



SD-WAN 2.15 (Viptela / Versa) Collector Optional Configurations Guide

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Table of Contents

1 Introduction	2
2 Optional Configurations	3
2.1 Flow Device Mapping	3
2.2 Object Mapping	3
2.3 Configure Custom Sites	5
2.4 Stop Collecting Data from Tenant	9
2.5 Tenant Name Location in vManage	11
2.6 Add Location Names to Device Templates	13
3 Verify Data Appears In SevOne NMS	15
3.1 for Viptela	15
3.2 for Versa	17
4 Object Type Indicator Optimization	25
4.1 for Viptela	25
4.2 for Versa	29

SevOne Documentation

All documentation is available from the SevOne Support customer portal.

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1 Introduction

This document describes the optional configurations to be set from your SevOne NMS appliance you are sending SD-WAN collector data to. It also provides details on how to configure custom sites, verify if SD-WAN collector data is correctly appearing from SevOne NMS, etc.

2 Optional Configurations

2.1 Flow Device Mapping

The Device Mapping page enables you to map a SevOne device to a flow device.

By default, NMS automatically maps the SevOne device to the respective flow device if SevOne device IP and flow device IP match.

The screenshot shows two screenshots of the SevOne NMS interface. The top screenshot is the 'Device Manager' page, showing a table of devices. The bottom screenshot is the 'Flow Interface Manager' page, showing a table of flow interfaces.

Group	Name	Device IP	Objects	Policy	Policy Name	Policy Frequency	Discovery	Priority	Latitude	Longitude	Actions
Everything	NEW_YORK	46.115.103.154	34	SevOne Appliance	300						
	vbranch1: SevOne	192.168.12.1	26	SevOne Appliance	300						
	vbranch2: SevOne	192.168.13.1	26	SevOne Appliance	300						
	vhut1: SevOne	192.168.11.1	26	SevOne Appliance	300						

Device	IP Address	Total Flows	Number of Interfaces	Allowed Directions	Peer	Actions
Seattle: SevOne	10.2.64.101	0.56 per / sec	2	2/2 100%	SevOne Appliance	
NewYork: SevOne	10.2.64.102	0.4 per / sec	2	2/2 100%	SevOne Appliance	
Los-Angeles: SevOne	10.2.64.103	0.36 per / sec	2	2/2 100%	SevOne Appliance	
NEW_YORK	46.115.103.154	0 per / sec	2	4/4 100%	SevOne Appliance	
MOUNTAIN_VIEW	72.54.159.192	0 per / sec	2	4/4 100%	SevOne Appliance	
Controller: SevOne	172.21.42.42	0.34 per / sec	2	2/2 100%	SevOne Appliance	
vhut1: SevOne	192.168.11.1	6.8 per / sec	11	16/16 100%	SevOne Appliance	
vbranch1: SevOne, vbranch2: SevOne	192.168.12.1	7.43 per / sec	7	16/16 100%	SevOne Appliance	
vbranch2: SevOne	192.168.13.1	6.24 per / sec	8	15/15 100%	SevOne Appliance	

Users can also manually add a device mapping. Steps required to manually add a device mapping can be found in **SevOne NMS System Administration Guide** > section **Map Flow Devices**. After device mapping is done, users can generate FlowFalcon report for Device Group on the basis of Device mapping if the mapped device falls under a device group.

2.2 Object Mapping

The Object Mapping page enables you to map the indicators on the objects that plugins poll to a flow interface. This enables you to display a FlowFalcon report of the flow data that is related to the poll data from an indicator that appears in an Instant Graph.

Users can generate FlowFalcon report for Object Group on the basis of Object mapping. As of SD-WAN Viptela 2.8 release, the solution will create Object mappings by default for the SD-WAN Tunnel and SD-WAN Interface Objects. For any other objects, users will have to manually add the Object mappings. Steps required to manually add an object mapping can be found in **SevOne NMS System Administration Guide** > section **Map Flow Objects**.

⚠ The device interface or tunnel object indicator should be mapped to the appropriate direction Incoming/Outgoing.

Mapping a device interface object

The screenshot shows the 'Object Mapping' page in the SevOne NMS. It displays a table with columns: Object, Indicator, Flow Device, Flow Interface, Flow Direction, View, Filter, and Actions.

Object	Indicator	Flow Device	Flow Interface	Flow Direction	View	Filter	Actions
vhut1: SevOne	xStats	gndr - WAN interface-type: gndr...	Unknown (192.168.11.1) [x10]	1	Incoming	SDWAN-Viptela-AugmentedFlow	
vhut1: SevOne	xStats	gndr - WAN interface-type: gndr...	Unknown (192.168.11.1) [x10]	1	Outgoing	SDWAN-Viptela-AugmentedFlow	

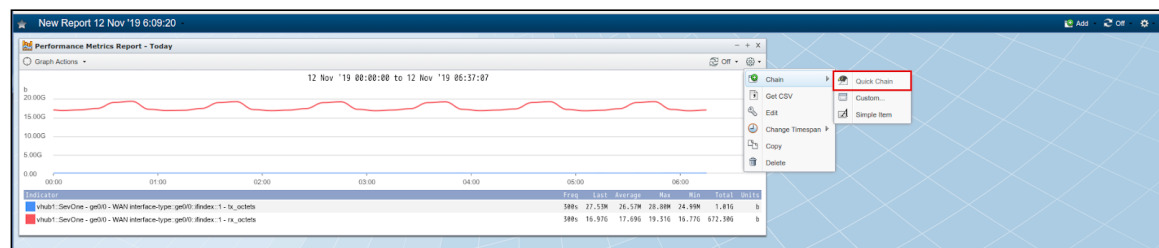
Mapping a tunnel object

Device	Plugin	Object	Indicator	Flow Device	Flow Interface	Flow Direction	View	Filter	Actions
vhub1-DevOne	xStats	ge0/0 - WAN interface-type: ge0/0...	rx_packets	Unknown (192.168.11.1) [v10]	1	Incoming	SDWAN Viptela AugmentedFlow		
vhub1-DevOne	xStats	ge0/0 - WAN interface-type: ge0/0...	tx_packets	Unknown (192.168.11.1) [v10]	1	Outgoing	SDWAN Viptela AugmentedFlow		
vhub1-DevOne	xStats	vhub1-ge0/0-ethernet1-ge0/0 - F...	tx_packets	Unknown (192.168.11.1) [v10]	1	Outgoing	SDWAN Viptela AugmentedFlow	test	

After adding the object mapping, the user is now able to quick chain the performance metrics report to the FlowFalcon report for the indicator. Follow the steps below to see the flows report for the mapped object and the indicator.

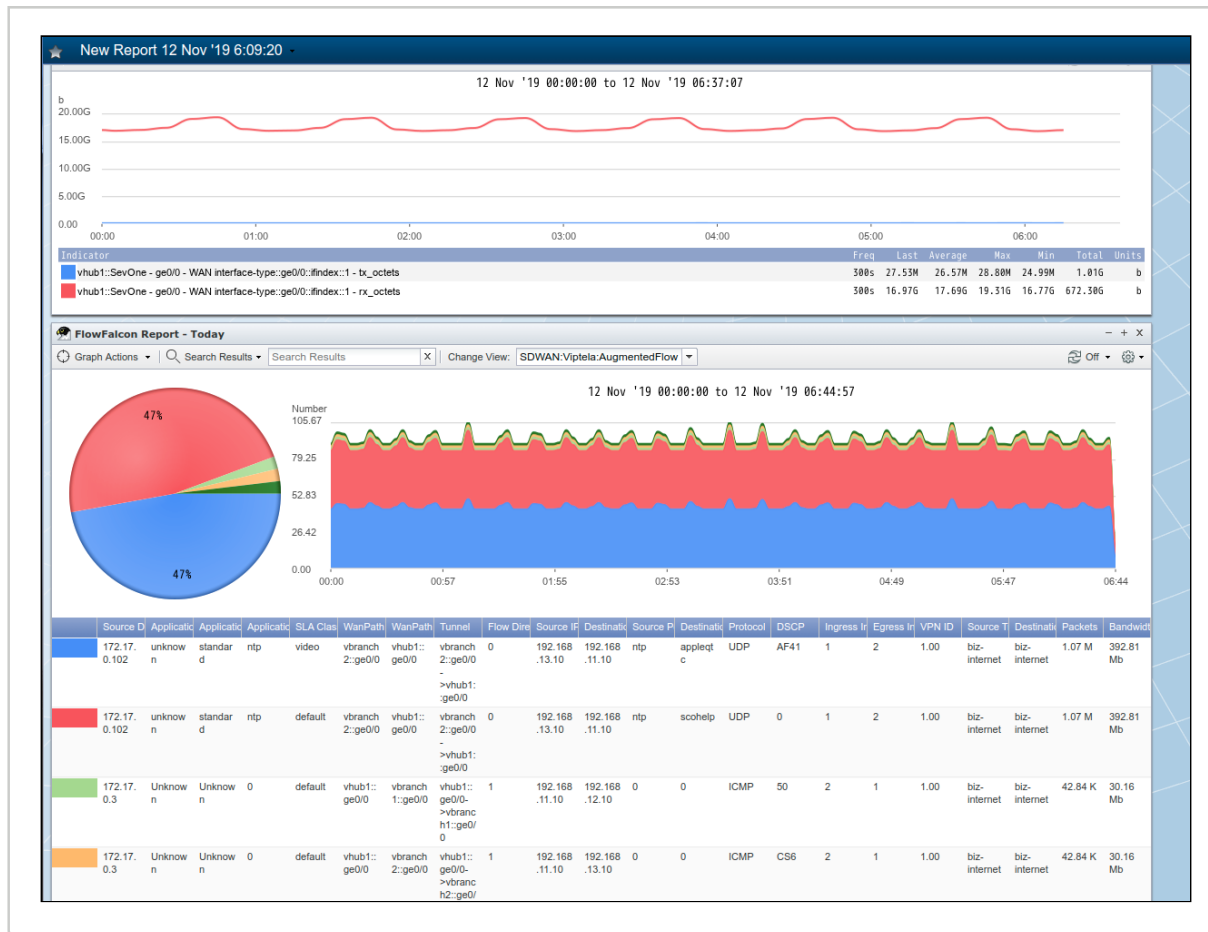
- Navigate to **Reports > Create Report**. Select **Performance Metrics**.
- Select appropriate Resources the same as the mapped object and the indicator.
- Create the Performance Metrics report by clicking on Finish. A Performance Metrics report will be generated.
- Click on the **Setting** icon on the top-right corner of the report. Select **Chain > Quick Chain**.

