



## **Cisco Nexus 1000V for Microsoft Hyper-V REST API Guide, Release 5.2(1)SM3(1.1)**

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**Cisco Systems, Inc.**

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## 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](#)
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## 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 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

```
<instance name="NEXUS1000V_LAN_SERVICES_PKG"
url="/api/n1k/license/NEXUS1000V_LAN_SERVICES_PKG">
  <properties>
    <expires>02 Feb 2015</expires>
    <type>NEXUS1000V_LAN_SERVICES_PKG</type>
    <available>1007</available>
    <status>In use</status>
    <used>0</used>
  </properties>
</instance>
```

### 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

```
<instance url="/api/n1k/summary">
  <properties>
    <haStatus>true</haStatus>
    <name>N1000V</name>
    <switchMode>ADVANCED (3.0)</switchMode>
    <mode>L3</mode>
    <version>version 5.2(1)SM3(1.1)</version>
    <ip>10.10.10.2</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

```
<instance name="3" url="/api/n1k/vem/3">
  <properties>
    <module>3</module>
    <licenseUsage>2</licenseUsage>
    <ip>10.106.196.107</ip>
    <hostVersion>Windows Server 2012 R2 - Datacenter (6.3.9600, 6.40)</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>
    <numVM>5</numVM>
    <nSockets>2</nSockets>
    <ports>288</ports>
    <modmac>3</modmac>
    <vethUsed>53</vethUsed>
    <version>5.2(1)SM3(1.1)</version>
    <model>NA</model>
    <lic_version>3.0</lic_version>
    <serialnum>NA</serialnum>
    <name>BLADE-107</name>
    <srvuuid>6810C0BE-3CE2-E211-0000-00000000008F</srvuuid>
  </properties>
  <children>
    <child name="port-profile" url="/api/n1k/vem/3/port-profile"/>
    <child name="uplink" url="/api/n1k/vem/3/uplink"/>
    <child name="vnic" url="/api/n1k/vem/3/vnic"/>
  </children>
</instance>
```

### Response Description

Property	Description
ports	Number of ports
module	Module number

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Property	Description
licenseUsage	Number of CPU licenses used by the Virtual Ethernet Module (VEM).
serialnum	Serial number of the host.
status	Host status
license	License status
vethUsed	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

```
<instance name="Ethernet9/4" url="/api/n1k/uplink/Ethernet9%2F4">
  <properties>
    <module>9</module>
    <packetsTx>15599219261</packetsTx>
    <mtu>1500</mtu>
    <cdpPort>Vethernet1198</cdpPort>
    <cdpSwitch>FI-16-A (SSI1526206H) </cdpSwitch>
    <cdpNativeVlan>1992</cdpNativeVlan>
    <packetsRx>13495841519</packetsRx>
    <name>Ethernet9/4</name>
    <ethernet>Ethernet</ethernet>
    <speed>10 Gb/s</speed>
    <mode>pvlan</mode>
    <portProfile>data-lacp</portProfile>
    <status>up</status>
  </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.
cdpNativeVlan	Native VLAN of the Cisco Discovery Protocol neighbor.
cdpSwitch	Name of the Cisco Discovery Protocol neighbor switch.
vlans	VLAN associated with the uplink.

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## 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

```
<instance name="Vethernet1" url="/api/n1k/vnic/Vethernet1">
  <properties>
    <module>5</module>
    <vnic>Vethernet1</vnic>
    <adapter>Net Adapter</adapter>
    <hostName>BLADE-110</hostName>
    <vlans>10</vlans>

    <portGroup>dynpp_c87c8a58-3acc-4691-9418-9b5ebedb85a5_c55e63c9-da4a-4aeb-be6a-3aea0f69ef34
    </portGroup>
    <status>up</status>
    <mac>0015.5dc4.6e06</mac>
    <vm>TVM126-08</vm>

    <dvport>17d997e9-9002-4c77-a5a4-483dc15ec348--6e632541-5268-464d-b212-307f22347aaf</dvport
  >
  </properties>
</instance>
```

