

OsmoPCAP VTY Reference

osmo-pcap-server

Copyright © 2024

This work is copyright by sysmocom - s.f.m.c. GmbH. All rights reserved.

COLLABORATORS			
	TITLE : OsmoPCAP VTY Reference		
ACTION	NAME	DATE	SIGNATURE
WRITTEN BY		May 18, 2024	

REVISION HISTORY			
NUMBER	DATE	DESCRIPTION	NAME
DRAFT 0.4.2-2-g9f47	2023-Dec-01	Automatically Generated VTY Reference	s.f.m.c.

Contents

1	VTY reference	1
1.1	Common Commands	1
1.1.1	end	2
1.1.2	exit	2
1.1.3	help	2
1.1.4	list [with-flags]	2
1.1.5	show running-config	3
1.1.6	show vty-attributes	3
1.1.7	show vty-attributes (application library global)	3
1.1.8	write	4
1.1.9	write file [PATH]	4
1.1.10	write memory	4
1.1.11	write terminal	5
1.2	view	5
1.2.1	enable [expert-mode]	5
1.2.2	logging color (0 1)	5
1.2.3	logging disable	6
1.2.4	logging enable	6
1.2.5	logging filter all (0 1)	6
1.2.6	logging level (pcap client server vty tls global llapd linp lmux lmill mibl smsl...	7
1.2.7	logging level force-all (debug info notice error fatal)	9
1.2.8	logging level set-all (debug info notice error fatal)	10
1.2.9	logging print category (0 1)	10
1.2.10	logging print category-hex (0 1)	11
1.2.11	logging print extended-timestamp (0 1)	11
1.2.12	logging print file (0 1 basename) [last]	12
1.2.13	logging print level (0 1)	12
1.2.14	logging print thread-id (0 1)	13
1.2.15	logging set-log-mask MASK	13
1.2.16	logging timestamp (0 1)	14

1.2.17	logp (pcapclientserver vty ts l global lapd linp mux lmi lmi bl sms lctrl lgt...	14
1.2.18	no logging level force-all	16
1.2.19	show alarms	17
1.2.20	show asciidoc counters	17
1.2.21	show history	17
1.2.22	show logging vty	18
1.2.23	show online-help	18
1.2.24	show pid	18
1.2.25	show rate-counters [skip-zero]	19
1.2.26	show stats [skip-zero]	19
1.2.27	show stats level (global peer subscriber) [skip-zero]	19
1.2.28	show talloc-context (application global all) (full brief DEPTH)	20
1.2.29	show talloc-context (application global all) (full brief DEPTH) filter REGEXP	21
1.2.30	show talloc-context (application global all) (full brief DEPTH) tree ADDRESS	21
1.2.31	show uptime	22
1.2.32	show version	22
1.2.33	terminal length <0-512>	23
1.2.34	terminal no length	23
1.2.35	who	23
1.3	enable	24
1.3.1	configure [terminal]	24
1.3.2	copy running-config startup-config	24
1.3.3	disable	24
1.3.4	logging color (0 1)	25
1.3.5	logging disable	25
1.3.6	logging enable	25
1.3.7	logging filter all (0 1)	26
1.3.8	logging level (pcapclientserver vty ts l global lapd linp mux lmi lmi bl sms l...	26
1.3.9	logging level force-all (debug info notice error fatal)	29
1.3.10	logging level set-all (debug info notice error fatal)	29
1.3.11	logging print category (0 1)	30
1.3.12	logging print category-hex (0 1)	30
1.3.13	logging print extended-timestamp (0 1)	31
1.3.14	logging print file (0 1 basename) [last]	31
1.3.15	logging print level (0 1)	32
1.3.16	logging print thread-id (0 1)	32
1.3.17	logging set-log-mask MASK	33
1.3.18	logging timestamp (0 1)	33
1.3.19	logp (pcapclientserver vty ts l global lapd linp mux lmi lmi bl sms lctrl lgt...	34

1.3.20	no logging level force-all	36
1.3.21	show alarms	36
1.3.22	show asciidoc counters	37
1.3.23	show history	37
1.3.24	show logging vty	37
1.3.25	show online-help	38
1.3.26	show rate-counters [skip-zero]	38
1.3.27	show startup-config	38
1.3.28	show stats [skip-zero]	39
1.3.29	show stats level (global peer subscriber) [skip-zero]	39
1.3.30	show talloc-context (application global all) (full brief DEPTH)	40
1.3.31	show talloc-context (application global all) (full brief DEPTH) filter REGEXP	40
1.3.32	show talloc-context (application global all) (full brief DEPTH) tree ADDRESS	41
1.3.33	show version	42
1.3.34	shutdown	42
1.3.35	stats report	42
1.3.36	stats reset	42
1.3.37	terminal length <0-512>	43
1.3.38	terminal monitor	43
1.3.39	terminal no length	43
1.3.40	terminal no monitor	44
1.3.41	who	44
1.4	config	44
1.4.1	banner motd default	44
1.4.2	banner motd file [FILE]	45
1.4.3	enable password (8l) WORD	45
1.4.4	enable password LINE	46
1.4.5	hostname WORD	46
1.4.6	line vty	46
1.4.7	log alarms <2-32700>	47
1.4.8	log file FILENAME [blocking-io]	47
1.4.9	log gsmtp [HOSTNAME]	47
1.4.10	log stderr [blocking-io]	48
1.4.11	log syslog (authpriv cron daemon ftp lpr mail news user uucp)	48
1.4.12	log syslog local <0-7>	49
1.4.13	log systemd-journal [raw]	49
1.4.14	no banner motd	49
1.4.15	no enable password	50
1.4.16	no hostname [HOSTNAME]	50

1.4.17	no log alarms	50
1.4.18	no log file FILENAME	51
1.4.19	no log gsmmap [HOSTNAME]	51
1.4.20	no log stderr	51
1.4.21	no log syslog	52
1.4.22	no log systemd-journal	52
1.4.23	no service advanced-vty	52
1.4.24	no service terminal-length [<0-512>]	53
1.4.25	no stats reporter log [NAME]	53
1.4.26	no stats reporter statsd [NAME]	54
1.4.27	password (8l) WORD	54
1.4.28	password LINE	54
1.4.29	server	55
1.4.30	service advanced-vty	55
1.4.31	service terminal-length <0-512>	55
1.4.32	show history	56
1.4.33	stats interval <0-65535>	56
1.4.34	stats reporter log [NAME]	56
1.4.35	stats reporter statsd [NAME]	57
1.4.36	stats-tcp batch-size <1-65535>	57
1.4.37	stats-tcp interval <0-65535>	57
1.5	config-log	58
1.5.1	logging color (0l1)	58
1.5.2	logging filter all (0l1)	58
1.5.3	logging level (pcap client server vt t s l global l lapd linp mux l m l mib l sms l...	59
1.5.4	logging level force-all (debug info notice error fatal)	61
1.5.5	logging level set-all (debug info notice error fatal)	62
1.5.6	logging print category (0l1)	62
1.5.7	logging print category-hex (0l1)	63
1.5.8	logging print extended-timestamp (0l1)	63
1.5.9	logging print file (0l1 basename) [last]	64
1.5.10	logging print level (0l1)	64
1.5.11	logging print thread-id (0l1)	65
1.5.12	logging timestamp (0l1)	65
1.5.13	no logging level force-all	66
1.6	config-stats	66
1.6.1	disable	66
1.6.2	enable	66
1.6.3	flush-period <0-65535>	67

