

OsmoMGCP VTY Reference

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COLLABORATORS

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Chapter 1

VTY reference

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

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

Table 1.1: VTY Parameter Patterns

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

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

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

Table 1.2: VTY port numbers

1.1

1.1.1 echo .MESSAGE

Command

```
echo .MESSAGE
```

Parameters

echo

Echo a message back to the vty

.MESSAGE

The message to echo

1.1.2 enable

Command

```
enable
```

Parameters

enable

Turn on privileged mode command

1.1.3 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

1.1.4 help

Command

```
help
```

Parameters

help

Description of the interactive help system

1.1.5 list

Command

```
list
```

Parameters

list

Print command list

1.1.6 logging color (0|1)

Command

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

Parameters

logging

Configure log message to this terminal

color

Configure color-printing for log messages

0

Don't use color for printing messages

1

Use color for printing messages

1.1.7 logging disable

Command

```
logging disable
```

Parameters

logging

Configure log message to this terminal

disable

Disables logging to this vty

1.1.8 logging enable

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

Command

```
logging enable
```

Parameters

logging

Configure log message to this terminal

enable

Enables logging to this vty

1.1.9 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 log message to this terminal

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

1.1.10 logging level (all|rll|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gprs|ns|↔ bssgp|llc|sndcp|nat|ctrl|smpp|lglobal|llapd|linp|lmux|lmi|lmib|lsms) (everything|↔ debug|info|notice|error|fatal)

Command

```
logging level (all|rll|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gprs|ns|↔  
bssgp|llc|sndcp|nat|ctrl|smpp|lglobal|llapd|linp|lmux|lmi|lmib|lsms) (everything|↔  
debug|info|notice|error|fatal)
```

Parameters

logging

Configure log message to this terminal

level

Set the log level for a specified category

all

Global setting for all subsystems

rl

A-bis Radio Link Layer (RLL)

cc

Layer3 Call Control (CC)

mm

Layer3 Mobility Management (MM)

rr

Layer3 Radio Resource (RR)

rsl

A-bis Radio Signalling Link (RSL)

nm

A-bis Network Management / O&M (NM/OML)

mncc

MNCC API for Call Control application

pag

Paging Subsystem

meas

Radio Measurement Processing

sccp

SCCP Protocol

msc

Mobile Switching Center

mgcp

Media Gateway Control Protocol

ho

Hand-Over

db

Database Layer

ref

Reference Counting

gprs

GPRS Packet Service

ns
GPRS Network Service (NS)

bssgp
GPRS BSS Gateway Protocol (BSSGP)

llc
GPRS Logical Link Control Protocol (LLC)

sndcp
GPRS Sub-Network Dependent Control Protocol (SNDTCP)

nat
GSM 08.08 NAT/Multiplexer

ctrl
Control interface

smpp
SMPP interface for external SMS apps

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)

everything
Log simply everything

debug
Log debug messages and higher levels

info
Log informational messages and higher levels

notice
Log noticable messages and higher levels

error
Log error messages and higher levels

fatal
Log only fatal messages

1.1.11 logging set log mask MASK

Command

```
logging set log mask MASK
```

Parameters

logging

Configure log message to this terminal

set

Decide which categories to output.

log

Log commands

mask

Mask commands

MASK

The logmask to use

1.1.12 logging set-log-mask MASK

Command

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

Parameters

logging

Configure log message to this terminal

set-log-mask

Set the logmask of this logging target

MASK

The logmask to use

1.1.13 logging timestamp (0|1)

Command

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

Parameters

logging

Configure log message to this terminal

timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp

1.1.14 show alarms

Command

```
show alarms
```

Parameters

show

Show running system information

alarms

Show current logging configuration

1.1.15 show history

Command

```
show history
```

Parameters

show

Show running system information

history

Display the session command history

1.1.16 show logging vty

Command

```
show logging vty
```

Parameters

show

Show running system information

logging

Show current logging configuration

vty

Show current logging configuration for this vty

1.1.17 show mgcp [stats]

Command

```
show mgcp [stats]
```

Parameters

show

Show running system information

mgcp

Display information about the MGCP Media Gateway

[stats]

