

## **OsmoMGW VTY Reference**

Copyright © 2017

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

**COLLABORATORS**

|               |   |                |                  |
|---------------|---|----------------|------------------|
|               | <i>TITLE :</i><br>OsmoMGW VTY Reference |                |                  |
| <i>ACTION</i> | <i>NAME</i>                             | <i>DATE</i>    | <i>SIGNATURE</i> |
| WRITTEN BY    |   | April 19, 2021 |                  |

**REVISION HISTORY**

| NUMBER | DATE               | DESCRIPTION | NAME |
|--------|--------------------|-------------|------|
| v1     | 12th December 2017 | Initial     | pm   |

# Contents

|          |   |          |
|----------|---|----------|
| <b>1</b> | <b>VTY reference</b>  | <b>1</b> |
| 1.1      | Common Commands   | 1        |
| 1.1.1    | end   | 2        |
| 1.1.2    | exit  | 2        |
| 1.1.3    | help  | 2        |
| 1.1.4    | list [with-flags]   | 2        |
| 1.1.5    | show running-config   | 3        |
| 1.1.6    | show vty-attributes   | 3        |
| 1.1.7    | show vty-attributes (application library global)                                | 3        |
| 1.1.8    | write   | 4        |
| 1.1.9    | write file [PATH]   | 4        |
| 1.1.10   | write memory  | 4        |
| 1.1.11   | write terminal  | 4        |
| 1.2      | view  | 5        |
| 1.2.1    | enable [expert-mode]  | 5        |
| 1.2.2    | logging color (0 1)   | 5        |
| 1.2.3    | logging disable   | 5        |
| 1.2.4    | logging enable  | 6        |
| 1.2.5    | logging filter all (0 1)  | 6        |
| 1.2.6    | logging level (rtple1 global lapd linp lmux lmi lmb lsm lctrl lgtpl stats lg... | 6        |
| 1.2.7    | logging level force-all (debug info notice error fatal)                         | 8        |
| 1.2.8    | logging level set-all (debug info notice error fatal)                           | 9        |
| 1.2.9    | logging print category (0 1)  | 9        |
| 1.2.10   | logging print category-hex (0 1)  | 10       |
| 1.2.11   | logging print extended-timestamp (0 1)  | 10       |
| 1.2.12   | logging print file (0 1 basename) [last]  | 11       |
| 1.2.13   | logging print level (0 1)   | 11       |
| 1.2.14   | logging print thread-id (0 1)   | 12       |
| 1.2.15   | logging set-log-mask MASK   | 12       |
| 1.2.16   | logging timestamp (0 1)   | 13       |

|        |   |    |
|--------|---|----|
| 1.2.17 | logp (rtple1lgloballllapdlinpllmuxllmillmibllsmsllctrlllgtpllstatsllgsuplloapl... | 13 |
| 1.2.18 | no logging level force-all  | 15 |
| 1.2.19 | show alarms   | 15 |
| 1.2.20 | show asciidoc counters  | 16 |
| 1.2.21 | show cpu-sched threads  | 16 |
| 1.2.22 | show e1_driver  | 16 |
| 1.2.23 | show e1_line [line_nr] [stats]  | 17 |
| 1.2.24 | show e1_timeslot [line_nr] [ts_nr]  | 17 |
| 1.2.25 | show history  | 17 |
| 1.2.26 | show logging vty  | 18 |
| 1.2.27 | show mgcp [stats]   | 18 |
| 1.2.28 | show mgcp endpoint NAME   | 18 |
| 1.2.29 | show mgcp trunk <0-64> endpoint NAME  | 19 |
| 1.2.30 | show online-help  | 19 |
| 1.2.31 | show rate-counters  | 19 |
| 1.2.32 | show stats  | 20 |
| 1.2.33 | show stats level (globalpeerlsubscriber)  | 20 |
| 1.2.34 | show talloc-context (applicationall) (fullllbrieflDEPTH)                          | 20 |
| 1.2.35 | show talloc-context (applicationall) (fullllbrieflDEPTH) filter REGEXP            | 21 |
| 1.2.36 | show talloc-context (applicationall) (fullllbrieflDEPTH) tree ADDRESS             | 22 |
| 1.2.37 | show version  | 22 |
| 1.2.38 | terminal length <0-512>   | 23 |
| 1.2.39 | terminal no length  | 23 |
| 1.2.40 | who   | 23 |
| 1.3    | enable  | 23 |
| 1.3.1  | configure terminal  | 24 |
| 1.3.2  | copy running-config startup-config  | 24 |
| 1.3.3  | disable   | 24 |
| 1.3.4  | free-endpoint <0-64> NUMBER   | 25 |
| 1.3.5  | logging color (0l1)   | 25 |
| 1.3.6  | logging disable   | 25 |
| 1.3.7  | logging enable  | 26 |
| 1.3.8  | logging filter all (0l1)  | 26 |
| 1.3.9  | logging level (rtple1lgloballllapdlinpllmuxllmillmibllsmsllctrlllgtpllstatsllg... | 26 |
| 1.3.10 | logging level force-all (debuglinfolnoticeerrorlfatal)                            | 28 |
| 1.3.11 | logging level set-all (debuglinfolnoticeerrorlfatal)                              | 29 |
| 1.3.12 | logging print category (0l1)  | 29 |
| 1.3.13 | logging print category-hex (0l1)  | 30 |
| 1.3.14 | logging print extended-timestamp (0l1)  | 30 |