1.6.4	level (globalpeerlssubscriber)	67
1.6.5	local-ip ADDR	67
1.6.6	mtu <100-65535>	68
1.6.7	no local-ip	68
1.6.8	no mtu	68
1.6.9	no prefix	69
1.6.10	prefix PREFIX	69
1.6.11	remote-ip ADDR	69
1.6.12	remote-port <1-65535>	70
1.7	config-line	70
1.7.1	bind A.B.C.D [<0-65535>]	70
1.7.2	login	70
1.7.3	no login	71
1.8	server	71
1.8.1	base-path PATH	71
1.8.2	client NAME A.B.C.D [no-store] [tls]	71
1.8.3	client NAME A.B.C.D store [tls]	72
1.8.4	disable tls	72
1.8.5	enable tls	72
1.8.6	file-permission-mask MODE	73
1.8.7	max-file-size NR	73
1.8.8	max-snaplen <1-262144>	73
1.8.9	no client NAME	74
1.8.10	no tls allow-auth anonymous	74
1.8.11	no tls allow-auth x509	74
1.8.12	no tls capath	75
1.8.13	no tls crlfile	75
1.8.14	no tls priority	75
1.8.15	no tls server-cert	76
1.8.16	no tls server-key	76
1.8.17	no zeromq-publisher	76
1.8.18	server ip A.B.C.D	77
1.8.19	server port <1-65535>	77
1.8.20	tls allow-auth anonymous	77
1.8.21	tls allow-auth x509	78
1.8.22	tls capath .PATH	78
1.8.23	tls crlfile .PATH	78
1.8.24	tls dh generate	79
1.8.25	tls dh pkcs .FILE	79

1.8.26	tls log-level <0-255>	79
1.8.27	tls priority STR	80
1.8.28	tls server-cert .PATH	80
1.8.29	tls server-key .PATH	80
1.8.30	zeromq-publisher (A.B.C.D *) <1-65535>	81

List of Tables

1.1	VTY Parameter Patterns	1
1.2	VTY port numbers	1

Chapter 1

VTY reference

The Virtual Tele Type (VTY) has the concept of nodes and commands. This chapter lists all nodes and the commands that are available within the node. Each command can consist out of several words followed by a variable number of parameters. There are common patterns for the parameters, these include IPv4 addresses, number ranges, a word, a line of text and choice. The following will explain the commonly used patterns.

Pattern	Example	Explanation
A.B.C.D	127.0.0.1	A IPv4 address
TEXT	example01	A single string without any spaces, tabs
.TEXT	Some information	A line of text
(OptionA OptionB OptionC)	OptionA	A choice between a list of available options
<0-10>	5	A number from a range

Table 1.1: VTY Parameter Patterns

The application is configured through the VTY. For configuring a system one needs to enter the **enable** node and then enter the **configure terminal** command. Then the configuration can be made according to the available commands. After the system has been configured one can use the **write** command to write the new configuration to the configuration file. The new file will be used after the application has been restarted.

The following table lists the TCP port numbers of the VTY for the various Osmocom GSM related programs as used on sysmocom products:

Port Number	Software
4240	osmo-pcu
4241	osmo-bts
4242	osmo-nitb, osmo-bsc
4243	osmo-bsc_mgcp
4244	osmo-bsc_nat
4245	osmo-sgsn
4246	osmo-gbproxy

Table 1.2: VTY port numbers

1.1 Common Commands

These commands are available on all VTY nodes. They are listed here only once, to unclutter the VTY reference.

1.1.1 end

Command

```
end
```

Parameters

end

End current mode and change to enable mode.

1.1.2 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

1.1.3 help

Command

```
help
```

Parameters

help

Description of the interactive help system

1.1.4 list [with-flags]

Command

```
list [with-flags]
```

Parameters

list

Print command list

[with-flags]

Also print the VTY attribute flags

1.1.5 show running-config

Command

```
show running-config
```

Parameters

show

Show running system information

running-config

running configuration

1.1.6 show vty-attributes

Command

```
show vty-attributes
```

Parameters

show

Show running system information

vty-attributes

List of VTY attributes

1.1.7 show vty-attributes (application|library|global)

Command

```
show vty-attributes (application|library|global)
```

Parameters

show

Show running system information

vty-attributes

List of VTY attributes

application

Application specific attributes only

library

Library specific attributes only

global

Global attributes only

1.1.8 write

Command

```
write
```

Parameters

write

Write running configuration to memory, network, or terminal

1.1.9 write file [PATH]

Command

```
write file [PATH]
```

Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

[PATH]

Set file path to store the config, or replace if already exists

1.1.10 write memory

Command

```
write memory
```

Parameters

write

Write running configuration to memory, network, or terminal

memory

Write configuration to the file (same as write file)

1.1.11 write terminal

Command

```
write terminal
```

Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

1.2 view

The view node is the default node when connecting to the VTY interface. This node does not require any additional permission and allows to introspect the application.

1.2.1 enable [expert-mode]

Command

```
enable [expert-mode]
```

Parameters

enable

Turn on privileged mode command

[expert-mode]

Enable the expert mode (show hidden commands)

1.2.2 logging color (0|1)

Command

```
logging color (0|1)
```

Parameters

logging

Configure logging

color

Configure color-printing for log messages

0

Don't use color for printing messages

1

Use color for printing messages

1.2.3 logging disable

Command

```
logging disable
```

Parameters

logging

Configure logging

disable

Disables logging to this vty

1.2.4 logging enable

This command is required to make logging commands available on the telnet VTY.

Command

```
logging enable
```

Parameters

logging

Configure logging

enable

Enables logging to this vty

1.2.5 logging filter all (0|1)

Disable/enable general log output on a given target. Typically, 'logging filter all 1' allows to see the usual log output on a given target. Setting to '0' can be useful when logging to the telnet VTY console: mute all log output to allow typing VTY commands on the telnet prompt without interference from log output; 'logging filter all 1' then re-enables logging in the same log output configuration as before. Some applications provide more specific filters, e.g. to log a given IMSI only. To employ such filters, set 'logging filter all 0' to disable general logging, and then enable a more specific filter instead.

Command

```
logging filter all (0|1)
```

Parameters

logging

Configure logging

filter

Filter log messages

all

Do you want to log all messages?

0

Only print messages matched by other filters

1

Bypass filter and print all messages

1.2.6 logging level (pcap|client|server|vty|tls|lglobal|llapd|linp|lmux|lmi|lmib|lsms|...

Command

```
logging level (pcap|client|server|vty|tls|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl| ↔
lgtp|lstats|lgsup|loap|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp|lnsdata ↔
|lnssignal|liuup|lpfcp|lcsn1|lio) (debug|info|notice|error|fatal)
```

Parameters

logging

Configure logging

level

Set the log level for a specified category

pcap

PCAP related functionality

client

Client related functionality

server

Server related functionality

vty

VTY code

tls

TLS code

lglobal

Library-internal global log family

llapd

LAPD in libosmogsm

linp

A-bis Input Subsystem

lmux

A-bis B-Subchannel TRAU Frame Multiplex

lmi

A-bis Input Driver for Signalling

lmib
A-bis Input Driver for B-Channels (voice)

lsms
Layer3 Short Message Service (SMS)

lctrl
Control Interface

lgtp
GPRS GTP library

lstats
Statistics messages and logging

lgsup
Generic Subscriber Update Protocol

loap
Osmocom Authentication Protocol

lss7
libosmo-sigtran Signalling System 7

lsccp
libosmo-sigtran SCCP Implementation

lsua
libosmo-sigtran SCCP User Adaptation

lm3ua
libosmo-sigtran MTP3 User Adaptation

lmgcp
libosmo-mgcp Media Gateway Control Protocol

ljibuf
libosmo-netif Jitter Buffer

lrspro
Remote SIM protocol

lns
GPRS NS layer

lbssgp
GPRS BSSGP layer

lnsdata
GPRS NS layer data PDU

lnssignal
GPRS NS layer signal PDU

liuup
Iu UP layer

lpfcp	libosmo-pfcp Packet Forwarding Control Protocol
lcsn1	libosmo-csn1 Concrete Syntax Notation 1 codec
lio	libosmocore IO Subsystem
debug	Log debug messages and higher levels
info	Log informational messages and higher levels
notice	Log noticeable messages and higher levels
error	Log error messages and higher levels
fatal	Log only fatal messages

