



OpenStack Command Reference

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Additions to the Neutron Command-Line Interface

The Neutron command-line interface now accepts a Cisco Nexus 1000V-related attribute extension for the core Neutron resources. Additionally, new commands have been introduced for the Cisco Nexus 1000V Neutron plug-in's extended resources.

This CLI reference document describes the newly added attribute extension and commands and contains examples to demonstrate how they are used. For a complete list and description of network-related commands and arguments, see <http://docs.openstack.org/api/openstack-network/2.0/content/>.

Attribute Extension for Core Neutron Resources

The network and port objects have been extended to include the **n1kv:profile_id** attribute extension to enable network and port association with Cisco Nexus 1000V profiles. Use the `profile_id` extension at network creation to associate a network with a Cisco Nexus 1000V network profile and, at port creation, to associate a port with a Cisco Nexus 1000V policy profile.

**Note**

For Cisco Nexus 1000V for KVM Release 5.2(1)SK3(2.2) and higher:

- The **n1kv:profile_id** attribute extension has been replaced with **n1kv:profile**.
 - Only the port object has been extended.
 - The network create extension is not required.
-

Commands and Options for Extended Neutron Resources

Commands have been added to enable extended Neutron resources; these resources include the network profile, policy profile, profile binding, and credentials.

**Note**

The Cisco Nexus 1000V for KVM Release 5.2(1)SK3(2.2) software and higher does not support the network profile and credential commands.

Network Profile Commands

Network profile commands enable you to create, update, list, delete, and show Cisco Nexus 1000V network profile details.

Policy Profile Commands

Policy profile commands enable you to list and show details of your Cisco Nexus 1000V policy profile.

Profile Binding Options

Profile binding options enable you to associate or disassociate Cisco Nexus 1000V policy and network profiles with tenants.

Credential Commands

Credential commands enable you to create, update, delete, and show details of your Cisco Nexus 1000V credentials.

cisco-credential-create

To create a Cisco Nexus 1000V credential, use the **neutron cisco-credential-create** command.

```
neutron cisco-credential-create [--help] credential-name credential-type [--request-format {format}]
[--tenant-id tenant-id] [--user_name username] [--password password]
```

Syntax Description

--help	(Optional) Specifies the help message
<i>credential-name</i>	IP address of the credential. The name is a string with up to 255 characters. Characters can be numbers, upper and lowercase letters, and special characters. The IP address must be in the a.b.c.d format.
<i>credential-type</i>	Type of credential. The credential for the Nexus 1000V is n1kv.
--tenant-id <i>tenant-id</i>	(Optional) Specifies the owner's tenant ID. This is a UUID. The value is 36 hexadecimal digits and hyphens in the format NNNNNNNNN-NNNN-NNNN-NNNN-NNNNNNNNNNNNNN.
--user_name <i>username</i>	(Optional) Specifies the username of the credential. The username is a string with up to 255 characters. Characters can be numbers, upper and lowercase letters, and special characters.
--request-format <i>format</i>	(Optional) Specifies the format of the request. Accepted values are json or xml .
--password <i>password</i>	(Optional) Specifies the password for the credential.

Command Default

None

Command History

Release	Modification
OpenStack Juno	This command has been deprecated and is not supported by Cisco Nexus 1000V for KVM Release 5.2(1)SK3(2.2) software and higher.
OpenStack Havana	This command was introduced.

Example

This example shows how to create a credential:

```
$ neutron cisco-credential-create 172.23.181.101 N1KV --user_name admin --password mypwd
```

cisco-credential-delete

To delete a credential, use the **neutron cisco-credential-delete** command.

```
neutron cisco-credential-delete credential-id
```

Syntax Description

<i>credential-id</i>	ID of the credential to be deleted. This is a UUID. The value is 36 hexadecimal digits and hyphens in the format NNNNNNNN-NNNN-NNNN-NNNN-NNNNNNNNNNNN.
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Command Default

None

Command History

Release	Modification
OpenStack Juno	This command has been deprecated and is not supported by Cisco Nexus 1000V for KVM Release 5.2(1)SK3(2.2) software and higher.
OpenStack Havana	This command was introduced.

