Transport and Management

The Transport and Management Profile helps you configure a VRF at WAN level. For each parameter of the feature that has a default value, the scope is set to Default (indicated by a check mark), and the default setting or value is shown.

ACL IPv4

1. In the **Add Feature** window, choose **ACL IPv4** from the drop-down list.
2. Enter the **Feature Name** and the **Description** for the ACL feature.
3. Click **Add ACL Sequence**. The **Add ACL Sequence** window appears.
4. Enter the name in the **ACL Sequence Name** field.
5. Select the required condition from the **Condition** drop-down list.
6. Select the action types **Accept** or **Reject** from the **Action Type** drop-down list.
7. For the **Accept** action type, choose the accept condition from the **Accept Condition** drop-down list.

8. Click **Save**.

   To copy, delete, or rename the ACL policy sequence rule, click **...** next to the rule's name and select the desired option.

9. If no packets match any of the ACL policy sequence rules, the default action is to drop the packets. To change the default action:

   a. Click **Default Action** in the left pane.

   b. Click the Pencil icon.

   c. Change the default action to **Accept**.

   d. Click **Save**.

10. Click **Save ACL IPv4 Policy**.

The following table describe the options for configuring the ACL IPv4 feature.

Field	Description
ACL Sequence Name	Specifies the name of the ACL sequence.
Condition	Specifies the ACL condition. The options are: • DSCP • Packet Length • PLP • Protocol • Source Data Prefix • Source Port • Destination Data Prefix • Destination Port • TCP • Class • Peer
Action Type	Specifies the action type. The options are: Accept or Reject.

Field	Description
Accept Condition	Specifies the accept condition type. The options are: • Counter • DSCP • Log • Next Hop • Mirror List • Class • Policer

You can select the specific ACL sequence in the ACL Policy window to edit, delete or add.

Note You can also configure **ACL Policy** features from Transport and Service Profile configuration groups.

ACL IPv6

1. In the **Add Feature** window, choose **ACL IPv6** from the drop-down list.
2. Enter the **Feature Name** and the **Description** for the ACL feature.
3. Click **Add ACL Sequence**. The **Add ACL Sequence** window appears.
4. Enter the name in the **ACL Sequence Name** field.
5. Select the required condition from the **Condition** drop-down list.
6. Select the action types **Accept** or **Reject** from the **Action Type** drop-down list.
7. For the **Accept** action type, choose the accept condition from the **Accept Condition** drop-down list.
8. Click **Save**.

   To copy, delete, or rename the ACL policy sequence rule, click **...** next to the rule's name and select the desired option.
9. If no packets match any of the route policy sequence rules, the default action is to drop the packets. To change the default action:
   a. Click **Default Action** in the left pane.
   b. Click the Pencil icon.
   c. Change the default action to **Accept**.
   d. Click **Save**.
10. Click **Save ACL IPv6 Policy**.

The following table describe the options for configuring the ACL IPv6 feature.

Field	Description
ACL Sequence Name	Specifies the name of the ACL sequence.
Condition	Specifies the ACL condition. The options are: • Next Header • Packet Length • PLP • Protocol • Source Data Prefix • Source Port • Destination Data Prefix • Destination Port • TCP • Class • Traffic Class
Action Type	Specifies the action type. The options are: Accept or Reject.
Accept Condition	Specifies the accept condition type. The options are: • Counter • Log • Next Hop • Traffic Class • Mirror List • Class • Policer

You can select the specific ACL sequence in the ACL Policy window to edit, delete or add.

Note You can also configure **ACL Policy** features from Transport and Service Profile configuration groups.

BGP Routing

This feature helps you configure the Border Gateway Protocol (BGP) routing in VPN 0 or the WAN VPN.

For each parameter of the feature that has a default value, the scope is set to Default (indicated by a check mark), and the default setting or value is shown. To change the default or to enter a value, click the scope drop-down to the left of the parameter field and choose one of the following:

Basic Configuration

Field	Description
AS Number	Enter the local AS number.
Router ID	Enter the BGP router ID, in decimal four-part dotted notation.
Propagate AS Path	Enable this option to carry BGP AS path information into OMP.
Propagate Community	Enable this option to propagate BGP communities between Cisco Catalyst SD-WAN sites, across VPNs using OMP redistribution.
External Routes Distance	Specify the BGP route administrative distance for routes learned from other sites in the overlay network. Range: 1 through 255 Default: 20
Internal Routes Distance	Enter a value to apply as the BGP route administrative distance for routes coming from one AS into another. Range: 1 through 255 Default: 200
Local Routes Distance	Specify the BGP route administrative distance for routes within the local AS. By default, a route received locally from BGP is preferred over a route received from OMP. Range: 1 through 255 Default: 20

Unicast Address Family

Field	Description
IPv4 Settings	
Maximum Paths	Specify the maximum number of parallel internal BGP paths that can be installed into a route table to enable internal BGP multipath load sharing. Range: 0 to 32
Originate	Enable this option to allow the default route to be artificially generated and injected into the BGP Route Information Base (RIB), regardless of whether it is present in the routing table. The newly injected default is advertised to all the BGP peers.
Redistribute	

Field	Description
Protocol*	Choose the protocols from which to redistribute routes into BGP, for all BGP sessions. Options are **static**, **connected**, **ospf**, **omp**, **eigrp**, and **nat**. At a minimum, choose **connected**, and then under **Route Policy**, specify a route policy that has BGP advertise the loopback interface address to its neighbors. Route policy is not supported in Cisco vManage Release 20.9.1.
Route Policy	Enter the name of the route policy to apply to redistributed routes. Route policy is not supported in Cisco vManage Release 20.9.1.
Network	
Network Prefix*	Enter a network prefix to be advertised by BGP. The network prefix is composed of the IPv4 subnet and the mask. For example, 192.0.2.0 and 255.255.255.0.
Aggregate Address	
Aggregate Prefix*	Enter the prefix of the addresses to aggregate for all BGP sessions. The aggregate prefix is composed of the IPv4 subnet and the mask. For example, 192.0.2.0 and 255.255.255.0.
AS Set Path	Enable this option to generate set path information for the aggregated prefixes.
Summary Only	Enable this option to filter out more specific routes from BGP updates.
Table Map	
Policy Name	Enter the route map that controls the downloading of routes. Route policy is not supported in Cisco vManage Release 20.9.1.
Filter	When you enable this option, the route map specified in the **Policy Name** field controls whether a BGP route is to be downloaded to the Route Information Base (RIB). A BGP route is not downloaded to the RIB if it is denied by the route map. When you disable this option, the route map specified in the **Policy Name** field is used to set certain properties, such as the traffic index, of the routes for installation into the RIB. The route is always downloaded, regardless of whether it is permitted or denied by the route map.
IPv6 Settings	
Maximum Paths	Specify the maximum number of parallel internal BGP paths that can be installed into a route table to enable internal BGP multipath load sharing. Range: 0 to 32

