Juniper Networks

JWOS Command Reference Guide

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JWOS Command Reference Guide

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About this guide

Objectives

This guide describes how to use the JWOS command-line interface (CLI) to configure, monitor, and manage the Juniper Networks WXC Application Acceleration gateways.

To manage WXC Series gateways through the JWOS Web interface, see the *Application Acceleration Administration Guide*.

Audience

This guide is intended for administrators who configure and manage WXC Series gateways. Be sure you are familiar with your network architecture and devices and that you can perform basic network configuration procedures.

Document Conventions

Table 1 on page xiv defines notice icons used in this guide, Table 2 on page xiv defines text conventions used throughout the book, and Table 3 on page xiv defines the text conventions used for CLI commands.

Table 1: Notice icons

Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates that you may risk losing data or damaging your hardware.
	Warning	Alerts you to the risk of personal injury.

Table 2: Text Conventions

Convention	Description
Sans serif type	Filenames and directory names.
Italics	• Terms defined in text. • Variable elements for which you supply values. • Book titles.
+ (plus sign)	Key names linked with a plus sign indicate that you must press two or more keys simultaneously.

Table 3: CLI Conventions

Convention	Description
Bold type	Commands that you enter; command names and options.
Sans serif type	• Filenames and directory names. • Code and system output.
Italics	Variables for which you supply values.
[ ] (square brackets)	Elements in square brackets indicate optional keywords or variables.
| (pipe symbol)	Elements separated by the pipe symbol indicate a choice between mutually exclusive keywords or variables. The set of choices is often enclosed in parentheses for clarity.
{ } (braces)	Elements in braces indicate required keywords or variables.
( ) (parentheses)	Enclose a set of mutually exclusive keywords or variables separated by the pipe symbol.

List of Technical Publications

The following additional documents are available at http://www.juniper.net/techpubs:

- *Application Acceleration Administration Guide*—Describes how to use the JWOS Web interface to install and configure the WXC Series gateways.
- *Junos Pulse Administration Guide*—Describes how to configure and distribute the Junos Pulse client from a Juniper Networks Infranet Controller or Juniper Networks SA Series SSL VPN Appliance. Online help provided with the Junos Pulse client describes how to use the features available to the end user, such as viewing the client status.

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- Join and participate in the Juniper Networks Community Forum: http://www.juniper.net/company/communities/
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For international or direct-dial options in countries without toll-free numbers, see http://www.juniper.net/support/requesting-support.html .

PART 1

Using the JWOS CLI

CHAPTER 1

JWOS Command-Line Interface Overview

This chapter describes the basic features of the JWOS command-line interface (CLI).

Using the JWOS CLI

You use the JWOS CLI to configure and monitor WXC Series gateways, either from a console or through a network connection. The CLI command shell runs on top of a UNIX-based operating system kernel.

The CLI is a straightforward command interface. You type commands on a single line, and the commands are executed when you press the Enter key. The CLI provides command help and command completion, as well as Emacs-style keyboard sequences that allow you to move around on a command line and scroll through recently executed commands.

Accessing the CLI

You can use either of the following methods to access the CLI:

- Use an SSH application to connect to the primary IP address of the WXC Series gateway. For example, you can download an SSH application from the following site:

  http://www.openssh.com

  Because there are many different types of SSH applications available, we recommend that you read the instructions for your specific SSH application.

NOTE: WXC Series gateways support SSH (protocol versions SSHv1 and SSHv2) with DES/3DES encryption. Up to four connections are supported. Multiple channels, port forwarding, and X11 forwarding are not supported.

- Connect a terminal to the serial port on the WXC Series gateway and use a terminal emulation program (such as HyperTerminal) to log in to the CLI. Use a female-to-female DB-9 crossover cable (null-modem cable) to connect the serial port on the gateway to the serial port on the terminal. The serial port on the gateway is of type RS-232 (AT-compatible) with a male DB-9 connector.

  On the terminal, verify the following serial port settings:

- Baud rate: 9600 bps
- Data bits: 8
- Parity: none
- Stop bits: 1
- Flow control: none

Logging In Using the CLI

Enter your username and password to log into the CLI. When you access a WXC Series gateway for the first time, type **admin** for the username and **juniper** for the password. We recommend that you change the default password immediately.

The following prompt is displayed with the default system name:

```
WX>
```

To add or change local user accounts, see config set system login. To change the default system name, see config set system name.

CLI Basics

Note the following about the CLI:

- CLI commands are case sensitive.
- To view the online help, type **help** before the command or **?** after it. Type just **help** or **?** at the command prompt to view available commands and options.
- Configuration changes take effect when you type **commit**. You can use the **show** commands to verify your changes before committing them. To retain your changes after the next time the system restarts, use the **request system save-config** command.

Table 4 on page 4 lists the commonly used keyboard shortcuts.

Table 4: Keyboard Shortcuts

Action	Shortcut	Description
Complete commands	Tab or Ctrl+I	Completes a partially typed keyword if enough characters are entered to uniquely identify it.
Recall commands	Ctrl+P or ↑ (up arrow)	Retrieves the previous command from the history buffer.
	Ctrl+N or ↓ (down arrow)	Retrieves the next command from the history buffer.

Table 4: Keyboard Shortcuts *(continued)*

Action	Shortcut	Description
Delete characters	Ctrl+H	Deletes the character before the cursor (same as Backspace key).
	Ctrl+K	Deletes all characters from the cursor to the end of the line.
	Ctrl+W	Deletes the word before the cursor.
	Ctrl+U	Deletes all characters on the line.
Move cursor	Ctrl+A	Moves the cursor to the start of the line.
	Ctrl+B	Moves the cursor back one character.
	Ctrl+E	Moves the cursor to the end of the line.
	Ctrl+F	Moves the cursor forward one character.
Transpose characters	Ctrl+T	Transposes the character at the cursor with the preceding character.

CHAPTER 2

System Commands

This chapter describes the JWOS system commands.

JWOS System Commands Summary

The following table summarizes the JWOS system commands. These commands are operational, and are not saved in the configuration file.

Command	Description
clear flow-filter debug-buffer	Clears the flow filter statistics.
cls	Clears the screen.
commit	Applies changes to the configuration.
exit	Exits the CLI (same as **quit**).
history	Displays the command history for the current user.
netstat	Displays network traffic statistics.
packet-capture	Captures raw network traffic on the Local or Remote interface.
ping	Verifies whether a remote network device is accessible.
quit	Exits the CLI (same as **exit**).
set adjacency establish	Sets a delay for creation of adjacencies.
set client default-config	Specifies the source of the default configuration that is downloaded to Junos Pulse clients.
set date	Sets the date and time of the WXC Series gateway.

Command	Description
set logging	Specifies the minimum severity of messages written to the log, and whether log messages are displayed on the console.
set system clear-hardened-state	Clears a passthrough condition and returns the system to normal operation.
setup	Runs Quick Setup from the command line.
traceroute	Traces the path to another network device.

clear flow-filter debug-buffer

Syntax clear flow-filter debug-buffer

Release Information Introduced in JWOS Release 6.0.

Description Clears the traffic statistics for all the current flow filters.

Options None.

Mode Not applicable.

Related Topics config delete flow-filter on page 32

show flow-filter on page 100

Sample Output

```
WX> clear flow-filter debug-buffer
```

cls

Syntax cls

Release Information Introduced in JWOS Release 6.0.

Description Clears the screen.

Options None.

Mode Not applicable.

Related Topics None.

Sample Output

```
WX> cls
```

commit

Syntax commit

Release Information Introduced in JWOS Release 6.0.

Description Applies the candidate configuration to the running configuration. The candidate configuration includes all configuration changes entered since the last commit. To retain your changes after the system restarts, use the command **request system save-config**.

Options None.

Mode Not applicable.

Related Topics request system save-config on page 82

Sample Output

```
WX> commit
```

exit

Syntax exit

Release Information Introduced in JWOS Release 6.0.

Description Exits the CLI. Same as **quit**.

Options None.

Mode Not applicable.

Related Topics quit on page 19

Sample Output

```
WX> exit
```

history

Syntax history

Release Information Introduced in JWOS Release 6.0.

Description Lists the command history of the current user.

Options None.

Mode Not applicable.

Related Topics None.

Sample Output

```
WX> history
  [1]  show client
  [2]  show client settings
  [3]  history
```

netstat

Syntax

netstat [-AaLnW] [-f *protocol_family* | -p *protocol*]
netstat -i | -I *interface* [-abdnt] [-f *protocol_family* | -p *protocol*]
netstat -w *seconds* [-I *interface*] [-d]
netstat -s [-s] [-z] [-f *protocol_family* | -p *protocol*]
netstat -m
netstat -r [-AnW] [-f *protocol_family*]
netstat -rs [-s]
netstat -g [-W] [-f *protocol_family*]
netstat -gs [-s] [-f *protocol_family*]

Release Information

Introduced in JWOS Release 6.0.

Description

Displays the active network connections and other traffic statistics. If no options are specified, displays the connection status and number of bytes in the send and receive queues for each open socket (local and remote IP address and port) for all protocol families.

Options

-AaLnW—Displays the hexadecimal number of each socket (A), both listening and nonlistening sockets (a), current listening queue sizes (L), numeric address names rather than symbolic host and port names (n), and/or wide (untruncated) host names (W).

-f *protocol_family*—Displays network data for only the specified family of protocols. Specify **inet** for the TCP and UDP protocols.

-p *protocol*—Displays network data for only the specified protocol, such as **tcp**.

-i | -I *interface*—Displays network statistics for all interfaces or a specific interface.

-abdnt—Displays both active and inactive interfaces (a), input and output byte counts for each interface (b), dropped packet counts (d), or network timer information (nt).

-w *seconds* [-I *interface*] [-d]—Displays input and output packet, byte, error, and collision counts for all interfaces or a specific interface, and refreshes the data in the specified number of seconds. Use the **-d** option to include the drop count. Press Ctrl+c to stop the refresh.

-s [-s] [-z]—Displays summary statistics for all protocols or the specified protocols. Use the second **-s** option to shorten the summary, and the **-z** option to further shorten the TCP and Proxy statistics.

-m—Includes masqueraded connections, if any, in the list of active connections.

-r [-AnW]—Displays the current routing tables. Use the options to display all hexadecimal addresses (A), numeric address names rather than symbolic host and port names (n), or wide (untruncated) host names (W).

-rs [-s]—Displays a routing statistics summary. Use the **-s** option to shorten the summary.

-g [-W]—Displays the virtual interface table, the multicast routing table, and the multicast group memberships. Use the **-W** option to view the wide (untruncated) host names.

-gs [-s]—Displays the multicast routing statistics and the multicast group memberships. Use the **-s** option to view only the multicast group memberships.

Mode Not applicable.

Related Topics show flow-stats on page 101

Sample Output

```
WX> netstat
Active Internet connections
Proto Recv-Q Send-Q  Local Address          Foreign Address        (state)
tcp4       0      0  10.87.78.20.48623      10.87.83.15.23         ESTABLISHED
tcp4       0      0  10.87.83.15.23         10.87.78.15.48623      ESTABLISHED
tcp4       0      0  10.87.78.20.2222       10.87.83.15.1775       ESTABLISHED
tcp4       0      0  10.87.83.15.1775       10.87.78.15.2222       ESTABLISHED
tcp4       0      0  10.87.78.20.48621      10.87.83.15.23         TIME_WAIT

WX> netstat –i
Name       Mtu Network       Address              Ipkts Ierrs    Opkts Oerrs
Coll
lo0      16384 (Link#1)                           567     0      567     0
 0
lo0      16384 127           127.0.0.2              0     -        0     -
 -
ge-0/0/1  1500 (Link#2)      00:30:48:d0:23:ce  7473520     0  7514837     0
 0
ge-0/0/0  1500 (Link#3)      00:30:48:d0:23:cf  5513083     0  5372512     0
 0
br-0/0    1500 (Link#4)      00:30:48:d0:23:ce 12986479     0 12887303     0
 0
br-0/0    1500 207.17.137    207.17.137.246     2307604     -  2557773     -
 -
fxp0      1500 (Link#5)      00:30:48:d0:23:d1        0     0        0     0
 0

WX> netstat –rs
routing:
        0 bad routing redirects
        0 dynamically created routes
        0 new gateways due to redirects
        402 destinations found unreachable
        0 uses of a wildcard route
        2 routes not in table but not freed
```

packet-capture

Syntax packet-capture (copy *url-path* [start-packet *n*] [number-of-packet *n*] | delete | start [save-time *seconds*] -i *interface* -b *bytes* [*options*] | stop)

Release Information Introduced in JWOS Release 6.0.

