

AppQoE Commands

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(config-scxt) appnav-controller-group

To configure the name of the ANCG to be used in a service context, use the **appnav-controller-group** service context configuration command. To unconfigure the ANCG, use the **no** form of this command.

appnav-controller-group *ancgroupname*

no appnav-controller-group *ancgroupname*

Syntax Description

appnav-controller-group *ancgroupname*	Specifies the name of the ANCG to add to the service context. The ANCG must have been previously configured by the **service-insertion appnav-controller-group** command.

Command Default

No default behavior or values.

Command Modes

Service context configuration (config-scxt)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.4.1a	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines

A service context can have only one member ANCG.

Examples

The following is an example of this command:

```
service-insertion service-context appqoe/1
appnav-controller-group ACG-APPQOE
```

app-resource package-profile

To assign a DRE profile size to a device, use the **app-resource package-profile** command in app-hosting configuration mode. To remove the DRE profile assigned to a device, use the **no** form of this command.

app-resource package-profile *profile-size*

app-resource package-profile

Syntax Description

profile-size	The size of the DRE profile.

Command Default

The default DRE size specific to the device model is assigned.

Command Modes

App-hosting (config-app-hosting)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.6.1a	This command was introduced.

Example

This example configures a small sized DRE profile on the device.

```
Device(config-app-hosting)# app-resource package-profile small
```

appqoe http-connect

To enable HTTP connect, use the **appqoe http-connect** command in the SD-WAN configuration mode. To disable HTTP connect, use the **no** form of this command.

appqoe http-connect enable [server-port] *port-number-1 [port-number-2] [port-number-3]*

no appqoe http-connect enable [server-port] *port-number-1 [port-number-2] [port-number-3]*

Table 1: Syntax Description

enable	Enables HTTP connect.
server-port	A number that identifies a specific process to which an internet or other network message is to be forwarded when it arrives at a server.
port-number	An HTTP connect request can be sent only using the following standard ports Port 80, 8080, and 8088

Command Default

HTTP connect is not enabled.

Command Modes

SD-WAN configuration (config-sdwan)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.9.1a	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines

This command enables HTTP connect. If you don't enter a standard port number, the default server-port number is assumed as 80.

Example

The following example shows how to enable HTTP connect.

```
Device(config)# sdwan
Device(config-sdwan)# appqoe
Device(config-appqoe)# http-connect enable server-port 80
```

appqoe tcpopt enable

To enable TCP optimization feature, use **appqoe tcpopt enable** command in Cisco SD-WAN configuration mode. To disable TCP optimization feature, use the **no** form of this command.

appqoe tcpopt enable

no appqoe tcpopt enable

Syntax Description This command has no keywords or arguments.

Command Default None

Command Modes SD-WAN configuration (config-sdwan)

Command History

Release	Modification
Cisco IOS XE Release 17.3.1a	TCP optimization support extended to CiscoISR4221, Cisco ISRv, and Cisco 1000 Series Integrated Services Routers.
Cisco IOS XE SD-WAN Release 16.12.1d	This feature optimizes TCP data traffic by decreasing any round-trip latency and improving throughput.

Usage Guidelines TCP optimization fine tunes the processing of TCP data traffic to decrease round-trip latency and improve throughput. It is recommended that you configure TCP optimization on both the WAN Edge routers.

The command can be used to enable TCP optimization feature on WAN Edge routers.

Example

The following example shows how to enable TCP optimization feature on a WAN Edge:

```
Device(config)# sdwan
Device(config-sdwan)# appqoe tcpopt enable

Or

Device(config)# sdwan
Device(config-sdwan)# appqoe
Device(config-appqoe)# tcpopt enable
```

The following example show how to disable TCP optimization feature on a WAN Edge router.

```
Device(config)# sdwan
Device(config-sdwan)# no appqoe tcpopt enable

Or

Device(config)# sdwan
Device(config-sdwan)# appqoe
Device(config-appqoe)# no tcpopt enable
```

app-hosting

To start or activate application hosting, use the **app-hosting** command in privileged EXEC mode. To stop or deactivate application hosting, use the **no** form of this command.

app-hosting { **install** | **activate** | **start** | **stop** | **deactivate** | **uninstall** } **appid** *app-name*

Syntax Description

install	Installs an application from the specified location. An application can be installed from a local storage location.

activate	Validates all the application resource requests, and if all the resources are available, the application is activated; if not, the activation fails.
start	Starts and runs an application that has already been configured.
stop	Stops the DRE application.
deactivate	Deactivates all the resources allocated for the application.
uninstall	Uninstalls all the packaging and images stored. All the changes and updates to the application are also removed.
appid *app-name*	Specifies the name of the application.