Field	Description
Originate	Enable this option to allow the default route to be artificially generated and injected into the BGP Route Information Base (RIB), regardless of whether it is present in the routing table. The newly injected default is advertised to all the BGP peers.
Redistribute	
Protocol*	Choose the protocols from which to redistribute routes into BGP, for all BGP sessions. Options are **static**, **connected**, **ospf**, **omp**, and **eigrp**. At a minimum, choose **connected**, and then under **Route Policy**, specify a route policy that has BGP advertise the loopback interface address to its neighbors. Route policy is not supported in Cisco vManage Release 20.9.1.
Route Policy	Enter the name of the route policy to apply to redistributed routes. Route policy is not supported in Cisco vManage Release 20.9.1.
Network	
Network Prefix*	Enter a network prefix to be advertised by BGP. The IPv6 network prefix is composed of the IPv6 address and the prefix length (1-128). For example, the IPv6 subnet is 2001:DB8:0000:0000:: and the prefix length is 64.
Aggregate Address	
Aggregate Prefix*	Enter the prefix of the addresses to aggregate for all BGP sessions. The IPv6 aggregate prefix is composed of the IPv6 address and the prefix length (1-128). For example, the IPv6 subnet is 2001:DB8:0000:0000:: and the prefix length is 64.
AS Set Path	Enable this option to generate set path information for the aggregated prefixes.
Summary Only	Enable this option to filter out more specific routes from BGP updates.
Table Map	
Policy Name	Enter the route map that controls the downloading of routes. Route policy is not supported in Cisco vManage Release 20.9.1.
Filter	When you enable this option, the route map specified in the **Policy Name** field controls whether a BGP route is to be downloaded to the Route Information Base (RIB). A BGP route is not downloaded to the RIB if it is denied by the route map. When you disable this option, the route map specified in the **Policy Name** field is used to set certain properties, such as the traffic index, of the routes for installation into the RIB. The route is always downloaded, regardless of whether it is permitted or denied by the route map.

MPLS Interface

Field	Description
Interface Name*	Enter a name for the MPLS interface.

Neighbor

Field	Description
IPv4 Settings	
Address*	Specify the IP address of the BGP neighbor.
Description	Enter a description of the BGP neighbor.
Remote AS*	Enter the AS number of the remote BGP peer.
Interface Name	Enter the interface name. This interface is used as the source of the TCP session when establishing neighborship. We recommend that you use a loopback interface.
Allows in Number	Enter the number of times to allow the advertisement of the autonomous system number (ASN) of a provider edge (PE) device. The range is 1 to 10. If no number is specified, the default value of three times is used.
AS Override	Enable this option to replace the AS number of the originating router with the AS number of the sending BGP router.
Shutdown	Disable this option to enable BGP for the VPN.
Advanced Options	
Next-Hop Self	Enable this option to configure the router to be the next hop for routes advertised to the BGP neighbor.
Send Community	Enable this option to send the BGP community attribute of the local router to the BGP neighbor.
Send Extended Community	Enable this option to send the BGP extended community attribute of the local router to the BGP neighbor.
EBGP Multihop	Set the time to live (TTL) for BGP connections to external peers. Range: 1 to 255 Default: 1
Password	Enter a password to use to generate an MD5 message digest. Configuring the password enables MD5 authentication on the TCP connection with the BGP peer. The password is case-sensitive and can be up to 25 characters long. It can contain any alphanumeric characters, including spaces. The first character cannot be a number.

Field	Description
Keepalive Time (seconds)	Specify the frequency at which keepalive messages are advertised to a BGP peer. These messages indicate to the peer that the local router is still active and should be considered to be available. Specify the keepalive time for the neighbor, to override the global keepalive time. Range: 0 through 65535 seconds Default: 60 seconds (one-third the hold-time value)
Hold Time (seconds)	Specify the interval after not receiving a keepalive message that the local BGP session considers its peer to be unavailable. The local router then terminates the BGP session to that peer. Specify the hold time for the neighbor, to override the global hold time. Range: 0 through 65535 seconds Default: 180 seconds (three times the keepalive time)
Send Label	Enable this option to allow the routers advertise to each other so that they can send MPLS labels with the routes. If the routers successfully negotiate their ability to send MPLS labels, the routers add MPLS labels to all the outgoing BGP updates.
Add Neighbor Address Family	
Family Type*	Choose the BGP IPv4 unicast address family.
In Route Policy	Specify the name of a route policy to apply to prefixes received from the neighbor. Route policy is not supported in Cisco vManage Release 20.9.1.
Out Route Policy	Specify the name of a route policy to apply to prefixes sent to the neighbor. Route policy is not supported in Cisco vManage Release 20.9.1.

Field	Description
Maximum Prefix Reach Policy*	Choose one of the following options: • **Policy Off**: Policy is off. • **Policy On - Restart**: Configure the time interval at which a peering session is re-established by a device when the number of prefixes that have been received from a peer has exceeded the maximum prefix limit. When you choose this option, the following fields appear: • **Maximum Number of Prefixes***: Enter the maximum prefix limit. Range: 1 to 4294967295 • **Threshold (percentage)**: Enter the threshold value: Range: 1 to 100 Default: 75 • **Restart Interval (minutes)***: Enter the time interval. Range: 1 to 65535 minutes • **Policy On - Warning message**: Configure the device to disable the restart capability to allow you to adjust a peer that is sending too many prefixes. • **Policy On - Disable Peer Neighbor**: When the device receives too many prefixes from a peer, and the maximum prefix limit is exceeded, the peering session is disabled or brought down.
IPv6 Settings	
Address*	Specify the IP address of the BGP neighbor.
Description	Enter a description of the BGP neighbor.
Remote AS*	Enter the AS number of the remote BGP peer.
Interface Name	Enter the interface name. This interface is used as the source of the TCP session when establishing neighborship. We recommend that you use a loopback interface.
Allowas in Number	Enter the number of times to allow the advertisement of the autonomous system number (ASN) of a provider edge (PE) device. The range is 1 to 10. If no number is specified, the default value of three times is used.
AS Override	Enable this option to replace the AS number of the originating router with the AS number of the sending BGP router.
Shutdown	Disable this option to enable BGP for the VPN.