Include Statistics

1.1.18 show online-help

Command

```
show online-help
```

Parameters

show

Show running system information

online-help

Online help

1.1.19 show version

Command

```
show version
```

Parameters

show

Show running system information

version

Displays program version

1.1.20 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)

1.1.21 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

1.1.22 who

Command

```
who
```

Parameters

who

Display who is on vty

1.2

1.2.1 configure terminal

Command

```
configure terminal
```

Parameters

configure

Configuration from vty interface

terminal

Configuration terminal

1.2.2 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)

1.2.3 disable

Command

```
disable
```

Parameters

disable

Turn off privileged mode command

1.2.4 echo .MESSAGE

Command

```
echo .MESSAGE
```

Parameters

echo

Echo a message back to the vty

.MESSAGE

The message to echo

1.2.5 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

1.2.6 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.

1.2.7 help

Command

```
help
```

Parameters

help

Description of the interactive help system

1.2.8 list

Command

```
list
```

Parameters

list

Print command list

1.2.9 logging color (0|1)

Command

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

Parameters

logging

Configure log message to this terminal

color

Configure color-printing for log messages

0

Don't use color for printing messages

1

Use color for printing messages

1.2.10 logging disable

Command

```
logging disable
```

Parameters

logging

Configure log message to this terminal

disable

Disables logging to this vty

1.2.11 logging enable

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

Command

```
logging enable
```

Parameters

logging

Configure log message to this terminal

enable

Enables logging to this vty

1.2.12 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 log message to this terminal

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

1.2.13 logging level (all|rll|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gprs|ns|↔ bssgp|llc|sndcp|nat|ctrl|smpp|lglobal|llapd|linp|lmux|lmi|lmib|lsms) (everything|↔ debug|info|notice|error|fatal)

Command

```
logging level (all|rll|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gprs|ns|↔  
bssgp|llc|sndcp|nat|ctrl|smpp|lglobal|llapd|linp|lmux|lmi|lmib|lsms) (everything|↔  
debug|info|notice|error|fatal)
```

Parameters

logging

Configure log message to this terminal

level

Set the log level for a specified category

all

Global setting for all subsystems

rl

A-bis Radio Link Layer (RLL)

cc

Layer3 Call Control (CC)

mm

Layer3 Mobility Management (MM)

rr

Layer3 Radio Resource (RR)

rsl

A-bis Radio Signalling Link (RSL)

nm

A-bis Network Management / O&M (NM/OML)

mncc

MNCC API for Call Control application

pag

Paging Subsystem

meas

Radio Measurement Processing

sccp

SCCP Protocol

msc

Mobile Switching Center

mgcp

Media Gateway Control Protocol

ho

Hand-Over

db

Database Layer

ref

Reference Counting

gprs

GPRS Packet Service

ns
GPRS Network Service (NS)

bssgp
GPRS BSS Gateway Protocol (BSSGP)

llc
GPRS Logical Link Control Protocol (LLC)

sndcp
GPRS Sub-Network Dependent Control Protocol (SNDTCP)

nat
GSM 08.08 NAT/Multiplexer

ctrl
Control interface

smpp
SMPP interface for external SMS apps

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)

everything
Log simply everything

debug
Log debug messages and higher levels

info
Log informational messages and higher levels

notice
Log noticable messages and higher levels

error
Log error messages and higher levels

fatal
Log only fatal messages

1.2.14 logging set log mask MASK

Command

```
logging set log mask MASK
```

Parameters

logging

Configure log message to this terminal

set

Decide which categories to output.

log

Log commands

mask

Mask commands

MASK

The logmask to use

1.2.15 logging set-log-mask MASK

Command

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

Parameters

logging

Configure log message to this terminal

set-log-mask

Set the logmask of this logging target

MASK

The logmask to use

1.2.16 logging timestamp (0|1)

Command

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

Parameters

logging

Configure log message to this terminal

timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp

1.2.17 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

1.2.18 reset-all-endpoints

Command

```
reset-all-endpoints
```

Parameters

reset-all-endpoints

Reset all endpoints

1.2.19 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.

