

PPPoEoVlan Commands

- class (class-map), on page 1
- dialer-group, on page 2
- dialer pool, on page 3
- encapsulation, on page 4
- interface Dialer, on page 5
- ip address, on page 5
- ip address negotiated, on page 6
- ip unnumbered, on page 7
- ppp authentication, on page 7
- ppp chap hostname, on page 8
- ppp chap password, on page 9
- ppp pap sent-username password, on page 10
- pppoe-client dial-pool-number, on page 11
- pppoe-client ppp-max-payload, on page 12
- pppoe enable group, on page 13
- protocol ppp dialer, on page 14
- set cos, on page 15

class (class-map)

To specify the name of the class whose policy you want to create or change before you configure its policy, use the **class**command in class-map configuration mode. To remove a class from the class map, use the **no** form of this command.

class *class-name*
no class { *class-name* }

Syntax Description

class-name	Name of the class to be configured or whose policy is to be modified. The class name is used for both the class map and to configure a policy for the class in the policy map.

Command Default

No class is specified.

Command Modes

Class-map configuration (config-class-map)

Command History

Release	Modification
Cisco IOS XE Release 17.2.1v	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines

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

Examples

The following is an example of this command:

```
Device(config)# policy
Device(config-policy)# class-map
Device(config-class-map)# class VOICE queue 0
```

dialer-group

To control access by configuring an interface to a specific dialer group, use the **dialer-group** command in interface configuration mode. To remove an interface from the specified dialer access group, use the **no** form of this command

dialer-group *group-number*

no dialer-group *group-number*

Syntax Description

group-number	Number of the dialer access group to which the specific interface belongs. The range is from 1 to 128.

Command Default

None

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
Cisco IOS XE SD-WAN Release 17.2.1v	Command qualified for use in Cisco SD-WAN Manager CLI templates.

Usage Guidelines

An interface can be associated with a single dialer access group only. You cannot assign multiple dialer-groups. This command can be used to control access by configuring an interface to a specific dialer group.

Example

The following example shows how to configure Interface Dialer1 to Dialer-Group 1.

```
Device# config-transaction
Device(config)# interface Dialer1
Device(config-if)# dialer-group 1
```

Related Commands

Command	Description
interface dialer	Defines a dialer rotary group.
pppoe-client dial-pool-number	Configures the dialer pool to which the interface belongs.
dialer-list	Specifies an access list by list number or by protocol, and the list number defines the "interesting" packets that can trigger a call.

dialer pool

To specify, for a dialer interface, which dialing pool to use to connect to a specific destination subnetwork, use the **dialer pool** command in interface configuration mode. To remove the dialing pool assignment, use the **no** form of this command.

dialer pool *number*

no dialer pool

Syntax Description

number	Dialing pool number, in the range 1 through 255.

Command Default

Disabled; no default number is specified.

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.2.1v	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines

This command applies to dialer interfaces only

Example

```
Device(config)# interface Dialer 1
Device(config-if)# dialer pool 1
```

encapsulation

To set the encapsulation method used by the interface, use the **encapsulation** command in interface configuration mode. To remove the encapsulation, use the **no** form of this command.

encapsulation *encapsulation-type*
no encapsulation *encapsulation-type*

Syntax Description

encapsulation-type	Encapsulation type; one of the following keywords: • **dot1q** *vlan-id* ---Enables IEEE 802.1q encapsulation of traffic on a specified subinterface in VLANs. The *vlan-id* argument is a virtual LAN identifier. • **frame-relay** --Frame Relay (for serial interface). • **ppp** -- PPP (for Dialer interface).

Command Default

NA

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.2.1v	Command qualified for use in Cisco vManage CLI templates. The following keywords are qualified: • **dot1q** for GigabitEthernet interface . • **ppp** for Dialer interface.
Cisco IOS XE Catalyst SD-WAN Release 17.3.1a	Command qualified for use in Cisco vManage CLI templates. The following keywords are qualified: • **encapsulation frame-relay** for serial interface.