Description Captures raw network traffic on the specified interfaces. The packet capture information can then be exported to a file and analyzed by a protocol analyzer program or other hardware. Packet captures are logged in the access log file. Many of the options and expressions available with the FreeBSD **tcpdump** utility are also available here (the exceptions are **-C, -D, -d, -dd, -ddd, -f, -l, -L, -m, -p, -U, -W, -w, -Y, -Z**). For more information, go to **http://www.manpages.info/freebsd/tcpdump.1.html**.

Options **copy (ftp://*ip:username:password/path* | tftp://*ip/path*)**—Copies a packet capture to an FTP or TFTP server.

- **start-packet *n***—Starting packet number in the trace file. The default is 0 (zero).
- **number-of-packet *n***—Number of packets to copy in addition to the start packet. The default is 0 (zero), which copies all packets.

delete—Deletes the previous packet capture.

start—Starts a packet capture.

- **save-time *seconds***—Duration in seconds that a completed packet capture is available in memory. The default is 3600.
- **-i *interface***—Interfaces where data is collected. The name can be a bridge interface (such as **br-0/0**) or a Local or Remote interface (such as **ge-0/0/1**).
- **-b *bytes***—Number of bytes to capture (4096 is the minimum).
- ***options***—Specify any combination of the following:
  - **-c *n***—Maximum number of packets to capture.
  - **-h (libpcap | snoop)**—File format of the collected data. The default is **libpcap**.
  - **-s *n***—Maximum number of bytes captured for each packet (0 to 65535). The default is 68. Specifying 0 (zero) captures the entire packet.
  - **[src | dst] host *IP_address***—Source and destination IP addresses of the traffic to be captured. The default is all IP addresses. If **src** or **dst** is omitted, a packet is captured if the specified address is its source or destination address.
  - **[src | dst] port *port***—Source and destination port numbers of the traffic to be captured. The default is all ports. If **src** or **dst** is omitted, a packet is captured if the specified port is its source or destination port.

- ***protocol***—IP protocol of the traffic to be captured. Specify **tcp** or **udp**. The default is all protocols.
- **'tcp[tcpflags] & (tcp-fin, tcp-syn, tcp-rst, tcp-psh, tcp-ack, tcp-urg, tcp-ece, tcp-cwr) !=0'**—TCP flags that must be set for a packet to be captured (applies only to TCP traffic). Multiple flags can be separated by or (|) or and (&) operators, and the entire expression must be enclosed in single quotation marks. For example, to capture just the first and last packets of a TCP connection, type the following:

  'tcp[tcpflags] & (tcp-fin | tcp-syn) !=0'

stop—Stops the packet capture.

Mode Not applicable.

Related Topics show packet-capture on page 108

Sample Output

```
WX> packet-capture start –i ge–0/0/1 –b 5000
tcpdump: listening on ge-0/0/1, link-type EN10MB (Ethernet), capture size 68 bytes
79 packets captured
5052 bytes captured
Successfully started tcpdump in background. CLI can be used as usual.
```


ping

Syntax ping *ip-address* [count *num*] [size *num*]

Release Information Introduced in JWOS Release 6.0.

Description Verifies connections to remote devices in your network.

Options ***ip-address***—IP address or hostname of the device.

count *num*—Number of request packets.

size *num*—Number of bytes in a request packet (8 to 4068). The default is 56.

Mode Not applicable.

Related Topics None.

Sample Output

```
WX> ping 10.87.83.13 count 2
PING 10.87.83.15 (10.87.83.15): 56 data bytes

64 bytes from 10.87.83.15: icmp_seq=0 ttl=126 time=0.685 ms
64 bytes from 10.87.83.15: icmp_seq=1 ttl=126 time=0.537 ms

--- 10.87.83.15 ping statistics ---

2 packets transmitted, 2 packets received, 0% packet loss

round-trip min/avg/max/stddev = 0.537/0.611/0.685/0.074 ms
```

quit

Syntax **quit**

Release Information Introduced in JWOS Release 6.0.

Description Exits the CLI. Same as **exit**.

Options None.

Mode Not applicable.

Related Topics exit on page 12

Sample Output

```
WX> quit
```

set adjacency establish

Syntax **set adjacency establish disable (delay *minutes* | no-delay)**

Release Information Introduced in JWOS Release 6.0.

Description Configures or disables a time period during which no new adjacencies can be formed with Pulse clients. Applies to both user-defined (UD) and automatically discovered (AD) adjacencies.

Options **delay *minutes***—Number of minutes (1 through 60) before new adjacencies can be formed.

no-delay—Cancels the current delay and allows new adjacencies to be formed immediately.

Mode Not applicable.

Related Topics config set adjacency peer-address on page 42

show adjacency peer-address on page 90

Sample Output

```
WX> set adjacency establish disable delay 10
```


set client default-config

Syntax **set client default-config (device-startup-config | *config-source*)**

Release Information Introduced in JWOS Release 6.0.

Description Specifies the source of the default configuration that is downloaded to Junos Pulse clients. This command is operational, and cannot be saved in the WXC configuration file.

Options **device-startup-config | *config-source***—Specifies the WXC startup configuration file as the default client configuration, or specifies the path for a customized configuration file. Use one of the following formats:

- */path/filename*
- **ftp:**// *IP address:username:password/path and filename*
- **tftp:**// *IP address/path and filename*

Mode Not applicable.

Related Topics show client settings on page 95

Sample Output

```
WX> set client default-config device-startup-config
```

set date

Syntax **set date *date***

Release Information Introduced in JWOS Release 6.0.

Description Manually sets the date and time for the WXC Series gateway. Use this option if the network does not have an NTP server.

Options ***date***—Date and time for the WXC Series gateway. The format is *YYYYMMDDhhmm.ss*. The time is in 24-hour format.

Mode Not applicable.

Related Topics

config set system clock on page 63

config set system ntp on page 72

show system on page 112

Sample Output

```
WX> set date 200908080820.02
```

set logging

Syntax **set logging (console-output | no-console-output | severity *module=level*)**

Release Information Introduced in JWOS Release 6.0.

Description Specifies whether to display log messages on the terminal connected to the WXC console port, in addition to writing them to the system log file. You can also change the logging levels for specific modules.

Options **console-output | no-console-output**—Enables or disables the display of log messages on the console (disabled by default).

severity *module=level*—Sets the lowest severity level of the messages written to the log or the console for the specified module (use the **show logging modules** command to list the module names). Use the **default** module name to set the logging level for all modules. The following severity levels are listed in descending order of severity. Each level includes all of the severity levels above it.

- **f | F**—Fatal error messages about software or hardware malfunctions.
- **e | E**—Error messages, such as license expired.
- **w | W**—Warning messages.
- **i | I**—Informational messages, such as reload requests and low-process stack messages (the default for all modules).
- **d | D**—Debug messages.
- **v | V**—Verbose mode, which provides additional details about the above messages.

Mode Not applicable.

Related Topics config set system syslog on page 74

show logging on page 107

Sample Output

```
WX> set logging console-output
```


set system clear-hardened-state

Syntax set system clear-hardened-state

Release Information Introduced in JWOS Release 6.0.

Description Clears a software or hardware passthrough condition where all traffic is passed through without any processing. You must then enter the **request system reboot** command to restart the WXC gateway.

Options None.

Mode Not applicable.

Related Topics request system reboot on page 81

Sample Output

```
WX> set system clear-hardened-state
WX> request system reboot
```

setup

Syntax setup

Release Information Introduced in JWOS Release 6.0.

Description Runs the Quick Setup from the command line when the WXC gateway is in the factory default state and the bridge interface is connected to the network. If this command is being run as part of an upgrade, the upgrade procedure preserves the bridge IP address, subnet mask, and gateway address.

NOTE: The following warning message appears if the WXC Series gateway is not in the factory default state (does not apply to upgrades):
Device is not in Quick Setup state. Please reset device to factory default without preserve-ip option before proceeding, quit setup.

When you run the **setup** command through a serial console connection to the WXC gateway you do not need to set up connectivity to the bridge interface. If the WXC gateway is in the factory default state when you log in using a serial console connection, the command runs automatically.

Options None.

Mode Not applicable.

Related Topics None.

Sample Output

```
WX> setup
****************************** WELCOME ******************************
Welcome to the Quick Setup wizard for JWOS. This wizard will enable you
to get your JWOS device up and running with a minimum of effort.
*********************************************************************************
Press Enter to continue
---------------------------------------------------------------------
You will now configure IP parameters (IP address, subnet mask, default
gateway) to enable IP connectivity for this device. Once these parameters
are configured, additional management tasks can be performed via the
CLI or the Web interface.
setup br-0/0? yes[y]/no[n] [yes]
```

traceroute

Syntax traceroute *ip-address* [maxhops *number*]

Release Information Introduced in JWOS Release 6.0.

Description Traces the network path from the current WXC Series gateway to another device in the network. Press Ctrl+C to stop the trace.

Options ***ip-address***— IP address or host name of a remote network device.

maxhops *number*—Maximum number of routers (hops) to traverse (up to 255). The default is 64 hops.

Mode Not applicable.

Related Topics show routing-options on page 110

Sample Output

```
WX> traceroute 10.87.76.20 maxhops 3
traceroute to 10.87.76.20 (10.87.76.20), 64 hops max, 40 byte packets
 1  10.87.73.1  0.345 ms  0.268 ms  0.242 ms
 2  10.87.75.2  0.509 ms  0.350 ms  0.371 ms
 3  10.87.76.20  0.518 ms  0.469 ms  0.620 ms
```


CHAPTER 3

Configuration Commands

This chapter describes the JWOS configuration commands.

JWOS Configuration Commands Summary

The following table summarizes the JWOS configuration commands. You must enter the **commit** command to apply your configuration changes before exiting the CLI session. To retain the changes when the system is restarted, enter the command **request system save-config**.

Command	Description
config delete acceleration cifs	Deletes the account used to access servers that require SMB signing.
config delete application-definition	Deletes an application definition or a specific rule in a definition.
config delete flow-filter	Deletes the specified flow filter.
config delete interface arp	Deletes Address Resolution Protocol (ARP) entries.
config delete routing-options	Deletes all static routing options or a specified route.
config delete snmp	Deletes trap destinations for SNMP.
config delete system	Deletes a user, DNS server, or syslog server.
config set acceleration cifs	Configures Common Internal File System (CIFS) acceleration.
config set acceleration lz-service	Enables or disables LZ compression.
config set acceleration monitor	Globally configures the monitoring of applications for reports.
config set acceleration tcpproxy-service	Configures TCP acceleration.