Field	Description
Advanced Options	
Next-Hop Self	Enable this option to configure the router to be the next hop for routes advertised to the BGP neighbor.
Send Community	Enable this option to send the BGP community attribute of the local router to the BGP neighbor.
Send Extended Community	Enable this option to send the BGP extended community attribute of the local router to the BGP neighbor.
EBGP Multihop	Set the time to live (TTL) for BGP connections to external peers. Range: 1 to 255 Default: 1
Password	Enter a password to use to generate an MD5 message digest. Configuring the password enables MD5 authentication on the TCP connection with the BGP peer. The password is case-sensitive and can be up to 25 characters long. It can contain any alphanumeric characters, including spaces. The first character cannot be a number.
Keepalive Time (seconds)	Specify the frequency at which keepalive messages are advertised to a BGP peer. These messages indicate to the peer that the local router is still active and should be considered to be available. Specify the keepalive time for the neighbor, to override the global keepalive time. Range: 0 through 65535 seconds Default: 60 seconds (one-third the hold-time value)
Hold Time (seconds)	Specify the interval after not receiving a keepalive message that the local BGP session considers its peer to be unavailable. The local router then terminates the BGP session to that peer. Specify the hold time for the neighbor, to override the global hold time. Range: 0 through 65535 seconds Default: 180 seconds (three times the keepalive time)
Add IPv6 Neighbor Address Family	
Family Type*	Choose the BGP IPv6 unicast address family.
In Route Policy	Specify the name of a route policy to apply to prefixes received from the neighbor. Route policy is not supported in Cisco vManage Release 20.9.1.
Out Route Policy	Specify the name of a route policy to apply to prefixes sent to the neighbor. Route policy is not supported in Cisco vManage Release 20.9.1.

Field	Description
Maximum Prefix Reach Policy*	Choose one of the following options: • **Policy Off**: Policy is off. • **Policy On - Restart**: Configure the time interval at which a peering session is re-established by a device when the number of prefixes that have been received from a peer has exceeded the maximum prefix limit. When you choose this option, the following fields appear: • **Maximum Number of Prefixes***: Enter the maximum prefix limit. Range: 1 to 4294967295 • **Threshold (percentage)**: Enter the threshold value: Range: 1 to 100 Default: 75 • **Restart Interval (minutes)***: Enter the time interval. Range: 1 to 65535 minutes • **Policy On - Warning message**: Configure the device to disable the restart capability to allow you to adjust a peer that is sending too many prefixes. • **Policy On - Disable Peer Neighbor**: When the device receives too many prefixes from a peer, and the maximum prefix limit is exceeded, the peering session is disabled or brought down.

Advanced

Field	Description
Keepalive (seconds)	Specify the frequency at which keepalive messages are advertised to a BGP peer. These messages indicate to the peer that the local router is still active and should be considered to be available. This keepalive time is the global keepalive time. Range: 0 through 65535 seconds Default: 60 seconds (one-third the hold-time value)
Hold Time (seconds)	Specify the interval after not receiving a keepalive message that the local BGP session considers its peer to be unavailable. The local router then terminates the BGP session to that peer. This hold time is the global hold time. Range: 0 through 65535 seconds Default: 180 seconds (three times the keepalive time)

Field	Description
Compare MED	Enable this option to compare the router IDs among BGP paths to determine the active path.
Deterministic MED	Enable this option to compare MEDs from all routes received from the same AS regardless of when the route was received.
Missing MED as Worst	Enable this option to consider a path as the worst path if the path is missing a MED attribute.
Compare Router ID	Enable this option to always compare MEDs regardless of whether the peer ASs of the compared routes are the same.
Multipath Relax	Enable this option to have the BGP best-path process select from routes in different ASs. By default, when you are using BGP multipath, the BGP best-path process selects from routes in the same AS to load-balance across multiple paths.

Cellular Controller

This feature helps you configure a cellular controller in VPN 0 or the WAN VPN.

The following table describes the options for configuring the Cellular Controller feature.

Field	Description
Type	Choose a feature from the drop-down list.
Feature Name	Enter a name for the feature. The name can be up to 128 characters and can contain only alphanumeric characters.
Description	Enter a description of the feature. The description can be up to 2048 characters and can contain only alphanumeric characters.
Cellular ID	Enter the interface slot and port number in which the cellular NIM card is installed. Currently, it can be 0/1/0 or 0/2/0.
Primary SIM slot	Enter the number of the primary SIM slot. It can be 0 or 1. The other slot is automatically set to be the secondary. If there is a single SIM slot, this parameter is not applicable.
SIM Failover Retries	Specify the maximum number of times to retry connecting to the secondary SIM when service on the primary SIM becomes unavailable. If there is a single SIM slot, this parameter is not applicable. Range: 0 through 65535 Default: 10

Field	Description
SIM Failover Timeout	Specify how long to wait before switching from the primary SIM to the secondary SIM if service on the primary SIM becomes unavailable. If there is a single SIM slot, this parameter is not applicable. Range: 3 to 7 minutes Default: 3 minutes
Firmware Auto Sim	By default, this option is enabled. AutoSIM analyzes any active SIM card and determines which service provider network is associated with that SIM. Based on that analysis, AutoSIM automatically loads the appropriate firmware.

After configuring the above parameters, choose a cellular profile to associate with the cellular controller and click **Save**.

Cellular Profile

This feature helps you configure a cellular profile in VPN 0 or the WAN VPN.

The following table describes the options for configuring the Cellular Profile feature.

Field	Description
Type	Choose a feature from the drop-down list.
Feature Name	Enter a name for the feature. The name can be up to 128 characters and can contain only alphanumeric characters.
Description	Enter a description of the feature. The description can be up to 2048 characters and can contain only alphanumeric characters.
Profile ID	Enter the identification number of the profile to use on the router. Range: 1 through 15
Access Point Name	Enter the name of the gateway between the service provider network and the public internet. It can be up to 32 characters long.
Authentication	Choose the authentication method used for the connection to the cellular network. It can be **none**, **pap**, **chap**, or **pap_chap**.
Profile Username	Enter the username to use when making cellular connections for web services. It can be 1 to 32 characters. It can contain any alphanumeric characters, including spaces.
Profile Password	Enter the user password to use when making cellular connections for web services. The password is case-sensitive and can be clear text, or an AES-encrypted key.
Packet Data Network Type	Choose the packet data network (PDN) type of the cellular network. It can be IPv4, IPv6, or IPv4v6.

Field	Description
No Overwrite	Enable this option to overwrite the profile on the cellular modem. By default, this option is disabled.

GPS

Use the GPS feature to detect the device location and to monitor GPS coordinates of Cisco IOS XE Catalyst SD-WAN devices.

The following tables describe the options for configuring the GPS feature.