1.2.7 logging level force-all (debug|info|notice|error|fatal)

Command

```
logging level force-all (debug|info|notice|error|fatal)
```

Parameters

logging

Configure logging

level

Set the log level for a specified category

force-all

Globally force all logging categories to a specific level. This is released by the 'no logging level force-all' command. Note: any 'logging level <category> <level>' commands will have no visible effect after this, until the forced level is released.

debug

Log debug messages and higher levels

info

Log informational messages and higher levels

notice

Log noticeable messages and higher levels

error

Log error messages and higher levels

fatal

Log only fatal messages

1.2.8 logging level set-all (debug|info|notice|error|fatal)

Command

```
logging level set-all (debug|info|notice|error|fatal)
```

Parameters

logging

Configure logging

level

Set the log level for a specified category

set-all

Once-off set all categories to the given log level. There is no single command to take back these changes -- each category is set to the given level, period.

debug

Log debug messages and higher levels

info

Log informational messages and higher levels

notice

Log noticeable messages and higher levels

error

Log error messages and higher levels

fatal

Log only fatal messages

1.2.9 logging print category (0|1)

Command

```
logging print category (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

category

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem name

1.2.10 logging print category-hex (0|1)

Command

```
logging print category-hex (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

category-hex

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem nr in hex ('<000b>')

1.2.11 logging print extended-timestamp (0|1)

Command

```
logging print extended-timestamp (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

extended-timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp with YYYYMMDDhhmmssnnn

1.2.12 logging print file (0|1|basename) [last]

Command

```
logging print file (0|1|basename) [last]
```

Parameters

logging

Configure logging

print

Log output settings

file

Configure log message

0

Don't prefix each log message

1

Prefix each log message with the source file and line

basename

Prefix each log message with the source file's basename (strip leading paths) and line

[last]

Log source file info at the end of a log line. If omitted, log source file info just before the log text.

1.2.13 logging print level (0|1)

Command

```
logging print level (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

level

Configure log message

0

Don't prefix each log message

1

Prefix each log message with the log level name

1.2.14 logging print thread-id (0|1)

Command

```
logging print thread-id (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

thread-id

Configure log message logging Thread ID

0

Don't prefix each log message

1

Prefix each log message with current Thread ID

1.2.15 logging set-log-mask MASK

Command

```
logging set-log-mask MASK
```

Parameters

logging

Configure logging

set-log-mask

Set the logmask of this logging target

MASK

List of logging categories to log, e.g. 'abc:mno:xyz'. Available log categories depend on the specific application, refer to the 'logging level' command. Optionally add individual log levels like 'abc,1:mno,3:xyz,5', where the level numbers are LOGL_DEBUG=1 LOGL_INFO=3 LOGL_NOTICE=5 LOGL_ERROR=7 LOGL_FATAL=8

1.2.16 logging timestamp (0|1)

Command

```
logging timestamp (0|1)
```

Parameters

logging

Configure logging

timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp

1.2.17 logp (pcap|client|server|vty|tls|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgt...)

Command

```
logp (pcap|client|server|vty|tls|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp| ↵  
lstats|lgsup|loap|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp|lndata| ↵  
lnssignal|liuup|lpfcp|lcsn1|lio) (debug|info|notice|error|fatal) .LOGMESSAGE
```

Parameters

logp

Print a message on all log outputs; useful for placing markers in test logs

pcap

PCAP related functionality

client

Client related functionality

server

Server related functionality

vty

VTY code

tls

TLS code

lglobal

Library-internal global log family

llapd

LAPD in libosmogsm

linp

A-bis Input Subsystem

lmux

A-bis B-Subchannel TRAU Frame Multiplex

lmi

A-bis Input Driver for Signalling

lmib

A-bis Input Driver for B-Channels (voice)

lsms

Layer3 Short Message Service (SMS)

lctrl

Control Interface

lgtp

GPRS GTP library

lstats

Statistics messages and logging

lgsup

Generic Subscriber Update Protocol

loap

Osmocom Authentication Protocol

lss7

libosmo-sigtran Signalling System 7

lsccp

libosmo-sigtran SCCP Implementation

lsua

libosmo-sigtran SCCP User Adaptation

lm3ua

libosmo-sigtran MTP3 User Adaptation

lmgcp

libosmo-mgcp Media Gateway Control Protocol

ljibuf

libosmo-netif Jitter Buffer

lrspro

Remote SIM protocol

lns

GPRS NS layer

lbssgp
GPRS BSSGP layer

lndata
GPRS NS layer data PDU

lnsignal
GPRS NS layer signal PDU

liuup
Iu UP layer

lpfcp
libosmo-pfcp Packet Forwarding Control Protocol

lcsn1
libosmo-csn1 Concrete Syntax Notation 1 codec

lio
libosmocore IO Subsystem

debug
Log debug messages and higher levels

info
Log informational messages and higher levels

notice
Log noticeable messages and higher levels

error
Log error messages and higher levels

fatal
Log only fatal messages

.LOGMESSAGE
Arbitrary message to log on given category and log level

1.2.18 no logging level force-all

Command

```
no logging level force-all
```

Parameters

no

Negate a command or set its defaults

logging

Configure logging

level

Set the log level for a specified category

force-all

Release any globally forced log level set with 'logging level force-all <level>'

1.2.19 show alarms

Command

```
show alarms
```

Parameters

show

Show running system information

alarms

Show current logging configuration

1.2.20 show asciidoc counters

Command

```
show asciidoc counters
```

Parameters

show

Show running system information

asciidoc

Asciidoc generation

counters

Generate table of all registered counters

1.2.21 show history

Command

```
show history
```

Parameters

show

Show running system information

history

Display the session command history

1.2.22 show logging vty

Command

```
show logging vty
```

Parameters

show

Show running system information

logging

Show current logging configuration

vtty

Show current logging configuration for this vty

1.2.23 show online-help

Command

```
show online-help
```

Parameters

show

Show running system information

online-help

Online help

1.2.24 show pid

Command

```
show pid
```

Parameters

show

Show running system information

pid

Displays the process ID

1.2.25 show rate-counters [skip-zero]

Command

```
show rate-counters [skip-zero]
```

Parameters

show

Show running system information

rate-counters

Show all rate counters

[skip-zero]

Skip items with total count zero

1.2.26 show stats [skip-zero]

Command

```
show stats [skip-zero]
```

Parameters

show

Show running system information

stats

Show statistical values

[skip-zero]

Skip items with total count zero

1.2.27 show stats level (global|peer|subscriber) [skip-zero]

Command

```
show stats level (global|peer|subscriber) [skip-zero]
```

Parameters

show

Show running system information

stats

Show statistical values

level

Set the maximum group level

global

Show global groups only

peer

Show global and network peer related groups

subscriber

Show global, peer, and subscriber groups

[skip-zero]

Skip items with total count zero

1.2.28 show talloc-context (application|global|all) (full|brief|DEPTH)

Command