Command	Description
config set adjacency defaultsettings	Resets adjacency settings to the default values.
config set adjacency peer-address	Configures adjacency settings for remote Junos Pulse clients.
config set allow downgrade no-wxos	Disables the software downgrade capability.
config set application-definition	Configures application definitions.
config set boot	Configures the startup settings.
config set client download	Configures support for downloading the Junos Pulse client from the WXC Series gateway.
config set client peering-support	Configures whether adjacencies can be formed with Junos Pulse clients.
config set client username	Configures a username and password required to download the Junos Pulse client.
config set control-traffic	Configures ToS or DSCP values for WXC control traffic.
config set events	Configures the system events.
config set flow-filter	Configures a flow filter to collect traffic flow statistics for a source and destination address, port, and protocol.
config set interface	Configures the interface settings, such as speed and duplex mode.
config set interface arp	Configures Address Resolution Protocol (ARP) entries.
config set interface periodic-test-mode	Configures periodic test mode for duplex settings.
config set packet-interception	Configures off-path interception for the WXC Series gateway
config set routing-options	Configures the routing options for the WXC Series gateway.
config set snmp	Configures the SNMP settings.
config set system bypass-capability	Configures hardware passthrough.
config set system clock	Configures the system clock settings.

Command	Description
config set system community	Specifies the community of the WXC Series gateway.
config set system contact	Specifies the system administrator name and contact information.
config set system domain-name	Specifies the domain name for the WXC Series gateway.
config set system front-panel	Enables or disables the front panel keypad.
config set system location	Specifies the physical location of the WXC Series gateway.
config set system login	Adds a new user account or edits an existing account.
config set system name	Configures the name of the WXC Series gateway.
config set system name-server	Configures one or more DNS server IP addresses.
config set system ntp	Configures the Network Time Protocol (NTP).
config set system ntp-server	Configures the NTP servers.
config set system syslog	Configures syslog settings.

config delete acceleration cifs

Syntax config delete acceleration cifs apply-signing username *name*

Release Information Introduced in JWOS Release 6.0.

Description Deletes the user account used to access one or more Windows servers that require Server Message Block (SMB) signing for Common Internet File System (CIFS) traffic flows.

Options **username *name***—Username for accessing the Windows servers that require SMB.

Mode Not applicable.

Related Topics config set acceleration cifs on page 37

show acceleration cifs configuration on page 85

Sample Output

```
WX> config delete acceleration cifs apply-signing username smbaccount
```

config delete application-definition

Syntax **config delete application-definition** *name* [**rule-id** *number*]

Release Information Introduced in JWOS Release 6.0.

Description Deletes an application definition or a specific rule in a definition.

Options ***name***—Deletes the current definition for the named application.

rule-id ***number***—Deletes the specified rule from the application definition. Each application definition can have up to 10 rules.

Mode Not applicable.

Related Topics config set application-definition on page 44

show application-definition on page 93

Sample Output

```
WX> config delete application-definition appname1
```

config delete flow-filter

Syntax **config delete flow-filter src-ip (*ip-address* | any) dst-ip (*ip-address* | any) src-port (*number* | any) dst-port (*number* | any) protocol (tcp | udp)**

Release Information Introduced in JWOS Release 6.0.

Description Deletes the specified flow filter.

Options **src-ip (*ip-address* | any)**—Source IP address of the flow filter (can be a specific address or **any**).

dst-ip (*ip-address* | any)—Destination IP address of the flow filter (can be a specific address or **any**).

src-port (*number* | any)—Source port number of the flow filter (can be a specific port or **any**).

dst-port (*number* | any)—Destination port number of the flow filter (can be a specific port or **any**).

protocol (tcp | udp)—Protocol of the flow filter.

Mode Not applicable.

Related Topics clear flow-filter debug-buffer on page 9

config set flow-filter on page 53

show flow-filter on page 100

Sample Output

```
WX> config delete flow-filter src-ip any dst-ip any src-port any dst-port any
protocol udp
```


config delete interface arp

Syntax **config delete interface arp (*ip-address* mac-address *hardware-address* | all)**

Release Information Introduced in JWOS Release 6.0.

Description Deletes the specified static entry in the Address Resolution Protocol (ARP) table or all dynamic entries.

Options ***ip-address*** **mac-address** ***hardware-address***—Deletes the static ARP entry for the specified IP address and MAC address.

all—Deletes all dynamic ARP entries.

Mode Not applicable.

Related Topics config set interface arp on page 56

show interfaces arp on page 104

Sample Output

```
WX> config delete interface arp 11.11.11.11 mac-address 11:22:33:44:55:66
```

config delete routing-options

Syntax **config delete routing-options interface** ***name*** **static route** ***ip-prefix*** **[next-hop** ***ip-address*****]**

Release Information Introduced in JWOS Release 6.0.

Description Deletes static routes from a bridge interface.

Options **interface** ***name***—Name of a bridge interface, such as **br-0/0**.

static route ***ip-prefix***—IP address and subnet mask of the static route(s) to be deleted, such as 10.20.30.0/24. If you do not specify a next-hop gateway address, all the static routes for the specified network are deleted.

next-hop ***ip-address***—IP address of the gateway associated with the static route. This option deletes only the static route with the specified gateway.

Mode Not applicable.

Related Topics config set routing-options on page 60

show routing-options on page 110

Sample Output

```
WX> config delete routing-options interface br-0/0 static route 10.17.20.0/24
```


config delete snmp

Syntax **config delete snmp traps destination** ***ip-address***

Release Information Introduced in JWOS Release 6.0.

Description Deletes a destination for traps generated by SNMP.

Options **destination** ***ip-address***—Trap destination IP address.

Mode Not applicable.

Related Topics config set snmp on page 61

show snmp on page 111

Sample Output

```
WX> config delete snmp traps destination 10.17.18.2
```

config delete system

Syntax **config delete system (login user *name* | name-server *ip-address* | syslog destination *ip-address*)**

Release Information Introduced in JWOS Release 6.0.

Description Deletes a user account, name server, or syslog destination.

Options **login user *name***—Deletes the login account of the specified user.

name-server *ip-address*—Deletes the IP address of a DNS server used to resolve addresses on the Flow Diagnostics page of the Web interface.

syslog destination *ip-address*—Deletes the specified IP address as a destination for syslog messages.

Mode Not applicable.

Related Topics

config set system login on page 69

config set system name-server on page 71

config set system syslog on page 74

show system on page 112

Sample Output

```
WX> config delete system login user jsmith
```

config set acceleration cifs

Syntax

config set acceleration cifs-service | no-cifs-service
config set acceleration cifs apply-signing-mode | no-apply-signing-mode
config set acceleration cifs apply-signing encrypted-username ***name*** **encrypted-password** ***password*** **encrypted-domain** ***domain***
config set acceleration cifs (cache | no-cache | default-settings | disable-signing | no-disable-signing)

Release Information

Introduced in JWOS Release 6.0.

Description

Configures application acceleration for CIFS traffic flows. Most active CIFS flows are accelerated; passive flows and flows for unsupported clients or servers are not. CIFS acceleration is supported between Junos Pulse clients and most Windows servers and between Pulse clients and Samba version 3.0 and later. However, CIFS traffic flows between any combination of Windows 7, Windows Vista, and Windows Server 2008 platforms are not accelerated.

Options

cifs-service | no-cifs-service—Enables or disables CIFS acceleration (enabled by default).

apply-signing-mode | no-apply-signing-mode—Enables or disables the use of Server Message Block (SMB) signing for CIFS traffic (disabled by default). If signing is enabled, use a separate command to specify an account on the Windows servers that require SMB signing. To accelerate CIFS traffic when a server requires SMB signing, the WXC gateway must log in to the server to create an SMB signature. Note that CIFS traffic flows using SMB2 are not accelerated.

- **encrypted-username** ***name*** **encrypted-password** ***password*** **encrypted-domain** ***domain***—Username (1 through 64 characters), password, and domain used to access the Windows servers that require SMB signing. The username can contain ASCII letters (a-z, A-Z), digits (0 through 9), dashes (-), and underscores (_).

cache | no-cache—Enables or disables the storing of transferred files in the disk object cache (enabled by default).

default-settings—Restores the default configuration settings for CIFS acceleration.

disable-signing | no-disable-signing—Enables or disables the disabling of SMB signing when it is not required (enabled by default).

Mode

Not applicable.

Related Topics

config delete acceleration cifs on page 30

show acceleration cifs configuration on page 85

Sample Output

```
WX> config set acceleration no-cifs-service
```

config set acceleration lz-service

Syntax **config set acceleration lz-service | no-lz-service**

Release Information Introduced in JWOS Release 6.1.

Description Globally enables or disables LZ compression. Compression can also be enabled by application.

Options **lz-service | no-lz-service**—Globally enables or disables compression (enabled by default).

Mode Not applicable.

Related Topics config set application-definition on page 44

show acceleration lz on page 86

Sample Output

```
WX> config set acceleration no-lz-service
```

config set acceleration monitor

Syntax **config set acceleration monitor | no-monitor**

Release Information Introduced in JWOS Release 6.0.

Description Globally enables or disables monitoring of applications for reports. Monitoring can also be enabled by application.

Options **monitor | no-monitor**—Globally enables or disables the monitoring of applications for reports (enabled by default).

Mode Not applicable.

Related Topics

config set application-definition on page 44

request system clear monitor stats on page 77

show acceleration monitor on page 87

Sample Output

```
WX> config set acceleration monitor
```

config set acceleration tcpproxy-service

Syntax **config set acceleration tcpproxy-service | no-tcpproxy-service**

Release Information Introduced in JWOS Release 6.0.

Description Configures global TCP acceleration settings. The sending and receiving WXC Series gateway and Pulse clients terminate the TCP session and acknowledge all data transmissions locally. This results in independent sessions between the source and the Pulse client, between the Pulse client and the WXC gateway, and between the gateway and the destination. TCP acceleration can also be enabled by application.

Options **tcpproxy-service | no-tcpproxy-service**—Globally enables or disables TCP acceleration (enabled by default).

Mode Not applicable.

Related Topics config set application-definition on page 44

show acceleration tcpproxy on page 88

Sample Output

```
WX> config set acceleration tcpproxy-service
```


config set adjacency defaultsettings

Syntax **config set adjacency defaultsettings**

Release Information Introduced in JWOS Release 6.0.

Description Resets the adjacency settings to the default values. By default, all services and automatic discovery are enabled for all discovered Pulse clients.

Options None.

Mode Not applicable.

Related Topics config set adjacency peer-address on page 42

show adjacency peer-address on page 90

Sample Output

```
WX> config set adjacency defaultsettings
```

config set adjacency peer-address

Syntax **config set adjacency peer-address *ip-address* (discover | no-discover | hello-freq *seconds*)**
config set adjacency peer-address *ip-address* (service | no-service *type*)
config set adjacency peer-address *ip-address* reset
config set adjacency peer-address all (discover | no-discover)

Release Information Introduced in JWOS Release 6.0.

Description Configures adjacencies with remote Junos Pulse clients in the same community. By default, a WXC Series gateway and Junos Pulse client discover each other automatically by marking the first two TCP packets in a traffic flow (SYN and SYN-ACK). They then form an adjacency to accelerate the traffic between them. Adjacencies formed automatically are maintained only while they are active. Inactive adjacencies are disabled after 15 minutes to conserve system resources.

To control which Junos Pulse clients can form adjacencies with the WXC gateway, you can configure persistent user defined (UD) adjacencies that are maintained even when there is no traffic. To define an adjacency manually, use the command **config set adjacency peer-address *ip-address* discover**.

Options ***ip-address***—IP address of a Junos Pulse client. You can configure the following adjacency settings:

- **discover | no-discover**—Enables or disables the use of automatic discovery for the specified Junos Pulse client (enabled by default).
- **hello-freq *seconds***—Configures the number of seconds between hello messages sent during an adjacency to verify the client is still active. The valid values are 5, 15, 60, 300, and 3600 (default is 15).
- **service | no-service *type***—Enables or disables one of the following services for the adjacency (all are enabled by default):
  - **cifs**—CIFS acceleration
  - **lz**—LZ data compression
  - **tcp**—TCP acceleration
- **reset**—Deletes the adjacency. The adjacency is re-established if automatic discovery is enabled.

all discover | no-discover—Enables or disables the use of automatic discovery for all Junos Pulse clients (enabled by default).

Mode Not applicable.

