



Cisco Nexus 7000 Series NX-OS High Availability Commands

Cisco NX-OS is a resilient operating system that is specifically designed for high availability at the network, system, and process level. For more information about high availability (HA) concepts and features for Cisco NX-OS devices, see the *Cisco Nexus 7000 Series NX-OS High Availability and Redundancy Guide*.

This chapter describes the Cisco Nexus 7000 Series NX-OS high availability commands.

clear bootvar log

To delete the boot variable log, use the **clear bootvar log** command.

clear bootvar log

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

Supported Use Roles network-admin

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines This command does not require a license.

Examples This example shows how to delete the boot variable log:

```
switch# clear bootvar log
switch#
```

| Related Commands | Command | Description |
|------------------|---------------------------|---|
| | show boot | Displays all configured boot variables. |
| | show boot variable | Displays the boot variable names. |

clear cores

To delete core dump files of a virtual device context (VDC) from the logflash, use the **clear cores** command.

clear cores archive file *file-name*

| Syntax | Description |
|------------------------------|--|
| archive | Specifies all core dump files for a VDC from the logflash on the module. |
| file <i>file-name</i> | Specifies the file on the logflash that needs to be deleted. |

Defaults None

Command Modes Any command mode

Supported Use Roles network-admin

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines This command does not require a license.

Examples This example shows how to delete core dump files of a VDC from the logflash:

```
switch(config)# clear cores archive
switch(config)#
```

| Related Commands | Command | Description |
|------------------|-------------------|---|
| | show cores | Displays core dump files of a virtual context device (VDC). |

clear xbar-driver

To delete the crossbar-related information, use the **clear x-bar driver** command.

clear xbar-driver [**xbar** *xbar-number* | **local** *xbar counter*]

| Syntax Description | |
|-----------------------------------|--|
| xbar <i>xbar-number</i> | (Optional) Specifies the crossbar number. The range is from 1 to 5. |
| local <i>xbar counter</i> | (Optional) Specifies the crossbar slot number. The range is from 1 to 4. |

Defaults None

Command Modes Any command mode

Supported Use Roles network-admin

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines This command does not require a license.

Examples This example shows how to delete the crossbar-related information:

```
switch# clear xbar-driver xbar 2 inst 1 counters port_num 1 all
switch#
```

| Related Commands | Command | Description |
|------------------|---|---|
| | show module fabric | Displays information about the module fabric. |
| | show hardware fabric-utilization | Displays information about the hardware fabric utilization. |

hardware fabric crc

To enable internal CRC detection and isolation functionality, use the **hardware fabric crc** command in configuration mode. To disable this functionality, use the **no** form of the command.

hardware fabric crc [**threshold** *threshold-count*]

no hardware fabric crc

| | |
|---------------------------|--|
| Syntax Description | <i>threshold-count</i> Specifies the threshold count, taken over a 24-hour period, consecutively. The range is 1 to 100. |
|---------------------------|--|

| | |
|-----------------|--------------------------|
| Defaults | 3, over a 24-hour period |
|-----------------|--------------------------|

| | |
|----------------------|--------------------|
| Command Modes | Configuration mode |
|----------------------|--------------------|

| Command History | Release | Modification |
|------------------------|----------------|------------------------------|
| | 8.4(1) | This command was introduced. |

| | |
|-------------------------|------|
| Usage Guidelines | None |
|-------------------------|------|

Examples The following example shows how to enable internal CRC error detection and isolation:

```
switch# config terminal
switch(config)# hardware fabric crc threshold 100
```

The following example shows how to disable internal CRC error detection and isolation:

```
switch# config terminal
switch(config)# no hardware fabric crc
```

| Related Commands | Command | Description |
|---|---------------------------|---|
| | show module fabric | |
| show hardware fabric-utilization | | Displays information about the hardware fabric utilization. |

out-of-service

To power off a supervisor module in the Cisco NX-OS software, use the **out-of-service** command.

out-of-service module *module-number*

| Syntax Description | module | Specifies an I/O module. |
|--------------------|----------------------|---|
| | <i>module-number</i> | Module number. The range is from 1 to 18. |

Defaults None

Command Modes Global configuration mode

Supported Use Roles network-admin
vdc-admin

| Command History | Release | Modification |
|-----------------|---------|----------------------------------|
| | 5.2(1) | Removed the xbar keyword. |
| | 4.0(1) | This command was introduced. |

Usage Guidelines This command is not supported on line card modules. For line card modules, use the **poweroff** command. You can use the **out-of-service** command only in the default virtual device context (VDC). Use this command to safely remove a module from service in the software. Before bringing a module back into service, you must remove the physical hardware module from the chassis and reinsert it. This command does not require a license.