Example

This example shows how to delete a credential:

```
$ neutron cisco-credential-delete 9fff279d-2f3f-4a9c-b0fe-3a0ae91075c5
```

cisco-credential-list

To list all available credentials, use the **neutron cisco-credential-list** command.

neutron cisco-credential-list

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
OpenStack Juno	This command has be deprecated and is not supported by Cisco Nexus 1000V for KVM Release 5.2(1)SK3(2.2) software and higher.
OpenStack Havana	This command was introduced.

Example

This example shows how to list credentials:

```
$ neutron cisco-credential-list
```

cisco-credential-show

To display the details for the credentials associated with a credential ID, use the **neutron cisco-credential-show** command.

neutron cisco-credential-show *credential-id*

Syntax Description

<i>credential-id</i>	ID of the credential. This is a UUID. The value is 36 hexadecimal digits and hypens in the format NNNNNNNNN-NNNN-NNNN-NNNN-NNNNNNNNNNNNNN.
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Command Default

None

Command History

Release	Modification
OpenStack Juno	This command has be deprecated and is not supported by Cisco Nexus 1000V for KVM Release 5.2(1)SK3(2.2) software and higher.
OpenStack Havana	This command was introduced.

Example

This example shows how to display details about the credential:

```
$ neutron cisco-credential-show 9fff279d-2f3f-4a9c-b0fe-3a0ae91075c5
```

cisco-credential-update

To update a credential, use the **neutron cisco-credential-update** command.

```
neutron cisco-credential-update credential-id [--user_name username] [--password password]
```

Syntax Description

<i>credential-id</i>	ID of the credential. This is a UUID. The value is 36 hexadecimal digits and hyphens in the format NNNNNNNNN-NNNN-NNNN-NNNN-NNNNNNNNNNNNN.
--user_name <i>username</i>	(Optional) Specifies the username of the credential. The username is a string with up to 255 characters. Characters can be numbers, upper and lowercase letters, and special characters.
--password <i>password</i>	(Optional) Specifies the password for the credential.

Command Default

None

Command History

Release	Modification
OpenStack Juno	This command has been deprecated and is not supported by Cisco Nexus 1000V for KVM Release 5.2(1)SK3(2.2) software and higher.
OpenStack Havana	This command was introduced.

Example

This example shows how to update a username and password:

```
$ neutron cisco-credential-update 9fff279d-2f3f-4a9c-b0fe-3a0ae91075c5 --user_name admin --password mypwd
```

cisco-network-profile-create

To create a Cisco Nexus 1000V network profile, use the **neutron cisco-network-profile-create** command.

```
neutron cisco-network-profile-create [--sub_type {type}] [--segment_range segment-range] [--physical_network network] [--multicast_ip_range ip-range] [ (--add-tenant tenant-id)...] netprofileName name {type}
```

Syntax Description

--sub_type <i>type</i>	(For Overlay and Trunk only.)Specifies the subtype for a specific type of network profile. The subtype is native_vxlan or enhanced for an overlay type of network profile and vlan for trunk type of network profile.
--segment_range <i>segment-range</i>	Specifies the range of the segment for vlan and vxlan types. The range is entered in a lowest to highest hyphen-separated format. The range of valid values for vlan types is 1 to 4095. The range of valid values for vxlan types is 4095 to 16000000.
--physical_network <i>network</i>	(For VLAN, only.) Specifies the name of the Layer 2 domain. The name is a string with up to 255 characters. Characters can be numbers, upper and lowercase letters, and special characters.
--multicast_ip_range <i>ip-range</i>	Specifies the range of the IP address. This is only applicable for the native_vxlan sub_type. The range is entered in a lowest to highest hyphen-separated format. The range of valid values is from 224.0.1.0 to 239.255.255.255. The range 224.0.0.0 to 224.0.0.255 is reserved on the VSM.
--add-tenant <i>tenant-id</i>	Associates a tenant with the network profile. This is a UUID. The value is 36 hexadecimal digits and hyphens in the format XXXXXXXXXXXXXXXXXXXXXXXXXXXX Can be repeated any number of times to add multiple tenants. When you add a new list of tenants using this keyword, the new list of tenants overwrites the existing list of tenants.
netprofName <i>name</i>	Name of the network profile.