Usage Guidelines

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

Examples

The following example shows how to enable frame-relay encapsulation on Serial interface 0:

```
Device(config)# interface Serial 0
Device(config-if)# encapsulation frame-relay
```

The following example shows how to configure Dialer interface 1 for PPP encapsulation:

```
Device(config)# interface Dialer 1
Device(config-if)# encapsulation ppp
```

interface Dialer

To define a dialer rotary group or profile, use the **interface Dialer** command in global configuration mode. To remove the configuration, use the **no** form of this command.

interface Dialer *dialer-rotary-group-number*

no Interface Dialer *dialer-rotary-group-number*

Syntax Description

dialer-rotary-group-number	Number of the dialer rotary group in the range from 0 to 255.

Command Default

No dialer rotary groups are predefined.

Command Modes

Global configuration

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.2.1v	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines

For usage guidelines, see the Cisco IOS XE interface Dialer command.

Examples

The following example identifies interface dialer 2 as the dialer rotary group leader. Interface dialer 2 is not a physical interface, but represents a group of interfaces.

```
Device(config)# interface Dialer 2
```

ip address

To set a primary or secondary IP address for an interface, use the **ip address** command in interface or sub-interface configuration mode. To remove an IP address or disable IP processing, use the **no** form of this command.

ip address *ip-address* [*mask*]
no ip address [*ip-address*] [*mask*]

Syntax Description

ip-address	IP address.
mask	(Optional) Mask for the associated IP subnet.

Command Default

No IP address is defined for the interface.

Command Modes

Interface configuration (config-if)

Sub-interface configuration (config-subif)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.2.1v	Qualified for use in Cisco vManage CLI templates.

Usage Guidelines

For the usage guidelines, see the Cisco IOS XE ip address command.

Examples

```
Device(config)# interface ATM 0/3/0.1 point-to-point
Device(config-if)# ip address 192.10.6.5
Device(config)# interface ATM 0/3/0.1
Device(config-subif)# ip address 10.0.0.0 255.255.255.252
Device(config)# interface Serial 0/1/0.2
Device(config-if)# ip address 10.1.1.1 255.255.255.0
Device(config)# interface Serial 0/0/1:5
Device(config-if)# ip address 10.1.1.1 255.255.255.0
Device(config)# interface MFR1
Device(config-if)# ip address 10.4.4.4 255.255.255.0
```

ip address negotiated

To configure an interface and to use the address that is obtained during IPCP negotiation, use **ip address negotiated** command in interface configuration mode. To remove the configuration, use the **no** form of this command.

ip address negotiated

no ip address negotiated

Syntax Description

This command has no keywords or arguments.

Command Default

By default, no ip address method is set.

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.2.1v	Command qualified for use in Cisco SD-WAN Manager CLI templates.

Usage Guidelines

The IP Control Protocol (IPCP) is used for configuring, enabling, and disabling the IP protocol modules on both ends of the Point-to-Point (PPP) link.

This command can be used to configure an interface to use the address that is obtained during IPCP negotiation. This command is used under the Dialer interface command which is configured for PPP connections.

Example

The following example shows how to configure interface Dialer1 to use the address that is obtained during IPCP negotiation.

```
Device# config-transaction
Device(config)# interface Dialer1
Device(config-if)# ip address negotiated
```

Related Commands

Command	Description
interface dialer	Defines a dialer rotary group.

ip unnumbered

To enable IP processing on an interface without assigning an explicit IP address to the interface, use the **ip unnumbered** command in interface configuration mode or subinterface configuration mode. To disable the IP processing on the interface, use the **no** form of this command.

ip unnumbered *type*
no ip unnumbered

Syntax Description

type	Type of interface. For more information, use the question mark (**?**) online help function.

Command Default

Unnumbered interfaces are not supported.

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.2.1v	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines

For usage guidelines, see the Cisco IOS XE ip unnumbered command.