Field	Description
Type	Choose a feature from the drop-down list.
Feature Name*	Enter a name for the feature. The name can be up to 128 characters and can contain only alphanumeric characters.
Description	Enter a description of the feature. The description can be up to 2,048 characters and can contain only alphanumeric characters.
GPS	Click **On** to enable the GPS feature on the router.
GPS Mode	Select the GPS mode: • **MS-based**: Use mobile station–based assistance, also called assisted GPS mode, when determining position. In this mode, cell tower data is used to enhance the quality and precision in determining location, which is useful when satellite signals are poor. • **Standalone**: Use satellite information when determining position.
NMEA	Click **On** to enable the use of NMEA streams to help with determining position. NMEA streams data from the router's cellular module to any marine device, such as a Windows-based PC, that is running a commercially available GPS-based application.
Source Address*	Enter the IP address of the router's interface that connects to the external device reading the NMEA.
Destination Address*	Enter the IP address of the external device's interface that's connected to router.
Destination Port*	Enter the number of the port to use to send NMEA data to the external device's interface.

IPv6 Tracker

This feature helps you configure the IPv6 tracker for the VPN interface.

The following table describes the options for configuring the IPv6 Tracker feature.

Table 1: IPv6 Tracker

Field	Description
Type	Choose a feature from the drop-down list.
Feature Name*	Enter a name for the feature.
Description	Enter a description of the feature. The description can contain any characters and spaces.
Tracker Name*	Name of the tracker. The name can be up to 128 alphanumeric characters.
Endpoint Tracker Type*	Choose a tracker type to configure endpoint trackers: • **ipv6-interface** **Note** This tracker type is available only in Cisco Catalyst SD-WAN Manager Release 20.12.x and earlier. • **http** • **icmp** This tracker type is available from Cisco Catalyst SD-WAN Manager Release 20.13.1.
Endpoint	Choose an endpoint type: • **Endpoint DNS Name**: When you choose this option, the following field appears: **Endpoint DNS Name**: DNS name of the endpoint. This is the destination on the internet to which probes are sent to determine the status of the endpoint. The DNS name can contain a minimum of one character and a maximum of 253 characters. • **Endpoint IP**: When you choose this option, the following field appears: **Endpoint IP**: IPv6 address of the endpoint. This is the destination on the internet to which the probes are sent to determine the status of an endpoint. The IPv6 address can be a valid IPv6 address in dotted-decimal notation. • **Endpoint API URL**: When you choose this option, the following field appears: **API url of endpoint**: API URL of the endpoint. The API URL can be a valid URL as described by RFC 3986.

Field	Description
Interval	Time interval between probes to determine the status of the configured endpoint. From Cisco Catalyst SD-WAN Manager Release 20.13.1, this option is called **Probe Interval**, allowing you to configure the time interval between probes. Range: 20 to 600 seconds Default: 60 seconds (1 minute) From Cisco Catalyst SD-WAN Manager Release 20.13.1, if you select **icmp** as the endpoint tracker type, the default probe interval is 2 seconds.
Multiplier	Number of times probes are sent before declaring that the endpoint is down. Range: 1 to 10 Default: 3
Threshold	Wait time for the probe to return a response before declaring that the configured endpoint is down. Range: 100 to 1000 milliseconds Default: 300 milliseconds

IPv6 Tracker Group

This feature helps you configure the IPv6 tracker froup for the VPN interface.

The following table describes the options for configuring the IPv6 tracker group feature.

Field	Description
Type	Choose a feature from the drop-down list.
Feature Name*	Enter a name for the feature. The name can be up to 128 characters and can contain only alphanumeric characters.
Description	Enter a description of the feature. The description can be up to 2048 characters and can contain only alphanumeric characters.

Table 2: IPv6 Tracker Group

Field	Description
Tracker Name	Enter a tracker name.
Tracker Elements	This field is displayed only if you chose **Tracker Type** as the **Tracker Group**. Add the existing interface tracker names (separated by a space). When you add this tracker to the template, the tracker group is associated with these individual trackers, and you can then associate the tracker group to an interface.

Field	Description
Tracker Boolean	This field is displayed only if you chose **Tracker Type** as the **Tracker Group**. Select **AND** or **OR**. **OR** is the default boolean operation. An **OR** ensures that the transport interface status is reported as active if either one of the associated trackers of the tracker group reports that the interface is active. If you select the **AND** operation, the transport-interface status is reported as active if both the associated trackers of the tracker group, report that the interface is active.

Management VPN

This feature helps you configure VPN 512 or the management VPN.

The following table describes the options for configuring the Management VPN feature.

Field	Description
Type	Choose a feature from the drop-down list.
Feature Name*	Enter a name for the feature.
Description	Enter a description of the feature. The description can contain any characters and spaces.

Basic Configuration

Field	Description
VPN	Management VPN carries out-of-band network management traffic among the Cisco IOS XE Catalyst SD-WAN devices in the overlay network. The interface used for management traffic resides in VPN 512. By default, VPN 512 is configured and enabled on all Cisco IOS XE Catalyst SD-WAN devices.
Name	Enter a name for the interface.

DNS

Field	Description
Add DNS	
Primary DNS Address (IPv4)	Enter the IPv4 address of the primary DNS server in this VPN.
Secondary DNS Address (IPv4)	Enter the IPv4 address of a secondary DNS server in this VPN.
Add DNS IPv6	

Field	Description
Primary DNS Address (IPv6)	Enter the IPv6 address of the primary DNS server in this VPN.
Secondary DNS Address (IPv6)	Enter the IPv6 address of a secondary DNS server in this VPN.

Host Mapping

Field	Description
Add New Host Mapping	
Hostname*	Enter the hostname of the DNS server. The name can be up to 128 characters.
List of IP Address*	Enter IP addresses to associate with the hostname. Separate the entries with commas.

IPv4/IPv6 Static Route

Field	Description
Add IPv4 Static Route	
IP Address*	Enter the IPv4 address or prefix, in decimal four-point-dotted notation, and the prefix length of the IPv4 static route to configure in the VPN.
Subnet Mask*	Enter the subnet mask.
Gateway*	Choose one of the following options to configure the next hop to reach the static route: • **nextHop**: When you choose this option and click **Add Next Hop**, the following fields appear: • **Address***: Enter the next-hop IPv4 address. • **Administrative distance***: Enter the administrative distance for the route. • **dhcp** • **null0**: When you choose this option, the following field appears: • **Administrative distance**: Enter the administrative distance for the route.
Add IPv6 Static Route	
Prefix*	Enter the IPv6 address or prefix, in decimal four-point-dotted notation, and the prefix length of the IPv6 static route to configure in the VPN.

