



## **Cisco Nexus 1000V for Microsoft Hyper-V REST API Guide, Release 5.2(1)SM1(5.2)**

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## Preface

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This preface introduces the Representational State Transfer (REST) application programming interface (API) functions for the Cisco Nexus 1000V for Microsoft Hyper-V and contains the following sections:

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

## Audience

This guide is for network administrators with the following experience and knowledge:

- An understanding of virtualization
- Using tools to configure a virtual switch

## Recommended Reading

Before configuring the Cisco Nexus 1000V for Microsoft Hyper-V, Cisco recommends that you read and become familiar with the following documentation:

- *Cisco Nexus 1000V for Microsoft Hyper-V Installation and Upgrade Guide, Release 5.2(1)SM1(5.2)*
- *Cisco Nexus 1000V for Microsoft Hyper-V Port Profile Configuration Guide, Release 5.2(1)SM1(5.2)*
- *Cisco Nexus 1000V for Microsoft Hyper-V NSM Configuration Guide, Release 5.2(1)SM1(5.2)*

## Document Organization

This document is organized into the following chapters:

Chapter	Description
<a href="#">Chapter 1, “Overview”</a>	Provides a brief introduction on how to use the REST API.
<a href="#">Chapter 2, “Hypervisor API Functions”</a>	Provides a detailed description of all of the REST API.

## Document Conventions

Command descriptions use these conventions:

<b>boldface font</b>	Commands and keywords are in boldface.
<i>italic font</i>	Arguments for which you supply values are in italics.
{ }	Elements in braces are required choices.
[ ]	Elements in square brackets are optional.
x   y   z	Alternative, mutually exclusive elements are separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.

Screen examples use these conventions:

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

This document uses the following additional conventions:



### Note

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



### Caution

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

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## Related Documentation

This section lists the documents used with the Cisco Nexus 1000V for Hyper-V.

### General Information

*Cisco Nexus 1000V for Hyper-V Release Notes*

### Install and Upgrade

*Cisco Nexus 1000V for Hyper-V Installation and Upgrade Guide*

### Configuration Guides

*Cisco Nexus 1000V for Hyper-V High Availability and Redundancy Configuration Guide*

*Cisco Nexus 1000V for Hyper-V Interface Configuration Guide*

*Cisco Nexus 1000V for Hyper-V Layer 2 Switching Configuration Guide*

*Cisco Nexus 1000V for Hyper-V License Configuration Guide*

*Cisco Nexus 1000V for Hyper-V Network Segmentation Manager Configuration Guide*

*Cisco Nexus 1000V for Hyper-V Port Profile Configuration Guide*

*Cisco Nexus 1000V for Hyper-V Quality of Service Configuration Guide*

*Cisco Nexus 1000V for Hyper-V Security Configuration Guide*

*Cisco Nexus 1000V for Hyper-V System Management Configuration Guide*

### Programming Guide

*Cisco Nexus 1000V for Hyper-V REST API Guide*

### Reference and Troubleshooting Guides

*Cisco Nexus 1000V for Hyper-V Command Reference*

*Cisco Nexus 1000V for Hyper-V Troubleshooting Guide*

### Virtual Services Appliance Documentation

The Cisco Nexus Virtual Services Appliance (VSA) documentation is available at

[http://www.cisco.com/en/US/products/ps9902/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps9902/tsd_products_support_series_home.html)

### Virtual Security Gateway Documentation

The Cisco Virtual Security Gateway documentation is available at

[http://www.cisco.com/en/US/products/ps13095/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps13095/tsd_products_support_series_home.html)

### Prime Network Services Controller

The Cisco Prime Network Services Controller documentation is available at

[http://www.cisco.com/en/US/partner/products/ps13213/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/partner/products/ps13213/tsd_products_support_series_home.html)

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### **Virtual Wide Area Application Services (vWAAS)**

The Virtual Wide Area Application Services documentation is available at  
[http://www.cisco.com/en/US/products/ps6870/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps6870/tsd_products_support_series_home.html)

### **ASA 1000V Cloud Firewall**

The ASA 1000V Cloud Firewall documentation is available at  
[http://www.cisco.com/en/US/products/ps12233/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps12233/tsd_products_support_series_home.html)

## **Obtaining Documentation and Submitting a Service Request**

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.





## Overview

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This chapter provides an overview for using the Representational State Transfer (REST) application programming interface (API) with the Cisco Nexus 1000V Series Switches.

This chapter contains the following sections:

- [RESTful Web Services API, page 1-1](#)
- [Finding Namespace Lists and Functions, page 1-2](#)
- [List of Functions Available For Nexus 1000V on Hyper-V, page 1-2](#)
- [Supported Response Formats, page 1-3](#)
- [Create, Read, Update, and Delete Operations, page 1-4](#)

## RESTful Web Services API

The Cisco Nexus 1000V Virtual Supervisor Module (VSM) supports the RESTful webservices API and provides limited functionality through this service.

You can create, read, update, and delete an object on the Cisco Nexus 1000V VSM using the RESTful web services API. REST is based on HTTP and, therefore, these four operations are in turn mapped to GET, POST, and DELETE HTTP operations. In order to call any REST function, you can use tools such as a web browser, the cURL tool, and Windows PowerShell.

REST tunneling is a special resource `api/cli` to which CLI commands may be posted to HTTP (HTTP POST) and CLI responses are returned. For example, to create a port-profile you type the following:

```
curl -u admin:Secret123 10.193.196.201/api/cli -d '{"cmd": "config ; port-profile pp1 ; description pp1 ; copy r s "}'
```

The following is the basic construct of a REST URL:

```
http[s]://<IP_address>/api/<resource locator>
```

The resource locator consists of two parts:

- `<resource locator> := <name space>/<object name>`
- `<name space>` indicates the broader class of functions and `<object name>` refers to the specific object.

For example, in the following URL, `n1k` is the namespace and `license` is the object name.

```
: http://10.10.10.2/api/n1k/license
```

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If you are using curl or a browser extension such as REST Console to issue REST calls, type the URL. For example, if you want to get the license information of your VSM that has an IP address of 10.10.10.2, you type the URL as follows:

```
https://10.10.10.2/api/n1k/license
```

To access the same through cURL, you use the following format:

```
curl http://username:password@10.10.10.2/api/n1k/license
```

OR

```
curl -u username:password 10.10.10.2/api/n1k/license
```



### Caution

When using the reload command through the REST tunnel, you need to make sure that the configuration is saved before using it. Otherwise the changes are lost.