|        |   |    |
|--------|---|----|
| 1.3.15 | logging print file (0 1 basename) [last]  | 31 |
| 1.3.16 | logging print level (0 1)   | 31 |
| 1.3.17 | logging print thread-id (0 1)   | 32 |
| 1.3.18 | logging set-log-mask MASK   | 32 |
| 1.3.19 | logging timestamp (0 1)   | 33 |
| 1.3.20 | logp (rtple l global lapd linp lmux lmi l mib l sms l ctrl l gtpl stats l gsup l loapl ...) | 33 |
| 1.3.21 | loop-endpoint <0-64> NAME (0 1)   | 35 |
| 1.3.22 | no logging level force-all  | 35 |
| 1.3.23 | reset-all-endpoints   | 36 |
| 1.3.24 | reset-endpoint <0-64> NUMBER  | 36 |
| 1.3.25 | show alarms   | 36 |
| 1.3.26 | show asciidoc counters  | 37 |
| 1.3.27 | show cpu-sched threads  | 37 |
| 1.3.28 | show e1_driver  | 37 |
| 1.3.29 | show e1_line [line_nr] [stats]  | 38 |
| 1.3.30 | show e1_timeslot [line_nr] [ts_nr]  | 38 |
| 1.3.31 | show history  | 38 |
| 1.3.32 | show logging vty  | 39 |
| 1.3.33 | show mgcp [stats]   | 39 |
| 1.3.34 | show mgcp endpoint NAME   | 39 |
| 1.3.35 | show mgcp trunk <0-64> endpoint NAME  | 40 |
| 1.3.36 | show online-help  | 40 |
| 1.3.37 | show rate-counters  | 40 |
| 1.3.38 | show startup-config   | 41 |
| 1.3.39 | show stats  | 41 |
| 1.3.40 | show stats level (global peer subscriber)   | 41 |
| 1.3.41 | show talloc-context (application all) (full brief DEPTH)                                    | 42 |
| 1.3.42 | show talloc-context (application all) (full brief DEPTH) filter REGEXP                      | 42 |
| 1.3.43 | show talloc-context (application all) (full brief DEPTH) tree ADDRESS                       | 43 |
| 1.3.44 | show version  | 43 |
| 1.3.45 | stats report  | 44 |
| 1.3.46 | stats reset   | 44 |
| 1.3.47 | tap-rtp <0-64> ENDPOINT CONN (in out) (A.B.C.D X::X::X:X) <0-65534>                         | 44 |
| 1.3.48 | terminal length <0-512>   | 45 |
| 1.3.49 | terminal monitor  | 45 |
| 1.3.50 | terminal no length  | 46 |
| 1.3.51 | terminal no monitor   | 46 |
| 1.3.52 | who   | 46 |
| 1.4    | config  | 46 |