### 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.
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.

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

### Resource Locator

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



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### Description

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

### Response Sample

```
<instance name="ucs-vpc" url="/api/n1k/vem/3/port-profile/ucs-vpc">
  <properties>
    <minPorts>1</minPorts>
    <systemVlans>1992,2161-2165,2178-2180</systemVlans>
    <usedPorts>12</usedPorts>
    <name>ucs-vpc</name>
    <type>Ethernet</type>
    <status>1</status>
    <mode>private-vlan trunk promiscuous</mode>
    <maxPorts>512</maxPorts>
    <vlans></vlans>
  </properties>
</instance>
```

### 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

```
<instance name="Vethernet647" url="/api/n1k/vem/10/vnic/Vethernet647">
  <properties>
    <module>10</module>
    <vnic>Vethernet647</vnic>
    <adapter>Net Adapter</adapter>
    <vlans>10</vlans>

    <portGroup>dynpp_ac1901e9-bc1b-46f5-abcfc60b0d97fc08c_acbd8f1e-b130-4922-85d7-edd4a405a345
    </portGroup>
    <status>up</status>
    <mac>0015.5dc4.7bca</mac>
    <vm>TVM117-05</vm>

    <dvport>19b7be34-5f10-4bc5-a074-accee4bec810--d0307bc9-14b0-420e-aa50-44ff50ae7202</dvport
  >
  </properties>
</instance>
```

### Response Description

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

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## 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

```
<instance name="Ethernet10/4" url="/api/n1k/vem/10/uplink/Ethernet10%2F4">
  <properties>
    <module>10</module>
    <portChannelType>Eth</portChannelType>
    <packetsTx>193511832</packetsTx>
    <mtu>1500</mtu>
    <cdpSwitch>FI-16-A (SSI1526206H) </cdpSwitch>
    <cdpPort>Vethernet1204</cdpPort>
    <cdpNativeVlan>1992</cdpNativeVlan>
    <packetsRx>104028488</packetsRx>
    <portChannel>8</portChannel>

    <portChannelMembers>Ethernet10/2, Ethernet10/3, Ethernet10/4, Ethernet10/5, Ethernet10/6</portChannelMembers>
    <name>Ethernet10/4</name>
    <ethernet>Ethernet</ethernet>
    <status>up</status>
    <mode>pvlan</mode>
    <portProfile>data-vpc</portProfile>
    <speed>10 Gb/s</speed>
  </properties>
</instance>
```

### Response Description

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

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

### Resource Locator

[`"/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

```
<instance url="/api/n1k/hyper-v/vsem-system-info">
  <properties>
    <version>1.0</version>
```

