

# Perform MDS Health and Configuration Check

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## Introduction

This document describes the procedure and requirements to perform automatic health and configuration checks for the MDS 9000 platforms.

## Prerequisites

### Requirements

Automated Health and Configuration Check is supported only for MDS platforms that run a supported version of NX-OS® software.

These hardware platforms are supported:

- All MDS 9000 series switches that have not yet reached the Last Date of Support : HW. Refer to the MDS End-of-Life and End-of-Sale Notices here:

[End-of-Life and End-of-Sale Notices](#)

### Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

### Conventions

Refer to [Cisco Technical Tips Conventions](#) for more information on document conventions.

# Health and Configuration Check Procedure

To perform an automated Health and Configuration check on MDS switches, open a regular TAC Service Request at Cisco [Support Case Manager](#) with these set of keywords:

Tech: Data Center and Storage Networking

Sub-Tech: MDS9000 - Health and Config Check (AUTOMATED)

Problem Code: Health and Config Check

For the TAC SR opened, upload output of the "show tech-support details" command captured from the switch, either in .txt or .gz/.tar format. Currently the show tech-support details file captured in ASCII and UTF-8 text formats are supported. For the upload instructions, refer to [TAC Customer File Uploads](#).

Starting with NX-OS 8.4(2d) and 9.2(1), the MDS `tac-pac` command has been enhanced to quickly create a file on bootflash that contains a show tech-support details with an appended show logging onboard. This is the preferred method of creating the input file for any TAC Service Request (SR) requiring a show tech-support details including an automated health and configuration check case.

After the required output is attached to the SR, Cisco automation analyzes the logs and provides a report (in PDF format) attached to an email sent to you. The report contains a list of issues detected, relevant steps to troubleshoot the problems, and recommended action plan.

If there are questions in regards to the health check failures reported, users are advised to open a separate service request(s) with appropriate keywords to get further assistance. It is strongly recommended to refer to the Service Request (SR) number opened for the Automated Health and Config Check along with the report generated to expedite the investigation.

## Health and Configuration Check Modules

Automated MDS Health and Configuration Check Version 1, May 2023 release, performs the checks listed in the Table 1.

Table 1: Health Check Modules and Associated CLIs used by the Modules

Index	Health Check Module	Brief Description of the Module	CLI(s) Used to Perform Health Check
1.	NX-OS Release Check	Checks if the device runs a Cisco recommended NX-OS software release.	show version
2.	MDS transceiver check for EOL/EOS	Checks if any transceiver is End-of-Life (EOL) or End-of-Sale (EOS).	show version show clock show hardware
3.	Data rate usage for FC interfaces on MDS switch	Checks interface input and output rates. Lists the top 10 interfaces and	show version show interface brief

		alerts on interfaces that are higher than 80% utilization.	
4.	Transceiver detail information for MDS switch	Checks interface temperature, voltage, current, tx power, or rx power values for nominal values. Suggests next steps if faults are detected.	show version show hardware show interface transceiver details
5.	Check for PSIRT defects based on running NX-OS version	Matches against a variety of PSIRTs according to the HW/SW and configuration. This is not exhaustive.	show version show running-config
6.	MDS check for Clock Information	Checks for recommended clock configuration and provides sample recommended clock configurations.	show running-config show clock
7.	MDS hardware check for EOL/EOS	Identifies End-of-Life (EOL) and End-of-Support (EOS) dates for MDS modules and chassis.	show version show module show hardware show inventory
8.	MDS software check for EOL/EOS	Identifies End-of-Life (EOL) and End-of-Support (EOS) dates for MDS NX-OS releases.	show version show module
9.	MDS FCNS database and FLOGI database consistency check	Check to see the consistency between the show FCNS database and show FLOGI database outputs.	show version show hardware show flogi database show fcns database local vsan 1-4093
10.	MDS check for all VSANs up and active on all TF ports	Check to ensure all the TF ports have all allowed VSANs in active state, no VSANs in isolated or initializing states.	show version show hardware show interface show interface brief show port-channel database
11.	MDS check for all VSANs up and active on all TE ports	Check to ensure all the TE ports have all allowed VSANs in active state, no VSANs in isolated or initializing states.	show version show module show interface show interface brief show port-channel database
12.	MDS OUI Check Remote Devices	Check to ensure MDS recognizes the OUI of connected through trunk and port-channel connections.	show flogi internal event-history errors show port internal event-history errors show system internal fcfwd idxmap interface show flogi

