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Cisco Nexus 7000 Series NX-OS Virtual Device Context Command Reference, Release 5.x

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New and Changed Information

This chapter provides release-specific information for each new and changed feature in the *Cisco Nexus 7000 Series NX-OS Virtual Device Context Command Reference, Release 5.x*. The latest version of this document is available at the following Cisco website:

http://www.cisco.com/en/US/products/ps9402/prod_command_reference_list.html

To check for additional information about Cisco Nexus 7000 Series NX-OS Release 5.1(1), see the *Cisco Nexus 7000 Series NX-OS Release Notes, Release 5.x* available at the following Cisco website:

http://www.cisco.com/en/US/products/ps9402/prod_release_notes_list.html

Table 1 summarizes the new and changed features for the *Cisco Nexus 7000 Series NX-OS Virtual Device Context Command Reference, Release 5.x* and tells you where they are documented.

Table 1 *New and Changed Features for Release 5.1(1)*

Feature	Description	Changed in Release	Where Documented
VDC resource limits	Added two new limit-resource commands.	5.1(1)	limit-resource module-type , limit-resource monitor-session-erspan-dst
VDC resource limits	The range for the minimum and maximum values changed for several limit-resource commands.	5.0(2)	limit-resource m4route-mem , limit-resource m6route-mem , limit-resource u4route-mem , limit-resource u6route-mem , limit-resource vrf

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Preface

This preface describes the audience, organization, and conventions of the *Cisco Nexus 7000 Series NX-OS Virtual Device Context Command Reference, Release 5.x*. It also provides information on how to obtain related documentation.

This chapter includes the following sections:

- [Audience, page vii](#)
- [Organization, page vii](#)
- [Document Conventions, page vii](#)
- [Related Documentation, page viii](#)
- [Obtaining Documentation and Submitting a Service Request, page ix](#)

Audience

This publication is for experienced users who configure and maintain Cisco NX-OS devices.

Organization

This reference is organized as follows:

Chapter Title	Description
Cisco Nexus 7000 Series NX-OS Virtual Device Context Commands	Describes the Cisco NX-OS virtual device context commands.

Document Conventions

Command descriptions use these conventions:

Convention	Description
boldface font	Commands and keywords are in boldface.
<i>italic font</i>	Arguments for which you supply values are in italics.

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[]	Elements in square brackets are optional.
[x y z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.

Screen examples use these conventions:

screen font	Terminal sessions and information that the switch displays are in screen font.
boldface screen font	Information you must enter is in boldface screen font.
<i>italic screen font</i>	Arguments for which you supply values are in italic screen font.
< >	Nonprinting characters, such as passwords, are in angle brackets.
[]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

This document uses the following conventions:



Note

Means reader *take note*. Notes contain helpful suggestions or references to material not covered in the manual.



Caution

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.



Tip

Means *the following information will help you solve a problem*.

Related Documentation

Cisco NX-OS includes the following documents:

Release Notes

Cisco Nexus 7000 Series NX-OS Release Notes, Release 5.x

NX-OS Configuration Guides

Cisco Nexus 7000 Series NX-OS Virtual Device Context Quick Start, Release 5.x

Cisco Nexus 7000 Series OTV Quick Start Guide

Cisco Nexus 7000 Series NX-OS Fundamentals Configuration Guide, Release 5.x

Cisco Nexus 7000 Series NX-OS Interfaces Configuration Guide, Release 5.x

Cisco Nexus 7000 Series NX-OS Layer 2 Switching Configuration Guide, Release 5.x

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Cisco Nexus 7000 Series NX-OS Quality of Service Configuration Guide, Release 5.x
Cisco Nexus 7000 Series NX-OS Unicast Routing Configuration Guide, Release 5.x
Cisco Nexus 7000 Series NX-OS Multicast Routing Configuration Guide, Release 5.x
Cisco Nexus 7000 Series NX-OS Security Configuration Guide, Release 5.x
Cisco Nexus 7000 Series NX-OS OTV Configuration Guide, Release 5.x
Cisco Nexus 7000 Series NX-OS Virtual Device Context Configuration Guide, Release 5.x
Cisco Nexus 7000 Series NX-OS FabricPath Configuration Guide, Release 5.x
Cisco Nexus 7000 Series NX-OS Software Upgrade and Downgrade Guide, Release 5.x
Cisco NX-OS Licensing Guide
Cisco Nexus 7000 Series NX-OS High Availability and Redundancy Guide, Release 5.x
Cisco Nexus 7000 Series NX-OS System Management Configuration Guide, Release 5.x
Cisco NX-OS XML Management Interface User Guide, Release 5.x
Cisco NX-OS System Messages Reference
Cisco Nexus 7000 Series NX-OS MIB Quick Reference

NX-OS Command References

Cisco Nexus 7000 Series NX-OS Command Reference Master Index, Release 5.x
Cisco Nexus 7000 Series NX-OS Fundamentals Command Reference, Release 5.x
Cisco Nexus 7000 Series NX-OS Interfaces Command Reference, Release 5.x
Cisco Nexus 7000 Series NX-OS Layer 2 Switching Command Reference, Release 5.x
Cisco Nexus 7000 Series NX-OS Quality of Service Command Reference, Release 5.x
Cisco Nexus 7000 Series NX-OS Unicast Routing Command Reference, Release 5.x
Cisco Nexus 7000 Series NX-OS Multicast Routing Command Reference, Release 5.x
Cisco Nexus 7000 Series NX-OS Security Command Reference, Release 5.x
Cisco Nexus 7000 Series NX-OS OTV Command Reference, Release 5.x
Cisco Nexus 7000 Series NX-OS Virtual Device Context Command Reference, Release 5.x
Cisco Nexus 7000 Series NX-OS FabricPath Command Reference, Release 5.x
Cisco Nexus 7000 Series NX-OS System Management Command Reference, Release 5.x

Other Software Document

Cisco Nexus 7000 Series NX-OS Troubleshooting Guide

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Cisco Nexus 7000 Series NX-OS Virtual Device Context Commands

This chapter describes the Cisco Nexus 7000 Series NX-OS virtual device context (VDC) commands.

allocate interface ethernet

To allocate Ethernet interfaces to a virtual device context (VDC), use the **allocate interface ethernet** command.

allocate interface ethernet *slot/port*

allocate interface ethernet *slot/port* [- *port*]

allocate interface ethernet *slot/port*, **ethernet** *slot1/port ...* [, **ethernet** *slot1/port*]

Syntax Description

slot/port Slot number and port number for the Ethernet interface.

Defaults

None

Command Modes

VDC configuration

Supported User Roles

network-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You can use this command only in the default VDC (VDC 1).

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Initially, all interfaces belong to the default VDC. You can allocate individual interfaces, ranges of interface, or lists of interfaces.

Use the **show vdc membership** command to display the current allocation of interfaces among the VDCs on the physical device.

**Note**

All configuration for the interface is lost when you allocate them to another VDC.

To remove the interface from the VDC and return them to the default VDC, you must enter VDC configuration mode for the default VDC and allocate the interface to the default VDC.

This command requires the Advanced Services license.