Command Default

Application hosting is not enabled.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	Command qualified for use in Cisco vManage templates.

Usage Guidelines

The **start** command in application-hosting configuration mode is equivalent to the **app-hosting activate appid** and **app-hosting start appid** commands.

The **no start** command in application-hosting configuration mode is equivalent to the **app-hosting stop appid**and **app-hosting deactivate appid** commands.

Example

The following example shows how to install an application named Bangalore.

```
Device# app-hosting install appid Bangalore
```

The following example shows how to start app-hosting for an application named Bangalore

```
Device# app-hosting activate appid Bangalore
```

app-hosting appid

To configure an application and enter application-hosting configuration mode, use the **app-hosting app-id** command in global configuration mode.

To remove the application, use the **no** form of this command.

app-hosting app-id *app-name*

Syntax Description

app-name	Specifies a name for the application.

Command Default

Command Modes Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	Command qualified for use in Cisco vManage templates.

Usage Guidelines

Example

The following example shows how to configure an application with the name TEST, and enter application hosting configuration mode.

```
Device(config)# app-hosting appid TEST
Device(config-app-hosting)#
```

app-vnic

To configure a virtual interface gateway for application, use the **app-vnic** command in application hosting configuration mode. To remove the configuration, use the **no** form of this command.

app-vnic gateway0 [**virtualportgroup** *port-number* **guest-interface** *interface*]

Syntax Description

gateway0	Configures gateway0 as the VNIC gateway for the application.
virtualportgroup *port-number*	Configures a VirtualPortGroup interface for the gateway. Range: 0 to 31.
guest-interface *interface*	Configures a guest interface for the gateway. Range: 0 to 3.

Command Default The virtual network gateway is not configured

Command Modes Application hosting configuration (config-app-hosting)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	Command qualified for use in Cisco vManage templates.

Usage Guidelines After you configure the virtual network interface gateway of an application, the command mode changes to application-hosting gateway configuration mode. In this mode, you can configure the IP address of the guest interface.

Example

```
Device(config)# iox
Device(config)# app-hosting appid dreopt
Device(config-app-hosting)# app-vnic gateway0 virtualportgroup 3 guest-interface 1
Device(config-app-hosting-gateway)# guest-ipaddress 192.168.3.2 netmask 255.255.255.252
Device(config-app-hosting-gateway)# exit
Device(config-app-hosting)# start
Device(config-app-hosting)# exit
```

```
Device(config)# interface VirtualPortGroup3
Device(config-if)# no shutdown
Device(config-if)# ip address 192.168.3.1 255.255.255.252
Device(config-if)# exit
```

cluster-type

To specify the cluster type for a specific service-context, use the **cluster-type** command in service insertion context configuration mode. To remove this configuration, use the **no** form of this command.

cluster-type { **service-controller** | **integrated-service-node** }

no cluster-type

Syntax Description

service-controller	Specifies service controller as the cluster type.
integrated-service-node	Specifies integrated service node as the cluster type.

Command Default

Service cluster type is not configured.

Command Modes

Service insertion context (config-service-insertion-context)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.4.1a	Command qualified for use in Cisco vManage CLI templates.
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	Additional parameters qualified: **integrated-service-node**

Example

The following example shows how to enter the service insertion context configuration mode and specify service-controller as the cluster type.

```
Device(config)# service-insertion service-context appqoe CISCO
Device(config-service-insertion-context)# cluster-type service-controller
```

The following example shows how to enter the service insertion context configuration mode and specify integrated-service-node as the cluster type.

```
Device(config)# service-insertion service-context appqoe CISCO
Device(config-service-insertion-context)# cluster-type integrated-service-node
```

device-role

To specify the role of the device attached to the port, use the **device-role** command in service context configuration command mode.

device-role

Command Default The device role is host.

Command Modes Service context configuration (config-scxt)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.4.1a	Command qualified for use in Cisco vManage CLI templates.