<code>{type}</code>	Specifies the type of network profile. The type can be one of the following: vlan , overlay , or trunk .
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Command Default None

Command History

Release	Modification
OpenStack Juno	This command has been deprecated and is not supported by Cisco Nexus 1000V for KVM Release 5.2(1)SK3(2.2) software and higher.
OpenStack Havana	This command was introduced.

Example

This example shows how to create a Cisco Nexus 1000V network profile:

```
$ neutron cisco-network-profile-create netprof vlan --segment_range 100-200 --physical_network physnet1
```

cisco-network-profile-delete

To delete a Cisco Nexus 1000V network profile, use the **neutron cisco-network-profile-delete** command.

```
neutron cisco-network-profile-delete network-profile
```

Syntax Description

<i>network-profile</i>	ID or name of the network profile. The name is a string with up to 255 characters. Characters can be numbers, upper and lowercase letters, and special characters. The ID is a UUID. The value is 36 hexadecimal digits and hyphens in the format NNNNNNNN-NNNN-NNNN-NNNN-NNNNNNNNNNNN.
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Command Default None

Command History

Release	Modification
OpenStack Juno	This command has been deprecated and is not supported by Cisco Nexus 1000V for KVM Release 5.2(1)SK3(2.2) software and higher.
OpenStack Havana	This command was introduced.

Example

This example shows how to delete a Cisco Nexus 1000V network profile:

```
$ neutron cisco-network-profile-delete netProf
```

cisco-network-profile-list

To list Cisco Nexus 1000V network profiles, use the **neutron cisco-network-profile-list** command.

neutron cisco-network-profile-list

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
OpenStack Juno	This command has been deprecated and is not supported by Cisco Nexus 1000V for KVM Release 5.2(1)SK3(2.2) software and higher.
OpenStack Havana	This command was introduced.

Example

This example shows how to list Cisco Nexus 1000V network profiles:

```
$ neutron cisco-network-profile-list
```

cisco-network-profile-show

To show Cisco Nexus 1000V network profile details, use the **neutron cisco-network-profile-show** command.

neutron cisco-network-profile-show *network-profile-id***Syntax Description**

<i>network-profile-id</i>	ID or name of the network profile. The network profile ID is a UUID. The value is 36 hexadecimal digits and hyphens in the format NNNNNNNN-NNNN-NNNN-NNNN-NNNNNNNNNNNN. The network profile name is a string with up to 255 characters. Characters can be numbers, upper and lowercase letters, and special characters.
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Command Default

None

Command History

Release	Modification
OpenStack Juno	This command has been deprecated and is not supported by Cisco Nexus 1000V for KVM Release 5.2(1)SK3(2.2) software and higher.
OpenStack Havana	This command was introduced.

Example

This example shows how to view Cisco Nexus 1000V network profile details:

```
$ neutron cisco-network-profile-show netProfId
```

cisco-network-profile-update

To update a Cisco Nexus 1000V network profile information, use the **neutron cisco-network-profile-update** command.

```
neutron cisco-network-profile-update network-profile-name [ --request-format format] [ --add-tenant | --remove-tenant ] tenant-id
```

Syntax Description

<i>network-profile-name</i>	UUID or name of the network profile to update. The value is 36 hexadecimal digits and hyphens in the format NNNNNNNN-NNNN-NNNN-NNNN-NNNNNNNNNNNN. The name is a string with up to 255 characters. Characters can be numbers, upper and lowercase letters, and special characters.
--request-format <i>format</i>	(Optional) Specifies the format of the request. Accepted values are: json or xml .
--add-tenant	(Optional) Associates a tenant with a network profile. Can be repeated any number of times to add multiple tenants. When you add a new list of tenants using this keyword, the new list of tenants overwrites the existing list of tenants.
--remove-tenant	(Optional) Disassociates a tenant from the network.
<i>tenant-id</i>	ID of the tenant being added or removed. This is a UUID. The value is 36 hexadecimal digits and hyphens in the format NNNNNNNN-NNNN-NNNN-NNNN-NNNNNNNNNNNN.

Command History

Release	Modification
OpenStack Juno	This command has be deprecated and is not supported by Cisco Nexus 1000V for KVM Release 5.2(1)SK3(2.2) software and higher.
OpenStack Havana	This command was introduced.