```
show talloc-context (application|global|all) (full|brief|DEPTH)
```

Parameters

show

Show running system information

talloc-context

Show talloc memory hierarchy

application

Application's context

global

Global context (OTC_GLOBAL)

all

All contexts, if NULL-context tracking is enabled

full

Display a full talloc memory hierarchy

brief

Display a brief talloc memory hierarchy

DEPTH

Specify required maximal depth value

1.2.29 show talloc-context (application|global|all) (full|brief|DEPTH) filter REGEXP

Command

```
show talloc-context (application|global|all) (full|brief|DEPTH) filter REGEXP
```

Parameters

show

Show running system information

talloc-context

Show talloc memory hierarchy

application

Application's context

global

Global context (OTC_GLOBAL)

all

All contexts, if NULL-context tracking is enabled

full

Display a full talloc memory hierarchy

brief

Display a brief talloc memory hierarchy

DEPTH

Specify required maximal depth value

filter

Filter chunks using regular expression

REGEXP

Regular expression

1.2.30 show talloc-context (application|global|all) (full|brief|DEPTH) tree ADDRESS

Command

```
show talloc-context (application|global|all) (full|brief|DEPTH) tree ADDRESS
```

Parameters

show

Show running system information

talloc-context

Show talloc memory hierarchy

application

Application's context

global

Global context (OTC_GLOBAL)

all

All contexts, if NULL-context tracking is enabled

full

Display a full talloc memory hierarchy

brief

Display a brief talloc memory hierarchy

DEPTH

Specify required maximal depth value

tree

Display only a specific memory chunk

ADDRESS

Chunk address (e.g. 0xdeadbeef)

1.2.31 show uptime

Command

```
show uptime
```

Parameters

show

Show running system information

uptime

Displays how long the program has been running

1.2.32 show version

Command

```
show version
```

Parameters

show

Show running system information

version

Displays program version

1.2.33 terminal length <0-512>

Command

```
terminal length <0-512>
```

Parameters

terminal

Set terminal line parameters

length

Set number of lines on a screen

<0-512>

Number of lines on screen (0 for no pausing)

1.2.34 terminal no length

Command

```
terminal no length
```

Parameters

terminal

Set terminal line parameters

no

Negate a command or set its defaults

length

Set number of lines on a screen

1.2.35 who

Command

```
who
```

Parameters

who

Display who is on vty

1.3 enable

The enable node is a privileged node, allowing to make changes to the configuration and to access further commands like 'configure'. All commands seen on the view node are also available here.

1.3.1 configure [terminal]

Command

```
configure [terminal]
```

Parameters

configure

Configuration from vty interface

[terminal]

Configuration terminal

1.3.2 copy running-config startup-config

Command

```
copy running-config startup-config
```

Parameters

copy

Copy configuration

running-config

Copy running config to...

startup-config

Copy running config to startup config (same as write file)

1.3.3 disable

Command

```
disable
```

Parameters

disable

Turn off privileged mode command

1.3.4 logging color (0|1)

Command

```
logging color (0|1)
```

Parameters

logging

Configure logging

color

Configure color-printing for log messages

0

Don't use color for printing messages

1

Use color for printing messages

1.3.5 logging disable

Command

```
logging disable
```

Parameters

logging

Configure logging

disable

Disables logging to this vty

1.3.6 logging enable

This command is required to make logging commands available on the telnet VTY.

Command

```
logging enable
```

Parameters

logging

Configure logging

enable

Enables logging to this vty

1.3.7 logging filter all (0|1)

Disable/enable general log output on a given target. Typically, 'logging filter all 1' allows to see the usual log output on a given target. Setting to '0' can be useful when logging to the telnet VTY console: mute all log output to allow typing VTY commands on the telnet prompt without interference from log output; 'logging filter all 1' then re-enables logging in the same log output configuration as before. Some applications provide more specific filters, e.g. to log a given IMSI only. To employ such filters, set 'logging filter all 0' to disable general logging, and then enable a more specific filter instead.

Command

```
logging filter all (0|1)
```

Parameters

logging

Configure logging

filter

Filter log messages

all

Do you want to log all messages?

0

Only print messages matched by other filters

1

Bypass filter and print all messages

1.3.8 logging level (pcap|client|server|vty|tls|lglobal|llapd|linp|lmux|lmi|lmib|lsms|...

Command

```
logging level (pcap|client|server|vty|tls|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl| ↵
lgtp|lstats|lgsup|loap|lss7|lsccp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp|lndata ↵
|lnssignal|liuup|lpfcp|lcsn1|lio) (debug|info|notice|error|fatal)
```

Parameters

logging

Configure logging

level

Set the log level for a specified category

pcap

PCAP related functionality

client

Client related functionality

server

Server related functionality

vtv

VTY code

tls

TLS code

lglobal

Library-internal global log family

llapd

LAPD in libosmogsm

linp

A-bis Input Subsystem

lmux

A-bis B-Subchannel TRAU Frame Multiplex

lmi

A-bis Input Driver for Signalling

lmib

A-bis Input Driver for B-Channels (voice)

lsms

Layer3 Short Message Service (SMS)

lctrl

Control Interface

lgtp

GPRS GTP library

lstats

Statistics messages and logging

lgsup

Generic Subscriber Update Protocol

loap

Osmocom Authentication Protocol

lss7

libosmo-sigtran Signalling System 7

lsccp

libosmo-sigtran SCCP Implementation

lsua

libosmo-sigtran SCCP User Adaptation

lm3ua

libosmo-sigtran MTP3 User Adaptation

lmgcp
libosmo-mgcp Media Gateway Control Protocol

ljibuf
libosmo-netif Jitter Buffer

lrspro
Remote SIM protocol

lms
GPRS NS layer

lbssgp
GPRS BSSGP layer

lmsdata
GPRS NS layer data PDU

lmsignal
GPRS NS layer signal PDU

liuup
Iu UP layer

lpfcp
libosmo-pfcp Packet Forwarding Control Protocol

lcsn1
libosmo-csn1 Concrete Syntax Notation 1 codec

lio
libosmocore IO Subsystem

debug
Log debug messages and higher levels

info
Log informational messages and higher levels

notice
Log noticeable messages and higher levels

error
Log error messages and higher levels

fatal
Log only fatal messages

1.3.9 logging level force-all (debug|info|notice|error|fatal)

Command

```
logging level force-all (debug|info|notice|error|fatal)
```

Parameters

logging

Configure logging

level

Set the log level for a specified category

force-all

Globally force all logging categories to a specific level. This is released by the 'no logging level force-all' command. Note: any 'logging level <category> <level>' commands will have no visible effect after this, until the forced level is released.

debug

Log debug messages and higher levels

info

Log informational messages and higher levels

notice

Log noticeable messages and higher levels

error

Log error messages and higher levels

fatal

Log only fatal messages

1.3.10 logging level set-all (debug|info|notice|error|fatal)

Command

```
logging level set-all (debug|info|notice|error|fatal)
```

Parameters

logging

Configure logging

level

Set the log level for a specified category

set-all

Once-off set all categories to the given log level. There is no single command to take back these changes -- each category is set to the given level, period.

debug

Log debug messages and higher levels

info

Log informational messages and higher levels

notice

Log noticeable messages and higher levels

error

Log error messages and higher levels

fatal

Log only fatal messages

1.3.11 logging print category (0|1)

Command

```
logging print category (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

category

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem name

1.3.12 logging print category-hex (0|1)

Command

```
logging print category-hex (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

category-hex

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem nr in hex ('<000b>')

1.3.13 logging print extended-timestamp (0|1)

Command

```
logging print extended-timestamp (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

extended-timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp with YYYYMMDDhhmmssnnn

1.3.14 logging print file (0|1|basename) [last]

Command

```
logging print file (0|1|basename) [last]
```

Parameters

logging

Configure logging

print

Log output settings

file

Configure log message

0

Don't prefix each log message

1

Prefix each log message with the source file and line

basename

Prefix each log message with the source file's basename (strip leading paths) and line

[last]

Log source file info at the end of a log line. If omitted, log source file info just before the log text.

