
System

You can use the System template for all Viptela devices.

To configure system-wide parameters using vManage templates:

1. Create a System feature template to configure system parameters, as described in this article.
2. Create an NTP feature template to configure NTP servers and authentication. See the Configuration ► Templates ► [NTP](#) help topic.
3. Create a device template that incorporates both the System and NTP feature templates. See the Configuration ► [Templates](#) help topic.
4. Configure the organization name and vBond orchestrator IP address on the vManage NMS under Administration ► Settings. These settings are appended to the device templates when the templates are pushed to devices.

Navigate to the Template Screen

1. In vManage NMS, select the Configuration ► Templates screen.
2. From the Templates title bar, select Feature.
3. Click Add Template.
4. In the left pane, select one or more devices. The right pane displays the available templates for the selected devices.
5. Select the System template.

The right pane displays the System template form:

- The top of the form contains fields for naming the template.
- The bottom contains fields for defining parameters applicable to that template.
- A drop-down menu to the left of each parameter field defines the scope of the parameter. When you first open a feature template form, for each parameter that has a default value, the scope is set to Default. To edit a parameter field, change the scope to Global or Device Specific. Note that if a parameter's scope is Device Specific, you cannot enter a value for it in the feature template. Instead, you enter a value when you attach the template to a device.
- A plus sign (+) is displayed to the right when you can add multiple entries for the same parameter.

Minimum System-Wide Configuration

The following parameters are required (unless otherwise indicated) to set up system-wide functionality on a Viptela device:



Step	Parameter Field	Procedure
1.	Template Name	Enter a name for the template. It can be up to 128 characters and can contain only alphanumeric characters.
2.	Description (Template)	Enter a description for the template. It can be up to 2048 characters and can contain only alphanumeric characters.
3.	Site ID	Enter the identifier of the site in the Viptela overlay network domain in which the device resides, such as a branch, campus, or data center. All vEdge routers at the same site must have the same site ID <i>Range:</i> 1 through 4294967295 ($2^{32} - 1$)
4.	System IP	Enter the system IP address for the Viptela device, in decimal four-part dotted notation. The system IP address provides a fixed location of the device in the overlay network and is a component of the device's TLOC address. It is used as the device's loopback address in the transport VPN (VPN 0). You cannot use this same address for another interface in VPN 0.
5.	Hostname (optional)	Enter a name for the Viptela device. It can be up to 32 characters.
6.	Location (optional)	Enter a description of the location of the device. It can be up to 128 characters.
7.	Device groups (optional)	Enter the names of one or more groups to which the device belongs, separated by commas.
8.	Controller groups (optional, on vEdge routers only)	List the vSmart controller groups to which the vEdge router belongs.
9.	Timezone	Select the timezone to use on the device.
10.	Description (optional)	Enter any additional descriptive information about the device.
11.	Console baud rate (vEdge routers only)	Select the baud rate of the console connection on the vEdge router. <i>Values:</i> 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 baud or bits per second (bps) <i>Default:</i> 115200 bps
12.	Maximum controllers (optional, on vEdge routers only)	Set the maximum number of vSmart controllers that the vEdge router is allowed to connect to. <i>Range:</i> 0 through 100 <i>Default:</i> Maximum number of OMP sessions configured in Max-OMP Sessions
13.	Maximum number of OMP sessions (optional, on vEdge routers)	Set the maximum number of OMP sessions that a vEdge router can establish to a vSmart controller. <i>Range:</i> 0 through 100 <i>Default:</i> 2



	only)	
14.	GPS Location: Latitude and Longitude	Enter the latitude and longitude of the device, in the format <i>decimal-degrees</i> . This location is used to place the device on the vManage NMS network map. Setting the location also allows the vManage NMS to send a notification if the device is moved to another location.
15.	Local vBond and vBond IP (on vBond orchestrators only)	Click Advanced Options, and click On to configure the vEdge router to act as a vBond orchestrator. Then specify the DNS name for the vBond orchestrator or its IP address, in decimal four-part dotted notation.
16.	Save	Click Save to save the feature template.