Field	Description
Next Hop/Null 0/NAT	Choose one of the following options to configure the next hop to reach the static route: • **Next Hop**: When you choose this option and click **Add Next Hop**, the following fields appear: • **Address***: Enter the next-hop IPv6 address. **Administrative distance***: Enter the administrative distance for the route. • **Null 0**: When you choose this option, the following field appears: • **NULL0***: Enable this option to set the next hop to be the null interface. All packets sent to this interface are dropped without sending any ICMP messages. • **NAT**: When you choose this option, the following field appears: • **IPv6 NAT**: Choose NAT64 or NAT66.

OSPF Routing

Use the OSPF feature to configure transport-side routing, to provide reachability to networks at the local site.

Some parameters have a scope drop-down list that enables you to choose **Global**, **Device Specific**, or **Default** for the parameter value. Choose one of the following options, as described in the table below:

Parameter Scope	Scope Description
Global (Indicated by a globe icon)	Enter a value for the parameter and apply that value to all devices. Examples of parameters that you might apply globally to a group of devices are DNS server, syslog server, and interface MTUs.
Device Specific (Indicated by a host icon)	Use a device-specific value for the parameter. Choose **Device Specific** to provide a value for the key in the **Enter Key** field. The key is a unique string that helps identify the parameter. To change the default key, type a new string in the **Enter Key** field. Examples of device-specific parameters are system IP address, host name, GPS location, and site ID.
Default (indicated by a check mark)	The default value is shown for parameters that have a default setting.

The following tables describe the options for configuring the OSPF Routing feature.

Field	Description
Type	Choose a feature from the drop-down list.

Field	Description
Feature Name*	Enter a name for the feature.
Description	Enter a description of the feature. The description can contain any characters and spaces.

Basic Configuration

Field	Description
Router ID	Enter the OSPF router ID, in decimal four-part dotted notation. This value is the IP address associated with the router for OSPF adjacencies. Default: <Device specific IPv4 system_ip >
Distance for External Routes	Specify the OSPF route administration distance for routes learned from other domains. Range: 1 through 255 Default: 110
Distance for Inter-Area Routes	Specify the OSPF route administration distance for routes coming from one area into another. Range: 1 through 255 Default: 110
Distance for Intra-Area Routes	Specify the OSPF route administration distance for routes within an area. Range: 0 through 255 Default: 110

Redistribute

Field	Description
Add Redistribute	
Protocol	Choose the protocol from which to redistribute routes into OSPF. • **Static** • **Connected** • **BGP** • **NAT**
Select Route Policy	Enter the name of a localized control policy to apply to routes before they are redistributed into OSPF.

Maximum Metric (Router LSA)

Field	Description
Add Router LSA	
Type	Configure OSPF to advertise a maximum metric so that other routers do not prefer this router as an intermediate hop in their Shortest Path First (SPF) calculation. Choose a type: • **administrative**: Force the maximum metric to take effect immediately, through operator intervention. • **on-startup**: Advertise the maximum metric for the specified time. **Note** You can configure a maximum of one router LSA.

Area

Field	Description
Add Area	
Area Number*	Enter the number of the OSPF area. Allowed value: Any 32-bit integer
Set the area type	Choose the type of OSPF area: • **Stub** • **NSSA** **Note** The **Set the area type** option won't appear if you have entered 0 as a value for **Area Number***.
Add Interface	Configure the properties of an interface in an OSPF area.
Name*	Enter the name of the interface. For example, GigabitEthernet0/0/1, GigabitEthernet0/1/2.1, GigabitEthernet0, or Loopback1.
Hello Interval (seconds)	Specify how often the router sends OSPF hello packets. Range: 1 through 65535 seconds Default: 10 seconds
Dead Interval (seconds)	Specify how often the router must receive an OSPF hello packet from its neighbor. If no packet is received, the router assumes that the neighbor is down. Range: 1 through 65535 seconds Default: 40 seconds (four times the default hello interval)

Field	Description
LSA Retransmission Interval (seconds)	Specify how often the OSPF protocol retransmits LSAs to its neighbors. Range: 1 through 65535 seconds Default: 5 seconds
Interface Cost	Specify the cost of the OSPF interface. Range: 1 through 65535
Designated Router Priority	Set the priority of the router to be elected as the designated router (DR). The router with the highest priority becomes the DR. If the priorities are equal, the router with the highest router ID becomes the DR or the backup DR. Range: 0 through 255 Default: 1
OSPF Network Type	Choose the OSPF network type to which the interface is to connect: • **Broadcast network** • **Point-to-point network** • **Non-broadcast network** • **Point-to-multipoint network**
Passive Interface	Specify whether to set the OSPF interface to be passive. A passive interface advertises its address, but does not actively run the OSPF protocol. Default: Disabled
Authentication Type	Specify the key ID and authentication key if you use message digest (MD5): • **Message Digest Key ID**: Enter the key ID for message digest (MD5 authentication). The input value must be an integer. Range: 1 through 255 • **Message Digest Key**: Enter the MD5 authentication key. Range: 1 through 127 characters
Add Range	Configure the area range of an interface in an OSPF area.
IP Address*	Enter the IP address.
Subnet Mask*	Enter the subnet mask.
Cost	Specify a number for the Type 3 summary LSA. OSPF uses this metric during its SPF calculation to determine the shortest path to a destination. Range: 0 through 16777214
No-advertise*	Enable this option to not advertise the Type 3 summary LSAs.

Advanced

Field	Description
Reference Bandwidth (Mbps)	Specify the reference bandwidth for the OSPF auto-cost calculation for the interface. Range: 1 through 4294967 Mbps Default: 100 Mbps
RFC 1583 Compatible	By default, the OSPF calculation is done per RFC 1583. Disable this option to calculate the cost of summary routes based on RFC 2328.
Originate	Enable this option to generate a default external route into an OSPF routing domain. When you enable this option, the following fields appear: • **Always**: Enable this option to always advertise the default route in an OSPF routing domain. • **Default Metric**: Set the metric used to generate the default route. Range: 0 through 16777214 Default: 10 • **Metric Type**: Choose to advertise the default route as an OSPF Type 1 external route or an OSPF Type 2 external route.
SPF Calculation Delay (milliseconds)	Specify the amount of time between when the first change to a topology is received until performing the SPF calculation. Range: 1 through 600000 ms (600 seconds) Default: 200 ms
Initial Hold Time (milliseconds)	Specify the amount of time between consecutive SPF calculations. Range: 1 through 600000 ms (600 seconds) Default: 1000 ms
Maximum Hold Time (milliseconds)	Specify the longest time between consecutive SPF calculations. Range: 1 through 600000 ms (600 seconds) Default: 10000 ms (10 seconds)
Select Route Policy	Enter the name of a localized control policy to apply to routes coming from OSPF neighbors.