1.3.15 logging print level (0|1)

Command

```
logging print level (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

level

Configure log message

0

Don't prefix each log message

1

Prefix each log message with the log level name

1.3.16 logging print thread-id (0|1)

Command

```
logging print thread-id (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

thread-id

Configure log message logging Thread ID

0

Don't prefix each log message

1

Prefix each log message with current Thread ID

1.3.17 logging set-log-mask MASK

Command

```
logging set-log-mask MASK
```

Parameters

logging

Configure logging

set-log-mask

Set the logmask of this logging target

MASK

List of logging categories to log, e.g. 'abc:mno:xyz'. Available log categories depend on the specific application, refer to the 'logging level' command. Optionally add individual log levels like 'abc,1:mno,3:xyz,5', where the level numbers are LOGL_DEBUG=1 LOGL_INFO=3 LOGL_NOTICE=5 LOGL_ERROR=7 LOGL_FATAL=8

1.3.18 logging timestamp (0|1)

Command

```
logging timestamp (0|1)
```

Parameters

logging

Configure logging

timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp

1.3.19 logp (pcap|client|server|vty|tls|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgt...

Command

```
logp (pcap|client|server|vty|tls|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp| ↔  
lstats|lgsup|loap|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp|lndata| ↔  
lnssignal|liuup|lpfcp|lcsn1|lio) (debug|info|notice|error|fatal) .LOGMESSAGE
```

Parameters

logp

Print a message on all log outputs; useful for placing markers in test logs

pcap

PCAP related functionality

client

Client related functionality

server

Server related functionality

vty

VTY code

tls

TLS code

lglobal

Library-internal global log family

llapd

LAPD in libosmogsm

linp

A-bis Input Subsystem

lmux

A-bis B-Subchannel TRAU Frame Multiplex

lmi

A-bis Input Driver for Signalling

lmib

A-bis Input Driver for B-Channels (voice)

lsms

Layer3 Short Message Service (SMS)

lctrl

Control Interface

lgtp

GPRS GTP library

lstats

Statistics messages and logging

lgsup

Generic Subscriber Update Protocol

loap

Osmocom Authentication Protocol

lss7

libosmo-sigtran Signalling System 7

lsccp

libosmo-sigtran SCCP Implementation

lsua

libosmo-sigtran SCCP User Adaptation

lm3ua

libosmo-sigtran MTP3 User Adaptation

lmgcp

libosmo-mgcp Media Gateway Control Protocol

ljibuf

libosmo-netif Jitter Buffer

lrspro

Remote SIM protocol

lns

GPRS NS layer

lbssgp

GPRS BSSGP layer

lnsdata

GPRS NS layer data PDU

lnssignal

GPRS NS layer signal PDU

liuup

Iu UP layer

lpfcp

libosmo-pfcp Packet Forwarding Control Protocol

lcsn1

libosmo-csn1 Concrete Syntax Notation 1 codec

lio

libosmocore IO Subsystem

debug

Log debug messages and higher levels

info

Log informational messages and higher levels

notice

Log noticeable messages and higher levels

error

Log error messages and higher levels

fatal

Log only fatal messages

.LOGMESSAGE

Arbitrary message to log on given category and log level

1.3.20 no logging level force-all

Command

```
no logging level force-all
```

Parameters

no

Negate a command or set its defaults

logging

Configure logging

level

Set the log level for a specified category

force-all

Release any globally forced log level set with 'logging level force-all <level>'

1.3.21 show alarms

Command

```
show alarms
```

Parameters

show

Show running system information

alarms

Show current logging configuration

1.3.22 show asciidoc counters

Command

```
show asciidoc counters
```

Parameters

show

Show running system information

asciidoc

Asciidoc generation

counters

Generate table of all registered counters

1.3.23 show history

Command

```
show history
```

Parameters

show

Show running system information

history

Display the session command history

1.3.24 show logging vty

Command

```
show logging vty
```

Parameters

show

Show running system information

logging

Show current logging configuration

vty

Show current logging configuration for this vty

1.3.25 show online-help

Command

```
show online-help
```

Parameters

show

Show running system information

online-help

Online help

1.3.26 show rate-counters [skip-zero]

Command

```
show rate-counters [skip-zero]
```

Parameters

show

Show running system information

rate-counters

Show all rate counters

[skip-zero]

Skip items with total count zero

1.3.27 show startup-config

Command

```
show startup-config
```

Parameters

show

Show running system information

startup-config

Contentes of startup configuration

1.3.28 show stats [skip-zero]

Command

```
show stats [skip-zero]
```

Parameters

show

Show running system information

stats

Show statistical values

[skip-zero]

Skip items with total count zero

1.3.29 show stats level (global|peer|subscriber) [skip-zero]

Command

```
show stats level (global|peer|subscriber) [skip-zero]
```

Parameters

show

Show running system information

stats

Show statistical values

level

Set the maximum group level

global

Show global groups only

peer

Show global and network peer related groups

subscriber

Show global, peer, and subscriber groups

[skip-zero]

Skip items with total count zero

1.3.30 show talloc-context (application|global|all) (full|brief|DEPTH)

Command

```
show talloc-context (application|global|all) (full|brief|DEPTH)
```

Parameters

show

Show running system information

talloc-context

Show talloc memory hierarchy

application

Application's context

global

Global context (OTC_GLOBAL)

all

All contexts, if NULL-context tracking is enabled

full

Display a full talloc memory hierarchy

brief

Display a brief talloc memory hierarchy

DEPTH

Specify required maximal depth value

1.3.31 show talloc-context (application|global|all) (full|brief|DEPTH) filter REGEXP

Command

```
show talloc-context (application|global|all) (full|brief|DEPTH) filter REGEXP
```

Parameters

show

Show running system information

talloc-context

Show talloc memory hierarchy

application

Application's context

global

Global context (OTC_GLOBAL)

all

All contexts, if NULL-context tracking is enabled

full

Display a full talloc memory hierarchy

brief

Display a brief talloc memory hierarchy

DEPTH

Specify required maximal depth value

filter

Filter chunks using regular expression

REGEXP

Regular expression

1.3.32 show talloc-context (application|global|all) (full|brief|DEPTH) tree ADDRESS

Command

```
show talloc-context (application|global|all) (full|brief|DEPTH) tree ADDRESS
```

Parameters

show

Show running system information

talloc-context

Show talloc memory hierarchy

application

Application's context

global

Global context (OTC_GLOBAL)

all

All contexts, if NULL-context tracking is enabled

full

Display a full talloc memory hierarchy

brief

Display a brief talloc memory hierarchy

DEPTH

Specify required maximal depth value

tree

Display only a specific memory chunk

ADDRESS

Chunk address (e.g. 0xdeadbeef)

1.3.33 show version

Command

```
show version
```

Parameters

show

Show running system information

version

Displays program version

1.3.34 shutdown

Command

```
shutdown
```

Parameters

shutdown

Request a shutdown of the program

1.3.35 stats report

Command

```
stats report
```

Parameters

stats

Stats related commands

report

Manurally trigger reporting of stats

1.3.36 stats reset

Command

```
stats reset
```

Parameters

stats

Stats related commands

reset

Reset all rate counter stats

1.3.37 terminal length <0-512>

Command

```
terminal length <0-512>
```

Parameters

terminal

Set terminal line parameters

length

Set number of lines on a screen

<0-512>

Number of lines on screen (0 for no pausing)

1.3.38 terminal monitor

Command

```
terminal monitor
```

Parameters

terminal

Set terminal line parameters

monitor

Copy debug output to the current terminal line

1.3.39 terminal no length

Command

```
terminal no length
```

Parameters

terminal

Set terminal line parameters

no

Negate a command or set its defaults

length

Set number of lines on a screen

1.3.40 terminal no monitor

Command

```
terminal no monitor
```

Parameters

terminal

Set terminal line parameters

no

Negate a command or set its defaults

monitor

Copy debug output to the current terminal line

1.3.41 who

Command

```
who
```

Parameters

who

Display who is on vty

1.4 config

The config node is the root for all configuration commands, which are identical to the config file format. Changes made on the telnet VTY can be made persistent with the 'write file' command.