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```
<description>Cisco Systems Nexus 1000V</description>
<model>Nexus 1000V Chassis 2.0</model>
<id>81df540d-aacc-4d1f-9f09-44c808eb2c8a</id>
<manufacturer>Cisco Systems</manufacturer>
<name>Cisco Nexus 1000V Chassis version 5.2(1)SM3(1.1) - N1000V</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-v2">
  <properties>
    <minVersion>301.100.0000.0000</minVersion>
    <extensionType>Forwarding</extensionType>
    <opdata>data-version 1.0
      switch-domain 2
      switch-name N1000V
      cp-version 5.2(1)SM3(1.1)
      control-vlan 1
      system-primary-mac 00:02:3d:7f:a0:03
      active-vsm packet mac 00:02:3d:7f:a0:04
      active-vsm mgmt mac 00:02:3d:7f:a0:02
      standby-vsm ctrl mac 0002-3d7f-a083
      inband-vlan 1
      svl-mode L3
      l3control-ipaddr 10.106.196.115
      upgrade state 0 mac 0002-3d7f-a083 l3control-ipv4 null
      net-seg 3af93d58-c96d-445a-b3dd-9590d674d75e access 1992
      net-seg 88f93cc5-7405-43a7-9b33-efcb4ddad5c6 access 2161
      net-seg 0ebcbdf7-c0c0-4ff3-9675-698a0f409334 access 2162
      net-seg e48dc9b6-ee88-4491-a80f-49288d52d2eb access 2163
      net-seg 92c32e91-71ba-403d-8062-27d981b3d672 access 2164
      net-seg cffae74-a1b2-4838-80fd-6c7c04bf0558 access 2165
```

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```

net-seg 27c00c7e-0d83-41b6-880a-51f1a0960479 access 2178
net-seg 527d100c-127d-40f5-9ef6-486d223e525e access 2179
net-seg f39463b1-06a3-4bf8-aa36-b61e82d9c75d access 2180
profile ee99ee2a-de7d-4b87-a3c5-ebab099873db trunk 1992,2161-2165,2178-2180
profile ee99ee2a-de7d-4b87-a3c5-ebab099873db mtu 1500
profile 914d3c32-d2d2-4b00-8056-75872f1b633a trunk 1992,2161-2165,2178-2180
profile 914d3c32-d2d2-4b00-8056-75872f1b633a mtu 1500
profile 999005a8-5761-47d7-b289-03163bd92f44 system
profile 999005a8-5761-47d7-b289-03163bd92f44 mtu 1500
profile a73d1355-d0c0-49e9-9aaf-bc6953d1b301 trunk 1992
profile a73d1355-d0c0-49e9-9aaf-bc6953d1b301 native-vlan 1992
profile a73d1355-d0c0-49e9-9aaf-bc6953d1b301 mtu 1500
profile 95c98f8b-3a0d-4a45-a90a-9e0be3fecbbe trunk 1992,2161-2165,2178-2180
profile 95c98f8b-3a0d-4a45-a90a-9e0be3fecbbe native-vlan 1992
profile 95c98f8b-3a0d-4a45-a90a-9e0be3fecbbe mtu 1500
profile 7e203625-e48c-4ed7-909c-6171ff04c228 trunk 1992,2161-2165,2178-2180
profile 7e203625-e48c-4ed7-909c-6171ff04c228 native-vlan 1992
profile 7e203625-e48c-4ed7-909c-6171ff04c228 mtu 1500
profile 766cba54-a914-4226-b4db-3dcff0145fca system
profile 766cba54-a914-4226-b4db-3dcff0145fca mtu 1500
sequence-number 34
end-version 1.0
</opdata>
<id>81df540d-aacc-4d1f-9f09-44c808eb2c8a</id>
<isSwitchTeamSupported>true</isSwitchTeamSupported>

<switchExtensionFeatureConfigId>2ABD62F9-0E77-4E4C-B7B0-B2DBAF9B7CBB</switchExtensionFeatureConfigId>
  <maxNumberOfPorts>16000</maxNumberOfPorts>

<drivernetcfginstanceid>9C8ED422-F33A-4F34-B771-E8B8D0539FD3</drivernetcfginstanceid>
  <name>N1000V</name>
  <mandatoryFeatureId>2ABD62F9-0E77-4E4C-B7B0-B2DBAF9B7CBB</mandatoryFeatureId>
  <maxNumberOfPortsPerHost>216</maxNumberOfPortsPerHost>
  <maxVersion>301.100.9999.9999</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.

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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.
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

```
<instance name="veth-nopolicy" url="/api/n1k/virtual-port-profile/veth-nopolicy">
  <properties>
    <state>enabled</state>
    <type>vethernet</type>
    <name>veth-nopolicy</name>
    <id>5a00e9a2-c490-4267-9c82-81b73c19e6b0</id>
    <maxNumberOfPortsPerHost>216</maxNumberOfPortsPerHost>
    <maxPorts>1024</maxPorts>
    <switchId>81df540d-aacc-4d1f-9f09-44c808eb2c8a</switchId>
  </properties>
</instance>
```

### Response Description

Property	Description
state	State of the port profile.
type	Type of port profile.
name	User-friendly profile name.

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Property	Description
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

