



VPDN Default Group Template

Feature History

Release	Modification
12.2(8)T	This feature was introduced.

This document describes the VPDN Default Group Template feature in Cisco IOS Release 12.2(8)T and includes the following sections:

- [Feature Overview, page 1](#)
- [Supported Platforms, page 2](#)
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- [Prerequisites, page 3](#)
- [Configuration Tasks, page 4](#)
- [Configuration Examples, page 5](#)
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Feature Overview

The VPDN Default Group Template feature introduces the ability to configure global default values for virtual private dialup network (VPDN) parameters in a VPDN template. These global default values are applied to all VPDN groups, unless specific values are configured for individual VPDN groups. Previously, the Cisco IOS software required that VPDN parameters be configured for each individual VPDN group if the system default values were not desired.

The default hierarchy for the application of VPDN parameters to a VPDN group is as follows:

- VPDN parameters configured for the individual VPDN group are always applied to that VPDN group.
- VPDN parameters configured in the VPDN template are applied for any settings not specified in the individual VPDN group configuration.
- System default settings for VPDN parameters are applied for any settings not configured in the individual VPDN group or VPDN template.

The VPDN Default Group Template feature also allows the uncoupling of individual VPDN groups from the VPDN template by using the **no source vpdn-template** command. If this command is applied to an individual VPDN group, the system default settings will be used for any settings not configured in the individual VPDN group.

Benefits

The VPDN Default Group Template feature allows the user to define VPDN parameter settings that will apply to all VPDN groups. Previously, a user that wanted specific similar settings to apply to a large number of VPDN groups would need to configure those settings for each individual VPDN group. The ability to configure a VPDN template that applies settings to all VPDN groups means that the amount of configuration the user must perform is greatly reduced.

Restrictions

A Layer 2 Tunneling Protocol (L2TP) or Layer 2 Forwarding Protocol (L2F) tunnel must be established for the VPDN template settings to be used. Once a tunnel has been established, changes in the VPDN template settings will not have an effect on the tunnel until it is brought down and reestablished.

Not all commands that are available for configuring a VPDN group can be used to configure a VPDN template. See [Table 1](#) in the “Command Reference” section of this document for a list of the commands that can be used in VPDN template configuration mode.

Related Features and Technologies

- Session Limit per VRF
- VPDN Group Session Limiting

Related Documents

- *Cisco IOS Dial Technologies Configuration Guide*, Release 12.2
- *Cisco IOS Dial Technologies Command Reference*, Release 12.2

Supported Platforms

- Cisco 2600 series
- Cisco 3620
- Cisco3640
- Cisco 3660
- Cisco 7200 series
- Cisco 7500 series

Determining Platform Support Through Cisco Feature Navigator

Cisco IOS software is packaged in feature sets that support specific platforms. To get updated information regarding platform support for this feature, access Cisco Feature Navigator. Cisco Feature Navigator dynamically updates the list of supported platforms as new platform support is added for the feature.

Cisco Feature Navigator is a web-based tool that enables you to quickly determine which Cisco IOS software images support a specific set of features and which features are supported in a specific Cisco IOS image. You can search by feature or release. Under the release section, you can compare releases side by side to display both the features unique to each software release and the features in common.

To access Cisco Feature Navigator, you must have an account on Cisco.com. If you have forgotten or lost your account information, send a blank e-mail to cco-locksmith@cisco.com. An automatic check will verify that your e-mail address is registered with Cisco.com. If the check is successful, account details with a new random password will be e-mailed to you. Qualified users can establish an account on Cisco.com by following the directions at <http://www.cisco.com/register>.

Cisco Feature Navigator is updated regularly when major Cisco IOS software releases and technology releases occur. For the most current information, go to the Cisco Feature Navigator home page at the following URL:

<http://www.cisco.com/go/fn>

Supported Standards, MIBs, and RFCs

Standards

No new or modified standards are supported by this feature.

MIBs

No new or modified MIBs are supported by this feature.

To obtain lists of supported MIBs by platform and Cisco IOS release, and to download MIB modules, go to the Cisco MIB website on Cisco.com at the following URL:

<http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml>

RFCs

- RFC 2341, *Layer Two Transport Protocol (L2TP)*
- RFC 2661, *Layer Two Forwarding Protocol (L2F)*

Prerequisites

VPDN must be enabled on the router and a VPDN group must be configured.

Configuration Tasks

See the following sections for configuration tasks for this feature. Each task in the list is identified as either required or optional.

- [Enabling a VPDN Group Template](#) (required)
- [Uncoupling an Individual VPDN Group from the VPDN Template](#) (optional)
- [Verifying VPDN Configuration](#) (optional)

Enabling a VPDN Group Template

To enter VPDN template configuration mode to configure a VPDN template, use the following command in global configuration mode:

Command	Purpose
Router(config)# vpdn-template	Enters VPDN template configuration mode to allow the configuration of a VPDN template.

Not all commands that are available for configuring a VPDN group can be used to configure a VPDN template. See [Table 1](#) in the “Command Reference” section of this document for a list of the commands that can be used in VPDN template configuration mode.

Uncoupling an Individual VPDN Group from the VPDN Template

To configure an individual VPDN group to use system default settings rather than the VPDN template settings for all unspecified parameters, use the following commands beginning in global configuration mode:

	Command	Purpose
Step 1	Router(config)# vpdn-group <i>name</i>	Enters VPDN group configuration mode for the specified VPDN group.
Step 2	Router(config- <i>vpdn</i>)# no source vpdn-template	Configures an individual VPDN group to use system default settings rather than the VPDN template settings for all unspecified parameters. VPDN groups will use VPDN template settings by default.

Verifying VPDN Configuration

Enter the **show running-config** command to verify that the VPDN Default Group Template feature is configured properly:

```
router# show running-config

vpdn-template
 local name template-1-name
!
vpdn-group 1
 request-dialin
  protocol l2tp
  local name Group-1-name
!
vpdn-group 2
 request-dialin
  protocol l2tp
 no source vpdn-template
!
vpdn-group 3
 request-dialin
  protocol l2tp
```

Configuration Examples

This section provides the following configuration examples:

- [Configuring a VPDN Template Example](#)
- [Uncoupling a VPDN Group from the VPDN Template Example](#)

Configuring a VPDN Template Example

The following example enters VPDN template configuration mode and configures two VPDN parameters in the VPDN template:

```
vpdn-template
 l2tp tunnel busy timeout 65
 l2tp tunnel password tunne14me
```

Uncoupling a VPDN Group from the VPDN Template Example

The following example enters VPDN group configuration mode and uncouples VPDN group 1 from the VPDN template settings. The system default settings will be used for all unspecified VPDN parameters.

```
vpdn-group 1
 no source vpdn-template
```

Command Reference

This section documents new commands. All other commands used with this feature are documented in the Cisco IOS Release 12.2 command reference publications.

- [source vpdn-template](#)
- [vpdn-template](#)

source vpdn-template

To configure an individual virtual private dialup network (VPDN) group to use VPDN template settings for all unspecified parameters, use the **source vpdn-template** command in VPDN group configuration mode. To configure an individual VPDN group to use system default settings rather than the VPDN template settings for all unspecified parameters, use the **no** form of this command.

source vpdn-template

no source vpdn-template

Syntax Description This command has no arguments or keywords.

Defaults VPDN template settings are applied to individual VPDN groups.

Command Modes VPDN group configuration

Command History	Release	Modification
	12.2(4)B	This command was introduced on the Cisco 7200 series and Cisco 7401ASR routers.
	12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T.

Usage Guidelines Use the **source vpdn-template** command to couple or uncouple individual VPDN groups from the VPDN template.

The default hierarchy for the application of VPDN parameters to a VPDN group is as follows:

- VPDN parameters configured for the individual VPDN group are always applied to that VPDN group.
- VPDN parameters configured in the VPDN template are applied for any settings not specified in the individual VPDN group configuration.
- System default settings for VPDN parameters are applied for any settings not configured in the individual VPDN group or VPDN template.

Uncoupling an individual VPDN group from the VPDN template using the **no source vpdn-template** command results in the following hierarchy for the application of VPDN parameters to that individual VPDN group:

- VPDN parameters configured for the individual VPDN group are always applied to that VPDN group.
- System default setting for VPDN parameters are applied for any settings not configured in the individual VPDN group.

Examples

The following example enters VPDN group configuration mode and uncouples VPDN group 1 from the VPDN template settings. The system default settings will be used for all unspecified VPDN parameters.

```
vpdn-group 1
no source vpdn-template
```

Related Commands

Command	Description
vpdn-group	Associates a VPDN group to a customer or VPDN profile.
vpdn-template	Enters VPDN template configuration mode to allow the configuration of a VPDN template.

vpdn-template

To enter VPDN template configuration mode to allow the configuration of a virtual private dialup network (VPDN) template, use the **vpdn-template** command in global configuration mode. To inactivate the use of a VPDN template, use the **no** form of this command.

vpdn-template

no vpdn-template

Syntax Description

This command has no arguments or keywords.

Defaults

No VPDN template exists. The system default values are applied to individual VPDN groups for any parameters that are not configured in the individual VPDN group.

Command Modes

Global configuration

Command History

Release	Modification
12.2(4)B	This command was introduced on the Cisco 7200 series and Cisco 7401ASR routers.
12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T.

Usage Guidelines

The **vpdn-template** command allows the configuration of global default values for VPDN parameters in a VPDN template. These global default values are applied to all VPDN groups, unless specific values are configured for individual VPDN groups. VPDN parameters that are not specified in the individual VPDN group or in the VPDN template are assigned system default values.

The default hierarchy for the application of VPDN parameters to a VPDN group is as follows:

- VPDN parameters configured for the individual VPDN group are always applied to that VPDN group.
- VPDN parameters configured in the VPDN template are applied for any settings not specified in the individual VPDN group configuration.
- System default settings for VPDN parameters are applied for any settings not configured in the individual VPDN group or VPDN template.

Not all commands that are available for configuring a VPDN group can be used to configure a VPDN template. [Table 1](#) lists the commands that can be used in VPDN template configuration mode.

Table 1 Commands Available for VPDN Template Configuration

Command Name	Description
default (vpdn)	Resets a VPDN command to its default value.
descriptions	Adds a description.
exit	Exits VPDN template configuration mode.

Table 1 *Commands Available for VPDN Template Configuration (continued)*

Command Name	Description
ip mtu	Enables the sending of Internet Control Message Protocol (ICMP) redirect messages if the Cisco IOS software is forced to resend a packet through the same interface on which it was received.
ip pmtu	Allows Layer 2 Tunneling Protocol (L2TP) tunnels to participate in path maximum transmission unit (MTU) discovery.
ip precedence	Sets IP Precedence (priority) for packets sent by the dial peer.
ip tos	Specifies the type of service (ToS) level for IP traffic in the TN3270 server.
l2f ignore-mid-sequence	Ignores message identifier (MID) sequence numbers for sessions in an Layer 2 Forwarding Protocol (L2F) tunnel.
l2f tunnel busy timeout	Configures the amount of time that the router waits before attempting to recontact an L2F destination router that was previously busy.
l2f tunnel retransmit initial retries	Configures the number of times after which a router will stop attempting to send the initial control packet for L2F tunnel establishment to a busy router.
l2f tunnel retransmit retries	Configures the number of times the router will attempt to resend tunnel control packets before tearing down the tunnel.
l2f tunnel timeout setup	Configures the amount of time that the router waits for a confirmation message after sending out the initial control packet to a busy router.
l2tp drop out-of-order	Disables dropping of out-of-sequence packets.
l2tp flow-control backoff-queuesize	Defines the maximum number of packets that can be queued locally for a session when the receive window of a peer is full.
l2tp flow-control maximum-ato	Defines the maximum adaptive timeout for congestion control.
l2tp flow-control receive-window	Defines the receive window on an L2TP access concentrator (LAC) or L2TP network server (LNS) and enables either device to send sequence numbers.
l2tp flow-control static-rtt	Defines a static round-trip time for congestion control.
l2tp hidden	Enables L2TP attribute-value (AV) pair hiding, which encrypts the AV pair value.
l2tp ip tos reflect	Configures a VPDN group to preserve the ToS field of L2TP-tunneled IP packets.

Table 1 *Commands Available for VPDN Template Configuration (continued)*

Command Name	Description
l2tp ip udp checksum	Enables IP User Datagram Protocol (UDP) checksums on L2TP payload packets.
l2tp tunnel authentication	Enables L2TP tunnel authentication.
l2tp tunnel busy timeout	Configures the amount of time that the router waits before attempting to recontact an L2TP destination router that was previously busy.
l2tp tunnel hello	Sets the number of seconds between sending hello keepalive packets for an L2TP tunnel.
l2tp tunnel password	Sets the password the router uses to authenticate the tunnel.
l2tp tunnel retransmit initial retries	Configures the number of times after which a router will stop attempting to send the initial control packet for L2TP tunnel establishment to a busy router.
l2tp tunnel retransmit initial timeout	Configures the amount of time that the router waits before resending an initial packet to establish a tunnel.
local name	Specifies a local host name that the tunnel will use to identify itself.
pptp flow-control receive-window	Specifies how many packets the client can send before it must wait for the tunnel server acknowledgment.
pptp flow-control static-rtt	Specifies the timeout interval of the tunnel server between sending a packet to the client and receiving a response.
pptp tunnel echo	Specifies the period of idle time on the tunnel that will trigger an echo message from the tunnel server to the client.

Examples

The following example enters VPDN template configuration mode and configures two VPDN parameters in the VPDN template:

```
vpdn-template
 l2tp tunnel busy timeout 65
 l2tp tunnel password tunnel4me
```

Related Commands

Command	Description
source vpdn-template	Configures an individual VPDN group to use system default settings rather than the VPDN template settings for all unspecified parameters.
vpdn-group	Associates a VPDN group to a customer or VPDN profile.

