



# 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*]

<b>Syntax Description</b>	<i>slot/port</i> Slot number and port number for the Ethernet interface.
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<b>Defaults</b>	None
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<b>Command Modes</b>	VDC configuration
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<b>SupportedUserRoles</b>	network-admin
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	4.0(1)	This command was introduced.

<b>Usage Guidelines</b>	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**


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

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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
<b>show vdc membership</b>	Displays VDC interface membership information.
<b>vdc</b>	Creates or specifies a VDC and enters VDC configuration mode.

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# boot-order

To 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.
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Defaults	1
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Command Modes	VDC configuration
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SupportedUserRoles	network-admin
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Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines	<p>You can use this command only in the default VDC (VDC 1).</p> <p>The boot order feature has the following characteristics:</p> <ul style="list-style-type: none"> <li>• More than VDC can have the same boot order value.</li> <li>• VDCs with lowest boot order value boot first.</li> <li>• The Cisco NX-OS software completely starts all VDCs with the same boot order value starting the VDCs with the next boot order value.</li> <li>• The Cisco NX-OS software starts VDCs which have the same boot order value in parallel.</li> <li>• You cannot change the boot order for the default VDC, only nondefault VDCs.</li> </ul>
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This command requires the Advanced Services license.

Examples	This example shows how to allocate one Ethernet interface to a VDC:
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```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# boot-order 2
```

Related Commands	Command	Description
	<b>show vdc detail</b>	Displays detailed information about the VDCs
	<b>vdc</b>	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 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		
<b>dual-sup</b>		Specifies the HA policy for devices with dual supervisor modules.
<b>bringdown</b>		Puts the VDC in failed state. To recover from the failed state, you must reload the physical device.
<b>restart</b>		Deletes the VDC and recreates it using the startup configuration.
<b>switchover</b>		Initiates a supervisor module switchover.
<b>dual-sup</b>		Specifies the HA policy for devices with dual supervisor modules.
<b>reload</b>		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:

```
switch# configure terminal
switch(config)# vdc MyDevice
switch(config-vdc)# ha-policy reset
```

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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 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 defaults, use the **no** form of the command.

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

**no limit-resource m4route-mem**

### Syntax Description

<b>minimum</b>	(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 200 MB.
<b>maximum</b>	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 200 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 32 MB.  
For a non-default 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
4.1(2)	This command was introduced.

### Usage Guidelines

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

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
<b>show vdc resource</b>	Displays VDC resource limits information.
<b>vdc</b>	Creates or specifies a VDC and enters VDC configuration mode.
<b>vdc resource template</b>	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 m6route-mem** command. To revert to the defaults, use the **no** form of the command.

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

**no limit-resource m6route-mem**

### Syntax Description

<b>minimum</b>	(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.
<b>maximum</b>	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 get equal to or greater than the minimum value.

### Defaults

For the default VDC, the default minimum and maximum limit value is 16 MB.  
For a non-default 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
4.1.(2)	This command was introduced.

### Usage Guidelines

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

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
<b>show vdc resource</b>	Displays VDC resource limits information.
<b>vdc</b>	Creates or specifies a VDC and enters VDC configuration mode.
<b>vdc resource template</b>	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 defaults, use the **no** form of the command.

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

**no limit-resource monitor-session**

### Syntax Description

<b>minimum</b>	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.
<b>maximum</b>	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.
<b>equal-to-min</b>	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 session-monitor 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 session-monitor
```