Related Topics show adjacency peer-address on page 90

Sample Output
```
WX> config set adjacency peer-address 10.17.20.11 discover
```


config set allow downgrade no-wxos

Syntax **config set allow downgrade no-wxos**

Release Information Introduced in JWOS Release 6.0.

Description Disables downgrading the WXC software from JWOS 6.x to WXOS 5.6.5 or later (enabled by default). You can always downgrade to a previous version of JWOS.

Options None.

Mode Not applicable.

Related Topics request system install on page 78

Sample Output

```
WX> config set allow downgrade no-wxos
```

config set application-definition

Syntax **config set application-definition *name* (monitor | no-monitor | service *type* | type *apptype* | rule-id *number options*)**
config set application-definition Undefined-Application (monitor | no-monitor)

Release Information Introduced in JWOS Release 6.0.

Description Configures the application definitions used to identify network traffic. Up to 256 applications can be defined. Definitions are provided for applications with well-known port numbers. All other applications are grouped as Undefined-Application.

Each application definition can have up to 10 rules. Each rule can specify a protocol, source and destination port numbers (or range of port numbers), source and destination IP addresses or subnets, and a Type of Service (ToS) or Differentiated Services Code Point (DSCP) value.

A packet matches an application definition if a match occurs on any of its rules. All the values defined in the same rule must be true for a match to occur on that rule. A packet is classified under the first application for which a rule match is found.

Options ***name***—Application definition name (up to 63 characters). For a new application definition, include any one of the following options, except the **rule-id**. The rules must be specified separately.

- **monitor | no-monitor**—Enables or disables the inclusion of traffic statistics for the application on the monitoring reports in the Web interface (enabled by default). Traffic statistics for unmonitored applications are grouped together as the Undefined-Application.
- **service *type***—Enables or disables the following service types (only CIFS acceleration is disabled by default):
  - **cifs | no-cifs**—Enables or disables CIFS acceleration.
  - **lz | no-lz**—Enables or disables LZ compression. Note that enabling LZ compression has no effect unless TCP acceleration is also enabled.
  - **tcp | no-tcp**—Enables or disables TCP acceleration.
- **type *apptype***—Specifies one of the following application types:
  - **default**—No special processing (the default).
  - **ftp**—Apply to the FTP application to allow FTP ports to be learned dynamically.

NOTE: If the *apptype* is set to **ftp**, the CIFS service cannot be enabled for the application.

- **rule-id** ***number options***—After an application name is defined, you can specify up to 10 rules (numbered 1 through 10) to identify the application traffic. Enter one rule per command. The rule options are:
  - **destination-address** ***IP-address [/mask]***—Destination IP address or subnet. Typically, source and destination addresses are specified in separate rules so that a match occurs on packets that specify either address. A rule that includes both addresses matches only packets that specify both addresses.
  - **destination-port** ***number***—Destination port number, a range of port numbers separated by a hyphen (-), or a series of comma-separated port numbers and ranges. Typically, source and destination ports are specified in separate rules so that a match occurs on packets that specify either port. A rule that includes both ports matches only packets that specify both ports.
  - **dscp** ***value***—Differentiated Services Code Point (DSCP) number (0 through 63) or name. Table 5 on page 45 lists the DSCP names and the equivalent DSCP and IP precedence values for the class selector (CSx) names. The assured forwarding (AFx) and expedited forwarding (EF) names are defined by RFCs 2597 and 3246.

Table 5: ToS and DSCP Values

Name	DSCP	IP Precedence
Default	0	0
CS1	8	1
CS2	16	2
CS3	24	3
CS4	32	4
CS5	40	5
CS6	48	6
CS7	56	7
AF11	10	–
AF12	12	–
AF13	14	–
AF21	18	–

Table 5: ToS and DSCP Values *(continued)*

Name	DSCP	IP Precedence
AF22	20	–
AF23	22	–
AF31	26	–
AF32	28	–
AF33	30	–
AF41	34	–
AF42	36	–
AF43	38	–
EF	46	–

- **protocol (*number* | any | tcp | udp)**—Protocol of the matching traffic. By default, a match can occur on any TCP or non-TCP packet. If you do not specify any port numbers, you can enter a protocol number (0 to 134). Note that only TCP traffic can be compressed and accelerated. Non-TCP traffic can only be monitored. If the protocol is **Any**, all selected services are applied to the TCP traffic, but the monitoring statistics will also include the matching non-TCP traffic (if any).
- **source-address *IP-address [/mask]***—Source IP address or subnet.
- **source-port *number***—Source port numbers (same format as the destination port).
- **tos *number***—IP precedence value (0 through 7).

Undefined-Application monitor | no-monitor—Enables or disables monitoring of traffic statistics for all application traffic that does not match an application definition (enabled by default).

Mode Not applicable.

Related Topics config delete application-definition on page 31

show application-definition on page 93

Sample Output

```
WX> config set application-definition app1 service lz
WX> config set application-definition app1 rule-id 1 destination-port 999
```

config set boot

Syntax **config set boot (*partition* [no-preserve-ip] | safe)**

Release Information Introduced in JWOS Release 6.0.

Description Configures the settings used for the next system reboot.

Options ***partition***—Partition name (A or B) used for the next reboot.

no-preserve-ip—Does not preserve the IP address information.

safe—Allows the gateway to be configured, but traffic is passed through without any processing.

Mode Not applicable.

Related Topics request system reboot on page 81

show boot on page 94

Sample Output

```
WX> config set boot A
```

config set client download

Syntax **config set client download (support | no-support | authentication | no-authentication)**

Release Information Introduced in JWOS Release 6.0.

Description Configures whether the Junos Pulse client software can be downloaded remotely and whether authentication is required.

Options **support | no support**—Enables or disables downloading of the Junos Pulse client software from the WXC Series gateway (enabled by default).

authentication | no-authentication—Enables or disables the prompt for a username and password to download the client software (disabled by default).

Mode Not applicable.

Related Topics config set client peering-support on page 49

config set client username on page 50

show client settings on page 95

Sample Output

```
WX> config set client download support
```


config set client peering-support

Syntax **config set client peering-support | no-peering-support**

Release Information Introduced in JWOS Release 6.0.

Description Configures whether the WXC Series gateway can form adjacencies with Junos Pulse clients (enabled by default). An adjacency must be established before traffic can be accelerated between a Pulse client and the WXC gateway.

Options **peering-support | no-peering-support**—Enables or disables the forming of adjacencies with Junos Pulse clients (enabled by default).

Mode Not applicable.

Related Topics show client settings on page 95

Sample Output

```
WX> config set client peering-support
```

config set client username

Syntax **config set client username** *name* **(encrypted-password** *encrypted-password* **| password** *password***)**

Release Information Introduced in JWOS Release 6.0.

Description Configures the username and password required to download the Junos Pulse client software.

Options *name*—The username (up to 32 characters) can contain ASCII letters (a-z, A-Z), digits (0 through 9), dashes (-), and underscores (_).

encrypted-password *encrypted-password*—The encrypted password must be a 32-byte, MD5 digest. The user is prompted for the password if the password is not included in the command.

password—The user is prompted for the password (4 to 64 characters) after entering the command.

Mode Not applicable.

Related Topics config set client download on page 48

show client settings on page 95

Sample Output

```
WX> config set client username ksmith password
New password:
Retype password:
```


config set control-traffic

Syntax **config set control-traffic (dscp *number* | tos *number*)**

Release Information Introduced in JWOS Release 6.0.

Description Configures a Type of Service (ToS) IP precedence value or a Differentiated Services Code Point (DSCP) value for the control traffic sent between the WXC gateway and the Pulse clients. For all other traffic, the incoming ToS/DSCP values are preserved on outgoing packets.

Options **dscp *number***—DSCP value (0 through 63).

tos *number*—IP precedence value (0 through 7).

Mode Not applicable.

Related Topics show system on page 112

Sample Output

```
WX> config set control-traffic dscp 1
```

config set events

Syntax **config set events | no-events**
config set events system (name | no-name) ***event-name***

Release Information Introduced in JWOS Release 6.0.

Description Specifies the system events that the WXC gateway can generate.

Options **events | no-events**—Globally enables or disables the generation of system events (enabled by default).

(name | no-name) ***event-name***—Enables or disables the generation of the specified system event. All system events are enabled by default. Use the **show events** command to view the event names.

Mode Not applicable.

Related Topics show events on page 99

Sample Output

```
WX> config set events system no-name cold start
```


config set flow-filter

Syntax **config set flow-filter src-ip (*ip-address* | any) dst-ip (*ip-address* | any) src-port (*number* | any) dst-port (*number* | any) protocol (tcp | udp)**

Release Information Introduced in JWOS Release 6.0.

Description Configures a flow filter to collect traffic flow statistics for a source and destination address, port, and protocol.

Options **src-ip (*ip-address* | any)**—Source IP address of the flow filter (can be a specific address or **any**).

dst-ip (*ip-address* | any)—Destination IP address of the flow filter (can be a specific address or **any**).

src-port (*number* | any)—Source port number of the flow filter (can be a specific port or **any**).

dst-port (*number* | any)—Destination port number of the flow filter (can be a specific port or **any**).

protocol (tcp | udp)—Protocol of the flow filter.

Mode Not applicable.

Related Topics clear flow-filter debug-buffer on page 9

config delete flow-filter on page 32

show flow-filter on page 100

Sample Output

```
WX> config set flow-filter src-ip any dst-ip any src-port any dst-port any protocol
 udp
```


config set interface

Syntax **config set interface** *name* **(enable | disable)**
config set interface *name* **ip-address** *ip-address* **subnet-mask** *mask* **default-gateway** *ip-address*
config set interface *name* **(down-time** *seconds* **| mtu** *number* **| propagate-failure | no-propagate-failure | speed-duplex** *speed***)**

Release Information Introduced in JWOS Release 6.0.

Description Configures the interfaces on the WXC Series gateway. Interface names are assigned automatically, as shown in Table 6 on page 54.

Table 6: Interface Types and Descriptions

Interface	Name	Description
Bridge	br-slot/pair	A bridge interface connects a pair of local and remote ports on the WXC gateway. When either port receives traffic that is not processed by the gateway, such as broadcast or passthrough traffic, the traffic is sent out the other port. The two ports, called a *port pair*, share the IP address of the bridge interface. Every WXC gateway has a bridge interface named br-0/0. On gateways that support additional two-port or four-port I/O modules, the slots are numbered from top to bottom and left to right, starting from 1. The pair number is 0 except on four-port modules, in which the right-hand pair is 1. You cannot configure the speed of a bridge interface.
Local	fe-slot/pair/0 or ge-slot/pair/0	The **fe** or **ge** indicates the interface speed (Fast Ethernet or Gigabit Ethernet). The slot and pair numbers are the same as the associated bridge. The **/0** indicates the Local interface.
Remote	fe-slot/pair/1 or ge-slot/pair/1	Same name as the Local interface, except that the **/1** indicates the Remote interface.
Loopback	lo0	On devices that support a loopback address, you can configure the IP address and subnet mask.
Management	fxp0	On devices that have a management port, you can configure the IP address, subnet mask, default gateway, and interface speed and mode.

Options **interface *name*** —Name of the interface. Specify one of the following options:

- **enable | disable**—Enables or disables the specified interface (disabled by default). This option is available for all interfaces .
- **down-time *seconds***—Specifies the number of seconds to shut down the Local or Remote interface to propagate a failure to the other interface. The default is 15.
- **ip-address *ip-address* subnet-mask *mask* default-gateway *ip-address***—Assigns an IP address, subnet mask, and default gateway to the management interface (fxp0) or a bridge interface (such as br-0/0).
- **mtu *number*** —Configures the maximum transmission unit (MTU) for an interface (1 through 1500). The default is 1500.
- **propagate-failure | no-propagate-failure**—Enables or disables failure propagation on the specified Local or Remote interface. For example, if the switch fails, the Local interface can briefly disable the Remote interface so that the router can detect the loss of connectivity with the switch (used in high-availability environments).
- **speed-duplex (auto | 10-full | 10-half | 100-full | 100-half |1000-full)** —Configures a speed-duplex pair for a Local or Remote interface (default is **auto**).

