.

3

1.2. Advanced configuration

The *Surveillance View* component allows to model multiple views for different monitoring contexts. It gives the possibility to create special view as example for network operators or server operators. The *Dashboard* shows only **one** configured *Surveillance View*. To give different users the possibility using their *Surveillance View* fitting there requirements it is possible to map a logged in user to a given *Surveillance View* used in the *Dashboard.*

The selected nodes from the *Surveillance View* are also aware of User Restriction Filter. If you have a group of users, which should see just a subset of nodes the *Surveillance View* will filter nodes which are not related to the assigned user group.