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 session-monitor 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 session-monitor
```

**Related Commands**

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

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## 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 defaults, use the **no** form of the command.

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

**no limit-resource monitor-session**

### Syntax Description

<b>minimum</b>	Specifies the minimum value reserved for the VDC.
<i>min-value</i>	Minimum number of port channels. The range is from 0 to 768.
<b>maximum</b>	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.
<b>equal-to-min</b>	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
4.0(1)	This command was introduced.
4.1(2)	Changed the default maximum limit from 192 to 768.

### 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 limits for a VDC:

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

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

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## 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 defaults, use the **no** form of the 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 80 MB.
	<b>maximum</b>	Specifies the maximum limit value as resources are available.
	<i>max-value</i>	Maximum amount of IPv4 unicast route memory in megabytes. The maximum value is 80 MB.

### Defaults

For the default VDC, the default minimum and maximum limit value is 32 MB.  
For a non-default 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
4.0(1)	This command was introduced.
4.0(2)	<ul style="list-style-type: none"> <li>The default maximum limit for the default VDC changed from 256 MB to 320 MB.</li> <li>The default maximum limit for non-default VDCs changed from 256 MB to 320 MB.</li> </ul>
4.1(2)	<ul style="list-style-type: none"> <li>The <b>minimum</b> keyword became optional.</li> <li>The default maximum limit for the default VDC changed from 320 MB to 32 MB.</li> <li>The default maximum limit for non-default VDCs changed from 320 MB to 8 MB.</li> </ul>

### Usage Guidelines

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

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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**

Take care when reserving IPv4 unicast 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 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
<b>show vdc resource</b>	Displays VDC resource limits information.
<b>vdc</b>	Creates or specifies a VDC and enters VDC configuration mode.
<b>vdc resource template</b>	Creates or specifies a VDC resource template and enters VDC resource template configuration mode.



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## 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 defaults, use the **no** form of the 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 48 MB.
	maximum	Specifies the maximum limit value as resources are available.
	<i>max-value</i>	Maximum amount of IPv6 route memory in megabytes. The maximum value is 48 MB.

### Defaults

For the default VDC, the default minimum and maximum limit value is 16 MB.  
For a non-default 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
4.0(1)	This command was introduced.
4.0(2)	<ul style="list-style-type: none"> <li>The default maximum limit for the default VDC changed from 256 MB to 192 MB.</li> <li>The default maximum limit for non-default VDCs changed from 256 MB to 192 MB.</li> </ul>
4.1(2)	<ul style="list-style-type: none"> <li>The <b>minimum</b> keyword became optional.</li> <li>The default maximum limit for the default VDC changed from 192 MB to 16 MB.</li> <li>The default maximum limit for non-default VDCs changed from 192 MB to 4 MB.</li> </ul>

### Usage Guidelines

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

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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**

Take care when reserving IPv6 unicast 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 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
<b>show vdc resource</b>	Displays VDC resource limits information.
<b>vdc</b>	Creates or specifies a VDC and enters VDC configuration mode.
<b>vdc resource template</b>	Creates or specifies a VDC resource template and enters VDC resource template configuration mode.

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## 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 defaults, use the **no** form of the command.

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

**no limit-resource vlan**

### Syntax Description

<b>minimum</b>	Specifies the minimum value reserved for the VDC.
<i>min-value</i>	Minimum number of VLANs. The range is from 16 to 4094.
<b>maximum</b>	Specifies the maximum limit value as resources are available.
<i>max-value</i>	Maximum number of VLANs. The range is from 16 to 4094.
<b>equal-to-min</b>	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
<b>show vdc resource</b>	Displays VDC resource limits information.
<b>vdc</b>	Creates or specifies a VDC and enters VDC configuration mode.
<b>vdc resource template</b>	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 defaults, use the **no** form of the command.

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

**no limit-resource vrf**

### Syntax Description

<b>minimum</b>	Specifies the minimum value reserved for the VDC.
<i>min-value</i>	Minimum number of VRFs. The range is from 16 to 8192.
<b>maximum</b>	Specifies the maximum limit value as resources are available.
<i>max-value</i>	Maximum number of VRFs. The range is from 16 to 8192.
<b>equal-to-min</b>	Maximum limit is always equal to the minimum limit.

### Defaults

The default minimum is 16.  
The default maximum is 8192.

### 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 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 4000
```

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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 6000
```

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
<b>show vdc resource</b>	Displays VDC resource limits information.
<b>vdc</b>	Creates or specifies a VDC and enters VDC configuration mode.
<b>vdc resource template</b>	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.
	monitor-sessions	(Optional) Displays the monitor session resource usage.

**Defaults** None

**Command Modes** Any command mode

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

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

**Usage Guidelines** This command does not require a license.

**Examples** This example shows how to display 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.

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---

**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 8192
  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 8192
  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 8192
  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]
```

<b>Syntax Description</b>	<b>all</b>	(Optional) Displays VDC default setting information from the running configuration.
---------------------------	------------	---

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Any command mode
----------------------	------------------

<b>SupportedUserRoles</b>	network-admin network-operator vdc-admin vdc-operator
---------------------------	--

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	4.0(1)	This command was introduced.

<b>Usage Guidelines</b>	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](mailto: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 8192
    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 8192
    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 8192
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
status: 0x411a0000 - shared pss not opened
```

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

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```
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
aclog match-log-level 6
```

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

```
switchto vdc Engineering
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 0x67568a735d6a1f7e4833fd0de8c196f
    priv 0x67568a735d6a1f7e4833fd0de8c196fb 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
aclog match-log-level 6
```

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## show startup-config vdc-all

To display the configuration information for all 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 VDC information, use the **show vdc** command.