```
<instance name="mgmt-uplink" url="/api/n1k/uplink-port-profile/mgmt-uplink">
  <properties>
    <switchId>81df540d-aacc-4d1f-9f09-44c808eb2c8a</switchId>
    <name>mgmt-uplink</name>
    <id>a73d1355-d0c0-49e9-9aaf-bc6953d1b301</id>
    <maxPorts>32</maxPorts>
    <networkSegmentPool>mgmt-pool,transport-pool</networkSegmentPool>
  </properties>
</instance>
```

### Response Description

Property	Description
networkSegmentPool	Network segment pool(s) allowed on this uplink
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).

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### 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>
      <source>1</source>
      <direction>Both</direction>
    </sources>
      <dscp>0</dscp>
      <shutdown>>false</shutdown>
      <ttl>255</ttl>
      <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

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Property	Description	Writable
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
ttl	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
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>
```



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```

        <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"]

### Description

Retrieves information about the Cisco Nexus 1000V port profiles.

### Response Sample

```

<instance
name="dynpp_16419159-70f0-4acb-88e3-5a49a4dd486a_1da31eb7-89fc-4a75-9ee0-8bd3f18a2921"
url="/api/n1k/port-profile/dynpp_16419159-70f0-4acb-88e3-5a49a4dd486a_1da31eb7-89fc-4a75-9
ee0-8bd3f18a2921">
    <properties>
        <profileConfig>switchport private-vlan mapping 2171 2172-2174</profileConfig>
        <minPorts>1</minPorts>
        <description>NSM created profile. Do not modify or delete this
profile.</description>
        <switchportMode>private-vlan</switchportMode>
        <state>true</state>
        <portBinding>static</portBinding>
    </properties>
</instance>
<name>dynpp_16419159-70f0-4acb-88e3-5a49a4dd486a_1da31eb7-89fc-4a75-9ee0-8bd3f18a2921</nam
e>
    <inherit>dhcp-policy</inherit>
    <portGroupName></portGroupName>
    <maxPorts>32</maxPorts>

```

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```

        <type>Vethernet</type>
    </properties>
</instance>
instance name="NSM_template_vlan" url="/api/n1k/port-profile/NSM_template_vlan">
    <properties>
        <minPorts>1</minPorts>
        <description>NSM default port-profile for VLAN networks. Do not
delete.</description>
        <state>true</state>
        <name>NSM_template_vlan</name>
        <shutdown>false</shutdown>
        <portGroupName></portGroupName>
        <portBinding>static</portBinding>
        <maxPorts>32</maxPorts>
        <type>Vethernet</type>
    </properties>
</instance>
<instance name="uplink" url="/api/n1k/port-profile/uplink">
    <properties>
        <minPorts>1</minPorts>
        <description></description>
        <state>true</state>
        <name>uplink</name>
        <shutdown>false</shutdown>
        <portGroupName></portGroupName>
        <portBinding>static</portBinding>
        <maxPorts>512</maxPorts>
        <type>Ethernet</type>
    </properties>
</instance>
<instance name="acl-egress" url="/api/n1k/port-profile/acl-egress">
    <properties>
        <profileConfig>ip port access-group ip-acl out</profileConfig>
        <minPorts>1</minPorts>
        <description></description>
        <state>true</state>
        <name>acl-egress</name>
        <shutdown>false</shutdown>
        <portGroupName>acl-egress</portGroupName>
        <portBinding>static</portBinding>
        <maxPorts>32</maxPorts>
        <type>Vethernet</type>
    </properties>
</instance>
<instance
name="dynpp_5a00e9a2-c490-4267-9c82-81b73c19e6b0_9c163165-5ad5-480e-a0a6-eb3748952599"
url="/api/n1k/port-profile/dynpp_5a00e9a2-c490-4267-9c82-81b73c19e6b0_9c163165-5ad5-480e-a
0a6-eb3748952599">
    <properties>
        <minPorts>1</minPorts>
        <description>NSM created profile. Do not modify or delete this
profile.</description>
        <switchportMode>access</switchportMode>
        <portBinding>static</portBinding>
        <state>true</state>