Examples

The following example shows how to configure GigabitEthernet 1 as an IP unnumbered interface.

```
Device(config)# interface Tunnel 1
Device(config-if)# ip unnumbered GigabitEthernet1
```

ppp authentication

To enable at least one PPP authentication protocol and to specify the order in which the protocols are selected on the interface, use the **ppp authentication** command in interface configuration mode. To disable this authentication, use the **no** form of this command.

ppp authentication *protocol1* [*protocol2*] [**callin**]

no ppp authentication *protocol1* [*protocol2*] [**callin**]

Syntax Description

protocol 1	One of the authentication methods is supported, in order of preference. Options are PAP or CHAP.
callin	(Optional) Authentication is on incoming (received) calls only.

Command Default

PPP authentication is not enabled.

Command Modes

Interface Configuration (config-if)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.2.1v	Command qualified for use in Cisco SD-WAN Manager CLI templates.

Usage Guidelines

When you enable Password Authentication Protocol (PAP) or Challenge Handshake Authentication Protocol (CHAP), the local router requires the remote device to prove its identity before allowing data traffic to flow. PAP authentication requires the remote device to send a name and a password, which is checked against a matching entry in the local username database or in the remote security server database. CHAP authentication sends a challenge message to the remote device. The remote device encrypts the challenge value with a shared secret and returns the encrypted value and its name to the local router in a Response message. The local router attempts to match the name of the remote device with an associated secret stored in the local username or remote security server database; it uses the stored secret to encrypt the original challenge and verify that the encrypted values match.

In order to configure PPP Authentication, you must configure the encapsulation of the interface as PPP.

Example

The following example shows how to configure CHAP authentication on interface Dialer1.

```
Device# config-transaction
Device(config)# interface Dialer1
Device(config-if)# encapsulation ppp
Device(config-if)# ppp authentication chap
```

Related Commands

Command	Description
encapsulation ppp	Configures the PPP as the encapsulation protocol for an interface.

ppp chap hostname

To create a pool of dialup routers by specifying a common alias for all routers when authenticating with CHAP (Challenge Handshake Authentication Protocol), use the **ppp chaphostname** command in interface configuration mode. To disable this function, use the no form of the command.

ppp chap hostname *hostname*
no ppp chap hostname

Syntax Description

hostname	The name sent in the CHAP challenge.

Command Default Disabled. The router name is sent in any CHAP challenges.

Command Modes Interface configuration (config-if)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.2.1v	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines The command is available only when **encapsulation ppp** is configured.

The **ppp chap hostname** command allows you to specify a common alias for all routers in a rotary group to use so that only one username must be configured on the dialing routers.

This command is normally used with local CHAP authentication (when the router authenticates to the peer), but it can also be used for remote CHAP authentication.

Note By default, after changing hostnames, an MLP member link does not undergo failure recovery automatically. You must use the **ppp chap hostname** command to define the Multilink PPP (MLP) bundle name on an endpoint. If this command is not configured and the hostname is changed, then a link flap will not return the link back to the bundle.

Examples

```
Device(config)# interface Dialer 1
Device(config-if)# encapsulation ppp
Device(config-if)# ppp chap hostname ntt
```

ppp chap password

To configure a common CHAP secret to be used in responses to challenges from an unknown remote peer in a collection of routers that do not support this command (such as routers running older Cisco IOS software images), use the **ppp chap password** interface configuration command. To disable this function, use the **no** form of this command.

ppp chap password *secret*
no ppp chap password *secret*

Syntax Description

secret	The secret used to compute the response value for any CHAP challenge from an unknown peer.

Command Default Disabled

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.2.1v	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines

The command is available only when **encapsulation ppp** is configured.

This command allows you to replace several username and password configuration commands with a single copy of this command on any dialer interface or asynchronous group interface.

This command is used for remote CHAP authentication only (when routers authenticate to the peer) and does not affect local CHAP authentication.

Examples

```
Device(config)# interface Dialer 1
Device(config-if)# encapsulation ppp
Device(config-if)# ppp chap password ntt
```

ppp pap sent-username password

To enable remote Password Authentication Protocol (PAP) support for an interface, and to use the values specified for username and password in the PAP authentication request, use the **ppp pap sent-username password** command in interface configuration mode. To disable remote PAP support, use the **no** form of this command.

ppp pap sent-username *username* **password** *password*

no ppp pap sent-username *username*

Syntax Description

username	Username sent in the PAP authentication request.
password	Cleartext or already-encrypted password.