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

Syntax Description	
<i>vdc-name</i>	(Optional) VDC name.
<b>detail</b>	(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 commands displays information about all VDCs on the physical device. In non-default 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 non-default 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 non-default 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
```

■ `show vdc current-vdc`

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## show vdc current-vdc

To display the current 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 VDCs, use the **show vdc membership** command.

**show vdc membership [status]**

<b>Syntax Description</b>	<b>status</b> (Optional) Displays status information about the interfaces.				
<b>Defaults</b>	None				
<b>Command Modes</b>	Any command mode				
<b>SupportedUserRoles</b>	network-admin network-operator vdc-admin vdc-operator				
<b>Command History</b>	<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.				
<b>Usage Guidelines</b>	You can use this command only in the default VDC. This command does not require a license.				

## ■ show vdc membership

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**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 non-default 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 VDC resource information, use the **show vdc resource** command.

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

Syntax Description		
<b>m4route-mem</b>	(Optional)	Displays only the IPv4 multicast route map resource information.
<b>m6route-mem</b>	(Optional)	Displays only the IPv6 multicast route map resource information.
<b>monitor-session</b>	(Optional)	Displays only the Switched Port Analyzer (SPAN) monitor session resources.
<b>port-channel</b>	(Optional)	Displays only the port channel resource information.
<b>u4route-mem</b>	(Optional)	Displays only the IPv4 unicast route map resource information.
<b>u6route-mem</b>	(Optional)	Displays only the IPv6 unicast route map resource information.
<b>vlan</b>	(Optional)	Displays only the VLAN resource information.
<b>vrf</b>	(Optional)	Displays only the Virtual Forwarding and Routing instance (VRF) resource information.
<b>detail</b>	(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.

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## 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
```

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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 VDC resource template information, use the **show vdc resource template** command.

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

<b>Syntax Description</b>	<i>vdc-template-name</i> (Optional) VDC resource template name.				
<b>Defaults</b>	None				
<b>Command Modes</b>	Any command mode				
<b>SupportedUserRoles</b>	network-admin network-operator vdc-admin vdc-operator				
<b>Command History</b>	<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.				
<b>Usage Guidelines</b>	<p>You can use this command only in the default VDC (VDC 1).</p> <p>This command does not require a license.</p>				



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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
```

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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 switchback to the default VDC:

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

Related Commands	Command	Description
	<b>show current vdc</b>	Displays information about the current VDC.
	<b>switchto vdc</b>	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**

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

To return to the default VDC, use the **exit** from EXEC mode or the **switchback** command.

This command requires the Advanced Services license.

**Examples**

This example shows how to switch to a VDC:

```
switch# switchto vdc MyDevice
TAC support: http://www.cisco.com/tac
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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#
```

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

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# template

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

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

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

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	VDC configuration
----------------------	-------------------

<b>SupportedUserRoles</b>	network-admin
---------------------------	---------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	4.0(1)	This command was introduced.

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

<b>Examples</b>	<p>This example shows how to apply a resource template to a VDC:</p> <pre>switch# <b>configure terminal</b> switch(config)# <b>vdc MyDevice</b> switch(config-vdc)# <b>template MyTemplate</b></pre>
-----------------	--

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



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## 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 the 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
```

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## 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 the command.

**vdc resource template** *vdc-template-name*

**no vdc resource template** *vdc-template-name*

### Syntax Description

<i>vdc-template-name</i>	Specifies the 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 <sup>1</sup>	8	8
IPv6 multicast route map memory <sup>1</sup>	2	2
IPv4 unicast route map memory <sup>1</sup>	8	8
IPv6 unicast route map memory <sup>1</sup>	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
	4.0(1)	This command was introduced.
	4.1(2)	<ul style="list-style-type: none"> <li>The default maximum limit for the IPv4 unicast resource changed from 256 MB to 8 MB.</li> <li>The default maximum limit for the IPv4 unicast resource changed from 256 MB to 4 MB.</li> <li>Added the IPv4 and IPv6 multicast resources.</li> </ul>

### 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
<b>show vdc resource template</b>	Displays VDC status information.

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## 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
---------------	----------------------

Supported User Roles	network-admin
----------------------	---------------

Command History	Release	Modification
	4.2(4)	This command was replaced by <b>reload vdc</b> .
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
	<b>reload vdc</b>	Restarts the current VDC.
<b>show vdc</b>	Displays the information and status for all VDCs on the physical device.	

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## vdc suspend

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

**vdc** *vdc-name* **suspend**

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

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

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

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

Supported User Roles	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
	<b>show vdc</b>	Displays the information and status for all VDCs on the physical device.

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