Performance Metrics Report



- This will automatically create the chained FlowFalcon for the selected object and the indicator as shown in the image below.

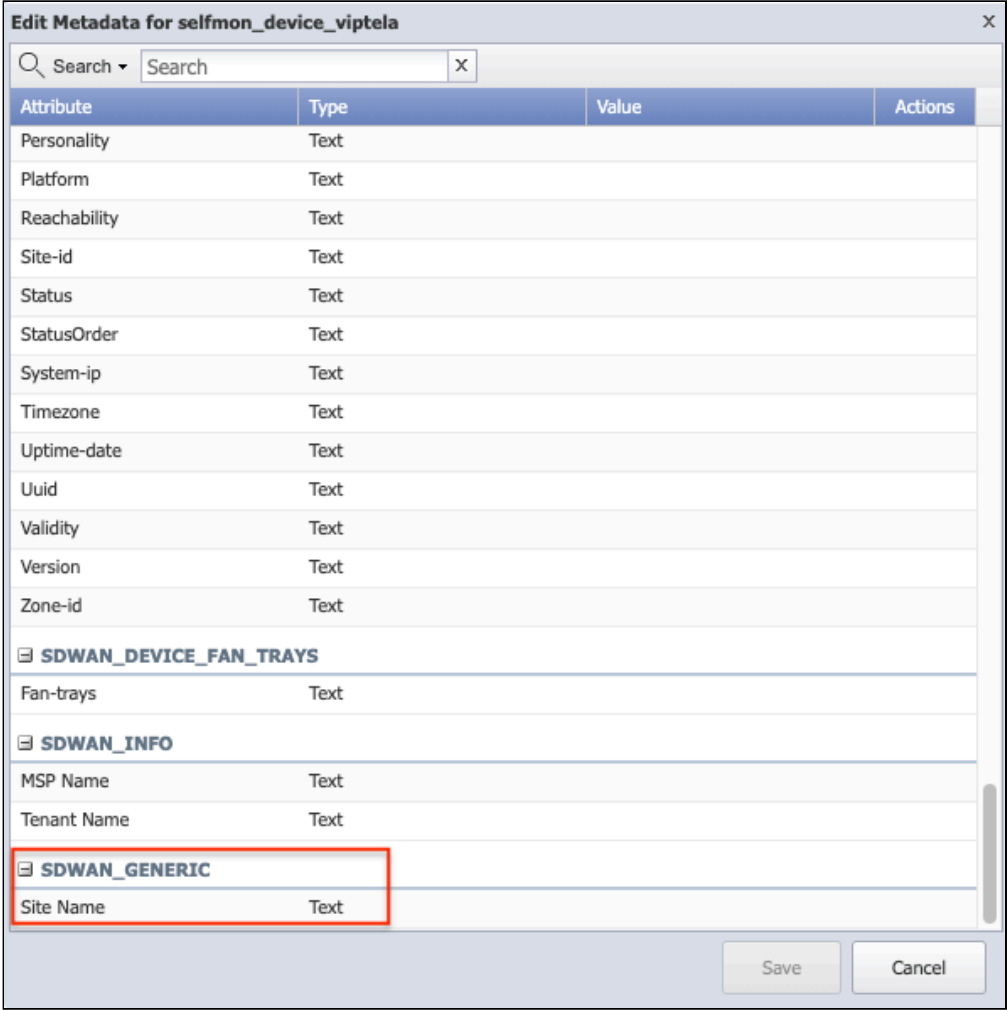
Quick Chain Report



2.3 Configure Custom Sites

Execute the following steps to configure custom sites for the Viptela collector.

1. To access the SevOne NMS login page, navigate to the appropriate URL in your browser.
2. From the navigation bar, click on **Devices** menu and select **Device Manager**.
3. Select the device and click on  under the **Actions** column to display the **Edit Metadata** pop-up to manage the values for the metadata attributes you want to associate with the device.
4. Scroll-down to **SDWAN_GENERIC**.



Edit Metadata for selfmon_device_viptela

Search Search X

Attribute	Type	Value	Actions
Personality	Text		
Platform	Text		
Reachability	Text		
Site-id	Text		
Status	Text		
StatusOrder	Text		
System-ip	Text		
Timezone	Text		
Uptime-date	Text		
Uuid	Text		
Validity	Text		
Version	Text		
Zone-id	Text		
SDWAN_DEVICE_FAN_TRAYS			
Fan-trays	Text		
SDWAN_INFO			
MSP Name	Text		
Tenant Name	Text		
SDWAN_GENERIC			
Site Name	Text		

Save Cancel

5. Place your cursor on the Site Name you want to provide a custom name to and click on  icon.

Edit Metadata for selfmon_device_viptela

Search Search X

Attribute	Type	Value	Actions
Personality	Text		
Platform	Text		
Reachability	Text		
Site-id	Text		
Status	Text		
StatusOrder	Text		
System-ip	Text		
Timezone	Text		
Uptime-date	Text		
Uuid	Text		
Validity	Text		
Version	Text		
Zone-id	Text		
SDWAN_DEVICE_FAN_TRAYS			
Fan-trays	Text		
SDWAN_INFO			
MSP Name	Text		
Tenant Name	Text		
SDWAN_GENERIC			
Site Name	Text		Key X

Save Cancel

6. Enter the Site Name in the text field available and click on the **Update** button. For example, **viptelaSN**.

i Site Name does not support the following characters

- forward-slash - /
- back-slash - \
- double-colon - ::
- double-quotes - "
- less-than - <
- greater-than - >
- pipe - |
- tab
- new-line

Edit Metadata for selfmon_device_viptela

Search

Search

X

Attribute	Type	Value	Actions
Reachability	Text		
Site-id	Text		
Status	Text		
StatusOrder	Text		
System-ip	Text		
Timezone	Text		
Uptime-date	Text		
Uuid	Text		
Validity	Text		
Version	Text		
Zone-id	Text		
SDWAN_DEVICE_FAN_TRAYS			
Fan-trays	Text		
SDWAN_INFO			
MSP Name	Text		
Tenant Name	Text		
SDWAN_GENERIC			
Site Name	Text	viptelaSN	

Update

Cancel

Save

Cancel

- Click on **Save** button to save the custom Site Name.

Attribute	Type	Value	Actions
Personality	Text		
Platform	Text		
Reachability	Text		
Site-id	Text		
Status	Text		
StatusOrder	Text		
System-ip	Text		
Timezone	Text		
Uptime-date	Text		
Uuid	Text		
Validity	Text		
Version	Text		
Zone-id	Text		
SDWAN_DEVICE_FAN_TRAYS			
Fan-trays	Text		
SDWAN_INFO			
MSP Name	Text		
Tenant Name	Text		
SDWAN_GENERIC			
Site Name	Text	viptelaSN	

Save Cancel

i If there is no site name available for the device from the device metadata, the collector will show **None::Tenant Name** under the Device Description column for that device. This is applicable only when the custom site grouping feature is enabled for the collector.

! Since the **cronjobs** run every 1 hour, it can take at most 1 hour for the update to take effect.

2.4 Stop Collecting Data from Tenant

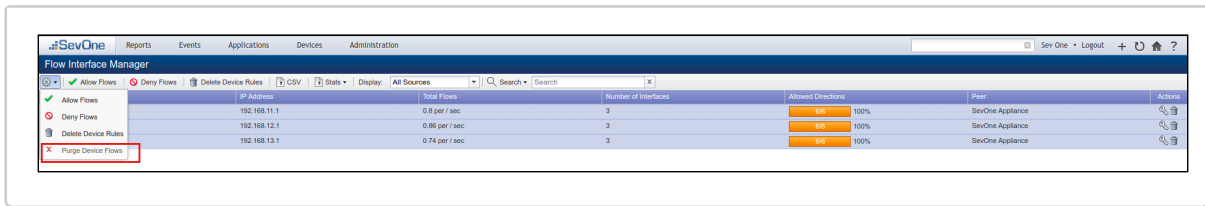
Execute the following steps.

1. To stop collecting data for a particular tenant, execute the following command.

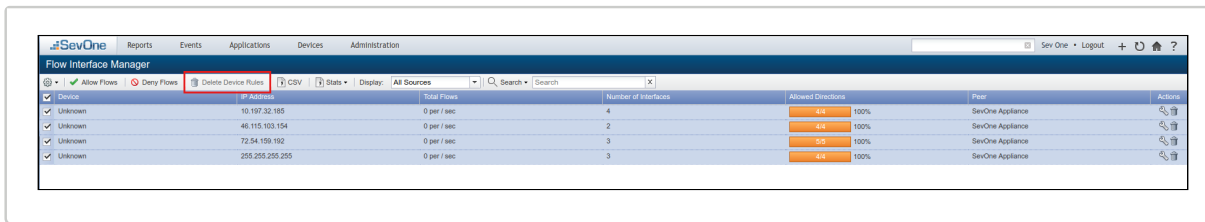
```
$ helm uninstall <helm_deployment_name>
```

where, **<helm_deployment_name>** is the name of the helm deployment related to a particular tenant you want to stop collecting data for.

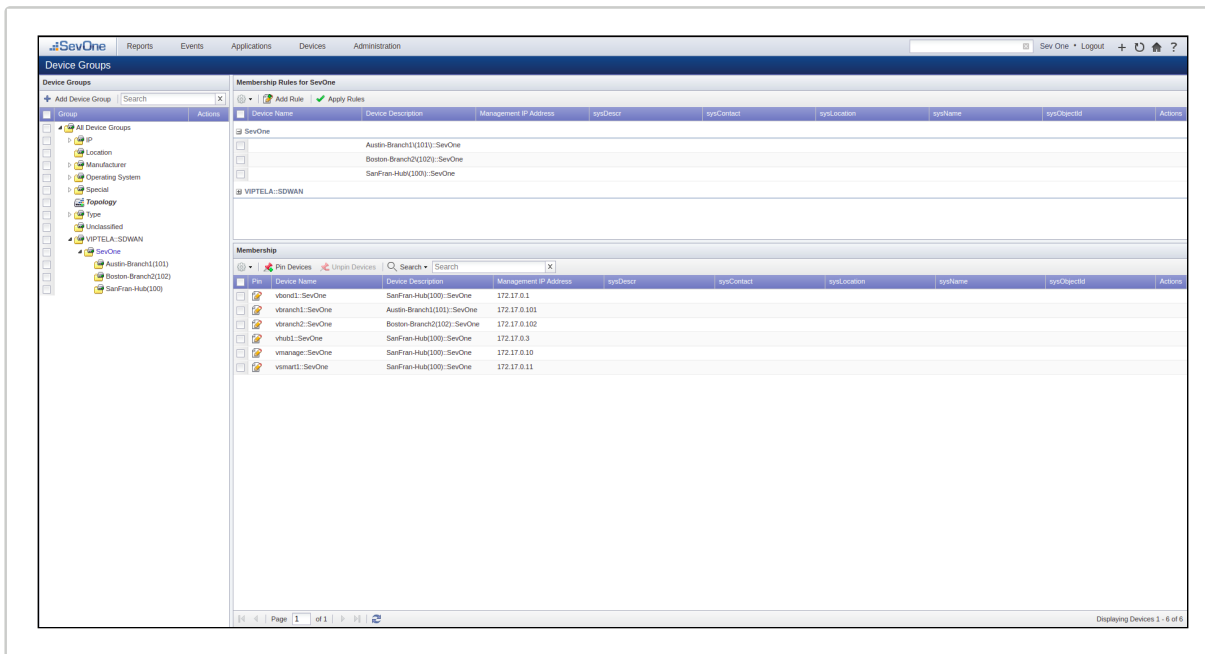
- After stopping the collection of data for the tenant, manually cleanup to remove the tenant specific data from the NMS. To purge the flows data, from the navigation bar, go to **Administration**, select **Flow Configuration**, and then select **Flow Interface Manager**. Select the devices from the list specific to the tenant, click on the wrench icon, and **Purge Device Flows**.