<name>dynpp_5a00e9a2-c490-4267-9c82-81b73c19e6b0_9c163165-5ad5-480e-a0a6-eb3748952599</nam
e>

        <inherit>veth-nopolicy</inherit>
        <portGroupName></portGroupName>

<switchportAccessBridgeDomain>&quot;vxlan_50254&quot;</switchportAccessBridgeDomai
n>

        <maxPorts>32</maxPorts>

```

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```

    <type>Vethernet</type>
  </properties>
</instance>

```

### Response Description

Property	Description
profileConfig	Other port configs of port-profile
description	description of port-profile either VSM generated or user defined
switchportMode/switchportAccessB ridgeDomain	mode of the port-profile
portBinding	port binding behaviour of the port-profile
inherit	inherited port-profile
portGroupName	name of port group
shutdown	flag set if the port-profile is in shutdown state
maxPorts	Maximum number of ports allowed per port profile.
type	Type of port profile (vEthernet, Ethernet).
name	Name of the port profile.
minPorts	Minimum number of ports allowed per port profile.
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

```

<instance name="acl-egress" url="/api/port-profile/acl-egress">
  <properties>
    <profileConfig>ip port access-group ip-acl out</profileConfig>
    <minPorts>1</minPorts>
    <description></description>
    <state>true</state>
    <name>acl-egress</name>
    <shutdown>>false</shutdown>
    <portGroupName>acl-egress</portGroupName>
    <portBinding>static</portBinding>
    <maxPorts>32</maxPorts>
    <type>Vethernet</type>
  </properties>
</instance>
<instance name="uplink" url="/api/port-profile/uplink">
  <properties>
    <minPorts>1</minPorts>
    <description></description>
    <state>true</state>
    <name>uplink</name>
    <shutdown>>false</shutdown>
    <portGroupName></portGroupName>
    <portBinding>static</portBinding>
    <maxPorts>512</maxPorts>
  </properties>
</instance>

```

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```
<type>Ethernet</type>
</properties>
</instance>
```

### 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
shutdown	Flag to set port-profile either as shutdown or no shutdown	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

```
<instance name="HNV" url="/api/n1k/logical-network/HNV">
  <properties>
    <description></description>
    <guid>1d0b887e-a3ee-4e88-b6c2-91f71ac27c37</guid>
    <isolated>false</isolated>
    <name>HNV</name>
  </properties>
</instance>
<instance name="VLAN" url="/api/n1k/logical-network/VLAN">
  <properties>
    <description></description>
    <guid>41274e5f-aa5f-4f0d-9a2b-da5338a6fb1f</guid>
    <isolated>true</isolated>
    <name>VLAN</name>
  </properties>
</instance>
<instance name="VXLAN-LN1" url="/api/n1k/logical-network/VXLAN-LN1">
  <properties>
    <description></description>
```

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```
<guid>fallcefc-aaae-415f-9d3a-8824bab3aa34</guid>
<isolated>true</isolated>
<name>VXLAN-LN1</name>
</properties>
</instance>
```

### Response Description

Property	Description	Writeable?
guid	unique VSM generated id	No
isolated	Displays whether logical network is isolated or not.	Yes
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

```
<instance name="hmv-pool" url="/api/n1k/network-segment-pool/hmv-pool">
  <properties>
    <logicalNetworkId>1d0b887e-a3ee-4e88-b6c2-91f71ac27c37</logicalNetworkId>
    <id>3075d68f-4ecc-4745-bed0-71098ac34e4a</id>
    <supportsVMNetworkProvisioning>true</supportsVMNetworkProvisioning>
    <segmentType>HNV</segmentType>
    <name>hmv-pool</name>
    <logicalNetworkName>HNV</logicalNetworkName>
    <intraPortCommunication>true</intraPortCommunication>
    <maximumNetworkSegmentsPerVMNetwork>2000</maximumNetworkSegmentsPerVMNetwork>
    <supportsIpPool>true</supportsIpPool>
    <multicastIp></multicastIp>
  </properties>
</instance>
<instance name="Mickey" url="/api/n1k/network-segment-pool/Mickey">
  <properties>
    <logicalNetworkId>41274e5f-aa5f-4f0d-9a2b-da5338a6fb1f</logicalNetworkId>
    <id>b372eece-6221-41ae-a782-e31602758f59</id>
    <supportsVMNetworkProvisioning>false</supportsVMNetworkProvisioning>
    <segmentType>VLAN</segmentType>
    <name>Mickey</name>
    <logicalNetworkName>VLAN</logicalNetworkName>
    <intraPortCommunication>true</intraPortCommunication>
    <maximumNetworkSegmentsPerVMNetwork>2000</maximumNetworkSegmentsPerVMNetwork>
    <supportsIpPool>true</supportsIpPool>
    <multicastIp></multicastIp>
  </properties>
```