1.2.20 show alarms

Command

```
show alarms
```

Parameters

show

Show running system information

alarms

Show current logging configuration

1.2.21 show history

Command

```
show history
```

Parameters

show

Show running system information

history

Display the session command history

1.2.22 show logging vty

Command

```
show logging vty
```

Parameters

show

Show running system information

logging

Show current logging configuration

vtty

Show current logging configuration for this vty

1.2.23 show mgcp [stats]

Command

```
show mgcp [stats]
```

Parameters

show

Show running system information

mgcp

Display information about the MGCP Media Gateway

[stats]

Include Statistics

1.2.24 show online-help

Command

```
show online-help
```

Parameters

show

Show running system information

online-help

Online help

1.2.25 show running-config

Command

```
show running-config
```

Parameters

show

Show running system information

running-config

running configuration

1.2.26 show startup-config

Command

```
show startup-config
```

Parameters

show

Show running system information

startup-config

Contentes of startup configuration

1.2.27 show version

Command

```
show version
```

Parameters

show

Show running system information

version

Displays program version

1.2.28 tap-call <0-64> ENDPOINT (bts-in|bts-out|net-in|net-out) A.B.C.D <0-65534>

Command

```
tap-call <0-64> ENDPOINT (bts-in|bts-out|net-in|net-out) A.B.C.D <0-65534>
```

Parameters

tap-call

Forward data on endpoint to a different system

<0-64>

Trunk number

ENDPOINT

The endpoint in hex

bts-in

Forward the data coming from the bts

bts-out

Forward the data coming from the bts leaving to the network

net-in

Forward the data coming from the net

net-out

Forward the data coming from the net leaving to the bts

A.B.C.D

destination IP of the data

<0-65534>

destination port

1.2.29 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)

1.2.30 terminal monitor

Command

```
terminal monitor
```

Parameters

terminal

Set terminal line parameters

monitor

Copy debug output to the current terminal line

1.2.31 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

1.2.32 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

1.2.33 who

Command

```
who
```

Parameters

who

Display who is on vty

1.2.34 write

Command

```
write
```

Parameters

write

Write running configuration to memory, network, or terminal

1.2.35 write file

Command

```
write file
```

Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

1.2.36 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)

1.2.37 write terminal

Command

```
write terminal
```

Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

1.3

1.3.1 banner motd default

Command

```
banner motd default
```

Parameters

banner

Set banner string

motd

Strings for motd

default

Default string

1.3.2 banner motd file [FILE]

Command

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

Parameters

banner

Set banner

motd

Banner for motd

file

Banner from a file

[FILE]

Filename

1.3.3 enable password (8|) WORD

Command

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

Parameters

enable

Modify enable password parameters

password

Assign the privileged level password

8

Specifies a HIDDEN password will follow

dummy string

WORD

The HIDDEN 'enable' password string

1.3.4 enable password LINE

Command

```
enable password LINE
```

Parameters

enable

Modify enable password parameters

password

Assign the privileged level password

LINE

The UNENCRYPTED (cleartext) 'enable' password

1.3.5 end

Command

```
end
```

Parameters

end

End current mode and change to enable mode.

1.3.6 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

1.3.7 help

Command

```
help
```

Parameters

help

Description of the interactive help system

1.3.8 hostname WORD

Command

```
hostname WORD
```

Parameters

hostname

Set system's network name

WORD

This system's network name

1.3.9 line vty

Command

```
line vty
```

Parameters

line

Configure a terminal line

vtty

Virtual terminal

1.3.10 list

Command

```
list
```

Parameters

list

Print command list

1.3.11 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

1.3.12 log file .FILENAME

Command

```
log file .FILENAME
```

Parameters

log

Configure logging sub-system

file

Logging to text file

.FILENAME

Filename

1.3.13 log stderr

Command

```
log stderr
```

Parameters

log

Configure logging sub-system

stderr

Logging via STDERR of the process

1.3.14 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

1.3.15 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

1.3.16 mgcp

Command

```
mgcp
```

Parameters

mgcp

Configure the MGCP

1.3.17 no banner motd

Command

```
no banner motd
```

Parameters

no

Negate a command or set its defaults

banner

Set banner string

motd

Strings for motd

1.3.18 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

1.3.19 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

1.3.20 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

1.3.21 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

1.3.22 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

1.3.23 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

1.3.24 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

1.3.25 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)

