



# Cisco NCS 5000 Series Product Overview

## Cisco NCS 5001 Overview

Cisco NCS 5001 is a dense 10/100 Gigabit Ethernet Router in 1 RU form factor. It is designed for service provider access and aggregation network. The Cisco NCS 5001 runs the industry-leading Cisco IOS XR Software operating system, with robust features and functions such as application hosting, machine to machine interface, telemetry, and flexible package delivery.

NCS 5001 contains the following ports:

- 40 x 10G SFP+ Ports:
  - 16 x Regular 10G SFP+ Ports
  - 24 x DWDM & ZR Capable 10G SFP+ Ports
- 4 x 100G QSFP28 Ports

## Features

The Cisco NCS 5001 router has the following features:

- 10Gbps bandwidth for each of the 40 fixed SFP+ ports
- Four QSPF ports capable of providing 100Gbps bandwidth
- Two 1+1 redundant, hot-swappable power supplies, which provide port side intake or exhaust for cooling
- Two N+1 redundant, hot-swappable fan modules, which provide port side intake or exhaust for cooling
- A management console and USB interface on the fan side of the router

## Cisco NCS 5002 Overview

Cisco NCS 5002 is a dense 10/100 Gigabit Ethernet Router in 2RU form factor. It is designed for service provider access and aggregation network. The Cisco NCS 5002 runs the industry-leading Cisco IOS XR Software operating system, with robust features and functions such as application hosting, machine to machine interface, telemetry, and flexible package delivery.

NCS 5002 contains the following ports:

- 80 x 10G SFP+ Ports:
  - 40 x Regular 10G SFP+ Ports

- 40 x DWDM & ZR Capable 10G SFP+ Ports
- 4 x 100G QSFP28 Ports

### Features

The Cisco NCS 5002 router has the following features:

- 10Gbps bandwidth for each of the 80 fixed SFP+ ports
- Four QSPF ports capable of providing 100Gbps bandwidth
- Two 1+1 redundant, hot-swappable power supplies, which provide port side intake or exhaust for cooling
- Two N+1 redundant, hot-swappable fan modules, which provide port side intake or exhaust for cooling
- A management console and USB interface on the fan side of the router
- [Cisco NCS 5000 Series Product Overview, on page 2](#)
- [Command Modes, on page 3](#)

## Cisco NCS 5000 Series Product Overview

### Cisco NCS 5001 Overview

Cisco NCS 5001 is a dense 10/100 Gigabit Ethernet Router in 1 RU form factor. It is designed for service provider access and aggregation network. The Cisco NCS 5001 runs the industry-leading Cisco IOS XR Software operating system, with robust features and functions such as application hosting, machine to machine interface, telemetry, and flexible package delivery.

NCS 5001 contains the following ports:

- 40 x 10G SFP+ Ports:
  - 16 x Regular 10G SFP+ Ports
  - 24 x DWDM & ZR Capable 10G SFP+ Ports
- 4 x 100G QSFP28 Ports

### Features

The Cisco NCS 5001 router has the following features:

- 10Gbps bandwidth for each of the 40 fixed SFP+ ports
- Four QSPF ports capable of providing 100Gbps bandwidth
- Two 1+1 redundant, hot-swappable power supplies, which provide port side intake or exhaust for cooling
- Two N+1 redundant, hot-swappable fan modules, which provide port side intake or exhaust for cooling
- A management console and USB interface on the fan side of the router

### Cisco NCS 5002 Overview

Cisco NCS 5002 is a dense 10/100 Gigabit Ethernet Router in 2RU form factor. It is designed for service provider access and aggregation network. The Cisco NCS 5002 runs the industry-leading Cisco IOS XR Software operating system, with robust features and functions such as application hosting, machine to machine interface, telemetry, and flexible package delivery.

NCS 5002 contains the following ports:

- 80 x 10G SFP+ Ports:
  - 40 x Regular 10G SFP+ Ports
  - 40 x DWDM & ZR Capable 10G SFP+ Ports
- 4 x 100G QSFP28 Ports

### Features

The Cisco NCS 5002 router has the following features:

- 10Gbps bandwidth for each of the 80 fixed SFP+ ports
- Four QSPF ports capable of providing 100Gbps bandwidth
- Two 1+1 redundant, hot-swappable power supplies, which provide port side intake or exhaust for cooling
- Two N+1 redundant, hot-swappable fan modules, which provide port side intake or exhaust for cooling
- A management console and USB interface on the fan side of the router

## Command Modes

The router runs on virtualized Cisco IOS XR software. Therefore, the CLI commands must be executed on virtual machines, namely the XR LXC and the System Admin LXC.

The command modes are applicable for the Cisco Series Routers. This table lists the command modes for the LXCs.

| Command Mode                                  | Description                                                                                                                                                              |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| XR EXEC mode<br>(XR LXC execution mode)       | Run commands on the XR LXC to display the operational state of the router.<br><br>Example:<br>RP/0/RP0/CPU0:router#                                                      |
| XR Config mode<br>(XR LXC configuration mode) | Perform security, routing, and other XR feature configurations on the XR LXC.<br><br>Example:<br>RP/0/RP0/CPU0:router# <b>configure</b><br>RP/0/RP0/CPU0:router(config)# |

| Command Mode                                                     | Description                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System Admin EXEC mode<br>(System Admin LXC execution mode)      | <p>Run commands on the System Admin LXC to display and monitor the operational state of the router hardware. The chassis or individual hardware modules can be reloaded from this mode.</p> <p>Example:</p> <pre>RP/0/RP0/CPU0:router#<b>admin</b><br/>sysadmin-vm:0_RP0#</pre> |
| System Admin Config mode<br>(System Admin LXCconfiguration mode) | <p>Run configuration commands on the System Admin LXC to manage and operate the hardware modules of the entire chassis.</p> <p>Example:</p> <pre>RP/0/RP0/CPU0:router#<b>admin</b><br/>sysadmin-vm:0_RP0#<b>config</b><br/>sysadmin-vm:0_RP0(config)#</pre>                     |