Mode Not applicable.

Related Topics show interfaces on page 102

Sample Output

```
WX> config set interface fe-0/0/0 speed-duplex 100-full
```


config set interface arp

Syntax **config set interface arp** *ip-address* **mac-address** *mac-address* **(local | remote)**
config set interface arp age-out-timer *minutes*

Release Information Introduced in JWOS Release 6.0.

Description Configures a static entry in the Address Resolution Protocol (ARP) table of the WXC Series gateway. The ARP protocol determines whether the gateway for a route is on the Local or Remote interface and discovers the hardware (MAC) addresses of devices that are directly addressable on the Local and Remote interfaces.

For devices that do not respond to ARP requests, you can add static ARP entries that map their IP addresses to their MAC addresses.

Options ***ip-address***—The IP address of the ARP entry.

mac-address ***mac-address***—Hardware (MAC) address associated with the IP address (the format is ***xx:xx:xx:xx:xx:xx***).

local | remote—Local or Remote interface.

age-out-timer ***minutes***—Number of minutes (up to 60) before dynamic ARP entries are deleted (default is 20). Changing the timer value affects only the ARP entries learned in the future, not the existing entries.

Mode Not applicable.

Related Topics config delete interface arp on page 33

show interfaces on page 102

Sample Output

```
WX> config set interface arp ip-address 10,11.11.01 mac-address 22:33:44:55:66:77
 local
```


config set interface periodic-test-mode

Syntax **config set interface periodic-test-mode | no-periodic-test-mode**

Release Information Introduced in JWOS Release 6.0.

Description Runs a test to detect a duplex mode mismatch on the Local or Remote interface of the WXC Series gateway.

Options **periodic-test-mode | no-periodic-test-mode**—Enables or disables a periodic test of the duplex settings on the Local and Remote interfaces (enabled by default). This test does not send any packets. If mismatched duplex settings are detected, an error message is displayed in the banner of the Web interface and when you log in to the CLI. A mismatch can be detected only when data is sent and received at the same time.

Mode Not applicable.

Related Topics config set interface on page 54

show interfaces on page 102

Sample Output

```
WX> config set interface no-periodic-test-mode
```


config set packet-interception

Syntax **config set packet-interception mode (off | external)**

Release Information Introduced in JWOS Release 6.0.

Description Enables packet interception for an off-path WXC Series gateway where the Local interface is connected to the router and the Remote interface is not used.

Options **mode (off | external)**—Indicates whether an external router is configured to route traffic to the WXC gateway (disabled by default).

CAUTION: Enabling packet interception disables the Remote interface. If the WXC gateway is installed in the data path, all data transmission through the gateway will stop.

If you enable packet interception, you must configure a policy on the local router or Layer 3 switch to redirect traffic to the WXC Series gateway. If the off-path gateway is connected to a dedicated port on a router, apply the policy to the inbound interface from the LAN switch.

In the following example, any incoming packet on interface **FastEthernet 0/0** that matches **access-list 120** is routed to the WXC Series gateway at IP address 192.168.10.10. The access list shown here redirects all packets, but you can specify additional filtering criteria.

```
interface FastEthernet 0/0
ip address 192.168.9.1 255.255.255.0
ip policy route-map Juniper
access-list 120 permit ip any any
route-map Juniper permit 50
match ip address 120
set ip next-hop 192.168.10.10
```

If the off-path gateway is connected to a dedicated VLAN on a Layer 3 switch, the commands are almost the same, except that you apply the policy to the inbound interface from the LAN:

```
interface Vlan200
  ip address 192.168.9.1 255.255.255.0
  ip policy route-map Juniper
```

NOTE: Use the **set ip next-hop** command to redirect packets to the IP address of the bridge interface on the WXC Series gateway. Do not use the **set interface** command to redirect traffic to the interface where the WXC gateway is connected.

Mode Not applicable.

Related Topics show packet-interception on page 109

Sample Output

```
WX> config set packet-interception mode external
```

config set routing-options

Syntax **config set routing-options interface** ***name*** **static route** ***network*** **next-hop** ***ip-address***

Release Information Introduced in JWOS Release 6.0.

Description Adds static routes for a bridge interface on the WXC Series gateway.

Options **interface** ***name***—Name of the bridge interface, such as br-0/0.

static route ***network***—Network prefix, such as **10.20.30.0/24**.

next-hop ***ip-address***—Gateway IP address for the specified network prefix.

Mode Not applicable.

Related Topics show routing-options on page 110

Sample Output

```
WX> config set routing-options interface br-0/0 static route 10.20.30.0/24 next-hop
 10.20.30.1
```


config set snmp

Syntax **config set snmp (authentication-failure-trap | no-authentication-failure-trap | read-community *string* | snmp-mode | no-snmp-mode | trap-mode | no-trap-mode | traps destination *ip-address* community *string* | write-community *string*)**

Release Information Introduced in JWOS Release 6.0.

Description Configures SNMP settings. WXC Series gateways support SNMP, the MIB II public objects, and private MIB objects. Your network management system (NMS) can use the private MIB to monitor the performance of the WXC gateways in your network. In addition, enabling SNMP traps allows the WXC gateway to send traps and alarms to the NMS as they occur.

Options **authentication-failure-trap | no-authentication-failure-trap**—Enables or disables traps for authentication failures (disabled by default).

read-community *string*—Specifies the read-community string. If the community string contains spaces, enclose it in double quotation marks.

snmp-mode | no-snmp-mode—Enables or disables support for SNMP (enabled by default).

trap-mode | no-trap—Enables or disables the generation of SNMP traps (disabled by default).

traps destination *ip-address* community *string* — Configures the trap server IP address and trap-community string (up to 30 characters). If the string contains spaces, enclose it in double quotation marks.

write-community *string*—Specifies the write-community string. If the community string contains spaces, enclose it in double quotation marks.

Mode Not applicable.

Related Topics show snmp on page 111

Sample Output

```
WX> config set snmp traps destination 10.11.11.11 community “string 1”
```

config set system bypass-capability

Syntax **config set system (bypass-capability | no-bypass-capability)**

Release Information Introduced in JWOS Release 6.0.

Description Configures hardware passthrough. Disabling hardware passthrough blocks all traffic through the WXC gateway during a reboot or system failure. In high-availability environments, this allows power failures to be detected and the traffic routed to an alternate device.

Options **bypass-capability | no-bypass-capability**—Enables or disables hardware passthrough (enabled by default).

Mode Not applicable.

Related Topics show system on page 112

Sample Output

```
WX> config set system no-bypass-capability
```


config set system clock

Syntax **config set system clock (daylight-saving | no-daylight-saving | time-format (12 | 24) | time-zone *name*)**

Release Information Introduced in JWOS Release 6.0.

Description Configures the system clock on the WXC Series gateway. The date and time is saved with each entry in the system log files, which can help you to troubleshoot problems.

Options **daylight-saving | no-daylight-saving**—Enables or disables daylight saving time.

time-format (12 | 24)—Specifies a 12-hour AM/PM time format (the default) or a 24-hour format.

time-zone *name*—Specifies the time zone in one of the following formats:

- GMT hour offset. Format is **GMT+/-hh:mm**. The value is negative when the location is west of GMT. For a list of offsets, see **http://time_zone.tripod.com/**.
- Abbreviated time zone names, such as PST, IST, and JST. For a complete list of time zones, see **http://www.timeandate.com/library/abbreviations/timezones/**.
- A geographical location. To view the location names, enter the command **config set system clock time-zone ?**.

Mode Not applicable.

Related Topics config set system ntp on page 72

show system on page 112

Sample Output

```
WX> config set system clock time-zone PST
```


config set system community

Syntax **config set system community** ***name***

Release Information Introduced in JWOS Release 6.0.

Description Configures the community for the WXC Series gateway. Adjacencies can occur only between WXC gateways and Pulse clients in the same community. If you do not specify a community, the WXC gateway is in the **default** community.

Options **community** ***name***—The community name (up to 64 characters). The name can contain ASCII letters (a-z, A-Z), digits (0 through 9), dashes (-), and underscores (_).

Mode Not applicable.

Related Topics show system on page 112

Sample Output

```
WX> config set system community juniper
```

config set system contact

Syntax **config set system contact** *name*

Release Information Introduced in JWOS Release 6.0.

Description Configures the system administrator's contact information for the WXC Series gateway.

Options **config set system contact** *name*—Contact information for the system administrator (up to 32 characters). If the text includes spaces, enclose it in double quotation marks.

Mode Not applicable.

Related Topics show system on page 112

Sample Output

```
WX> config set system contact "Carlos Hernandez"
```

config set system domain-name

Syntax **config set system domain-name** *name*

Release Information Introduced in JWOS Release 6.0.

Description Configures the local DNS domain name of a WXC Series gateway for use on the Flow Diagnostics page in the Web interface. When an IP address in the specified domain is resolved by one of the DNS servers, the domain name is prepended to the host name shown on the Flow Diagnostics page.

Options **domain-name** *name*—Local domain name (up to 256 characters), such as **juniper.net**. The name must include at least one period, but not as the first or last character. If the local domain is not specified, only the host names are shown for resolved IP addresses in the local domain. Resolved addresses outside the local domain will include the domain name returned by the DNS server. To remove the local domain name, specify **none**. The limit is 256 characters.

Mode Not applicable.

Related Topics config set system name-server on page 71

show system on page 112

Sample Output

```
WX> config set system domain-name juniper.net
```


config set system front-panel

Syntax **config set system front-panel (lock | no-lock)**

Release Information Introduced in JWOS Release 6.0.

Description Locks or unlocks the front panel keypad on WXC Series gateways that have an LCD.

Options **lock | no-lock**—Locks or unlocks the front panel keypad (unlocked by default).

Mode Not applicable.

Related Topics show system on page 112

Sample Output

```
WX> config set system front-panel lock
```

config set system location

Syntax **config set system location *string***

Release Information Introduced in JWOS Release 6.0.

Description Specifies the physical location of the WXC Series gateway.

Options **location *string***—A description of the physical location of the WXC gateway (up to 32 characters). If the text includes spaces, enclose it in double quotation marks.

Mode Not applicable.

Related Topics show system on page 112

Sample Output

```
WX> config set system location "Central data center"
```

config set system login

Syntax

config set system login user *name* **class** *type* [**idle-timeout** *minutes*]
config set system login user *name* (**class** *type* | **idle-timeout** *minutes* | **password**)

Release Information

Introduced in JWOS Release 6.0.

Description

Adds a new user account or modifies an existing account on the WXC Series gateway.

Options

user ***name***—Login name of a new or existing user (up to 32 characters). The name can contain ASCII letters (a-z, A-Z), digits (0 through 9), dashes (-), and underscores (_). To add a new user account, enter the name and user class, and then respond to the prompt for a password (4 to 64 characters). To change an existing account, enter the current user name and the option to be changed.

class ***type*** —The following class types are supported:

- **superuser**—Full read-write privileges. Only the superuser can create or update user accounts.
- **operator**—Read-write configuration privileges, but no packet capture or user management privileges.
- **read-only-plus**—Read-only privileges and packet capture capability.
- **read-only**—Read-only privileges.

idle-timeout ***minutes***—Number of minutes before an idle user is logged out (the default is 30).

password—Changes the password (4 to 64 characters) of an existing account. You are prompted for the password after you enter the command.

Mode

Not applicable.

Related Topics

show system on page 112

Sample Output

```
WX> config set system login user jsmith class operator
New password:
Retype password:
```

config set system name

Syntax **config set system name *string***

Release Information Introduced in JWOS Release 6.0.

Description Configures the name of the WXC Series gateway.

Options **name *string***—Specifies the WXC gateway name (up to 30 characters). Do not use colons (:), asterisks (*), question marks (?), or angle brackets (< >) in the name.