1.3.26 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

1.3.27 password LINE

Command

```
password LINE
```

Parameters

password

Assign the terminal connection password

LINE

The UNENCRYPTED (cleartext) line password

1.3.28 service advanced-vty

Command

```
service advanced-vty
```

Parameters

service

Set up miscellaneous service

advanced-vty

Enable advanced mode vty interface

1.3.29 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)

1.3.30 show history

Command

```
show history
```

Parameters

show

Show running system information

history

Display the session command history

1.3.31 show running-config

Command

```
show running-config
```

Parameters

show

Show running system information

running-config

running configuration

1.3.32 write

Command

```
write
```

Parameters

write

Write running configuration to memory, network, or terminal

1.3.33 write file

Command

```
write file
```

Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

1.3.34 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)

1.3.35 write terminal

Command

```
write terminal
```

Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

1.4

1.4.1 end

Command

```
end
```

Parameters

end

End current mode and change to enable mode.

1.4.2 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

1.4.3 help

Command

```
help
```

Parameters

help

Description of the interactive help system

1.4.4 list

Command

```
list
```

Parameters

list

Print command list

1.4.5 logging color (0|1)

Command

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

Parameters

logging

Configure log message to this terminal

color

Configure color-printing for log messages

0

Don't use color for printing messages

1

Use color for printing messages

1.4.6 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 log message to this terminal

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

1.4.7 logging level (all|rll|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gprs|ns|↔ bssgp|llc|sndcp|nat|ctrl|smpp|lglobal|llapd|linp|lmux|lmi|lmib|lsms) (everything|↔ debug|info|notice|error|fatal)

Command

```
logging level (all|rll|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gprs|ns|↔  
bssgp|llc|sndcp|nat|ctrl|smpp|lglobal|llapd|linp|lmux|lmi|lmib|lsms) (everything|↔  
debug|info|notice|error|fatal)
```

Parameters

logging

Configure log message to this terminal

level

Set the log level for a specified category

all

Global setting for all subsystems

rll

A-bis Radio Link Layer (RLL)

cc

Layer3 Call Control (CC)

mm
Layer3 Mobility Management (MM)

rr
Layer3 Radio Resource (RR)

rsl
A-bis Radio Siganlling Link (RSL)

nm
A-bis Network Management / O&M (NM/OML)

mncc
MNCC API for Call Control application

pag
Paging Subsystem

meas
Radio Measurement Processing

sccp
SCCP Protocol

msc
Mobile Switching Center

mgcp
Media Gateway Control Protocol

ho
Hand-Over

db
Database Layer

ref
Reference Counting

gprs
GPRS Packet Service

ns
GPRS Network Service (NS)

bssgp
GPRS BSS Gateway Protocol (BSSGP)

llc
GPRS Logical Link Control Protocol (LLC)

sndcp
GPRS Sub-Network Dependent Control Protocol (SNDCP)

nat
GSM 08.08 NAT/Multiplexer

ctrl	Control interface
smpp	SMPP interface for external SMS apps
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)
everything	Log simply everything
debug	Log debug messages and higher levels
info	Log informational messages and higher levels
notice	Log noticable messages and higher levels
error	Log error messages and higher levels
fatal	Log only fatal messages

1.4.8 logging timestamp (0|1)

Command

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

Parameters

logging

Configure log message to this terminal

timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp

1.4.9 show running-config

Command

```
show running-config
```

Parameters

show

Show running system information

running-config

running configuration

1.4.10 write

Command

```
write
```

Parameters

write

Write running configuration to memory, network, or terminal

1.4.11 write file

Command

```
write file
```

Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

1.4.12 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)

1.4.13 write terminal

Command

```
write terminal
```

Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

1.5 MGCP Global Commands

This node allows to configure global MGCP settings. These include the various port numbers.