Examples The following is an example of this command:

```
service-insertion service-node-group appqoe SNG-APPQOE
device-role service-node
```

dreopt enable

To enable DRE optimization, use the **dreopt enable** command in AppQoE configuration mode.

dreopt enable

no dreopt [**enable**]

Syntax Description This command has no keywords or arguments.

Command Default DRE optimization is not enabled.

Command Modes AppQoE configuration (config-appqoe)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	Command qualified for use in Cisco vManage CLI templates

Example

The following example shows how to enable the AppQoE configure mode, and enable DRE optimization.

```
Device(config)# sdwan appqoe
Device(config-appqoe)# dreopt enable
```

dual-side optimization enable

To enable optimization of dual-side traffic, use the **dual-side optimization enable** command in SSL proxy configuration mode. To disable optimization of dual-side traffic, use the **no** form of this command.

dual-side optimization enable

no dual-side optimization

Syntax Description

This command has no keywords or arguments.

Command Default

Dual-side optimization is not enabled.

Command Modes

SSL proxy configuration (config-sslproxy)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	Command qualified for use in Cisco vManage CLI templates.

Example

```
sslproxy
 enable
 dual-side optimization enable
!
```

exporter

To export metrics from performance monitors to the collectors, use the **exporter** command in performance monitor configuration mode. To clear the configuration, use the **no** form of this command.

exporter destination { *destination-ip* [**source** *port*] | **local-sdwan source** *source* [**dscp** *value* | **vrf** *vrf-id*] }

no exporter destination

Syntax Description

destination *destination-ip*	Specifies the IP address of the collector.
source *source*	Specifies the source interface.
port *port*	(Optional) Specifies the port on the interface.
local-sdwan	Specifies that the performance monitor metrics be sent to Cisco vManage. Note that this option is only supported on features that support vManage as the collector. **Note** This keyword is not applicable to the Performance Monitor feature.
dscp *value*	(Optional) Specifies IP differentiated services code point (DSCP) values to match. Valid values are from 0 to 63.
vrf *vrf-id*	(Optional) Specifies that the export data packets should be sent to the VRF that is specified.

Command Default Performance monitor metrics are not exported to the collector.

Command Modes Performance monitor configuration (config-perf-mon)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.4.1a	Command qualified for use in Cisco vManage CLI templates.
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	Additional parameters qualified: **destination** *destination-ip*

Usage Guidelines After configuring performance monitor, use the **exporter** command to specify where the monitoring metrics should be exported.

The **local-sdwan** keyword is not applicable to the Performance Monitoring feature.

Example

The following example shows how to configure performance monitoring with the sdwan-performance profile, and then specify the destination IP, source interface, and port to export the monitoring metrics.

```
Device(config)# performance monitor context CISCO-MONITOR profile sdwan-performance
Device(config-perf-mon)# exporter destination 10.0.1.128 source GigabitEthernet9 port 2055
```

guest-ipaddress

To configure the IP address of the guest interface configured for application hosting (DRE), use the **guest-ipaddress** command in app hosting gateway configuration mode.

guest-ipaddress *ip-address* [**netmask** *mask*]

no guest-ipaddress *ip-address* [**netmask** *mask*]

Syntax Description

ip-address	The IP address that should be assigned to the guest interface.
netmask *mask*	Specifiest the netmask for the IP address.

Command Modes App hosting gateway configuration (config-app-hosting-gateway)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines After you configure the virtual network interface gateway of an application, the command mode changes to application-hosting gateway configuration mode. In this mode, you can configure the IP address of the guest interface.

Example

The following example assigns and IP address and netmask to the guest interface configured for app-hosting.

```
Device(config)# app-hosting appid dreopt
Device(config-app-hosting)# app-vnic gateway0 virtualportgroup 3 guest-interface 1
Device(config-app-hosting-gateway)# guest-ipaddress 192.168.3.2 netmask 255.255.255.252
```

iox

To enable DRE or UTD container, use the **iox** command in global configuration mode.

iox

no iox

Syntax Description

This command has no keywords or arguments.

Command Default

The container for DRE or UTD is not enabled.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	Command qualified for use in Cisco vManage CLI templates.