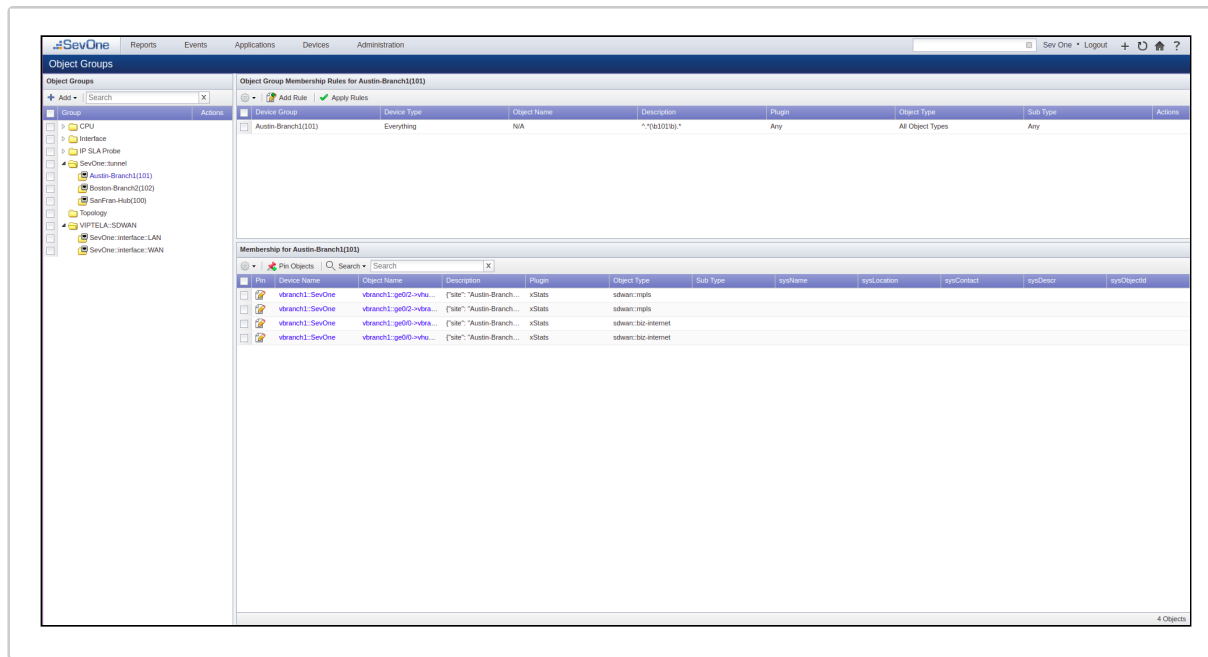
- To finally delete the data, select the devices specific to the tenant from the list on the **Flow Interface Manager**, click on the **Delete Device Rules** button.



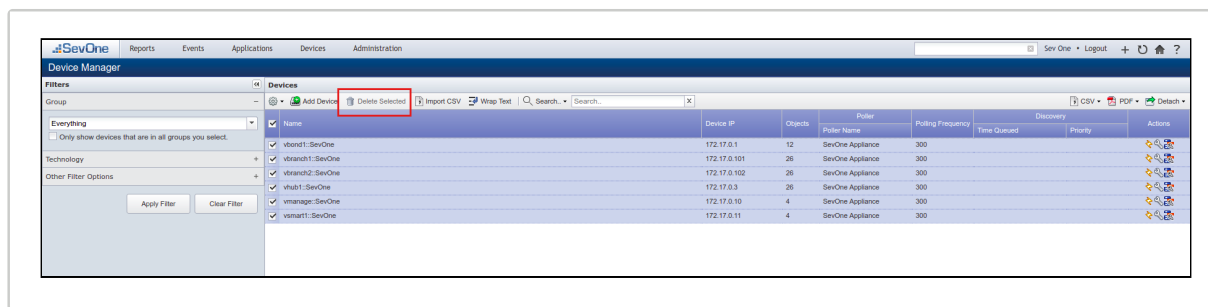
- To delete the tenant device group, from the navigation bar, go to **Devices**, select **Grouping**, and then select **Device Groups**. Hover over the tenant device group and click on the  icon. Click on **OK** to confirm.



- To delete the tenant object groups, from the navigation bar, go to **Devices**, select **Grouping**, and then select **Object Groups**. Hover over the tenant object group and click on  icon. Click on **OK** to confirm.



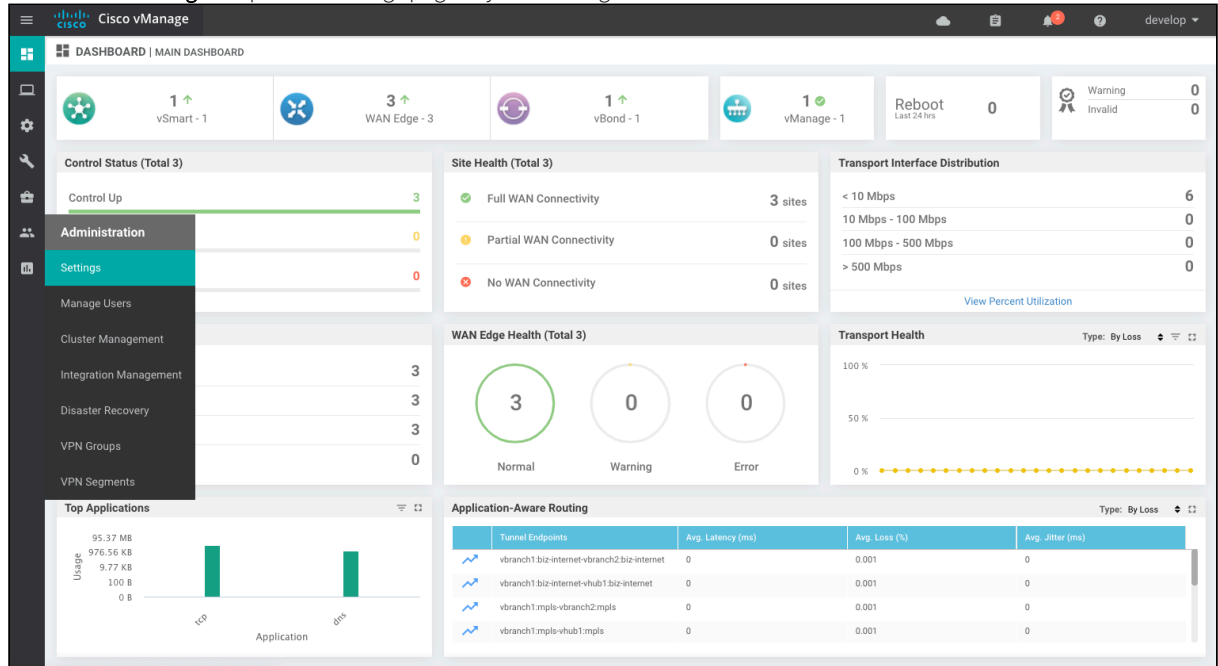
6. To delete the devices for this tenant, from the navigation bar, go to **Devices** and then select **Device Manager**. Select the devices for this tenant and click on **Delete Selected**. Then click on **OK** to confirm.



2.5 Tenant Name Location in vManage

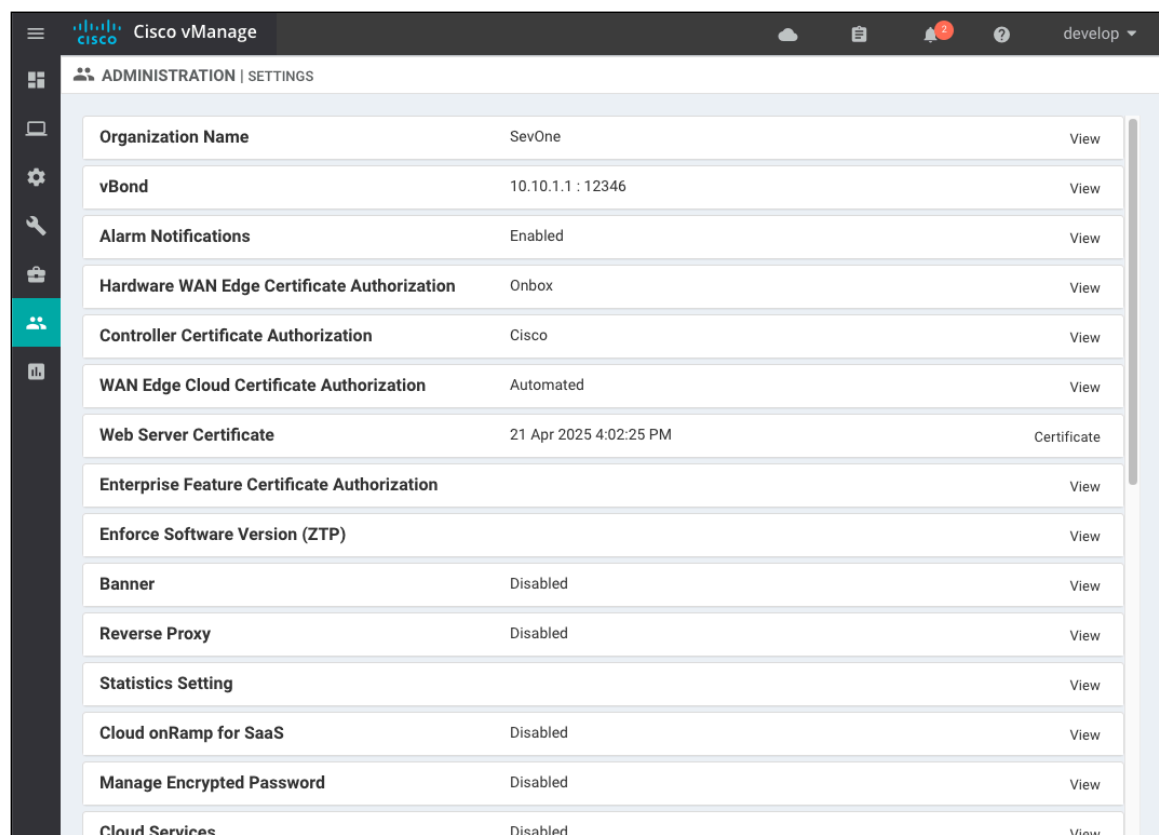
Execute the steps below to obtain the tenant name from vManage.

