



Release Notes for SONiC on Cisco 8000 Series Routers, Release 202511.1.1.0

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SONiC on Cisco 8000 Series Routers, Release 202511.1.1.0

Cisco SONiC Release 202511.1.1.0 introduces support for Online Diag support for SONiC, Teamd Enhancements, and 8000 SONiC - Support for DHCPv4 and DHCPv6 Relay. This release enhances the SONiC platform on Cisco 8000 Series routers by improving software reliability and deployment simplicity.

New software features

Table 1. SONiC on Cisco 8000 Series Routers, Release 202511.1.1.0

Product impact	Feature	Description
Software Reliability	SONiC Online Diagnostics Support	This feature allows you to perform online diagnostics of the device, enhancing your ability to monitor and troubleshoot system performance without downtime. We enable background check on the devices, generating syslogs to alert you when any hardware issue is detected, thereby streamlining maintenance and improving operation efficiency.
API Experience	DHCPv4 and DHCPv6 Relay Support	This feature enhances your network's IP address management by supporting DHCPv4 and DHCPv6 relay, allowing you to efficiently handle IP configuration across multiple VLANs and VRFs. We build a new relay agent from scratch, integrating improved functionality and eliminating limitations of the previous ISC-based code, enabling seamless communication between clients and servers across different subnets.
Software Reliability	Catastrophic Drop Event Monitoring	This feature allows you to monitor and identify unexpected packet drops, enhancing your response to network issues. We provide a CLI that displays total and drop counters in each system block, allowing you to proactively manage your network's performance and reliability.
Software Reliability	Traffic Generation CLI	You can now manage your packet traffic generation easily using the TGEN CLI. This feature streamlines your operations by providing a single command-line interface for traffic generation, simplifying control and improving efficiency in your network management tasks.
Software Reliability	SONiC Non-Sudo NPU Command Support	Many of the show platform npu CLIs are now available as non-sudo, enhancing troubleshooting efficiency by enabling easier access to necessary diagnostic tools. We simplify your workflow by providing critical commands in SONiC, which previously required sudo access and are essential for speeding up issue resolution as more devices migrate to SONiC.
Hardware Reliability	Platform Hardware Fault Detection and Handling of FAN/FAN tray	This feature allows detection of issues with FAN/FAN tray. This is in addition to monitoring temperature, current and voltage that was already supported.
Software	Offline Data-Plane Health Monitoring	You can effectively monitor your fabric and data plane health on demand with the Offline Data-

Product impact	Feature	Description
Reliability		Plane Health Monitor. We provide a tool that sends traffic at higher rates to check for packet corruption or loss, allowing you to quickly identify and resolve any issues when your device is isolated.

New hardware

There is no new hardware introduced in this release.

Changes in behavior

There are no changes in behavior in this release.

Open issues

There are no open issues in this release.

Known issues

Table 2. Known issues for SONiC on Cisco 8000 Series Routers, Release 202511.1.1.0

Known Issues	Description
Warm Boot	After warmboot, ACL counters may not work due to a SONiC community issue. As a workaround, delete and add the ACL configuration.

Compatibility

This table outlines the versions of various components included in this release.

Table 3. Component version for SONiC on Cisco 8000 Series Routers, Release 202511.1.1.0

Component	Version
Linux Kernel	6.12.41+deb13-sonic-amd64
SAI API	1.17.0
FRR	10.4.1-sonic-0
LLDP	1.0.16-1+deb12u1

Component	Version
TeamD	1.31-1
SNMPD	5.9.3+dfsg-2+deb12u1
Python	3.13.5-1
SYNCD	1.0.0
swss	1.0.0
Radvd	1:2.19-1+b1
sonic-gnmi version	0.1
redis-server	5:7.0.15-1~deb12u6
redis-tools version	5:7.0.15-1~deb12u6
eventd version	1.0.0-0
mgmt-framework version	1.0-01

Supported hardware

Table of supported hardware components and the minimum required software versions.

Table 4. Supported hardware for SONiC on Cisco 8000 Series Routers, Release 202511.1.1.0

Part Number	Description
8101-32FH-O	Cisco 8100 1 RU Chassis with 32x400G QSFP56-DD with Open Software and without HBM on Q200 Silicon.
8102-64H-O	Cisco 8100 2 RU Chassis with 64x100G QSFP28 with Open Software and without HBM on Q200 Silicon.
8122-64EH-O	Cisco 8100 2 RU Chassis with 64x800G or 128x400GbE QSFP-DD800 with Open Software and without HBM based on G200 ASIC with 112Gb Serdes.
8201-32FH-O	Cisco 8200 1 RU Chassis with 32x400G QSFP56-DD with Open Software and with HBM.

Part Number	Description
8102-28FH-DPU-O	Cisco 8100 2 RU Smart Switch with 28x400G QSFP-DD DPU enabled, featuring Cisco Silicon One Q200L switching processor and AMD DSC-200 Data Processing Unit (DPU), with Open Software and without HBM.
8101-32FH-O-C01	Cisco 8100 1 RU Chassis with 32x400G QSFP56-DD, Open Software, and without HBM on Q200 Silicon.

Related resources

Table 5. Related resources

Resource	Description
Explore SONiC on Cisco 8000 Series Routers	Provides documentation for installing and deploying SONiC on Cisco 8000 Series Routers.
Explore Cisco 8000 SONiC on Interactive Python Notebooks	Introduces use-case-based documentation for SONiC through Learning Labs, offering guidance on use cases and configurations to facilitate deployment. Additionally, it enables experimentation and customization to meet specific network requirements.
Install SONiC on Cisco 8000 Routers	Provides guidance on installing a new SONiC image on Cisco 8000 series routers, covering two installation methods: Open Network Install Environment (ONIE) and the sonic-installer command.
Cisco 8000 Series Routers Data Sheet	Provides detailed specifications and feature information for Cisco 8000 Series Routers in the Data Sheet.
Cisco Software Download Center	Provides SONiC image download options for Cisco 8000 Series Routers.
Explore SONiC on Cisco 8000 Series Routers	Provides documentation for installing and deploying SONiC on Cisco 8000 Series Routers.
Explore Cisco 8000 SONiC on Interactive Python Notebooks	Introduces use-case-based documentation for SONiC through Learning Labs, offering guidance on use cases and configurations to facilitate deployment. Additionally, it enables experimentation and customization to meet specific network requirements.

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