



Unhealthy Ports Window

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The Unhealthy Ports view shows all the unhealthy nodes in the fabric and the OpenSM health policy of the healthy/unhealthy nodes.

After the Subnet Manager examines the behavior of subnet nodes (switches and hosts) and discovers that a node is “unhealthy” according to the conditions specified below, the node is displayed in the Unhealthy Ports window. Once a node is declared as “unhealthy”, Subnet Manager can either ignore, report, isolate or disable the node. The user is provided with the ability to control the actions performed and the phenomena that declares a node “unhealthy.” Moreover, the user can “clear” nodes that were previously marked as “unhealthy.”

The information is displayed in a tabular form and includes the unhealthy port’s state, source node, source port, source port GUID, peer node, peer port, peer GUID, peer LID, condition, and status time.

Unhealthy Source Port										Peer	
Severity	Node	Port	GUID	Name	Port	GUID	LID	Condition	Status Time		
Info	smg-lb-sw012	smg-lb-sw012.2	0x043f720300f695c6	smg-lb-sw040	smg-lb-sw040.39	0x043f720300b818a0	33	FLAPPING	Thu Apr 28 14:04:08 2...		
Minor	smg-lb-sw012	smg-lb-sw012.40	0x043f720300f695c6	smg-lb-sw022	smg-lb-sw022.36	0x7cfe900300fa05b0	39	FLAPPING	Thu Apr 28 14:10:11 2...		
Warning	smg-lb-sw012	smg-lb-sw012.16	0x043f720300f695c6	smg-lb-sw056	smg-lb-sw056.1/30/1/1	0x900a84030040c840	12	FLAPPING	Thu Apr 28 14:10:11 2...		
Warning	smg-lb-sw012	smg-lb-sw012.31	0x043f720300f695c6	smg-lb-apl022-gen3	smg-lb-apl022-gen3 ...	0x98039b03009fcdce	53	FLAPPING	Thu Apr 28 14:10:11 2...		
Warning	smg-lb-sw012	smg-lb-sw012.32	0x043f720300f695c6	smg-lb-apl022-gen3	smg-lb-apl022-gen3 ...	0x98039b03009fcdce	54	FLAPPING	Thu Apr 28 14:10:11 2...		
Warning	smg-lb-sw012	smg-lb-sw012.26	0x043f720300f695c6	smg-lb-vrt003	smg-lb-vrt003 HCA-1	0x98039b03009fcd4e	14	FLAPPING	Thu Apr 28 14:10:11 2...		
Warning	smg-lb-sw012	smg-lb-sw012.33	0x043f720300f695c6	smg-lb-apl021-gen3	smg-lb-apl021-gen3 ...	0xb8599d03005681a0	1	FLAPPING	Thu Apr 28 14:10:11 2...		
Warning	smg-lb-sw012	smg-lb-sw012.34	0x043f720300f695c6	smg-lb-apl021-gen3	smg-lb-apl021-gen3 ...	0xb8599d03005681a1	35	FLAPPING	Thu Apr 28 14:10:11 2...		
Warning	smg-lb-sw012	smg-lb-sw012.29	0x043f720300f695c6	smg-lb-sw036	smg-lb-sw036.33/1	0xb8cef60300a04afe	56	FLAPPING	Thu Apr 28 14:10:11 2...		

Note

The feature requires OpenSM parameter hm_unhealthy_ports_checks to be set to TRUE (default).

Note

This feature is not available in the "Monitoring Only Mode."

The following are the conditions that would declare a node as “unhealthy”:

- Reboot - If a node was rebooted more than 10 times during last 900 seconds
- Flapping - If several links of the node found in Initializing state in 5 out of 10 previous sweeps
- Unresponsive - A port that does not respond to one of the SMPs and the MAD status is TIMEOUT in 5 out of 7 previous SM sweeps
- Noisy Node - If a node sends traps 129, 130 or 131 more than 250 traps with interval of less than 60 seconds between each two traps
- Seterr - If a node respond with bad status upon SET SMPs (PortInfo, SwitchInfo, VLArb, SL2VL or Pkeys)
- Illegal - If illegal MAD fields are discovered after a check for MADs/fields during receive_process
- Manual - Upon user request mark the node as unhealthy/healthy
- Link Level Retransmission (LLR) – Activated when retransmission-per-second counter exceeds its threshold

All conditions except LLR generate Unhealthy port event, LLR generates a High Data retransmission event.

➤ *To clear a node from the Unhealthy Ports Tab, do the following:*

1. Go to the Unhealthy Ports window under Managed Elements.
2. From the Unhealthy Ports table, right click the desired port it and mark it as healthy.

The screenshot shows a table titled "Unhealthy Source Port" with columns: Severity, Node, Port, GUID, Name, Port, Peer, GUID, LID, Condition, and Status Time. The table contains several rows of data. A context menu is open over the second row, with options "Copy Cell" and "Mark As Healthy".

