# OsmoMGW VTY Reference

Copyright © 2017

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

| COLLABORATORS | | | |
|---|---|---|---|
| | *TITLE* :<br><br>OsmoMGW VTY Reference | | |
| *ACTION* | *NAME* | *DATE* | *SIGNATURE* |
| WRITTEN BY | | August 27, 2025 | |

| REVISION HISTORY | | | |
|---|---|---|---|
| NUMBER | DATE | DESCRIPTION | NAME |
| DRAFT | unknown | Automatically Generated VTY Reference | pm |

# 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 . . . 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 (rtp|e1|osmux|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lst... . . . 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 (rtp|e1|osmux|l|global|l|lapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup... 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 cpu-sched threads 17
1.2.22 show e1_driver 17
1.2.23 show e1_line [<0-255>] [stats] 17
1.2.24 show e1_timeslot [<0-255>] [<0-31>] 18
1.2.25 show history 18
1.2.26 show logging vty 18
1.2.27 show mgcp [stats] 19
1.2.28 show mgcp active 19
1.2.29 show mgcp endpoint NAME 19
1.2.30 show mgcp trunk <0-64> endpoint NAME 20
1.2.31 show online-help 20
1.2.32 show pid 20
1.2.33 show rate-counters [skip-zero] 21
1.2.34 show stats [skip-zero] 21
1.2.35 show stats level (global|peer|subscriber) [skip-zero] 21
1.2.36 show talloc-context (application|global|all) (full|brief|DEPTH) 22
1.2.37 show talloc-context (application|global|all) (full|brief|DEPTH) filter REGEXP 22
1.2.38 show talloc-context (application|global|all) (full|brief|DEPTH) tree ADDRESS 23
1.2.39 show uptime 24
1.2.40 show version 24
1.2.41 terminal length <0-512> 24
1.2.42 terminal no length 25
1.2.43 who 25
1.3 enable 25
1.3.1 configure [terminal] 25
1.3.2 copy running-config startup-config 26
1.3.3 disable 26
1.3.4 free-endpoint <0-64> NUMBER 26
1.3.5 logging color (0|1) 27
1.3.6 logging disable 27
1.3.7 logging enable 27
1.3.8 logging filter all (0|1) 28
1.3.9 logging level (rtp|e1|osmux|l|global|l|lapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lst... 28
1.3.10 logging level force-all (debug|info|notice|error|fatal) 30
1.3.11 logging level set-all (debug|info|notice|error|fatal) 31

1.3.12 logging print category (0|1) . . . 32
1.3.13 logging print category-hex (0|1) . . . 32
1.3.14 logging print extended-timestamp (0|1) . . . 33
1.3.15 logging print file (0|1|basename) [last] . . . 33
1.3.16 logging print level (0|1) . . . 34
1.3.17 logging print thread-id (0|1) . . . 34
1.3.18 logging set-log-mask MASK . . . 35
1.3.19 logging timestamp (0|1) . . . 35
1.3.20 logp (rtp|e1|osmux|l|global|l|lapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup... . . . 35
1.3.21 loop-endpoint <0-64> NAME (0|1) . . . 38
1.3.22 no logging level force-all . . . 38
1.3.23 reset-all-endpoints . . . 38
1.3.24 reset-endpoint <0-64> NUMBER . . . 39
1.3.25 show alarms . . . 39
1.3.26 show asciidoc counters . . . 39
1.3.27 show cpu-sched threads . . . 40
1.3.28 show e1_driver . . . 40
1.3.29 show e1_line [<0-255>] [stats] . . . 40
1.3.30 show e1_timeslot [<0-255>] [<0-31>] . . . 41
1.3.31 show history . . . 41
1.3.32 show logging vty . . . 41
1.3.33 show mgcp [stats] . . . 42
1.3.34 show mgcp active . . . 42
1.3.35 show mgcp endpoint NAME . . . 42
1.3.36 show mgcp trunk <0-64> endpoint NAME . . . 43
1.3.37 show online-help . . . 43
1.3.38 show rate-counters [skip-zero] . . . 43
1.3.39 show startup-config . . . 44
1.3.40 show stats [skip-zero] . . . 44
1.3.41 show stats level (global|peer|subscriber) [skip-zero] . . . 44
1.3.42 show talloc-context (application|global|all) (full|brief|DEPTH) . . . 45
1.3.43 show talloc-context (application|global|all) (full|brief|DEPTH) filter REGEXP . . . 45
1.3.44 show talloc-context (application|global|all) (full|brief|DEPTH) tree ADDRESS . . . 46
1.3.45 show version . . . 47
1.3.46 shutdown . . . 47
1.3.47 stats report . . . 47
1.3.48 stats reset . . . 48
1.3.49 tap-rtp <0-64> ENDPOINT CONN (in|out) (A.B.C.D|X:X::X:X) <0-65534> . . . 48
1.3.50 terminal length <0-512> . . . 49

1.3.51 terminal monitor . . . 49
1.3.52 terminal no length . . . 49
1.3.53 terminal no monitor . . . 50
1.3.54 who . . . 50
1.4 config . . . 50
1.4.1 banner motd default . . . 50
1.4.2 banner motd file [FILE] . . . 51
1.4.3 cpu-sched . . . 51
1.4.4 ctrl . . . 51
1.4.5 e1_input . . . 52
1.4.6 enable password (8|) WORD . . . 52
1.4.7 enable password LINE . . . 52
1.4.8 hostname WORD . . . 53
1.4.9 line vty . . . 53
1.4.10 log alarms <2-32700> . . . 53
1.4.11 log file FILENAME [blocking-io] . . . 54
1.4.12 log gsmtap [HOSTNAME] . . . 54
1.4.13 log stderr [blocking-io] . . . 54
1.4.14 log syslog (authpriv|cron|daemon|ftp|lpr|mail|news|user|uucp) . . . 55
1.4.15 log syslog local <0-7> . . . 55
1.4.16 log systemd-journal [raw] . . . 56
1.4.17 mgcp . . . 56
1.4.18 no banner motd . . . 56
1.4.19 no enable password . . . 57
1.4.20 no hostname [HOSTNAME] . . . 57
1.4.21 no log alarms . . . 57
1.4.22 no log file FILENAME . . . 58
1.4.23 no log gsmtap [HOSTNAME] . . . 58
1.4.24 no log stderr . . . 58
1.4.25 no log syslog . . . 59
1.4.26 no log systemd-journal . . . 59
1.4.27 no service advanced-vty . . . 59
1.4.28 no service terminal-length [<0-512>] . . . 60
1.4.29 no stats reporter log [NAME] . . . 60
1.4.30 no stats reporter statsd [NAME] . . . 60
1.4.31 password (8|) WORD . . . 61
1.4.32 password LINE . . . 61
1.4.33 service advanced-vty . . . 62
1.4.34 service terminal-length <0-512> . . . 62