CLI equivalent:

```

system
  clock
  timezone timezone
  console-baud-rate rate
  controller-group-list numbers
  description text
  device-groups group-name
  gps-location (latitude decimal-degrees | longitude decimal-degrees)
  host-name string
  location string
  max-control-connections number
  max-omp-sessions number
  site-id site-id
  system-ip ip-address
  vbond (dns-name | ip-address) local

```

To configure the DNS name or IP address of the vBond orchestrator in your overlay network, go to the [Administration](#) ► [Settings](#) screen and click vBond.

Configure Advanced Options

To configure additional system parameters, click Advanced Options:

Parameter Name	Description
Control session	Specify a maximum rate of DTLS control session traffic, to police the flow of control traffic. <i>Range:</i> 1 through 65535 pps <i>Default:</i> 300 pps
MTU of DTLS tunnel	Specify the MTU size to use on the DTLS tunnels that send control traffic between Viptela devices. <i>Range:</i> 500 through 2000 bytes <i>Default:</i> 1024 bytes
Port Hopping	Click On to enable port hopping, or click Off to disable it. When a Viptela device is behind a NAT, port hopping rotates through a pool of preselected OMP port numbers (called base ports) to establish DTLS connections with other Viptela devices when a connection attempt is unsuccessful. The default base



Parameter Name	Description
	ports are 12346, 12366, 12386, 12406, and 12426. To modify the base ports, set a port offset value. <i>Default:</i> Enabled
Port Offset	Enter a number by which to offset the base port number. Configure this option when multiple Viptela devices are behind a single NAT device, to ensure that each device uses a unique base port for DTLS connections. <i>Values:</i> 0 through 19
DNS Cache Timeout	Specify when to time out the vBond orchestrator addresses that have been cached by the device. <i>Range:</i> 1 through 30 minutes <i>Default:</i> 30 minutes
Track Transport	Click On to regularly check whether the DTLS connection between the device and a vBond orchestrator is up. Click Off to disable checking. By default, transport checking is enabled
Local vBond vBond IP (vBond orchestrators only)	Click On to configure the vEdge router to act as a vBond orchestrator. Then specify the DNS name for the vBond orchestrator or its IP address, in decimal four-part dotted notation.
USB Controller (vEdge 1000 and 2000 series routers only)	Click On to enable or click Off to disable the USB controller, which drives the external USB ports. If you enable the USB controller, the vEdge router reboots when you attach the device template to the device. <i>Default:</i> Disabled
Gateway Tracking	Click On to enable or click Off to Disable tracking of default gateway. Gateway tracking determines, for static routes, whether the next hop is reachable before adding that route to the device's route table. <i>Default:</i> Enabled
Host Policer (vEdge routers only)	Specify the maximum rate at which a policer delivers packets to the control plane. <i>Range:</i> 1000 through 20000 pps <i>Default:</i> 5000 pps
ICMP Error (vEdge routers only)	Specify how many ICMP error messages a policer can generate or receive. <i>Range:</i> 1 through 200 pps <i>Default:</i> 100 pps
Allow Same-Site Tunnel (vEdge routers only)	Click On to allow tunnels to be formed between vEdge routers in the same site. Note that no BFD sessions are established between the two collocated vEdge routers. <i>Default:</i> Off



CLI equivalent:

```
system
  allow-same-site-tunnels
  control-session-pps rate
  host-policer-pps rate
  icmp-error-pps rate
  port-hop
  port-offset number
  system-tunnel-mtu bytes
  timer
    dns-cache-timeout minutes
  track-default-gateway
  track-transport
  upgrade-confirm minutes
  [no] usb-controller
  vbond (dns-name | ip-address) local
```

Release Information

Introduced in vManage NMS in Release 15.2.