Examples

This example shows how to allocate one Ethernet interface to a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# allocate interface ethernet 2/1
Moving ports will cause all config associated to them in source vdc to be removed. Are you
sure you want to move the ports? [yes] yes
```

This example shows how to allocate a range of Ethernet interfaces on the same module to a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# allocate interface ethernet 2/1 - 4
Moving ports will cause all config associated to them in source vdc to be removed. Are you
sure you want to move the ports? [yes] yes
```

This example shows how to allocate a list of Ethernet interfaces on the same module to a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# allocate interface ethernet 2/1, ethernet 2/3, ethernet 2/5
Moving ports will cause all config associated to them in source vdc to be removed. Are you
sure you want to move the ports? [yes] yes
```

This example shows how to move an Ethernet interface back to the default VDC:

```
switch# configure terminal
switch(config)# vdc switch
switch(config-vdc)# allocate interface ethernet 2/1
Moving ports will cause all config associated to them in source vdc to be removed. Are you
sure you want to move the ports? [yes] yes
```

Related Commands

Command	Description
show vdc membership	Displays VDC interface membership information.
vdc	Creates or specifies a VDC and enters VDC configuration mode.

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boot-order

To allocate the boot order value for a nondefault virtual device context (VDC), use the **boot-order** command.

boot-order *number*

Syntax Description	<i>number</i>	Boot order number. The range is from 1 to 4.
---------------------------	---------------	--

Defaults	1
-----------------	---

Command Modes	VDC configuration
----------------------	-------------------

SupportedUserRoles	network-admin
---------------------------	---------------

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines You can use this command only in the default VDC (VDC 1).

The boot order feature has the following characteristics:

- More than VDC can have the same boot order value.
- VDCs with lowest boot order value boot first.
- The Cisco NX-OS software completely starts all VDCs with the same boot order value starting the VDCs with the next boot order value.
- The Cisco NX-OS software starts VDCs which have the same boot order value in parallel.
- You cannot change the boot order for the default VDC, only nondefault VDCs.

This command requires the Advanced Services license.

Examples This example shows how to allocate one Ethernet interface to a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# boot-order 2
```

■ boot-order

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Related Commands	Command	Description
	show vdc detail	Displays detailed information about the VDCs.
	vdc	Creates or specifies a VDC and enters VDC configuration mode.

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copy running-config startup-config vdc-all

To copy the running configuration for all virtual device contexts (VDCs) to the startup configuration, use the **show copy running-config startup-config vdc-all** command.

copy running-config startup-config vdc-all

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 You can use this command only in the default VDC (VDC 1).
This command does not require a license.

Examples This example shows how to copy the running configuration for all VDCs on the physical device to the startup configuration:

```
switch# copy running-config startup-config vdc-all
[#####] 100%
```

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ha-policy

To configure the high availability (HA) policy for a virtual device context (VDC), use the **ha-policy** command.

```
ha-policy {dual-sup {bringdown | restart | switchover} | single-sup {bringdown | reload |
restart}}
```

Syntax Description		
dual-sup		Specifies the HA policy for devices with dual supervisor modules.
bringdown		Puts the VDC in a failed state. To recover from the failed state, you must reload the physical device.
restart		Deletes the VDC and recreates it using the startup configuration.
switchover		Initiates a supervisor module switchover.
dual-sup		Specifies the HA policy for devices with dual supervisor modules.
reload		Reloads the physical device and recreates the VDC using the startup configuration.

Defaults	
Default VDC:	dual-sup default is switchover single-sup default is reload
Nondefault VDC:	dual-sup default is switchover single-sup default is restart

Command Modes	
	VDC configuration

SupportedUserRoles	
	network-admin

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

Usage Guidelines	
	You can use this command only in the default VDC (VDC 1).
	You cannot change the HA policy for the default VDC.
	This command requires the Advanced Services license.

Examples	
	This example shows how to specify the HA policy for a VDC:
	<pre>switch# configure terminal switch(config)# vdc MyDevice switch(config-vdc)# ha-policy reset</pre>

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Related Commands	Command	Description
	show vdc	Displays VDC interface membership information.
	vdc	Creates or specifies a VDC and enters VDC configuration mode.

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limit-resource module-type

To configure the line card type resource limit for a virtual device context (VDC), use the **limit-resource module-type** command. To revert to the default, use the **no** form of this command.

limit-resource module-type [m1 | f1]

no limit-resource module-type [m1 | f1]

Syntax Description		
	f1	(Optional) Enables F1 type line cards in the VDC.
	m1	(Optional) Enables M1 type line cards in the VDC.

Defaults	None
----------	------

Command Modes	VDC configuration
---------------	-------------------

SupportedUserRoles	network-admin
--------------------	---------------

Command History	Release	Modification
	5.1(1)	This command was introduced.

Usage Guidelines	<p>By default, both the M1 and F1 types of line cards are supported in a VDC.</p> <p>A VDC supports only the following line card type modes:</p> <ul style="list-style-type: none"> limit-resource module-type M1(default)—This module restricts a VDC to M1 modules only. limit-resource module-type F1—This module restricts a VDC to F1 modules only. no limit-resource module-type—This module allows a combination of F1 and M1 modules in a VDC.
------------------	---



Note This command does not support VDC resource templates.

This command does not require a license.

Examples	<p>This example shows how to configure the line card type for a VDC:</p> <pre>switch# configure terminal switch(config)# vdc MyDevice switch(config-vdc)# limit-resource module-type f1 This will cause all ports of unallowed types to be removed from this vdc. Continue? [yes] switch(config-vdc)</pre>
----------	---

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This example shows how to revert to the default line card type for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# no limit-resource module-type f1
This will cause all ports of unallowed types to be removed from this vdc. Continue? [yes]
switch(config-vdc)#
```

Related Commands

Command	Description
show vdc resource	Displays VDC resource limits information.
vdc	Creates or specifies a VDC and enters VDC configuration mode.

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limit-resource m4route-mem

To configure IPv4 multicast route map memory resource limits for a virtual device context (VDC) or a VDC resource template, use the **limit-resource m4route-mem** command. To revert to the default, use the **no** form of this command.

limit-resource m4route-mem [**minimum** *min-value*] **maximum** *max-value*

no limit-resource m4route-mem

Syntax Description

minimum	(Optional) Specifies the minimum value reserved for the VDC.
<i>min-value</i>	Minimum amount of IPv4 multicast route memory in megabytes. The range is from 1 to 90 MB.
maximum	Specifies the maximum limit value as resources are available.
<i>max-value</i>	Maximum amount of IPv4 multicast route memory in megabytes. The range is from 1 to 90 MB and must be equal to or greater than the minimum value.

Defaults

For the default VDC, the default minimum and maximum limit value is 58 MB.
For a nondefault VDC, the default minimum and maximum limit value is 8 MB.

Command Modes

VDC configuration
VDC resource template configuration

Supported User Roles

network-admin

Command History

Release	Modification
5.0(2)	Changed the minimum and maximum values.
4.1(2)	This command was introduced.

Usage Guidelines

The multicast routing information base (RIB) for IPv4 is in shared memory. The total available shared memory for the RIB for all VDCs on a physical device with 4 GB of memory is 256 MB. You can have approximately 11,000 routes, each with 16 next-hops, in 4 MB of IPv4 multicast route map memory.



Note

Take care when reserving IPv4 multicast routing map memory for a VDC not to reserve more of the shared memory than is available.

The Cisco NX-OS software reserves the minimum limit for the resource. Changing the minimum limit for IPv4 multicast routing map memory takes affect only after a device reload or a stateful supervisor module switchover.

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**Note**

You can set only one value for the IPv4 multicast route memory resource maximum and minimum limits. If you specify a minimum limit, that is the value for both the minimum and maximum limits and the maximum limit is ignored. If you specify only a maximum limit, that is the value for both the minimum and maximum limits.

This command does not require a license.

Examples

This example shows how to configure the IPv4 multicast route memory limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# limit-resource m4route-mem minimum 8 maximum 64
```

This example shows how to revert to the default IPv4 multicast route memory limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# no limit-resource m4route-mem
```

This example shows how to configure the IPv4 multicast route memory limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# limit-resource m4route-mem minimum 4 maximum 40
```