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```
</instance>
<instance name="Donald-VX98" url="/api/n1k/network-segment-pool/Donald-VX98">
  <properties>
    <logicalNetworkId>271790fb-dd9b-4a53-babe-7e7872dd8aa6</logicalNetworkId>
    <id>b2f323e7-e4c4-4322-b27e-71e669d52b7c</id>
    <supportsVMNetworkProvisioning>true</supportsVMNetworkProvisioning>
    <segmentType>VXLAN</segmentType>
    <name>Donald-VX98</name>
    <logicalNetworkName>VXLAN-LN98</logicalNetworkName>
    <intraPortCommunication>true</intraPortCommunication>
    <maximumNetworkSegmentsPerVMNetwork>2000</maximumNetworkSegmentsPerVMNetwork>
    <supportsIpPool>true</supportsIpPool>
    <multicastIp>230.1.2.98</multicastIp>
  </properties>
</instance>
```

### Response Description

Property	Description	Writeable
logicalNetworkId	logical network identifier	No
segmentType	Indicates the type of segment, valid values are; <ul style="list-style-type: none"> <li>vlan</li> <li>vxlan</li> <li>hmv.</li> </ul>	Yes
maximumNetworkSegmentsPerVMNetwork	Maximum network segments per VM network.	No
muticastIp	Muticast group IP used for VXLAN.	Yes
intraPortCommunication	Whether intraport communication exists.	Yes
logicalNetworkName	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.

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### Response Sample

```
<instance name="PA-ippool" url="/api/n1k/ip-pool-template/PA-ippool">
  <properties>
    <netbt>false</netbt>
    <description></description>
    <ipAddressSubnet>255.255.255.0</ipAddressSubnet><dnsSuffixList></dnsSuffixList>
    <addressFamily>IPv4</addressFamily>
    <dnsServersList></dnsServersList>
    <addressRangeEnd>196.1.1.254</addressRangeEnd>
    <networkAddress>196.1.1.0/24</networkAddress>
    <addressRangeStart>196.1.1.2</addressRangeStart>
    <gateway></gateway>
    <name>PA-ippool</name>
    <netbiosServersList></netbiosServersList>
    <reservedIpList></reservedIpList>
  </properties>
</instance>
```

### 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 Ethernet Network Segments

### Resource Locator

[["/api/n1k/ethernet-network-segment"](#)] [Writeable]

### Description

Retrieves a list of ethernet network segments. An ethernet network segment represents a HNV provider address subnet.

```
<instance name="PA-NS" url="/api/n1k/ethernet-network-segment/PA-NS">
```

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```
<properties>
  <segmentId>0</segmentId>
  <networkSegmentPoolName>hmv-pool</networkSegmentPoolName>
  <isolationType>vlan</isolationType>
  <id>86add575-f45c-4376-8b7f-4b0c4438bcce</id>
  <dhcp>false</dhcp>
  <addressFamily>IPv4</addressFamily>
  <maxNumberOfPorts>2000</maxNumberOfPorts>
  <ipPoolId>59028c64-b438-4fea-866c-1223ec7ccd67</ipPoolId>
  <ipPoolName>PA-ippool</ipPoolName>
  <name>PA-NS</name>
  <ipSubnet>196.1.1.0/24</ipSubnet>
  <networkSegmentPoolId>3075d68f-4ecc-4745-bed0-71098ac34e4a</networkSegmentPoolId>
  <vlan>100</vlan>
  <ipSubnetId>546c6507-423a-4349-942c-c6b795658493</ipSubnetId>
</properties>
</instance>
```

