Introduction

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Cisco NCS 520 Series Ethernet Access Device Overview

The Cisco NCS 520 Series Ethernet Access Device is a family of low cost, fixed Carrier Ethernet Network Interface Devices (NID) and a switch that is targeted to be the next generation replacement of the Cisco ME 3400 series Access Switches. The Cisco NCS 520 Series Ethernet Access Device adds 10G NID and low-cost MBH switch to the existing Service Provider Access portfolio, with the following features:

- MEF CE 3.0 compliant
- Premium SKUs with support for extended temperature (from -40C to 65C)
- Conformal coating on the PCBAs (to be able to support installation in ventilated enclosures)

This release note contains information about the Cisco NCS 520 Series Ethernet Access Device, provides features information for these devices, hardware support, limitations and restrictions, and caveats.

This release note provides information for these variants of the Cisco NCS 520 Series Ethernet Access Device:

- N520-4G4Z-A (Base)
- N520-X-4G4Z-A (Premium)
- N520-X-4G4Z-D (Premium)
- N520-20G4Z-A (Base)
- N520-20G4Z-D (Base)
- N520-X-20G4Z-A (Premium)
- N520-X-20G4Z-D (Premium)

Feature Navigator

Use the Cisco Feature Navigator to find information about feature, platform, and software image support. To access the Cisco Feature Navigator, go to http://www.cisco.com/go/cfn. An account on cisco.com is not required.

Determining the Software Version

Use the following commands to verify your software version:

- Consolidated Package— **show version**

Supported FPGA Version

The table below lists the FPGA version of the software releases.

Table 1: FPGA Versions for NCS520-20G4Z-A ,NCS520-20G4Z-D, NCS520-X-20G4Z-A, NCS520-X-20G4Z-D,N520-4G4Z-A,N520-X-4G4Z-A and N520-X-4G4Z-D

Release	FPGA Version
Cisco IOS XE Fuji 16.9.7	0x0003001E

Software Licensing Overview

The Cisco NCS 520 Series Ethernet Access Device supports the following types of licenses:

- Port Licensing—Port Upgrade license is available as a "Pay as you Grow" model.

- 10G upgrade license
- 1G upgrade license

- Metro Access (default)

The following method is used to activate the above licenses:

- Cisco Software Licensing—The Cisco Software License Activation feature is a set of processes and components to activate Cisco software feature sets by obtaining and validating fee-based Cisco software licenses.

Note Licenses generated by the Cisco Software Licensing are tied to the UDI of the chassis and a corresponding watchtower device certificate (WDC) is stored in the system.

The following features are supported for the software licenses:

- QoS, with deep buffers and hierarchical QoS (HQOS)
- Layer 2: 802.1d, 802.1q
- Ethernet Virtual Circuit (EVC)
- Ethernet OAM (802.1ag, 802.3ah)
- IPv4 and IPv6 host connectivity

Limitations and Restrictions on the Cisco NCS 520 Series Ethernet Access Device

Note The error message "PLATFORM-1-NOSPACE: SD bootflash : no space alarm assert" may occur in the following scenarios:

- Any sector of SD Card gets corrupted
- Improper shut down of router
- power outage.

This issue is observed on platforms which use EXT2 file systems.

We recommend performing a reload of the router. As a result, above alarm will not be seen during the next reload due to FSCK(file systems check) execution.

However, If the error persists after a router reload, we recommend to format the bootflash or FSCK manually from IOS.

- The **default interface** command is used to default the parameters under that interface. However, when speed is configured on the interface, the following error is displayed:

  ```
  Speed is configured. Remove speed configuration before enabling auto-negotiation
  ```

- Adding or deleting the Trunk Ethernet flow points (TEFPs) with scaled bridge-domain, without delay causes the Cisco NCS 520 Series Ethernet Access Device to crash.
- Virtual services should be deactivated and uninstalled before performing replace operations.
- The **controller** and **nid-controller** commands are not supported.
- Cisco NCS 520 Series Ethernet Access Device displays an error in Hierarchical QoS policy while trying to remove the **bandwidth** and **bandwidth percent** commands from the default parent class dynamically. To remove the commands, you must first remove the bandwidth from child class and then from the parent class.
- When port is in OPER-DOWN state, applying Hierarchical QoS followed by speed change sets wrong bandwidth values on standard queues. To work around the mismatch, you must reattach the policy to the port level again.

Field Notices and Bulletins

- Field Notices—We recommend that you view the field notices for this release to determine whether your software or hardware platforms are affected. You can find field notices at http://www.cisco.com/en/US/support/tsd_products_field_notice_summary.html.
- Bulletins—You can find bulletins at http://www.cisco.com/en/US/products/sw/iosswrel/ps5012/prod_literature.html.

MIBs Support

The below tables summarize the supported MIBs on the Cisco NCS 520 Series Ethernet Access Device.

Supported Systems SNMP MIBs		
IF-MIB	CISCO-flash-mib	cisco-ENITY-ALARM
CISCO-ENTITY-EXT-MIB	CISCO-BULK-FILE-MIB	NOTIFICATION-LOG-MIB
SNMP-COMMUNITY-MIB	CISCO-ENHANCED-MEMPOOL-MIB	CISCO-SYSLOG-MIB
SNMP-FRAMEWORK-MIB	ENTITY-SENSOR-MIB	CISCO-CONFIG-MAN-MIB
SNMPv2-MIB	SNMP-MPD-MIB	entity-state-mib-cisco
CISCO-ENTITY-MIB	CISCO-ENTITY-SENSOR-MIB	

Supported Layer 2 and OAM SNMP MIBs		
DS1-MIB	CISCO-CDP-MIBCISCO-CEF-MIB	

Supported Layer 2 and OAM SNMP MIBs		
CISCO-IPSLA-ETHERNET-MIB	CISCO-ETHER-CFM-MIB	IEEE8021-CFM-MIB

Supported QoS SNMP MIBs		
CLASS-BASED-QOS-POLICING-MIB	CLASS-BASED-QOS-MARKING-MIB	CLASS-BASED-QOS-SHAPE-MIB
CISCO-CLASS-BASED-QOS-MIB		

Accessibility Features in the Cisco NCS 520 Series Ethernet Access Device

For a list of accessibility features in Cisco NCS 520 Series Ethernet Access Device, see the Voluntary Product Accessibility Template (VPAT) on the Cisco website, or contact accessibility@cisco.com.

All product documents are accessible except for images, graphics, and some charts. If you would like to receive the product documentation in audio format, braille, or large print, contact accessibility@cisco.com.