|        |   |    |
|--------|---|----|
| 1.4.1  | banner motd default . . . . .   | 47 |
| 1.4.2  | banner motd file [FILE] . . . . .                                       | 47 |
| 1.4.3  | cpu-sched . . . . .   | 47 |
| 1.4.4  | ctrl . . . . .  | 48 |
| 1.4.5  | e1_input . . . . .  | 48 |
| 1.4.6  | enable password (8l) WORD . . . . .                                     | 48 |
| 1.4.7  | enable password LINE . . . . .  | 49 |
| 1.4.8  | hostname WORD . . . . .   | 49 |
| 1.4.9  | line vty . . . . .  | 49 |
| 1.4.10 | log alarms <2-32700> . . . . .  | 50 |
| 1.4.11 | log file .FILENAME . . . . .  | 50 |
| 1.4.12 | log gsmmap [HOSTNAME] . . . . .   | 50 |
| 1.4.13 | log stderr . . . . .  | 51 |
| 1.4.14 | log syslog (authpriv cron daemon ftp lpr mail news user uucp) . . . . . | 51 |
| 1.4.15 | log syslog local <0-7> . . . . .  | 52 |
| 1.4.16 | log systemd-journal [raw] . . . . .                                     | 52 |
| 1.4.17 | mgcp . . . . .  | 52 |
| 1.4.18 | no banner motd . . . . .  | 53 |
| 1.4.19 | no enable password . . . . .  | 53 |
| 1.4.20 | no hostname [HOSTNAME] . . . . .  | 53 |
| 1.4.21 | no log alarms . . . . .   | 54 |
| 1.4.22 | no log file .FILENAME . . . . .   | 54 |
| 1.4.23 | no log stderr . . . . .   | 54 |
| 1.4.24 | no log syslog . . . . .   | 55 |
| 1.4.25 | no log systemd-journal . . . . .  | 55 |
| 1.4.26 | no service advanced-vty . . . . .                                       | 55 |
| 1.4.27 | no service terminal-length [<0-512>] . . . . .                          | 56 |
| 1.4.28 | no stats reporter log . . . . .   | 56 |
| 1.4.29 | no stats reporter statsd . . . . .                                      | 56 |
| 1.4.30 | password (8l) WORD . . . . .  | 57 |
| 1.4.31 | password LINE . . . . .   | 57 |
| 1.4.32 | service advanced-vty . . . . .  | 57 |
| 1.4.33 | service terminal-length <0-512> . . . . .                               | 58 |
| 1.4.34 | show history . . . . .  | 58 |
| 1.4.35 | stats interval <0-65535> . . . . .                                      | 58 |
| 1.4.36 | stats reporter log . . . . .  | 59 |
| 1.4.37 | stats reporter statsd . . . . .   | 59 |
| 1.5    | config-log . . . . .  | 59 |
| 1.5.1  | logging color (0 1) . . . . .   | 59 |

|        |  |    |
|--------|--|----|
| 1.5.2  | logging filter all (0 1) . . . . .   | 60 |
| 1.5.3  | logging level (rtple1lgloballlapdllinpllmuxllmillmibllsmsllctrlllgtplllstatsllg... . . . . | 60 |
| 1.5.4  | logging level force-all (debuglinfofnoticeerrorlfatal) . . . . .                           | 62 |
| 1.5.5  | logging level set-all (debuglinfofnoticeerrorlfatal) . . . . .                             | 63 |
| 1.5.6  | logging print category (0 1) . . . . .   | 63 |
| 1.5.7  | logging print category-hex (0 1) . . . . .   | 64 |
| 1.5.8  | logging print extended-timestamp (0 1) . . . . .   | 64 |
| 1.5.9  | logging print file (0 1 basename) [last] . . . . .   | 65 |
| 1.5.10 | logging print level (0 1) . . . . .  | 65 |
| 1.5.11 | logging print thread-id (0 1) . . . . .  | 66 |
| 1.5.12 | logging timestamp (0 1) . . . . .  | 66 |
| 1.5.13 | no logging level force-all . . . . .   | 66 |
| 1.6    | config-stats . . . . .   | 67 |
| 1.6.1  | disable . . . . .  | 67 |
| 1.6.2  | enable . . . . .   | 67 |
| 1.6.3  | flush-period <0-65535> . . . . .   | 67 |
| 1.6.4  | level (globalpeerlsubscriber) . . . . .  | 68 |
| 1.6.5  | local-ip ADDR . . . . .  | 68 |
| 1.6.6  | mtu <100-65535> . . . . .  | 68 |
| 1.6.7  | no local-ip . . . . .  | 69 |
| 1.6.8  | no mtu . . . . .   | 69 |
| 1.6.9  | no prefix . . . . .  | 69 |
| 1.6.10 | prefix PREFIX . . . . .  | 69 |
| 1.6.11 | remote-ip ADDR . . . . .   | 70 |
| 1.6.12 | remote-port <1-65535> . . . . .  | 70 |
| 1.7    | config-line . . . . .  | 70 |
| 1.7.1  | bind A.B.C.D [<0-65535>] . . . . .   | 70 |
| 1.7.2  | login . . . . .  | 71 |
| 1.7.3  | no login . . . . .   | 71 |
| 1.8    | config-e1_input . . . . .  | 71 |
| 1.8.1  | e1_line <0-255> driver (misdnlmisdn_lapdlldahdle1dlipalunixsocket) . . . . .               | 71 |
| 1.8.2  | e1_line <0-255> ipa-keepalive <1-300> <1-300> . . . . .                                    | 72 |
| 1.8.3  | e1_line <0-255> keepalive . . . . .  | 72 |
| 1.8.4  | e1_line <0-255> keepalive <1-300> <1-20> <1-300> . . . . .                                 | 73 |
| 1.8.5  | e1_line <0-255> name .LINE . . . . .   | 73 |
| 1.8.6  | e1_line <0-255> port <0-255> . . . . .   | 74 |
| 1.8.7  | e1_line <0-255> socket .SOCKET . . . . .   | 74 |
| 1.8.8  | ipa bind A.B.C.D . . . . .   | 75 |
| 1.8.9  | no e1_line <0-255> ipa-keepalive . . . . .   | 75 |



