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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 *Cisco Nexus 7000 Series NX-OS High Availability and Redundancy Guide, Release 4.2*.

This chapter describes the Cisco Nexus 7000 Series NX-OS High Availability commands.

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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

SupportedUserRoles 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(config)# clear bootvar log
switch(config)#
```

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

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clear cores

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

clear cores *archive*

Syntax Description	<i>archive</i> Specifies all core dump files for a VDC from logflash on the module.				
Defaults	None				
Command Modes	Any command mode				
Supported User Roles	network-admin				
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>4.0(1)</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	4.0(1)	This command was introduced.
Release	Modification				
4.0(1)	This command was introduced.				
Usage Guidelines	This command does not require a license.				
Examples	<p>This example shows how to delete core dump files of a VDC from the logflash:</p> <pre>switch(config)# clear cores archive switch(config)#</pre>				
Related Commands	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>show cores</td> <td>Displays core dump files of a virtual context device (VDC).</td> </tr> </tbody> </table>	Command	Description	show cores	Displays core dump files of a virtual context device (VDC).
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clear xbar-driver

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

```
clear xbar-driver [xbar xbar-number | local xbar slot-number]
```

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

Defaults None

Command Modes Any command mode

SupportedUserRoles 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(config)# clear xbar-driver xbar 2 inst 1 counters port_num 1 all
switch(config)#
```

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

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out-of-service

To take a module out of service in the 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 Any command mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	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 in 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(config)# out-of-service module 5
```

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

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poweroff

To power off a supervisor of a line card module in the Cisco NX-OS, 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
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Command Modes	Global configuration mode
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Supported User Roles	network-admin vdc-admin
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Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines	This command does not require a license.
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Examples	This example shows how to take a supervisor module out of service: <pre>switch# configure terminal switch(config)# poweroff module 5</pre>
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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.

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power redundancy-mode

To configure the power supply redundancy mode, use the **power redundancy-mode** command. To revert to the default, 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 User 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 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 utilizes 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.

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This command does not require a license.

Examples

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

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

This example shows how to revert to the default power supply redundancy mode:

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

Related Commands

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

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reload module

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

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

Syntax Description	slot	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 User 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). Use the **show hardware** command to display information about the hardware on your device. This command does not require a license.

Examples This example shows how to reload a module:

```
switch# reload module 2
This command will reload module 2. Proceed[y/n]? [n] y
reloading module 7 ...
2009 Dec 4 21:54:20 switch %PLATFORM-2-PFM_MODULE_RESET: Manual restart of Module 7 from Command Line Interface
switch# 2009 Dec 4 21:54:23 switch %PLATFORM-2-MOD_DETECT: Module 2 detected (Serial number JAF1219AGFE) Module-Type 1000 Mbps Optical Ethernet Module Model N7K-M148GS-11
2009 Dec 4 21:54:23 switch %PLATFORM-2-MOD_PWRUP: Module 2 powered up (Serial number JAF1219AGFE)
switch#2009 Dec 4 3 21:58:35 switch %CARDCLIENT-2-SSE: MOD:2 LC ONLINE
```

Related Commands	Command	Description
	show version	Displays information about the software version.

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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

SupportedUserRoles 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(config)# 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(config)#
```

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Related Commands

Command	Description
<code>system cores</code>	Configures the system core filename.

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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 VDC.
	vdc-all	Specifies core dumps for all VDCs.

Command Modes Any command mode

Supported User 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 view the recent system core dump file:

```
switch# show core 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.

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show system cores

To display 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

SupportedUserRoles network-admin
network-operator
vdc-admin
vdc-operator

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

Usage Guidelines Use the **system cores** command to configure the system core filename.
This command does not require a license.

Examples This example shows how to display the core file name:

```
switch(config)# show system cores  
Cores are transferred to slot0: core_file  
switch(config)#
```

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

■ `show system redundancy status`

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show system redundancy status

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

show system redundancy [ha] status

Syntax Description	ha (Optional) Displays the VDC redundancy (High Availability) status.
---------------------------	--

Defaults	None
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Command Modes	Any command mode
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SupportedUserRoles	network-admin network-operator vdc-admin vdc-operator
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Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	This command does not require a license.
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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#
```

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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.

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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

SupportedUserRoles 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.

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system cores

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

```
system cores {slot0:[path] | tftp:/server//[path/]}filename
```

```
no system cores
```

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

Defaults None

Command Modes Global configuration

Supported User Roles network-admin
vdc-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 configure a core file:

```
switch# configure terminal
switch(config)# system cores slot0:core_file
```

This example shows how to disable system core logging:

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

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Related Commands	Command	Description
	clear system cores	Clears the core file.
	show system cores	Displays the core filename.

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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

SupportedUserRoles 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.
You configure switchover and high availability (HA) policies for a VDC when you create the VDC.

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.

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system no hap-reset

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

no system hap-reset

Syntax Description This command has no arguments or keywords.

Defaults Disabled

Command Modes Any command mode

SupportedUserRoles 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.
You configure switchover and high availability (HA) policies for a VDC when you create the VDC.

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

```
switch(config)# system no hap-reset
switch(config)#
```

Related Commands	Command	Description
	system hap-reset	Enables the heartbeat checks and reverts to the factory default.

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system standby manual-boot

To enable the system standby manual boot, 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

SupportedUserRoles 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(config)# system standby manual-boot
system standby manual-boot option is enabled
switch(config)#
```

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

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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

SupportedUserRoles 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.

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system test-preupgrade running-ver

To test the running software version before an upgrade, use the **system test-preupgrade running-ver** command.

```
system test-preupgrade running-ver s0 target-ver s1 swid s2 impact i0
```

Syntax	Description
<i>s0</i>	Running version.
target-ver	Specifies target version.
<i>s1</i>	Target version.
swid	Specifies software ID of the image running on a module. For example: system, kickstart.
<i>s2</i>	Software ID.
impact	Specifies impact. 0 for hitless and 1 for hitful.
<i>i0</i>	0/1.

Defaults None

Command Modes Any command mode

SupportedUserRoles 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 test the running software version before an upgrade:

```
switch(config)# system test-preupgrade running-ver 4.2<0.202> target-ver Update
swid 4.2.1 impact 0
```

System will be upgraded according to following table:

Module	Swid	Impact	Running-Version	New-Version	Upg-Required
6	4.2.1	hitless	4.2<0.202>	Update	
1					
9	4.2.1	hitless	4.2<0.202>	Update	
1					
11	4.2.1	hitless	4.2<0.202>	Update	

■ `system test-preupgrade running-ver`

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Final upgrade impact table:

```
Module      Impact
-----
      6      hitless
      9      hitless
     11      hitless
```

Message from services:

```
switch(config)#
```

Related Commands

Command	Description
<code>system startup-config unlock</code>	Unlocks startup configuration.
<code>system startup-config init</code>	Initializes the startup-configuration.