Mode Not applicable.

Related Topics show system on page 112

Sample Output

```
WX> config set system name wx-10.10.20.10
```


config set system name-server

Syntax **config set system name-server *ip-address* [*ip-address2 ip-address3*]**

Release Information Introduced in JWOS Release 6.0.

Description Specifies up to three DNS servers used to resolve IP addresses on the Flow Diagnostics page in the Web interface of the WXC Series gateway. The first IP address is configured as the primary DNS server. The other addresses (if any) are configured as secondary DNS servers.

Options ***ip-address* [*ip-address2 ip-address3*]**—Sets one or more DNS server IP addresses.

Mode Not applicable.

Related Topics config set system domain-name on page 66

show system on page 112

Sample Output

```
WX> config set system name-server 10.10.10.11 20.20.20.21
```


config set system ntp

Syntax **config set system ntp (interval *number* | server (primary | secondary) *ip-address*)**

Release Information Introduced in JWOS Release 6.0.

Description Configures the Network Time Protocol (NTP) servers used to maintain the correct time on the WXC Series gateway.

Options **interval *number***—Poll interval for NTP updates, in seconds to the power of 2 (6 through 17). The default interval is 6, which means the NTP client polls the server for time updates every 64 seconds. The maximum interval is 17 (36 hours).

server (primary | secondary) *ip-address*—Specifies the IP address of the primary or secondary NTP server.

Mode Not applicable.

Related Topics config set system clock on page 63

show system on page 112

Sample Output

```
WX> config set system ntp server secondary 10.11.12.10
```


config set system ntp-server

Syntax **config set system (ntp-server | no-ntp-server)**

Release Information Introduced in JWOS Release 6.1.

Description Configures the use of the NTP service to maintain the correct time on the WXC gateway.

Options **ntp-server | no-ntp-server**—Enables or disables the NTP service (disabled by default).

Mode Not applicable.

Related Topics config set system ntp on page 72

config set system clock on page 63

show system on page 112

Sample Output

```
WX> config set system ntp-server
```

config set system syslog

Syntax **config set system syslog (destination *ip-address* | facility local0–local7 | severity (any | none | emergency | alert | critical | error | warning | notice | info))**

Release Information Introduced in JWOS Release 6.0.

Description Allows WXC Series gateways to send syslog messages to one or more syslog servers. A syslog server allows you to centrally log and analyze configuration events and system error messages, such as interface status, security alerts, and environmental conditions.

Options **destination *ip-address***—IP address of a syslog server. You can specify up to five servers (one per command).

facility local0–local7—Specifies the facility of the syslog messages. The default is **local0**.

severity (any | none | emergency | alert | critical | error | warning | notice | info)—Specifies the lowest severity level of the messages sent to the syslog servers. Select **Any** to include all severity levels. The default is **none**. Note that debug messages are not sent to the syslog servers.

- **emergency**—Critical error messages about system failures.
- **alert**—Critical error messages that need immediate action.
- **critical**—Critical error messages that need prompt action.
- **error**—Noncritical error messages, such as license expired.
- **warning**—Informational messages about minor events that are not errors.
- **notice**—Informational messages about normal but significant events.
- **info**—Informational messages, such as reload requests.

Mode Not applicable.

Related Topics show logging on page 107

show system on page 112

Sample Output

```
WX> config set system syslog destination 10.12.22.10
```


CHAPTER 4

JWOS request Commands

This chapter describes the JWOS **request** commands.

JWOS Request Commands Summary

The following table summarizes the JWOS request commands used to restart, revert, or upgrade the WXC Series gateway or Junos Pulse client software.

Command	Description
request support	Generates a diagnostic file for Technical Support.
request system clear monitor stats	Clears the statistics for the monitoring reports in the Web interface.
request system install	Loads the WXC software image or Junos Pulse client software image, or allows you to revert to a prior JWOS software version.
request system license	Adds or saves a license.
request system load-config	Loads a configuration from a file or restores factory settings.
request system reboot	Restarts the WXC Series gateway.
request system save-config	Saves the current configuration to the **startup.cfg** file or an external file.

request support

Syntax request support export *label path*

Release Information Introduced in JWOS Release 6.0.

Description Generates a diagnostic file on the WXC Series gateway containing the current configuration, system information, filter settings, and log files. You can e-mail this file to JTAC (Juniper Technical Assistance Center) to assist in the diagnosis of problems.

Options ***label*** —Label for the diagnostic file. If the label includes spaces, enclose it in double quotation marks.

path —Path where you want to save the file.

Mode Not applicable.

Related Topics None.

Sample Output

```
WX> request support export call_1 c:\support
```

request system clear monitor stats

Syntax request system clear monitor stats

Release Information Introduced in JWOS Release 6.0.

Description Clears the statistics for the monitoring reports in the Web interface of the WXC Series gateway.

Options None.

Mode Not applicable.

Related Topics config set acceleration monitor on page 39

Sample Output

```
WX> request system clear monitor stats
```

request system install

Syntax **request system install (*path* [allow-wxos-downgrade] [mark-current] | client *path*)**

Release Information Introduced in JWOS Release 6.0.

Description Loads a software image on the WXC Series gateway. You can load a WXC or Pulse client software image from an FTP or TFTP server, and you can revert to a previous version of the WXC software.

Options **install *path* | client *path***—Loads a WXC software image or a Junos Pulse client software image from a FTP or TFTP server. The location is specified in one of the following formats:

- **ftp:*//IP-address:username:password/path-and-filename***
- **tftp:*//IP-address/path-and-filename***

allow-wxos-downgrade—Allows you to downgrade the WXC software from JWOS 6.x to WXOS 5.6.5 or later.

mark-current—Marks the uploaded WXC software image to be used for the next system reboot.

Mode Not applicable.

Related Topics config set allow downgrade no-wxos on page 43

config set client download on page 48

request system reboot on page 81

show boot on page 94

Sample Output

```
WX> request system install tftp:\\10.10.25.30\software\jwos6010.zip mark-current
```


request system license

Syntax **request system license (add terminal *license-key* | save *license-file*)**

Release Information Introduced in JWOS Release 6.0.

Description Adds or saves a license key for the WXC Series gateway.

Options **add terminal *license-key***—Adds the license key. Do not enclose the license key in quotation marks.

save *license-file*—Saves the license key as a file on an FTP or TFTP server. Specify the location in one of the following formats:

- **ftp://*IP-address:username:password/path-and-filename***
- **tftp://*IP-address/path-and-filename***

Mode Not applicable.

Related Topics show system on page 112

Sample Output

```
WX> request system license save ftp://11.11.11.11:ksmith:passwd/mylicense
```

request system load-config

Syntax **request system load-config (*(filename* | factory-default [wipe-disk *n*] [preserve-ip])**

Release Information Introduced in JWOS Release 6.0.

Description Loads configuration information from a file or restores the factory default settings on the WXC Series gateway.

Options ***filename***—Loads a configuration file. The file name can be up to eight characters (omit the file extension). Specify the file location in one of the following formats:

- */path/filename*
- **ftp:***//IP-address:username:password/path-and-filename*
- **tftp:***//IP-address/path-and-filename*

factory-default—Reloads the factory settings and restores the temporary license. When the reload is complete, unplug the power cable from the back of the WXC gateway, plug the cable back in, and then specify the IP address, subnet mask, and default gateway. You can specify options to preserve the IP addresses and wipe the disk.

NOTE: Restoring the factory default configuration removes all data, configuration information and log files. It also disrupts the adjacencies associated with the WXC gateway. Before you restore the factory default configuration, be sure to back up the configuration file to another location.

- **preserve-ip**—Retains the IP address information when you reload the factory defaults.
- **wipe-disk *n***—Specifies the number of passes for performing a secure wipe of the hard disk. During each pass, a different value is written to each byte on the disks. The first pass uses random numbers, the second pass writes a repeated pattern, the third pass uses zeros, the fourth pass writes another repeated pattern, and the fifth pass repeats the sequence with random numbers, shifted by one byte. Each pass takes about 3 hours (to stop the process, reboot the WXC gateway). For maximum security, five passes are recommended.

Mode Not applicable.

Related Topics set client default-config on page 21

request system save-config on page 82

Sample Output

```
WX> request system load-config c:\mypath\startup
```


request system reboot

Syntax request system reboot

Release Information Introduced in JWOS Release 6.0.

Description Restarts the WXC Series gateway. Restarting the gateway loads the configuration information in the **startup.cfg** file, along with the current boot image.

Options None.

Mode Not applicable.

Related Topics config set boot on page 47

request system install on page 78

Sample Output

```
WX> request system reboot
```

request system save-config

Syntax request system save-config [*filename*]

Release Information Introduced in JWOS Release 6.0.

Description Saves the running configuration on the WXC Series gateway to the **startup.cfg** file in flash memory or to the specified file name.

Options *filename*—Saves the running configuration to an external location. Specify the external location in one of the following formats:

- */path/filename*
- **ftp:***//IP-address:username:password/path-and-filename*
- **tftp:***//IP-address/path-and-filename*

Mode Not applicable.

Related Topics request system load-config on page 80

Sample Output

```
WX> request system save-config c:\mypath\startup.cfg
```


CHAPTER 5

JWOS show Commands

This chapter describes the JWOS **show** commands.

JWOS Show Commands Summary

The following table summarizes the JWOS **show** commands that display information about the WXC gateway configuration and runtime status.

Command	Description
show acceleration cifs configuration	Displays the Common Internet File System (CIFS) acceleration configuration.
show acceleration lz	Indicates whether LZ compression is globally enabled, and displays compression statistics.
show acceleration monitor	Indicates whether application monitoring for reports is globally enabled.
show acceleration tcpproxy	Indicates whether TCP acceleration is globally enabled.
show access-log	Displays the access log.
show adjacency peer-address	Displays the status of one or all adjacent Junos Pulse clients.
show adjacency status	Indicates whether adjacencies can be formed with remote Junos Pulse clients.
show application-definition	Displays the current definitions for all applications.
show boot	Displays the WXC software image on each partition.
show client settings	Displays the Junos Pulse client settings.
show commands	Displays a list of all available CLI commands.

Command	Description
show configuration	Displays the global system configuration.
show disks	Displays the disk space usage on each partition.
show events	Displays the configuration of the system events.
show flow-filter	Displays the configured flow filters or the traffic statistics for each of the current flow filters.
show flow-stats	Displays the current and cumulative traffic flow statistics.
show interfaces	Displays the specified level of interface information for one or all interfaces.
show interfaces arp	Displays the static and dynamic Address Resolution Protocol (ARP) entries.
show interfaces bridge	Displays the status of the bridge interfaces.
show log	Displays the system log file.
show logging	Displays the log settings and the list of modules that can add entries to the system log.
show packet-capture	Displays the packet capture status and options.
show packet-interception	Displays the current packet interception settings.
show routing-options	Displays the static routes for one or all interfaces.
show snmp	Displays SNMP settings or statistics.
show system	Displays general system information.
show version	Displays WXC gateway model number and software version information.

show acceleration cifs configuration

Syntax **show acceleration cifs configuration**

Release Information Introduced in JWOS Release 6.0.

Description Displays the CIFS acceleration configuration on the WXC Series gateway.

Options None.

Mode Not applicable.

Related Topics config set acceleration cifs on page 37

Sample Output

```
WX> show acceleration cifs configuration
******* Cifs Configured parameters ******

CIFS Mode                       : enable
Disable Signing                 : enable
Apply Signing Mode              : disable
Cache                           : enable
```

show acceleration lz

Syntax **show acceleration lz (configuration | statistics)**

Release Information Introduced in JWOS Release 6.1.

Description Displays LZ compression statistics or indicates whether LZ compression is globally enabled on the WXC Series gateway. LZ compression can also be enabled or disabled by application.

Options **configuration**—Indicates whether LZ compression is globally enabled. Compression can also be enabled by application.

statistics—Displays LZ compression statistics.