This example shows how to revert to the default IPv4 multicast route memory limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# no limit-resource m4route-mem
```

Related Commands

Command	Description
show vdc resource	Displays VDC resource limits information.
vdc	Creates or specifies a VDC and enters VDC configuration mode.
vdc resource template	Creates or specifies a VDC resource template and enters VDC resource template configuration mode.

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limit-resource m6route-mem

To configure IPv6 multicast route map memory resource limits for a virtual device context (VDC) or a VDC resource template, use the **limit-resource u6route-mem** command. To revert to the default, use the **no** form of this command.

limit-resource m6route-mem [**minimum** *min-value*] **maximum** *max-value*

no limit-resource m6route-mem

Syntax Description

minimum	(Optional) Specifies the minimum value reserved for the VDC.
<i>min-value</i>	Minimum amount of IPv6 multicast route memory in megabytes. The range is from 1 to 20.
maximum	Specifies the maximum limit value as resources are available.
<i>max-value</i>	Maximum amount of IPv6 multicast route memory in megabytes. The range is from 1 to 20 and must be equal to or greater than the minimum value.

Defaults

For the default VDC, the default minimum and maximum limit value is 8 MB.
For a nondefault VDC, the default minimum and maximum limit value is 2 MB.

Command Modes

VDC configuration
VDC resource template configuration

Supported User Roles

network-admin

Command History

Release	Modification
5.0(2)	Changed the minimum and maximum values.
4.1.(2)	This command was introduced.

Usage Guidelines

The multicast routing information base (RIB) for IPv6 is in shared memory. The total available shared memory for RIB in a physical device with 4 GB of memory is 256 MB for both IPv4 and IPv6 route map memory. You can have approximately 11,000 routes, each with 16 next-hops, in 4 MB of IPv6 route map memory.



Note

Take care when reserving IPv6 route map memory for a VDC not to reserve more of the shared memory than is available.

The Cisco NX-OS software reserves the minimum limit for the resource. Changing the minimum limit for IPv6 multicast routing map memory takes affect after a device reload or a stateful supervisor module switchover.

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**Note**

You can set only one value for the IPv6 multicast route memory resource maximum and minimum limits. If you specify a minimum limit, that is the value for both the minimum and maximum limits and the maximum limit is ignored. If you specify only a maximum limit, that is the value for both the minimum and maximum limits.

This command does not require a license.

Examples

This example shows how to configure the IPv6 multicast route memory limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# limit-resource m6route-mem minimum 8 maximum 12
```

This example shows how to revert to the default IPv6 multicast route memory limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# no limit-resource m6route-mem
```

This example shows how to configure the IPv6 multicast route memory limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# limit-resource m6route-mem minimum 4 maximum 16
```

This example shows how to revert to the default IPv6 multicast route memory limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# no limit-resource m6route-mem
```

Related Commands

Command	Description
show vdc resource	Displays VDC resource limits information.
vdc	Creates or specifies a VDC and enters VDC configuration mode.
vdc resource template	Creates or specifies a VDC resource template and enters VDC resource template configuration mode.

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limit-resource monitor-session

To configure switched port analyzer (SPAN) monitor session resource limits for a virtual device context (VDC) or a VDC resource template, use the **limit-resource monitor-session** command. To revert to the default, use the **no** form of this command.

limit-resource monitor-session minimum *min-value* **maximum** {*max-value* | **equal-to-min**}

no limit-resource monitor-session

Syntax Description

minimum	Specifies the minimum value reserved for the VDC.
<i>min-value</i>	Minimum number of SPAN monitor sessions. The range is from 0 to 2.
maximum	Specifies the maximum limit value as resources are available.
<i>max-value</i>	Maximum number of SPAN monitor sessions. The range is from 0 to 2.
equal-to-min	Specifies that the maximum limit is always equal to the minimum limit.

Defaults

The default minimum is 0.
The default maximum is 2.

Command Modes

VDC configuration
VDC resource template configuration

Supported User Roles

network-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You can use this command only in the default VDC (VDC 1).

The Cisco NX-OS software reserves the minimum limit for the resource. Changing the minimum limit for SPAN monitor sessions takes affect immediately.

This command does not require a license.

Examples

This example shows how to configure the SPAN monitor session limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# limit-resource monitor-session minimum 1 maximum 2
```


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This example shows how to revert to the default SPAN monitor session limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# no limit-resource monitor-session
```

This example shows how to configure the SPAN monitor session limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# limit-resource monitor-session minimum 0 maximum 1
```

This example shows how to revert to the default SPAN monitor session limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# no limit-resource monitor-session
```

Related Commands

Command	Description
<code>show vdc resource [detail]</code>	Displays VDC resource limits information.
<code>show vdc resource template</code>	Displays VDC resource limits information.
<code>vdc</code>	Creates or specifies a VDC and enters VDC configuration mode.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

limit-resource monitor-session-erspan-dst

To configure the encapsulated remote switched port analyzer (ERSPAN) destination monitor session resource limits for a virtual device context (VDC), use the **limit-resource monitor-session-erspan-dst** command. To revert to the default, use the **no** form of this command.

monitor-session-erspan-dst [**minimum** *min-value* | **maximum** *max-value*]

no monitor-session-erspan-dst [**minimum** *min-value* | **maximum** *max-value*]

Syntax Description	Parameter	Description
	minimum	Specifies the minimum value reserved for the VDC and allocates the minimum monitor ERSPAN destination session.
	<i>min-value</i>	Minimum number of erspan-dst monitor sessions. The range is from 0 to 24.
	maximum	Specifies the maximum value reserved for the VDC and allocates the maximum monitor ERSPAN destination session.
	<i>max-value</i>	Maximum number of erspan-dst monitor sessions. The range is from 0 to 24.

Defaults

The default minimum is 0.

The default maximum is 24.

Command Modes

VDC configuration

VDC resource template configuration

Supported User Roles

network-admin

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the ERSPAN destination monitor session limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# limit-resource monitor-session-erspan-dst minimum 5 maximum 15
switch(config-vdc)#
```

Send document comments to nexus7k-docfeedback@cisco.com.

This example shows how to revert to the default ERSPAN destination monitor session limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# no limit-resource monitor-session-erspan-dst minimum 5 maximum 15
switch(config-vdc)#
```

Related Commands

Command	Description
show vdc resource	Displays VDC resource limits information.
limit-resource monitor-session	Configures Switched Port Analyzer (SPAN) monitor session resource limits for a virtual device context (VDC) or a VDC resource template.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

limit-resource port-channel

To configure port channel resource limits for a virtual device context (VDC) or a VDC resource template, use the **limit-resource port-channel** command. To revert to the default, use the **no** form of this command.

limit-resource port-channel minimum *min-value* **maximum** {*max-value* | **equal-to-min**}

no limit-resource monitor-session

Syntax Description

minimum	Specifies the minimum value reserved for the VDC.
<i>min-value</i>	Minimum number of port channels. The range is from 0 to 768.
maximum	Specifies the maximum limit value as resources are available.
<i>max-value</i>	Maximum number of port channels. The range is from 0 to 768.
equal-to-min	Specifies that the maximum limit is always equal to the minimum limit.

Defaults

The default minimum is 0.
The default maximum is 768.

Command Modes

VDC configuration
VDC resource template configuration

Supported User Roles

network-admin

Command History

Release	Modification
4.1(2)	Changed the default maximum limit from 192 to 768.
4.0(1)	This command was introduced.

Usage Guidelines

You can use this command only in the default VDC (VDC 1).

The Cisco NX-OS software reserves the minimum limit for the resource. Changing the minimum limit for port channels takes affect immediately.

This command does not require a license.

Examples

This example shows how to configure the port channel resource limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# limit-resource port-channel minimum 8 maximum 64
```

Send document comments to nexus7k-docfeedback@cisco.com.

