Node Health Report

Node Health Report

The Node Health report display health-related attributes for all selected nodes for a given period. Attributes displayed are: Status, Device, Availability, Interface Availability, %CPU, 95th% CPU, Max %CPU, CPU Exc., %Mem Free, 95th% Mem Used, Max %Mem Used, %Mem Util, %IO/VIR Mem Free, 95th% IO Mem Used, Max %IO Mem Used, %IO/VIR Mem Util. As of version 3.1.4 when this report is exported to XLSX and CSV formats the following columns of information are also displayed: Group, %IO Mem Free.

The report also includes two columns with the detected (abnormal) Conditions and the recommended Actions.

If you pass this report the option `exceptions=true`, then only nodes with exceptional conditions present are shown; the default is to show all nodes.

Below shows the outcome of a default Node Health Report or where *exceptions=false*. The full report can be viewed by downloading the ZIP file HERE

To create a Node Health Report showing **exceptions only**, click the box that the arrow points to in the image below.

Create On-Demand Report

Report Description	(optional) Description of the report
Report Type	Node Report
Node Selection	All Active Nodes
Start Date/Time	now - 7 days ?
End Date/Time	now ?
From Hours	? 0
To Hours	? 24
Days	? Mon-Sun
Formats	☑ HTML ☑ CSV ☑ XLSX
Report Name	(Optional) Report Name ?
Node Name Display	Plain Node Name ?
Interface Display	Interface Description ?
Include Embedded Graphs	☑
Custom Report Title	(Optional) Custom Report Title ?
Exceptions Report	☐ Exceptions Only (Health Report)
WAN Report Level	Default
Show Util Thresholds	☑ **Show only Util** ☐
Utilisation Threshold	80 % **Min Over-Threshold Count** 1
Show 95th Percentile	Combined In and Out Utilisation ?
Authorised Viewers	?

[Generate] [Cancel]   [Advanced Options]

A Node Health Report using the same devices where *exceptions=true* looks similar to the image below. The full report can be viewed by downloading the ZIP file HERE

opReports 3.1.4   Views ▾   Modules ▾ Help ▾ User: nmis ▾

Node Health Exception Report   Info | CSV | HTML | XLSX | ZIP | Email | Delete

Coverage: 7 day(s), from 2018-07-09T19:48:53 to 2018-07-16T19:48:53 AEST
Generated: 2018-07-16T19:49:11 AEST

Branches

Cloud

No devices with exceptions in group Branches and location Cloud.

Surfers_Paradise

Status	Device	Availability	Interface Availability	%CPU	95th% CPU	Max %CPU	CPU Exc.	%Mem Free	95th% Mem Used	Max %Mem Used	%Mem Util	%IO/Swap Mem Free	95th% IO/Swap Mem Used	Max %IO/Swap Mem Used	%IO/Swap Mem Util	Conditions	Actions
	gc-router1	99.951	100.000	5.20	13.39	22.87	2	53.60	44.30	58.35	46.40	87.73	12.26	12.31	12.27	1: Device has low availability	1: Investigate causes for low availability
	gc-switch1	99.953	63.245	5.26	6.00	10.45	0	57.82	42.16	42.26	42.18	31.97	67.83	68.55	68.03	1: Device has low availability 2: Device has very low interface availability	1: Investigate causes for low availability 2: Investigate causes for very low interface availability

USA_West_Coast

Status	Device	Availability	Interface Availability	%CPU	95th% CPU	Max %CPU	CPU Exc.	%Mem Free	95th% Mem Used	Max %Mem Used	%Mem Util	%IO/Swap Mem Free	95th% IO/Swap Mem Used	Max %IO/Swap Mem Used	%IO/Swap Mem Util	Conditions	Actions
	meatball	99.951	100.000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1: Device has low availability	1: Investigate causes for low availability
	midgard	99.945	63.235	5.30	6.00	10.44	0	57.82	42.16	42.24	42.18	31.98	67.83	68.55	68.02	1: Device has low availability 2: Device has very low interface availability	1: Investigate causes for low availability 2: Investigate causes for very low interface availability

Brisbane

Surfers_Paradise

Status	Device	Availability	Interface Availability	%CPU	95th% CPU	Max %CPU	CPU Exc.	%Mem Free	95th% Mem Used	Max %Mem Used	%Mem Util	%IO/Swap Mem Free	95th% IO/Swap Mem Used	Max %IO/Swap Mem Used	%IO/Swap Mem Util	Conditions	Actions
	bne-router1	99.941	100.000	5.15	13.41	22.17	1	53.58	44.30	57.54	46.42	87.73	12.26	12.31	12.27	1: Device has low availability	1: Investigate causes for low availability
	bne-server1	99.924	100.000	8.47	18.15	84.94	135	35.03	73.09	75.66	64.97	96.00	5.91	6.10	4.00	1: Device has low availability	1: Investigate causes for low availability
	bne-switch1	99.953	63.252	5.15	5.98	10.07	0	57.82	42.16	42.25	42.18	31.97	67.83	68.55	68.03	1: Device has low availability 2: Device has very low interface availability	1: Investigate causes for low availability 2: Investigate causes for very low interface availability

Charlotte

USA_East_Coast

Status	Device	Availability	Interface Availability	%CPU	95th% CPU	Max %CPU	CPU Exc.	%Mem Free	95th% Mem Used	Max %Mem Used	%Mem Util	%IO/Swap Mem Free	95th% IO/Swap Mem Used	Max %IO/Swap Mem Used	%IO/Swap Mem Util	Conditions	Actions
	char-router1	99.894	99.999	5.22	13.20	22.73	3	53.60	44.29	58.15	46.40	87.73	12.26	12.31	12.27	1: Device has very low availability	1: Investigate causes for very low availability

The formulas used for calculation of the reporting conditions can be tuned and adjusted by the user:

The section `opreports_rules` (in `conf/opCommon.nmis` in opReports 3.x, or `opReports.nmis` in version 2.x) defines the threshold values for the following conditions:

Device Availability = Condition: "Device has LOW or VERY LOW availability"
Action: Investigate causes for low availability
Formula used for Calculation:

- Very Low device availability less than 99.9

- Low device availability less than 99.999

Interface Availability = Condition: "Device has LOW or VERY LOW interface availability"
Action: Investigate causes for low interface availability
Formula used for Calculation:

- Very Low interface availability less than 80

- Low interface availability less than 95

CPU Utilisation = Condition: "Device has VERY HIGH, HIGH or MODERATE CPU utilisation"
Action: Investigate causes for CPU utilisation
Formula used for Calculation:

- Very High CPU utilisation: greater than 30%

- High CPU utilisation: greater than 20%

- Moderate CPU utilisation: greater than 12%

If the node has multiple CPUs then the utilisation measure is averaged over all CPUs.

CPU Exceptions
The count of times the CPU utilisation exceeded the "CPU Exception Threshold" of 20%. If the node has multiple CPUs then this is the sum of the exception counts of all CPUs.

Memory Utilisation = Condition: "Device has VERY LOW or LOW main memory free"
Action: Investigate causes for free low main memory
Formula used for Calculation:

- Very Low free main memory less than 10

- Low free main memory less than 25

IO or Virtual Memory Utilisation = Condition: "Device has VERY LOW or LOW IO or Virtual memory free"
Action: Investigate causes for low free IO or Virtual memory
Formula used for Calculation:

- Very Low free main memory less than 10

- Low free main memory less than 25