1. Click  > **Settings** to open the settings page of your vManage.



2. The name next to field **Organization Name** is your **tenant name**. In the example below, the tenant name is **SevOne**.

Example



The screenshot shows the Cisco vManage Administration | Settings page with the following configuration details:

Field	Value	Action
Organization Name	SevOne	View
vBond	10.10.1.1 : 12346	View
Alarm Notifications	Enabled	View
Hardware WAN Edge Certificate Authorization	Onbox	View
Controller Certificate Authorization	Cisco	View
WAN Edge Cloud Certificate Authorization	Automated	View
Web Server Certificate	21 Apr 2025 4:02:25 PM	Certificate
Enterprise Feature Certificate Authorization		View
Enforce Software Version (ZTP)		View
Banner	Disabled	View
Reverse Proxy	Disabled	View
Statistics Setting		View
Cloud onRamp for SaaS	Disabled	View
Manage Encrypted Password	Disabled	View
Cloud Services	Disabled	View

2.6 Add Location Names to Device Templates

The SevOne collector utilizes the Viptela API to retrieve device information that it uses to populate SevOne NMS, as well as generate Device and Object Groups for each tenant. By default, Viptela starts the assignment of edge devices with the number **100**, and increments them for additional sites. Viewing an internal Viptela number as the device name is not very intuitive. To improve upon this, Viptela has a **Location (system_location)** field in the Device template that the customer must populate with a more user-friendly name. The following screenshots show how to review the template settings for a device within the Cisco vManage interface. Please

follow steps **1** to **8** below.

The screenshot shows the Cisco vManage Dashboard. The left sidebar contains a menu with the following items: Configuration (1), Devices (2), TLS/SSL Proxy, Certificates, Network Design, Templates, Policies, Security, Unified Communications, Cloud onRamp for SaaS, Cloud onRamp for IaaS, Cloud OnRamp for Multi-Cloud, and Cloud OnRamp for Colocation. The main dashboard area displays various health and status metrics, including Site Health (Total 3), WAN Edge Health (Total 3), Transport Interface Distribution, Transport Health, and Application-Aware Routing.

The screenshot shows the Cisco vManage Configuration | DEVICES page. The 'WAN Edge List' tab is selected, and the 'Controllers' section is visible. The table displays the following data:

State	Device Model	Chassis Number	Serial No./Token	Hostname	System IP	Site ID	Mode	Assigned Template	Device S
Running	vEdge Cloud	91eff1af-90d1-4ea3-8226-70b47d544914	B9D42273BE019EEF	vbranch2	172.17.0.102	102	vManage	vedge	In Sync
Running	vEdge Cloud	c5c608a4-58ab-4453-a20e-3d579f2420...	B9D42273BE019EEC	vhub1	172.17.0.3	100	vManage	vedge	
Running	vEdge Cloud	bc92c893-23f7-42d8-b7e1-f8968a0f2473	B9D42273BE019EED	vbranch1	172.17.0.101	101	vManage	vedge	

The context menu is open over the table, showing the following options: Running Configuration, Local Configuration, Delete WAN Edge, Copy Configuration, Decommission WAN Edge, Change Device Values (4), Template Log, and Device Bring Up.

Cisco vManage CONFIGURATION | TEMPLATES

Device Template | vedge

Search Options

Total Rows: 1

S...	Chassis Number	System IP	Hostname	Interface Name(int_notunnel)	IPv4 Address	Address(0.0.0.0/0)	Interface Name(int_notunr
✓	91eff1af-90d1-4ea3-8226-70b47d544914	172.17.0.102	vbranch2	ge0/1	192.168.13.1/24	172.24.132.1	eth0

5

6 Edit Device Template

Next Cancel

Update Device Template

Variable List (Hover over each field for more information)

IPv4 Address(vpn_if_ipv4_address)	10.10.1.102/24
Color(vpn_if_tunnel_color_value1)	biz-internet
Interface Name(int_tunnel2)	ge0/2
IPv4 Address(vpn_if_ipv4_address)	10.10.2.102/24
Color(vpn_if_tunnel_color_value2)	mpls
Address(0.0.0.0/0)	172.24.132.1
Interface Name(int_notunnel)	eth0
IPv4 Address	172.24.132.45/24
Interface Name(int_notunnel)	ge0/1
IPv4 Address	192.168.13.1/24
Address(vpn0_ge00_default_gateway)	10.10.1.254
Address(vpn0_ge02_default_gateway)	10.10.2.1
Location(system_location)	Boston-Branch2
Latitude(system_latitude)	42.360181
Longitude(system_longitude)	-71.050798
NAT	☒

7

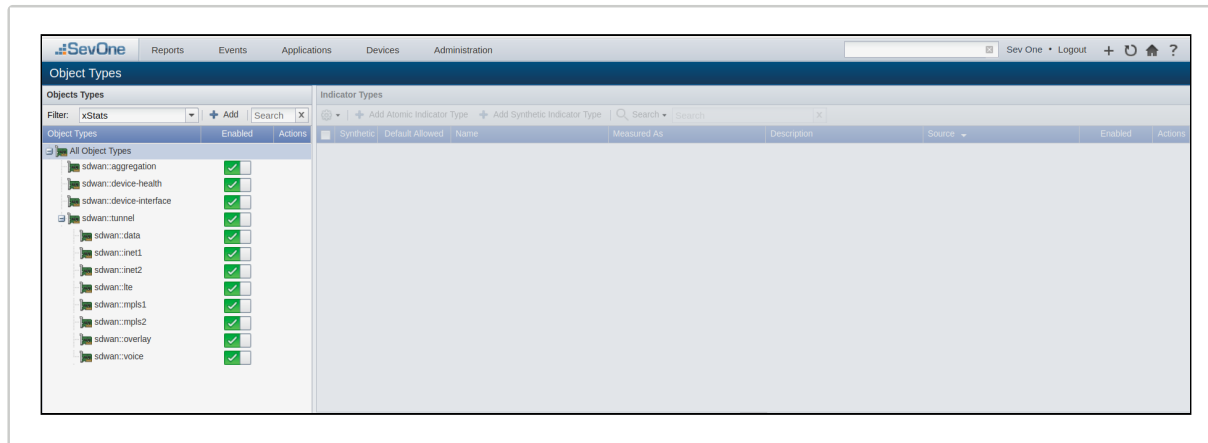
8 Update Cancel

3 Verify Data Appears in SevOne NMS

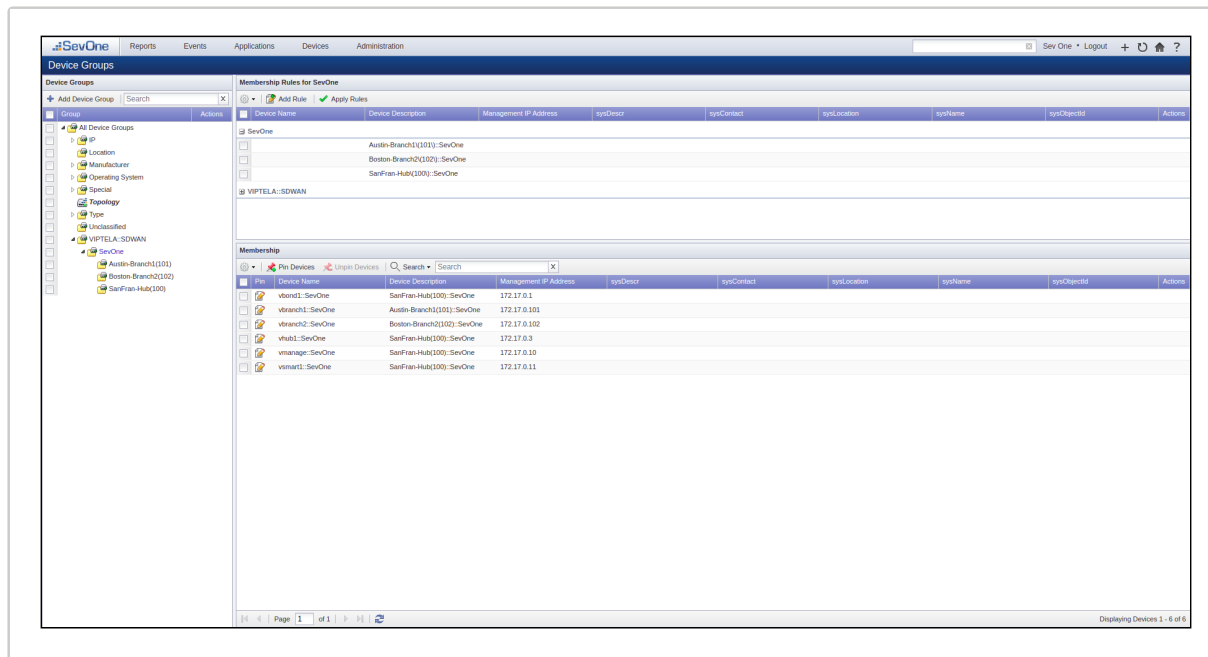
3.1 for Viptela

Once the collector has been running for 15 to 20 minutes, data should appear in SevOne NMS. Perform the following steps to verify this.

- Log into SevOne NMS.
- From the navigation bar, go to **Administration**, select **Object Types** from **Monitoring Configuration**. Filter to **xStats**.



- From the navigation bar, go to **Devices**, select **Grouping**, and then select **Device Groups**.



- From the navigation bar, go to **Devices**, select **Grouping**, and then select **Object Groups**.

SevOne
Reports Events Applications Devices Administration
Sev One • Logout + ?