This example shows how to revert to the default port channel limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# no limit-resource port-channel
```

This example shows how to configure the port channel limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# limit-resource port-channel minimum 4 maximum 128
```

This example shows how to revert to the default port channel limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# no limit-resource port-channel
```

Related Commands

Command	Description
show vdc resource	Displays VDC resource limits information.
vdc	Creates or specifies a VDC and enters VDC configuration mode.
vdc resource template	Creates or specifies a VDC resource template and enters VDC resource template configuration mode.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

limit-resource u4route-mem

To configure IPv4 unicast route map memory resource limits for a virtual device context (VDC) or a VDC resource template, use the **limit-resource u4route-mem** command. To revert to the default, use the **no** form of this command.

limit-resource u4route-mem [**minimum** *min-value*] **maximum** *max-value*

no limit-resource u4route-mem

Syntax Description

minimum	(Optional) Specifies the minimum value reserved for the VDC.
<i>min-value</i>	Minimum amount of IPv4 unicast route memory in megabytes. The range is from 1 to 250 MB.
maximum	Specifies the maximum limit value as resources are available.
<i>max-value</i>	Maximum amount of IPv4 unicast route memory in megabytes. The range is from 1 to 250 MB and must be equal to or greater than the minimum value.

Defaults

For the default VDC, the default minimum and maximum limit value is 96 MB.
For a nondefault VDC, the default minimum and maximum limit value is 8 MB.

Command Modes

VDC configuration
VDC resource template configuration

Supported User Roles

network-admin

Command History

Release	Modification
5.0(2)	Changed the minimum and maximum values.
4.1(2)	<ul style="list-style-type: none"> The minimum keyword became optional. The default maximum limit for the default VDC changed from 320 MB to 32 MB. The default maximum limit for nondefault VDCs changed from 320 MB to 8 MB.
4.0(2)	<ul style="list-style-type: none"> The default maximum limit for the default VDC changed from 256 MB to 320 MB. The default maximum limit for nondefault VDCs changed from 256 MB to 320 MB.
4.0(1)	This command was introduced.

Send document comments to nexus7k-docfeedback@cisco.com.

Usage Guidelines

The unicast routing information base (RIB) for IPv4 is in shared memory. The total available shared memory for the RIB for all VDCs on a physical device with 4 GB of memory is 256 MB. You can have approximately 11,000 routes, each with 16 next-hops, in 4 MB of IPv4 unicast route map memory.



Note

Be careful when you are reserving IPv4 unicast routing map memory for a VDC that you do not reserve more of the shared memory than is available.

The Cisco NX-OS software reserves the minimum limit for the resource. Changing the minimum limit for IPv4 unicast routing map memory takes affect only after a device reload or a stateful supervisor module switchover.



Note

You can set only one value for the IPv4 unicast route memory resource maximum and minimum limits. If you specify a minimum limit, that is the value for both the minimum and maximum limits and the maximum limit is ignored. If you specify only a maximum limit, that is the value for both the minimum and maximum limits.

This command does not require a license.

Examples

This example shows how to configure the IPv4 unicast route memory limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# limit-resource u4route-mem minimum 8 maximum 64
```

This example shows how to revert to the default IPv4 unicast route memory limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# no limit-resource u4route-mem
```

This example shows how to configure the IPv4 unicast route memory limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# limit-resource u4route-mem minimum 4 maximum 40
```

This example shows how to revert to the default IPv4 unicast route memory limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# no limit-resource u4route-mem
```

Related Commands

Command	Description
<code>show vdc resource</code>	Displays VDC resource limits information.
<code>vdc</code>	Creates or specifies a VDC and enters VDC configuration mode.
<code>vdc resource template</code>	Creates or specifies a VDC resource template and enters VDC resource template configuration mode.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

limit-resource u6route-mem

To configure IPv6 unicast route map memory resource limits for a virtual device context (VDC) or a VDC resource template, use the **limit-resource u6route-mem** command. To revert to the default, use the **no** form of this command.

limit-resource u6route-mem [**minimum** *min-value*] **maximum** *max-value*

no limit-resource u6route-mem

Syntax Description

minimum	(Optional) Specifies the minimum value reserved for the VDC.
<i>min-value</i>	Minimum amount of IPv6 route memory in megabytes. The range is from 1 to 100 MB.
maximum	Specifies the maximum limit value as resources are available.
<i>max-value</i>	Maximum amount of IPv6 route memory in megabytes. The range is from 1 to 100 MB and must be equal to or greater than the minimum value.

Defaults

For the default VDC, the default minimum and maximum limit value is 24 MB.
For a nondefault VDC, the default minimum and maximum limit value is 4 MB.

Command Modes

VDC configuration
VDC resource template configuration

Supported User Roles

network-admin

Command History

Release	Modification
5.0(2)	Changed the minimum and maximum values.
4.1(2)	<ul style="list-style-type: none"> The minimum keyword became optional. The default maximum limit for the default VDC changed from 192 MB to 16 MB. The default maximum limit for nondefault VDCs changed from 192 MB to 4 MB.
4.0(2)	<ul style="list-style-type: none"> The default maximum limit for the default VDC changed from 256 MB to 192 MB. The default maximum limit for nondefault VDCs changed from 256 MB to 192 MB.
4.0(1)	This command was introduced.

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Usage Guidelines

The unicast routing information base (RIB) for IPv6 is in shared memory. The total available shared memory for RIB in a physical device with 4 GB of memory is 256 MB for both IPv4 and IPv6 route map memory. You can have approximately 11,000 routes, each with 16 next-hops, in 4 MB of IPv6 route map memory.



Note

Be careful when you are reserving IPv4 unicast routing map memory for a VDC that you do not reserve more of the shared memory than is available.

The Cisco NX-OS software reserves the minimum limit for the resource. Changing the minimum limit for IPv6 unicast routing map memory takes affect after a device reload or a stateful supervisor module switchover.



Note

You can set only one value for the IPv6 unicast route memory resource maximum and minimum limits. If you specify a minimum limit, that is the value for both the minimum and maximum limits and the maximum limit is ignored. If you specify only a maximum limit, that is the value for both the minimum and maximum limits.

This command does not require a license.

Examples

This example shows how to configure the IPv6 unicast route memory limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# limit-resource u6route-mem minimum 8 maximum 24
```

This example shows how to revert to the default IPv6 unicast route memory limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# no limit-resource u6route-mem
```

This example shows how to configure the IPv6 unicast route memory limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# limit-resource u6route-mem minimum 4 maximum 32
```

This example shows how to revert to the default IPv6 unicast route memory limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# no limit-resource u6route-mem
```

Related Commands

Command	Description
show vdc resource	Displays VDC resource limits information.
vdc	Creates or specifies a VDC and enters VDC configuration mode.
vdc resource template	Creates or specifies a VDC resource template and enters VDC resource template configuration mode.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

limit-resource vlan

To configure VLAN resource limits for a virtual device context (VDC) or a VDC resource template, use the **limit-resource vlan** command. To revert to the default, use the **no** form of this command.

limit-resource vlan minimum *min-value* **maximum** { *max-value* | **equal-to-min** }

no limit-resource vlan

Syntax Description	Parameter	Description
	minimum	Specifies the minimum value reserved for the VDC.
	<i>min-value</i>	Minimum number of VLANs. The range is from 16 to 4094.
	maximum	Specifies the maximum limit value as resources are available.
	<i>max-value</i>	Maximum number of VLANs. The range is from 16 to 4094.
	equal-to-min	Specifies that the maximum limit is always equal to the minimum limit.

Defaults

The default minimum is 16.
The default maximum is 4094.

Command Modes

VDC configuration
VDC resource template configuration

Supported User Roles

network-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You can use this command only in the default VDC (VDC 1).

The Cisco NX-OS software reserves the minimum limit for the resource. Changing the minimum limit for VLANs takes affect immediately.

This command does not require a license.

Examples

This example shows how to configure the VLAN limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# limit-resource vlan minimum 32 maximum 2056
```

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This example shows how to revert to the default VLAN limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# no limit-resource vlan
```

This example shows how to configure the VLAN limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# limit-resource vlan minimum 24 maximum 3000
```

This example shows how to revert to the default VLAN limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# no limit-resource vlan
```

Related Commands

Command	Description
show vdc resource	Displays VDC resource limits information.
vdc	Creates or specifies a VDC and enters VDC configuration mode.
vdc resource template	Creates or specifies a VDC resource template and enters VDC resource template configuration mode.

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limit-resource vrf

To configure virtual routing and forwarding instance (VRF) resource limits for a virtual device context (VDC) or a VDC resource template, use the **limit-resource vrf** command. To revert to the default, use the **no** form of this command.

limit-resource vrf minimum *min-value* **maximum** {*max-value* | **equal-to-min**}

no limit-resource vrf

Syntax Description

minimum	Specifies the minimum value reserved for the VDC.
<i>min-value</i>	Minimum number of VRFs. The range is from 2 to 1000.
maximum	Specifies the maximum limit value as resources are available.
<i>max-value</i>	Maximum number of VRFs. The range is from 2 to 1000.
equal-to-min	Specifies that the maximum limit is always equal to the minimum limit.

Defaults

The default minimum is 16.
The default maximum is 1000.

Command Modes

VDC configuration
VDC resource template configuration

Supported User Roles

network-admin

Command History

Release	Modification
5.0(2)	Changed the minimum and maximum values.
4.0(1)	This command was introduced.

Usage Guidelines

You can use this command only in the default VDC (VDC 1).

The Cisco NX-OS software reserves the minimum limit for the resource. Changing the minimum limit for VRFs takes affect immediately.

This command does not require a license.

Examples

This example shows how to configure the VRF limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# limit-resource vrf minimum 32 maximum 1000
```

