

# **OsmoPCAP VTY Reference**



**osmo-pcap-server**

Copyright © 2023

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

---

**COLLABORATORS**

	<i>TITLE :</i> OsmoPCAP VTY Reference		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
WRITTEN BY		March 21, 2023	

**REVISION HISTORY**

NUMBER	DATE	DESCRIPTION	NAME
v1	21th March 2023	Automatic build (0.2.1)	s.f.m.c.

# Contents

<b>1</b>	<b>VTY reference</b>	<b>1</b>
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	4
1.2	view	5
1.2.1	enable [expert-mode]	5
1.2.2	logging color (0 1)	5
1.2.3	logging disable	5
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 lapd linp lmux lmi lmi lmsl...	6
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)	9
1.2.9	logging print category (0 1)	10
1.2.10	logging print category-hex (0 1)	10
1.2.11	logging print extended-timestamp (0 1)	11
1.2.12	logging print file (0 1 basename) [last]	11
1.2.13	logging print level (0 1)	12
1.2.14	logging print thread-id (0 1)	12
1.2.15	logging set-log-mask MASK	13
1.2.16	logging timestamp (0 1)	13

1.2.17	logp (pcapclientserver vty ts l global lapd linp mux mill mib sms lctrl lgt...	13
1.2.18	no logging level force-all	16
1.2.19	show alarms	16
1.2.20	show asciidoc counters	16
1.2.21	show history	17
1.2.22	show logging vty	17
1.2.23	show online-help	17
1.2.24	show pid	18
1.2.25	show rate-counters [skip-zero]	18
1.2.26	show stats [skip-zero]	18
1.2.27	show stats level (global peer subscriber) [skip-zero]	19
1.2.28	show talloc-context (application global all) (full brief DEPTH)	19
1.2.29	show talloc-context (application global all) (full brief DEPTH) filter REGEXP	20
1.2.30	show talloc-context (application global all) (full brief DEPTH) tree ADDRESS	20
1.2.31	show uptime	21
1.2.32	show version	21
1.2.33	terminal length <0-512>	22
1.2.34	terminal no length	22
1.2.35	who	22
1.3	enable	22
1.3.1	configure terminal	23
1.3.2	copy running-config startup-config	23
1.3.3	disable	23
1.3.4	logging color (0 1)	24
1.3.5	logging disable	24
1.3.6	logging enable	24
1.3.7	logging filter all (0 1)	25
1.3.8	logging level (pcapclientserver vty ts l global lapd linp mux mill mib sms l...	25
1.3.9	logging level force-all (debug info notice error fatal)	27
1.3.10	logging level set-all (debug info notice error fatal)	28
1.3.11	logging print category (0 1)	29
1.3.12	logging print category-hex (0 1)	29
1.3.13	logging print extended-timestamp (0 1)	30
1.3.14	logging print file (0 1 basename) [last]	30
1.3.15	logging print level (0 1)	31
1.3.16	logging print thread-id (0 1)	31
1.3.17	logging set-log-mask MASK	32
1.3.18	logging timestamp (0 1)	32
1.3.19	logp (pcapclientserver vty ts l global lapd linp mux mill mib sms lctrl lgt...	32

---

1.3.20	no logging level force-all	35
1.3.21	show alarms	35
1.3.22	show asciidoc counters	35
1.3.23	show history	36
1.3.24	show logging vty	36
1.3.25	show online-help	36
1.3.26	show rate-counters [skip-zero]	37
1.3.27	show startup-config	37
1.3.28	show stats [skip-zero]	37
1.3.29	show stats level (globalpeer subscriber) [skip-zero]	38
1.3.30	show talloc-context (application global all) (full brief DEPTH)	38
1.3.31	show talloc-context (application global all) (full brief DEPTH) filter REGEXP	39
1.3.32	show talloc-context (application global all) (full brief DEPTH) tree ADDRESS	39
1.3.33	show version	40
1.3.34	shutdown	40
1.3.35	stats report	41
1.3.36	stats reset	41
1.3.37	terminal length <0-512>	41
1.3.38	terminal monitor	42
1.3.39	terminal no length	42
1.3.40	terminal no monitor	42
1.3.41	who	43
1.4	config	43
1.4.1	banner motd default	43
1.4.2	banner motd file [FILE]	43
1.4.3	enable password (8 ) WORD	44
1.4.4	enable password LINE	44
1.4.5	hostname WORD	44
1.4.6	line vty	45
1.4.7	log alarms <2-32700>	45
1.4.8	log file FILENAME [blocking-io]	45
1.4.9	log gsm tap [HOSTNAME]	46
1.4.10	log stderr [blocking-io]	46
1.4.11	log syslog (auth priv cron daemon ftplib mail news user uucp)	46
1.4.12	log syslog local <0-7>	47
1.4.13	log systemd-journal [raw]	47
1.4.14	no banner motd	48
1.4.15	no enable password	48
1.4.16	no hostname [HOSTNAME]	49