1.4.35 show history . . . 62
1.4.36 stats interval <0-65535> . . . 63
1.4.37 stats reporter log [NAME] . . . 63
1.4.38 stats reporter statsd [NAME] . . . 63
1.4.39 stats-tcp batch-size <1-65535> . . . 64
1.4.40 stats-tcp interval <0-65535> . . . 64
1.5 config-log . . . 64
1.5.1 logging color (0|1) . . . 64
1.5.2 logging filter all (0|1) . . . 65
1.5.3 logging level (rtp|e1|osmux|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lst... . . . 65
1.5.4 logging level force-all (debug|info|notice|error|fatal) . . . 68
1.5.5 logging level set-all (debug|info|notice|error|fatal) . . . 68
1.5.6 logging print category (0|1) . . . 69
1.5.7 logging print category-hex (0|1) . . . 69
1.5.8 logging print extended-timestamp (0|1) . . . 70
1.5.9 logging print file (0|1|basename) [last] . . . 70
1.5.10 logging print level (0|1) . . . 71
1.5.11 logging print thread-id (0|1) . . . 71
1.5.12 logging timestamp (0|1) . . . 72
1.5.13 no logging level force-all . . . 72
1.6 config-stats . . . 72
1.6.1 disable . . . 72
1.6.2 enable . . . 73
1.6.3 flush-period <0-65535> . . . 73
1.6.4 level (global|peer|subscriber) . . . 73
1.6.5 local-ip ADDR . . . 74
1.6.6 mtu <100-65535> . . . 74
1.6.7 no local-ip . . . 74
1.6.8 no mtu . . . 74
1.6.9 no prefix . . . 75
1.6.10 prefix PREFIX . . . 75
1.6.11 remote-ip ADDR . . . 75
1.6.12 remote-port <1-65535> . . . 75
1.7 config-line . . . 76
1.7.1 bind A.B.C.D [<0-65535>] . . . 76
1.7.2 login . . . 76
1.7.3 no login . . . 76
1.8 config-e1_input . . . 77
1.8.1 e1_line <0-255> connect-timeout <0-60> . . . 77

1.8.2 e1_line <0-255> driver (misdn|misdn_lapd|dahdi|e1d|ipa|unixsocket) . . . 77
1.8.3 e1_line <0-255> ipa-keepalive <1-300> <1-300> . . . 78
1.8.4 e1_line <0-255> keepalive . . . 78
1.8.5 e1_line <0-255> keepalive <1-300> <1-20> <1-300> . . . 79
1.8.6 e1_line <0-255> name .LINE . . . 79
1.8.7 e1_line <0-255> pcap .FILE . . . 80
1.8.8 e1_line <0-255> port <0-255> . . . 80
1.8.9 e1_line <0-255> socket .SOCKET . . . 81
1.8.10 ipa bind A.B.C.D . . . 81
1.8.11 ipa ip-dscp (oml|rsl) <0-63> . . . 82
1.8.12 ipa socket-priority (oml|rsl) <0-255> . . . 82
1.8.13 no e1_line <0-255> ipa-keepalive . . . 83
1.8.14 no e1_line <0-255> keepalive . . . 83
1.8.15 no e1_line <0-255> pcap . . . 84
1.9 config-ctrl . . . 84
1.9.1 bind A.B.C.D [<0-65535>] . . . 84
1.10 config-cpu-sched . . . 85
1.10.1 cpu-affinity (self|all|<0-4294967295>|THREADNAME) CPUHEXMASK [delay] . . . 85
1.10.2 policy rr <1-32> . . . 85
1.11 config-mgcp . . . 86
1.11.1 bind ip (A.B.C.D|X:X::X:X) . . . 86
1.11.2 bind port <0-65534> . . . 86
1.11.3 call-agent ip (A.B.C.D|X:X::X:X) . . . 86
1.11.4 conn-timeout <0-65534> . . . 87
1.11.5 domain NAME . . . 87
1.11.6 force-realloc (0|1) . . . 87
1.11.7 local ip (A.B.C.D|X:X::X:X) . . . 88
1.11.8 no rtcp-omit . . . 88
1.11.9 no rtp bind-ip . . . 89
1.11.10 no rtp bind-ip-v6 . . . 89
1.11.11 no rtp force-ptime . . . 90
1.11.12 no rtp ip-probing . . . 90
1.11.13 no rtp keep-alive . . . 91
1.11.14 no rtp-patch . . . 91
1.11.15 no rtp-patch rfc5993hr . . . 91
1.11.16 no rtp-patch ssrc . . . 92
1.11.17 no rtp-patch timestamp . . . 92
1.11.18 no sdp audio-payload send-name . . . 93
1.11.19 no sdp audio-payload send-ptime . . . 93

1.11.20 number endpoints <1-65534> . . . 94
1.11.21 osmux (on|off|only) . . . 94
1.11.22 osmux batch-factor <1-8> . . . 94
1.11.23 osmux batch-size <1-65535> . . . 95
1.11.24 osmux bind-ip A.B.C.D . . . 95
1.11.25 osmux bind-ip-v6 X:X::X:X . . . 95
1.11.26 osmux dummy (on|off) . . . 96
1.11.27 osmux peer-behind-nat (on|off) . . . 96
1.11.28 osmux port <1-65535> . . . 96
1.11.29 rtcp-omit . . . 97
1.11.30 rtp bind-ip A.B.C.D . . . 97
1.11.31 rtp bind-ip-v6 X:X::X:X . . . 97
1.11.32 rtp force-ptime (10|20|40) . . . 98
1.11.33 rtp ip-dscp <0-63> . . . 98
1.11.34 rtp ip-probing . . . 99
1.11.35 rtp keep-alive <1-120> . . . 99
1.11.36 rtp keep-alive once . . . 100
1.11.37 rtp port-range <1024-65534> <1025-65535> . . . 100
1.11.38 rtp socket-priority <0-255> . . . 100
1.11.39 rtp-accept-all (0|1) . . . 101
1.11.40 rtp-patch rfc5993hr . . . 101
1.11.41 rtp-patch ssrc . . . 102
1.11.42 rtp-patch timestamp . . . 102
1.11.43 sdp audio-payload send-name . . . 102
1.11.44 sdp audio-payload send-ptime . . . 103
1.11.45 trunk <0-64> . . . 103
1.12 config-mgcp-trunk . . . 104
1.12.1 force-realloc (0|1) . . . 104
1.12.2 line <0-255> . . . 104
1.12.3 no rtcp-omit . . . 104
1.12.4 no rtp keep-alive . . . 105
1.12.5 no rtp-patch . . . 105
1.12.6 no rtp-patch rfc5993hr . . . 105
1.12.7 no rtp-patch ssrc . . . 106
1.12.8 no rtp-patch timestamp . . . 106
1.12.9 no sdp audio-payload send-name . . . 107
1.12.10 no sdp audio-payload send-ptime . . . 107
1.12.11 rtcp-omit . . . 108
1.12.12 rtp keep-alive <1-120> . . . 108

