

PVC Interface Configuration Mode Commands

Command Modes

The PVC (permanent virtual connection) Interface configuration mode is used to create and manage the IP parameters for PVC interface(s) associated with an OLC (ATM-type) for a specific context.

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-if-pvc)#
```

Important The commands or keywords/variables that are available are dependent on platform type, product version, and installed license(s).

Important For information on common commands available in this configuration mode, refer to the Common Commands chapter.

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description

Defines descriptive text to provide useful information about the current interface.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-if-pvc)#
```

Syntax Description

description *text*
no description

no

Erases the port's description from the configuration file.

text

text: Must be a string of 1 to 79 alphanumeric characters with no spaces or a string within double quotes that includes printable characters. The description is case-sensitive.

Usage Guidelines

Set the description to provide helpful information, for example the port's primary function, services, end users. Define any information, the only limit is the number of characters, 79.

Example

```
description "PVC12 connects server 1 to home office."
```

ip

The commands in this section are used to configure the IP parameters for the PVC interface.

Important Before configuring the OSPF parameters in this section, you need to enable OSPF using the router command and OSPF configuration sub-mode commands accessed in the Context configuration mode and documented in the Context Configuration Mode chapter of this Command Line Interface Reference.

ip access-group

This command identities the access control list (ACL to be associated with this PVC interface in this context.



Important Prior to using this command, the access list must be created for this context with the **ip access-list** command in the Context configuration mode and then the ACL must be configured using the commands described in CLI chapter ACL Configuration Mode.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-if-pvc)#`

Syntax Description

ip access-group *name* **{ in | out }**
no ip access-group *name* **{ in | out }**

no

Indicates the specified access group to be removed from the access list.

name

Specifies the access control list (ACL) rule to be added or removed from the group.

name: Must be a string of 1 to 79 alphanumeric characters with no spaces.



Important Up to 8 ACLs can be applied to a group provided that the number of rules configured within the ACL(s) does not exceed the 128 rule limit for the interface.

in | out

in: Specifies list is for in-bound access control.

out: Specifies the list is for out-bound access control.



Important Even though "in" or "out" can be specified, context-level ACL rules are automatically applied to both directions.

Usage Guidelines

Use this command to add IP access lists configured for the same context to an IP access-group. The list can be configured to apply to all inbound and/or outbound traffic.

Example

The following adds ACL access-list-1 to the IP access-group associated with this PVC for this context.

```
ip access-group access-list-1 in
```

ip address

Defines the primary IP address and the network mask to be associated with this PVC interface for this context. This command can also be used to configure the secondary IP address.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-if-pvc)#
```

Syntax Description

ip address *ip_address ip_mask* **[secondary]**
no ip address *ip_address*

no

Removes the IP address information for this PVC from the configuration. It is not necessary to include the subnet mask with the command.

The command must first be issued with the secondary IP address if one exists and then re-issued with the primary IP address.

address *ip_address ip_mask*

Configures the IP address and the network mask for this PVC interface. The first time this command is entered, it automatically defines the primary IP address for this interface.

ip_address and *ip_mask* must be specified using the standard IPv4 or IPv6 dotted decimal notation.

secondary

secondary: Including this keyword indicates the IP address and subnet mask being defined are to be used as the secondary IP address for this PVC interface. This is referred to as multi-homing of the interface.

Usage Guidelines

Configures or deletes the IPv4 or IPv6 addresses and subnet mask to be associated with this PVC.

Example

The following configures the secondary IP address to associate with the interface.

ip address 131.2.3.4 255.255.255.224 **secondary**

The following set of commands removes the primary IP address from the PVC interface configuration for this context.

no ip address *secondary address*
no ip address *primary address*

ip mtu

Configures the maximum transmission unit (MTU) to be supported on this interface.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-if-pvc)#
```

Syntax Description

ip mtu *value*
no ip mtu

no

Disables and/or restores the option to the system default.

mtu *value*

Configures the maximum transmission unit in octets.

value: Enter an integer between 576 and 1600. Default is 1500.

Usage Guidelines

Change the maximum transmission unit size to 1300.

Example

ip mtu *1300*

ip ospf authentication-key

This command configures the password or key to be used for OSPF (Open Shortest Path First) authentication with neighboring routers.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-if-pvc)#
```

Syntax Description

ip ospf authentication-key [encrypted] password *auth_key*
no ip ospf authentication-key

no

Deletes the authentication key.

encrypted

Enter this keyword if you are pasting a previously encrypted authentication key into the **password** *auth_key* for this command.

password*auth_key*

auth_key is a string variable, from 1 through 16 alphanumeric characters, that denotes the authentication key (password). This variable is entered in clear text format.

Usage Guidelines

Use this command to set the authentication key used when authenticating with neighboring routers.

Example

To set the authentication key to 123abc, use the following command;

ip ospf authentication-key password *123abc*

Use the following command to delete the authentication key;

no ip ospf authentication-key

ip ospf authentication-type

This command configures the OSPF authentication method to be used with OSPF neighbors over the logical interface.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

[context_name]host_name(config-if-pvc)#

Syntax Description

ip ospf authentication-type { message-digest | null | text }
no ip ospf authentication-type { message-digest | null | text }

no

Disable this function.

message-digest

Set the OSPF authentication type to use the message digest (MD) authentication method.

null

Set the OSPF authentication type to use no authentication, thus disabling either MD or clear text methods.

text

Set the OSPF authentication type to use the clear text authentication method.

Usage Guidelines

Use this command to set the type of authentication to use when authenticating with neighboring routers.

Example

To set the authentication type to use clear text, enter the following command;

```
ip ospf authentication-type text
```

ip ospf cost

This command configures the cost associated with sending a packet over this logical interface.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-if-pvc)#
```

Syntax Description

ip ospf cost *value*
no ip ospf cost

no

Disable this function.

value

Default: 10

The cost to assign to OSPF packets. This must be an integer from 1 through 65535.