---

1.4.17	no log alarms	49
1.4.18	no log file FILENAME	49
1.4.19	no log gsmmap [HOSTNAME]	50
1.4.20	no log stderr	50
1.4.21	no log syslog	50
1.4.22	no log systemd-journal	51
1.4.23	no service advanced-vty	51
1.4.24	no service terminal-length [<0-512>]	51
1.4.25	no stats reporter log [NAME]	52
1.4.26	no stats reporter statsd [NAME]	52
1.4.27	password (8l) WORD	53
1.4.28	password LINE	53
1.4.29	server	53
1.4.30	service advanced-vty	54
1.4.31	service terminal-length <0-512>	54
1.4.32	show history	54
1.4.33	stats interval <0-65535>	55
1.4.34	stats reporter log [NAME]	55
1.4.35	stats reporter statsd [NAME]	55
1.4.36	stats-tcp batch-size <1-65535>	56
1.4.37	stats-tcp interval <0-65535>	56
1.5	config-log	56
1.5.1	logging color (01)	56
1.5.2	logging filter all (01)	57
1.5.3	logging level (pcap client server vty tls global lapd linp mux mill mibl smsl...)	57
1.5.4	logging level force-all (debug info notice error fatal)	60
1.5.5	logging level set-all (debug info notice error fatal)	60
1.5.6	logging print category (01)	61
1.5.7	logging print category-hex (01)	61
1.5.8	logging print extended-timestamp (01)	62
1.5.9	logging print file (01 basename) [last]	62
1.5.10	logging print level (01)	63
1.5.11	logging print thread-id (01)	63
1.5.12	logging timestamp (01)	64
1.5.13	no logging level force-all	64
1.6	config-stats	64
1.6.1	disable	64
1.6.2	enable	65
1.6.3	flush-period <0-65535>	65

1.6.4	level (globalpeersubscriber)	65
1.6.5	local-ip ADDR	66
1.6.6	mtu <100-65535>	66
1.6.7	no local-ip	66
1.6.8	no mtu	66
1.6.9	no prefix	67
1.6.10	prefix PREFIX	67
1.6.11	remote-ip ADDR	67
1.6.12	remote-port <1-65535>	67
1.7	config-line	68
1.7.1	bind A.B.C.D [<0-65535>]	68
1.7.2	login	68
1.7.3	no login	68
1.8	server	69
1.8.1	base-path PATH	69
1.8.2	client NAME A.B.C.D [no-store] [tls]	69
1.8.3	client NAME A.B.C.D store [tls]	69
1.8.4	disable tls	70
1.8.5	enable tls	70
1.8.6	max-file-size NR	70
1.8.7	max-snaplen <1-262144>	71
1.8.8	no client NAME	71
1.8.9	no tls allow-auth anonymous	71
1.8.10	no tls allow-auth x509	72
1.8.11	no tls capath	72
1.8.12	no tls crlfile	72
1.8.13	no tls priority	73
1.8.14	no tls server-cert	73
1.8.15	no tls server-key	73
1.8.16	no zeromq-publisher	74
1.8.17	server ip A.B.C.D	74
1.8.18	server port <1-65535>	74
1.8.19	tls allow-auth anonymous	75
1.8.20	tls allow-auth x509	75
1.8.21	tls capath .PATH	75
1.8.22	tls crlfile .PATH	76
1.8.23	tls dh generate	76
1.8.24	tls dh pkcs .FILE	76
1.8.25	tls log-level <0-255>	77
1.8.26	tls priority STR	77
1.8.27	tls server-cert .PATH	77
1.8.28	tls server-key .PATH	78
1.8.29	zeromq-publisher (A.B.C.D *) <1-65535>	78

---



# 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 sismocom 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| ↵  
lgtpl|lstats|lgsup|loap|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp|lndata ↵  
|lnssignal|liuup|lpfcp|lcsn1) (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