1.12.13 rtp keep-alive once . . . . . 108
1.12.14 rtp-accept-all (0|1) . . . . . 109
1.12.15 rtp-patch rfc5993hr . . . . . 109
1.12.16 rtp-patch ssrc . . . . . 110
1.12.17 rtp-patch timestamp . . . . . 110
1.12.18 sdp audio-payload send-name . . . . . 110
1.12.19 sdp audio-payload send-ptime . . . . . 111

# 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 (rtp|e1|osmux|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lst...

Command

```
logging level (rtp|e1|osmux|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats| ↩
    lgsup|loap|lss7|lsccp|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

rtp
: RTP stream handling

e1
: E1 line handling

osmux
: Osmux (Osmocom RTP multiplexing)

lglobal
: Library-internal global log family

llapd
: LAPD in libosmogsm

linp
: A-bis Intput 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 (rtp|e1|osmux|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup...

Command

```
logp (rtp|e1|osmux|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loap| ↩
    lss7|lsccp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp|lnsdata|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

rtp
: RTP stream handling

e1
: E1 line handling

osmux
: Osmux (Osmocom RTP multiplexing)

lglobal
: Library-internal global log family

llapd
: LAPD in libosmogsm

linp
: A-bis Intput 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

### 1.2.18 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 cpu-sched threads

Command

```
show cpu-sched threads
```

Parameters

show
: Show running system information

cpu-sched
: Show Sched section information

threads
: Show information about running threads)

### 1.2.22 show e1_driver

Command

```
show e1_driver
```

Parameters

show
: Show running system information

e1_driver
: Display information about available E1 drivers

### 1.2.23 show e1_line [<0-255>] [stats]

Command

```
show e1_line [<0-255>] [stats]
```

Parameters

show
: Show running system information

e1_line
: Display information about a E1 line

[<0-255>]
: E1 Line Number

[stats]
: Include statistics

### 1.2.24 show e1_timeslot [<0-255>] [<0-31>]

Command

```
show e1_timeslot [<0-255>] [<0-31>]
```

Parameters

show
: Show running system information

e1_timeslot
: Display information about a E1 timeslot

[<0-255>]
: E1 Line Number

[<0-31>]
: E1 Timeslot Number

### 1.2.25 show history

Command

```
show history
```

Parameters

show
: Show running system information

history
: Display the session command history

### 1.2.26 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

### 1.2.27 show mgcp [stats]

Command

```
show mgcp [stats]
```

Parameters

show
: Show running system information

mgcp
: Display information about the MGCP Media Gateway

[stats]
: Include statistics

### 1.2.28 show mgcp active

Command

```
show mgcp active
```

Parameters

show
: Show running system information

mgcp
: Display information about the MGCP Media Gateway

active
: Show only endpoints with active connections

### 1.2.29 show mgcp endpoint NAME

Command

```
show mgcp endpoint NAME
```

Parameters

show
: Show running system information

mgcp
: Display information about the MGCP Media Gateway

endpoint
: Display information about an endpoint

NAME
: The name of the endpoint

### 1.2.30 show mgcp trunk <0-64> endpoint NAME

Command

```
show mgcp trunk <0-64> endpoint NAME
```

Parameters

show
: Show running system information

mgcp
: Display information about the MGCP Media Gateway

trunk
: Display information about a trunk

<0-64>
: Trunk number

endpoint
: Display information about an endpoint

NAME
: The name of the endpoint

### 1.2.31 show online-help

Command

```
show online-help
```

Parameters

show
: Show running system information

online-help
: Online help

### 1.2.32 show pid

Command

```
show pid
```

Parameters

show
: Show running system information

pid
: Displays the process ID

### 1.2.33 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

### 1.2.34 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

### 1.2.35 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

### 1.2.36 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

### 1.2.37 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

### 1.2.38 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)

### 1.2.39 show uptime

Command

```
show uptime
```

Parameters

show
: Show running system information

uptime
: Displays how long the program has been running

### 1.2.40 show version

Command

```
show version
```

Parameters

show
: Show running system information

version
: Displays program version

### 1.2.41 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)

### 1.2.42 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

### 1.2.43 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 free-endpoint <0-64> NUMBER

Command

```
free-endpoint <0-64> NUMBER
```

Parameters

free-endpoint
: Free the given endpoint

<0-64>
: Trunk number

NUMBER
: Endpoint number in hex.

### 1.3.5 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

### 1.3.6 logging disable

Command

```
logging disable
```

Parameters

logging
: Configure logging

disable
: Disables logging to this vty

### 1.3.7 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

### 1.3.8 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

### 1.3.9 logging level (rtp|e1|osmux|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lst...

Command

```
logging level (rtp|e1|osmux|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats| ↩
    lgsup|loap|lss7|lsccp|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

rtp
: RTP stream handling

e1
: E1 line handling

osmux
: Osmux (Osmocom RTP multiplexing)

lglobal
: Library-internal global log family

llapd
: LAPD in libosmogsm

linp
: A-bis Intput 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

### 1.3.10 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

### 1.3.11 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

### 1.3.12 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

### 1.3.13 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>’)

### 1.3.14 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

### 1.3.15 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.

### 1.3.16 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

### 1.3.17 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

### 1.3.18 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

### 1.3.19 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

### 1.3.20 logp (rtp|e1|osmux|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup...

Command