Object Groups
 Add ▾ Search X
 Group Actions
 CPU
 Interface
 IP SLA Probe
 SevOne:tunnel
 Austin-Branch1(101)
 Boston-Branch2(102)
 SanFran-Hub(100)
 Topology
 VFPTELA-SOWAN
 SevOne-interface:LAN
 SevOne-interface-WAN

Object Group Membership Rules for Austin-Branch1(101)
 Add Rule Apply Rules

Device Group	Device Type	Object Name	Description	Plugin	Object Type	Sub Type	Actions
Austin-Branch1(101)	Everything	N/A	"Title": "Austin-Branch..."	Any	All Object Types	Any	

Membership for Austin-Branch1(101)
 Pin Objects Search X

Pkts	Device Name	Object Name	Description	Plugin	Object Type	Sub Type	syntaxName	syntaxLocation	syntaxContact	syntaxOwner	syntaxObjectid
☐	vbranch1-SevOne	vbranch1:ge0/02~vh...	"Title": "Austin-Branch..."	xStats	sdwan: mpls						
☐	vbranch1-SevOne	vbranch1:ge0/02~vh...	"Title": "Austin-Branch..."	xStats	sdwan: mpls						
☐	vbranch1-SevOne	vbranch1:ge0/00~vh...	"Title": "Austin-Branch..."	xStats	sdwan: bsc-internet						
☐	vbranch1-SevOne	vbranch1:ge0/00~vh...	"Title": "Austin-Branch..."	xStats	sdwan: bsc-internet						

4 Objects

SevOne
Reports Events Applications Devices Administration
Sev One • Logout + ?

Object Groups
 Add ▾ Search X
 Group Actions
 CPU
 Interface
 IP SLA Probe
 SevOne:tunnel
 Austin-Branch1(101)
 Boston-Branch2(102)
 SanFran-Hub(100)
 Topology
 VFPTELA-SOWAN
 SevOne-interface:LAN
 SevOne-interface-WAN

Object Group Membership Rules for SevOne-interface:LAN
 Add Rule Apply Rules

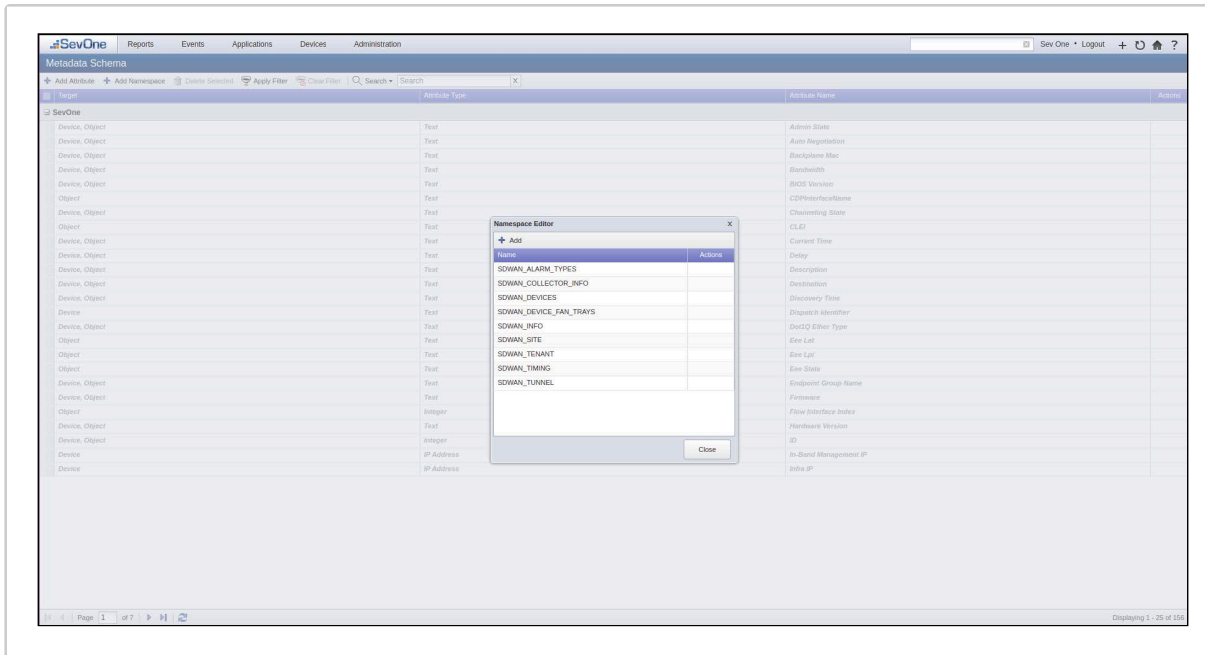
Device Group	Device Type	Object Name	Description	Plugin	Object Type	Sub Type	Actions
SevOne	Everything	N/A	"LAN interface"	xStats	sdwan: device-interface	Any	

Membership for SevOne-interface:LAN
 Pin Objects Search X

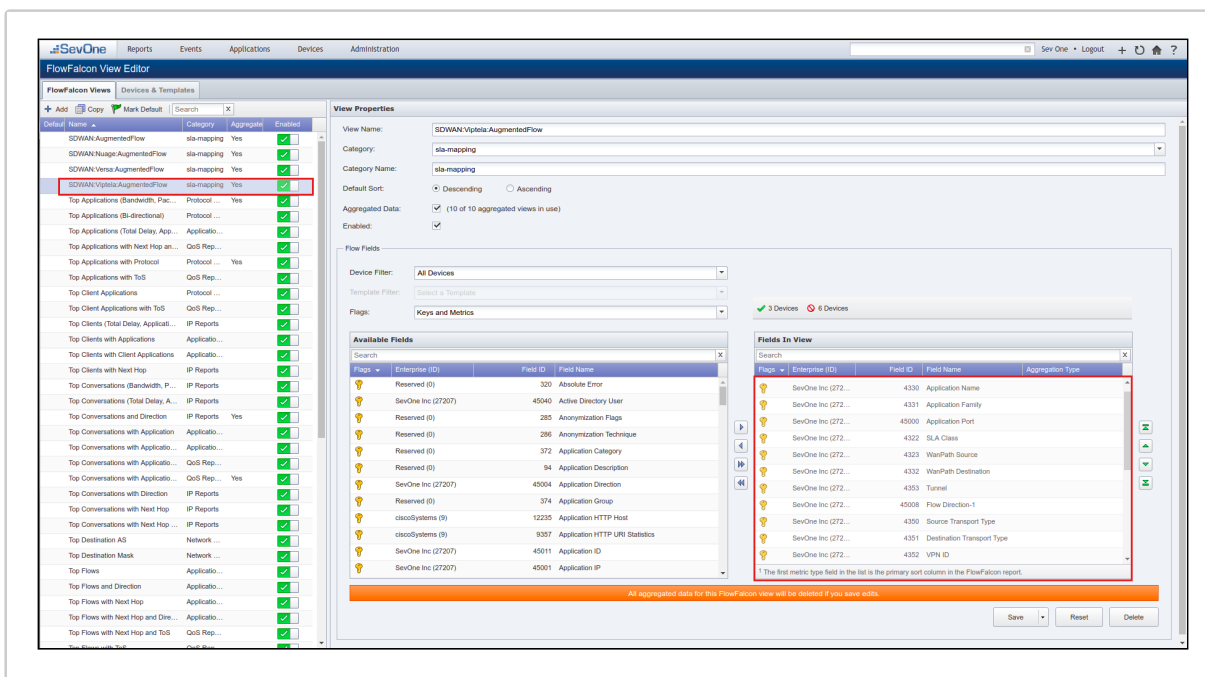
Pkts	Device Name	Object Name	Description	Plugin	Object Type	Sub Type	syntaxName	syntaxLocation	syntaxContact	syntaxOwner	syntaxObjectid
☐	vbranch1-SevOne	ge0/1	LAN interface-type: ge...	xStats	sdwan: device-interface						
☐	vbranch2-SevOne	ge0/1	LAN interface-type: ge...	xStats	sdwan: device-interface						
☐	whub1-SevOne	ge0/1	LAN interface-type: ge...	xStats	sdwan: device-interface						

3 Objects

- From the navigation bar, go to **Administration** and select **Metadata Schema**. Click on **Add Namespace** to check metadata creation.



- If **enable_flow_view_creation** and **flow_enabled** are set to true, then the user will be able to see the created SDWAN:Viptela:AugmentedFlow view. To see the created view, from the navigation bar go to **Administration**, select **Flow Configuration**, and then select **FlowFalcon View Editor**.



i Some flow view fields may not be added in the SDWAN:Viptela:AugmentedFlow view. Please verify the addition of above highlighted flow view fields in the **Fields in View** section. Add the missing fields from the **Available Fields** section.

3.2 for Versa

3.2.1 Versa Analytics Log Exporter

Versa Analytics sends metric data, alarms and flows in the form of SysLogs to client machines. This can be enabled on Versa Analytics by configuration of Log Exporter. The Log Exporter (SysLog) configuration must be done in Versa Analytics by Versa Support Team.

Please ensure that SysLog data is in **kvp** format.

Versa Analytics Log Exporter must send these logs in UDP format to port **50001** on the machine where the Datastream Consumer is deployed (NMS/Virtual Machine). Following logs send the metric data and alarms.

- alarm-log (for alarm data)
- event-log (for event data)
- site-status-log (for alarm data)
- system-load-log (for device health objects)
- mon-log (for tunnel objects)
- slam-log (for tunnel objects)
- cos-log (for queue objects)

In order to configure the flows for Versa, the Versa Analytics Log Exporter must send these logs in UDP format to the Flow Augmentor machine on port **9992**. **flow-log** sends the flow data.

3.2.2 Versa Installer Verification

1. Log into SevOne NMS.
2. From the navigation bar, go to **Administration > Metadata schema**.

Target	Attribute Type	Attribute Name	Actions
SDWAN_SITE			
☐ Device Group	Text	Address	
☐ Device Group	Text	Description	
☐ Device Group	Integer	ID	
☐ Device Group	Text	IsHeadquarters	
☐ Device Group	Text	Latitude	
☐ Device Group	Text	Longitude	
☐ Device Group	Text	Name	
☐ Device Group	Text	Type	
SDWAN_DEVICES			
☐ Device	Text	Latitude	
☐ Device	Text	Longitude	
☐ Device	Text	Max-controllers	
☐ Device	Text	Name	
☐ Device	Text	OmpPeers	
☐ Device	Text	Personality	
☐ Device	Text	Platform	
☐ Device	Text	Reachability	
☐ Device	Text	Site-id	
☐ Device	Text	Status	
☐ Device	Text	StatusOrder	
☐ Device	Text	System-ip	

3.2.3 Object Creation Verification

i Please make sure that the Versa Analytics is configured to send the data to the Collector. Otherwise, SevOne NMS will not show the tunnel/device health/queue objects. Please refer to [Versa Analytics Log Exporter](#) section above for more details.