Mode Not applicable.

Related Topics config set acceleration lz-service on page 38

config set application-definition on page 44

Sample Output

```
WX> show acceleration lz statistics
******* LZ Stats ******

Bytes To WAN            : 1531664
Bytes From WAN          : 6355148640
Bytes To LAN            : 362725411465
Bytes From LAN          : 1732409
Flow Reset by LZ Comp   : 0
Flow Reset by LZ Decomp : 0
Memory Fail in LZ Comp  : 0
Memory Fail in LZ Decomp: 0
LZ Compression Fail     : 0
LZ Decompression Fail   : 0
```


show acceleration monitor

Syntax **show acceleration monitor**

Release Information Introduced in JWOS Release 6.0.

Description Indicates whether global monitoring of applications is enabled for reports on the WXC Series gateway. Monitoring can also be enabled by application.

Options None.

Mode Not applicable.

Related Topics config set acceleration monitor on page 39

config set application-definition on page 44

Sample Output

```
WX> show acceleration monitor
Monitor Mode: enabled
```

show acceleration tcpproxy

Syntax **show acceleration tcpproxy**

Release Information Introduced in JWOS Release 6.0.

Description Indicates whether TCP acceleration is globally enabled on the WXC Series gateway. TCP acceleration can also be enabled or disabled by application.

Options None.

Mode Not applicable.

Related Topics config set acceleration tcpproxy-service on page 40

config set application-definition on page 44

Sample Output

```
WX> show acceleration tcpproxy
****** TCP Proxy Acceleration Settings ******
TCP Proxy: enable
```


show access-log

Syntax show access-log [nopause]

Release Information Introduced in JWOS Release 6.0.

Description Displays the access control log on the WXC Series gateway.

Options **nopause**—Lists the log information without pausing after each page of output.

Mode Not applicable.

Related Topics show logging on page 107

Sample Output

```
WX> show access-log nopause
2008-08-06 18:49:56 HTTPS: 172.23.5.8 admin Login http POST 0
2008-08-06 19:21:23 CONSOLE:  admin Logout
2008-08-06 19:22:42 CONSOLE:  admin Logout
2008-08-06 19:24:40 CONSOLE:  admin Login
```

show adjacency peer-address

Syntax **show adjacency peer-address (*ip-address* | all) [detail | state (connected | connecting | disconnected | rejected | waiting)] [type (WXC | client)]**

Release Information Introduced in JWOS Release 6.0.

Description Displays the status of one or all Junos Pulse clients adjacent to the WXC Series gateway. Inactive adjacent clients are disconnected after 15 minutes, and disconnected and rejected adjacencies are retained until the WXC gateway is rebooted. An adjacency must be formed before traffic can be accelerated.

Options ***ip-address* | all**—Displays adjacency information for a specific IP address or all current adjacencies.

detail—Displays adjacency details, such as the last activity time, the remote WXID (the Pulse client MAC address), and whether the local and remote adjacency was established through automatic discovery (AD) or user configuration (UC).

state (connected | connecting | disconnected | rejected | waiting)—Displays only clients in the specified state.

type (WXC | client)—Displays adjacency information for Junos Pulse clients or WXC gateways. JWOS 6.1 supports only Pulse client adjacencies.

Mode Not applicable.

Related Topics config set adjacency peer-address on page 42

Output Fields Table 7 on page 90 lists the output fields for the **show adjacency peer-address** command. Output fields are listed in the approximate order in which they appear.

Table 7: Output Fields for show adjacency peer-address

Field	Description
Type	Indicates whether the remote endpoint is a Junos Pulse client (WX-C), a WXC gateway, or an unknown device (NONE). JWOS 6.1 supports only Junos Pulse clients.
ConS	Indicates which services are configured on the remote client. For example, **TLC** indicates that TCP acceleration (T), LZ compression (L), and CIFS acceleration (C) are enabled.
SvcS	Indicates which services are actually applied to the traffic sent to the remote client.
Adj-State	Indicates the state of the adjacency (connected, connecting, disconnected, rejected, or waiting). If an adjacency is rejected, see the **Nack-Reason** field for an explanation.
Destination-Name	Indicates the host name of the remote client.

Table 7: Output Fields for show adjacency peer-address *(continued)*

Field	Description
Nack-Reason	Indicates why an adjacency with the remote client was rejected: ADJ DISABLED—Adjacencies with the remote client are disabled on the local WXC gateway. AUTODISC OFF—Automatic discovery is disabled on the local WXC gateway. CLIENT-CLIENT—Adjacencies are not allowed between Junos Pulse clients. CLIENT-LIMIT—Maximum number of adjacent Junos Pulse clients for the local WXC gateway was reached. CLIENT OFF—Pulse client is disabled. COMMUNITY ST—Community name of the remote client and the local WXC gateway do not match. HW VERSION—Remote hardware version does not support adjacencies with the local WXC gateway. SW VERSION—Remote software version does not support adjacencies with the local WXC gateway. PROXY MODE—TCP acceleration on the remote client is disabled. SYSTEM LIMIT—Maximum number of adjacencies has been reached on the local WXC gateway.
Hello Frequency	Number of seconds between hello messages sent to verify whether an adjacent client is still active.

Sample Output

```
WX> show adjacency peer-address all
********** Adjacency Show **********

     IP-Address Type ConS SvcS   Adj-State        Destination-Name  Nack-Reason
   172.23.16.22 WX-C TCL  TCL    Connected           ITLOANER-T418
   172.23.16.13 WX-C TCL  TCL    Connected          MRIJHWANI-T421
   172.23.16.23 WX-C TCL  TCL    Connected            MLANGDON-T61
    172.23.16.2 WX-C TCL  TCL    Connected               JTOSH-T42
   172.23.16.11 WX-C TCL  TCL    Connected             RDELANCY-XP
    172.23.16.9 WX-C TCL  TCL    Rejected                RSMITH-XP  CLIENT OFF

WX> show adjacency peer-address 172.23.16.22 detail
********** Adjacency Details **********

Remote IP Address   : 172.23.16.22
Remote WXID         : 00:1F:E2:18:CD:9C
Hello Frequency     : 15
Local Adj Type      : AD
Remote Adj Type     : AD
Last Active Time    : Wed Apr  1 15:58:14 2009

Services Conf       : TCL
Services Status     : TCL
```

show adjacency status

Syntax **show adjacency status**

Release Information Introduced in JWOS Release 6.1.

Description Indicates whether the ability to form adjacencies with remote Junos Pulse clients is enabled on the WXC Series gateway (enabled by default).

Options None.

Mode Not applicable.

Related Topics config set adjacency peer-address on page 42

config set client peering-support on page 49

Sample Output

```
WX> show adjacency status

********** Adjacency Global Status **********

Adjacency Status: Enabled
```


show application-definition

Syntax **show application-definition [*name*]**

Release Information Introduced in JWOS Release 6.0.

Description Displays the definitions for one or all applications on the WXC Series gateway.

Options ***name***—Displays the definition for the specified application. The application names are case sensitive.

Mode Not applicable.

Related Topics config delete application-definition on page 31

config set application-definition on page 44

Sample Output

```
WX> show application-definition FTP
=======================================
Application: FTP
 Priority: 1 Type: ftp Monitoring:enabled
Services:
  NSC:disabled  CIFS:disabled  LZ:disabled  TCP:enabled
Rule Id: 1
  Source Port: 20-21
Rule Id: 2
  Destination Port: 20-21
```

show boot

Syntax **show boot**

Release Information Introduced in JWOS Release 6.0.

Description Displays the WXC software images on each partition on the WXC Series gateway, and indicates which image is running and which is selected for use by the next reboot.

Options None.

Mode Not applicable.

Related Topics config set boot on page 47

request system install on page 78

request system reboot on page 81

Sample Output

```
WX> show boot
Image          Partition      Running        Selected
JWOS 6.1I1.9413     B            X              X
JWOS 6.1I1.9394     A
```

show client settings

Syntax **show client settings**

Release Information Introduced in JWOS Release 6.0.

Description Displays the settings for the Junos Pulse client on the WXC Series gateway, including the current client configuration.

Options None.

Mode Not applicable.

Related Topics set client default-config on page 21

config set client download on page 48

config set client peering-support on page 49

config set client username on page 50

Sample Output

```
WX> show client settings
************Client Settings***************
Client Download Support: on
Client Peering Support: on
Client Authentication: Required
Client Download Username: wxclient
Client Download Password: ********
Client Version: 6.0
Client Default Configuration Source: Startup Configuration of WX
                         May 23 2009: 10 Hours
=======================================
     Current Client Configurations:
=======================================
config set system contact "juniper-support"
config set system community "jnpr"
.
.
.
```

show commands

Syntax **show commands**

Release Information Introduced in JWOS Release 6.0.

Description Displays a list of all of the available commands on the WXC Series gateway.

Options None.

Mode Not applicable.

Related Topics None.

Sample Output

```
WX> show commands
Commands:
        clear
            flow-filter
                debug-buffer
        cls
        commit
        config
            delete
                acceleration
                    cifs
                        apply-signing
                            username
                                %username
                application-definition
                    %application-name
                        rule-id
                            %rule-id
                flow-filter
[=More (2%)=]
```

show configuration

Syntax **show configuration**

Release Information Introduced in JWOS Release 6.0.

Description Displays the system configuration on the WXC Series gateway.

Options None.

Mode Not applicable.

Related Topics None.

Sample Output

```
WX> show configuration
***** General information *****
***** System information *****
System name: WX
Location: on
Community : default
Contact: juniper-support
Management IP:

Software version: JWOS 6.1
Model No.: 1.0
Platform: WXC-590
Serial number: 0590000016

JWOS started at: 05:11:50 12/14/09
System up for: 4 days 13:13:45 hr:min:sec

Front Panel Lock Status: 0
System Bypass Capability: on

Info for flash file system:
File system size:  MB
Free space:  453 MB
[=More (9%)=]
```

show disks

Syntax **show disks**

Release Information Introduced in JWOS Release 6.0.

Description Displays the disk space usage on each partition on the WXC Series gateway, including the percentage of space used and the number of used and available 1K blocks of space on each partition.

Options None.

Mode Not applicable.

Related Topics None.

Sample Output

```
WX> show disks
Filesystem           1K-blocks      Used Available Use% Mounted on
/dev/sda1            275070500   1790976 259306676   1% /opt/jwos/nsc/read
/dev/sda2            183380272        52 174064988   0% /opt/jwos/nsc/write
/dev/sdb1            275070500       188 261097464   0% /opt/jwos/objstore
/dev/sdb2             91690136      3116  87029404   0% /opt/jwos/monitor
/dev/sdb3             91688180     80760  86949904   0% /opt/jwos/misc
```

show events

Syntax **show events configuration system**

Release Information Introduced in JWOS Release 6.0.

Description Displays the configuration of system events on the WXC Series gateway.

Options None.

Mode Not applicable.

Related Topics config set events on page 52

Sample Output

```
WX> show events configuration system
Mode: on
=====  System Events  =====
ID         Name                                Enabled    Severity
---------- ----------------------------------- ---------- ----------
101        power-supply-failure                on          error
102        power-supply-ok                     on          notice
201        license-will-expire                 on          info
202        thruput-limit-exceeded              on          error
203        license-expired                     on          error
204        client-limit-exceeded               on          info
301        fail-safe-mode-active               on          critical
302        cold-start                          on          notice
401        if-speed-mode-mismatch              on          error
402        if-speed-mode-ok                    on          notice
403        if-duplex-mismatch                  on          error
501        lan-link-up                         on          notice
502        lan-link-down                       on          info
503        wan-link-up                         on          notice
504        wan-link-down                       on          info
601        login-failure                       on          error
602        log-in-success                      on          notice
701        startup-cfg-saved                   on          notice
702        startup-cfg-failure                 on          error
801        disk-failure                        on          error
```

show flow-filter

Syntax **show flow-filter (configuration | debug-buffer)**

Release Information Introduced in JWOS Release 6.0.