```
logp (rtp|e1|osmux|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loap| ↩
    lss7|lsccp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp|lnsdata|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

rtp
: RTP stream handling

e1
: E1 line handling

osmux
: Osmux (Osmocom RTP multiplexing)

lglobal
: Library-internal global log family

llapd
: LAPD in libosmogsm

linp
: A-bis Intput 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

### 1.3.21 loop-endpoint <0-64> NAME (0|1)

Command

```
loop-endpoint <0-64> NAME (0|1)
```

Parameters

loop-endpoint
: Loop a given endpoint

<0-64>
: Trunk number

NAME
: The name in hex of the endpoint

0
: Disable the loop

1
: Enable the loop

### 1.3.22 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>'

### 1.3.23 reset-all-endpoints

Command

```
reset-all-endpoints
```

Parameters

reset-all-endpoints
: Reset all endpoints

### 1.3.24 reset-endpoint <0-64> NUMBER

Command

```
reset-endpoint <0-64> NUMBER
```

Parameters

reset-endpoint
: Reset the given endpoint

<0-64>
: Trunk number

NUMBER
: Endpoint number in hex.

### 1.3.25 show alarms

Command

```
show alarms
```

Parameters

show
: Show running system information

alarms
: Show current logging configuration

### 1.3.26 show asciidoc counters

Command

```
show asciidoc counters
```

Parameters

show
: Show running system information

asciidoc
: Asciidoc generation

counters
: Generate table of all registered counters

### 1.3.27 show cpu-sched threads

Command

```
show cpu-sched threads
```

Parameters

show
: Show running system information

cpu-sched
: Show Sched section information

threads
: Show information about running threads)

### 1.3.28 show e1_driver

Command

```
show e1_driver
```

Parameters

show
: Show running system information

e1_driver
: Display information about available E1 drivers

### 1.3.29 show e1_line [<0-255>] [stats]

Command

```
show e1_line [<0-255>] [stats]
```

Parameters

show
: Show running system information

e1_line
: Display information about a E1 line

[<0-255>]
: E1 Line Number

[stats]
: Include statistics

### 1.3.30 show e1_timeslot [<0-255>] [<0-31>]

Command

```
show e1_timeslot [<0-255>] [<0-31>]
```

Parameters

show
: Show running system information

e1_timeslot
: Display information about a E1 timeslot

[<0-255>]
: E1 Line Number

[<0-31>]
: E1 Timeslot Number

### 1.3.31 show history

Command

```
show history
```

Parameters

show
: Show running system information

history
: Display the session command history

### 1.3.32 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

### 1.3.33 show mgcp [stats]

Command

```
show mgcp [stats]
```

Parameters

show
: Show running system information

mgcp
: Display information about the MGCP Media Gateway

[stats]
: Include statistics

### 1.3.34 show mgcp active

Command

```
show mgcp active
```

Parameters

show
: Show running system information

mgcp
: Display information about the MGCP Media Gateway

active
: Show only endpoints with active connections

### 1.3.35 show mgcp endpoint NAME

Command

```
show mgcp endpoint NAME
```

Parameters

show
: Show running system information

mgcp
: Display information about the MGCP Media Gateway

endpoint
: Display information about an endpoint

NAME
: The name of the endpoint

### 1.3.36 show mgcp trunk <0-64> endpoint NAME

Command

```
show mgcp trunk <0-64> endpoint NAME
```

Parameters

show
: Show running system information

mgcp
: Display information about the MGCP Media Gateway

trunk
: Display information about a trunk

<0-64>
: Trunk number

endpoint
: Display information about an endpoint

NAME
: The name of the endpoint

### 1.3.37 show online-help

Command

```
show online-help
```

Parameters

show
: Show running system information

online-help
: Online help

### 1.3.38 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

### 1.3.39 show startup-config

Command

```
show startup-config
```

Parameters

show
: Show running system information

startup-config
: Contentes of startup configuration

### 1.3.40 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

### 1.3.41 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

### 1.3.42 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

### 1.3.43 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

### 1.3.44 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)

### 1.3.45 show version

Command

```
show version
```

Parameters

show
: Show running system information

version
: Displays program version

### 1.3.46 shutdown

Command

```
shutdown
```

Parameters

shutdown
: Request a shutdown of the program

### 1.3.47 stats report

Command

```
stats report
```

Parameters

stats
: Stats related commands

report
: Manurally trigger reporting of stats

### 1.3.48 stats reset

Command

```
stats reset
```

Parameters

stats
: Stats related commands

reset
: Reset all rate counter stats

### 1.3.49 tap-rtp <0-64> ENDPOINT CONN (in|out) (A.B.C.D|X:X::X:X) <0-65534>

Command

```
tap-rtp <0-64> ENDPOINT CONN (in|out) (A.B.C.D|X:X::X:X) <0-65534>
```

Parameters

tap-rtp
: Forward data on endpoint to a different system

<0-64>
: Trunk number

ENDPOINT
: The endpoint in hex

CONN
: The connection id in hex

in
: Forward incoming data

out
: Forward leaving data

A.B.C.D
: Destination IPv4 of the data

X:X::X:X
: Destination IPv6 of the data

<0-65534>
: Destination port

### 1.3.50 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)

### 1.3.51 terminal monitor

Command

```
terminal monitor
```

Parameters

terminal
: Set terminal line parameters

monitor
: Copy debug output to the current terminal line

### 1.3.52 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

### 1.3.53 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

### 1.3.54 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 cpu-sched

Command

```
cpu-sched
```

Parameters

cpu-sched
: Configure CPU Scheduler related settings

### 1.4.4 ctrl

Command

```
ctrl
```

Parameters

ctrl
: Configure the Control Interface

### 1.4.5 e1_input

Command

```
e1_input
```

Global attributes

Flag: !