### Note

You can view detailed information pertaining to all the REST resources. To get this information, you must append ?meta to the URI.

```
http://<IP_address>/api/<resource_name>?meta
```

## Finding Namespace Lists and Functions

Every REST API function is associated with a namespace. Functions that are specific to Nexus 1000V on Hyper-V are under the n1k namespace. The n1k namespace is found when the following URL is entered:

```
https://10.10.10.2/api
```

You get the following output:

```
<?xml version="1.0" encoding="utf-8"?>
<instance url="/api">
<children>
<child name="span" url="/api/span"/>
<child name="vpath" url="/api/vpath"/>
<child name="user" url="/api/user"/>
<child name="port-profile" url="/api/port-profile"/>
<child name="n1k" url="/api/n1k"/>
<child name="vlan" url="/api/vlan"/>
<child name="vnode" url="/api/vnode"/>
</children>
</instance>
```

In the above output, span, vpath, user, port-profile, vlan, and vnode are the functions that are a part of the global namespace and n1k is the namespace that includes the Hyper-V specific functions.

## List of Functions Available For Nexus 1000V on Hyper-V

To find all the functions under the n1k namespace, enter the following URL:

```
https://10.10.10.2/api/n1k
```

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You get the following output:

```
<instance url="/api/n1k">
  <children>
    <child name="network-segment-pool" url="/api/n1k/network-segment-pool"/>
    <child name="uplink" url="/api/n1k/uplink"/>
    <child name="vnic" url="/api/n1k/vnic"/>
    <child name="network-segment" url="/api/n1k/network-segment"/>
    <child name="logical-network" url="/api/n1k/logical-network"/>
    <child name="ip-pool-template" url="/api/n1k/ip-pool-template"/>
    <child name="license" url="/api/n1k/license"/>
    <child name="summary" url="/api/n1k/summary"/>
    <child name="hyper-v" url="/api/n1k/hyper-v"/>
    <child name="port-profile" url="/api/n1k/port-profile"/>
    <child name="vem" url="/api/n1k/vem"/>
    <child name="uplink-port-profile" url="/api/n1k/uplink-port-profile"/>
    <child name="virtual-port-profile" url="/api/n1k/virtual-port-profile"/>
  </children>
</instance>
```

### Response Description

Each child shows the available functions under the current n1k namespace.

Keyword	Description
name	Name of a function.
url	Relative uniform resource locator (URL).

To find the functions under the Hyper-V namespace, enter the following URL:

```
https://10.10.10.2/api/n1k/hyper-v
```

You get the following output:

```
<instance url="/api/n1k/hyper-v">
  <children>
    <child name="vsem-system-info" url="/api/n1k/hyper-v/vsem-system-info"/>
    <child name="vm-network" url="/api/n1k/hyper-v/vm-network"/>
    <child name="switch-extension-info" url="/api/n1k/hyper-v/switch-extension-info"/>
  </children>
</instance>
```

## Supported Response Formats

### JSON Format

The REST API supports the JavaScript Object Notation (JSON) format for a response. For JSON response, specify `Accept: application/json` in the HTTP header as shown in the following example:

```
GET /api/vc/summary HTTP/1.1
Host: 10.10.10.2
Accept: application/json
Authorization: Basic YWRtaW46U2Zpc2gxMjM=
```

To specify the JSON response format through cURL, use the following:

```
curl -u <user>:<password> <vsm_ip>/api/n1k/license -H "Accept: application/json"
```

The following example shows the response received in the JSON format:

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```
{
  "NEXUS1000V_LAN_SERVICES_PKG": {
    "url": "/api/nlk/license/NEXUS1000V_LAN_SERVICES_PKG",
    "properties": {
      "expires": "01 Feb 2014",
      "type": "NEXUS1000V_LAN_SERVICES_PKG",
      "available": 1022,
      "status": "In use",
      "used": 0
    }
  }
}
```

## XML Format

The REST API supports the XML format for a response. For XML response, specify `Accept: application/xml` in the HTTP header as shown in the following example:

```
GET /api/vc/summary HTTP/1.1
Host: 10.10.10.2
Accept: application/xml
Authorization: Basic YWRtaW46U2Zpc2gxMjM=
```

To specify the XML response format through cURL, use the following:

```
curl -u <user>:<password> <vsm_ip>/api/nlk/summary -H "Accept: application/xml"
```

The following example shows the response received in the XML format:

```
<?xml version="1.0" encoding="utf-8"?>
<instance url="/api/nlk/summary">
  <properties>
    <haStatus>false</haStatus>
    <name>Nlk-SITE-MANAGER</name>
    <switchMode>Advanced</switchMode>
    <mode>L3</mode>
    <version>version 5.2(1)SM1(5.2)</version>
    <ip>10.106.196.249</ip>
  </properties>
</instance>
```

# Create, Read, Update, and Delete Operations

## Creating an Object

To create an object, you must construct an HTTP POST request:

```
https://<IP address>/api/<name space>/<resource locator>
```

The request must have a payload that contains JavaScript Object Notation- (JSON)-formatted fields that are part of the newly created object:

```
\{"<property>": "<value>", "<property>": "<value>", ..... \}
```

For example, to create an IP address pool with a pool name of `pool1` on a VSM with an IP address of `10.10.10.2`, send a POST request by entering the following:

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Use cURL to perform the following:

```
curl -u admin:Secret123 10.10.10.2/api/n1k/ip-pool-template -d '{"name":"pool1",
"addressRangeStart":"192.168.0.2" , "addressRangeEnd":"192.168.0.16"} '
```

The same can be obtained through a browser using addons such as the REST console.

Use PowerShell to perform the following:

```
#Basic parameters required for accessing REST-APIs
$User = "admin"
$Password = ConvertTo-SecureString -String "Secret123" -AsPlainText -Force
$VSMIPAddress = "10.10.10.2"
$URI = "http://" + $VSMIPAddress
$Credential = New-Object -TypeName System.Management.Automation.PSCredential
-ArgumentList $User, $Password
#Create-
$args1 = '{"name" : "pool1" , "addressRangeStart":"192.168.0.2" ,
"addressRangeEnd":"192.168.0.16"}'
Invoke-RestMethod -Uri http://10.10.10.2/api/n1k/ip-pool-template-Credential
$Credential -Method Post-Body $args1
```

To find out the valid property names for a given function, see the Response Sample in each function definition later in this document.

## Reading an Object

To read an object, you must construct an HTTP GET request:

```
https://<IP address>/api/<name space>/<resource locator>/<instance name>
```

For example, to read switch extension manager information from a VSM with an IP address of 10.10.10.2, send a GET request by entering the following:

Use cURL to perform the following:

```
curl -u admin:Secret123 10.10.10.2/api/n1k/hyper-v/vsem-system-info
```

Use PowerShell to perform the following:

```
#Read the VSEM info - HTTP GET
$VersionURI = $URI + "/api/n1k/hyper-v/vsem-system-info"
Invoke-RestMethod -Uri $VersionURI -Credential $Credential -Method Get -Outfile
testout.xml
```

The above PowerShell command sends the results to the specified output file, which in this case, is "testout.xml". The default location where the outfile gets saved is the current folder location.

## Updating an Object

To update an object, you must construct an HTTP POST request:

```
https://<IP address>/api/<name space>/<resource locator>/<instance name>
```

The request must have a payload that contains JSON-formatted fields that are updated on the object:

```
\{"<property>": "<value>", "<property>": "<value>", ....\}
```

For example, to modify the address range for the IP pool named pool1 on a VSM with an IP address of 10.10.10.2, send a POST request by entering the following IP pool:

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Use cURL to perform the following:

```
curl -u admin:Secret123 10.10.10.2/api/n1k/ip-pool-template/pool1 -d '{"name"
"addressRangeStart": "192.168.0.5" , "addressRangeEnd": "192.168.0.20"}'
```

Use PowerShell to perform the following:

```
#Update the IP-address Pool Information - HTTP POST
$IPPURI = $URI + "/api/n1k/ip-pool-template/pool1"
$IPPArg = '{"addressRangeStart": "192.168.0.5", "addressRangeEnd": "192.168.0.20"}'
Invoke-RestMethod -Uri $Ippuri -Credential $Credential -Method Post -Body $IppArg
```

To find the valid property names for a given function, see the Response Sample in each function definition later in this document.

## Deleting an Object

To delete an object, you must construct an HTTP DELETE request:

```
https://<IP address>/api/<name space>/<resource locator>/<instance name>
```

To delete a network segment named VMN4 from a VSM with an IP address of 10.10.10.2, send a DELETE request by entering the following:

Use cURL to perform the following:

```
curl -u admin:Secret123 10.10.10.2/api/n1k/network-segment/VMN4 -X DELETE
```

Use PowerShell to perform the following:

```
#Delete a network segment - HTTP Delete
$VMNURI = $URI + "/api/n1k/network-segment/VMN4"
Invoke-RestMethod -Uri $VMNURI -Credential $Credential -Method Delete
```



## Hypervisor API Functions

---

This chapter provides information about the Cisco Nexus 1000V application programming interface (API) functions. The functions are grouped under two namespaces—`n1k` and `hyper-v`. The functions that support write (create, update, and delete) operations are explicitly marked as writeable. All others are read-only functions.

The functions are the following:

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- [Get Basic Information About the Cisco Nexus 1000V](#), page 2-8
- [Get Module Information for the Cisco Nexus 1000V](#), page 2-9
- [Get Uplink Information for the Cisco Nexus 1000V](#), page 2-11
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- [Feature History for REST API](#), page 2-29

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## Get License Information for the Cisco Nexus 1000V

### Resource Locator

[“/api/n1k/license”]

### Description

Retrieves license-usage information. This function is equivalent to the **show license usage** command.

### Response Sample

```
<?xml version="1.0" encoding="utf-8"?>
<set name="license_set">
<instance name="NEXUS1000V_LAN_SERVICES_PKG"
url="/api/n1k/license/NEXUS1000V_LAN_SERVICES_PKG">
<properties>
<expires>14 Dec 2013</expires>
<type>NEXUS1000V_LAN_SERVICES_PKG</type>
<available>1022</available>
<status>In use</status>
<used>0</used>
</properties>
</instance>
</set>
```

### Response Description

Property	Description
expires	Earliest expiration date for a given license.
type	License name.
available	Available license count.
status	License usage status.
used	Used licenses.

## Get Basic Information About the Cisco Nexus 1000V

### Resource Locator

[“/api/n1k/summary”]

### Description

Retrieves basic information about the Cisco Nexus 1000V.

### Response Sample

```
<?xml version="1.0" encoding="utf-8"?>
<instance url="/api/n1k/summary">
<properties>
<haStatus>true</haStatus>
<name>N1k-Av<</name>
<switchMode>Advanced</switchMode>
<mode>L3</mode>
<version>version 5.2(1)SM1(5.2)</version>
<ip>10.105.234.216</ip>
</properties>
</instance>
```



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### Response Description

Property	Description
haStatus	Whether the VSM is in high availability mode.
name	Cisco Nexus 1000V VSM hostname.
switchMode	Switch mode. Can be Essential or Advanced.
mode	Communication mode.
version	Cisco Nexus 1000V version.
ip	IP address of the Cisco Nexus 1000V VSM.

## Get Module Information for the Cisco Nexus 1000V

### Resource Locator

["/api/n1k/vem"]

### Description

Retrieves information about Cisco Nexus 1000V modules. This function is equivalent to the **show module** command.

### Response Sample

```
<set name="vem_set">
<instance name="3" url="/api/n1k/vem">
  <properties>
    <module>3</module>
    <licenseUsage>--</licenseUsage>
    <numVnics>3</numVnics>
    <ip>10.10.10.10</ip>
    <hostVersion>Windows Server 8 - Datacenter (6.2.9200, 6.30) </hostVersion>
    <status>ok</status>
    <license>licensed</license>
    <mac>02-00-0c-00-03-00 to 02-00-0c-00-03-80</mac>
    <type>Virtual Ethernet Module</type>
    <maxNumVnic>216</maxNumVnic>
    <nSockets>2</nSockets>
    <ports>288</ports>
    <modmac>3</modmac>
    <numVM>3</numVM>
    <version>5.2(1)SM1(5.2)</version>
    <model>NA</model>
    <lic_version>--</lic_version>
    <serialnum>NA</serialnum>
    <name>SAMLIN-SERVER02</name>
  </properties>
  <children>
    <child name="port-profile" url="/api/n1k/vem/3/port-profile"/>
    <child name="uplink" url="/api/n1k/vem/3/uplink"/>
  </children>
</instance>
</set>
```

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### Response Description

Property	Description
module	Module number
licenseUsage	Number of CPU licenses used by the Virtual Ethernet Module (VEM).
serialnum	Serial number of the host.
status	Host status
license	License status
numVnic	Number of virtual network interface cards (vNICs) on the host.
type	Host type
nSockets	Number of sockets on the host.
vethUsed	Number of veths connected to the module.
version	Host VIB version
ports	Number of available ports per module.
modmac	Module number
model	Host model
name	Host DNS name
srvuuid	Server UUID unique to identify each server.
lic_version	Licensing version
mac	Host MAC address
numVM	Number of active virtual machines (VMs) on the host.
ip	Host IP address

Each child indicates the sub-addon available under each module.

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## Get Uplink Information for the Cisco Nexus 1000V

### Resource Locator

["/api/n1k/uplink"]

### Description

Retrieves information about the Cisco Nexus 1000V uplink ports.

### Response Sample