1.5.1 bind early (0|1)

Command

```
bind early (0|1)
```

Parameters

bind

Listen/Bind related socket option

early

Bind local ports on start up

0

Bind on demand

1

Bind on startup

1.5.2 bind ip A.B.C.D

Command

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

Parameters

bind

Listen/Bind related socket option

ip

IP information

A.B.C.D

IPv4 Address to bind to

1.5.3 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

1.5.4 bts ip A.B.C.D

Command

```
bts ip A.B.C.D
```

Parameters

bts

BTS Audio source/destination options

ip

IP information

A.B.C.D

IPv4 Address of the BTS

1.5.5 call agent ip A.B.C.D

Command

```
call agent ip A.B.C.D
```

Parameters

call

Callagent information

agent

Callagent information

ip

IP information

A.B.C.D

IPv4 Address of the callagent

1.5.6 call-agent ip A.B.C.D

Command

```
call-agent ip A.B.C.D
```

Parameters

call-agent

Callagent information

ip

IP information

A.B.C.D

IPv4 Address of the callagent

1.5.7 end

Command

```
end
```

Parameters

end

End current mode and change to enable mode.

1.5.8 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

1.5.9 help

Command

```
help
```

Parameters

help

Description of the interactive help system

1.5.10 list

Command

```
list
```

Parameters

list

Print command list

1.5.11 local ip A.B.C.D

Command

```
local ip A.B.C.D
```

Parameters

local

Local options for the SDP record

ip

IP information

A.B.C.D

IPv4 Address to use in SDP record

1.5.12 loop (0|1)