This command applies immediately

Parameters

e1_input

Configure E1/T1/J1 TDM input

### 1.4.6 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

### 1.4.7 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

### 1.4.8 hostname WORD

Command

```
hostname WORD
```

Parameters

hostname
: Set system's network name

WORD
: This system's network name

### 1.4.9 line vty

Command

```
line vty
```

Parameters

line
: Configure a terminal line

vty
: Virtual terminal

### 1.4.10 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

### 1.4.11 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

### 1.4.12 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)

### 1.4.13 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

### 1.4.14 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

### 1.4.15 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

### 1.4.16 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

### 1.4.17 mgcp

Command

```
mgcp
```

Parameters

mgcp
: Configure the MGCP

### 1.4.18 no banner motd

Command

```
no banner motd
```

Parameters

no
: Negate a command or set its defaults

banner
: Set banner string

motd
: Strings for motd

### 1.4.19 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

### 1.4.20 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

### 1.4.21 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

### 1.4.22 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

### 1.4.23 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)

### 1.4.24 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

### 1.4.25 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

### 1.4.26 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

### 1.4.27 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

### 1.4.28 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)

### 1.4.29 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

### 1.4.30 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

### 1.4.31 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

### 1.4.32 password LINE

Command

```
password LINE
```

Parameters

password
: Assign the terminal connection password

LINE
: The UNENCRYPTED (cleartext) line password

### 1.4.33 service advanced-vty

Command

```
service advanced-vty
```

Parameters

service
: Set up miscellaneous service

advanced-vty
: Enable advanced mode vty interface

### 1.4.34 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)

### 1.4.35 show history

Command

```
show history
```

Parameters

show
: Show running system information

history
: Display the session command history

### 1.4.36 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)

### 1.4.37 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

### 1.4.38 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

### 1.4.39 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

### 1.4.40 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 (rtp|e1|osmux|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lst...

Command

```
logging level (rtp|e1|osmux|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats| ↩
    lgsup|loap|lss7|lsccp|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

rtp
: RTP stream handling

e1
: E1 line handling

osmux
: Osmux (Osmocom RTP multiplexing)

lglobal
: Library-internal global log family

llapd
: LAPD in libosmogsm

linp
: A-bis Intput 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 config-e1_input

### 1.8.1 e1_line <0-255> connect-timeout <0-60>

Command

```
e1_line <0-255> connect-timeout <0-60>
```

Global attributes

Flag: !

This command applies immediately

Parameters

e1_line

Configure E1/T1/J1 Line

<0-255>

Line Number

connect-timeout

Set connect timeout

<0-60>

Connect timeout in seconds (0 to disable)

### 1.8.2 e1_line <0-255> driver (misdn|misdn_lapd|dahdi|e1d|ipa|unixsocket)

Command

```
e1_line <0-255> driver (misdn|misdn_lapd|dahdi|e1d|ipa|unixsocket)
```

Parameters

e1_line

Configure E1/T1/J1 Line

<0-255>

Line Number

driver

Set driver for this line

misdn

mISDN supported E1 Card (kernel LAPD)

misdn_lapd

mISDN supported E1 Card (userspace LAPD)

dahdi

DAHDI supported E1/T1/J1 Card

e1d
: osmo-e1d supported E1 interface

ipa
: IPA TCP/IP input

unixsocket
: Unix socket input

### 1.8.3 e1_line <0-255> ipa-keepalive <1-300> <1-300>

Command

```
e1_line <0-255> ipa-keepalive <1-300> <1-300>
```

Global attributes

Flag: !
: This command applies immediately

Parameters

e1_line
: Configure E1/T1/J1 Line

<0-255>
: Line Number

ipa-keepalive
: Enable IPA PING/PONG keep-alive

<1-300>
: Idle interval in seconds before probes are sent

<1-300>
: Time to wait for PONG response

### 1.8.4 e1_line <0-255> keepalive

Command

```
e1_line <0-255> keepalive
```

Library specific attributes

Flag: I
: This command applies on IPA link establishment

Parameters

e1_line
: Configure E1/T1/J1 Line

<0-255>
: Line Number

keepalive
: Enable keep-alive probing

### 1.8.5 e1_line <0-255> keepalive <1-300> <1-20> <1-300>

Command

```
e1_line <0-255> keepalive <1-300> <1-20> <1-300>
```

Library specific attributes

Flag: I

This command applies on IPA link establishment

Parameters

e1_line

Configure E1/T1/J1 Line

<0-255>

Line Number

keepalive

Enable keep-alive probing

<1-300>

Idle interval in seconds before probes are sent

<1-20>

Number of probes to sent

<1-300>

Delay between probe packets in seconds

### 1.8.6 e1_line <0-255> name .LINE

Command

```
e1_line <0-255> name .LINE
```

Global attributes

Flag: !

This command applies immediately

Parameters

e1_line

Configure E1/T1/J1 Line

<0-255>

Line Number

name

Set name for this line

.LINE

Human readable name

### 1.8.7 e1_line <0-255> pcap .FILE

Command

```
e1_line <0-255> pcap .FILE
```

Global attributes

Flag: !

This command applies immediately

Parameters

e1_line

Configure E1/T1/J1 Line

<0-255>

Line Number

pcap

Setup a pcap recording of E1 traffic for line

.FILE

Filename to save the packets to

### 1.8.8 e1_line <0-255> port <0-255>

Command

```
e1_line <0-255> port <0-255>
```

Library specific attributes

Flag: L

This command applies on E1 line update

Parameters

e1_line

Configure E1/T1/J1 Line

<0-255>

Line Number

port

Set physical port/span/card number

<0-255>

E1/T1 Port/Span/Card number

### 1.8.9 e1_line <0-255> socket .SOCKET

Command

```
e1_line <0-255> socket .SOCKET
```

Library specific attributes

Flag: L
: This command applies on E1 line update

Parameters

e1_line
: Configure E1/T1/J1 Line

<0-255>
: Line Number

socket
: Set socket path for unixsocket

.SOCKET
: socket path

### 1.8.10 ipa bind A.B.C.D

Command

```
ipa bind A.B.C.D
```

Library specific attributes

Flag: L
: This command applies on E1 line update

Parameters

ipa
: ipa driver config

bind
: Set ipa local bind address

A.B.C.D
: Listen on this IP address (default 0.0.0.0)

### 1.8.11 ipa ip-dscp (oml|rsl) <0-63>

Command

```
ipa ip-dscp (oml|rsl) <0-63>
```

Library specific attributes

Flag: I

This command applies on IPA link establishment

Parameters

ipa

ipa driver config

ip-dscp

Set IP DSCP value for outbound packets

oml

Set IP DSCP for OML link

rsl

Set IP DSCP for RSL link

<0-63>

IP DSCP Value to use

### 1.8.12 ipa socket-priority (oml|rsl) <0-255>

Command