Examples This example shows how to take a supervisor module out of service:

```
switch# configure terminal
switch(config)# out-of-service module 3
```

| Related Commands | Command | Description |
|------------------|----------------------|--|
| | poweroff | Shuts down a supervisor of a line card module in the Cisco NX-OS software. |
| | reload module | Reloads a module in a device. |

poweroff

To power off a supervisor of a line card module in the Cisco NX-OS software, use the **poweroff** command.

poweroff { **module** *module-number* | **xbar** *xbar-number* }

Syntax Description

| | |
|------------------------------------|--|
| module <i>module-number</i> | Specifies an I/O module. The range is from 1 to 18. |
| xbar <i>xbar-number</i> | Specifies a fabric module. The range is from 1 to 5. |

Defaults

None

Command Modes

Global configuration mode

Supported Use Roles

network-admin
vdc-admin

Command History

| Release | Modification |
|---------|------------------------------|
| 5.2(1) | This command was introduced. |

Usage Guidelines

This command does not require a license.

Examples

This example shows how to take a supervisor module out of service:

```
switch# configure terminal
switch(config)# poweroff module 5
```

Related Commands

| Command | Description |
|-----------------------|---|
| out-of-service | Shuts down a supervisor module in the Cisco NX-OS software. |
| reload module | Reloads a module in a device. |

power redundancy-mode

To configure the power supply redundancy mode, use the **power redundancy-mode** command. To disable the power redundancy mode, use the **no** form of this command.

power redundancy-mode { **combined** | **insrc-redundant** | **ps-redundant** | **redundant** }

no power redundancy-mode { **combined** | **insrc-redundant** | **ps-redundant** | **redundant** }

| Syntax Description | | |
|--------------------|------------------------|--|
| | combined | Specifies the combined power supply mode. |
| | insrc-redundant | Specifies the input source redundancy mode. |
| | ps-redundant | Specifies the power support redundancy mode. |
| | redundant | Specifies the full redundancy mode. |

Defaults **ps-redundant**

Command Modes Global configuration

Supported Use Roles network-admin

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines You can use the **power redundancy-mode** command only in the default virtual device context (VDC).

You can configure the power supplies with the following modes:

- Combined mode—This mode does not provide power redundancy. The available power for this mode is the total power capacity of all power supplies.
- Power supply redundancy mode—This mode provides an extra power supply in case an active power supply goes down. With this mode, the power supply that can supply the most power operates in the standby mode. The other one or two power supplies are active. The available power is the amount of power provided by the active power supply units.
- Input source redundancy mode—This mode uses two electrical grids, each one powering a half module within each power supply. If one power grid goes down, each power supply continues to draw power through its other half module. The available power is the amount of power by the lesser of the two grids through the power supplies.
- Full redundancy mode—This mode combines power supply redundancy and input source redundancy, which means that the chassis has an extra power supply and each half of each power supply is connected to one electrical grid while the other half of each power supply is connected to the other electrical grid. The available power is the lesser of the available power for power supply mode and input source mode.

This command does not require a license.

Examples

This example shows how to configure the power supply redundancy mode:

```
switch# configure t  
switch(config)# power redundancy-mode redundant
```

This example shows how to disable the power supply redundancy mode:

```
switch# configure t  
switch(config)# no power redundancy-mode redundant
```

Related Commands

| Command | Description |
|-------------------------|---|
| show environment | Displays information about the device hardware environment. |

reload module

To reload a module in the device, use the **reload module** command.

reload module *slot* [**force-dnld**]

| Syntax Description | | |
|--------------------|-------------------|--|
| | <i>slot</i> | Chassis slot number. The slot range depends on the system. |
| | force-dnld | (Optional) Forces the download of software to the module. |

Defaults None

Command Modes Any command mode

Supported Use Roles network-admin

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines You can use the **reload module** command only in the default virtual device context (VDC).
To display information about the hardware on your device, use the **show hardware** command.
This command does not require a license.

Examples This example shows how to reload a module:

```
switch# reload module 2
```

| Related Commands | Command | Description |
|------------------|--------------------|--|
| | show module | Displays the fabric modules in the Cisco Nexus 7000 Series switch. |

show boot

To display the boot variables in the startup configuration, use the **show boot** command.

show boot

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
network-operator
vdc-admin
vdc-operator

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.2 | This command was introduced. |

Usage Guidelines This command does not require a license.