Usage Guidelines

None

Example

This example shows how to associate a tenant with a network profile:

```
$ neutron cisco-network-profile-update mynetprofile VLAN --add-tenant 1234-1234-1234-1234
```

cisco-policy-profile-list

To list available Cisco Nexus 1000V policy profiles, use the **neutron cisco-policy-profile-list** command.

neutron cisco-policy-profile-list

This command has no arguments or keywords.

Command Default

None

Command History

Release	Modification
OpenStack Havana	This command was introduced.

Example

This example shows how to list available Cisco Nexus 1000V policy profiles:

```
$ neutron policy-profile-list
```

cisco-policy-profile-show

To show Cisco Nexus 1000V policy profile details, use the **neutron cisco-policy-profile-show** command.

neutron cisco-policy-profile-show *policy-profile-id*

Syntax Description	<i>policy-profile-id</i>	UUID of the policy profile. The value is 36 hexadecimal digits and hyphens in the format NNNNNNNN-NNNN-NNNN-NNNN-NNNNNNNNNNNN.
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Command Default	None
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Command History	Release	Modification
	OpenStack Havana	This command was introduced.

Example

This example shows how to view Cisco Nexus 1000V policy profile details:

```
$ neutron cisco-policy-profile-show b9b8d5fa-41a3-4e59-bb1e-6a5e296908e1
```

cisco-policy-profile-update

To update a Cisco Nexus 1000V policy profile and associate or disassociate tenants, use the **neutron cisco-policy-profile-update** command.

```
neutron cisco-policy-profile-update policy-profile-id [ --request-format format] [ --add-tenant | --remove-tenant ] tenant-id
```

Syntax Description		
<i>policy-profile-id</i>		ID of the policy profile being updated. The value is 36 hexadecimal digits and hyphens in the format NNNNNNNN-NNNN-NNNN-NNNN-NNNNNNNNNNNN. This is a UUID or name of the policy profile published in the OpenStack plugin from the VSM.
--request-format <i>format</i>		(Optional) Specifies the format of the request. Accepted values are: json or xml .
--add-tenant		(Optional) Associates a tenant with a policy profile. Can be repeated any number of times to add multiple tenants.
--remove-tenant		(Optional) Disassociates a tenant from the network.
<i>tenant-id</i>		ID of the tenant being added or removed. This is a UUID. The value is 36 hexadecimal digits and hyphens in the format NNNNNNNN-NNNN-NNNN-NNNN-NNNNNNNNNNNN.

Command Default None

Command History	Release	Modification
	OpenStack Havana	These arguments were introduced.

Example

This example shows how to update a policy profile and associate a tenant:

```
$neutron cisco-policy-profile-update polprofId --add-tenant 1234-1234-1234-1234
```

net-create

To create a network and associate it with a Cisco Nexus 1000V network profile, use the **neutron net-create** command.



Note

For Cisco Nexus 1000V for KVM Release 5.2(1)SK3(2.2) and higher, **--n1kv:profile_id** is replaced with **--n1kv:profile**

```
neutron net-create name --n1kv:profile_id profileId
```

Syntax Description	
<i>name</i>	Name of the network. The name is a string with up to 255 characters. Characters can be numbers, upper and lowercase letters, and special characters.
--n1kv:profile_id	Associates a network with a Cisco Nexus 1000V network profile.
<i>profileId</i>	UUID of the network profile. The value is 36 hexadecimal digits and hyphens in the format NNNNNNNN-NNNN-NNNN-NNNN-NNNNNNNNNNNN.

Command Default None

Command History	Release	Modification
	OpenStack Havana	This attribute extension was introduced.

Example

This example shows how to create a network and associate the network with a Cisco Nexus 1000V network profile:

```
$ neutron net-create NetworkOne --n1kv:profile_id b9b8d5fa-41a3-4e59-bb1e-6a5e296908e1
$ neutron subnet-create NetworkOne 172.23.181.0/24 --name SubnetOne
```

port-create

To create a port and associate it with a Cisco Nexus 1000V policy profile, use the **neutron port-create** command.

```
neutron port-create name --n1kv:profile_id profile-id
```

Syntax Description

<i>name</i>	Name of the network. The name is a string with up to 255 characters. Characters can be numbers, upper and lowercase letters, and special characters.
--n1kv:profile_id	Associates a network with a Cisco Nexus 1000V policy profile.
<i>profile-id</i>	UUID of the policy profile. The value is 36 hexadecimal digits and hyphens in the format NNNNNNNN-NNNN-NNNN-NNNN-NNNNNNNNNNNN.