Command Default

Remote PAP support is disabled.

Command Modes

Interface configuration

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.3.1a	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines

Use the **ppp pap sent-username password** command to enable remote PAP support (for example, to respond to the peer's request to authenticate with PAP) and to specify the parameters to be used when sending the PAP authentication request.

You must configure the **ppp pap sent-username password** command for each interface.

The command is available only when **virtual-ppp** is configured.

Examples

In the following example, a password is entered as a cleartext password, xxxx for remote PAP authentication:

```
router# configure
router(config)# interface POS 0/1/0/0
router(config-if)# ppp pap sent-username xxxx password notified
router(config-if)# ppp pap sent-username xxxx password clear notified
```

pppoe-client dial-pool-number

To configure a PPP over Ethernet (PPPoE) client, use the **pppoe-client dial-pool-number** command in interface configuration mode or VLAN interface configuration mode. To disable the configured dial-on-demand functionality, use the **no** form of this command.

pppoe-client dial-pool-number *number* [**service-name** *name*]
no pppoe-client dial-pool-number [*number*] [**service-name**]

Syntax Description

number	A number that is assigned to a configured dialer pool. The range is from 1 to 255.
service-name *name*	(Optional) Specifies the service name requested by the PPPoE client. • The service name that allows the PPPoE client to signal a service name to the Broadband Access Aggregation System (BRAS). • By default, no service name is signaled and the service name value is set to NULL.

Command Default

A PPPoE client is not configured and the DDR functionality is disabled.

Command Modes

Interface configuration (config-if)

VLAN interface configuration (config-VLAN-*vlan-id*)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.2.1v	Command qualified for use in Cisco vManage CLI templates.
Cisco IOS XE Catalyst SD-WAN Release 17.3.1a	Command qualified for use in Cisco vManage CLI templates. The following optional parameter is qualified: **service-name** *name*

Usage Guidelines

For usage guidelines, see the Cisco IOS XE `pppoe-client dial-pool-number` command.

Examples

The following example shows PPPoE client configuration for a VLAN interface:

```
Device(config)# interface Vlan 1
Device(config-Vlan-1)# pppoe-client dial-pool-number 1
```

The following example shows PPPoE client configuration for a GigabitEthernet interface:

```
Device(config)# interface GigabitEthernet 4.302
Device(config-Vlan-1)# pppoe-client dial-pool-number 1 service-name ser1
```

pppoe-client ppp-max-payload

To set a Maximum Receive Unit (MRU) value to be negotiated during PPP Link Control Protocol (LCP) negotiation on an interface, use the **pppoe-client ppp-max-payload** command in interface configuration mode. To remove the MRU value, use the **no** form of this command.

pppoe-client ppp-max-payload *size*

no pppoe-client ppp-max-payload *size*

Syntax Description

size	Enter the Maximum Receive Unit (MRU) value to be negotiated during PPP LCP negotiation. Range is from 64 to 1792 bytes.

Command Default

By default, the MRU value to be negotiated during PPP LCP negotiation is 1492 bytes.

Command Modes

Interface configuration (config-if).

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.2.1v	Command qualified for use in Cisco SD-WAN Manager CLI templates.

Usage Guidelines

A PPPoE client and a server negotiate different parameters during the during PPP LCP phase, including the MTU and MRU of the interface.

This command can be used to set MRU size for a specific interface for the LCP negotiation.

In order to configure **pppoe-client ppp-max-payload** command, you must first configure the **pppoe-client dial-pool-number** command.

Example

The following example shows how to set the MRU to 1492 bytes on Interface GigabitEthernet 0/0/1:

```
Device# config-transaction
Device(config)# interface GigabitEthernet 0/0/1
Device(config-if)# pppoe-client dial-pool-number 1
Device(config-if)# pppoe-client ppp-max-payload 1492
```

Related Commands

Command	Description
pppoe-client dial-pool-number	Configures the dialer pool to which the interface belongs.

pppoe enable group

To enable a PPPoE session on the Gigabit Ethernet interface or subinterface, use the **pppoe enable group** command in interface configuration mode. To disable a PPPoE session, use the **no** form of this command.

pppoe enable [**group** { *profile-name* | **global** }]

no pppoe enable [**group** { *profile-name* | **global** }]

Syntax Description

profile-name	PPPoE profile name.
global	If a PPPoE profile is not assigned to the interface by using the group group-name option, the interface will use the global PPPoE profile.