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This example shows how to revert to the default VRF limits for a VDC:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# no limit-resource vrf
```

This example shows how to configure the VRF limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# limit-resource vrf minimum 64 maximum 1000
```

This example shows how to revert to the default VRF limits for a VDC resource template:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)# no limit-resource vrf
```

Related Commands

Command	Description
show vdc resource	Displays VDC resource limits information.
vdc	Creates or specifies a VDC and enters VDC configuration mode.
vdc resource template	Creates or specifies a VDC resource template and enters VDC resource template configuration mode.

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reload vdc

To reload a nondefault virtual device context (VDC), use the **reload vdc** command.

reload vdc

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode in a nondefault VDC

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines You can use the **reload vdc** command only in the nondefault VDCs.



Note Use the **reload** command to reload the default VDC, which also reloads all nondefault VDCs.

This command requires the Advanced Services license.



Caution Reloading a VDC disrupts all traffic on the VDC.

Examples This example shows how to reload a nondefault VDC:

```
switch-TestVDC# reload vdc
```

Related Commands	Command	Description
	reload	Reloads the Cisco NX-OS device.

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show resource

To display the resource usage for a virtual device context (VDC), use the **show resource** command.

show resource [**monitor-sessions** | **port-channel** | **u4route-mem** | **u6route-mem** | **vlan** | **vrf**]

Syntax Description		
monitor-sessions	(Optional)	Displays the monitor session resource usage.
port-channel	(Optional)	Displays the port channel resource usage.
u4route-mem	(Optional)	Displays the IPv4 unicast route map memory resource usage.
u6route-mem	(Optional)	Displays the IPv6 unicast route map memory resource usage.
vlan	(Optional)	Displays only the VLAN resource information.
vrf	(Optional)	Displays only the virtual forwarding and routing instance (VRF) resource information.

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.

■ show resource

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Examples

This example shows how to display the resource usage for a VDC:

```
switch# show resource
```

Resource	Min	Max	Used	Unused	Avail
port-channel	0	192	4	0	188
monitor-session	0	2	2	0	0
vlan	16	4094	12	4	4082
u6route-mem	16	256	16	0	232
u4route-mem	32	256	32	0	208
vrf	16	8192	2	14	8158

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show running-config vdc

To display the virtual device context (VDC) information in the default VDC running configuration, use the **show running-config vdc** command.

show running-config vdc

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 You can use this command only in the default VDC (VDC 1).
This command does not require a license.

Send document comments to nexus7k-docfeedback@cisco.com.

Examples

This example shows how to display VDC information in the running configuration:

```
switch# show running-config vdc
version 4.0(1)
vdc switch id 1
  limit-resource vlan minimum 16 maximum 4094
  limit-resource monitor-session minimum 0 maximum 2
  limit-resource vrf minimum 16 maximum 1000
  limit-resource port-channel minimum 0 maximum 192
  limit-resource u4route-mem minimum 32 maximum 256
  limit-resource u6route-mem minimum 16 maximum 256
vdc Payroll id 2
  allocate interface Ethernet2/47
  limit-resource vlan minimum 16 maximum 4094
  limit-resource monitor-session minimum 0 maximum 2
  limit-resource vrf minimum 16 maximum 1000
  limit-resource port-channel minimum 0 maximum 192
  limit-resource u4route-mem minimum 8 maximum 256
  limit-resource u6route-mem minimum 4 maximum 256
vdc Engineering id 3
  allocate interface Ethernet2/46
  limit-resource vlan minimum 16 maximum 4094
  limit-resource monitor-session minimum 0 maximum 2
  limit-resource vrf minimum 16 maximum 1000
  limit-resource port-channel minimum 0 maximum 192
  limit-resource u4route-mem minimum 8 maximum 256
  limit-resource u6route-mem minimum 4 maximum 256
vdc resource template MyTemplate
```

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show running-config vdc-all

To display the running configurations for all virtual device contexts (VDCs), use the **show running-config vdc-all** command.

```
show running-config vdc-all [all]
```

Syntax Description	all	(Optional) Displays VDC default setting information from the running configuration.
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	You can use this command only in the default VDC (VDC 1). This command does not require a license.	

show running-config vdc-all***Send document comments to nexus7k-docfeedback@cisco.com.*****Examples**

This example shows how to display the running configurations for all VDCs:

```

switch# show running-config vdc-all
!Running config for vdc: switch

switchto vdc switch
version 4.0(1)
snmp-server enable traps entity
power redundancy-mode combined force
feature tacacs+
feature pbr
feature private-vlan
feature interface-vlan
feature dot1x
feature lacp
feature glbp
feature dhcp
feature eou
feature tunnel
feature cts
logging level glbp 6
role name MyRole
username adminbackup password 5 $1$0ip/C5Ci$oOdx7oJS1BCFpNRmQK4na. role network
-operator
username admin password 5 $1$x.9srJIq$jvKISFQ1sXR4oi44YanxJ0 role network-admin
username User1 password 5 $1$Dm4XUUyR$V1/3B25/84g3YRkOt3Rj50 role network-opera
tor
telnet server enable
ssh key rsa 768 force
kernel core target 0.0.0.0
kernel core limit 1
aaa group server radius aaa-private-sg
    use-vrf management
vlan dot1Q tag native
system default switchport
no system default switchport shutdown
snmp-server user User1 auth md5 0xbc9d5254b8aedec4747ad156d8726ae0 priv 0xbc9d52
54b8aedec4747ad156d8726ae0 localizedkey engineID 128:0:0:9:3:0:24:186:216:63:188
snmp-server user admin auth md5 0xbc9d5254b8aedec4747ad156d8726ae0 priv 0xbc9d52
54b8aedec4747ad156d8726ae0 localizedkey engineID 128:0:0:9:3:0:24:186:216:63:188
snmp-server enable traps license
vrf context management
    ip route 0.0.0.0/0 172.28.230.1
logging level sysmgr 1
logging server 172.28.254.254
vdc switch id 1
    limit-resource vlan minimum 16 maximum 4094
    limit-resource monitor-session minimum 0 maximum 2
    limit-resource vrf minimum 16 maximum 1000
    limit-resource port-channel minimum 0 maximum 192
    limit-resource u4route-mem minimum 32 maximum 256
    limit-resource u6route-mem minimum 16 maximum 256
vdc Payroll id 2
    allocate interface Ethernet2/47
    limit-resource vlan minimum 16 maximum 4094
    limit-resource monitor-session minimum 0 maximum 2
    limit-resource vrf minimum 16 maximum 1000
    limit-resource port-channel minimum 0 maximum 192
    limit-resource u4route-mem minimum 8 maximum 256
    limit-resource u6route-mem minimum 4 maximum 256
vdc Engineering id 3
    allocate interface Ethernet2/46
    limit-resource vlan minimum 16 maximum 4094

```

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```
limit-resource monitor-session minimum 0 maximum 2
limit-resource vrf minimum 16 maximum 1000
limit-resource port-channel minimum 0 maximum 192
limit-resource u4route-mem minimum 8 maximum 256
limit-resource u6route-mem minimum 4 maximum 256
vdc resource template MyTemplate

interface Vlan1

interface Ethernet2/1
 shutdown
 switchport
 switchport monitor
 ip access-group markin in
 ip dhcp snooping limit rate 80
 ip arp inspection limit rate 300 burst interval 5

interface Ethernet2/2
 shutdown
 no switchport

interface Ethernet2/2.1
 shutdown

interface Ethernet2/3
 no cdp enable
 shutdown
 storm-control broadcast level 20
 storm-control unicast level 20
 switchport
 dot1x mac-auth-bypass

....

interface mgmt0
 ip address 172.28.231.193/23

line console
 speed 115200
 logging level cdp 6
 event manager applet x
 monitor session 1
 no shut
 monitor session 2
 no shut
 source interface Ethernet2/2 both
 source interface Ethernet2/5 both
 destination interface Ethernet2/1
 destination interface Ethernet2/3
 filter vlan 50
 monitor session 3
 no shut
 logging level dhcp_snoop 6
 logging level eth_port_channel 6
 logging ip access-list cache entries 8000
 logging ip access-list cache interval 300
 logging ip access-list cache threshold 0
 acllog match-log-level 6

!Running config for vdc: Payroll

switchto vdc Payroll
im_verify_ifindex failed for 0x5000000
```

```
show running-config vdc-all
```