Example

```
Device(config)# iox
Device(config)# app-hosting appid dreopt
Device(config-app-hosting)# app-vnic gateway0 virtualportgroup 3 guest-interface 1
Device(config-app-hosting-gateway)# guest-ipaddress 192.168.3.2 netmask 255.255.255.252
Device(config-app-hosting-gateway)# exit
Device(config-app-hosting)# start
Device(config-app-hosting)# exit
Device(config)# interface VirtualPortGroup3
Device(config-if)# no shutdown
Device(config-if)# ip address 192.168.3.1 255.255.255.252
Device(config-if)# exit
```

performance monitor apply

To apply performance monitor to a tunnel, use the **performance monitor apply** command in global configuration mode. To remove performance monitor from a tunnel, use the **no** form of this command.

performance monitor apply *context* { **color-all-dia** | **color-list** *color* | **sdwan-tunnel** }

no performance monitor apply *context*

Syntax Description

context	The name of the context for which the performance monitor should be applied.
color-all-dia	Applies performance monitor to all links in the Direct Internet Access (DIA) tunnel.
color-list *color*	Specifies the link color or colors to which the performance monitor should be applied.
sdwan-tunnel	Specifies that the performance monitor be applied to all SD-WAN tunnel interfaces.

Command Default

Performance monitor is not applied to any tunnel interfaces or links.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.4.1a	Command qualified for use in Cisco vManage CLI templates.
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	Additional parameters qualified: **sdwan-tunnel**

Usage Guidelines

The keywords **color-all-dia** and **color-list** are not applicable to the application performance monitor feature. These parameters are specific to ART monitoring for Cloud onRamp for SaaS applications.

Example

The following example shows how to apply performance monitor configuration on all SD-WAN tunnel interfaces globally.

```
Device(config)# performance monitor apply CISCO-MONITOR sdwan-tunnel
```

performance monitor context

To enable the performance monitor context on a specified interface, use the **performance monitor context** command in interface configuration mode. To remove performance monitor configuration, use the **no** form of this command.

performance monitor context *context-name* [**profile sdwan-performance**]

no performance monitor context *context-name* [**profile sdwan-performance**]

Syntax Description

context-name	Name of the performance monitor context name. The performance monitor context is used to enable performance monitor feature on the specified interface.
profile sdwan-performance	Specifies that the sdwan-performance profile should be applied to the class map specified for performance monitoring. **Note** This parameter is optional only if sdwan-performance profile is used to instantiate the performance monitor context.

Command Default Performance monitor is not configured.

Command Modes Interface configuration (config-if)

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.4.1a	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines The keywords **profile** and **sdwan-performance** are optional only if the context name is generated when the sdwan-performance profile is applied.

Example

The following example shows how to enable performance monitor on Tunnel1.

```
interface Tunnel1
  performance monitor context CISCO-MONITOR
```

performance monitor sampling-rate

To monitor a specified number of flows as a sample, from the total flows being monitored, use the **performance monitor sampling-rate** command in global configuration mode. To remove the sampling rate, use the **no** form of this command

performance monitor sampling-rate *rate*

no performance monitor sampling-rate

Syntax Description

rate	Specifies the number of flows to be monitored from the total flows that performance monitor is applied to. Range: 2 to 32768

Command Default Sampling rate is not configured.

Command Modes Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.4.1a	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines

Example

The following example shows how to configure a sampling rate of 10 for the traffic being monitored:

```
Device(config)# performance monitor sampling-rate 10
```

platform resource

To configure a device to allocate cores to the service plane or the data plane, use the **platform resource** command in global configuration mode. To remove the core allocation configuration, use the no form of this command.

platform resource { **data-plane-heavy** | **service-plane-heavy** | **app-heavy** }

Syntax Description

data-plane-heavy	Allocates more cores to the data plane.
service-plane-heavy	Allocates more cores to the service plane.
app-heavy	Allocates more cores to the AppQoE service. **Note** Use this keyword to allocate more cores to the service plane of Cisco Catalyst 8000V instances on UCS E-Series servers.