|         |  |    |
|---------|--|----|
| 1.8.10  | no e1_line <0-255> keepalive   | 76 |
| 1.8.11  | no pcap  | 76 |
| 1.8.12  | pcap .FILE   | 77 |
| 1.9     | config-ctrl  | 77 |
| 1.9.1   | bind A.B.C.D   | 77 |
| 1.10    | config-cpu-sched   | 77 |
| 1.10.1  | cpu-affinity (self all <0-4294967295> THREADNAME) CPUHEXMASK [delay] | 77 |
| 1.10.2  | policy rr <1-32>   | 78 |
| 1.11    | config-mgcp  | 79 |
| 1.11.1  | allow-transcoding  | 79 |
| 1.11.2  | bind ip (A.B.C.D X:X::X:X)   | 79 |
| 1.11.3  | bind port <0-65534>  | 79 |
| 1.11.4  | call-agent ip (A.B.C.D X:X::X:X)                                     | 80 |
| 1.11.5  | conn-timeout <0-65534>   | 80 |
| 1.11.6  | domain NAME  | 80 |
| 1.11.7  | force-realloc (0 1)  | 81 |
| 1.11.8  | local ip (A.B.C.D X:X::X:X)  | 81 |
| 1.11.9  | no allow-transcoding   | 82 |
| 1.11.10 | no rtcp-omit   | 82 |
| 1.11.11 | no rtp bind-ip   | 82 |
| 1.11.12 | no rtp bind-ip-v6  | 83 |
| 1.11.13 | no rtp force-ptime   | 83 |
| 1.11.14 | no rtp ip-probing  | 84 |
| 1.11.15 | no rtp keep-alive  | 84 |
| 1.11.16 | no rtp-patch   | 85 |
| 1.11.17 | no rtp-patch rfc5993hr   | 85 |
| 1.11.18 | no rtp-patch ssrc  | 85 |
| 1.11.19 | no rtp-patch timestamp   | 86 |
| 1.11.20 | no sdp audio-payload send-name                                       | 86 |
| 1.11.21 | no sdp audio-payload send-ptime                                      | 87 |
| 1.11.22 | number endpoints <1-65534>   | 87 |
| 1.11.23 | osmux (on off only)  | 88 |
| 1.11.24 | osmux batch-factor <1-8>   | 88 |
| 1.11.25 | osmux batch-size <1-65535>   | 88 |
| 1.11.26 | osmux bind-ip (A.B.C.D X:X::X:X)                                     | 89 |
| 1.11.27 | osmux dummy (on off)   | 89 |
| 1.11.28 | osmux port <1-65535>   | 89 |
| 1.11.29 | rtcp-omit  | 90 |
| 1.11.30 | rtp bind-ip A.B.C.D  | 90 |

|  |     |
|--|-----|
| 1.11.31 rtp bind-ip-v6 X:X::X:X . . . . .                  | 90  |
| 1.11.32 rtp force-ptime (10 20 40) . . . . .               | 91  |
| 1.11.33 rtp ip-dscp <0-255> . . . . .                      | 91  |
| 1.11.34 rtp ip-probing . . . . .                           | 92  |
| 1.11.35 rtp keep-alive <1-120> . . . . .                   | 92  |
| 1.11.36 rtp keep-alive once . . . . .                      | 93  |
| 1.11.37 rtp port-range <1024-65534> <1025-65535> . . . . . | 93  |
| 1.11.38 rtp-accept-all (0 1) . . . . .                     | 93  |
| 1.11.39 rtp-patch rfc5993hr . . . . .                      | 94  |
| 1.11.40 rtp-patch ssrc . . . . .                           | 94  |
| 1.11.41 rtp-patch timestamp . . . . .                      | 95  |
| 1.11.42 sdp audio fntp-extra .NAME . . . . .               | 95  |
| 1.11.43 sdp audio-payload send-name . . . . .              | 96  |
| 1.11.44 sdp audio-payload send-ptime . . . . .             | 96  |
| 1.11.45 trunk <0-64> . . . . .                             | 96  |
| 1.12 config-mgcp-trunk . . . . .                           | 97  |
| 1.12.1 allow-transcoding . . . . .                         | 97  |
| 1.12.2 force-realloc (0 1) . . . . .                       | 97  |
| 1.12.3 line <0-255> . . . . .                              | 97  |
| 1.12.4 no allow-transcoding . . . . .                      | 98  |
| 1.12.5 no rtcp-omit . . . . .                              | 98  |
| 1.12.6 no rtp keep-alive . . . . .                         | 98  |
| 1.12.7 no rtp-patch . . . . .                              | 99  |
| 1.12.8 no rtp-patch rfc5993hr . . . . .                    | 99  |
| 1.12.9 no rtp-patch ssrc . . . . .                         | 100 |
| 1.12.10 no rtp-patch timestamp . . . . .                   | 100 |
| 1.12.11 no sdp audio-payload send-name . . . . .           | 101 |
| 1.12.12 no sdp audio-payload send-ptime . . . . .          | 101 |
| 1.12.13 rtcp-omit . . . . .                                | 102 |
| 1.12.14 rtp keep-alive <1-120> . . . . .                   | 102 |
| 1.12.15 rtp keep-alive once . . . . .                      | 102 |
| 1.12.16 rtp-accept-all (0 1) . . . . .                     | 103 |
| 1.12.17 rtp-patch rfc5993hr . . . . .                      | 103 |
| 1.12.18 rtp-patch ssrc . . . . .                           | 104 |
| 1.12.19 rtp-patch timestamp . . . . .                      | 104 |
| 1.12.20 sdp audio fntp-extra .NAME . . . . .               | 104 |
| 1.12.21 sdp audio-payload send-name . . . . .              | 105 |
| 1.12.22 sdp audio-payload send-ptime . . . . .             | 105 |