1.4.1 banner motd default

Command

```
banner motd default
```

Parameters

banner

Set banner string

motd

Strings for motd

default

Default string

1.4.2 banner motd file [FILE]

Command

```
banner motd file [FILE]
```

Parameters

banner

Set banner

motd

Banner for motd

file

Banner from a file

[FILE]

Filename

1.4.3 enable password (8|) WORD

Command

```
enable password (8|) WORD
```

Parameters

enable

Modify enable password parameters

password

Assign the privileged level password

8

Specifies a HIDDEN password will follow

dummy string

WORD

The HIDDEN 'enable' password string

1.4.4 enable password LINE

Command

```
enable password LINE
```

Parameters

enable

Modify enable password parameters

password

Assign the privileged level password

LINE

The UNENCRYPTED (cleartext) 'enable' password

1.4.5 hostname WORD

Command

```
hostname WORD
```

Parameters

hostname

Set system's network name

WORD

This system's network name

1.4.6 line vty

Command

```
line vty
```

Parameters

line

Configure a terminal line

vty

Virtual terminal

1.4.7 log alarms <2-32700>

Command

```
log alarms <2-32700>
```

Parameters

log

Configure logging sub-system

alarms

Logging alarms to osmo_strrb

<2-32700>

Maximum number of messages to log

1.4.8 log file FILENAME [blocking-io]

Command

```
log file FILENAME [blocking-io]
```

Parameters

log

Configure logging sub-system

file

Logging to text file

FILENAME

Filename

[blocking-io]

Use blocking, synchronous I/O

1.4.9 log gsmtap [HOSTNAME]

Command

```
log gsmtap [HOSTNAME]
```

Parameters

log

Configure logging sub-system

gsmtap

Logging via GSMTAP

[HOSTNAME]

Host name to send the GSMTAP logging to (UDP port 4729)

1.4.10 log stderr [blocking-io]

Command

```
log stderr [blocking-io]
```

Parameters

log

Configure logging sub-system

stderr

Logging via STDERR of the process

[blocking-io]

Use blocking, synchronous I/O

1.4.11 log syslog (authpriv|cron|daemon|ftp|lpr|mail|news|user|uucp)

Command

```
log syslog (authpriv|cron|daemon|ftp|lpr|mail|news|user|uucp)
```

Parameters

log

Configure logging sub-system

syslog

Logging via syslog

authpriv

Security/authorization messages facility

cron

Clock daemon (cron/at) facility

daemon

General system daemon facility

ftp

Ftp daemon facility

lpr

Line printer facility

mail

Mail facility

news

News facility

user

Generic facility

uucp

UUCP facility

1.4.12 log syslog local <0-7>

Command

```
log syslog local <0-7>
```

Parameters

log

Configure logging sub-system

syslog

Logging via syslog

local

Syslog LOCAL facility

<0-7>

Local facility number

1.4.13 log systemd-journal [raw]

Command

```
log systemd-journal [raw]
```

Parameters

log

Configure logging sub-system

systemd-journal

Logging to systemd-journal

[raw]

Offload rendering of the meta information (location, category) to systemd

1.4.14 no banner motd

Command

```
no banner motd
```

Parameters

no

Negate a command or set its defaults

banner

Set banner string

motd

Strings for motd

1.4.15 no enable password

Command

```
no enable password
```

Parameters

no

Negate a command or set its defaults

enable

Modify enable password parameters

password

Assign the privileged level password

1.4.16 no hostname [HOSTNAME]

Command

```
no hostname [HOSTNAME]
```

Parameters

no

Negate a command or set its defaults

hostname

Reset system's network name

[HOSTNAME]

Host name of this router

1.4.17 no log alarms

Command

```
no log alarms
```

Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

alarms

Logging alarms to osmo_strrb

1.4.18 no log file FILENAME

Command

```
no log file FILENAME
```

Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

file

Logging to text file

FILENAME

Filename

1.4.19 no log gsmtap [HOSTNAME]

Command

```
no log gsmtap [HOSTNAME]
```

Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

gsmtap

Logging via GSMTAP

[HOSTNAME]

Host name to send the GSMTAP logging to (UDP port 4729)

1.4.20 no log stderr

Command

```
no log stderr
```

Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

stderr

Logging via STDERR of the process

1.4.21 no log syslog

Command

```
no log syslog
```

Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

syslog

Logging via syslog

1.4.22 no log systemd-journal

Command

```
no log systemd-journal
```

Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

systemd-journal

Logging to systemd-journal

1.4.23 no service advanced-vty

Command

```
no service advanced-vty
```

Parameters

no

Negate a command or set its defaults

service

Set up miscellaneous service

advanced-vty

Enable advanced mode vty interface

1.4.24 no service terminal-length [<0-512>]

Command

```
no service terminal-length [<0-512>]
```

Parameters

no

Negate a command or set its defaults

service

Set up miscellaneous service

terminal-length

System wide terminal length configuration

[<0-512>]

Number of lines of VTY (0 means no line control)

1.4.25 no stats reporter log [NAME]

Command

```
no stats reporter log [NAME]
```

Parameters

no

Negate a command or set its defaults

stats

Configure stats sub-system

reporter

Configure a stats reporter

log

Report to the logger

[NAME]

Name of the reporter

1.4.26 no stats reporter statsd [NAME]

Command

```
no stats reporter statsd [NAME]
```

Parameters

no

Negate a command or set its defaults

stats

Configure stats sub-system

reporter

Configure a stats reporter

statsd

Report to a STATSD server

[NAME]

Name of the reporter

1.4.27 password (8|) WORD

Command

```
password (8|) WORD
```

Parameters

password

Assign the terminal connection password

8

Specifies a HIDDEN password will follow

dummy string

WORD

The HIDDEN line password string

1.4.28 password LINE

Command

```
password LINE
```

Parameters

password

Assign the terminal connection password

LINE

The UNENCRYPTED (cleartext) line password

1.4.29 server

Command

```
server
```

Parameters

server

Enter the server configuration

1.4.30 service advanced-vty

Command

```
service advanced-vty
```

Parameters

service

Set up miscellaneous service

advanced-vty

Enable advanced mode vty interface

1.4.31 service terminal-length <0-512>

Command

```
service terminal-length <0-512>
```

Parameters

service

Set up miscellaneous service

terminal-length

System wide terminal length configuration

<0-512>

Number of lines of VTY (0 means no line control)

1.4.32 show history

Command

```
show history
```

Parameters

show

Show running system information

history

Display the session command history

1.4.33 stats interval <0-65535>

Command

```
stats interval <0-65535>
```

Parameters

stats

Configure stats sub-system

interval

Set the reporting interval

<0-65535>

Interval in seconds (0 disables the reporting interval)