Command

```
loop (0|1)
```

Parameters

loop

Loop audio for all endpoints on main trunk

0

Don't Loop

1

Loop

1.5.13 no rtcp-omit

Command

```
no rtcp-omit
```

Parameters

no

Negate a command or set its defaults

rtcp-omit

Drop RTCP packets in both directions

1.5.14 no rtp keep-alive

Command

```
no rtp keep-alive
```

Parameters

no

Negate a command or set its defaults

rtp

RTP configuration

keep-alive

Send dummy UDP packet to net RTP destination

1.5.15 no rtp-patch

Command

```
no rtp-patch
```

Parameters

no

Negate a command or set its defaults

rtp-patch

Modify RTP packet header in both directions

1.5.16 no rtp-patch ssrc

Command

```
no rtp-patch ssrc
```

Parameters

no

Negate a command or set its defaults

rtp-patch

Modify RTP packet header in both directions

ssrc

Force a fixed SSRC

1.5.17 no rtp-patch timestamp

Command

```
no rtp-patch timestamp
```

Parameters

no

Negate a command or set its defaults

rtp-patch

Modify RTP packet header in both directions

timestamp

Adjust RTP timestamp

1.5.18 no sdp audio-payload send-ptime

Command

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

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

1.5.19 no transcoder-mgw

Command

```
no transcoder-mgw
```

Parameters

no

Negate a command or set its defaults

transcoder-mgw

Disable the transcoding

1.5.20 number endpoints <0-65534>

Command

```
number endpoints <0-65534>
```

Parameters

number

Number options

endpoints

Endpoints available

<0-65534>

Number endpoints

1.5.21 rtcp-omit

Command

```
rtcp-omit
```

Parameters

rtcp-omit

Drop RTCP packets in both directions

1.5.22 rtp base <0-65534>

Command

```
rtp base <0-65534>
```

Parameters

rtp

RTP configuration

base

First UDP port allocated for the BTS side

<0-65534>

UDP Port number

1.5.23 rtp bts-base <0-65534>

Command

```
rtp bts-base <0-65534>
```

Parameters

rtp

RTP configuration

bts-base

First UDP port allocated for the BTS side

<0-65534>

UDP Port number

1.5.24 rtp bts-range <0-65534> <0-65534>

Command

```
rtp bts-range <0-65534> <0-65534>
```

Parameters

rtp

RTP configuration

bts-range

Range of ports to use for the BTS side

<0-65534>

Start of the range of ports

<0-65534>

End of the range of ports

1.5.25 rtp ip-dscp <0-255>

Command

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

Parameters

rtp

RTP configuration

ip-dscp

Apply IP_TOS to the audio stream

<0-255>

The DSCP value

1.5.26 rtp ip-tos <0-255>

Command

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

Parameters

rtp

RTP configuration

ip-tos

Apply IP_TOS to the audio stream

<0-255>

The DSCP value

1.5.27 rtp keep-alive <1-120>

Command

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

Parameters

rtp

RTP configuration

keep-alive

Send dummy UDP packet to net RTP destination

<1-120>

Keep alive interval in secs

1.5.28 rtp keep-alive once

Command

```
rtp keep-alive once
```

Parameters

rtp

RTP configuration

keep-alive

Send dummy UDP packet to net RTP destination

once

Send dummy packet only once after CRCX/MDCX

1.5.29 rtp net-base <0-65534>

Command

```
rtp net-base <0-65534>
```

Parameters

rtp

RTP configuration

net-base

First UDP port allocated for the NET side

<0-65534>

UDP Port number

1.5.30 rtp net-range <0-65534> <0-65534>

Command

```
rtp net-range <0-65534> <0-65534>
```

Parameters

rtp

RTP configuration

net-range

Range of ports to use for the NET side

<0-65534>

Start of the range of ports

<0-65534>

End of the range of ports

1.5.31 rtp transcoder-base <0-65534>

Command

```
rtp transcoder-base <0-65534>
```

Parameters

rtp

RTP configuration

transcoder-base

First UDP port allocated for the Transcoder side

<0-65534>

UDP Port number

1.5.32 rtp transcoder-range <0-65534> <0-65534>

Command

```
rtp transcoder-range <0-65534> <0-65534>
```

Parameters

rtp

RTP configuration

transcoder-range

Range of ports to use for the Transcoder

<0-65534>

Start of the range of ports

<0-65534>

End of the range of ports

1.5.33 rtp-patch ssrc

Command

```
rtp-patch ssrc
```

Parameters

rtp-patch

Modify RTP packet header in both directions

ssrc

Force a fixed SSRC

1.5.34 rtp-patch timestamp

Command

```
rtp-patch timestamp
```

Parameters

rtp-patch

Modify RTP packet header in both directions

timestamp

Adjust RTP timestamp

1.5.35 sdp audio fntp-extra .NAME

Command

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

Parameters

sdp

Add extra fntp for the SDP file

audio

Audio

fntp-extra

Fntp-extra

.NAME

Extra Information

1.5.36 sdp audio payload name NAME

Command

```
sdp audio payload name NAME
```

Parameters

sdp

SDP File related options

audio

Audio payload options

payload

Audio payload options

name

Name

NAME

Payload name

1.5.37 sdp audio payload number <1-255>

Command

```
sdp audio payload number <1-255>
```

Parameters

sdp

SDP File related options

audio

Audio payload options

payload

Audio payload options

number

Number

<1-255>

Payload number

1.5.38 sdp audio-payload name NAME

Command

```
sdp audio-payload name NAME
```

Parameters

sdp

SDP File related options

audio-payload

Audio payload options

name

Name

NAME

Payload name

1.5.39 sdp audio-payload number <1-255>

Command

```
sdp audio-payload number <1-255>
```

Parameters

sdp

SDP File related options

audio-payload

Audio payload options

number

Number

<1-255>

Payload number

1.5.40 sdp audio-payload send-ptime

Command

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

Parameters

sdp

SDP File related options

audio-payload

Audio payload options

send-ptime

Send SDP ptime (packet duration) attribute

1.5.41 show running-config

Command

```
show running-config
```

Parameters

show

Show running system information

running-config

running configuration

1.5.42 transcoder-mgw A.B.C.D

Command

```
transcoder-mgw A.B.C.D
```

Parameters

transcoder-mgw

Use a MGW to detranscoder RTP

A.B.C.D

The IP address of the MGW

1.5.43 transcoder-remote-base <0-65534>

Command

```
transcoder-remote-base <0-65534>
```

Parameters

transcoder-remote-base

Set the base port for the transcoder

<0-65534>

The RTP base port on the transcoder

1.5.44 trunk <1-64>

Command

```
trunk <1-64>
```

Parameters

trunk

Configure a SS7 trunk

<1-64>

Trunk Nr

1.5.45 write

Command

```
write
```

Parameters

write

Write running configuration to memory, network, or terminal

1.5.46 write file

Command

```
write file
```

Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

1.5.47 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)

1.5.48 write terminal

Command

```
write terminal
```

Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

1.6 MGCP Trunk Command

This node allows to configure a MGCP trunk. These include the number, the local binding ports, SDP configuration.