```
ipa socket-priority (oml|rsl) <0-255>
```

Library specific attributes

Flag: I

This command applies on IPA link establishment

Parameters

ipa

ipa driver config

socket-priority

Set socket priority value for outbound packets

oml

Set socket priority for OML link

rsl

Set socket priority for RSL link

<0-255>

socket priority value to use (>6 requires CAP_NET_ADMIN)

### 1.8.13 no e1_line <0-255> ipa-keepalive

Command

```
no e1_line <0-255> ipa-keepalive
```

Global attributes

Flag: !

This command applies immediately

Parameters

no

Negate a command or set its defaults

e1_line

Configure E1/T1/J1 Line

<0-255>

Line Number

ipa-keepalive

Enable IPA PING/PONG keep-alive

### 1.8.14 no e1_line <0-255> keepalive

Command

```
no e1_line <0-255> keepalive
```

Library specific attributes

Flag: I

This command applies on IPA link establishment

Parameters

no

Negate a command or set its defaults

e1_line

Configure E1/T1/J1 Line

<0-255>

Line Number

keepalive

Enable keep-alive probing

### 1.8.15 no e1_line <0-255> pcap

Command

```
no e1_line <0-255> pcap
```

Global attributes

Flag: !

This command applies immediately

Parameters

no

Negate a command or set its defaults

e1_line

Configure E1/T1/J1 Line

<0-255>

Line Number

pcap

Disable pcap recording of E1 traffic for line

## 1.9 config-ctrl

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

Command

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

Parameters

bind

Set bind address to listen for Control connections

A.B.C.D

Local IP address (default 127.0.0.1)

[<0-65535>]

Local TCP port number

## 1.10 config-cpu-sched

### 1.10.1 cpu-affinity (self|all|<0-4294967295>|THREADNAME) CPUHEXMASK [delay]

Command

```
cpu-affinity (self|all|<0-4294967295>|THREADNAME) CPUHEXMASK [delay]
```

Global attributes

Flag: !
: This command applies immediately

Parameters

cpu-affinity
: Set CPU affinity mask on a (group of) thread(s)

self
: Set CPU affinity mask on thread running the VTY

all
: Set CPU affinity mask on all process' threads

<0-4294967295>
: Set CPU affinity mask on a thread with specified PID

THREADNAME
: Set CPU affinity mask on a thread with specified thread name

CPUHEXMASK
: CPU affinity mask

[delay]
: If set, delay applying the affinity mask now and let the app handle it at a later point

### 1.10.2 policy rr <1-32>

Command

```
policy rr <1-32>
```

Global attributes

Flag: !
: This command applies immediately

Parameters

policy
: Set the scheduling policy to use for the process

rr
: Use the SCHED_RR real-time scheduling algorithm

<1-32>
: Set the SCHED_RR real-time priority

## 1.11 config-mgcp

### 1.11.1 bind ip (A.B.C.D|X:X::X:X)

Command

```
bind ip (A.B.C.D|X:X::X:X)
```

Parameters

bind
: Listen/Bind related socket option

ip
: IP information

A.B.C.D
: IPv4 Address to bind to

X:X::X:X
: IPv6 Address to bind to

### 1.11.2 bind port <0-65534>

Command

```
bind port <0-65534>
```

Parameters

bind
: Listen/Bind related socket option

port
: Port information

<0-65534>
: UDP port to listen for MGCP messages

### 1.11.3 call-agent ip (A.B.C.D|X:X::X:X)

Command

```
call-agent ip (A.B.C.D|X:X::X:X)
```

Parameters

call-agent
: Call agent information

ip

IP information

A.B.C.D

IPv4 Address of the call agent

X:X::X:X

IPv6 Address of the call agent

### 1.11.4 conn-timeout <0-65534>

Command

```
conn-timeout <0-65534>
```

Parameters

conn-timeout

Set a time after which inactive connections (CIs) are closed. Set to 0 to disable timeout. This can be used to work around interoperability problems causing connections to stay open forever, and slowly exhausting all available ports. Enable keep-alive packets in MGW clients when using this option together with LCLS (OsmoBSC, OsmoMSC: 'rtp keep-alive')!

<0-65534>

Timeout value (sec.)

### 1.11.5 domain NAME

Command

```
domain NAME
```

Parameters

domain

Set the domain part expected in MGCP messages' endpoint names

NAME

Qualified domain name expected in MGCP endpoint names, or '*' to accept any domain

### 1.11.6 force-realloc (0|1)

Command

```
force-realloc (0|1)
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

force-realloc
: Force endpoint reallocation when the endpoint is still seized

0
: Don't force reallocation

1
: force reallocation

### 1.11.7 local ip (A.B.C.D|X:X::X:X)

Command

```
local ip (A.B.C.D|X:X::X:X)
```

Application specific attributes

Flag: n
: This command applies when a new connection is created

Parameters

local
: Local options for the SDP record

ip
: IP information

A.B.C.D
: IPv4 Address to use in SDP record

X:X::X:X
: IPv6 Address to use in SDP record

### 1.11.8 no rtcp-omit

Command

```
no rtcp-omit
```

Global attributes

Flag: !
: This command applies immediately

Parameters

no
: Negate a command or set its defaults

rtcp-omit
: Drop RTCP packets in both directions

### 1.11.9 no rtp bind-ip

Command

```
no rtp bind-ip
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

no

Negate a command or set its defaults

rtp

RTP configuration

bind-ip

Bind endpoints facing the Network

### 1.11.10 no rtp bind-ip-v6

Command

```
no rtp bind-ip-v6
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

no

Negate a command or set its defaults

rtp

RTP configuration

bind-ip-v6

Bind endpoints facing the Network

### 1.11.11 no rtp force-ptime

Command

```
no rtp force-ptime
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

no

Negate a command or set its defaults

rtp

RTP configuration

force-ptime

Force a fixed ptime for packets sent

### 1.11.12 no rtp ip-probing

Command

```
no rtp ip-probing
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

no

Negate a command or set its defaults

rtp

RTP configuration

ip-probing

no automatic rtp bind ip selection

### 1.11.13 no rtp keep-alive

Command

```
no rtp keep-alive
```

Global attributes

Flag: !