Command Default

When this command is not configured, the supported Cisco Catalyst 8300 Series Edge Platforms are configured as service-plane heavy by default, and Cisco Catalyst 8000V Edge software is configured as data-plane heavy by default.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.4.1a	Command qualified for use in Cisco vManage CLI templates.
Cisco IOS XE Catalyst SD-WAN Release 17.6.1a	A new keyword was added to this command: app-heavy

Usage Guidelines

If this command is not configured, the supported Cisco Catalyst 8300 Series Edge Platforms are configured as service-plane heavy by default, and Cisco Catalyst 8000V Edge software is configured as data-plane heavy by default. If you change the default configuration, you need to reboot the device for the updated configuration to take effect.

Example

The following example configures an external service node device as app-heavy.

```
Device(config)# platform resource app-heavy
```

rd

To specify a route distinguisher (RD) for a VPN routing and forwarding (VRF) instance, use the **rd**command in VRF configuration mode. To remove a route distinguisher, use the **no** form of this command.

rd *route-distinguisher*
no rd *route-distinguisher*

Syntax Description

route-distinguisher	An 8-byte value to be added to an IPv4 prefix to create a VPN IPv4 prefix.

Command Default

No RD is specified.

Command Modes

VRF configuration (config-vrf)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.4.1a	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines

For usage guidelines, see the Cisco IOS XE rd command.

Examples

The following example shows how to configure a default RD:

```
vrf definition 100
rd 1:100
!
address-family ipv4
route-target export 1:100
route-target import 1:100
exit-address-family
!
```

sdwan appqoe dreopt enable

To enable DRE optimization, use the **sdwan appqoe dreopt enable** command in global configuration mode. To disable DRE, use the **no** form of this command.

sdwan appqoe dreopt enable

no sdwan appqoe dreopt enable

Command Default

DRE optimization is not enabled.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	Command qualified for use in Cisco vManage templates.

Usage Guidelines

Example

The following example shows how to enable DRE optimization.

```
Device(config)# sdwan appqoe dreopt enable
```

service-insertion appqoe

To configure service nodes and a service controller to form a service node group, use the **service-insertion appqoe** command in interface configuration mode. To unconfigure the service node group, use the **no** form of this command.

service-insertion appqoe

no service-insertion appqoe

Syntax Description This command has no keywords or arguments.

Command Default No default behavior or values.

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
Cisco IOS XE Release 17.5.1a	Command qualified for use in Cisco vManage CLI templates.

Examples

```
interface VirtualPortGroup2
no shutdown
ip address 192.168.2.1 255.255.255.0
service-insertion appqoe
```

service-insertion appnav-controller-group appqoe

To configure a service controller inside a service controller group, use the **service-insertion appnav-controller-group appqoe** command in global configuration mode.

To remove the service controller configuration, use the **no** form of this command.

service-insertion appnav-controller-group appqoe *group-name* [**appnav-controller** *ipv4-address* [**vrf** *vrf-id*] | **description** *description* [**appnav-controller** *ipv4-address* [**vrf** *vrf-id*]]]

no service-insertion appnav-controller-group appqoe

Syntax Description

group-name	Specifies the name of the AppQoE service-controller-group that the service controller is being configured under
appnav-controller *ipv4-address*	Specifies the IPv4 address of the AppQoE service controller
vrf *vrf-id*	Specifies the ID of the VRF to which this configuration is being applied.
description *description*	Provides a description for the AppQoE controller.

Command Default

No service controller is configured.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.4.1a	Command modified to enable applying the service-insertion configuration to a VRF.

Usage Guidelines

For the **service-insertion appnav-controller-group appqoe** configuration to take effect, you must create a VRF and configure interface VirtualPortGroup first.

Examples

The following example shows how to configure a service controller inside a controller group and connect service nodes to the controller:

```
config-transaction
 vrf definition 200
 !
 interface VirtualPortGroup2
  no shutdown
  ip address 192.168.2.1 255.255.255.0
  service-insertion appqoe
  !
 service-insertion appnav-controller-group appqoe ACG-APPQOE
  appnav-controller 198.51.100.1 vrf 200
  !
 service-insertion service-node-group appqoe SNG-APPQOE
  service-node 192.0.2.2
  service-node 192.0.2.3
  service-node 192.0.2.4
  service-node 192.0.2.5
  !
 service-insertion service-context appqoe/1
  appnav-controller-group ACG-APPQOE
  service-node-group SNG-APPQOE
  cluster-type service-controller
  enable
  vrf default
  !
```

service-insertion service-node-group appqoe

To configure a supported device as an external AppQoE service node, use the **service-insertion service-node-group appqoe** command in global configuration mode.