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```
status: 0x411a0000 - shared pss not opened
if_info_status: 0x0
version 4.0(1)
username admin password 5 $1$f89fb1AG$TK6vd.TAq0rp9Gwzc7j6y0 role network-admi
telnet server enable
ssh key rsa 768 force
aaa group server radius aaa-private-sg
    use-vrf management
snmp-server user admin network-admin auth md5 0xddf68fa88ad2a5ea0818856db35fa9f
    priv 0xddf68fa88ad2a5ea0818856db35fa9fb localizedkey
vrf context management
    ip route 0.0.0.0/0 172.28.230.1
logging server 172.28.254.254
```

```
interface Ethernet2/47
logging ip access-list cache entries 8000
logging ip access-list cache interval 300
logging ip access-list cache threshold 0
accllog match-log-level 6
```

```
!Running config for vdc: Engineering
```

```
switchto vdc Engineering
im_verify_ifindex failed for 0x5000000
status: 0x411a0000 - shared pss not opened
if_info_status: 0x0
version 4.0(1)
username admin password 5 $1$pPfrW5.g$rciQSDOB/A/c0N8eXf1081 role network-admi
telnet server enable
ssh key rsa 768 force
aaa group server radius aaa-private-sg
    use-vrf management
snmp-server user admin network-admin auth md5 0x67568a735d6alf7e4833fd0de8c196f
    priv 0x67568a735d6alf7e4833fd0de8c196fb localizedkey
vrf context management
    ip route 0.0.0.0/0 172.28.230.1
logging server 172.28.254.254
```

```
interface Ethernet2/46
logging ip access-list cache entries 8000
logging ip access-list cache interval 300
logging ip access-list cache threshold 0
accllog match-log-level 6
```

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show startup-config vdc-all

To display the configuration information for all virtual device contexts (VDCs) in the startup configuration, use the **show startup-config vdc-all** command.

show startup-config vdc-all

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 You can use this command only in the default VDC (VDC 1).
This command does not require a license.

Examples This example shows how to display information for all VDCs in the startup configuration:

```
switch# show startup-config vdc-all
```

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show vdc

To display virtual context device (VDC) information, use the **show vdc** command.

```
show vdc [vdc-name] [detail]
```

Syntax Description	
<i>vdc-name</i>	(Optional) VDC name.
detail	(Optional) Displays detailed information about the VDCs.

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	
In the default VDC, this command displays information about all VDCs on the physical device. In nondefault VDCs, this command display information only about the current VDC.	

This command does not require a license.

Examples	
This example shows how to display summary information about VDCs in the default VDC:	

```
switch# show vdc
```

```
vdc_id  vdc_name                state                mac
-----  -----                -
1        switch                    active              00:18:ba:d8:3f:fd
2        Payroll                    active              00:18:ba:d8:3f:fe
3        MyVDC                      active              00:18:ba:d8:3f:ff
```


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This example shows how to display detailed information about VDCs in the default VDC:

```
switch# show vdc detail
vdc id: 1
vdc name: switch
vdc state: active
vdc mac address: 00:22:55:79:a4:c1
vdc ha policy: RELOAD
vdc dual-sup ha policy: SWITCHOVER
vdc boot Order: 1
vdc create time: Thu May 14 08:14:39 2009
vdc restart count: 0
```

```
vdc id: 2
vdc name: payroll
vdc state: active
vdc mac address: 00:22:55:79:a4:c2
vdc ha policy: RESTART
vdc dual-sup ha policy: SWITCHOVER
vdc boot Order: 1
vdc create time: Thu May 14 08:15:22 2009
vdc restart count: 0
```

```
vdc id: 3
vdc name: test
vdc state: active
vdc mac address: 00:22:55:79:a4:c3
vdc ha policy: RESTART
vdc dual-sup ha policy: SWITCHOVER
vdc boot Order: 1
vdc create time: Thu May 14 08:15:29 2009
vdc restart count: 0
```

This example shows how to display summary VDC information in a nondefault VDC:

```
switch-Payroll# show vdc Payroll
```

vdc_id	vdc_name	state	mac
-----	-----	-----	-----
2	Payroll	active	00:18:ba:d8:3f:fe

This example shows how to display detailed VDC information in a nondefault VDC:

```
switch-Payroll# show vdc Payroll detail
vdc id: 2
vdc name: payroll
vdc state: active
vdc mac address: 00:22:55:79:a4:c2
vdc ha policy: RESTART
vdc dual-sup ha policy: SWITCHOVER
vdc boot Order: 1
vdc create time: Thu May 14 08:15:22 2009
vdc restart count: 0
```

Send document comments to nexus7k-docfeedback@cisco.com.

show vdc current-vdc

To display the current virtual device context (VDC) identifier information, use the **show vdc current-vdc** command.

show vdc current-vdc

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 You can use this command in any VDC.
This command does not require a license.

Examples This example shows how to display the current VDC identifier information:

```
switch-Payroll# show vdc current-vdc
Current vdc is 2 - Payroll
```

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show vdc membership

To display the interface membership information for the virtual device contexts (VDCs), use the **show vdc membership** command.

show vdc membership [status]

Syntax Description	status (Optional) Displays status information about the interfaces.
---------------------------	--

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	You can use this command only in the default VDC. This command does not require a license.
-------------------------	---

■ show vdc membership

Send document comments to nexus7k-docfeedback@cisco.com.

Examples

This example shows how to display the interface membership information in the default VDC:

```
switch# show vdc membership

vdc_id: 1 vdc_name: switch interfaces:
Ethernet2/1      Ethernet2/2      Ethernet2/3
Ethernet2/4      Ethernet2/5      Ethernet2/6
Ethernet2/7      Ethernet2/8      Ethernet2/9
Ethernet2/10     Ethernet2/11     Ethernet2/12
Ethernet2/13     Ethernet2/14     Ethernet2/15
Ethernet2/16     Ethernet2/17     Ethernet2/18
Ethernet2/19     Ethernet2/20     Ethernet2/21
Ethernet2/22     Ethernet2/23     Ethernet2/24
Ethernet2/25     Ethernet2/26     Ethernet2/27
Ethernet2/28     Ethernet2/29     Ethernet2/30
Ethernet2/31     Ethernet2/32     Ethernet2/33
Ethernet2/34     Ethernet2/35     Ethernet2/36
Ethernet2/37     Ethernet2/38     Ethernet2/39
Ethernet2/40     Ethernet2/41     Ethernet2/42
Ethernet2/43     Ethernet2/44     Ethernet2/45
Ethernet2/48

vdc_id: 2 vdc_name: Payroll interfaces:
Ethernet2/47

vdc_id: 3 vdc_name: MyVDC interfaces:
Ethernet2/46
```

This example shows how to display the interface membership information in a nondefault VDC:

```
switch-Payroll# show vdc membership

vdc_id: 2 vdc_name: Payroll interfaces:
Ethernet2/47
```

This example shows how to display the interface status information in a default VDC:

```
switch# show vdc membership status

vdc_id: 1 vdc_name: switch interfaces:
Port      Status
----      -
Eth2/1    OK
Eth2/2    OK
Eth2/3    OK
Eth2/4    OK
Eth2/5    OK
Eth2/6    OK
Eth2/7    OK
Eth2/8    OK
Eth2/9    OK
Eth2/10   OK
...
```

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show vdc resource

To display the virtual device context (VDC) resource information, use the **show vdc resource** command.