Command Default

None

Command Modes

Interface configuration (config-if)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.2.1v	Command qualified for use in Cisco SD-WAN Manager CLI templates.

Usage Guidelines

This command is used to enable a PPPoE session on the Gigabit Ethernet interface or or subinterface. If a PPPoE profile is not assigned to the interface by using the **group** *profile-name* option, the interface will use the global PPPoE profile.

Example

The following example shows how to enable a PPPoE session on the Gigabit Ethernet subinterface GigabitEthernet0/0/1.101.

```
Device# config-t
Device(config)# interface GigabitEthernet0/0/1.101
Device(config-if)# ip address 192.10.6.5 255.255.255.0
Device(config-if)# encapsulation dot1Q 101
Device(config-if)# pppoe enable group global
Device(config-if)# pppoe-client dial-pool-number 1
```

Related Commands

Command	Description
pppoe client dial pool-number	Configures a PPPoE client and specifies Dial-on-Demand Routing (DDR) functionality.

protocol ppp dialer

To configure a static map for an Asynchronous Transfer Mode (ATM) Permanent Virtual Circuit (PVC), use the **protocol ppp dialer** command in the interface ATM virtual circuit configuration mode. To remove the static mapping, use the **no** form of this command.

protocol ppp dialer

no protocol ppp dialer

Syntax Description

This command has no keywords or arguments.

Command Default

No default behaviour or value

Command Modes

Interface ATM virtual circuit configuration (config-if-pvc)

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.2.1v	Command qualified for use in Cisco SD-WAN Manager CLI templates.

Usage Guidelines

This command is used to configure a static map for an ATM PVC, Switched Virtual Circuit (SVC), or Virtual Circuit (VC) class.

Example

The following example shows how to configure PPPoA on an ATM interface with a Point-to-Point subinterface using PVC 0/100.

```
Device# config-transaction
Device(config)# interface ATM 0/3/0
Device(config-if)# no shutdown
Device(config-if)# ip mtu 1496
Device(config-if)# interface ATM 0/3/0.1 point-to-point
Device(config-subif)# ip mtu 1496
Device(config-subif)# ip address 10.0.0.0 255.255.255.252
Device(config-subif)# no shutdown
Device(config-subif)# pvc 0/100
Device(config-if-pvc)# dialer pool-member 1
Device(config-if-pvc)# protocol ppp dialer
```

Related Commands

Command	Description
pvc	Specifies the encapsulation type on an ATM PVC and enters config-if-pvc mode.
dialer pool-member	Configures a physical interface to be a member of a dialer profiles dialing pool.

set cos

To set the Layer 2 class of service (CoS) value of an outgoing packet, use the **setcos** command in policy-map class configuration mode. To remove a specific CoS value setting, use the **no** form of this command.

set cos *cos-value*
no set cos

Syntax Description

cos-value	Specific IEEE 802.1Q CoS value from 0 to 7.

Command Default

No CoS value is set for the outgoing packet.

Command Modes

Policy-map class configuration

Command History

Release	Modification
Cisco IOS XE Catalyst SD-WAN Release 17.3.1a	Command qualified for use in Cisco vManage CLI templates.

Usage Guidelines

For usage guidelines, see the Cisco IOS XE `set cos` command.

Examples

In the following example, the policy map called “cos-set” is created to assign different CoS values for different types of traffic. This example assumes that the class maps called “voice” and “video-data” have already been created.

```
Router(config)# policy-map cos-set
Router(config-pmap)# class voice
Router(config-pmap-c)# set cos 1
Router(config-pmap-c)# exit


Router(config-pmap)# class video-data
Router(config-pmap-c)# set cos 2
Router(config-pmap-c)# end
```