This command applies immediately

Parameters

no

Negate a command or set its defaults

rtp

RTP configuration

keep-alive

Send dummy UDP packet to net RTP destination

### 1.11.14 no rtp-patch

Command

```
no rtp-patch
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

no

Negate a command or set its defaults

rtp-patch

Modify RTP packet header in both directions

### 1.11.15 no rtp-patch rfc5993hr

Command

```
no rtp-patch rfc5993hr
```

Application specific attributes

Flag: n
This command applies when a new connection is created

Parameters

no
Negate a command or set its defaults

rtp-patch
Modify RTP packet header in both directions

rfc5993hr
Convert GSM-HR from TS101318 to RFC5993 and vice versa

### 1.11.16 no rtp-patch ssrc

Command

```
no rtp-patch ssrc
```

Application specific attributes

Flag: n
This command applies when a new connection is created

Parameters

no
Negate a command or set its defaults

rtp-patch
Modify RTP packet header in both directions

ssrc
Force a fixed SSRC

### 1.11.17 no rtp-patch timestamp

Command

```
no rtp-patch timestamp
```

Application specific attributes

Flag: n
This command applies when a new connection is created

Parameters

no
Negate a command or set its defaults

rtp-patch
Modify RTP packet header in both directions

timestamp
Adjust RTP timestamp

### 1.11.18 no sdp audio-payload send-name

Command

```
no sdp audio-payload send-name
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

no

Negate a command or set its defaults

sdp

SDP File related options

audio-payload

Audio payload options

send-name

Send SDP rtpmap with the audio name

### 1.11.19 no sdp audio-payload send-ptime

Command

```
no sdp audio-payload send-ptime
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

no

Negate a command or set its defaults

sdp

SDP File related options

audio-payload

Audio payload options

send-ptime

Send SDP ptime (packet duration) attribute

### 1.11.20 number endpoints <1-65534>

Command

```
number endpoints <1-65534>
```

Parameters

number
: Number options

endpoints
: Endpoints available

<1-65534>
: Number endpoints

### 1.11.21 osmux (on|off|only)

Command

```
osmux (on|off|only)
```

Parameters

osmux
: RTP multiplexing

on
: Enable OSMUX

off
: Disable OSMUX

only
: Only use OSMUX

### 1.11.22 osmux batch-factor <1-8>

Command

```
osmux batch-factor <1-8>
```

Parameters

osmux
: RTP multiplexing

batch-factor
: Batching factor

<1-8>
: Number of messages in the batch

### 1.11.23 osmux batch-size <1-65535>

Command

```
osmux batch-size <1-65535>
```

Parameters

osmux
: RTP multiplexing

batch-size
: batch size

<1-65535>
: Batch size in bytes

### 1.11.24 osmux bind-ip A.B.C.D

Command

```
osmux bind-ip A.B.C.D
```

Parameters

osmux
: RTP multiplexing

bind-ip
: IP information

A.B.C.D
: IPv4 Address to bind to

### 1.11.25 osmux bind-ip-v6 X:X::X:X

Command

```
osmux bind-ip-v6 X:X::X:X
```

Parameters

osmux
: RTP multiplexing

bind-ip-v6
: IP information

X:X::X:X
: IPv6 Address to bind to

### 1.11.26 osmux dummy (on|off)

Command

```
osmux dummy (on|off)
```

Parameters

osmux
: RTP multiplexing

dummy
: Dummy padding

on
: Enable dummy padding

off
: Disable dummy padding

### 1.11.27 osmux peer-behind-nat (on|off)

Command

```
osmux peer-behind-nat (on|off)
```

Parameters

osmux
: RTP multiplexing

peer-behind-nat
: Define whether peer is behind NAT

on
: Peer is behind NAT

off
: Peer is NOT behind NAT

### 1.11.28 osmux port <1-65535>

Command

```
osmux port <1-65535>
```

Parameters

osmux
: RTP multiplexing

port
: port

<1-65535>
: UDP port

### 1.11.29 rtcp-omit

Command

```
rtcp-omit
```

Global attributes

Flag: !

This command applies immediately

Parameters

rtcp-omit

Drop RTCP packets in both directions

### 1.11.30 rtp bind-ip A.B.C.D

Command

```
rtp bind-ip A.B.C.D
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

rtp

RTP configuration

bind-ip

Bind endpoints facing the Network

A.B.C.D

IPv4 Address to bind to

### 1.11.31 rtp bind-ip-v6 X:X::X:X

Command

```
rtp bind-ip-v6 X:X::X:X
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

rtp
: RTP configuration

bind-ip-v6
: Bind endpoints facing the Network

X:X::X:X
: IPv6 Address to bind to

### 1.11.32 rtp force-ptime (10|20|40)

Command

```
rtp force-ptime (10|20|40)
```

Application specific attributes

Flag: n
: This command applies when a new connection is created

Parameters

rtp
: RTP configuration

force-ptime
: Force a fixed ptime for packets sentThe required ptime (packet duration) in ms

10
: 10 ms

20
: 20 ms

40
: 40 ms

### 1.11.33 rtp ip-dscp <0-63>

Command

```
rtp ip-dscp <0-63>
```

Application specific attributes

Flag: n
: This command applies when a new connection is created

Parameters

rtp
: RTP configuration

ip-dscp
: Use specified DSCP for the audio stream (including Osmux)

<0-63>
: The DSCP value

### 1.11.34 rtp ip-probing

Command

```
rtp ip-probing
```

Application specific attributes

Flag: n
: This command applies when a new connection is created

Parameters

rtp
: RTP configuration

ip-probing
: automatic rtp bind ip selection

### 1.11.35 rtp keep-alive <1-120>

Command

```
rtp keep-alive <1-120>
```

Global attributes

Flag: !
: This command applies immediately

Parameters

rtp
: RTP configuration

keep-alive
: Send dummy UDP packet to net RTP destination

<1-120>
: Keep alive interval in secs

### 1.11.36 rtp keep-alive once

Command

```
rtp keep-alive once
```

Global attributes

Flag: !

This command applies immediately

Parameters

rtp

RTP configuration

keep-alive

Send dummy UDP packet to net RTP destination

once

Send dummy packet only once after CRCX/MDCX

### 1.11.37 rtp port-range <1024-65534> <1025-65535>

Command

```
rtp port-range <1024-65534> <1025-65535>
```

Parameters

rtp

RTP configuration

port-range

Range of ports to use for the NET side

<1024-65534>

Start of the range of ports

<1025-65535>

End of the range of ports

### 1.11.38 rtp socket-priority <0-255>

Command

```
rtp socket-priority <0-255>
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

rtp

RTP configuration

socket-priority

socket priority (values > 6 require CAP_NET_ADMIN)

<0-255>

socket priority value

### 1.11.39 rtp-accept-all (0|1)

Command

```
rtp-accept-all (0|1)
```

Global attributes

Flag: !