Severity	Node	Port	GUID	Name	Port	Peer	GUID	LID	Condition	Status Time
Info	smg-ib-sw012	smg-ib-sw012.2	0x043f720300f695c6	smg-ib-sw040	smg-ib-sw040.39	0x043f720300e818a0		39	FLAPPING	Thu Apr 28 14:04:08 2...
Minor	smg-ib-sw012	smg-ib-sw012.40	0x043f720300f695c6	smg-ib-sw022	smg-ib-sw022.36	0x7c1e9003009a05b0		39	FLAPPING	Thu Apr 28 14:10:11 2...
Warning	smg-ib-sw012	smg-ib-sw012.16	0x043f720300f695c6	smg-ib-sw012	smg-ib-sw012.16	0x900a84030040c840		12	FLAPPING	Thu Apr 28 14:10:11 2...
Warning	smg-ib-sw012	smg-ib-sw012.31	0x043f720300f695c6	smg-ib-sw012	smg-ib-sw012.31	0x9803fb03009fcdee		53	FLAPPING	Thu Apr 28 14:10:11 2...
Warning	smg-ib-sw012	smg-ib-sw012.32	0x043f720300f695c6	smg-ib-asp022-been3	smg-ib-asp022-been3	0x9803fb03009fcdee		54	FLAPPING	Thu Apr 28 14:10:11 2...

➤ *To mark a node as permanently healthy, do the following:*

1. Open the `/opt/ufm/files/conf/health-policy.conf.user_ext` file.
2. Enter the node and the port information and set it as "Healthy."
3. Run the `/opt/ufm/scripts/sync_hm_port_health_policy_conf.sh` script.

i Note

To control Partial Switch ASIC Failure event:

Trigger Partial Switch ASIC Failure whenever number of unhealthy ports exceed the defined percent of the total number of the switch ports.

The `switch_asic_fault_threshold` flag (under the `UnhealthyPorts` section in `gv.cfg` file) default value is 20.

Unhealthy Port Connectivity Filter

It is possible to filter the Unhealthy Ports table by connectivity (all, host-to-switch, or switch-to-host).

Filtering the Unhealthy Ports table is possible from the dropdown options at the top of the table which includes

- All Connectivity
- Switch to Switch
- Host to Switch

Severity	Node	Port	GUID	Name	Port	Peer	LID	Condition	Status Time
Info	smg-ib-sw012	smg-ib-sw012.2	0x043f720300f695c6	smg-ib-sw040	smg-ib-sw040.39	0x043f720300b818a0	33	FLAPPING	Thu Apr 28 14:04:08 2...
Minor	smg-ib-sw012	smg-ib-sw012.40	0x043f720300f695c6	smg-ib-sw022	smg-ib-sw022.36	0x7efe9003009a05b0	39	FLAPPING	Thu Apr 28 14:10:11 2...
Warning	smg-ib-sw012	smg-ib-sw012.16	0x043f720300f695c6	smg-ib-sw056	smg-ib-sw056:1/30/1/1	0x900a840300d0c840	12	FLAPPING	Thu Apr 28 14:10:11 2...
Warning	smg-ib-sw012	smg-ib-sw012.31	0x043f720300f695c6	smg-ib-api022-gen3	smg-ib-api022-gen3 ...	0x98039b03009fcdee	53	FLAPPING	Thu Apr 28 14:10:11 2...
Warning	smg-ib-sw012	smg-ib-sw012.32	0x043f720300f695c6	smg-ib-api022-gen3	smg-ib-api022-gen3 ...	0x98039b03009fcdef	54	FLAPPING	Thu Apr 28 14:10:11 2...
Warning	smg-ib-sw012	smg-ib-sw012.26	0x043f720300f695c6	smg-ib-vrt003	smg-ib-vrt003 HCA-1	0x98039b03009fcfde	14	FLAPPING	Thu Apr 28 14:10:11 2...
Warning	smg-ib-sw012	smg-ib-sw012.33	0x043f720300f695c6	smg-ib-api021-gen3	smg-ib-api021-gen3 ...	0xb8599f03005681a0	1	FLAPPING	Thu Apr 28 14:10:11 2...
Warning	smg-ib-sw012	smg-ib-sw012.34	0x043f720300f695c6	smg-ib-api021-gen3	smg-ib-api021-gen3 ...	0xb8599f03005681a1	35	FLAPPING	Thu Apr 28 14:10:11 2...
Warning	smg-ib-sw012	smg-ib-sw012.29	0x043f720300f695c6	smg-ib-sw036	smg-ib-sw036.33/1	0xb8cef60300604afe	56	FLAPPING	Thu Apr 28 14:10:11 2...

Health Policy Management

This view manages the OpenSM health policy for the healthy/unhealthy nodes and ports. The OpenSM health policy is stored in the /opt/ufm/files/conf/opensm/opensm-health-policy.conf file.

The information is displayed in a tabular form, with an option to group it either by devices or ports, and includes the health nodes/ports details (GUID, Name, policy [healthy/unhealthy])

1. Health Policy by devices:

Node GUID	Node Name	# of policies
0xec0e9a03002f9ba0	switchib	1
0x7efe900300a5a2a0	sharp2	1

2. Health Policy by ports:

Node GUID	Node Name	Port	Policy	Action	Last Update
0xec0e9a03002f9ba0	switchib	11	UNHEALTHY	isolate	Wed Jul 26 15:17:49 2023
0x7efe900300a5a2a0	sharp2	36	UNHEALTHY	isolate	Wed Jul 26 15:18:33 2023

To switch between the above views, simply click on the control button located at the top right corner of the table. By default, the devices view will be shown.

The health policy supports the following capabilities. When you select a policy and right-click, you can perform the following actions:

1. Delete the Policy
2. Mark the selected healthy policies as unhealthy (Isolate/No discover)
3. Mark the selected unhealthy policies as healthy

If you wish to delete all the healthy ports from the health policy, click on the 'Delete All Healthy Ports' option situated at the top right corner of the policy table.

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