Description Displays the configured flow filters or the traffic statistics stored in the debug buffer for each of the current flow filters on the WXC Series gateway.

Options **configuration**—Displays a list of the configured flow filters.

debug-buffer—Displays the traffic statistics stored in the debug buffer for all flow filters.

Mode Not applicable.

Related Topics clear flow-filter debug-buffer on page 9

config delete flow-filter on page 32

config set flow-filter on page 53

Sample Output

```
WX> show flow-filter configuration
source-address      destination-address source-port         destination-port
207.17.137.246      any                 80                  any
```

```
WX> show flow-filter debug-filter
Processing flow trace buffer might take time, depending upon the number of flows.
Are you sure you want to proceed  [yes,no]? (no)y

---- Flow Filter Output ----

================================================
Real Time Statistics for FlowNo:1
Source IP: 10.87.43.6 Source Port: 1258
Destination IP: 10.87.44.200  Destination Port: 443
Protocol: TCP

==== General Info ====

Packets Sent Proxy: 0
Packets Received Proxy: 0
Bytes Sent WAN Proxy: 0
Bytes Received WAN Proxy: 0
Packets Difference Sent LAN Proxy: 0
Packets Difference Sent WAN Proxy: 0
Packets Difference Received WAN Proxy: 0
Total Packets Passthrough: 0
Total Bytes Passthrough: 0
```


show flow-stats

Syntax show flow-stats

Release Information Introduced in JWOS Release 6.0.

Description Displays the current and cumulative number of proxied (accelerated) and passthrough (unprocessed) traffic flows on the WXC Series gateway, as well as the number of flows that have compression or CIFS acceleration applied. The cumulative statistics are the totals since the last time the WXC gateway was restarted.

Options None.

Mode Not applicable.

Related Topics show acceleration cifs configuration on page 85

Sample Output

```
WX> show flow-stats

                    Current                          Cumulative
------------------- -------------------------------- --------------------------
Number of flows:    58                               30390
Proxied:            48                               20804
CIFS:               2                                630
LZ:                 46                               20033
```

show interfaces

Syntax **show interfaces [*interface-name*] (brief | extensive | terse)**

Release Information Introduced in JWOS Release 6.0.

Description Displays the specified level of interface information for one or all interfaces on the WXC Series gateway.

Options ***interface-name***—Name of the interface you want to view, such as br-0/0. To view information for all interfaces, omit the interface name.

brief—Displays basic interface properties, including admin status, link status, IP address, speed, duplex, flags, and MTU.

extensive—Displays the basic interface properties, as well as the hardware address, traffic statistics, and last flap time (last reset time).

terse—Displays the interface name, type, admin, link status, and IP address.

Mode Not applicable.

Related Topics config set interface on page 54

Sample Output

```
WX> show interfaces terse
******* Interface Status ******
Name            Type          Admin     Link      Proto     IP Address
lo0             loopback      up        up        inet      127.0.0.2/8
ge-0/0/1        remote        up        up        inet
ge-0/0/0        local         up        up        inet
br-0/0          bridge        up        up        inet      10.204.67.66/29
fxp0            management    up        down      inet      0.0.0.0/0
```

```
WX> show interfaces brief
******* Interface Status ******
Physical interface: lo0 Admin: up Physical Link is up
Type: loopback, MTU: 16436, Speed: N/A, Duplex: N/A
Auto-negotiation: N/A
Propagate Failure: N/A, Down Time: N/A
Device flags : Up Running Multicast
inet 127.0.0.2
Subnet Mask: 255.0.0.0

Physical interface: ge-0/0/1 Admin: up Physical Link is up
Type: remote, MTU: 1500, Speed: 1000, Duplex: full
Auto-negotiation: enable
Propagate Failure: off, Down Time: 15
Device flags : Up Broadcast Running Promisc Link0
inet N/A
Subnet Mask: N/A

Physical interface: ge-0/0/0 Admin: up Physical Link is up
Type: local, MTU: 1500, Speed: 1000, Duplex: full
Auto-negotiation: enable
Propagate Failure: off, Down Time: 15
```



```
Device flags : Up Broadcast Running Promisc Link0
inet N/A
Subnet Mask: N/A

Physical interface: br-0/0 Admin: up Physical Link is up
Type: bridge, MTU: 1500, Speed: N/A, Duplex: N/A
Auto-negotiation: N/A
Propagate Failure: N/A, Down Time: N/A
Device flags : Up Broadcast Running Multicast
inet 10.204.67.66
Subnet Mask: 255.255.255.248

Physical interface: fxp0 Admin: up Physical Link is down
Type: management, MTU: 1500, Speed: auto, Duplex: full
Auto-negotiation: enable
Propagate Failure: N/A, Down Time: N/A
Device flags : Up Broadcast Link0
inet 0.0.0.0
Subnet Mask: 0.0.0.0
```

show interfaces arp

Syntax **show interfaces arp**

Release Information Introduced in JWOS Release 6.0.

Description Displays all static and dynamic entries in the Address Resolution Protocol (ARP) table on the WXC Series gateway.

Options None.

Mode Not applicable.

Related Topics config delete interface arp on page 33

config set interface arp on page 56

Sample Output

```
WX> show interfaces arp
Number of ARP entries listed on this WX device:4
IP              MAC Address         Interface Bridge    Port      Type
10.209.161.1    00:00:5e:00:01:1b   ge-0/0/0  br-0/0    local     dynamic
10.209.161.3    00:24:dc:9a:47:c0   ge-0/0/0  br-0/0    local     dynamic
10.209.161.10   00:30:48:5e:c5:26   ge-0/0/1  br-0/0    remote    dynamic
10.209.161.11   00:30:48:d0:4e:2a             br-0/0    local     static
```


show interfaces bridge

Syntax **show interfaces bridge (*bridge-name* | all) status**

Release Information Introduced in JWOS Release 6.0.

Description Displays the network settings and the Local and Remote interface associated with one or all bridge interfaces on the WXC Series gateway.

Options ***bridge-name***—Name of a bridge interface, such as br-0/0.

Mode Not applicable.

Related Topics config set interface on page 54

Sample Output

```
WX> show interfaces bridge br-0/0 status
IP Address: 207.17.137.246
Subnet Mask: 255.255.255.0
Default Gateway: 207.17.137.1

--------Member Physical Interfaces--------
Name        Type      Speed     Duplex    Admin   Oper    MAC
ge-0/0/0    local     1000      full      up      up      00:30:48:d0:1b:8f
ge-0/0/1    remote    1000      full      up      up      00:30:48:d0:1b:8e
```

show log

Syntax **show log [nopause] [session]**
show log [after *time*] [before *time*] [session]
show log module *name* [severity *level*] [after *time*] [before *time*] [session]
show log severity *level* [after *time*] [before *time*] [session]

Release Information Introduced in JWOS Release 6.0.

Description Displays the system log file on the WXC Series gateway.

Options **after *time***—Displays entries after the specified date and time. The format is "*yyyy-mm-dd hh:mm:ss*". You can omit the quotation marks if only the date is specified.

before *time*—Displays entries prior to the specified date and time.

module *name*—Displays entries for the specified module.

nopause—Displays entries without pausing after each page of output.

session—Displays entries sorted by session.

severity *level*—Displays entries for the specified severity level.

- **f | F**—Fatal error messages about software or hardware malfunctions.
- **e | E**—Error messages, such as License expired.
- **w | W**—Warning messages.
- **i | I**—Informational messages, such as reload requests and low-process stack messages.
- **d | D**—Debug messages.
- **v | V**—Verbose mode, which provides additional details about the above messages.

Mode Not applicable.

Related Topics show logging on page 107

Sample Output

```
WX> show log module ctrlmgr
CtrlMgrd: 2009-04-13 22:52:42,002 [0xb6ee76e0] INFO  ctrlmgr - JWOS is starting
```


show logging

Syntax **show logging [modules]**

Release Information Introduced in JWOS Release 6.0.

Description Displays the log settings and the list of modules that can add entries to the system log on the WXC Series gateway.

Options **modules**—Displays the module names.

Mode Not applicable.

Related Topics set logging on page 23

Sample Output

```
WX> show logging
Default severity: INFO
Console output: disable
aap = DEBUG,
http = DEBUG,
```

show packet-capture

Syntax **show packet-capture**

Release Information Introduced in JWOS Release 6.0.

Description Displays the current status and options for the packet capture utility on the WXC Series gateway.

Options None.

Mode Not applicable.

Related Topics packet-capture on page 16

Sample Output

```
WX> show packet-capture
Packet Capture Status: Ready
Packet Capture Options: NULL
```


show packet-interception

Syntax **show packet-interception**

Release Information Introduced in JWOS Release 6.0.

Description Displays the current packet interception settings on the WXC Series gateway.

Options None.

Mode Not applicable.

Related Topics config set packet-interception on page 58

Sample Output

```
WX> show packet-interception
******* Packet Interception Details ******
Packet Interception Mode       : off
```

show routing-options

Syntax **show routing-options (interface *name* static route | static route [*destination_IP*])**

Release Information Introduced in JWOS Release 6.0.

Description Displays the static routes for one or all interfaces on the WXC Series gateway.

Options **interface *name***—Displays static routes for the specified bridge interface, such as br-0/0.

static route [*destination_IP*]—Displays all static routes or only the routes for the specified destination network.

Mode Not applicable.

Related Topics config set routing-options on page 60

Sample Output

```
WX> show routing-options static route
Number of Routing entries listed on this WX device:2
Destination         Subnet Mask         Next Hop            Type      Interface
0.0.0.0             0.0.0.0             207.17.137.1        static    br-0/0
172.23.16.0         255.255.255.0       207.17.137.250      static    br-0/0
```

show snmp

Syntax **show snmp [statistics]**

Release Information Introduced in JWOS Release 6.0.

Description Displays the settings or statistics for SNMP on the WXC Series gateway.

Options **statistics**—Displays SNMP statistics, such as the number of SNMP packets, traps, get and set requests, and dropped packets.

Mode Not applicable.

Related Topics config delete snmp on page 35

config set snmp on page 61

Sample Output

```
WX> show snmp
SNMP status: on
Read community string: ******
Write community string: ******
Trap status: on
Trap destination     Trap community string
Authentication-failure trap status: on
```

show system

Syntax **show system [clock | license [key | usage] | login | ntp | syslog]**

Release Information Introduced in JWOS Release 6.0.

Description Displays the system settings on the WXC Series gateway, such as the name, community, software version, time settings, file system, system start time, and license information.

Options **clock**—Displays system time, time zone, and daylight saving time settings.

license [key | usage]—Displays system licensing information, or only the license key or features.

login—Displays the user account names (no passwords).

ntp—Displays the NTP settings.

syslog—Displays the syslog settings.

Mode Not applicable.

Related Topics

config set system clock on page 63

request system license on page 79

config set system login on page 69

config set system name on page 70

config set system ntp on page 72

config set system syslog on page 74

Sample Output

```
WX> show system
***** System information *****
System name: WX-10
Location:
Community : default
Contact:
Management IP: 10.204.67.66

Software version: JWOS 6.1
Model No.: 1.0
Platform: WXC-2600
Serial number: 2600000112

JWOS started at: 05:11:50 12/14/09
System up for: 0 days 11:50:18 hr:min:sec

Front Panel Lock Status: off
System Bypass Capability: on

Info for flash file system:
```



```
File system size: 461 MB
Free space:  281 MB
File system block size: 1024 Bytes

[=More (57%)=]
```

show version

Syntax **show version**

Release Information Introduced in JWOS Release 6.0.

Description Displays the model number and JWOS software version on the WXC Series gateway.

Options None.

Mode Not applicable.

Related Topics None.

Sample Output

```
show version
Software version: JWOS 6.1
Model No: WXC-590 - 1.0
```

PART 2

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