			internal event-history debugs show accounting log
13.	MDS CFS Lock Check	Check for CFS locks and suggested steps to clear locks.	show version show module show hardware show cfs lock show logging log show cfs internal session-history show cfs peers show fcdomain domain-list show cfs internal event-history errors show clock
14.	MDS Check active supervisor mgmt0 link	Check if the active or only supervisor mgmt0 link status shows 'up'.	show version show interface mgmt0
15.	MDS 9700 Check standby supervisor mgmt0 link	Check if the standby supervisor mgmt0 link status shows 'up'. Only valid for MDS 9700 directors running NX-OS 9.2(1) and higher versions.	show version show interface mgmt0 standby
16.	MDS Suboptimal PC Member Allocation Check	Port-channels are important for resiliency in multi-switch Fibre Channel SANs. Configuring port-channels for maximum fault-tolerance and hardware resource utilization contributes to the resiliency of the SAN. This module checks each Fibre Channel port-channel found to ensure its member interfaces are distributed as evenly as possible across the available modules and fwd-engines in the switch.	<b>show version</b> <b>show interface brief</b>

## Reports and Caveats

- The Health and Config Check SR is automated and handled by the Virtual TAC Engineer.
- The report (in PDF format) is usually generated within 24 business hours after all necessary logs attached to the SR.
- The report is automatically shared over email (sourced from Cisco TAC Automated Emails <no-reply@cisco.com>) with all contacts (primary as well as secondary) associated with the service request.
- The report is also attached to the Service Request to allow its availability at any later point in time.
- Please be advised that the issues listed in the report are based on the logs provided, and within the scope of the health check modules listed in Table 1 (shown previously).
- The list of health and configuration checks performed is non-exhaustive, and users are advised to perform further health checks as needed.

- New health and configuration checks can be added over time.

## FAQs

### **Q1: Can I upload show tech-support details for more than one switch in the same SR to get Health Check report for all the switches?**

A1: This is an automated case handling and the health checks are performed by the Virtual TAC Engineer. The health check is done for only the first `show tech-support details` uploaded.

### **Q2: Can I upload more than one show tech-support details for the same device say, captured a few hours apart, to get health check done for both?**

A2: This is an automated and stateless case handling performed by the Virtual TAC Engineer, and the Health and Config Check is done for the first the `show tech-support details` file uploaded to the SR, irrespective of whether the files uploaded are from the same switch or different switches.

### **Q3: Can I get health checks done for the switches whose show tech-support details files compressed as a single rar/gz file and uploaded to the SR?**

A3: No. if multiple show tech support details are uploaded as a single rar/zip/gz file, only the first file in the archive is processed for health checks.

### **Q4: What can I do if I have questions about one of the health check failures reported?**

A4: Please open a separate TAC Service Request to get further assistance on the specific health check result. It is highly recommended to attach the health check report and refer to the Service Request (SR) Case number opened for the automated health and config check.

### **Q5: Can I use the same SR opened for the Automated Health and Config Check to troubleshoot the issues found?**

A5: No. As the proactive health check is automated, please open a new Service Request to troubleshoot and resolve the issues reported. Please be advised that the SR opened for health check is closed within 24 hours after the health report is published.

### **Q6: Does the automated health and config check run against the show tech-support details file for the switch that runs versions older than the one mentioned previously?**

A6: The automated health and configuration check is built for the platforms and software releases mentioned previously. For devices that run older versions, it is best effort and there is no guarantee on the accuracy of the report.

### **Q7: How do I close the SR opened for Health Check?**

A7: The SR is closed within 24 hours after the first Health Check report is sent. No action needed from the user towards SR closure.

### **Q8: How do I share comments or feedback about the Proactive Health and Configuration Check?**

A8: Share them through email to [MDS-HealthCheck-Feedback@cisco.com](mailto:MDS-HealthCheck-Feedback@cisco.com)

### **Q9. What is the recommended method to capture "show tech-support" or "show tech-support details" from a switch?**

A9: As mentioned earlier in this document, starting with NX-OS 8.4(2d) and 9.2(1), the MDS `tac-pac` command has been enhanced to quickly create a file on bootflash that contains a `show tech-support details` with an appended `show logging onboard` . This is the preferred method of creating the input file for any TAC Service Request (SR) requiring a `show tech-support details` including an automated health and configuration check. The CLI output captured to a log file in the terminal application (for example, SecureCRT, PuTTY) could be in UTF-8-BOM format (or similar) which is NOT supported by the automated health check. The Automated Health & Config check supports files only in ASCII or UTF-8 formats.

## Perform Nexus Health and Configuration Check

Refer to [Perform Nexus Health and Configuration Check](#) .

## Feedback

Any feedback on the operation of these tools is much appreciated. If you have any observations, or suggestions (for example, about the ease of use, scope, quality of the reports generated and so on) share them here [MDS-HealthCheck-Feedback@cisco.com](mailto:MDS-HealthCheck-Feedback@cisco.com).