Once the collector has been running for 15 to 20 minutes, data should appear in SevOne NMS. Perform the following steps to verify that data appears from SevOne NMS.

1. Log into SevOne NMS.

- From the navigation bar, go to **Administration > Monitoring Configuration > Object Types**. Select **xstats** in the **Filter** field. You may check to ensure that object types are created/installed on the NMS appliance.

Object Types

Filter: **xStats** | + Add | Search

Object Types

- sdwan:aggregation
- sdwan:device-health
- sdwan:device-interface
- sdwan:tunnel**
- sdwan:internet
- sdwan:isp-1
- sdwan:mpls

Indicator Types

Synthetic	Default	Allowed	Name	Measured As	Description	Source	Enabled	Actions
☐	☒	☒	destination_interface_speed	Number	destination_interface_speed	Local	☒	
☐	☒	☒	jitter	Milliseconds	jitter	Local	☒	
☐	☒	☒	latency	Milliseconds	latency	Local	☒	
☐	☒	☒	loss	Number	loss	Local	☒	
☐	☒	☒	loss_percentage	Percent	loss_percentage	Local	☒	
☐	☒	☒	rx_octets	Number	rx_octets	Local	☒	
☐	☒	☒	rx_pkts	Number	rx_pkts	Local	☒	
☐	☒	☒	rx_utilization	Percent	rx_utilization	Local	☒	
☐	☒	☒	source_interface_speed	Number	source_interface_speed	Local	☒	
☐	☒	☒	total_utilization	Percent	total_utilization	Local	☒	
☐	☒	☒	tx_octets	Number	tx_octets	Local	☒	
☐	☒	☒	tx_pkts	Number	tx_pkts	Local	☒	
☐	☒	☒	tx_utilization	Percent	tx_utilization	Local	☒	

Device Types

Associate X Unassociate | Search

Default

- From the navigation bar, go to **Devices** and select **Device Manager**. You will see the devices installed.

Device Manager

Filters: Everything | Only show devices that are in all groups you select.

Technology: +

Other Filter Options: +

Apply Filter | Clear Filter

Name	Device IP	Objects	Poller Name	Polling Frequency	Discovery Time	Priority	Actions
Controller: SevOne	172.21.42.42	19	SevOne Appliance	300			
Los-Angeles: SevOne	10.2.64.103	16	SevOne Appliance	300			
NewYork: SevOne	10.2.64.102	26	SevOne Appliance	300			
Seattle: SevOne	10.2.64.101	26	SevOne Appliance	300			

Please wait until all devices are discovered.

- From the navigation bar, go to **Devices** and select **Object Manager**. From **Filter Options** popup, for field **Device Group**, choose name ending with **SDWAN (MSP Device group)** under **All Device Groups Device Group**; set **Plugin** to **xStats** to see the objects and click on **Apply**.

Object Manager

Filter Applied | Clear Filter | Search

Device	Plugin	Object	User Description	Object Type	Subtype	Last Discovered	Enabled	Actions
Controller: SevOne	xStats	Controller: vni-01.0->Los-Angeles: vni-00.0	"Idle""Controller->Los-Angeles","device"...	sdwan: tunnel:sdwan: internet		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	Controller: vni-01.0->Los-Angeles: vni-01.0	"Idle""Controller->Los-Angeles","device"...	sdwan: tunnel:sdwan: internet		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	Controller: vni-01.0->NewYork: vni-00.0	"Idle""Controller->NewYork","device""Con...	sdwan: tunnel:sdwan: internet		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	Controller: vni-01.0->NewYork: vni-01.0	"Idle""Controller->NewYork","device""Con...	sdwan: tunnel:sdwan: internet		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	Controller: vni-01.0->Seattle: vni-00.0	"Idle""Controller->Seattle","device""Cont...	sdwan: tunnel:sdwan: internet		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	Controller: vni-01.0->Seattle: vni-01.0	"Idle""Controller->Seattle","device""Cont...	sdwan: tunnel:sdwan: internet		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	device-health	Device health summary	sdwan: device-health		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	Ivi-02.0	Interface-type: Ivi-02.0: IIndex: 1035	sdwan: device-interface		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	Ivi-03.0	Interface-type: Ivi-03.0: IIndex: 1037	sdwan: device-interface		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	Ivi-04.0	Interface-type: Ivi-04.0: IIndex: 1028	sdwan: device-interface		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	Ivi-05.0	Interface-type: Ivi-05.0: IIndex: 1030	sdwan: device-interface		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	Ivi-02002.0	Interface-type: Ivi-02002.0: IIndex: 1039	sdwan: device-interface		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	Ivi-02003.0	Interface-type: Ivi-02003.0: IIndex: 1032	sdwan: device-interface		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	Ivi-00.0	Interface-type: Ivi-00.0: IIndex: 1042	sdwan: device-interface		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	vni-01.0	Interface-type: vni-01.0: IIndex: 1044	sdwan: device-interface		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	vni-01.0: A1	Interface Queue Object	sdwan: device-interface-queue		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	vni-01.0: Bc	Interface Queue Object	sdwan: device-interface-queue		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	vni-01.0: E1	Interface Queue Object	sdwan: device-interface-queue		24 Jun '19 5:16:08	☒	
Controller: SevOne	xStats	vni-01.0: Nc	Interface Queue Object	sdwan: device-interface-queue		24 Jun '19 5:16:08	☒	
Los-Angeles: SevOne	xStats	device-health	Device health summary	sdwan: device-health		24 Jun '19 5:16:05	☒	
Los-Angeles: SevOne	xStats	Ivi-04.0	Interface-type: Ivi-04.0: IIndex: 1031	sdwan: device-interface		24 Jun '19 5:16:05	☒	
Los-Angeles: SevOne	xStats	Ivi-05.0	Interface-type: Ivi-05.0: IIndex: 1033	sdwan: device-interface		24 Jun '19 5:16:05	☒	

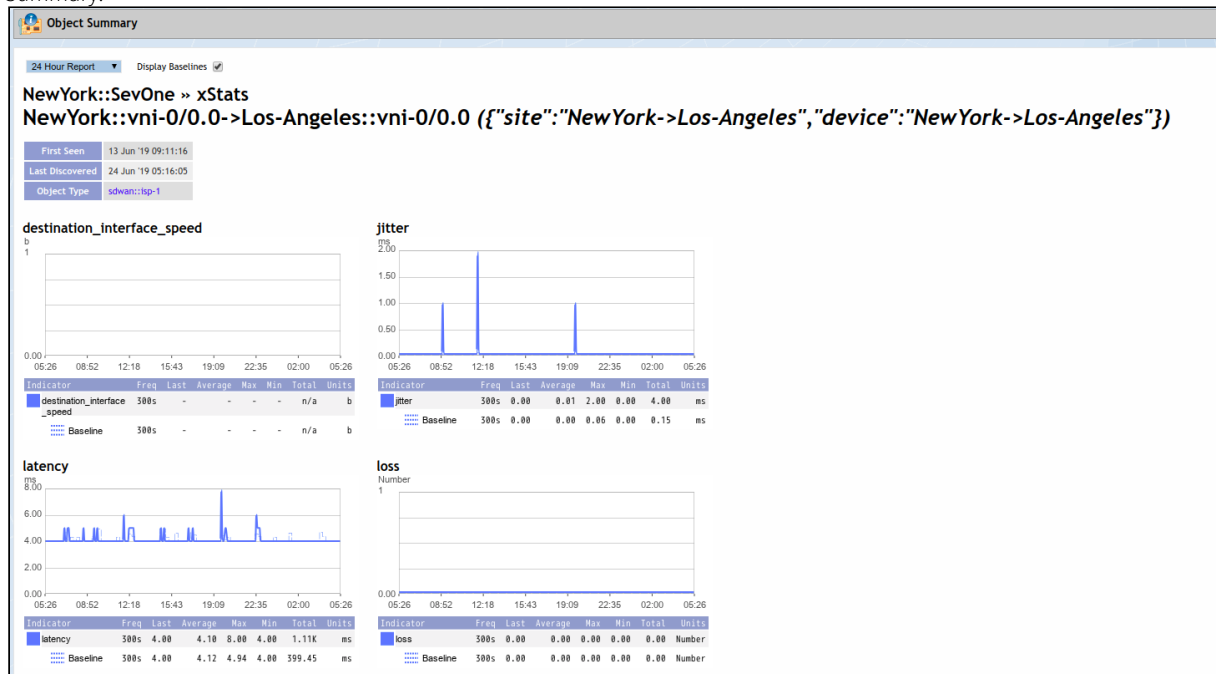


The devices and objects are created in SevOne NMS.
Some of the objects might be created after [Data Verification](#).

3.2.4 Data Verification

! Please make sure that the Versa Analytics is configured to send the data to the Collector. Otherwise, the SevOne NMS will not show the data for tunnel/device health/queue objects as well as alarms. Please refer to [Versa Analytics Log Exporter](#) section above for more details.

1. From the Object column, click an object. For example, NewYork::vni-0/0.0->Los-Angeles::vni-0/0.0 to get the Object Summary.



! This indicates that the objects are now collecting data.

From the navigation bar, go to **Reports** and select **Create Reports** to create reports. **Sources** subtab, choose Performance Metrics. **Resources** subtab, set the following fields. For example,

- **Type** drop-down, choose Indicator
- **Device Group** drop-down, choose Everything > All Device Groups > VERSA::SDWAN > SevOne > choose NewYork
- **Device** drop-down, NewYork::SevOne
- **Object** drop-down, under **xStats**, choose NewYork::vni-0/0.0->Los-Angeles::vni-0/0.0

! **VERSA::SDWAN, SevOne, NewYork** above is an example where, - MSP Name = VERSA
 - Tenant Name = SevOne
 - Site Name = NewYork
 The following shown above are also examples:- NewYork::SevOne
 - NewYork::vni-0/0.0->Los-Angeles::vni-0/0.0

- Click on Next > Next > Next > Next > Finish



- From SevOne NMS navigation bar, go to **Events** and select **Alerts** to run the collector as a Datastream Consumer. If the Versa analytics is sending any alarms/events/site status, the data will be displayed here.

 This indicates that the Versa alerts are saved in SevOne NMS.

3.2.5 Flow Configuration Verification

If the Flow Augmentor has been installed, you can verify the configurations using the following steps.

i This installation script installs all the Flow Augmentor components on the same machine.