# 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|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lg...

#### Command

```
logging level (rtp|e1|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lg  
sup|loap|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp) (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

### lglobal

Library-internal global log family

### llapd

LAPD in libosmogsm

### linp

A-bis Input Subsystem

### lmux

A-bis B-Subchannel TRAU Frame Multiplex

### lmi

A-bis Input Driver for Signalling

### lmib

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

### lsms

Layer3 Short Message Service (SMS)

### lctrl

Control Interface

### lgtp

GPRS GTP library

### lstats

Statistics messages and logging

### lgsup

Generic Subscriber Update Protocol

### loap

Osmocom Authentication Protocol

### lss7

libosmo-sigtran Signalling System 7

### lsccp

libosmo-sigtran SCCP Implementation

### lsua

libosmo-sigtran SCCP User Adaptation

---

|        |  |
|--------|--|
| lm3ua  | libosmo-sigtran MTP3 User Adaptation         |
| lmgcp  | libosmo-mgcp Media Gateway Control Protocol  |
| ljibuf | libosmo-netif Jitter Buffer                  |
| lrspro | Remote SIM protocol                          |
| lms    | GPRS NS layer                                |
| lbssgp | GPRS BSSGP layer                             |
| 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|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loap|...

#### Command

```
logp (rtp|e1|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loap|lss7| ↵
lsccp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lms|lbssgp) (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

##### lglobal

Library-internal global log family

##### llapd

LAPD in libosmogsm

##### linp

A-bis Input Subsystem

##### lmux

A-bis B-Subchannel TRAU Frame Multiplex

##### lmi

A-bis Input Driver for Signalling



---

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

lsms  
Layer3 Short Message Service (SMS)

lctrl  
Control Interface

lgtp  
GPRS GTP library

lstats  
Statistics messages and logging

lgsup  
Generic Subscriber Update Protocol

loap  
Osmocom Authentication Protocol

lss7  
libosmo-sigtran Signalling System 7

lsccp  
libosmo-sigtran SCCP Implementation

lsua  
libosmo-sigtran SCCP User Adaptation

lm3ua  
libosmo-sigtran MTP3 User Adaptation

lmgcp  
libosmo-mgcp Media Gateway Control Protocol

ljibuf  
libosmo-netif Jitter Buffer

lrspro  
Remote SIM protocol

lns  
GPRS NS layer

lbssgp  
GPRS BSSGP layer

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 [line\_nr] [stats]

#### Command

```
show e1_line [line_nr] [stats]
```

#### Parameters

show

Show running system information

e1\_line

Display information about a E1 line

[line\_nr]

E1 Line Number

[stats]

Include statistics

### 1.2.24 show e1\_timeslot [line\_nr] [ts\_nr]

#### Command

```
show e1_timeslot [line_nr] [ts_nr]
```

#### Parameters

show

Show running system information

e1\_timeslot

Display information about a E1 timeslot

[line\_nr]

E1 Line Number

[ts\_nr]

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

vtv

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 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