To remove the service node configuration, see the **no** form of this command.

service-insertion service-node-group appqoe *group-name* [**description** *description*] [**device-role service-node**] [**node-discovery enable**] [**service-node** *ipv4-address*]

no service-insertion service-node-group appqoe

Syntax Description

group-name	Specifies the name of the appqoe service-node-group that the service node is being configured under
device-role service-node	(Optional) Configures the supported device with the service-node role
node-discovery enable	(Optional) Enables discovery for the service node
service-node *ipv4-address*	(Optional) Specifies the IPv4 address of the service node

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.4.1a	Command modified. Support was added for the keywords **device-role service-node**, which enables you to configure a device as an external service node.

Usage Guidelines

The parameters after **service-insertion service-node-group appqoe** *group-name* are optional and can be entered in any order.

Examples

The following example shows how to configure a service node in a service node group.

```
config-transaction
 service-insertion service-node-group appqoe SNG-APPQOE
  device-role service-node
  service-node 192.168.2.2
  !
```

start (app-hosting)

To start the DRE service, use the **start** command in app-hosting configuration mode. To stop the DRE service, use the **no** form of this command.

start

no start

Syntax Description This command has no keywords or arguments.

Command Default The DRE service does not start.

Command Modes App hosting gateway configuration (config-app-hosting)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	Command qualified for use in Cisco vManage CLI templates.

Example

```
app-hosting appid dreopt
app-resource package-profile extra-large
app-vnic gateway0 virtualportgroup 3 guest-interface 1
guest-ipaddress 192.168.3.2 netmask 255.255.255.252
!
start
```

traffic-monitor

To specify the type of traffic that sdwan-performance monitoring profile monitors, use the **traffic-monitor** command in performance monitor configuration mode. To clear the types of traffic being monitored, use the **no** form of this command.

traffic-monitor { **application-response-time** | **media** | **art-cor-saas** } [**class-and** *class-map* [**ipv4**]] [**class-replace** *class-map*]

no traffic-monitor [**application-response-time** | **media** | **art-cor-saas**] [**class-and** | **class-replace**]

Syntax Description

application-response-time	Specifies that application response time (ART) be monitored for the specified traffic.
media	Specifies that media traffic be monitored.
art-cor-saas	Specifies that ART be monitored for traffic specific to Cloud onRamp for SaaS.
class-and *class-map*	Specifies that traffic monitoring be filtered by additional class maps specified.
class-replace *class-map*	Specifies that the customized class-map replace the default class-map, which is automatically created when you enable the sdwan-performance profile for monitoring.
ipv4	Specifies that only IPv4 flows be monitored. **Note** For the Application Performance Monitor feature introduced in Cisco IOS XE Catalyst SD-WAN Release 17.5.1a, IPv4 is enabled by default.

Command Default Performance monitoring is not applied to specific traffic type.

Command Modes Performance monitor configuration (config-perf-mon)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.4.1a	Command qualified for use in Cisco vManage CLI templates.
Cisco IOS XE Catalyst SD-WAN Release 17.5.1a	Additional parameters qualified: **application-response-time** and **media**

Usage Guidelines After configuring performance monitor, use the **traffic-monitor** command to specify which traffic type should be monitored.

Example

The following example show how to configure traffic monitoring by ART for media monitoring.

```
Device(config)# performance monitor context CISCO-MONITOR profile sdwan-performance
Device(config-perf-mon)# traffic-monitor application-response-time
Device(config-perf-mon)# traffic-monitor media
```

vrf (service-insertion-context)

To specify the VRF to which the AppQoE service should be applied, use the **vrf** command in service-insertion-context configuration mode. To remove the AppQoE service from the VRF, use the **no** form of this command.

vrf global

no vrf global

Syntax Description

global	Applies the AppQoE service to the global VRF.

Command Default AppQoE service is not applied to the VRF.

Command Modes Service insertion context (config-service-insertion-context)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.4.1a	Command qualified for use in Cisco vManage CLI templates.

Example

```
service-insertion service-context appqoe/1
 appnav-controller-group ACG-APPQOE
 service-node-group SNG-APPQOE
```

```
 cluster-type integrated-service-node
 enable
 vrf global
!
```