```
show vdc resource [monitor-session | port-channel | u4route-mem | vlan | vrf] [detail]
```

Syntax Description		
monitor-session	(Optional)	Displays only the Switched Port Analyzer (SPAN) monitor session resources.
port-channel	(Optional)	Displays only the port channel resource information.
u4route-mem	(Optional)	Displays only the IPv4 unicast route map resource information.
u6route-mem	(Optional)	Displays only the IPv6 unicast route map resource information.
vlan	(Optional)	Displays only the VLAN resource information.
vrf	(Optional)	Displays only the virtual forwarding and routing instance (VRF) resource information.
detail	(Optional)	Displays detailed information.

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 You can use this command only in the default VDC (VDC 1).
This command does not require a license.

■ show vdc resource

Send document comments to nexus7k-docfeedback@cisco.com.

Examples

This example shows how to display summary VDC resource information:

```
switch# show vdc resource

port-channel          0 used          0 unused          192 free          192 total

monitor-session      0 used          0 unused           2 free           2 total

vlan                  14 used         34 unused        16370 free        16384 total

u4route-mem          48 used          0 unused          208 free          256 total

vrf                   6 used          42 unused         8186 free         8192 total
```

This example shows how to display detailed VDC resource information:

```
switch# show vdc resource detail

port-channel          0 used          0 unused          192 free          192 total
-----
  Vdc      Min      Max      Used      Unused      Avail
  ----      -
switch      0      192      0          0          192
Payroll     0      192      0          0          192
MyVDC       0      192      0          0          192

monitor-session      0 used          0 unused           2 free           2 total
-----
  Vdc      Min      Max      Used      Unused      Avail
  ----      -
switch      0          2          0          0          2
Payroll     0          2          0          0          2
MyVDC       0          2          0          0          2

vlan                  14 used         34 unused        16370 free        16384 total
-----
  Vdc      Min      Max      Used      Unused      Avail
  ----      -
switch      16      4094      10         6          4084
Payroll     16      4094      2          14         4092
MyVDC       16      4094      2          14         4092

u4route-mem          48 used          0 unused          208 free          256 total
-----
  Vdc      Min      Max      Used      Unused      Avail
  ----      -
switch      32      256      32         0          208
Payroll     8        256      8          0          208
MyVDC       8        256      8          0          208

vrf                   6 used          42 unused         8186 free         8192 total
-----
  Vdc      Min      Max      Used      Unused      Avail
  ----      -
switch      16      8192      2          14         8158
Payroll     16      8192      2          14         8158
MyVDC       16      8192      2          14         8158
```

This example shows how to display summary VDC resource information for port channels:

```
switch# show vdc resource port-channel

port-channel          0 used          0 unused          192 free          192 total
```

Send document comments to nexus7k-docfeedback@cisco.com.

This example shows how to display detailed VDC resource information for port channels:

```
switch# show vdc resource port-channel detail
```

```
port-channel          0 used          0 unused        192 free        192 total
-----
   Vdc                Min           Max           Used           Unused          Avail
-----
switch                0             192            0              0              192
Payroll                0             192            0              0              192
MyVDC                  0             192            0              0              192
```

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show vdc resource template

To display the virtual device context (VDC) resource template information, use the **show vdc resource template** command.

```
show vdc resource template [vdc-template-name]
```

Syntax Description	<i>vdc-template-name</i> (Optional) VDC resource template name.
---------------------------	---

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	You can use this command only in the default VDC (VDC 1). This command does not require a license.
-------------------------	---

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Examples

This example shows how to display summary information for all VDC resource templates:

```
switch# show vdc resource template
```

```
MyTemplate
-----
Resource           Min           Max
-----
port-channel       8             64

global-default
-----
Resource           Min           Max
-----
u4route-mem       32            256

vdc-default
-----
Resource           Min           Max
-----
port-channel       0             192
monitor-session    0              2
vlan               16            4094
u4route-mem       8             256
vrf                16            8192
```

This example shows how to display summary information for a specific VDC resource template:

```
switch# show vdc resource template MyTemplate
```

```
MyTemplate
-----
Resource           Min           Max
-----
port-channel       8             64
```

```
show vdc resource template
```

Send document comments to nexus7k-docfeedback@cisco.com.

This example shows how to display detailed VDC resource information:

```
switch# show vdc resource detail
```

```

port-channel          0 used          0 unused          192 free          192 total
-----
  Vdc      Min      Max      Used      Unused      Avail
  ----      -
switch          0      192         0         0         192
Payroll         0      192         0         0         192
MyVDC           0      192         0         0         192

monitor-session      0 used          0 unused           2 free           2 total
-----
  Vdc      Min      Max      Used      Unused      Avail
  ----      -
switch          0         2         0         0         2
Payroll         0         2         0         0         2
MyVDC           0         2         0         0         2

vlan                 14 used          34 unused        16370 free        16384 total
-----
  Vdc      Min      Max      Used      Unused      Avail
  ----      -
switch          16      4094         10         6         4084
Payroll         16      4094          2         14         4092
MyVDC           16      4094          2         14         4092

u4route-mem         48 used          0 unused          208 free          256 total
-----
  Vdc      Min      Max      Used      Unused      Avail
  ----      -
switch          32      256         32         0         208
Payroll          8      256          8         0         208
MyVDC            8      256          8         0         208

vrf                  6 used          42 unused         8186 free         8192 total
-----
  Vdc      Min      Max      Used      Unused      Avail
  ----      -
switch          16      8192          2         14         8158
Payroll         16      8192          2         14         8158
MyVDC           16      8192          2         14         8158

```

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switchback

To switch back to the default virtual device context (VDC) from another VDC, use the **switchback** command.

switchback

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator

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

Usage Guidelines This command requires the Advanced Services license.

Examples This example shows how to switch back to the default VDC:

```
switch-MyVDC# switchback
switch(config)#
```

Related Commands	Command	Description
	show current vdc	Displays information about the current VDC.
	switchto vdc	Switches to a nondefault VDC.

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switchto vdc

To switch to another virtual device context (VDC) from the default VDC, use the **switchto vdc** command.

switchto vdc *vdc-name*

Syntax Description	<i>vdc-name</i>	VDC name.
--------------------	-----------------	-----------

Defaults	None
----------	------

Command Modes	Any command mode
---------------	------------------

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

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

Usage Guidelines	<p>You can use this command only from the default VDC (VDC 1).</p> <p>To return to the default VDC, use the exit from EXEC mode or the switchback command.</p> <p>This command requires the Advanced Services license.</p>
------------------	--

Examples	<p>This example shows how to switch to a VDC:</p>
----------	---

```
switch# switchto vdc MyDevice
TAC support: http://www.cisco.com/tac
Copyright (c) 2002-2008, Cisco Systems, Inc. All rights reserved.
The copyrights to certain works contained in this software are
owned by other third parties and used and distributed under
license. Certain components of this software are licensed under
the GNU General Public License (GPL) version 2.0 or the GNU
Lesser General Public License (LGPL) Version 2.1. A copy of each
such license is available at
http://www.opensource.org/licenses/gpl-2.0.php and
http://www.opensource.org/licenses/lgpl-2.1.php
switch-MyDevice#
```

Send document comments to nexus7k-docfeedback@cisco.com.

Related Commands	Command	Description
	show current vdc	Displays information about the current VDC.
	switchback	Returns to the default VDC.

Send document comments to nexus7k-docfeedback@cisco.com.

template

To apply a virtual device context (VDC) resource template to a VDC, use the **template** command.