### vtty

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

lscpp  
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

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

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|lnsdata| ←
lnssignal|liuup|lpfcp|lcsn1) (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

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

lgtv  
GPRS GTP library

lstats  
Statistics messages and logging

lgsup  
Generic Subscriber Update Protocol

loap  
Osmocom Authentication Protocol

lss7  
libosmo-sigtran Signalling System 7

lscvp  
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

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

##### vty

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 ←
|lnsignal|liuup|lpfcp|lcsn1) (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

---

vtty  
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

lscpp  
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
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
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|lnsdata| ←
lnssignal|liuup|lpfcp|lcsn1) (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
- 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
- lgtv
  - GPRS GTP library
- lstats
  - Statistics messages and logging
- lgsup
  - Generic Subscriber Update Protocol
- loap
  - Osmocom Authentication Protocol
- lss7
  - libosmo-sigtran Signalling System 7
- lscvp
  - 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

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

##### vtty

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

#### vtty

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|lscpp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp|lnsdata ←
|lnssignal|liuup|lpfcp|lcsn1) (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

vtty  
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

---

---

lscpp  
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

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

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 max-file-size NR

**Command**

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

**Parameters****max-file-size**

Maximum file size for a trace

**NR**

Filesize in bytes

---

### 1.8.7 max-snaplen <1-262144>

#### Command

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

#### Parameters

max-snaplen

Maximum pcap snapshot length

<1-262144>

Bytes

### 1.8.8 no client NAME

#### Command

```
no client NAME
```

#### Parameters

no

Negate a command or set its defaults

client

Client

NAME

The name

### 1.8.9 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

---



### 1.8.10 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

### 1.8.11 no tls capath

#### Command

```
no tls capath
```

#### Parameters

no

Negate a command or set its defaults

tls

Transport Layer Security

capath

Trusted root certificates

### 1.8.12 no tls crlfile

#### Command

```
no tls crlfile
```

#### Parameters

no

Negate a command or set its defaults

tls

Transport Layer Security

crlfile

CRL file

---

### 1.8.13 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

### 1.8.14 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

### 1.8.15 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

### 1.8.16 no zeromq-publisher

#### Command

```
no zeromq-publisher
```

#### Parameters

no

Negate a command or set its defaults

zeromq-publisher

Disable zeromq-publishing

### 1.8.17 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

### 1.8.18 server port <1-65535>

#### Command

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

#### Parameters

server

Server settings

port

Port

<1-65535>

Port Number

### 1.8.19 `tls allow-auth anonymous`

#### Command

```
tls allow-auth anonymous
```

#### Parameters

`tls`

Transport Layer Security

`allow-auth`

allow authentication

`anonymous`

for anonymous

### 1.8.20 `tls allow-auth x509`

#### Command

```
tls allow-auth x509
```

#### Parameters

`tls`

Transport Layer Security

`allow-auth`

allow authentication

`x509`

for certificates

### 1.8.21 `tls capath .PATH`

#### Command

```
tls capath .PATH
```

#### Parameters

`tls`

Transport Layer Security

`capath`

Trusted root certificates

`.PATH`

Filename

---

### 1.8.22 `tls crlfile .PATH`

#### Command

```
tls crlfile .PATH
```

#### Parameters

`tls`

Transport Layer Security

`crlfile`

CRL file

`.PATH`

Filename

### 1.8.23 `tls dh generate`

#### Command

```
tls dh generate
```

#### Parameters

`tls`

Transport Layer Security

`dh`

Diffie-Hellman Key Exchange

`generate`

Generate prime

### 1.8.24 `tls dh pkcs .FILE`

#### Command

```
tls dh pkcs .FILE
```

#### Parameters

`tls`

Transport Layer Security

`dh`

Diffie-Hellman Key Exchange

`pkcs`

PKCS3

`.FILE`

Filename

---

### 1.8.25 **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

### 1.8.26 **tls priority STR**

#### Command

```
tls priority STR
```

#### Parameters

tls

Transport Layer Security

priority

Priority string for GNUtls

STR

Priority string

### 1.8.27 **tls server-cert .PATH**

#### Command

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

#### Parameters

tls

Transport Layer Security

server-cert

Server certificate

.PATH

Filename

### 1.8.28 `tls server-key .PATH`

#### Command

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

#### Parameters

`tls`

Transport Layer Security

`server-key`

Server private key

`.PATH`

Filename

### 1.8.29 `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

---