### 1.2.29 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

### 1.2.30 show online-help

#### Command

```
show online-help
```

#### Parameters

##### show

Show running system information

##### online-help

Online help

### 1.2.31 show rate-counters

#### Command

```
show rate-counters
```

#### Parameters

##### show

Show running system information

##### rate-counters

Show all rate counters

---

### 1.2.32 show stats

#### Command

```
show stats
```

#### Parameters

##### show

Show running system information

##### stats

Show statistical values

### 1.2.33 show stats level (global|peer|subscriber)

#### Command

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

#### 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

### 1.2.34 show talloc-context (application|all) (full|brief|DEPTH)

#### Command

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

#### Parameters

##### show

Show running system information

---

**talloc-context**  
Show talloc memory hierarchy

**application**  
Application's context

**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

### 1.2.35 **show talloc-context (application|all) (full|brief|DEPTH) filter REGEXP**

Command

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

Parameters

**show**  
Show running system information

**talloc-context**  
Show talloc memory hierarchy

**application**  
Application's context

**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



### 1.2.36 show talloc-context (application|all) (full|brief|DEPTH) tree ADDRESS

#### Command

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

#### Parameters

##### show

Show running system information

##### talloc-context

Show talloc memory hierarchy

##### application

Application's context

##### 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)

### 1.2.37 show version

#### Command

```
show version
```

#### Parameters

##### show

Show running system information

##### version

Displays program version

### 1.2.38 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)

### 1.2.39 terminal no length

#### Command

```
terminal no length
```

#### Parameters

##### terminal

Set terminal line parameters

##### no

Negate a command or set its defaults

##### length

Set number of lines on a screen

### 1.2.40 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|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lg...

#### Command

```
logging level (rtp|e1|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lg... ↵
    loap|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp) (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

### lglobal

Library-internal global log family

### llapd

LAPD in libosmogsm

### linp

A-bis Input Subsystem

### lmux

A-bis B-Subchannel TRAU Frame Multiplex

### lmi

A-bis Input Driver for Signalling

### lmib

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

### lsms

Layer3 Short Message Service (SMS)

### lctrl

Control Interface

### lgtp

GPRS GTP library

### lstats

Statistics messages and logging

### lgsup

Generic Subscriber Update Protocol

### loap

Osmocom Authentication Protocol

### lss7

libosmo-sigtran Signalling System 7

### lsccp

libosmo-sigtran SCCP Implementation

### lsua

libosmo-sigtran SCCP User Adaptation

---

|        |  |
|--------|--|
| lm3ua  | libosmo-sigtran MTP3 User Adaptation         |
| lmgcp  | libosmo-mgcp Media Gateway Control Protocol  |
| ljibuf | libosmo-netif Jitter Buffer                  |
| lrspro | Remote SIM protocol                          |
| lms    | GPRS NS layer                                |
| lbssgp | GPRS BSSGP layer                             |
| 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|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loap|...

#### Command

```
logp (rtp|e1|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loap|lss7| ↵
lsccp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lms|lbssgp) (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

##### lglobal

Library-internal global log family

##### llapd

LAPD in libosmogsm

##### linp

A-bis Input Subsystem

##### lmux

A-bis B-Subchannel TRAU Frame Multiplex

##### lmi

A-bis Input Driver for Signalling

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

lsms  
Layer3 Short Message Service (SMS)

lctrl  
Control Interface

lgtp  
GPRS GTP library

lstats  
Statistics messages and logging

lgsup  
Generic Subscriber Update Protocol

loap  
Osmocom Authentication Protocol

lss7  
libosmo-sigtran Signalling System 7

lsccp  
libosmo-sigtran SCCP Implementation

lsua  
libosmo-sigtran SCCP User Adaptation

lm3ua  
libosmo-sigtran MTP3 User Adaptation

lmgcp  
libosmo-mgcp Media Gateway Control Protocol

ljibuf  
libosmo-netif Jitter Buffer

lrspro  
Remote SIM protocol

lns  
GPRS NS layer

lbssgp  
GPRS BSSGP layer

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 [line\_nr] [stats]

#### Command

```
show e1_line [line_nr] [stats]
```

#### Parameters

show

Show running system information

e1\_line

Display information about a E1 line

[line\_nr]

E1 Line Number

[stats]

Include statistics

### 1.3.30 show e1\_timeslot [line\_nr] [ts\_nr]

#### Command

```
show e1_timeslot [line_nr] [ts_nr]
```

#### Parameters

show

Show running system information

e1\_timeslot

Display information about a E1 timeslot

[line\_nr]

E1 Line Number

[ts\_nr]

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

vtv

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 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