This command applies immediately

Parameters

rtp-accept-all

Accept all RTP packets, even when the originating IP/Port does not match

0

enable filter

1

disable filter

### 1.11.40 rtp-patch rfc5993hr

Command

```
rtp-patch rfc5993hr
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

rtp-patch

Modify RTP packet header in both directions

rfc5993hr

Convert GSM-HR from TS101318 to RFC5993 and vice versa

### 1.11.41 rtp-patch ssrc

Command

```
rtp-patch ssrc
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

rtp-patch

Modify RTP packet header in both directions

ssrc

Force a fixed SSRC

### 1.11.42 rtp-patch timestamp

Command

```
rtp-patch timestamp
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

rtp-patch

Modify RTP packet header in both directions

timestamp

Adjust RTP timestamp

### 1.11.43 sdp audio-payload send-name

Command

```
sdp audio-payload send-name
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

sdp
: SDP File related options

audio-payload
: Audio payload options

send-name
: Send SDP rtpmap with the audio name

### 1.11.44 sdp audio-payload send-ptime

Command

```
sdp audio-payload send-ptime
```

Application specific attributes

Flag: n
: This command applies when a new connection is created

Parameters

sdp
: SDP File related options

audio-payload
: Audio payload options

send-ptime
: Send SDP ptime (packet duration) attribute

### 1.11.45 trunk <0-64>

Command

```
trunk <0-64>
```

Parameters

trunk
: Configure a SS7 trunk

<0-64>
: Trunk Nr

## 1.12 config-mgcp-trunk

### 1.12.1 force-realloc (0|1)

Command

```
force-realloc (0|1)
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

force-realloc

Force endpoint reallocation when the endpoint is still seized

0

Don't force reallocation

1

force reallocation

### 1.12.2 line <0-255>

Command

```
line <0-255>
```

Parameters

line

Configure trunk for given Line

<0-255>

E1/T1 Line Number

### 1.12.3 no rtcp-omit

Command

```
no rtcp-omit
```

Global attributes

Flag: !

This command applies immediately

Parameters

no

Negate a command or set its defaults

rtcp-omit

Drop RTCP packets in both directions

### 1.12.4 no rtp keep-alive

Command

```
no rtp keep-alive
```

Global attributes

Flag: !

This command applies immediately

Parameters

no

Negate a command or set its defaults

rtp

RTP configuration

keep-alive

Send dummy UDP packet to net RTP destination

### 1.12.5 no rtp-patch

Command

```
no rtp-patch
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

no

Negate a command or set its defaults

rtp-patch

Modify RTP packet header in both directions

### 1.12.6 no rtp-patch rfc5993hr

Command

```
no rtp-patch rfc5993hr
```

Application specific attributes

Flag: n
This command applies when a new connection is created

Parameters

no
Negate a command or set its defaults

rtp-patch
Modify RTP packet header in both directions

rfc5993hr
Convert GSM-HR from TS101318 to RFC5993 and vice versa

### 1.12.7 no rtp-patch ssrc

Command

```
no rtp-patch ssrc
```

Application specific attributes

Flag: n
This command applies when a new connection is created

Parameters

no
Negate a command or set its defaults

rtp-patch
Modify RTP packet header in both directions

ssrc
Force a fixed SSRC

### 1.12.8 no rtp-patch timestamp

Command

```
no rtp-patch timestamp
```

Application specific attributes

Flag: n
This command applies when a new connection is created

Parameters

no
Negate a command or set its defaults

rtp-patch
Modify RTP packet header in both directions

timestamp
Adjust RTP timestamp

### 1.12.9 no sdp audio-payload send-name

Command

```
no sdp audio-payload send-name
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

no

Negate a command or set its defaults

sdp

SDP File related options

audio-payload

Audio payload options

send-name

Send SDP rtpmap with the audio name

### 1.12.10 no sdp audio-payload send-ptime

Command

```
no sdp audio-payload send-ptime
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

no

Negate a command or set its defaults

sdp

SDP File related options

audio-payload

Audio payload options

send-ptime

Send SDP ptime (packet duration) attribute

### 1.12.11 rtcp-omit

Command

```
rtcp-omit
```

Global attributes

Flag: !

This command applies immediately

Parameters

rtcp-omit

Drop RTCP packets in both directions

### 1.12.12 rtp keep-alive <1-120>

Command

```
rtp keep-alive <1-120>
```

Global attributes

Flag: !

This command applies immediately

Parameters

rtp

RTP configuration

keep-alive

Send dummy UDP packet to net RTP destination

<1-120>

Keep-alive interval in secs

### 1.12.13 rtp keep-alive once

Command

```
rtp keep-alive once
```

Global attributes

Flag: !

This command applies immediately

Parameters

rtp
: RTP configuration

keep-alive
: Send dummy UDP packet to net RTP destination

once
: Send dummy packet only once after CRCX/MDCX

### 1.12.14 rtp-accept-all (0|1)

Command

```
rtp-accept-all (0|1)
```

Global attributes

Flag: !
: This command applies immediately

Parameters

rtp-accept-all
: Accept all RTP packets, even when the originating IP/Port does not match

0
: enable filter

1
: disable filter

### 1.12.15 rtp-patch rfc5993hr

Command

```
rtp-patch rfc5993hr
```

Application specific attributes

Flag: n
: This command applies when a new connection is created

Parameters

rtp-patch
: Modify RTP packet header in both directions

rfc5993hr
: Convert GSM-HR from TS101318 to RFC5993 and vice versa

### 1.12.16 rtp-patch ssrc

Command

```
rtp-patch ssrc
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

rtp-patch

Modify RTP packet header in both directions

ssrc

Force a fixed SSRC

### 1.12.17 rtp-patch timestamp

Command

```
rtp-patch timestamp
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

rtp-patch

Modify RTP packet header in both directions

timestamp

Adjust RTP timestamp

### 1.12.18 sdp audio-payload send-name

Command

```
sdp audio-payload send-name
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

sdp
: SDP File related options

audio-payload
: Audio payload options

send-name
: Send SDP rtpmap with the audio name

### 1.12.19 sdp audio-payload send-ptime

Command

```
sdp audio-payload send-ptime
```

Application specific attributes

Flag: n
: This command applies when a new connection is created

Parameters

sdp
: SDP File related options

audio-payload
: Audio payload options

send-ptime
: Send SDP ptime (packet duration) attribute