```
template vdc-template-name
```

Syntax Description	<i>vdc-template-name</i>	VDC resource template name.
--------------------	--------------------------	-----------------------------

Defaults	None
----------	------

Command Modes	VDC configuration
---------------	-------------------

SupportedUserRoles	network-admin
--------------------	---------------

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

Usage Guidelines	You can use this command only in the default VDC (VDC 1). This command does not require a license.
------------------	---

Examples	This example shows how to apply a resource template to a VDC:
----------	---

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# template MyTemplate
```

Related Commands	Command	Description
	show vdc	Displays VDC interface membership information.
	vdc	Creates or specifies a VDC and enters VDC configuration mode.

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vdc

To create or specify a virtual device context (VDC) and enter VDC configuration mode, use the **vdc** command. To delete a VDC, use the **no** form of this command.

```
vdc vdc-name [ha-policy { dual-sup { bringdown | restart | switchover } [single-sup { bringdown
| reload | restart }] | single-sup { bringdown | reload | restart } [dual-sup { bringdown | restart
| switchover }]]] [id vdc-id] [template vdc-template-name]
```

```
no vdc vdc-name
```

Syntax Description	
<i>vdc-name</i>	VDC name.
ha-policy	(Optional) Specifies the high availability (HA) policy for the VDC when an unrecoverable error occurs. The default is restart.
dual-sup	Specifies the HA policy for devices with dual supervisor modules.
bringdown	Puts the VDC in a failed state. To recover from the failed state, you must reload the physical device.
restart	Deletes the VDC and recreates it using the startup configuration.
switchover	Initiates a supervisor module switchover.
single-sup	Specifies the HA policy for devices with a single supervisor module.
reload	Reloads the physical device and recreates the VDC using the startup configuration.
id <i>vdc-id</i>	(Optional) Specifies the VDC ID. The default is the first available number.
template <i>vdc-template-name</i>	(Optional) Specifies the VDC resource template. The default is the default VDC resource template.

Defaults

The default HA policy for the default VDC: **dual-sup** default is **switchover**
single-sup default is **reload**

The default HA policy for nondefault VDCs: **dual-sup** default is **switchover**
single-sup default is **restart**

The default VDC ID is first available.

The default VDC resource template is the default template.

The default switchover policy is **bringdown**.

Command Modes

Global configuration

Supported User Roles

network-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

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Usage Guidelines

You can use this command only in the default VDC (VDC 1).

When you create a VDC, the Cisco NX-OS software allocates the internal resources for the VDC. This process can take a few minutes to complete depending on the amount of internal resource you have requested for the VDC.

When you delete a VDC, the Cisco NX-OS software removes the interface configuration and moves the interfaces to the default VDC.

This command requires the Advanced Services license for creating and managing nondefault VDCs. It does not require a license for managing the default VDC.

Examples

This example shows how to create a VDC and enter VDC configuration mode:

```
switch# configure terminal
switch(config)# vdc MyDevice
```

Note: VDC creation is a time consuming process, please wait until the command completes
switch(config-vdc)#

This example shows how to create a VDC with a different single supervisor module HA policy than the default and enter VDC configuration mode:

```
switch# configure terminal
switch(config)# vdc MyDevice ha-policy single-sup reload
```

Note: VDC creation is a time consuming process, please wait until the command completes
switch(config-vdc)#

This example shows how to delete a VDC:

```
switch# configure terminal
switch(config)# no vdc MyDevice
```

Deleting this vdc will remove its config. Continue deleting this vdc? [no] **yes**

Note: VDC deletion is a time consuming process, please wait until the command completes

Related Commands

Command	Description
show vdc	Displays VDC status information.

Send document comments to nexus7k-docfeedback@cisco.com.

vdc combined-hostname

To change the command-line interface (CLI) prompt for the nondefault virtual device contexts (VDCs) to show both the default VDC name and the hostname, use the **vdc combined-hostname** command. To change the CLI prompt to show only the nondefault VDC name, use the **no** form of this command.

vdc combined-hostname

no vdc combined-hostname

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration

SupportedUserRoles network-admin

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to change the CLI prompt for the nondefault VDCs to include the hostname:

```
switch# configure terminal  
switch(config)# vdc combined-hostname
```

This example shows how to change the CLI prompt for the nondefault VDCs to not include the hostname:

```
switch# configure terminal  
switch(config)# no vdc combined-hostname
```

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

vdc resource template

To create or specify a virtual device context (VDC) resource template and enter VDC resource template configuration mode, use the **vdc** command. To delete a VDC resource template, use the **no** form of this command.

vdc resource template *vdc-template-name*

no vdc resource template *vdc-template-name*

Syntax Description

vdc-template-name VDC resource template name. The name has a maximum length of 32 characters and is not case-sensitive.

Defaults

Resource	Minimum	Maximum
IPv4 multicast route map memory ¹	8	8
IPv6 multicast route map memory ¹	2	2
IPv4 unicast route map memory ¹	8	8
IPv6 unicast route map memory ¹	4	4
Port channels	0	768
SPAN sessions	0	2
VLANs	16	4094
VRFs	16	8192

1. Route map memory limits are in megabytes.

Command Modes

Global configuration

Supported User Roles

network-admin

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Command History	Release	Modification
	4.1(2)	<ul style="list-style-type: none"> The default maximum limit for the IPv4 unicast resource changed from 256 MB to 8 MB. The default maximum limit for the IPv4 unicast resource changed from 256 MB to 4 MB. Added the IPv4 and IPv6 multicast resources.
	4.0(1)	This command was introduced.

Usage Guidelines

You can use this command only in the default VDC (VDC 1).

You cannot change the default VDC resource template provided by the Cisco NX-OS software.

You can create up to 64 VDC resource templates.

This command does not require a license.

Examples

This example shows how to create or specify a VDC resource template and enter VDC resource template configuration mode:

```
switch# configure terminal
switch(config)# vdc resource template MyTemplate
switch(config-vdc-template)#
```

This example shows how to delete a VDC resource template:

```
switch# configure terminal
switch(config)# no vdc resource template MyTemplate
```

Related Commands

Command	Description
<code>show vdc resource template</code>	Displays VDC status information.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

vdc restart

To restart a virtual device context (VDC) that is in the failed state due to a high availability (HA) failure, use the **vdc restart** command.

```
vdc vdc-name restart
```

Syntax Description	<i>vdc-name</i>	VDC name.
--------------------	-----------------	-----------

Defaults	None
----------	------

Command Modes	Global configuration
---------------	----------------------

SupportedUserRoles	network-admin
--------------------	---------------

Command History	Release	Modification
	4.2(4)	This command was replaced by the reload vdc command.
	4.2(1)	This command was introduced.

Usage Guidelines	You can use this command only from the default VDC (VDC 1). This command requires the Advanced Services license.
------------------	---



Caution

Restarting a VDC disrupts all traffic on the VDC.

Examples	This example shows how to restart a VDC:
----------	--

```
switch# configure terminal
switch(config)# vdc TestVDC restart
```

Related Commands	Command	Description
	reload vdc	Restarts the current VDC.
	show vdc	Displays the information and status for all VDCs on the physical device.

Send document comments to nexus7k-docfeedback@cisco.com.

vdc suspend

To suspend virtual device context (VDC) operation, use the **vdc suspend** command. To resume the VDC operation, use the **no** form of this command.

vdc *vdc-name* **suspend**

no vdc *vdc-name* **suspend**

Syntax Description	<i>vdc-name</i>	VDC name.
--------------------	-----------------	-----------

Defaults	None
----------	------

Command Modes	Global configuration
---------------	----------------------

SupportedUserRoles	network-admin
--------------------	---------------

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines	<p>You can use this command only from the default VDC (VDC 1).</p> <p>You can only suspend a nondefault VDC.</p> <p>This command requires the Advanced Services license.</p>
------------------	--



Caution

Suspending a VDC disrupts all traffic on the VDC.

Examples	This example shows how to suspend VDC operation:
----------	--

```
switch# configure terminal
switch(config)# vdc TestVDC suspend
```

This example shows how to resume VDC operation:

```
switch# configure terminal
switch(config)# no vdc TestVDC suspend
```

Related Commands	Command	Description
	show vdc	Displays the information and status for all VDCs on the physical device.

Send document comments to nexus7k-docfeedback@cisco.com.