



Consistency Checker

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Limitations for Consistency Checker

The Consistency Checker has the following limitations:

- Consistency Checkers are CPU intensive. It is not recommended to run the checkers at very short intervals.
- Consistency Checkers do not have support for snapshot. So, the previous runs cannot be displayed.
- There is no command to stop/abort the already running Consistency Checkers.
- Forwarding Engine hardware entry validations are partially implemented. Only programming failures can be detected and reported.
- Layer2 MAC Consistency Checker can validate the MAC address in hardware with software copy.
- Consistency checker is designed to reduce false positives in all cases. However, there could be rare cases of reporting a false positive in the following scenarios:
 - Large table state changes (i.e clear, relearn etc).
 - Under very high CPU usage due to any other feature while a consistency checker running. The consistency checker may report inconsistency in processes where CPU usage is high.
- Forwarding engine hardware (FED) check is not entirely supported in Layer3 Multicast Consistency Checker. You can only detect and report on programming failures.
- Forwarding Manager-RP software entry is not supported in Layer3 Multicast Consistency Checker.

Information about Consistency Checker

Overview of Consistency Checker

The Consistency Checker collects information on various table states within the software and the hardware. It compares the software state with the hardware state. If there is any inconsistency, it flags the issue immediately. This helps to reduce increased troubleshooting time at a later period. The consistency checker supplements basic troubleshooting and helps to identify scenarios where inconsistent states between software and hardware tables are causing issues in the network, thereby reducing the mean time to resolve the issue.

Consistency Checker supports validating the entry from control plane to the forwarding engine (or hardware copy).

Features Supported in Consistency Checker

The following features are supported in consistency checker:

- **Layer2 MAC Consistency Checker:** This consistency checker validates the IOS entry to FED software entry. It also validates the MAC address into hardware tables.
- **Layer3 FMANFP Entry Consistency Checker:** This consistency checker validates the Layer 2, Layer 3, and multicast objects status in the Forwarding Manager-FP process. This includes stale objects and long pending objects.

Running the Consistency Checker

The table shown below lists the commands to run the various consistency checkers:

Command	Purpose
show consistency-checker l2	Runs the consistency-checker on the Layer 2 forwarding tables.
show consistency-checker l3	Runs the consistency-checker on the Layer 3 forwarding tables.
show consistency-checker switch	Runs the consistency-checker on the specified switch.

Feature History for Consistency Checker

This table provides release and related information for the features explained in this module.

These features are available in all the releases subsequent to the one they were introduced in, unless noted otherwise.

Release	Feature	Feature Information
Cisco IOS XE Amsterdam 17.3.1	Consistency Checker	<p>The Consistency Checker collects information on various table states within the software and the hardware and flags any inconsistency it finds immediately. It supplements basic troubleshooting and helps to identify scenarios where inconsistent states between software and hardware tables are causing issues in the network, thereby reducing the mean time to resolve the issue.</p> <p>Support on this feature was introduced on all series of Cisco Catalyst 9500 Series Switches.</p>

Use the Cisco Feature Navigator to find information about platform and software image support. To access Cisco Feature Navigator, go to <https://cfng.cisco.com/>