1.4.34 stats reporter log [NAME]

Command

```
stats reporter log [NAME]
```

Parameters

stats

Configure stats sub-system

reporter

Configure a stats reporter

log

Report to the logger

[NAME]

Name of the reporter

1.4.35 stats reporter statsd [NAME]

Command

```
stats reporter statsd [NAME]
```

Parameters

stats

Configure stats sub-system

reporter

Configure a stats reporter

statsd

Report to a STATSD server

[NAME]

Name of the reporter

1.4.36 stats-tcp batch-size <1-65535>

Command

```
stats-tcp batch-size <1-65535>
```

Parameters

stats-tcp

Configure stats sub-system

batch-size

Set the number of tcp sockets that are processed per stats polling interval

<1-65535>

Number of sockets per interval

1.4.37 stats-tcp interval <0-65535>

Command

```
stats-tcp interval <0-65535>
```

Parameters

stats-tcp

Configure stats sub-system

interval

Set the tcp socket stats polling interval

<0-65535>

Interval in seconds (0 disables the polling interval)

1.5 config-log

The log node is commonly available in all Osmocom programs and allows configuring logging to stderr and/or log files, including logging category and level filtering as well as output formatting options. Note that the 'logging enable' command is required to make logging commands available on the telnet VTY.

1.5.1 logging color (0|1)

Command

```
logging color (0|1)
```

Parameters

logging

Configure logging

color

Configure color-printing for log messages

0

Don't use color for printing messages

1

Use color for printing messages

1.5.2 logging filter all (0|1)

Disable/enable general log output on a given target. Typically, 'logging filter all 1' allows to see the usual log output on a given target. Setting to '0' can be useful when logging to the telnet VTY console: mute all log output to allow typing VTY commands on the telnet prompt without interference from log output; 'logging filter all 1' then re-enables logging in the same log output configuration as before. Some applications provide more specific filters, e.g. to log a given IMSI only. To employ such filters, set 'logging filter all 0' to disable general logging, and then enable a more specific filter instead.

Command

```
logging filter all (0|1)
```

Parameters

logging

Configure logging

filter

Filter log messages

all

Do you want to log all messages?

0

Only print messages matched by other filters

1

Bypass filter and print all messages

1.5.3 logging level (pcap|client|server|vty|tls|lglobal|llapd|linp|lmux|lmi|lmib|lsms|...

Command

```
logging level (pcap|client|server|vty|tls|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl| ↵
lgtp|lstats|lgsup|loap|lss7|lscdp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp|lndata ↵
|lnssignal|liuup|lpfcp|lcsn1|lio) (debug|info|notice|error|fatal)
```

Parameters

logging

Configure logging

level

Set the log level for a specified category

pcap

PCAP related functionality

client

Client related functionality

server

Server related functionality

vty

VTY code

tls

TLS code

lglobal

Library-internal global log family

llapd

LAPD in libosmogsm

linp

A-bis Input Subsystem

lmux

A-bis B-Subchannel TRAU Frame Multiplex

lmi

A-bis Input Driver for Signalling

lmib

A-bis Input Driver for B-Channels (voice)

lsms

Layer3 Short Message Service (SMS)

lctrl

Control Interface

lgtp
GPRS GTP library

lstats
Statistics messages and logging

lgsup
Generic Subscriber Update Protocol

loap
Osmocom Authentication Protocol

lss7
libosmo-sigtran Signalling System 7

lsccp
libosmo-sigtran SCCP Implementation

lsua
libosmo-sigtran SCCP User Adaptation

lm3ua
libosmo-sigtran MTP3 User Adaptation

lmgcp
libosmo-mgcp Media Gateway Control Protocol

ljibuf
libosmo-netif Jitter Buffer

lrspro
Remote SIM protocol

lns
GPRS NS layer

lbssgp
GPRS BSSGP layer

lnsdata
GPRS NS layer data PDU

lnssignal
GPRS NS layer signal PDU

liuup
Iu UP layer

lpfcp
libosmo-pfcp Packet Forwarding Control Protocol

lcsn1
libosmo-csn1 Concrete Syntax Notation 1 codec

lio
libosmocore IO Subsystem

debug

Log debug messages and higher levels

info

Log informational messages and higher levels

notice

Log noticeable messages and higher levels

error

Log error messages and higher levels

fatal

Log only fatal messages

1.5.4 logging level force-all (debug|info|notice|error|fatal)

Command

```
logging level force-all (debug|info|notice|error|fatal)
```

Parameters**logging**

Configure logging

level

Set the log level for a specified category

force-all

Globally force all logging categories to a specific level. This is released by the 'no logging level force-all' command. Note: any 'logging level <category> <level>' commands will have no visible effect after this, until the forced level is released.

debug

Log debug messages and higher levels

info

Log informational messages and higher levels

notice

Log noticeable messages and higher levels

error

Log error messages and higher levels

fatal

Log only fatal messages

1.5.5 logging level set-all (debug|info|notice|error|fatal)

Command

```
logging level set-all (debug|info|notice|error|fatal)
```

Parameters

logging

Configure logging

level

Set the log level for a specified category

set-all

Once-off set all categories to the given log level. There is no single command to take back these changes -- each category is set to the given level, period.

debug

Log debug messages and higher levels

info

Log informational messages and higher levels

notice

Log noticeable messages and higher levels

error

Log error messages and higher levels

fatal

Log only fatal messages

1.5.6 logging print category (0|1)

Command

```
logging print category (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

category

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem name

1.5.7 logging print category-hex (0|1)

Command

```
logging print category-hex (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

category-hex

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem nr in hex ('<000b>')

1.5.8 logging print extended-timestamp (0|1)

Command

```
logging print extended-timestamp (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

extended-timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp with YYYYMMDDhhmmssnnn

1.5.9 logging print file (0|1|basename) [last]

Command

```
logging print file (0|1|basename) [last]
```

Parameters

logging

Configure logging

print

Log output settings

file

Configure log message

0

Don't prefix each log message

1

Prefix each log message with the source file and line

basename

Prefix each log message with the source file's basename (strip leading paths) and line

[last]

Log source file info at the end of a log line. If omitted, log source file info just before the log text.

1.5.10 logging print level (0|1)

Command

```
logging print level (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

level

Configure log message

0

Don't prefix each log message

1

Prefix each log message with the log level name

1.5.11 logging print thread-id (0|1)

Command

```
logging print thread-id (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

thread-id

Configure log message logging Thread ID

0

Don't prefix each log message

1

Prefix each log message with current Thread ID

1.5.12 logging timestamp (0|1)

Command

```
logging timestamp (0|1)
```

Parameters

logging

Configure logging

timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp

1.5.13 no logging level force-all

Command

```
no logging level force-all
```

Parameters

no

Negate a command or set its defaults

logging

Configure logging

level

Set the log level for a specified category

force-all

Release any globally forced log level set with 'logging level force-all <level>'

1.6 config-stats

1.6.1 disable

Command

```
disable
```

Parameters

disable

Disable the reporter

1.6.2 enable

Command

```
enable
```

Parameters

enable

Enable the reporter

1.6.3 flush-period <0-65535>

Command

```
flush-period <0-65535>
```

Parameters

flush-period

Configure stats sub-system

<0-65535>

Send all stats even if they have not changed (i.e. force the flush) every N-th reporting interval. Set to 0 to disable regular flush (default).

1.6.4 level (global|peer|subscriber)

Command

