

Chapter 16

Summary of VPLS Configuration Statements

The following sections explain the major routing instances and interfaces configuration statements that apply specifically to virtual private LAN service (VPLS). The statements are organized alphabetically. The routing instance statements at the [edit routing-instances *routing-instance-name*] hierarchy level are explained in the *JUNOS Internet Software Configuration Guide: Routing and Routing Protocols*. The interface statements at the [edit interfaces *interface-name*] hierarchy level are explained in the *JUNOS Internet Software Configuration Guide: Interfaces and Class of Service*.

encapsulation

Syntax	encapsulation (ethernet-vpls extended-vlan-vpls vlan-vpls);
Hierarchy Level	[edit interfaces <i>interface-name</i>]
Description	Physical link-layer encapsulation type for virtual private LAN service (VPLS) interfaces.
Options	<p>ethernet-vpls—Use Ethernet VPLS encapsulation on Ethernet interfaces that have VPLS enabled and that must accept packets carrying standard Tag Protocol ID (TPID) values.</p> <p>extended-vlan-vpls—Use extended VLAN VPLS encapsulation on Ethernet interfaces that have VLAN 802.1Q tagging and VPLS enabled and that must accept packets carrying TPIDs 0x8100, 0x9100, and 0x9901.</p> <p>vlan-vpls—Use VLAN VPLS encapsulation on Ethernet interfaces with VLAN tagging and VPLS enabled. Interfaces with VLAN VPLS encapsulation accept packets carrying standard TPID values only.</p>
Usage Guidelines	See “Configure the Interface Encapsulation” on page 286.
Required Privilege Level	interface—To view this statement in the configuration. interface-control—To add this statement to the configuration.

site

Syntax	site <i>site-name</i> { site-identifier <i>number</i> ; }
Hierarchy Level	[edit routing-instances <i>routing-instance-name</i> protocols vpls]
Description	Specify the site name and site identifier for a site. Allows you to configure a remote site ID for remote sites.
Options	site <i>site-name</i> —Name of the site. The other statement is explained separately.
Usage Guidelines	See “Configure the VPLS Site” on page 288.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

site-identifier

Syntax	site-identifier <i>identifier</i> ;
Hierarchy Level	[edit routing-instances <i>routing-instance-name</i> protocols vpls site <i>site-name</i>]
Description	The numerical identifier for the site used as a default reference for the remote site ID. It is an unsigned 16-bit number greater than zero.
Usage Guidelines	See “Configure the VPLS Site” on page 288.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

site-range

Syntax	site-range <i>number</i> ;
Hierarchy Level	[edit routing-instances <i>routing-instance-name</i> protocols vpls]
Description	Specifies the maximum number of sites allowed for the VPLS domain. The value must be between 1 and 1024.
Usage Guidelines	See “Configure the Site Range” on page 288.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

traceoptions

Syntax traceoptions {
 file *filename* <replace> <size *size*> <files *number*> <no-stamp>;
 flag *flag* <flag-modifier> <disable>;
 }

Hierarchy Level [edit routing-instances *routing-instance-name* protocols vpls]

Description Trace traffic flowing through a VPLS.

Options disable—(Optional) Disable the tracing operation. You can use this option to disable a single operation when you have defined a broad group of tracing operations, such as all.

file *filename*—Name of the file to receive the output of the tracing operation. Enclose the name within quotation marks.

files *number*—(Optional) Maximum number of trace files. When a trace file named *trace-file* reaches its maximum size, it is renamed *trace-file.0*, then *trace-file.1*, and so on, until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum number of files, you also must specify a maximum file size with the size option.

Range: 2 to 1000

Default: 2 files

flag *flag*—Tracing operation to perform. To specify more than one tracing operation, include multiple flag statements.

all—All VPLS tracing options

connections—VPLS connections (events and state changes)

error—Error conditions

nri—VPLS advertisements received or sent by means of the Border Gateway Protocol (BGP)

route—Routing information

topology—VPLS topology changes caused by reconfiguration or advertisements received from other PE routers using BGP

flag-modifier—(Optional) Modifier for the tracing flag. You can specify the following modifier:

detail—Provide detailed trace information

no-stamp—(Optional) Do not place timestamp information at the beginning of each line in the trace file.

Default: If you omit this option, timestamp information is placed at the beginning of each line of the tracing output.

replace—(Optional) Replace an existing trace file if there is one.

Default: If you do not include this option, tracing output is appended to an existing trace file.

size *size*—(Optional) Maximum size of each trace file, in kilobytes (KB), megabytes (MB), or gigabytes (GB). When a trace file named *trace-file* reaches this size, it is renamed *trace-file.0*. When *trace-file* again reaches its maximum size, *trace-file.0* is renamed *trace-file.1* and *trace-file* is renamed *trace-file.0*. This renaming scheme continues until the maximum number of trace files is reached. Then the oldest trace file is overwritten.

If you specify a maximum file size, you also must specify a maximum number of trace files with the *files* option.

Syntax: *xk* to specify KB, *xm* to specify MB, or *xg* to specify GB

Range: 10 KB through the maximum file size supported on your system

Default: 1 MB

Usage Guidelines See “Trace VPLS Traffic and Operations” on page 290.

Required Privilege Level routing—To view this statement in the configuration.
routing-control—To add this statement to the configuration.

vlan-id

Syntax *vlan-id number*;

Hierarchy Level [edit interfaces *interface-name* unit *logical-unit-number*]

Description For Fast Ethernet and Gigabit Ethernet interfaces only, binds an 802.1Q VLAN tag ID to a logical interface.

Options *number*—A valid VLAN identifier.

Range: For 4-port Fast Ethernet PICs configured to handle VPLS traffic, 512 through 1023.

For 1-port and 10-port Gigabit Ethernet PICs configured to handle VPLS traffic, 512 through 4094.

Usage Guidelines See “Enable VLAN Tagging” on page 287.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

vlan-tagging

Syntax *vlan-tagging*;

Hierarchy Level [edit interfaces *interface-name*]

Description For Fast Ethernet and Gigabit Ethernet interfaces only, enables the reception and transmission of 802.1Q VLAN-tagged frames on the interface.

Usage Guidelines See “Enable VLAN Tagging” on page 287.

Required Privilege Level interface—To view this statement in the configuration.
interface-control—To add this statement to the configuration.

vpls

Syntax	vpls;
Hierarchy Level	[edit interfaces <i>interface-name</i> unit <i>unit-number</i> family]
Description	Specifies the VPLS protocol family information for the logical interface.
Usage Guidelines	See “Configure Interfaces for VPLS Routing” on page 285.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