### Response Description

Property	Description	Writeable?
segmentId	Displays the segment identifier	Yes
networkSegmentPoolName	Network segment pool to which this network segment belongs to.	Yes
isolationType	Type of network segment, valid values are: <ul style="list-style-type: none"> <li>VLAN</li> <li>VXLAN</li> <li>HNV</li> </ul>	No
id	Unique identifier of the Ethernet network segment.	No
dhcp	Dhcp flag	No
addressFamily	IPv4 or IPv6 address family	
maxNumberOfPorts	Maximum number of ports	Yes
ipPoolId	The id of the IP pool that the network segment inherits.	No
ipPoolName	Name of the IP pool that is inherited in the network segment	Yes
name	Name of the Ethernet network segment	Yes <sup>1</sup>
ipSubnet	IP subnet for the network segment	Yes
networkSegmentPoolId	ID of the network segment pool that this network segment inherits	No
vlan	Network segment VLAN	Yes
ipSubnetId	IP subnet Id	No

1. Indicates that the property value can be set using the REST API during creation but you can not update it later.



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

### Resource Locator

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

### Description

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

### Response Sample

```
<instance name="hmv-vmsubnet127" url="/api/n1k/network-segment/hmv-vmsubnet127">
  <properties>
    <isolationType>hmv</isolationType>
    <networkSegmentPoolName></networkSegmentPoolName>
    <maxNumberOfPorts>2000</maxNumberOfPorts>
    <ipSubnet></ipSubnet>
    <networkSegmentPoolId></networkSegmentPoolId>
    <ipSubnetId></ipSubnetId>
    <segmentId>820556</segmentId>
    <id>56ad103d-716f-4a2d-8e16-5fa2b5f9d118</id>
    <addressFamily>IPv4</addressFamily>
    <system>FALSE</system>
    <vmNetworkId>14aa3ebf-f3b6-49ac-80fd-83a18d6019ba</vmNetworkId>
    <vmNetworkName>hmv-vmn127_14aa3ebf-f3b6-49ac-80fd-83a18d6019ba</vmNetworkName>
    <name>hmv-vmsubnet127</name>
    <dhcp>>false</dhcp>
    <intraPortCommunication>>true</intraPortCommunication>
    <ipPoolId></ipPoolId>
    <vlan>0</vlan>
    <ipPoolName></ipPoolName>
  </properties>
</instance>
<instance name="vxlan-292" url="/api/n1k/network-segment/vxlan-292">
  <properties>
    <isolationType>vxlan</isolationType>
    <networkSegmentPoolName>Donald-VX39</networkSegmentPoolName>
    <maxNumberOfPorts>2000</maxNumberOfPorts>
    <ipSubnet>171.39.0.0/16</ipSubnet>
    <networkSegmentPoolId>868fc0ea-492a-42b8-b0d9-bbc8064944fe</networkSegmentPoolId>
    <ipSubnetId>b1daee8f-d87c-446f-90da-fd8dad11b0c8</ipSubnetId>
    <segmentId>14730</segmentId>
    <id>232097bc-f392-4515-ad81-af7685559ffb</id>
    <addressFamily>IPv4</addressFamily>
    <system>FALSE</system>
    <vmNetworkId>0eb4a549-0e1c-4f49-8417-63100e903857</vmNetworkId>
    <vmNetworkName>vxlan-292_0eb4a549-0e1c-4f49-8417-63100e903857</vmNetworkName>
    <name>vxlan-292</name>
    <dhcp>>false</dhcp>
    <intraPortCommunication>>true</intraPortCommunication>
    <ipPoolId></ipPoolId>
    <vlan>0</vlan>
    <ipPoolName></ipPoolName>
  </properties>
</instance>
<instance name="vlan955" url="/api/n1k/network-segment/vlan955">
  <properties>
    <isolationType>vlan</isolationType>
    <networkSegmentPoolName>vlan-scale</networkSegmentPoolName>
    <maxNumberOfPorts>2000</maxNumberOfPorts>
    <ipSubnet></ipSubnet>
    <networkSegmentPoolId>898c58da-7440-42c9-bdc6-f6e34ffdealb</networkSegmentPoolId>
    <ipSubnetId></ipSubnetId>
```