OSPFv3 IPv4 Routing

Use this feature to configure the Open Shortest Path First version 3 (OSPFv3) IPv4 link-state routing protocol for IPv4 unicast address families.

The following tables describe the options for configuring the OSPFv3 IPv4 Routing feature.

Field	Description
Type	Choose a feature from the drop-down list.
Feature Name*	Enter a name for the feature. The name can be up to 128 characters and can contain only alphanumeric characters.
Description	Enter a description of the feature. The description can be up to 2048 characters and can contain only alphanumeric characters.

Basic Settings

Field	Description
Router ID	Enter the OSPF router ID, in decimal four-part dotted notation. This value is the IP address that is associated with the router for OSPF adjacencies. Default: No Router ID is configured.
Add Redistribute	
Protocol	Choose the protocol from which to redistribute routes into OSPFv3, for all OSPFv3 sessions. • **Connected** • **Static** • **Nat-route** • **BGP**
Select Route Policy	Enter the name of a localized control policy to apply to routes before they are redistributed into OSPF.

Area

Field	Description
Area Number*	Enter the number of the OSPFv3 area. Allowed value: Any 32-bit integer
Area Type	Choose the type of OSPFv3 area: • **Stub** - no external routes • **NSSA**: not-so-stubby area, allows external routes • **Normal** **Note** You can't enter a value for **Area type** if you have entered 0 as a value for **Area Number**.
Interface	

Field	Description
Add Interface	Configure the properties of an interface in an OSPFv3 area.
Name*	Enter the name of the interface. Examples of interface names: GigabitEthernet0/0/1, GigabitEthernet0/1/2.1, GigabitEthernet0, or Loopback1.
Cost	Specify a number for the Type 3 summary link-state advertisement (LSA). OSPFv3 uses this metric during its SPF calculation to determine the shortest path to a destination. Range: 0 through 16777215
Authentication Type	Specify the SPI and authentication key if you use IPSec SHA1. • **no-auth**: Select no authentication. • **ipsec-sha1**: Enter the value for the IPSEC Secure Hash Algorithm 1 (SHA-1) authentication.
SPI	Specifies the Security Policy Index (SPI) value. Range: 256 through 4294967295
Authentication Key	Provide a value for the authentication key. When IPSEC SHA-1 authentication is used, the key must be 40 hex digits long.
Passive Interface	Specify whether to set the OSPFv3 interface to be passive. A passive interface advertises its address, but does not actively run the OSPFv3 protocol. Default: Disabled
IPv4 Range	
Add IPv4 Range	Configure the area range of an interface in an OSPFv3 area.
Network Address*	Enter the IPv4 address.
Subnet Mask*	Enter the subnet mask.
No Advertise*	Enable this option to not advertise the Type 3 summary LSAs.
Cost	Specify the cost of the OSPFv3 interface. Range: 1 through 65535

Advanced

Field	Description
Route Policy	Enter the name of a localized control policy to apply to routes coming from OSPFv3 neighbors.

Field	Description
Reference Bandwidth (Mbps)	Specify the reference bandwidth for the OSPFv3 autocost calculation for the interface. Range: 1 through 4294967 Mbps Default: 100 Mbps
RFC 1583 Compatible	By default, the OSPFv3 calculation is done per RFC 1583. Disable this option to calculate the cost of summary routes based on RFC 2328.
Originate	Enable this option to generate a default external route into an OSPF routing domain. When you enable this option, the following fields appear: • **Always**: Enable this option to always advertise the default route in an OSPF routing domain. • **Default Metric**: Set the metric used to generate the default route. Range: 0 through 16777214 Default: 10 • **Metric Type**: Choose to advertise the default route as an OSPF Type 1 external route or an OSPF Type 2 external route.
Distance	Define the OSPFv3 route administration distance based on route type. Default: 100
Distance for External Routes	Set the OSPFv3 distance for routes learned from other domains. Range: 0 through 255 Default: 110
Distance for Inter-Area Routes	Set the distance for routes coming from one area into another. Range: 0 through 255 Default: 110
Distance for Intra-Area Routes	Set the distance for routes within an area. Range: 0 through 255 Default: 110
SPF Calculation Timers	Configure the amount of time between when OSPFv3 detects a topology and when it runs its SPF algorithm.
SPF Calculation Delay (milliseconds)	Specify the amount of time between when the first change to a topology is received until performing the SPF calculation. Range: 1 through 600000 ms (600 seconds) Default: 200 ms

Field	Description
Initial Hold Time (milliseconds)	Specify the amount of time between consecutive SPF calculations. Range: 1 through 600000 ms (600 seconds) Default: 1000 ms
Maximum Hold Time (milliseconds)	Specify the longest time between consecutive SPF calculations. Range: 1 through 600000 ms (600 seconds) Default: 10000 ms (10 seconds)
Maximum Metric (Router LSA)	Configure OSPFv3 to advertise a maximum metric so that other routers do not prefer this Cisco vEdge Device as an intermediate hop in their Shortest Path First (SPF) calculation. • **Immediately**: Force the maximum metric to take effect immediately, through operator intervention. • **On-startup**: Advertise the maximum metric for the specified number of seconds after the router starts up. Range: 5 through 86400 seconds Maximum metric is disabled by default.

OSPFv3 IPv6 Routing

Use this feature to configure the Open Shortest Path First version 3 (OSPFv3) IPv6 link-state routing protocol for IPv6 unicast address families.

The following tables describe the options for configuring the OSPFv3 IPv6 Routing feature.

Field	Description
Type	Choose a feature from the drop-down list.
Feature Name*	Enter a name for the feature. The name can be up to 128 characters and can contain only alphanumeric characters.
Description	Enter a description of the feature. The description can be up to 2048 characters and can contain only alphanumeric characters.

Basic Settings

Field	Description
Router ID	Enter the OSPF router ID, in decimal four-part dotted notation. This value is the IP address that is associated with the router for OSPF adjacencies. Default: No Router ID is configured.
Add Redistribute	

Field	Description
Protocol	Choose the protocol from which to redistribute routes into OSPFv3, for all OSPFv3 sessions. • **Connected** • **Static** • **BGP**
Select Route Policy	Enter the name of a localized control policy to apply to routes before they are redistributed into OSPF.