```
<set name="uplink_set">
  </instance>
  <instance name="Ethernet4/1" url="/api/n1k/uplink/Ethernet4%2F1">
    <properties>
      <module>4</module>
      <portChannelType>Eth</portChannelType>
      <packetsTx>2473418</packetsTx>
      <mtu>1500</mtu>
      <cdpSwitch>Patch-N5K-1 (SSI13470FS0)</cdpSwitch>
      <cdpPort>Ethernet101/1/29</cdpPort>
      <cdpNativeVlan>1</cdpNativeVlan>
      <packetsRx>13325990</packetsRx>
      <portChannel>19</portChannel>
      <portChannelMembers>Ethernet4/1, Ethernet4/3</portChannelMembers>
      <name>Ethernet4/1</name>
      <ethernet>Ethernet</ethernet>
      <status>up</status>
      <mode>pvlan</mode>
      <portProfile>Mac-Uplink</portProfile>
      <speed>1000 Mb/s</speed>
    </properties>
  </instance>
</set>
```

### Response Description

Property	Description
module	Module ID to which the uplink is connected.
portChannelType	Port channel type.
packetsTx	Number of packets transmitted.
mtu	Maximum transmission unit (MTU) size.
cdpPort	Name of the port of the Cisco Discovery Protocol neighbor.
portChannelMembers	Members of the port channel
speed	Uplink speed.
mode	Uplink port mode (access, trunk, and pcvlan).
status	Status of uplink port.
portProfile	Name of the assigned port profile.
portChannel	Port channel group.
packetsRx	Number of packets sent.
name	Uplink port name.
ethernet	Type of port.
cdpNativeVlan	Native VLAN of the Cisco Discovery Protocol neighbor.

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Property	Description
cdpSwitch	Name of the Cisco Discovery Protocol neighbor switch.
vlan	VLAN associated with the uplink.

## Get Virtual Port Information for the Cisco Nexus 1000V

### Resource Locator

["/api/n1k/vnic"]

### Description

Retrieves information about the Cisco Nexus 1000V virtual ports.

### Response Sample

```
<set name="vnic_set">
  <instance name="Vethernet5" uri="/api/n1k/vnic/Vethernet5">
    <properties>
      <module>3</module>
      <dvport>DVPort65</dvport>
      <adapter>Net Adapter 1</adapter>
      <hostIP>172.23.231.192</hostIP> with <hostName>Host-1</hostName>
      <mac>0050.56ba.58bc</mac>
      <portGroup>n1kv-system-control</portGroup>
      <status>up</status>
      <vm>vsm-openstack</vm>
      <vlans>231</vlans>
      <vnic>Vethernet5</vnic>
    </properties>
  </instance>
</set>
```

### Response Description

Property	Description
module	Module ID with which the vNIC is associated.
dvport	Distributed virtual port Globally Unique Identifier (GUID).
adapter	Adapter with which the vNIC is associated.
hostname	Name of the Hyper-V host.
hostIP	IP address of the host vNIC.
mac	MAC address associated with the vNIC.
portGroup	Port profile to which the vNIC is assigned.
status	vNIC status.
vm	Virtual machine to which the vNIC is connected.
vlans	VLANs assigned to the vNIC.
vnic	vNIC name.

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## Get a List of Cisco Nexus 1000V Port Profiles on a Specific Module

### Resource Locator

[/"api/n1k/vem/<module number>/port-profile"]

### Description

Retrieves a list of the Cisco Nexus 1000V port profiles in use on a specific module.

### Response Sample

```
<set name="port-profile_set">
  <instance name="sample-pp" uri="/api/n1k/vem/3/port-profile/"sample-pp">
    <properties>
      <minPorts>1</minPorts>
      <systemVlans>231</systemVlans>
      <usedPorts>1</usedPorts>
      <name>n1kv-pp-vmk0</name>
      <vlans>231</vlans>
      <status>1</status>
      <mode>access</mode>
      <maxPorts>32</maxPorts>
      <type>Vethernet</type>
    </properties>
  </instance>
</set>
```

### Response Description

See the description for [/"api/n1k/port-profile].

## Get a List of Cisco Nexus 1000V vNICs in Use on a Specific Module

### Resource Locator

[/"api/n1k/vem/<module no>/vnic/<vnic number>"]

### Description

Retrieves a list of Cisco Nexus 1000V virtual ports in use on a specific module.

### Response Sample

```
<set name="vnic_set">
  <instance name="Vethernet5" uri="/api/n1k/vem/3/vnic/Vethernet5">
    <properties>
      <mac>0050.56ba.58bc</mac>
      <dvport>DVPort65</dvport>
      <adapter>Net Adapter 1</adapter>
      <hostIP>172.23.231.192</hostIP>
      <vlans>231</vlans>
      <portGroup>n1kv-system-control</portGroup>
      <status>up</status>
      <module>3</module>
```

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```

        <vm></module>
        <vnic>Vethernet5</vnic>
    </properties>
</instance>
</set>

```

### Response Description

See the description for [/api/n1k/vnic].

## Get a List of Cisco Nexus 1000V Uplink Ports In Use On a Specific Module

### Resource Locator

["/api/n1k/vem/<module number>/uplink"]

### Description

Retrieves a list of uplink ports in use on a specific module and related information.

### Response Sample

```

<set name="uplink_set">
  <instance name="Ethernet3/8" uri="/api/n1k/vem/3/uplink/Ethernet3%2F8">
    <properties>
      <module>3</module>
      <portChannelType>Eth</portChannelType>
      <packetsTx>33077</packetsTx>
      <mtu>1500</mtu>
      <cdpPort>GigabitEthernet3/39</cdpPort>
      <port>Ethernet3/8</port>
      <status>up</status>
      <mode>trunk</mode>
      <vlans>231</vlans>
      <portChannel>1</portChannel>
      <cdpNativeVlan>231</cdpNativeVlan>
      <portChannelMembers>Ethernet3/8</portChannelMembers>
      <ethernet>Ethernet</ethernet>
      <packetsRx>235849</packetsRx>
      <cdpSwitch>sfish-6k-I9</cdpSwitch>
      <portProfile>n1kv-uplink0</portProfile>
      <speed>1000 Mb/s</speed>
    </properties>
  </instance>
</set>

```

### Response Description

See the description for [/api/n1k/uplink].