Examples This example shows how to display the boot variables in the startup configuration:

```
switch# show boot
Current Boot Variables:

sup-1
kickstart variable = bootflash:/n7000-s1-kickstart.4.1.5.gbin.S1
system variable = bootflash:/n7000-s1-dk9.4.1.5.gbin.S1
sup-2
kickstart variable = bootflash:/n7000-s1-kickstart.4.1.5.gbin.S1
system variable = bootflash:/n7000-s1-dk9.4.1.5.gbin.S1
No module boot variable set

Boot Variables on next reload:

sup-1
kickstart variable = bootflash:/n7000-s1-kickstart.4.1.5.gbin.S1
system variable = bootflash:/n7000-s1-dk9.4.1.5.gbin.S1
sup-2
kickstart variable = bootflash:/n7000-s1-kickstart.4.1.5.gbin.S1
system variable = bootflash:/n7000-s1-dk9.4.1.5.gbin.S1
No module boot variable set
switch#
```

■ show boot

| Related Commands | Command | Description |
|------------------|-----------------------|--|
| | boot kickstart | Configures the boot variable for the Cisco NX-OS software kickstart image. |
| | boot system | Configures the boot variable for the Cisco NX-OS software system image. |

show cores

To display the system core dump files, use the **show cores** command.

```
show cores {vdc | vdc-all}
```

| Syntax | Description |
|----------------|--|
| vdc | Specifies all core dumps for a virtual device context (VDC). |
| vdc-all | Specifies core dumps for all VDCs. |

Command Modes Any command mode

Supported Use Roles network-admin

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines This command does not require a license.

Examples This example shows how to display the recent system core dump file:

```
switch# show cores vdc
VDC No Module-num      Instance-num  Process-name  PID      Core-create-time
-----
1      5                1            cdp       16718    May 21 15:36
switch#
```

| Related Commands | Command | Description |
|------------------|-------------------------|--|
| | show system core | Displays information about transferring cores. |
| | system cores | Configures the system core filename. |

show system cores

To display the core filename, use the **show system cores** command.

show system cores

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

Supported Use Roles network-admin
network-operator
vdc-admin
vdc-operator

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines To configure the system core filename, use the **show system cores** command.
This command does not require a license.

Examples This example shows how to display the core filename:

```
switch# show system cores
Cores are transferred to slot0:
switch#
```

| Related Commands | Command | Description |
|------------------|---------------------|--------------------------------------|
| | system cores | Configures the system core filename. |

show system redundancy

To display the system redundancy status, use the **show system redundancy** command.

show system redundancy [ha] status

| Syntax Description | ha | (Optional) Displays the virtual device context (VDC) redundancy (high availability) status. |
|--------------------|----|---|
|--------------------|----|---|

Defaults None

Command Modes Any command mode

Supported Use Roles network-admin
network-operator
vdc-admin
vdc-operator

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines This command does not require a license.

Examples This example shows how to display the system redundancy status:

```
switch# show system redundancy status
Redundancy mode
-----
      administrative:  HA
      operational:    None

This supervisor (sup-1)
-----
      Redundancy state:  Active
      Supervisor state:  Active
      Internal state:    Active with no standby

Other supervisor (sup-2)
-----
      Redundancy state:  Not present
switch#
```

show system redundancy

This example shows how to display the VDC redundancy status:

```
switch# show system redundancy ha status
VDC No      This supervisor                Other supervisor
-----      -
vdc 1      Active with no standby         N/A
vdc 2      Active with no standby         N/A
vdc 3      Active with no standby         N/A
vdc 4      N/A                            N/A
switch#
```

Related Commands

| Command | Description |
|-------------------------|---|
| system hap-reset | Enables the Supervisor Reset HA policy. |

show system standby manual-boot

To display the status of the system standby manual boot feature, use the **show system standby manual-boot** command.

show system standby manual-boot

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
network-operator
vdc-admin
vdc-operator

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines This command does not require a license.

Examples This example shows how to display the status of the system standby manual boot feature:

```
switch(config)# show system standby manual-boot
system standby manual-boot option is disabled
switch(config)#
```

| Related Commands | Command | Description |
|------------------|-------------------------|---|
| | system hap-reset | Enables the Supervisor Reset HA policy. |

system cores

To configure the destination for the core dumps on your system, use the **system cores** command. To revert to the default, use the **no** form of this command.

```
system cores {slot1:[path] | fttp:/server//[path] }filename
```

```
no system cores {slot1:[path] | fttp:/server//[path] }filename
```

| Syntax Description | slot1 | Specifies the slot0: external file system. |
|--------------------|-----------------|--|
| | <i>path</i> | (Optional) Directory path to the file. The directory names in the path are case sensitive. |
| | fttp | Specifies a TFTP server. |
| | <i>server</i> | Name or IPv4 address of the TFTP server. The server name is case sensitive. |
| | <i>filename</i> | Name of the core file. The name is alphanumeric, case sensitive, and has a maximum of 32 characters. |

Defaults None

Command Modes Any command mode

Supported Use Roles network-admin
network-operator
vdc-admin
vdc-operator

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines This command does not require a license.