- The Flow Falcon flow view will be created after running the above command. Verify successful creation of FlowFalcon view. Using a browser, enter the IP address of the NMS. Go to **Administration > Flow Configuration > FlowFalcon View Editor**. You should be able to find a view called **SDWAN:Versa:AugmentedFlow**.

- To check the incoming flows on port 9992, you can execute the following command on the system where Flow Augmentor is deployed.

```
$ tcpdump port 9992
```

i If you do not see any incoming data as the output of this command, the flows are not subscribed to the machine. If the flows are already subscribed to the machine, please check the firewall settings on the machine to expose 9992 port. Press Ctrl + C to exit the command.

- To check if flows are received by the system, go to **Administration > Flow Configuration > Flow Interface Manager**. You should be able to see your devices. The incoming flows can be checked in the Total Flows column.

! If you do not see any data in the Flow Interface Manager, there are no flows subscribed to the machine.

Verify the flows via Flow Falcon Report. Go to **Applications > FlowFalcon Reports**.

- Under **Resources** tab, select the device, interface and direction if required. Click on Add Resource.

- Under **Report Settings** tab, select **Aggregated Data** as **No** and **View** as **SDWAN:Versa:AugmentedFlow**. In order to get aggregated flows, select **Aggregated Data** as **Yes**. You might have to wait for some time for flows to get aggregated by DNC.

FlowFalcon Reports

Resources

Resource Type: **Interfaces**

Device: **Controller::SevOne (172.21.42.42) [v10]**

Interface: **All Interfaces**

Direction: **All Directions**

Add Resource

Current Resources:

Device	Interface	Direction
Controller::SevOne (172.21.42.42) [v10]	All Interfaces	All Directions

1 record • 0 selected

Report Settings

Aggregated Data: **No**

View: **SDWAN:Versa:AugmentedFlow**

Time Span: **Past 4 Hours**

Time Zone: **New York GMT-5**

Split: **Nothing**

Network Segment: **(none selected)**

Graph Other: **Yes**

Results Limit: **100**

Advanced Report Settings

Resolution Settings

Display Settings

Filters

Filter: **New Filter**

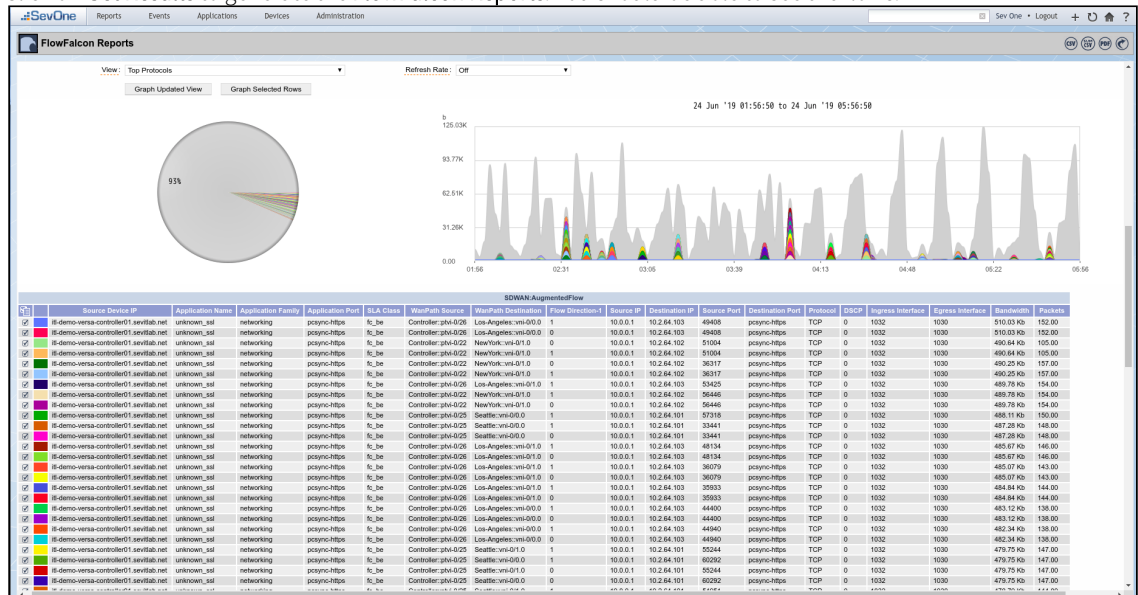
Add Rule To Filter Save Filter Save Filter As New Delete Filter Clear Filter

Rules	Field	Boolean	Operator	First Value	Second Value	Subnet
There are currently no records.						

0 record • 0 selected

Get Results

- Click on **Get Results** to generate the **FlowFalcon Reports**. You should be able to see the flows.





It might take some time to process and show Versa flows on the Flow Falcon Report. Also, please make sure that the flows are directed to the Flow Augmentor machine on port 9992. Please refer to [Versa Analytics Log Exporter](#) section above for more information on configuration of flows from Versa Analytics.

4 Object Type Indicator Optimization



- kbps = kilobits per second
- m = minutes
- mbps = megabits per second
- ms = milliseconds
- sec = seconds
- # = number
- % = percent
- default = Indicator is reported by default but can be turned off using the required config flags.
- mandatory = Indicator is always reported and cannot be turned off.
- optional = Indicator is not reported by default but can be turned on using the required config flags.

4.1 for Viptela

Indicators	Units	Description	Indicator Type	Controlled by Flag
SD-WAN Interface Object				
bw_down	mbps	Indicates the capacity of down link to transmit maximum amount of data per second.	optional	n/a
bw_up	mbps	Indicates the capacity of up link to transmit maximum amount of data per second.	mandatory	n/a
interface_speed	mbps	Indicates the rate of data flowing through the interface.	mandatory	n/a
oper_status	#	Indicates the operational state of the interface.	mandatory	n/a
rx_drops	#	Indicates total number of dropped packets through the interface.	mandatory	n/a
rx_errors	#	Indicates total number of error packets received through the interface.	mandatory	n/a
rx_kbps	kbps	Indicates total number of kilobits received in a second through the interface.	mandatory	n/a
tx_drops	#	Indicates total number of dropped transmitted packets through the interface.	mandatory	n/a

Indicators	Units	Description	Indicator Type	Controlled by Flag
tx_errors	#	Indicates total number of transmitted error packets through the interface.	mandatory	n/a
tx_kbps	kbps	Indicates total number of transmitted kilobits in a second through the interface.	mandatory	n/a
availability	%	Indicates availability of an interface over a period of time.	mandatory	n/a
down_capacity_percent	%	Indicates percentage amount of utilized down-link capacity.	optional	collectorConfig.vendor.filtere d_indicators_list
up_capacity_percentage	%	Indicates percentage amount of utilized up-link capacity.	optional	collectorConfig.vendor.filtere d_indicators_list
tx_pps	#	Indicates total number of transmitted packets per second through the interface.	optional	collectorConfig.vendor.filtere d_indicators_list
rx_pps	#	Indicates total number of received packets per second through the interface.	optional	collectorConfig.vendor.filtere d_indicators_list
total_mbps	mpbs	Indicates total number of megabits transferred per second through the interface.	optional	collectorConfig.vendor.filtere d_indicators_list
rx_octets	bytes	Indicates total number of bytes received through the interface.	default	collectorConfig.vendor.disab le_collect_octets
tx_octets	bytes	Indicates total number of transmitted bytes through the interface.	default	collectorConfig.vendor.disab le_collect_octets
rx_pkts	#	Indicates total number of packets received through the interface.	optional	collectorConfig.vendor.disab le_collect_packets
tx_pkts	#	Indicates total number of transmitted packets through the interface.	optional	collectorConfig.vendor.disab le_collect_packets
SD-WAN Interface Queue Object				
tx_octets	bytes	Indicates total number of transmitted bytes at given time.	default	collectorConfig.vendor.disab le_collect_octets

Indicators	Units	Description	Indicator Type	Controlled by Flag
queued_octets	bytes	Indicates number of queued bytes at given time.	default	collectorConfig.vendor.disable_collect_octets
drop_octets	bytes	Indicates total number of dropped bytes at given time from the queue.	default	collectorConfig.vendor.disable_collect_octets
tx_pkts	#	Indicates total number of transmitted packets at given time.	optional	collectorConfig.vendor.disable_collect_packets
queued_pkts	#	Indicates number of queued packets at given time.	optional	collectorConfig.vendor.disable_collect_packets
drop_pkts	#	Indicates total number of dropped packets at given time from the queue.	optional	collectorConfig.vendor.disable_collect_packets
SD-WAN Tunnel Object				
jitter	ms	Indicates variation in latency at given time.	mandatory	n/a
latency	ms	Indicates delay in transmitting data from one end to another end of tunnel.	mandatory	n/a
loss_percentage	%	Indicates packet loss in percentage with respect to total amount of packets sent.	mandatory	n/a
rx_utilization	%	Indicates percentage utilization of down link tunnel capacity.	mandatory	n/a
tx_utilization	%	Indicates percentage utilization of up link tunnel capacity. $\text{tx_utilization} = (((\text{tx_octets} * 8 / 1000000) / (\text{queryInterval} * \text{source_interface_speed})) * 100$ where, queryInterval = collectorConfig.vendor.tunnel_statistics.default_query_interval	mandatory	n/a
availability	%	Indicates availability of a BFD session over a period of time.	optional	collectorConfig.vendor.disable_bfd_sessions_stat
transitions	#	Indicates number of transitions of a BFD session over a period of time.	optional	collectorConfig.vendor.disable_bfd_sessions_stat

Indicators	Units	Description	Indicator Type	Controlled by Flag
destination_interface_speed	mbps	Indicates the rate of data flowing through the destination interface.	optional	collectorConfig.vendor.filtered_indicators_list
loss	#	Indicates total number of packets lost at given time.	optional	collectorConfig.vendor.filtered_indicators_list
source_interface_speed	mbps	Indicates the rate of data flowing through the source interface.	optional	collectorConfig.vendor.filtered_indicators_list
total_utilization	%	Indicates total percentage utilization of tunnel capacity.	optional	collectorConfig.vendor.filtered_indicators_list
rx_octets	bytes	Indicates total number of received bytes by destination interface at particular time.	default	collectorConfig.vendor.disable_collect_octets
tx_octets	bytes	Indicates total number of transmitted bytes by source interface at particular time.	default	collectorConfig.vendor.disable_collect_octets
rx_pkts	#	Indicates total number of received packets by destination interface at particular time.	optional	collectorConfig.vendor.disable_collect_packets
tx_pkts	#	Indicates total number of transmitted packets by source interface at particular time.	optional	collectorConfig.vendor.disable_collect_packets
sla_state_<dynamic name>	#	One indicator per SLA class defined in vManage policy. Indicates the state of SLA class in use in the tunnel at the instant (it is sent only if collectorConfig.vendor.number_of_sla_indicators_to_create is set to true-1).	optional	collectorConfig.vendor.number_of_sla_indicators_to_create
sla_state_<dynamic name>_Normal sla_state_<dynamic name>_Degraded sla_state_<dynamic name>_No Viable	#	Three indicators (Normal, Degraded, and No Viable) per SLA class defined in vManage policy. Indicates the state of SLA class in use in the tunnel at the instant (it is sent only if collectorConfig.vendor.number_of_sla_indicators_to_create is set to true-3).	optional	collectorConfig.vendor.number_of_sla_indicators_to_create