## Get a List of Cisco Nexus 1000V VSEM Details

### Resource Locator

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["/api/n1k/hyper-v/vsem-system-info"]

### Description

Retrieves information that is associated with the Virtual Switch Extension Module (VSEM) object. For any external switch device managed by the Virtual Machine Manager (VMM), the VMM associates it to a VSEM object.

### Response Sample

```
<?xml version="1.0" encoding="utf-8"?>
instance url="/api/n1k/hyper-v/vsem-system-info">
<properties>
<version>1.0</version>
<description>Cisco Systems Nexus 1000V</description>
<model>Nexus 1000V Chassis</model>
<id>6c7f7b99-584e-4e53-b8cc-c8d6af737b44</id>
<manufacturer>Cisco Systems</manufacturer>
<name>Cisco Nexus 1000V Chassis version 5.2(1)SM1(5.2) - N1k-SITE-MANAGER</name>
<vendorId>{55ca4f11-f549-4440-a489-e7337f3a6b73}</vendorId>
</properties>
</instance>
```

### Response Description

Property	Description
description	VSEM description.
model	Model of the VSEM.
manufacturer	Manufacturer name.
name	User-readable name for a VSEM instance.
version	VSEM version.
id	VSEM ID.
vendorId	Vendor ID.

## Get a List of Cisco Nexus 1000V Switch Extensions

### Resource Locator

["/api/n1k/hyper-v/switch-extension-info"]

### Description

Retrieves the VSM information needed by VMM to associate it to a switch extension. A VSEM can contain one or more switch extensions. For the Cisco Nexus 1000V, a VSEM can contain only one switch extension.

### Response Sample

```
<instance url="/api/n1k/hyper-v/switch-extension-info">
<properties>
<minVersion>105.100.0000.0000</minVersion>
<extensionType>Forwarding</extensionType>
<opdata>data-version 1.0 switch-domain 666 switch-name hypervsml cp-version
5.2(1)SM1(5.2) control-vlan 1 system-primary-mac
00:50:56:b8:1d:59 active-vsm packet mac 00:50:56:b8:1d:5b active-vsm mgmt mac
00:50:56:b8:1d:5a standby-vsm ctrl mac ffff-ffff-ffff inband-vlan 1 svcs-mode L3
l3control-ipaddr 10.193.196.111 upgrade state 0 mac ffff-ffff-ffff l3control-ipv4
```

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```

null sequence-number 37 end-version 1.0</opdata>
<id>92086c7c-8770-4b10-ab27-36ec1d67436a</id>
<isSwitchTeamSupported>true</isSwitchTeamSupported>
<switchExtensionFeatureConfigId>2ABD62F9-0E77-4E4C-B7B0-B2DBAF9B7CBB
</switchExtensionFeatureConfigId>
<maxNumberOfPorts>16000</maxNumberOfPorts>
<drivernetcfginstanceid>9C8ED422-F33A-4F34-B771-E8B8D0539FD3
</drivernetcfginstanceid>
<name>hypervsml</name>
<mandatoryFeatureId>2ABD62F9-0E77-4E4C-B7B0-B2DBAF9B7CBB</mandatoryFeatureId>
<maxNumberOfPortsPerHost>216</maxNumberOfPortsPerHost>
<maxVersion>105.200.9999.9999</maxVersion>
<isChildOfWFPSwitchExtension>>false</isChildOfWFPSwitchExtension>
</properties>
</instance>

```

### Response Description

Property	Description
minVersion	Minimum version of the switch extension driver that is supported.
extensionType	Extension type of the Nexus 1000V switch extension driver. The Nexus 1000V is a Forwarding extension.
opdata	Opaque data.
id	Unique ID of the switch extension information.
isSwitchTeamSupported	Whether the switch supports Teaming. For the Cisco Nexus 1000V, the answer is Yes.
switchExtensionFeatureConfigId	Guide to identify the Cisco extension
maxNumberOfPorts	Maximum number of ports that can be created.
drivernetcfginstanceid	Unique ID of the switch extension driver.
name	User-friendly name for the switch extension information.
mandatoryFeatureId	Mandatory feature ID. This is not set for a Cisco Nexus 1000V.
maxNumberOfPortsPerHost	Maximum number of ports per host that can be created on a logical switch.
maxVersion	Maximum version of the switch extension driver that is supported.
isChildOfWFPSwitchExtension	Not set for a Cisco Nexus 1000V.

## Get a List of Cisco Nexus 1000V Virtual Port Profiles

### Resource Locator

[“/api/n1k/virtual-port-profile”]

### Description

Retrieves a list of virtual port profiles. A virtual port profile is a port profile that can be attached to a virtual interface.

### Response Sample



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```
<set name="virtual_port_profile_set">
  <instance name="veth-pp" url="/api/n1k/virtual-port-profile">
    <properties>
      <state>enabled</state>
      <type>vethernet</type>
      <name>veth-pp</name>
      <id>4b87bc57-e686-4296-8720-92736aec95b</id>
      <maxNumberOfPortsPerHost>216</maxNumberOfPortsPerHost>
      <maxPorts>32</maxPorts>
      <switchId>86e13b66-ba94-4190-9e5d-e2e43c9ec1cd</switchId>
    </properties>
  </instance>
</set>
```

### Response Description

Property	Description
state	State of the port profile.
type	Type of port profile.
name	User-friendly profile name.
id	Unique profile ID.
maxNumberOfPortsPerHost	Maximum number of ports per host.
maxPorts	Port capacity.
switchId	ID of the switch extension to which to publish this port profile.

## Get a List of Cisco Nexus 1000V Uplink Port Profiles

### Resource Locator

["/api/n1k/uplink-port-profile"]

### Description

Retrieves a list of uplink port profiles. An uplink port profile is a port profile that can be attached to a physical interface.

### Response Sample

```
<set name="uplink_port_profile_set">
  <instance name="aaa" url="/api/n1k/uplink-port-profile/aaa">
    <properties>
      <switchId>92086c7c-8770-4b10-ab27-36ec1d67436a</switchId>
      <name>aaa</name>
      <id>73a6010e-0ba7-4fe0-bea3-bc315e2872ab</id>
      <maxPorts>32</maxPorts>
    </properties>
  </instance>
</set>
```

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### Response Description

Property	Description
switchId	ID of the switch extension on which to publish this port profile.
name	User-friendly profile name.
id	Unique profile ID.
maxPorts	Port capacity.

## Get Switch Port Analyzer Session Information for the Cisco Nexus 1000V

### Resource Locator

["/api/span/"] [Writable]

### Description

Retrieves information for the Cisco Nexus 1000V switch port analyzer (SPAN) and the encapsulated remote SPAN (ERSPAN).