Command Default

None

Command History

Release	Modification
OpenStack Havana	This attribute extension was introduced.

Example

This example shows how to create a port and associate it with a Cisco Nexus 1000V policy profile:

```
$ neutron port-create NetworkOne --n1kv:profile_id b9b8d5fa-41a3-4e59-bb1e-6a5e296908e1
```

Related Cisco Nexus 1000V Configuration Options

cisco_n1k Configuration Options

The following configuration options appear in the `cisco_n1k` section in the `cisco_plugins.ini` file located at `/etc/neutron/plugin.ini`.

Configuration Option	Description
integration_bridge = br-int	Specify the name of the integration bridge to which the VIFs are attached.
default_policy_profile = For example, default_policy_profile = service_profile	The name of the policy profile that needs to be associated with a port, when a policy profile is not specified during port creation.
network_node_policy_profile = For example, network_node_policy_profile = dhcp_pp	The name of the policy profile that needs to be associated with a port owned by the network node (dhcp, router).
default_network_profile = For example, default_network_profile = network_pool	The name of the network profile to be associated with a network, when a network profile is not specified during network creation. The administrator must pre-create a network profile with this name.
poll_duration = 60	The time (in seconds) for which the plug-in polls the VSM for updates in the policy profiles. The default value is 60.
restrict_policy_profiles = For example, restrict_policy_profiles = False	Specifies if tenants are restricted from accessing all the policy profiles. The default value is False, indicating that all tenants can access all the policy profiles.
http_pool_size = 4	The number of threads that needs to be used to make HTTP requests to the VSM.
http_timeout = 30	The time (in seconds) for which the plug-in waits for the VSM to respond.
enable_sync_on_start = False	Specifies if the plug-in should attempt to synchronize with the VSM when neutron is started. The default value is False, indicating that no full sync will be performed when neutron is started.
enable_sync_on_error = False	Specifies if the plug-in should attempt to synchronize with the VSM when there is a connection failure to the VSM. The default value is False, indicating that no full sync will be performed when there is a connection failure to the VSM.
max_vsm_retries	Number of VSM request retries the Neutron plug-in attempts before timing out. The default value is 2.

Configuration Option	Description
<code>sync_interval</code>	Number of seconds between checks of state between the plugin and VSM. The default value is 300 seconds.

ml2_cisco_n1kv Configuration Options

The following configuration options appear in the `ml2_cisco_n1kv` section in `ml2_conf_cisco.ini` file located at `/etc/neutron/plugins/ml2/ml2_conf_cisco.ini`.

Configuration Option	Description
<code>default_policy_profile</code>	Name of the policy profile to be associated with a port when a port is created. The default value is default-pp . For example: <code>default_policy_profile = default-pp</code>
<code>default_vlan_network_profile</code>	Name of the VLAN network profile to be associated with a network. The default value is default-vlan-np . For example: <code>default_vlan_network_profile = default-vlan-np</code>
<code>default_vxlan_network_profile</code>	Name of the VXLAN network profile to be associated with a network. The default value is default-vxlan-np . For example: <code>default_vxlan_network_profile = default-vxlan-np</code>
<code>poll_duration</code>	Time in seconds for which the plugin polls the VSM for updates in policy profiles. The default value is 60 seconds. For example: <code>poll_duration = 60</code>
<code>http_timeout</code>	Timeout duration in seconds for the HTTP request. The default value is 15 seconds. For example: <code>http_timeout = 15</code>
<code>restrict_policy_profiles</code>	Specifies whether tenants are restricted from accessing all of the policy profiles. The default value is false , indicating that all tenants can access all policy profiles. For example: <code>restrict_policy_profiles = false</code>

Configuration Option	Description
n1kv_vsm_ips	Specifies the IP addresses in order for the plugin to connect to the VSM. You can enter multiple IP addresses separated by commas. For example: <code>n1kv_vsm_ips = 192.0.2.1, 192.0.2.2</code>
username	Specifies the username in order for the plugin to log into the VSM. For example: <code>username = user</code>
password	Specifies the password in order for the plugin to log into the VSM. For example: <code>password = secret</code>