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```
<segmentId>0</segmentId>
<id>011f2eb1-9392-43c9-8868-3058f12ded9b</id>
<addressFamily>IPv4</addressFamily>
<system>FALSE</system>
<vmNetworkId>bb614005-66df-41bc-bd65-839a3d869308</vmNetworkId>
<vmNetworkName>vlan955</vmNetworkName>
<name>vlan955</name>
<dhcp>>false</dhcp>
<intraPortCommunication>>true</intraPortCommunication>
<ipPoolId></ipPoolId>
<vlan>955</vlan>
<ipPoolName></ipPoolName>
</properties>
</instance>
```

### Response Description

Property	Description	Writeable?
segmentId	Displays the segment identifier	Yes
intraportcommunication	Whether intraport communication exists.	Yes
isolationType	Type of network segment, valid values are: <ul style="list-style-type: none"> <li>VLAN</li> <li>VXLAN</li> <li>HNV</li> </ul>	No
dhcp	Dhcp flag	No
addressFamily	IPv4 or IPv6 address family	
maxNumberOfPorts	Maximum number of ports	Yes
ipSubnet	IP subnet for the network segment	Yes
networkSegmentPoolName	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
name	Name of network segment.	Yes <sup>1</sup>
vmNetworkName	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 Network Uplink

### Resource Locator

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

### Description

Retrieves a list of network uplinks. A network uplink can contain more than one network segment pool.

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### Response Sample

```
<instance name="sample-uplink" url="/api/n1k/hyper-v/network-uplink/sample-uplink">
  <properties>
    <name>sample-uplink</name>
    <publish>sample-uplink</publish>
    <nativeNetworkSegment>vlan-10</nativeNetworkSegment>
    <systemNetwork>true</systemNetwork>
    <portProfile>sample-policy</portProfile>

    <networkSegmentPool>sample-pool</networkSegmentPool><networkSegmentPool>sample-pool1</networkSegmentPool>
  </properties>
</instance>
```

### Response Description

Property	Description	Writeable
name	Name of the network uplink	Yes <sup>1</sup>
publish	Publish name of the network uplink	Yes
nativeNetworkSegment	Native network segment name	Yes
systemNetwork	Flag to set the network uplink as system uplink	Yes
portProfile	Inherited policy port-profile	Yes
networkSegmentPool	Network segment pools to be allowed on the network uplink	Yes

1. Indicates that the property value can be set using the REST API during creation but you can not update it later.

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

### Resource Locator

["/api/n1k/hyper-v/vm-network"] [Not 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

```
<instance name="vlan-10" url="/api/n1k/hyper-v/vm-network/vlan-10">
  <properties>
    <logicalNetworkId>404e0645-7112-4f27-9f7d-e47cefe4fae2</logicalNetworkId>
    <logicalNetworkName>VLAN</logicalNetworkName>
    <id>1819801b-2fa6-4845-8344-4fd74ee90bcf</id>
    <name>vlan-10</name>
  </properties>
</instance>
```

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### Response Description

Property	Description	Writeable
logicalNetworkId	ID of logical network	No
logicalNetworkName	Name of the logical network	Yes <sup>1</sup>
name	name of vm network	Yes
id	id of the vm network	No

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

## 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)	Added span, port-profile(write capability), and user resources APIs.
REST API	5.2(1)SM3(1.1)	Added Ethernet Network Segment and Network Uplink REST APIs.