### Response Sample

```
<set name="span_set">
  <instance name="1" url="/api/span/1">
    <properties>
      <sources><type>Vethernet</type>
      <source>7</source>
      <direction>rx</direction>
    </sources>
      <sources><type>Vethernet</type>
      <source>7</source>
      <direction>tx</direction>
    </sources>
      <sources><type>Vethernet</type>
      <source>7</source>
      <direction>Both</direction>
    </sources>
      <shutdown>>false</shutdown>
      <id>1</id>
      <destVethIfs>6</destVethIfs>
      <type>local</type>
    </properties>
  </instance>
  <instance name="1" url="/api/span/1">
    <properties>
      <type>erspan-source</type>
      <mtu>9000</mtu>
      <destIpAddr>10.106.196.124</destIpAddr>
      <headerType>2</headerType>
      <sources><type>port-channel</type>
      <source>1</source>
      <direction>rx</direction>
    </sources>
      <sources><type>port-channel</type>
      <source>1</source>
      <direction>tx</direction>
    </sources>
      <sources><type>port-channel</type>
```

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```

    <source>1</source>
    <direction>Both</direction>
  </sources>
  <dscp>0</dscp>
  <shutdown>>false</shutdown>
  <t1>255</t1>
  <id>1</id>
  <erSpanId>2</erSpanId>
  <prec>0</prec>
</properties>
</instance>

```

## Response Description

Property	Description	Writable
description	Description of the monitor session.	Yes
mtu	The mtu value for the monitor session (the values can be <50-9000>).	Yes
dscp	The ip dscp value for the monitor session (the values can be <0-63>).	Yes
sources	The source interface/vlan/port-profile which has the type/direction/source <ul style="list-style-type: none"> <li>type—ethernet, vethernet, port-channel, vlan, port-profile</li> <li>source—&lt;slot/&lt;port&gt; when ethernet, &lt;number&gt; when veth,vlan,port-channel</li> <li>direction—rx,tx,both</li> </ul>	Yes
destPortChannels	The destination port-channel for the monitor session.	Yes
filterVlans	The vlans to be filtered on the monitor session.	Yes
destEthIifs	The destination ethernet interfaces for the monitor session	Yes
prec	The IP precedence value for the monitor session (the values can be <0-7>).	Yes
type	The type of the session (the values can be <local, erspan-source>).	Yes <sup>1</sup>
id	The ID of the span/erspan (should be unique).	Yes <sup>1</sup>
destVethIifs	The destination vethernet interfaces for the monitor session.	Yes
header type	The header type for the monitor session ( the values can be <2-3>).	Yes
config	The configs for the monitor session.	Yes
shutdown	The shutdown state of the monitor session.	Yes
t1	The IP time-to-live value value for the monitor session (the values can be <1-255>).	Yes
erSpanId	The erspan ID for the monitor session (the values can be <1-1023>).	Yes

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Property	Description	Writable
destIpAddr	The destination IP address for the monitor session.	Yes
destPortProfile	The destination port-profile.	Yes

1. Indicates that the property value can be set from REST during creation but not during updation/modification.

## Get User Information for the Cisco Nexus 1000V

### Resource Locator

[“/api/user/”] [Writable]

### Description

Retrieves information about users for the Cisco Nexus 1000V.

### Response Sample

```
<set name="user_set">
  <instance name="guest" url="/api/user/guest">
    <properties>
      <expire>this user account has no expiry date</expire>
      <name>guest</name>
      <role>network-operator</role>
    </properties>
  </instance>
  <instance name="admin" url="/api/user/admin">
    <properties>
      <expire>this user account has no expiry date</expire>
      <name>admin</name>
      <role>network-admin</role>
    </properties>
  </instance>
  <instance name="jasonxu" url="/api/user/jasonxu">
    <properties>
      <expire>this user account has no expiry date</expire>
      <name>jasonxu</name>
      <role>network-operator</role>
    </properties>
  </instance>
</set>
```

### Response Description

Property	Description	Writable
expire	Expiry date of the user account.	Yes
name	Name of the user account.	Yes <sup>1</sup>
role	Role which the user has to be assigned to.	Yes

1. Indicates that the property value can be set from REST during creation but not during updation/modification.

## Get Port Profile Information for the Cisco Nexus 1000V

### Resource Locator

[“/api/n1k/port-profile”]

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## Description

Retrieves information about the Cisco Nexus 1000V port profiles.

## Response Sample

```
<set name="portProfile_set">
  <instance name="uplink_network_default_policy"
url="/api/n1k/port-profile/uplink_network_default_policy">
  <properties>
    <maxPorts>512</maxPorts>
    <type>Ethernet</type>
    <name>uplink_network_default_policy</name>
    <systemVlans>none</systemVlans>
    <status>1</status>
    <minPorts>1</minPorts>
    <vlans />
    <usedPorts>0</usedPorts>
  </properties>
</instance>
<instance name="Eth-Uplink1" url="/api/n1k/port-profile/Eth-Uplink1">
  <properties>
    <minPorts>1</minPorts>
    <nativeVlan>1608</nativeVlan>
    <systemVlans>1608</systemVlans>
    <systemVlans>none</systemVlans>
    <usedPorts>0</usedPorts>
    <name>Eth-Uplink1</name>
    <type>Ethernet</type>
    <status>1</status>
    <mode>trunk</mode>
    <maxPorts>512</maxPorts>
    <vlans>1608</vlans>
  </properties>
</instance>
<instance name="NSM_template_vlan" url="/api/n1k/port-profile/NSM_template_vlan">
  <properties>
    <maxPorts>32</maxPorts>
    <type>Vethernet</type>
    <name>NSM_template_vlan</name>
    <systemVlans>none</systemVlans>
    <status>1</status>
    <minPorts>1</minPorts>
    <vlans />
    <usedPorts>0</usedPorts>
  </properties>
</instance>
<instance name="aaa" url="/api/n1k/port-profile/aaa">
  <properties>
    <minPorts>1</minPorts>
    <systemVlans>none</systemVlans>
    <usedPorts>0</usedPorts>
    <name>aaa</name>
    <type>Ethernet</type>
    <status>1</status>
    <mode>trunk</mode>
    <maxPorts>512</maxPorts>
    <vlans />
  </properties>
</instance>
<instance name="NSM_template_segmentation"
url="/api/n1k/port-profile/NSM_template_segmentation">
  <properties>
    <maxPorts>32</maxPorts>
```

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```

    <type>Vethernet</type>
    <name>NSM_template_segmentation</name>
    <systemVlans>none</systemVlans>
    <status>1</status>
    <minPorts>1</minPorts>
    <vlans />
    <usedPorts>0</usedPorts>
  </properties>
</instance>
</set>

```

### Response Description

Property	Description
maxPorts	Maximum number of ports allowed per port profile.
type	Type of port profile (vEthernet, Ethernet).
name	Name of the port profile.
systemVlans	Assigned system VLANs.
status	Status of the port profile.
minPorts	Minimum number of ports allowed per port profile.
vlans	Number of associated VLANs.
usedPorts	Used ports.
nativeVlan	Native VLAN of the port-profile, if specified.
mode	Access/trunk or the private-vlan.

### Resource Locator

[“/api/port-profile”] [Writable]

### Description

Retrieves information about the Cisco Nexus 1000V port profiles.

### Resource Sample

```

<set name="pp_set">
  <instance name="sample-pp" url="/api/port-profile/"sample-pp">
    <properties>
      <profileConfig>data_empty</profileConfig>
      <minPorts>1</minPorts>
      <description />
      <capability />
      <state>>false</state>
      <name>& ;</name>
      <portGroupName />
      <portBinding>static</portBinding>
      <maxPorts>32</maxPorts>
      <type>Vethernet</type>
    </properties>
  </instance>
<?xml version="1.0" encoding="utf-8"?>
  <instance name="Eth-Uplink1" url="/api/port-profile/Eth-Uplink">
    <properties>
      <minPorts>1</minPorts>
      <description>NSM created this profile. Do not modify or delete this
profile.</description>
      <switchportMode>trunk</switchportMode>
      <portBinding>static</portBinding>
    </properties>
  </instance>
</set>

```

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```

    <switchportTrunkNativeVLAN>1608</switchportTrunkNativeVLAN>
    <state>>true</state>
    <shutdown>>false</shutdown>
    <name>Eth-Uplink1</name>
    <inherit>Eth-Policy1</inherit>
    <portGroupName></portGroupName>
    <type>Ethernet</type>
    <maxPorts>512</maxPorts>
    <switchportTrunkVLANs>1608</switchportTrunkVLANs>
  </properties>
</instance>
<instance name="NSM_template_vlan" url="/api/port-profile/NSM_template_vlan">
  <properties>
    <minPorts>1</minPorts>
    <description>NSM default port-profile for VLAN networks. Do not delete.
  </description>
    <capability />
    <state>>false</state>
    <name>NSM_template_vlan</name>
    <shutdown>>false</shutdown>
    <portGroupName />
    <portBinding>static</portBinding>
    <maxPorts>32</maxPorts>
    <type>Vethernet</type>
  </properties>
</instance>
<instance name="NSM_template_segmentation" url="/api/port-profile/NSM_template_
segmentation">
  <properties>
    <minPorts>1</minPorts>
    <description>NSM default port-profile for VXLAN networks. Do not delete.
  </description>
    <capability />
    <state>>false</state>
    <name>NSM_template_segmentation</name>
    <shutdown>>false</shutdown>
    <portGroupName />
    <portBinding>static</portBinding>
    <maxPorts>32</maxPorts>
    <type>Vethernet</type>
  </properties>
</instance>
<instance name="uplink_network_default_policy" url="/api/port-profile/uplink_network_
default_policy">
  <properties>
    <minPorts>1</minPorts>
    <description>NSM created profile. Do not modify or delete this profile.--
  </description>
    <capability> </capability>
    <state>>false</state>
    <name>uplink_network_default_policy</name>
    <shutdown>>false</shutdown>
    <portGroupName />
    <portBinding>static</portBinding>
    <maxPorts>512</maxPorts>
    <type>Ethernet</type>
  </properties>
</instance>
<instance name="aaa" url="/api/port-profile/aaa">
  <properties>
    <minPorts>1</minPorts>
    <description>NSM created profile. Do not modify or delete this profile.
  <description>
    aaaaabb</description>
    <switchportMode>trunk</switchportMode>
  </properties>
</instance>

```

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```

    <capability />
    <state>false</state>
    <type>Ethernet</type>
    <name>aaa</name>
    <inherit>uplink_network_default_policy</inherit>
    <portGroupName />
    <portBinding>static</portBinding>
    <maxPorts>512</maxPorts>
  </properties>
</instance>

</set>

```

### Response Description

Property	Description	Writable
profileConfig	Policy configuration of the port-profile	Yes
minPorts	Minimum number of ports that are allowed per port-profile.	Yes
description	Description of the port-profile.	Yes
state	State of the port-profile.	Yes
name	Name of the port-profile.	Yes <sup>1</sup>
portGroupName	Name of the port group.	No
portBinding	Port-binding behavior of the port-profile.	No
maxPorts	Maximum number of ports allowed per port profile	Yes
type	Type of the port-profile.	Yes <sup>1</sup>

1. Indicates that the property value can be set using REST during creation but not during updation/modification.

## Get a List of Cisco Nexus 1000V Logical Networks

### Resource Locator

["/api/n1k/logical-network"] [Writable]

### Description

Retrieves a list of logical networks. This function represents a logical network that spans across multiple sites represented by multiple subnets.

### Response Sample

```

<set name="logical_network_set">
  <instance name="t3" url="/api/n1k/logical-network/t3">
    <properties>
      <name>t3</name>
      <description>testing-3</description>
    </properties>
  </instance>
  <instance name="sometest" url="/api/n1k/logical-network/sometest">
    <properties>
      <name>sometest</name>
      <description>testing-2</description>
    </properties>
  </instance>
  <instance name="t6" url="/api/n1k/logical-network/t6">

```



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```

    <properties>
      <name>t6</name>
      <description>abc</description>
    </properties>
  </instance>
  <instance name="t5" url="/api/n1k/logical-network/t5">
    <properties>
      <name>t5</name>
      <description>abc</description>
    </properties>
  </instance>
  <instance name="t4" url="/api/n1k/logical-network/t4">
    <properties>
      <name>t4</name>
      <description />
    </properties>
  </instance>
</set>

```

### Response Description

Property	Description	Writeable?
name	User friendly name for a logical network.	Yes <sup>1</sup>
description	Description of a logical network.	Yes

1. Indicates that the property value can be set using REST during creation but not during update/modification.

## Get a List of Cisco Nexus 1000V Network Segment Pools

### Resource Locator

["/api/n1k/network-segment-pool"] [Writeable]

### Description

Retrieves a list of network segment pools. The network segment pools contain one or more network segments that represent a logical network in a location. This function is equivalent to the VMM network segment pool.

### Response Sample