Area

Field	Description
Area Number*	Enter the number of the OSPFv3 area. Allowed value: Any 32-bit integer
Area Type	Choose the type of OSPFv3 area: • **Stub**: No external routes • **NSSA**: Not-so-stubby area, allows external routes • **Normal** **Note** You can't enter a value for **Area type** if you have entered 0 as a value for **Area Number**.
Interface	
Add Interface	Configure the properties of an interface in an OSPFv3 area.
Name*	Enter the name of the interface. Examples of interface names: GigabitEthernet0/0/1, GigabitEthernet0/1/2.1, GigabitEthernet0, or Loopback1.
Cost	Specify a number for the Type 3 summary link-state advertisement (LSA). OSPFv3 uses this metric during its SPF calculation to determine the shortest path to a destination. Range: 0 through 16777215
Authentication Type	Specify the SPI and authentication key if you use IPSec SHA1. • **no-auth**: Select no authentication. • **ipsec-sha1**: Enter the value for the IPSEC Secure Hash Algorithm 1 (SHA-1) authentication.

Field	Description
SPI	Specifies the Security Policy Index (SPI) value. Range: 256 through 4294967295
Authentication Key	Provide a value for the authentication key. When IPSEC SHA-1 authentication is used, the key must be 40 hex digits long.
Passive Interface	Specify whether to set the OSPFv3 interface to be passive. A passive interface advertises its address, but does not actively run the OSPFv3 protocol. Default: Disabled
IPv6 Range	
Add IPv6 Range	Configure the area range of an interface in an OSPFv3 area.
Network Address*	Enter the IPv6 address.
Subnet Mask*	Enter the subnet mask.
No Advertise*	Enable this option to not advertise the Type 3 summary LSAs.
Cost	Specify the cost of the OSPFv3 interface. Range: 1 through 65535

Advanced

Field	Description
Route Policy	Enter the name of a localized control policy to apply to routes coming from OSPFv3 neighbors.
Reference Bandwidth (Mbps)	Specify the reference bandwidth for the OSPFv3 autocost calculation for the interface. Range: 1 through 4294967 Mbps Default: 100 Mbps
RFC 1583 Compatible	By default, the OSPFv3 calculation is done per RFC 1583. Disable this option to calculate the cost of summary routes based on RFC 2328.

Field	Description
Originate	Enable this option to generate a default external route into an OSPF routing domain. When you enable this option, the following fields appear: • **Always**: Enable this option to always advertise the default route in an OSPF routing domain. • **Default Metric**: Set the metric used to generate the default route. Range: 0 through 16777214 Default: 10 • **Metric Type**: Choose to advertise the default route as an OSPF Type 1 external route or an OSPF Type 2 external route.
Distance	Define the OSPFv3 route administration distance based on route type. Default: 100
Distance for External Routes	Set the OSPFv3 distance for routes learned from other domains. Range: 0 through 255 Default: 110
Distance for Inter-Area Routes	Set the distance for routes coming from one area into another. Range: 0 through 255 Default: 110
Distance for Intra-Area Routes	Set the distance for routes within an area. Range: 0 through 255 Default: 110
SPF Calculation Timers	Configure the amount of time between when OSPFv3 detects a topology and when it runs its SPF algorithm.
SPF Calculation Delay (milliseconds)	Specify the amount of time between when the first change to a topology is received until performing the SPF calculation. Range: 1 through 600000 ms (600 seconds) Default: 200 ms
Initial Hold Time (milliseconds)	Specify the amount of time between consecutive SPF calculations. Range: 1 through 600000 ms (600 seconds) Default: 1000 ms
Maximum Hold Time (milliseconds)	Specify the longest time between consecutive SPF calculations. Range: 1 through 600000 ms (600 seconds) Default: 10000 ms (10 seconds)

Field	Description
Maximum Metric (Router LSA)	Configure OSPFv3 to advertise a maximum metric so that other routers do not prefer this vEdge router as an intermediate hop in their Shortest Path First (SPF) calculation. • **Immediately**: Force the maximum metric to take effect immediately, through operator intervention. • **On-startup**: Advertise the maximum metric for the specified number of seconds after the router starts up. Range: 5 through 86400 seconds Maximum metric is disabled by default.

Route Policy

Use this feature to configure the policy-based routing if you want certain packets to be routed through a specific path other than the obvious shortest path.

The following table describes the options for configuring the route policy feature.

Field	Description
Routing Sequence Name	Specifies the name of the routing sequence.
Protocol	Specifies the internet protocol. The options are IPv4, IPv6, or Both.
Condition	Specifies the routing condition. The options are: • **Address** • **AS Path List** • **Community List** • **Extended Community List** • **BGP Local Preference** • **Metric** • **Next Hop** • **OMP Tag** • **OSPF Tag**
Action Type	Specifies the action type. The options are **Accept** or **Reject**.

Field	Description
Accept Condition	Specifies the accept condition type. The options are: - **AS Path** - **Community** - **Local Preference** - **Metric** - **Metric Type** - **Next Hop** - **OMP Tag** - **Origin** - **OSPF Tag** - **Weight**

T1/E1 Controller

Use this feature to configure the T1 or E1 network interface module (NIM) parameters for Cisco IOS XE Catalyst SD-WAN devices.

Configure a T1 Controller

To configure a T1 controller, choose **T1** and configure the following parameters. Parameters marked with an asterisk are mandatory.

Parameter Name	Description
Slot*	Enter the number of the slot in slot/subslot/port format, where the T1 NIM is installed. For example, 0/1/0.
Description	Enter a description for the controller.
Framing	It is an optional field. Enter the T1 frame type: - **esf**: Send T1 frames as extended superframes. This is the default. - **sf**: Send T1 frames as superframes. Superframing is sometimes called D4 framing.
Line Code	It is an optional field. Select the line encoding to use to send T1 frames: - **ami**: Use alternate mark inversion (AMI) as the linecode. AMI signaling uses frames grouped into superframes. - **b8zs**: Use bipolar 8-zero substitution as the linecode. This is the default. B8ZS uses frames that are grouping into extended superframes

Parameter Name	Description
Cable Length	Select the cable length to configure the attenuation • **short**: Set the transmission attenuation for cables that are 660 feet or shorter. • **long**: Attenuate the pulse from the transmitter using pulse equalization and line buildout. You can configure a long cable length for cables longer that 660 feet. There is no default length.
Clock Source	Select the clock source: • **line**: Use phase-locked loop (PLL) on the interface. This is the default. When both T1 ports use line clocking and neither port is configured as the primary, by default, port 0 is the primary clock source and port 1 is the secondary clock source. • **internal**: Use the controller framer as the primary clock. • **loop-timed**: • **network**:

Configure an E1 Controller

To configure an E1 controller, choose **E1** and configure the following parameters. Parameters marked with an asterisk are mandatory.

Parameter Name	Description
Slot*	Enter the number of the slot in slot/subslot/port format, where the E1 NIM is installed. For example, 0/1/0.
Description	Enter a description for the controller.
Framing	Enter the E1 frame type: • **crc4**: Use cyclic redundancy check 4 (CRC4). This is the default. • **no-crc4**: Do not use CRC4.
Line Code	Choose the line encoding to use to send E1 frames: • **ami**: Use alternate mark inversion (AMI) as the linecode. • **hdb3**: Use high-density bipolar 3 as the linecode. This is the default.
Clock Source	Choose the clock source: • **internal**: Use the controller framer as the primary clock. • **line**: Use phase-locked loop (PLL) on the interface. This is the default.