---

### 1.3.35 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

### 1.3.36 show online-help

#### Command

```
show online-help
```

#### Parameters

show

Show running system information

online-help

Online help

### 1.3.37 show rate-counters

#### Command

```
show rate-counters
```

#### Parameters

show

Show running system information

rate-counters

Show all rate counters

### 1.3.38 show startup-config

#### Command

```
show startup-config
```

#### Parameters

##### show

Show running system information

##### startup-config

Contentes of startup configuration

### 1.3.39 show stats

#### Command

```
show stats
```

#### Parameters

##### show

Show running system information

##### stats

Show statistical values

### 1.3.40 show stats level (global|peer|subscriber)

#### Command

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

#### 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

---

### 1.3.41 show talloc-context (application|all) (full|brief|DEPTH)

#### Command

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

#### Parameters

show

Show running system information

talloc-context

Show talloc memory hierarchy

application

Application's context

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

### 1.3.42 show talloc-context (application|all) (full|brief|DEPTH) filter REGEXP

#### Command

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

#### Parameters

show

Show running system information

talloc-context

Show talloc memory hierarchy

application

Application's context

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

### 1.3.43 **show talloc-context (application|all) (full|brief|DEPTH) tree ADDRESS**

**Command**

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

**Parameters****show**

Show running system information

**talloc-context**

Show talloc memory hierarchy

**application**

Application's context

**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)

### 1.3.44 **show version**

**Command**

```
show version
```

**Parameters****show**

Show running system information

**version**

Displays program version

### 1.3.45 stats report

#### Command

```
stats report
```

#### Parameters

##### stats

Stats related commands

##### report

Manurally trigger reporting of stats

### 1.3.46 stats reset

#### Command

```
stats reset
```

#### Parameters

##### stats

Stats related commands

##### reset

Reset all stats

### 1.3.47 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

### 1.3.48 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)

### 1.3.49 terminal monitor

Command

```
terminal monitor
```

Parameters

terminal

Set terminal line parameters

monitor

Copy debug output to the current terminal line



### 1.3.50 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

### 1.3.51 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

### 1.3.52 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

##### vtty

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

#### Command

```
log file .FILENAME
```

#### Parameters

log

Configure logging sub-system

file

Logging to text file

.FILENAME

Filename

### 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

#### Command

```
log stderr
```

#### Parameters

log

Configure logging sub-system

stderr

Logging via STDERR of the process

### 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 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

---

### 1.4.24 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

### 1.4.25 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

### 1.4.26 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

---

### 1.4.27 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)

### 1.4.28 no stats reporter log

#### Command

```
no stats reporter log
```

#### Parameters

no

Negate a command or set its defaults

stats

Configure stats sub-system

reporter

Configure a stats reporter

log

Report to the logger

### 1.4.29 no stats reporter statsd

#### Command

```
no stats reporter statsd
```

#### 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

### 1.4.30 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

### 1.4.31 password LINE

Command

```
password LINE
```

Parameters

password

Assign the terminal connection password

LINE

The UNENCRYPTED (cleartext) line password

### 1.4.32 service advanced-vty

Command

```
service advanced-vty
```

Parameters

service

Set up miscellaneous service

advanced-vty

Enable advanced mode vty interface

### 1.4.33 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)

### 1.4.34 show history

#### Command

```
show history
```

#### Parameters

##### show

Show running system information

##### history

Display the session command history

### 1.4.35 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)

---

### 1.4.36 stats reporter log

#### Command

```
stats reporter log
```

#### Parameters

stats

Configure stats sub-system

reporter

Configure a stats reporter

log

Report to the logger

### 1.4.37 stats reporter statsd

#### Command

```
stats reporter statsd
```

#### Parameters

stats

Configure stats sub-system

reporter

Configure a stats reporter

statsd

Report to a STATSD server

## 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|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lg...****Command**

```
logging level (rtp|e1|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup| ↵
loap|lss7|lsccp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp) (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

lglobal  
Library-internal global log family

llapd  
LAPD in libosmogsm

linp  
A-bis Input Subsystem

lmux  
A-bis B-Subchannel TRAU Frame Multiplex

lmi  
A-bis Input Driver for Signalling

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

lsms  
Layer3 Short Message Service (SMS)

lctrl  
Control Interface

lgtp  
GPRS GTP library

lstats  
Statistics messages and logging

lgsup  
Generic Subscriber Update Protocol

loap  
Osmocom Authentication Protocol

lss7  
libosmo-sigtran Signalling System 7

lsccp  
libosmo-sigtran SCCP Implementation

lsua  
libosmo-sigtran SCCP User Adaptation

lm3ua  
libosmo-sigtran MTP3 User Adaptation

---



lmgcp  
libosmo-mgcp Media Gateway Control Protocol

ljibuf  
libosmo-netif Jitter Buffer

lrspro  
Remote SIM protocol

lms  
GPRS NS layer

lbssgp  
GPRS BSSGP layer

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> 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

### 1.8.2 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

### 1.8.3 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

### 1.8.4 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

### 1.8.5 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

### 1.8.6 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

### 1.8.7 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

### 1.8.8 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)

### 1.8.9 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

---

### 1.8.10 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

### 1.8.11 no pcap

#### Command

