

Chapter 24

Summary of Layer 2 Circuit Configuration Statements

The following sections explain the major protocol configuration statements that apply specifically to Layer 2 circuits. The statements are organized alphabetically. Protocols and the statements at the [edit protocols] hierarchy level are explained in the *JUNOS Internet Software Routing Protocols Configuration Guide*.

bandwidth

Syntax	<code>bandwidth (bandwidth ctnumber bandwidth);</code>
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols l2circuit neighbor <i>address</i> interface <i>interface-name</i>], [edit protocols l2circuit neighbor <i>address</i> interface <i>interface-name</i>]
Description	Specify bandwidth allocation for a Layer 2 circuit or for the class types of a Layer 2 circuit.
Options	<i>bandwidth</i> —Configure the bandwidth in bits per second for the Layer 2 circuit. You cannot configure the bandwidth for the Layer 2 circuit and for the class types at the same time. <i>ctnumber bandwidth</i> —Configure the bandwidth in bits per second for a class type on the Layer 2 circuit. You can configure bandwidth for up to 4 class types (ct0, ct1, ct2, ct3) per Layer 2 circuit. If you configure the class types, you must configure them in order, starting with class type ct0.
Usage Guidelines	See “Configure Bandwidth Allocation and Call Admission Control” on page 450.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

community

Syntax	community <i>community-name</i> { invert-match; members <i>community-members</i> ; }
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> policy-options], [edit logical-routers <i>logical-router-name</i> protocols l2circuit neighbor <i>address</i> interface <i>interface-name</i>], [edit policy-options], [edit protocols l2circuit neighbor <i>address</i> interface <i>interface-name</i>]
Description	Specify the community for the Layer 2 circuit.
Options	invert-match—Invert the results of the community expression match. members <i>community-members</i> —Specify the members of the community.
Usage Guidelines	See “Configure the Layer 2 Circuit Community” on page 444.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

control-word

Syntax	(control-word no-control-word);
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols l2circuit neighbor <i>address</i> interface <i>interface-name</i>], [edit logical-routers <i>logical-router-name</i> routing-instances <i>routing-instance-name</i> protocols l2vpn], [edit protocols l2circuit neighbor <i>address</i> interface <i>interface-name</i>], [edit routing-instances <i>routing-instance-name</i> protocols l2vpn]
Description	Specify the control word. The control word is 4 bytes long and is inserted between the Layer 2 protocol data unit (PDU) being transported and the virtual circuit (VC) label that is used for demultiplexing. control-word—Enables the use of the control word. Default: A null control word is enabled by default. You can also configure the control word explicitly using the control-word statement. no-control-word—Disable the use of the control word.
Usage Guidelines	See “Configure the Control Word for Frame Relay Interfaces” on page 447.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

description

Syntax	description <i>text</i> ;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols l2circuit neighbor <i>address</i> interface <i>interface-name</i>], [edit protocols l2circuit neighbor <i>address</i> interface <i>interface-name</i>]
Description	Provide a text description for the Layer 2 circuit. If the text includes one or more spaces, enclose the entire text string in quotation marks (" ").
Usage Guidelines	See “Configure the Description” on page 18.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

install-nexthop

Syntax	install-nexthop (except lsp <i>lsp-name</i> lsp-regex <i>lsp-regular-expression</i>);
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> policy-options policy-statement <i>policy-name</i> term <i>term-name</i> then], [edit policy-options policy-statement <i>policy-name</i> term <i>term-name</i> then]
Description	Select a specific label-switched path (LSP), or select an LSP from a set of similarly named LSPs as the traffic destination for the configured community. Also can prevent the installation of any matching next hops.
Options	except—Prevent the installation of any matching next hops. lsp <i>lsp-name</i> —Configure a specific LSP. lsp-regex <i>lsp-regular-expression</i> —Configure a range of similarly named LSPs. You can use the following wildcard characters when configuring an LSP regular expression: Asterisk (*)—Match any characters. Period (.)—Match any single digit.
Usage Guidelines	See “Configure the Policy Statement for the Layer 2 Circuit Community” on page 445.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

interface

Syntax	interface <i>interface-name</i> ;
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols l2circuit neighbor <i>address</i>], [edit protocols l2circuit neighbor <i>address</i>]
Description	Interface over which Layer 2 circuit traffic travels.
Options	<i>interface-name</i> —Name of the interface to configure.
Usage Guidelines	See “Configure the Neighbor and Interface” on page 440.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

neighbor

Syntax	neighbor <i>address</i>
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols l2circuit], [edit protocols l2circuit]
Description	Each Layer 2 circuit is represented by the logical interface connecting the local provider edge (PE) router to the local customer edge (CE) router. All the Layer 2 circuits using a particular remote PE router designated for remote CE routers are listed under the neighbor statement (neighbor designates the PE router). Each neighbor is identified by its IP address and is usually the end-point destination for the LSP tunnel (transporting the Layer 2 circuit).
Options	<i>address</i> —IP address of a neighboring router.
Usage Guidelines	See “Configure the Neighbor and Interface” on page 440.
Required Privilege Level	routing—To view this statement in the configuration. routing-control—To add this statement to the configuration.

no-control-word

See control-word on page 460

protect-interface

Syntax	<code>protect-interface <i>interface-name</i>;</code>
Hierarchy Level	[edit logical-routers <i>logical-router-name</i> protocols l2circuit neighbor <i>address</i> interface <i>interface-name</i>], [edit protocols l2circuit neighbor <i>address</i> interface <i>interface-name</i>]
Description	Provide a backup for the protected interface in case of failure. Network traffic uses the primary interface only, as long as the primary interface functions.
Options	<i>interface-name</i> —Name of the protect interface to configure.
Usage Guidelines	See “Configure the Protect Interface” on page 441.
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*> <nostamp> <no-world-readable
 | world-readable>;
 flag *flag* <flag-modifier> <disable>;
 }

Hierarchy Level [edit logical-routers *logical-router-name* protocols l2circuit],
 [edit protocols l2circuit]

Description Trace traffic flowing through a Layer 2 circuit.

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 in 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 through 1000 files
Default: 2 files

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

connections—Layer 2 circuit connections (events and state changes)

error—Error conditions

FEC—Layer 2 circuit advertisements received or sent by means of the Label Distribution Protocol (LDP)

topology—Layer 2 circuit topology changes caused by reconfiguration or advertisements received from other PE routers

flag-modifier—(Optional) Modifier for the tracing flag. You can specify the detail modifier if you want to provide detailed trace information.

nostamp—(Optional) Do not place timestamp information at the beginning of each line in the trace file.

Default: If you do not include this option, timestamp information is placed at the beginning of each line of the tracing output.

no-world-readable—(Optional) Do not allow any user to read the log file.

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 the *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

world-readable—(Optional) Allow any user to read the log file.

Usage Guidelines See “Trace Layer 2 Circuit Creation and Changes” on page 452.

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

virtual-circuit-id

Syntax virtual-circuit-id *identifier*;

Hierarchy Level [edit logical-routers *logical-router-name* protocols l2circuit neighbor *address* interface *interface-name*],
[edit protocols l2circuit neighbor *address* interface *interface-name*]

Description Uniquely identify a Layer 2 circuit.

Usage Guidelines See “Configure the Virtual Circuit ID” on page 442.

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