```
level (global|peer|subscriber)
```

Parameters

level

Set the maximum group level

global

Report global groups only

peer

Report global and network peer related groups

subscriber

Report global, peer, and subscriber groups

1.6.5 local-ip ADDR

Command

```
local-ip ADDR
```

Parameters

local-ip

Set the IP address to which we bind locally

ADDR

IP Address

1.6.6 mtu <100-65535>

Command

```
mtu <100-65535>
```

Parameters

mtu

Set the maximum packet size

<100-65535>

Size in byte

1.6.7 no local-ip

Command

```
no local-ip
```

Parameters

no

Negate a command or set its defaults

local-ip

Set the IP address to which we bind locally

1.6.8 no mtu

Command

```
no mtu
```

Parameters

no

Negate a command or set its defaults

mtu

Set the maximum packet size

1.6.9 no prefix

Command

```
no prefix
```

Parameters

no

Negate a command or set its defaults

prefix

Set the item name prefix

1.6.10 prefix PREFIX

Command

```
prefix PREFIX
```

Parameters

prefix

Set the item name prefix

PREFIX

The prefix string

1.6.11 remote-ip ADDR

Command

```
remote-ip ADDR
```

Parameters

remote-ip

Set the remote IP address to which we connect

ADDR

IP Address

1.6.12 remote-port <1-65535>

Command

```
remote-port <1-65535>
```

Parameters

remote-port

Set the remote port to which we connect

<1-65535>

Remote port number

1.7 config-line

1.7.1 bind A.B.C.D [<0-65535>]

Command

```
bind A.B.C.D [<0-65535>]
```

Parameters

bind

Accept VTY telnet connections on local interface

A.B.C.D

Local interface IP address (default: 127.0.0.1)

[<0-65535>]

Local TCP port number

1.7.2 login

Command

```
login
```

Parameters

login

Enable password checking

1.7.3 no login

Command

```
no login
```

Parameters

no

Negate a command or set its defaults

login

Enable password checking

1.8 server

1.8.1 base-path PATH

Command

```
base-path PATH
```

Parameters

base-path

Base path for log files

PATH

Path

1.8.2 client NAME A.B.C.D [no-store] [tls]

Command

```
client NAME A.B.C.D [no-store] [tls]
```

Parameters

client

Client

NAME

Remote name used in filenames

A.B.C.D

IP of the remote

[no-store]

Do not store traffic

[tls]

Use Transport Level Security

1.8.3 client NAME A.B.C.D store [tls]

Command

```
client NAME A.B.C.D store [tls]
```

Parameters

client

Client

NAME

Remote name used in filenames

A.B.C.D

IP of the remote

store

Do not store traffic

[tls]

Use Transport Level Security

1.8.4 disable tls

Command

```
disable tls
```

Parameters

disable

Disable

tls

Transport Layer Security

1.8.5 enable tls

Command

```
enable tls
```

Parameters

enable

Enable

tls

Transport Layer Security

1.8.6 file-permission-mask MODE

Command

```
file-permission-mask MODE
```

Parameters

file-permission-mask

Permission mask to use when creating pcap files

MODE

The file permission mask, in octal format (default: 0440)

1.8.7 max-file-size NR

Command

```
max-file-size NR
```

Parameters

max-file-size

Maximum file size for a trace

NR

Filesize in bytes

1.8.8 max-snaplen <1-262144>

Command

```
max-snaplen <1-262144>
```

Parameters

max-snaplen

Maximum pcap snapshot length

<1-262144>

Bytes

1.8.9 no client NAME

Command

```
no client NAME
```

Parameters

no

Negate a command or set its defaults

client

Client

NAME

The name

1.8.10 no tls allow-auth anonymous

Command

```
no tls allow-auth anonymous
```

Parameters

no

Negate a command or set its defaults

tls

Transport Layer Security

allow-auth

allow authentication

anonymous

for anonymous

1.8.11 no tls allow-auth x509

Command

```
no tls allow-auth x509
```

Parameters

no

Negate a command or set its defaults

tls

Transport Layer Security

allow-auth

allow authentication

x509

for certificates

1.8.12 no tls capath

Command

```
no tls capath
```

Parameters

no

Negate a command or set its defaults

tls

Transport Layer Security

capath

Trusted root certificates

1.8.13 no tls crlfile

Command

```
no tls crlfile
```

Parameters

no

Negate a command or set its defaults

tls

Transport Layer Security

crlfile

CRL file

1.8.14 no tls priority

Command

```
no tls priority
```

Parameters

no

Negate a command or set its defaults

tls

Transport Layer Security

priority

Priority string for GNUtls

1.8.15 no tls server-cert

Command

```
no tls server-cert
```

Parameters

no

Negate a command or set its defaults

tls

Transport Layer Security

server-cert

Server certificate

1.8.16 no tls server-key

Command

```
no tls server-key
```

Parameters

no

Negate a command or set its defaults

tls

Transport Layer Security

server-key

Server private key

1.8.17 no zeromq-publisher

Command

```
no zeromq-publisher
```

Parameters

no

Negate a command or set its defaults

zeromq-publisher

Disable zeromq-publishing

1.8.18 server ip A.B.C.D

Command

```
server ip A.B.C.D
```

Parameters

server

Server settings

ip

Listen

A.B.C.D

IP Address

1.8.19 server port <1-65535>

Command

```
server port <1-65535>
```

Parameters

server

Server settings

port

Port

<1-65535>

Port Number

1.8.20 tls allow-auth anonymous

Command

```
tls allow-auth anonymous
```

Parameters

tls

Transport Layer Security

allow-auth

allow authentication

anonymous

for anonymous

1.8.21 **tls allow-auth x509**

Command

```
tls allow-auth x509
```

Parameters

tls

Transport Layer Security

allow-auth

allow authentication

x509

for certificates

1.8.22 **tls capath .PATH**

Command

```
tls capath .PATH
```

Parameters

tls

Transport Layer Security

capath

Trusted root certificates

.PATH

Filename

1.8.23 **tls crlfile .PATH**

Command

```
tls crlfile .PATH
```

Parameters

tls

Transport Layer Security

crlfile

CRL file

.PATH

Filename

1.8.24 **tls dh generate**

Command

```
tls dh generate
```

Parameters

tls

Transport Layer Security

dh

Diffie-Hellman Key Exchange

generate

Generate prime

1.8.25 **tls dh pkcs .FILE**

Command

```
tls dh pkcs .FILE
```

Parameters

tls

Transport Layer Security

dh

Diffie-Hellman Key Exchange

pkcs

PKCS3

.FILE

Filename

1.8.26 **tls log-level <0-255>**

Command

```
tls log-level <0-255>
```

Parameters

tls

Transport Layer Security

log-level

Log-level

<0-255>

GNUtls debug level

1.8.27 **tls priority STR**

Command

```
tls priority STR
```

Parameters

tls

Transport Layer Security

priority

Priority string for GNUtls

STR

Priority string

1.8.28 **tls server-cert .PATH**

Command

```
tls server-cert .PATH
```

Parameters

tls

Transport Layer Security

server-cert

Server certificate

.PATH

Filename

1.8.29 **tls server-key .PATH**

Command

```
tls server-key .PATH
```

Parameters

tls

Transport Layer Security

server-key

Server private key

.PATH

Filename

1.8.30 zeromq-publisher (A.B.C.D|*) <1-65535>

Command

```
zeromq-publisher (A.B.C.D|*) <1-65535>
```

Parameters

zeromq-publisher

Enable publishing data to ZeroMQ

A.B.C.D

Bind to IPv4 address

*

Bind to wildcard

<1-65535>

Bind to port