```
no pcap
```

#### Global attributes

#### Flag: !

This command applies immediately

#### Parameters

##### no

Negate a command or set its defaults

##### pcap

Disable pcap recording of all E1 traffic

## 1.8.12 pcap .FILE

Command

```
pcap .FILE
```

Global attributes

Flag: !

This command applies immediately

Parameters

pcap

Setup a pcap recording of all E1 traffic

.FILE

Filename to save the packets to

## 1.9 config-ctrl

### 1.9.1 bind A.B.C.D

Command

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

Parameters

bind

Set bind address to listen for Control connections

A.B.C.D

Local IP address (default 127.0.0.1)

## 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 allow-transcoding

Command

```
allow-transcoding
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

allow-transcoding

Allow transcoding

### 1.11.2 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

### 1.11.3 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

---

### 1.11.4 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

### 1.11.5 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.)

### 1.11.6 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

---

### 1.11.7 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

### 1.11.8 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

### 1.11.9 no allow-transcoding

#### Command

```
no allow-transcoding
```

#### Application specific attributes

Flag: n

This command applies when a new connection is created

#### Parameters

no

Negate a command or set its defaults

allow-transcoding

Allow transcoding

### 1.11.10 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

### 1.11.11 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

### 1.11.12 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

### 1.11.13 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

### 1.11.14 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

### 1.11.15 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

---

### 1.11.16 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

### 1.11.17 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

### 1.11.18 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

### 1.11.19 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

### 1.11.20 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

### 1.11.21 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

### 1.11.22 number endpoints <1-65534>

Command

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

Parameters

number

Number options

endpoints

Endpoints available

<1-65534>

Number endpoints

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

#### Command

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

#### Parameters

osmux

RTP multiplexing

on

Enable OSMUX

off

Disable OSMUX

only

Only use OSMUX

### 1.11.24 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

### 1.11.25 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

---

### 1.11.26 osmux bind-ip (A.B.C.D|X:X::X:X)

#### Command

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

#### Parameters

osmux

RTP multiplexing

bind-ip

IP information

A.B.C.D

IPv4 Address to bind to

X:X::X:X

IPv6 Address to bind to

### 1.11.27 osmux dummy (on|off)

#### Command

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

#### Parameters

osmux

RTP multiplexing

dummy

Dummy padding

on

Enable dummy padding

off

Disable dummy padding

### 1.11.28 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 <0-255>

#### Command

```
rtp ip-dscp <0-255>
```

#### Application specific attributes

Flag: n

This command applies when a new connection is created

#### Parameters

---

rtp

RTP configuration

ip-dscp

Apply IP\_TOS to the audio stream (including Osmux)

<0-255>

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-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

### 1.11.39 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

### 1.11.40 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

### 1.11.41 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

### 1.11.42 sdp audio fntp-extra .NAME

#### Command

```
sdp audio fntp-extra .NAME
```

#### Application specific attributes

#### Flag: n

This command applies when a new connection is created

#### Parameters

#### sdp

Add extra fntp for the SDP file

#### audio

Audio

#### fntp-extra

Fntp-extra

#### .NAME

Extra Information

### 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 allow-transcoding

Command

```
allow-transcoding
```

Application specific attributes

Flag: n

This command applies when a new connection is created

Parameters

allow-transcoding

Allow transcoding

### 1.12.2 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

### 1.12.3 line <0-255>

Command

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

Parameters

line

Configure trunk for given Line

<0-255>

E1/T1 Line Number

### 1.12.4 no allow-transcoding

#### Command

```
no allow-transcoding
```

#### Application specific attributes

#### Flag: n

This command applies when a new connection is created

#### Parameters

#### no

Negate a command or set its defaults

#### allow-transcoding

Allow transcoding

### 1.12.5 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

### 1.12.6 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

### 1.12.7 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

### 1.12.8 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

---

### 1.12.9 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

### 1.12.10 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

### 1.12.11 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

### 1.12.12 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



### 1.12.13 rtcp-omit

#### Command

```
rtcp-omit
```

#### Global attributes

#### Flag: !

This command applies immediately

#### Parameters

#### rtcp-omit

Drop RTCP packets in both directions

### 1.12.14 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

### 1.12.15 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

### 1.12.16 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

### 1.12.17 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

---

### 1.12.18 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

### 1.12.19 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

### 1.12.20 sdp audio fntp-extra .NAME

#### Command

```
sdp audio fntp-extra .NAME
```

#### Application specific attributes

#### Flag: n

This command applies when a new connection is created

---

## Parameters

### sdp

Add extra fntp for the SDP file

### audio

Audio

### fntp-extra

Fntp-extra

### .NAME

Extra Information

## 1.12.21 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

## 1.12.22 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