

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.

						All Connectivity	Mark All Ports	as Healthy 🛛 💋 🛛 D	isplayed Columns 👻 CSV 🗸
		Unhealthy Source Port			P	ber -			
Severity	Node	Port	GUID	Name	Port	GUID	LID	Condition	Status Time
	▼ (Filter) 🗸 (Filter)	V (Filter)	🗸 🛛 (Filter 🗸 🗸	(Filter 🗸	Filter 🗸	(Filter 🗸	Filter	♥ [Filter ♥
🕑 Info	smg-ib-sw012	smg-ib-sw012:2	0x043f720300f695c6	smg-ib-sw040	smg-ib-sw040:39	0x043f720300b818e0	33	FLAPPING	Thu Apr 28 14:04:08 2
1 Minor	smg-ib-sw012	smg-ib-sw012:40	0x043f720300f695c6	smg-ib-sw022	smg-ib-sw022:36	0x7cfe9003009a05b0	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	0x900a84030040c840	12	FLAPPING	Thu Apr 28 14:10:11 2
😮 Warning	smg-ib-sw012	smg-ib-sw012:31	0x043f720300f695c6	smg-ib-apl022-gen3	smg-ib-apl022-gen3	0x98039b03009fcdee	53	FLAPPING	Thu Apr 28 14:10:11 2
😮 Warning	smg-ib-sw012	smg-ib-sw012:32	0x043f720300f695c6	smg-ib-apl022-gen3	smg-ib-apl022-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	0x98039b03009fcf4e	14	FLAPPING	Thu Apr 28 14:10:11 2
😮 Warning	smg-ib-sw012	smg-ib-sw012:33	0x043f720300f695c6	smg-ib-apl021-gen3	smg-ib-apl021-gen3	0xb8599f03005681e0	1	FLAPPING	Thu Apr 28 14:10:11 2
🚱 Warning	smg-ib-sw012	smg-ib-sw012:34	0x043f720300f695c6	smg-ib-apl021-gen3	smg-ib-apl021-gen3	0xb8599f03005681a1	35	FLAPPING	Thu Apr 28 14:10:11 2
😮 Warning	smg-ib-sw012	smg-ib-sw012:29	0x043f720300f695e6	smg-ib-sw036	smg-ib-sw036:33/1	0xb8cef60300604afe	56	FLAPPING	Thu Apr 28 14:10:11 2

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j 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.

\succ 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.

							All Connectivity	/ 👻 Mark All	Ports as Healthy 🛛 😂	Displayed Columns - CSV -
		Unhealthy Source Port				Pe	er			
Severity	Node	Port	GUID	Name	Port		GUID	LID	Condition	Status Time
	🔽 Filter	🛛 🛛 Filter 🗸		V Filter	🔽 Filter		Filter 🗸		Filter) 🛛 (Filter) 🗸
🥑 Info	smg-ib-sw012	smg-ib-sw012:2	0x0431720300f695c6	smg-ib-sw040	smg-ib-sw040	1:39	0x043f720300b818a0	33	FLAPPING	Thu Apr 28 14:04:08 2
1 Minor	smg-ib-sw012	smg-ib-sw012:40	0x043f720300f695c6	smg-ib-sw022	ema ih autor	36	0x7cfe9003009a05b0	39	FLAPPING	Thu Apr 28 14:10:11 2
🔞 Warning	smg-ib-sw012	smg-ib-sw012:16	0x043f720300f695c6	smg-ib-sw	🛑 Copy Cell	1/30/1/1	0x900a84030040c840	12	FLAPPING	Thu Apr 28 14:10:11 2
😮 Warning	smg-ib-sw012	smg-ib-sw012:31	0x043f720300f695c6	smg-ib-ap	Mark As Healthy	-gen3	0x98039b03009fcdee	53	FLAPPING	Thu Apr 28 14:10:11 2
🚱 Warning	sma-ib-sw012	sma-ib-sw012:32	0x043f720300f695c6	smq-ib-apl022-	aen3 sma-ib-apl02	2-gen3	0x98039b03009fcdef	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.

(j) 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 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

						All Connectivity	Mark All Ports as	Healthy 🛛 😂 🛛 Dis	played Columns 👻 CSV 👻
		Unhealthy Source P	ort		F	Peer Switch to Switch			
Severity	Node	Port	GUID	Name	Port	Host to Switch	LID	Condition	Status Time
	▼ [Filter	V Filter	♥ Filter ♥	Filter	7 (Filter 🗸	(Filter 🗸	Filter 🗸	Filter	7 Filter 7
🕑 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
1 Minor	smg-ib-sw012	smg-ib-sw012:40	0x043f720300f695c6	smg-ib-sw022	smg-ib-sw022:36	0x7cfe9003009a05b0	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	0x900a84030040c840	12	FLAPPING	Thu Apr 28 14:10:11 2
🚱 Warning	smg-ib-sw012	smg-ib-sw012:31	0x043f720300f695c6	smg-ib-apl022-gen3	smg-ib-apl022-gen3	0x98039b03009fcdee	53	FLAPPING	Thu Apr 28 14:10:11 2
🕜 Warning	smg-ib-sw012	smg-ib-sw012:32	0x04317203001695c6	smg-ib-apl022-gen3	smg-ib-apl022-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	0x98039b03009fcf4e	14	FLAPPING	Thu Apr 28 14:10:11 2
🕜 Warning	smg-ib-sw012	smg-ib-sw012:33	0x043f720300f695c6	smg-ib-apl021-gen3	smg-ib-apl021-gen3	0xb8599f03005681a0	1	FLAPPING	Thu Apr 28 14:10:11 2
🚱 Warning	smg-ib-sw012	smg-ib-sw012:34	0x043f720300f695c6	smg-ib-apl021-gen3	smg-ib-apl021-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-healthpolicy.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:

Unhealthy Ports Health Policy			
		*	Delete All Healthy Ports 🛛 😂 Displayed Columns 🔹 CSV 🔹
Node GUID	Node Name		# of policies 👃
(Filter		▼ Filter	▼
0xec0d9s030029dbs0	switchib	1	
0x7cfe900300a5a2a0	sharp2	1	
			Viewing 1-2 of 2 4 ← → H 10 ♥

2. Health Policy by ports:

Unhealthy Ports Health P	Policy									
							Ø	Delete All Healthy Ports	Displayed Column	ns 🕶 🛛 CSV 🗸
Node GUID ↓ 1		Node Name		Port \uparrow 2		Policy		Action	Last Update	
	🗸 🛛 🖓 Filter		🔽 (Filten		🔽 (Filter		Filter			
0xec0d9a030029dba0	switchib		11			UNHEALTHY		isolate	Wed Jul 26 15:17:49 2023	
0x7cfe900300a5a2a0	sharp2		36			UNHEALTHY		isolate	Wed Jul 26 15:18:33 2023	

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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 rightclick, 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. © Copyright 2024, NVIDIA. PDF Generated on 08/14/2024