Indicators	Units	Description	Indicator Type	Controlled by Flag
SD-WAN Device Health Object				
cpu_utilization	%	Indicates the percentage usage of device cpu.	mandatory	n/a
disk_utilization	%	Indicates the percentage usage of device disk.	mandatory	n/a
memory_utilization	%	Indicates the percentage usage of device memory.	mandatory	n/a
availability	%	Indicates availability of a device over a period of time.	mandatory	n/a
reachability	%	Indicates reachability of a device over a period of time.	mandatory	n/a
Self-monitoring Indicators				
CPU usage user	sec	Indicates the usage by collector of device cpu.	optional	collectorConfig.vendor.filterend_indicators_list
CPU usage system	sec	Indicates the system usage by collector of device cpu.	optional	collectorConfig.vendor.filterend_indicators_list
Memory usage	bytes	Indicates the memory usage by the collector.	optional	collectorConfig.vendor.filterend_indicators_list
REST API Transport				
Data Messages sent	#	Indicates the data messages sent by the collector using the REST API transport.	optional	collectorConfig.vendor.filterend_indicators_list
Messages sent	#	Indicates the messages sent by the collector using the REST API transport.	optional	collectorConfig.vendor.filterend_indicators_list

4.2 for Versa

Indicators	Units	Description	Indicator Type	Controlled by Flag
SD-WAN Interface Object				
bw_down	mbps	Indicates the capacity of down link to transmit maximum amount of data per second.	mandatory	n/a

Indicators	Units	Description	Indicator Type	Controlled by Flag
bw_up	mbps	Indicates the capacity of up link to transmit maximum amount of data per second.	mandatory	n/a
interface_speed	mbps	Indicates the rate of data flowing through the interface.	mandatory	n/a
rx_errors	#	Indicates total number of error packets received through the interface.	mandatory	n/a
rx_kbps	kbps	Indicates total number of kilobits received in a second through the interface.	mandatory	n/a
tx_errors	#	Indicates total number of transmitted error packets through the interface.	mandatory	n/a
tx_kbps	kbps	Indicates total number of transmitted kilobits in a second through the interface.	mandatory	n/a
tx_pps	#	Indicates total number of transmitted packets per second through the interface.	optional	collectorConfig.vendor.filtered_indicators_list
rx_pps	#	Indicates total number of received packets per second through the interface.	optional	collectorConfig.vendor.filtered_indicators_list
total_mbps	mbps	Indicates total number of megabits transferred per second through the interface.	optional	collectorConfig.vendor.filtered_indicators_list
rx_octets	bytes	Indicates total number of bytes received through the interface.	default	collectorConfig.vendor.disable_collect_octets
tx_octets	bytes	Indicates total number of transmitted bytes through the interface.	default	collectorConfig.vendor.disable_collect_octets
rx_pkts	#	Indicates total number of packets received through the interface.	optional	collectorConfig.vendor.disable_collect_packets
tx_pkts	#	Indicates total number of transmitted packets through the interface.	optional	collectorConfig.vendor.disable_collect_packets

Indicators	Units	Description	Indicator Type	Controlled by Flag
SD-WAN Interface Queue Object				
tx_octets	bytes	Indicates total number of transmitted bytes at given time.	default	collectorConfig.vendor.disable_collect_octets
drop_octets	bytes	Indicates total number of dropped bytes at given time from the queue.	optional	collectorConfig.vendor.filtered_indicators_list
SD-WAN Tunnel Object				
jitter	ms	Indicates variation in latency at given time.	mandatory	n/a
latency	ms	Indicates delay in transmitting data from one end to another end of tunnel.	mandatory	n/a
loss_percentage	%	Indicates packet loss in percentage with respect to total amount of packets sent.	mandatory	n/a
rx_utilization	%	Indicates percentage utilization of down link tunnel capacity.	mandatory	n/a
tx_utilization	%	Indicates percentage utilization of up link tunnel capacity. $\text{tx_utilization} = (((\text{tx_octets} * 8) / 1000000) / (\text{source_interface_speed})) * 100$	mandatory	n/a
destination_interface_speed	mbps	Indicates the rate of data flowing through the destination interface.	optional	collectorConfig.vendor.filtered_indicators_list
loss	#	Indicates total number of packets lost at given time.	optional	collectorConfig.vendor.filtered_indicators_list
source_interface_speed	mbps	Indicates the rate of data flowing through the source interface.	optional	collectorConfig.vendor.filtered_indicators_list
total_utilization	%	Indicates total percentage utilization of tunnel capacity.	optional	collectorConfig.vendor.filtered_indicators_list
rx_octets	bytes	Indicates total number of received bytes by destination interface at particular time.	default	collectorConfig.vendor.disable_collect_octets

Indicators	Units	Description	Indicator Type	Controlled by Flag
tx_octets	bytes	Indicates total number of transmitted bytes by source interface at particular time.	default	collectorConfig.vendor.disable_collect_octets
tunnel_sla_degradation	%	Indicates degradation in the used SLA class in the tunnel over time. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-1 .	default	collectorConfig.vendor.number_of_sla_indicators_to_create
forwarding_class_network_control	#	Indicates whether SLA class in use in the tunnel at the instant is network control. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-1 .	default	collectorConfig.vendor.number_of_sla_indicators_to_create
forwarding_class_best_effort	#	Indicates whether SLA class in use in the tunnel at the instant is network control. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-1 .	default	collectorConfig.vendor.number_of_sla_indicators_to_create
forwarding_class_expedited_forwarding	#	Indicates whether SLA class in use in the tunnel at the instant is expedited forwarding. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-1 .	default	collectorConfig.vendor.number_of_sla_indicators_to_create
forwarding_class_assured_forwarding	#	Indicates whether SLA class in use in the tunnel at the instant is assured forwarding. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-1 .	default	collectorConfig.vendor.number_of_sla_indicators_to_create

Indicators	Units	Description	Indicator Type	Controlled by Flag
forwarding_class_network_control_normal	%	Indicates whether SLA class in use in the tunnel at the instant is network control is normal. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-3 .	default	<code>collectorConfig.vendor.number_of_sla_indicators_to_create</code>
forwarding_class_network_control_degraded	%	Indicates whether SLA class in use in the tunnel at the instant is network control is degraded. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-3 .	default	<code>collectorConfig.vendor.number_of_sla_indicators_to_create</code>
forwarding_class_network_control_no_viable	%	Indicates whether SLA class in use in the tunnel at the instant is network control is no viable. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-3 .	default	<code>collectorConfig.vendor.number_of_sla_indicators_to_create</code>
forwarding_class_best_effort_normal	%	Indicates whether SLA class in use in the tunnel at the instant is best effort is normal. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-3 .	default	<code>collectorConfig.vendor.number_of_sla_indicators_to_create</code>
forwarding_class_best_effort_degraded	%	Indicates whether SLA class in use in the tunnel at the instant is best effort is degraded. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-3 .	default	<code>collectorConfig.vendor.number_of_sla_indicators_to_create</code>

Indicators	Units	Description	Indicator Type	Controlled by Flag
forwarding_class_best_effort_no_viable	%	Indicates whether SLA class in use in the tunnel at the instant is best effort is no viable. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-3 .	default	<code>collectorConfig.vendor.number_of_sla_indicators_to_create</code>
forwarding_class_expedited_forwarding_normal	%	Indicates whether SLA class in use in the tunnel at the instant is expedited forwarding is normal. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-3 .	default	<code>collectorConfig.vendor.number_of_sla_indicators_to_create</code>
forwarding_class_expedited_forwarding_degraded	%	Indicates whether SLA class in use in the tunnel at the instant is expedited forwarding is degraded. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-3 .	default	<code>collectorConfig.vendor.number_of_sla_indicators_to_create</code>
forwarding_class_expedited_forwarding_no_viable	%	Indicates whether SLA class in use in the tunnel at the instant is expedited forwarding is no viable. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-3 .	default	<code>collectorConfig.vendor.number_of_sla_indicators_to_create</code>
forwarding_class_assured_forwarding_normal	%	Indicates whether SLA class in use in the tunnel at the instant is assured forwarding is normal. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-3 .	default	<code>collectorConfig.vendor.number_of_sla_indicators_to_create</code>

Indicators	Units	Description	Indicator Type	Controlled by Flag
forwarding_class_assured_forwarding_degraded	%	Indicates whether SLA class in use in the tunnel at the instant is assured forwarding is degraded. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-3 .	default	<code>collectorConfig.vendor.number_of_sla_indicators_to_create</code>
forwarding_class_assured_forwarding_no_viable	%	Indicates whether SLA class in use in the tunnel at the instant is assured forwarding is no viable. NOTE: Sent only if <code>collectorConfig.vendor.number_of_sla_indicators_to_create</code> is set to true-3 .	default	<code>collectorConfig.vendor.number_of_sla_indicators_to_create</code>
SD-WAN Device Health Object				
cpu_utilization	%	Indicates the percentage usage of device cpu.	mandatory	n/a
disk_utilization	%	Indicates the percentage usage of device disk.	mandatory	n/a
memory_utilization	%	Indicates the percentage usage of device memory.	mandatory	n/a
Self-monitoring Indicators				
CPU usage user	sec	Indicates the usage by collector of device cpu.	optional	<code>collectorConfig.vendor.filtered_indicators_list</code>
CPU usage system	sec	Indicates the system usage by collector of device cpu.	optional	<code>collectorConfig.vendor.filtered_indicators_list</code>
Memory usage	bytes	Indicates the memory usage by the collector.	optional	<code>collectorConfig.vendor.filtered_indicators_list</code>
REST API Transport				
Data Messages Sent	#	Indicates the data messages sent by the collector using the REST API transport.	optional	<code>collectorConfig.vendor.filtered_indicators_list</code>

Indicators	Units	Description	Indicator Type	Controlled by Flag
Messages Sent	#	Indicates the messages sent by the collector using the REST API transport.	optional	collectorConfig.vendor.filtered_indicators_list