```

<set name="network_segment_pool_set">
  <instance name="my-network-segment-pool" url="/api/n1k/network-segment-pool">
    <properties>
      <intraPortCommunication>true</intraPortCommunication>
      <maximumNetworkSegmentsPerVMNetwork>2000</maximumNetworkSegmentsPerVMNetwork>
      <logicalNetwork>my-logical-network</logicalNetwork>
      <id>a3e7d0b7-98ac-44f7-89ad-0eaa9675d753</id>
      <supportsVMNetworkProvisioning>true</supportsVMNetworkProvisioning>
      <supportsIpPool>true</supportsIpPool>
      <name>my-network-segment-pool</name>
    </properties>
  </instance>
</set>

```

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### Response Description

Property	Description	Writeable
intraPortCommunication	Whether intraport communication exists.	Yes
logicalNetwork	Fabric network name.	Yes
maximumVMNetworkDefinitionsPerVMNetwork	Maximum network segment definitions per network segment.	No
id	Unique ID of the network segment pool.	No
supportsVMNetworkProvisioning	Whether network segment provisioning is supported.	No
supportsIpPool	Network segments in this pool that can have an associated IP pool.	No
name	Username for the fabric network.	Yes <sup>1</sup>

1. Indicates that the property value can be set using REST during creation but not during updation/modification.

## Get a List of Cisco Nexus 1000V IP Address Pools

### Resource Locator

[`"/api/n1k/ip-pool-template"`] [Writeable]

### Description

Retrieves the Layer-3 information associated with the Layer-2 network. Every network segment is associated with an IP address pool.

### Response Sample

```
<set name="ip_address_pool_set">
  <instance name="ip-pool-template" url="api/n1k/ip-pooltemplate">
    <properties>
      <netbt>>false</netbt>
      <description/> </description>
      <dnsServersListList>1.1.1.3</dnsServersListList>
      <id> </id>
      <dnsSuffixList>cisco.com</dnsSuffixList>
      <addressFamily>IPv4</addressFamily>
      <ipAddressSubnet>255.255.255.0</ipAddressSubnet>
      <name>ip-pool-template</name>
      <addressRangeEnd>1.1.1.100</addressRangeEnd>
      <networkAddress>1.1.1.1</networkAddress>
      <addressRangeStart>1.1.1.2</addressRangeStart>
      <gateway>1.1.1.1</gateway>
      <dhcp>>true</dhcp>
      <netbiosServersList>1.1.1.99</netbiosServersList>
      <reservedIpList>1.1.1.50</reservedIpList>
    </properties>
  </instance>
</set>
```

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### Response Description

Property	Description	Writeable
netbt	NetBIOS over TCP/IP enabled	Yes
description	Description of an IP address pool.	Yes
dnsServersList	IP addresses of DNS servers in order of use.	Yes
dnsSuffixList	DNS suffix.	Yes
addressFamily	IPv4 or IPv6.	No
ipAddressSubnet	IP address subnet.	Yes
name	IP pool name.	Yes <sup>1</sup>
addressRangeEnd	End of the IP address range.	Yes
networkAddress	Network address.	Yes
addressRangeStart	Start of the IP address range.	Yes
gateway	Network gateways.	Yes
dhcp	Whether the network is DHCP-supported.	Yes
netbiosServersList	Whether NetBIOS is enabled.	Yes
reservedIpList	List of static IP addresses excluded from allocation by VMM.	Yes

1. Indicates that the property value can be set using REST during creation but not during updation/modification.

## Get a List of Cisco Nexus 1000V Network Segments

### Resource Locator

["/api/n1k/network-segment"] [Writeable]

### Description

Retrieves a list of network segments. A network segment represents a subnet.

```
<set name="network_segment_set">
  <instance name="my-network-segment-secondary-101" url="/api/n1k/network-segment">
    <properties>
      <description>My secondary (101) network segment</description>
      <networkSegmentPool> </networkSegmentPool>
      <id>21e1dbbe-7fb4-456c-a91b-8c66ff33792b</id>
      <maxNoOfPorts> </maxNoOfPorts>
      <vmNetworkId>5b602e01-58c8-4b48-a3b8-9d66c5dac5d9</vmNetworkId>
      <segmentType>VLAN</segmentType>
      <name>joe-network-segment-secondary-101</name>
      <publish> </publish>
      <vmNetwork>my-network-segment-secondary-101</vmNetwork>
      <ipPoolId>d4fe3b3a-8ade-4fd0-9e3d-0af43b760c1a</ipPoolId>
      <vlan>0</vlan>
      <ipPoolName>joe-ip-pool-template</ipPoolName>
    </properties>
  </instance>
</set>
```

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### Response Description

Property	Description	Writeable?
description	Description of the network-segment.	Yes
networkSegmentPool	Network segment pool that this network segment is a member of.	Yes
id	Unique ID of the network segment.	No
vmNetworkId	Unique ID of network segment.	No
segmentType	Type of segment.	No
name	Name of network segment.	Yes <sup>1</sup>
publish	Publish name of the network segment.	Yes
vmNetwork	Network segment object name.	No
ipPoolId	Unique ID of the IP pool instance.	No
vlan	Associated VLAN.	Yes
ipPoolName	Available IP pool template name.	Yes

1. Indicates that the property value can be set using REST during creation but not during updation/modification.

## Get a List of Cisco Nexus 1000V VM Networks

### Resource Locator

["/api/n1k/hyper-v/vm-network"] [Writeable]

### Description

Retrieves a list of virtual machine (VM) networks. A network segment can contain one or more network segments. For VLAN-based networks, a network segment can contain only one network segment.

### Response Sample

```
<set name="vm_network_set">
  <instance name="vlan-2200" url="/api/n1k/hyper-v/vm-network/vlan-2200">
    <properties>
      <id>048347f5-d460-48a1-b474-5dd674fd1406</id>
      <networkSegment>vlan-2200</networkSegment>
      <name>vlan-2200</name>
      <networkSegmentPool>NSP-2200</networkSegmentPool>
    </properties>
  </instance>
</set>
```

### Response Description

Property	Description	Writeable
networkSegment	User-friendly name of the network segment.	No
name	User-friendly name of the network segment.	Yes <sup>1</sup>
networkSegmentPool	Network segment pool.	Yes
id	Unique ID of the network segment.	No

1. Indicates that the property value can be set using REST during creation but not during updation/modification.

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## Feature History for REST API

This section provides the REST API history.

Feature Name	Release	
REST API	5.2(1)SM1(5.1)	This feature was introduced.
REST API	5.2(1)SM1(5.2)	span, port-profile(write capability), and user resources

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