Examples This example shows how to configure the destination for the system core:

```
switch# config t
switch(config)# system cores slot1:core_file
switch(config)#
```

This example shows how to disable system core logging:

```
switch(config)# no system cores
```

| Related Commands | Command | Description |
|------------------|-------------------|-----------------------------|
| | show system cores | Displays the core filename. |

system hap-reset

To enable the Supervisor Reset High Availability (HA) policy, use the **system hap-reset** command.

system hap-reset

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

Supported Use Roles network-admin
network-operator
vdc-admin
vdc-operator

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines You configure switchover and high availability (HA) policies for a virtual device context (VDC) when you create the VDC.

This command does not require a license.

Examples This example shows how to enable the Supervisor Reset HA policy:

```
switch(config)# system hap-reset
switch(config)#
```

| Related Commands | Command | Description |
|------------------|----------------------------|---|
| | system no hap-reset | Disables the heartbeat checks and reverts to the factory default. |

system heartbeat

To enable heartbeat checks (default) and revert to the factory default, use the **system heartbeat** command. To disable heartbeat checks, use the **no** form of this command.

system heartbeat

system no heartbeat

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

Supported Use Roles network-admin
network-operator
vdc-admin
vdc-operator

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines This command does not require a license.

Examples This example shows how to enable the heartbeat checks (default) and revert to the factory default:

```
switch# system heartbeat
switch#
```

This example shows how to disable the heartbeat checks:

```
switch# system no heartbeat
switch#
```

| Related Commands | Command | Description |
|------------------|----------------------------|---|
| | system no hap-reset | Disables the heartbeat checks (default) and reverts to the factory default. |

system no hap-reset

To disable the Supervisor Reset High Availability (HA) policy, use the **system no hap-reset** command.

system no hap-reset

Syntax Description This command has no arguments or keywords.

Defaults Disabled

Command Modes Any command mode

Supported Use Roles network-admin
network-operator
vdc-admin
vdc-operator

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines You configure switchover and high availability (HA) policies for a VDC when you create the VDC. This command does not require a license.

Examples This example shows how to disable the Supervisor Reset HA policy:

```
switch# system no hap-reset
switch#
```

| Related Commands | Command | Description |
|------------------|--------------------------------------|--|
| | system no standby manual-boot | Disables the system standby manual boot. |

system standby manual-boot

To enable the system standby manual boot, use the **system standby manual-boot** command. To disable the system standby manual-boot option, use the **no** form of this command.

system standby manual-boot

system no standby manual-boot

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
network-operator
vdc-admin
vdc-operator

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines This command does not require a license.

Examples This example shows how to enable the system standby manual boot:

```
switch# system standby manual-boot
system standby manual-boot option is enabled
switch#
```

| Related Commands | Command | Description |
|------------------|-------------------------|---|
| | system hap-reset | Enables the Supervisor Reset HA policy. |

system switchover

To switch over to the standby supervisor, use the **system switchover** command.

system switchover

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

Supported Use Roles network-admin

| Release | Modification |
|---------|------------------------------|
| 4.0(1) | This command was introduced. |

Usage Guidelines This command does not require a license.

Examples This example shows how to switch over to the standby supervisor:

```
switch# system switchover
switch#
```

| Command | Description |
|-------------------------------|--|
| show system redundancy | Displays the system redundancy status. |

system watchdog

To enable the watchdog feature, use the **system no watchdog** command. To disable the watchdog feature, use the **no** form of this command.

system watchdog

system no watchdog

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
network-operator
vdc-admin
vdc-operator

| Command History | Release | Modification |
|-----------------|---------|------------------------------|
| | 4.0(1) | This command was introduced. |

Usage Guidelines This command does not require a license.

Examples This example shows how to enable the watchdog feature:

```
switch# system watchdog
switch#
```

This example shows how to disable the watchdog feature:

```
switch# system no watchdog
switch#
```

| Related Commands | Command | Description |
|------------------|--------------------------------|--|
| | system no watchdog kgdb | Prevents the system from entering the Linux KGDB debugger on a watchdog failure. |

■ system watchdog