Usage Guidelines

Use this command to set the cost associated with routes from the interface.

Example

Use the following command to set the cost to 20;

```
ip ospf cost 20
```

Use the following command to disable the cost setting;

```
no ip ospf cost
```

ip ospf dead-interval

This command configures the dead-interval and the delay time in seconds, for OSPF communications.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-if-pvc)#
```

Syntax Description

```
ip ospf dead-interval value
no ip ospf dead-interval
```

no

Deletes the value set and returns the value to its default.

value

The interval, in seconds, that the router should wait. During this interval, if no packets are received then the system considers the neighboring router to be off-line. This interval is typically 4 times the duration of the hello-interval.

value must be an integer from 1 through 65535. Default: 40

Usage Guidelines

Use this command to set the dead-intervals or delays for OSPF communications.

Example

To set the dead-interval to 100, use the following command;

```
ip ospf dead-interval 100
```

To delete the setting for the dead-interval and reset the dead-interval value to its default of 40, use the following command'

```
no ip ospf dead-interval
```

ip ospf hello-interval

This command configures the delay time in seconds, for OSPF hello interval.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-if-pvc)#`

Syntax Description

ip ospf hello-interval *value*
no ip ospf hello-interval

no

Deletes the value set and returns the value to its default.

value

The interval, in seconds, between sending hello packets. This value is typically set to be 1/4 of the value of the **dead-interval**.

value must be an integer from 1 through 65535. Default: 10

Usage Guidelines

Use this command to set the delays for the hello-interval.

Example

To set the hello-interval to 25, use the following command;

ip ospf hello-interval *25*

To delete the setting for the hello-interval and reset the hello-interval value to its default of 10, use the following command'

no ip ospf hello-interval

ip ospf message-digest-key

This command enables the use of MD5-based OSPF authentication.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-if-pvc)#
```

Syntax Description

ip ospf message-digest-key *key_id* **md5 [encrypted] password** *authentication_key*
no ip ospfmessage-digest-key *key_id*

no

Deletes the key.

message-digest-key key_id

Specifies the key identifier number. key_id must be an integer from 1 through 255.

encrypted

Use this if you are pasting a previously encrypted authentication key into the CLI command.

password *authentication_key*

The password to use for authentication. *authentication_key* is a string variable, from 1 through 16 alphanumeric characters, that denotes the authentication password. This variable is entered in clear text format.

Usage Guidelines

Use this command to create an authentication key that uses MD5-based OSPF authentication.

Example

To create a key with the ID of 25 and a password of 123abc, use the following command;

ip ospf message-digest-key *25* **md5 password** *123abc*

To delete the same key, enter the following command;

no ip ospf message-digest-key *25*

ip ospf network

Configures the OSPF network type.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-if-pvc)#
```

Syntax Description

```
ip ospf network { broadcast | non-broadcast | point-to-multipoint |
point-to-point }
no ip ospf network
```

no

Disable this function.

broadcast

Sets the network type to broadcast.

non-broadcast

Sets the network type to non-broadcast multi access (NBMA).

point-to-multipoint

Sets the network type to point-to-multipoint.

point-to-point

Sets the network type to point-to-point.

Usage Guidelines

Use this command to specify the OSPF network type.

Example

To set the OSPF network type to broadcast, enter the following command;

```
ip ospf network broadcast
```

To disable the OSPF network type, enter the following command;

```
no ip ospf network
```

ip ospf priority

This command designates the OSPF router priority.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-if-pvc)#
```

Syntax Description

ip ospf priority *value*
no ip ospf priority *value*

no

Disable this function.

value

The priority value to assign. This must be an integer from 0 through 255.

Usage Guidelines

Use this command to set the OSPF router priority.

Example

To set the priority to 25, enter the following command:

ip ospf priority *25*

To disable the priority, enter the following command:

no ip ospf priority

ip ospf retransmit-interval

This command configures the retransmit-interval and the delay time in seconds, for OSPF communications.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

`[context_name]host_name(config-if-pvc)#`

Syntax Description

ip ospf dead-interval *value*
no ip ospf dead-interval

no

Deletes the value set and returns the value to its default.

value

The interval, in seconds, between LSA (Link State Advertisement) retransmissions.

value must be an integer from 1 through 65535. Default: 5

Usage Guidelines

Use this command to set the retransmit-intervals or delays for OSPF communications.

Example

To set the dead-interval to 25, use the following command;

```
ip ospf retransmit-interval 25
```

ip ospf transmit-delay

This command configures the transmit-delay the OSPF communications parameters.

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Command Modes

Exec > Global Configuration > Context Configuration > PVC Interface Configuration

configure > context *context_name* **> interface** *interface_name* **point-to-point**

Entering the above command sequence results in the following prompt:

```
[context_name]host_name(config-if-pvc)#
```

Syntax Description

```
ip ospf transmit-delay value
no ip ospf transmit-delay
```

no

Deletes the value set and returns the value to its default.

transmit-delay *value*

The interval, in seconds, that the router should wait before transmitting a packet.

value must be an integer from 1 through 65535. Default: 1

Usage Guidelines

Use this command to set the transmit-delay.

Example

To set the transmit delay to 5 seconds, use the following command;

```
ip ospf transmit-delay 5
```

To delete the setting for the transmit-delay or reset the transmit-delay value to its default of 1, use the following command'

```
no ip ospf transmit-delay
```