Channel Group

Parameter Name	Description
Add Channel Group	To configure the serial WAN on the E1 interface, enter a channel group number and a value for the timeslot. • **Channel Group**: Enter a value for the channel group. Range: 0 through 30 • **Time Slot**: Type a value for the timeslot. Range: 0 through 31

Tracker

This feature helps you configure the tracker for the VPN interface.

For each parameter of the feature that has a default value, the scope is set to Default (indicated by a check mark), and the default setting or value is shown. To change the default or to enter a value, click the scope drop-down to the left of the parameter field and choose one of the following:

The following table describes the options for configuring the Tracker feature.

Field	Description
Tracker Name*	Name of the tracker. The name can be up to 128 alphanumeric characters.
Endpoint Tracker Type*	Choose a tracker type to configure endpoint trackers: • **http**

Field	Description
Endpoint	Choose an endpoint type: • **Endpoint IP**: When you choose this option, the following field appears: **Endpoint IP**: IP address of the endpoint. This is the destination on the internet to which the probes are sent to determine the status of an endpoint. • **Endpoint DNS Name**: When you choose this option, the following field appears: **Endpoint DNS Name**: DNS name of the endpoint. This is the destination on the internet to which probes are sent to determine the status of the endpoint. The DNS name can contain a minimum of one character and a maximum of 253 characters. • **Endpoint API URL**: When you choose this option, the following field appears: **API URL of endpoint***: API URL for the endpoint of the tunnel. This is the destination on the internet to which probes are sent to determine the status of the endpoint.
Interval	Time interval between probes to determine the status of the configured endpoint. Range: 20 to 600 seconds Default: 60 seconds (1 minute).
Multiplier	Number of times probes are sent before declaring that the endpoint is down. Range: 1 to 10 Default: 3
Threshold	Wait time for the probe to return a response before declaring that the configured endpoint is down. Range: 100 to 1000 milliseconds Default: 300 milliseconds

Tracker Group

Use the Tracker Group feature profile to track the status of transport interfaces.

Some parameters have a scope drop-down list that enables you to choose **Global**, **Device Specific**, or **Default** for the parameter value. Choose one of the following options, as described in the table below:

The following table describes the options for configuring the Tracker Group feature.

Field	Description
Tracker Elements*	This field is displayed only if you chose **Tracker Type** as the **Tracker Group**. Add the existing interface tracker names, separated with a space. When you add this tracker to the template, the tracker group is associated with these individual trackers, and you can then associate the tracker group to an interface.
Tracker Boolean	This field is displayed only if you chose **Tracker Type** as the **Tracker Group**. Select **AND** or **OR**. **OR** is the default boolean operation. An **OR** ensures that the transport interface status is reported as active if either one of the associated trackers of the tracker group reports that the interface is active. If you select the **AND** operation, the transport-interface status is reported as active if both the associated trackers of the tracker group report that the interface is active.

Transport VPN

The Transport VPN feature helps you configure VPN 0 or the WAN VPN.

For each parameter of the feature that has a default value, the scope is set to Default (indicated by a check mark), and the default setting or value is shown.

The following table describes the options for configuring the Transport VPN feature.

Basic Configuration

Field	Description
VPN	Enter the numeric identifier of the VPN.
Enhance ECMP Keying	Enable the use in the ECMP hash key of Layer 4 source and destination ports, in addition to the combination of the source IP address, destination IP address, protocol, and DSCP field, as the ECMP hash key. Default: Disabled

DNS

Field	Description
Add DNS	
Primary DNS Address (IPv4)	Enter the IP address of the primary IPv4 DNS server in this VPN.
Secondary DNS Address (IPv4)	Enter the IP address of a secondary IPv4 DNS server in this VPN.
Add DNS IPv6	
Primary DNS Address (IPv6)	Enter the IP address of the primary IPv6 DNS server in this VPN.

Field	Description
Secondary DNS Address (IPv6)	Enter the IP address of a secondary IPv6 DNS server in this VPN.

Host Mapping

Field	Description
Add New Host Mapping	
Hostname*	Enter the hostname of the DNS server. The name can be up to 128 characters.
List of IP*	Enter up to 14 IP addresses to associate with the hostname. Separate the entries with commas.

Route

Field	Description
Add IPv4 Static Route	
Network address*	Enter the IPv4 address or prefix, in decimal four-point-dotted notation, and the prefix length of the IPv4 static route to configure in the VPN.
Subnet Mask*	Enter the subnet mask.
Gateway*	Choose one of the following options to configure the next hop to reach the static route: • **nextHop**: When you choose this option and click **Add Next Hop**, the following fields appear: • **Address***: Enter the next-hop IPv4 address. • **Administrative distance***: Enter the administrative distance for the route. • **dhcp** • **null0**: When you choose this option, the following field appears: • **Administrative distance**: Enter the administrative distance for the route.
Add IPv6 Static Route	
Prefix*	Enter the IPv6 address or prefix, in decimal four-point-dotted notation, and the prefix length of the IPv6 static route to configure in the VPN.

Field	Description
Next Hop/Null 0/NAT	Choose one of the following options to configure the next hop to reach the static route: • **Next Hop**: When you choose this option and click **Add Next Hop**, the following fields appear: • **Address***: Enter the next-hop IPv6 address. **Administrative distance***: Enter the administrative distance for the route. • **Null 0**: When you choose this option, the following field appears: • **IPv6 Route Null 0***: Enable this option to set the next hop to be the null interface. All packets sent to this interface are dropped without sending any ICMP messages. • **NAT**: When you choose this option, the following field appears: • **IPv6 NAT***: Choose NAT64 or NAT66.
Add BGP Routing	Choose a BGP route.

NAT

Field	Description
Add NAT64 v4 Pool	
NAT64 v4 Pool Name*	Enter a NAT pool number configured in the centralized data policy. The NAT pool name must be unique across VPNs and VRFs. You can configure up to 31 (1–32) NAT pools per router.
NAT64 Pool Range Start*	Enter a starting IP address for the NAT pool.
NAT64 Pool Range End*	Enter a closing IP address for the NAT pool.
NAT64 Overload	Enable this option to configure per-port translation. If this option is disabled, only dynamic NAT is configured on the end device. Per-port NAT is not configured. Default: Disabled

Service

Field	Description
Add Service	
Service Type	Choose the service available in the VPN. Value: **TE**