1.6.1 end

Command

```
end
```

Parameters

end

End current mode and change to enable mode.

1.6.2 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

1.6.3 help

Command

```
help
```

Parameters

help

Description of the interactive help system

1.6.4 list

Command

```
list
```

Parameters

list

Print command list

1.6.5 loop (0|1)

Command

```
loop (0|1)
```

Parameters

loop

Loop audio for all endpoints on this trunk

0

Don't Loop

1

Loop

1.6.6 no rtcp-omit

Command

```
no rtcp-omit
```

Parameters

no

Negate a command or set its defaults

rtcp-omit

Drop RTCP packets in both directions

1.6.7 no rtp keep-alive

Command

```
no rtp keep-alive
```

Parameters

no

Negate a command or set its defaults

rtp

RTP configuration

keep-alive

Send dummy UDP packet to net RTP destination

1.6.8 no rtp-patch

Command

```
no rtp-patch
```

Parameters

no

Negate a command or set its defaults

rtp-patch

Modify RTP packet header in both directions

1.6.9 no rtp-patch ssrc

Command

```
no rtp-patch ssrc
```

Parameters

no

Negate a command or set its defaults

rtp-patch

Modify RTP packet header in both directions

ssrc

Force a fixed SSRC

1.6.10 no rtp-patch timestamp

Command

```
no rtp-patch timestamp
```

Parameters

no

Negate a command or set its defaults

rtp-patch

Modify RTP packet header in both directions

timestamp

Adjust RTP timestamp

1.6.11 no sdp audio-payload send-ptime

Command

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

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

1.6.12 rtcp-omit

Command

```
rtcp-omit
```

Parameters

rtcp-omit

Drop RTCP packets in both directions

1.6.13 rtp keep-alive <1-120>

Command

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

Parameters

rtp

RTP configuration

keep-alive

Send dummy UDP packet to net RTP destination

<1-120>

Keep-alive interval in secs

1.6.14 rtp keep-alive once

Command

```
rtp keep-alive once
```

Parameters

rtp

RTP configuration

keep-alive

Send dummy UDP packet to net RTP destination

once

Send dummy packet only once after CRCX/MDCX

1.6.15 rtp-patch ssrc

Command

```
rtp-patch ssrc
```

Parameters

rtp-patch

Modify RTP packet header in both directions

ssrc

Force a fixed SSRC

1.6.16 rtp-patch timestamp

Command

```
rtp-patch timestamp
```

Parameters

rtp-patch

Modify RTP packet header in both directions

timestamp

Adjust RTP timestamp

1.6.17 sdp audio fntp-extra .NAME

Command

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

Parameters

sdp

Add extra fntp for the SDP file

audio

Audio

fntp-extra

Fntp-extra

.NAME

Extra Information

1.6.18 sdp audio payload name NAME

Command

```
sdp audio payload name NAME
```

Parameters

sdp

SDP File related options

audio

Audio payload options

payload

Audio payload options

name

Payload

NAME

Payload Name

1.6.19 sdp audio payload number <1-255>

Command

```
sdp audio payload number <1-255>
```

Parameters

sdp
SDP File related options

audio
Audio payload options

payload
Audio payload options

number
Number

<1-255>
Payload Number

1.6.20 sdp audio-payload name NAME

Command

```
sdp audio-payload name NAME
```

Parameters

sdp
SDP File related options

audio-payload
Audio payload options

name
Payload

NAME
Payload Name

1.6.21 sdp audio-payload number <1-255>

Command

```
sdp audio-payload number <1-255>
```

Parameters

sdp
SDP File related options

audio-payload
Audio payload options

number
Number

<1-255>
Payload Number

1.6.22 sdp audio-payload send-ptime

Command

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

Parameters

sdp

SDP File related options

audio-payload

Audio payload options

send-ptime

Send SDP ptime (packet duration) attribute

1.6.23 show running-config

Command

```
show running-config
```

Parameters

show

Show running system information

running-config

running configuration

1.6.24 write

Command

```
write
```

Parameters

write

Write running configuration to memory, network, or terminal

1.6.25 write file

Command

```
write file
```

Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

1.6.26 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)

1.6.27 write terminal

Command

```
write terminal
```

Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal