

OsmoNITB VTY Reference

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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 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

Command

```
list
```

Parameters

list

Print command list

1.1.5 show running-config

Command

```
show running-config
```

Parameters

show

Show running system information

running-config

running configuration

1.1.6 write

Command

```
write
```

Parameters

write

Write running configuration to memory, network, or terminal

1.1.7 write file

Command

```
write file
```

Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

1.1.8 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)

1.1.9 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

Command

```
enable
```

Parameters

enable

Turn on privileged mode command

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 filter imsi IMSI

Command

```
logging filter imsi IMSI
```

Parameters

logging

Configure logging

filter

Filter log messages

imsi

Filter log messages by IMSI

IMSI

IMSI to be used as filter

1.2.7 logging level (rll|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gprs|ns...

Command

```
logging level (rll|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gprs|ns|bssgp| ↔
llc|sndcp|nat|ctrl|smpp|filter|ranap|sua|pcu|lglobal|llapd|linp|lmux|lmi|lmib|lsms| ↔
lctrl|lgtp|lstats|lgsup|loap|lss7|lsccp|lsua|lm3ua|lmgcp|ljibuf|lrspro) (debug|info ↔
|notice|error|fatal)
```

Parameters

logging

Configure logging

level

Set the log level for a specified category

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 (SNDTCP)

nat
GSM 08.08 NAT/Multiplexer

ctrl
Control interface

smpp
SMPP interface for external SMS apps

filter
BSC/NAT IMSI based filtering

ranap
Radio Access Network Application Part Protocol

sua
 SCCP User Adaptation Protocol

pcu
 PCU Interface

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

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 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

1.2.9 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

1.2.10 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

1.2.11 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>')

1.2.12 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 YYYYMMDDhhmmssnn

1.2.13 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.

1.2.14 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

1.2.15 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 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>'

1.2.18 show alarms

Command

```
show alarms
```

Parameters

show

Show running system information

alarms

Show current logging configuration

1.2.19 show asciidoc counters

Command

```
show asciidoc counters
```

Parameters

show

Show running system information

asciidoc

Asciidoc generation

counters

Generate table of all registered counters

1.2.20 show bts [<0-255>]

Command

```
show bts [<0-255>]
```

Parameters

show

Show running system information

bts

Display information about a BTS

[<0-255>]

BTS number

1.2.21 show e1_driver

Command

```
show e1_driver
```

Parameters

show

Show running system information

e1_driver

Display information about available E1 drivers

1.2.22 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

1.2.23 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

1.2.24 show fsm NAME

Command

```
show fsm NAME
```

Parameters

show

Show running system information

fsm

Show information about finite state machines

NAME

Display information about a single named finite state machine

1.2.25 show fsm all

Command

```
show fsm all
```

Parameters

show

Show running system information

fsm

Show information about finite state machines

all

Display a list of all registered finite state machines

1.2.26 show fsm-instances NAME

Command

```
show fsm-instances NAME
```

Parameters

show

Show running system information

fsm-instances

Show information about finite state machine instances

NAME

Display a list of all FSM instances of the named finite state machine

1.2.27 show fsm-instances all

Command

```
show fsm-instances all
```

Parameters

show

Show running system information

fsm-instances

Show information about finite state machine instances

all

Display a list of all FSM instances of all finite state machine

1.2.28 show history

Command

```
show history
```

Parameters

show

Show running system information

history

Display the session command history

1.2.29 show lchan [<0-255>] [<0-255>] [<0-7>] [lchan_nr]

Command

```
show lchan [<0-255>] [<0-255>] [<0-7>] [lchan_nr]
```

Parameters

show

Show running system information

lchan

Display information about a logical channel

[<0-255>]

BTS Number

[<0-255>]

TRX Number

[<0-7>]

Timeslot Number

[lchan_nr]

Logical Channel Number

1.2.30 show lchan summary [<0-255>] [<0-255>] [<0-7>] [lchan_nr]

Command

```
show lchan summary [<0-255>] [<0-255>] [<0-7>] [lchan_nr]
```

Parameters

show

Show running system information

lchan

Display information about a logical channel

summary

Short summary

[<0-255>]

BTS Number

[<0-255>]

TRX Number

[<0-7>]

Timeslot Number

[lchan_nr]

Logical Channel Number

1.2.31 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

1.2.32 show network

Command

```
show network
```

Parameters

show

Show running system information

network

Display information about a GSM NETWORK

1.2.33 show online-help

Command

```
show online-help
```

Parameters

show

Show running system information

online-help

Online help

1.2.34 show paging [<0-255>]

Command

```
show paging [<0-255>]
```

Parameters

show

Show running system information

paging

Display information about paging requests of a BTS

[<0-255>]

BTS Number

1.2.35 show paging-group <0-255> IMSI

Command

```
show paging-group <0-255> IMSI
```

Parameters

show

Show running system information

paging-group

Display the paging group

<0-255>

BTS Number

IMSI

IMSI

1.2.36 show rate-counters

Command

```
show rate-counters
```

Parameters

show

Show running system information

rate-counters

Show all rate counters

1.2.37 show smpp esme

Command

```
show smpp esme
```

Parameters

show

Show running system information

smpp

SMPP Interface

esme

SMPP External SMS Entity

1.2.38 show sms-queue

Command

```
show sms-queue
```

Parameters

show

Show running system information

sms-queue

Display SMSQueue statistics

1.2.39 show statistics

Command

```
show statistics
```

Parameters

show

Show running system information

statistics

Display network statistics

1.2.40 show stats

Command

```
show stats
```

Parameters

show

Show running system information

stats

Show statistical values

1.2.41 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

1.2.42 show subscriber (extension|imsi|tmsi|id) ID

Command

```
show subscriber (extension|imsi|tmsi|id) ID
```

Parameters

show

Show running system information

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

1.2.43 show subscriber cache

Command

```
show subscriber cache
```

Parameters

show

Show running system information

subscriber

Show information about subscribers

cache

Display contents of subscriber cache

1.2.44 show timeslot [<0-255>] [<0-255>] [<0-7>]

Command

```
show timeslot [<0-255>] [<0-255>] [<0-7>]
```

Parameters

show

Show running system information

timeslot

Display information about a TS

[<0-255>]

BTS Number

[<0-255>]

TRX Number

[<0-7>]

Timeslot Number

1.2.45 show trx [<0-255>] [<0-255>]

Command

```
show trx [<0-255>] [<0-255>]
```

Parameters

show

Show running system information

trx

Display information about a TRX

[<0-255>]

BTS Number

[<0-255>]

TRX Number

1.2.46 show version

Command

```
show version
```

Parameters

show

Show running system information

version

Displays program version

1.2.47 sms send pending

Command

```
sms send pending
```

Parameters

sms

SMS related commands

send

SMS Sending related commands

pending

Send all pending SMS

1.2.48 subscriber (extension|imsi|tmsi|id) ID ms-test close-loop (a|b|c|d|e|f|i)

Command

```
subscriber (extension|imsi|tmsi|id) ID ms-test close-loop (a|b|c|d|e|f|i)
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

ms-test

Send a TS 04.14 MS Test Command to subscriber

close-loop

Close a TCH Loop inside the MS

a

Loop Type A

b

Loop Type B

c

Loop Type C

d

Loop Type D

e

Loop Type E

f

Loop Type F

i

Loop Type I

1.2.49 subscriber (extension|imsi|tmsi|id) ID ms-test open-loop

Command

```
subscriber (extension|imsi|tmsi|id) ID ms-test open-loop
```

Parameters**subscriber**

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

ms-test

Send a TS 04.14 MS Test Command to subscriber

open-loop

Open a TCH Loop inside the MS

1.2.50 subscriber (extension|imsi|tmsi|id) ID silent-call start (any|tch/f|tch/any|sdcc...

Command

```
subscriber (extension|imsi|tmsi|id) ID silent-call start (any|tch/f|tch/any|sdccch)
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

silent-call

Silent call operation

start

Start silent call

any

Any channel

tch/f

TCH/F channel

tch/any

Any TCH channel

sdccch

SDCCCH channel

1.2.51 subscriber (extension|imsi|tmsi|id) ID silent-call stop

Command

```
subscriber (extension|imsi|tmsi|id) ID silent-call stop
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

silent-call

Silent call operation

stop

Stop silent call

1.2.52 subscriber (extension|imsi|tmsi|id) ID silent-sms sender (extension|imsi|tmsi|id...

Command

```
subscriber (extension|imsi|tmsi|id) ID silent-sms sender (extension|imsi|tmsi|id) ←  
SENDER_ID send .LINE
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

silent-sms

Silent SMS Operations

sender

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

SENDER_ID

Identifier for the subscriber

send

Send SMS

.LINE

Actual SMS Text

1.2.53 subscriber (extension|imsi|tmsi|id) ID sms sender (extension|imsi|tmsi|id) SENDE...

Command

```
subscriber (extension|imsi|tmsi|id) ID sms sender (extension|imsi|tmsi|id) SENDER_ID ↔  
send .LINE
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi
Identify subscriber by IMSI

tmsi
Identify subscriber by TMSI

id
Identify subscriber by database ID

ID
Identifier for the subscriber

sms
SMS Operations

sender
Operations on a Subscriber

extension
Identify subscriber by extension (phone number)

imsi
Identify subscriber by IMSI

tmsi
Identify subscriber by TMSI

id
Identify subscriber by database ID

SENDER_ID
Identifier for the subscriber

send
Send SMS

.LINE
Actual SMS Text

1.2.54 subscriber (extension|imsi|tmsi|id) ID update

Command

```
subscriber (extension|imsi|tmsi|id) ID update
```

Parameters

subscriber
Operations on a Subscriber

extension
Identify subscriber by extension (phone number)

imsi
Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

update

Update the subscriber data from the dabase.

1.2.55 subscriber (extension|imsi|tmsi|id) ID ussd-notify (0|1|2) .TEXT

Command

```
subscriber (extension|imsi|tmsi|id) ID ussd-notify (0|1|2) .TEXT
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

ussd-notify

Send a USSD notify to the subscriber

0

Alerting Level 0

1

Alerting Level 1

2

Alerting Level 2

.TEXT

Text of USSD message to send

1.2.56 subscriber create imsi ID

Command

```
subscriber create imsi ID
```

Parameters

subscriber

Operations on a Subscriber

create

Create new subscriber

imsi

Identify the subscriber by his IMSI

ID

Identifier for the subscriber

1.2.57 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)

1.2.58 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

1.2.59 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 **bts <0-255> om2000 class (trxc|ts|tf|is|con|dp|cf|tx|rx) <0-255> <0-255> <0-255>**

Command

```
bts <0-255> om2000 class (trxc|ts|tf|is|con|dp|cf|tx|rx) <0-255> <0-255> <0-255>
```

Parameters

bts

BTS related commands

<0-255>

BTS Number

om2000

Manipulate the OM2000 managed objects

class

Object Class

trxc

TRX Controller

ts

Timeslot

tf

Timing Function

is

Interface Switch

con

Abis Concentrator

dp
Digital Path

cf
Central Function

tx
Transmitter

rx
Receiver

<0-255>
BTS Number

<0-255>
Associated SO Instance

<0-255>
Instance Number

1.3.2 **bts <0-255> om2000 class <0-255> <0-255> <0-255> <0-255>**

Command

```
bts <0-255> om2000 class <0-255> <0-255> <0-255> <0-255>
```

Parameters

bts
BTS related commands

<0-255>
BTS Number

om2000
Manipulate the OML managed objects

class
Object Class

<0-255>
Object Class

<0-255>
BTS Number

<0-255>
Associated SO Instance

<0-255>
Instance Number

1.3.3 **bts** <0-255> oml class (site-manager|bts|radio-carrier|baseband-transceiver|chann...

Command

```
bts <0-255> oml class (site-manager|bts|radio-carrier|baseband-transceiver|channel|adjc ↔  
|handover|power-contorl|btse|rack|test|envabtse|bport|gprs-nse|gprs-cell|gprs-nsvc| ↔  
siemenshw) instance <0-255> <0-255> <0-255>
```

Parameters

bts

BTS related commands

<0-255>

BTS Number

oml

Manipulate the OML managed objects

class

Object Class

site-manager

Site Manager Object

bts

BTS Object

radio-carrier

Radio Carrier Object

baseband-transceiver

Baseband Transceiver Object

channel

Channel (Timeslot) Object

adjc

Adjacent Object (Siemens)

handover

Handover Object (Siemens)

power-contorl

Power Control Object (Siemens)

btse

BTSE Object (Siemens)

rack

Rack Object (Siemens)

test

Test Object (Siemens)

envabtse

ENVABTSE Object (Siemens)

bport

BPORT Object (Siemens)

gprs-nse

GPRS NSE Object (ip.access/osmo-bts)

gprs-cell

GPRS Cell Object (ip.acecss/osmo-bts)

gprs-nsvc

GPRS NSVC Object (ip.acecss/osmo-bts)

siemenshw

SIEMENSHW Object (Siemens)

instance

Object Instance

<0-255>

BTS Number

<0-255>

TRX Number

<0-255>

TS Number

1.3.4 **bts <0-255> oml class <0-255> instance <0-255> <0-255> <0-255>**

Command

```
bts <0-255> oml class <0-255> instance <0-255> <0-255> <0-255>
```

Parameters

bts

BTS related commands

<0-255>

BTS Number

oml

Manipulate the OML managed objects

class

Object Class

<0-255>

Object Class

instance

Object Instance

<0-255>

BTS Number

<0-255>

TRX Number

<0-255>

TS Number

1.3.5 **bts <0-255> resend-system-information**

Command

```
bts <0-255> resend-system-information
```

Parameters

bts

BTS Specific Commands

<0-255>

BTS Number

resend-system-information

Re-generate + re-send BCCH SYSTEM INFORMATION

1.3.6 **bts <0-255> smscb-command <1-4> HEXSTRING**

Command

```
bts <0-255> smscb-command <1-4> HEXSTRING
```

Parameters

bts

BTS related commands

<0-255>

BTS Number

smscb-command

SMS Cell Broadcast

<1-4>

Last Valid Block

HEXSTRING

Hex Encoded SMSCB message (up to 88 octets)

1.3.7 **bts <0-255> trx <0-255> timeslot <0-7> pdch (activate|deactivate)**

Command

```
bts <0-255> trx <0-255> timeslot <0-7> pdch (activate|deactivate)
```

Parameters

bts

BTS related commands

<0-255>

BTS Number

trx

Transceiver

<0-255>

Transceiver Number

timeslot

TRX Timeslot

<0-7>

Timeslot Number

pdch

Packet Data Channel

activate

Activate Dynamic PDCH/TCH (-> PDCH mode)

deactivate

Deactivate Dynamic PDCH/TCH (-> TCH mode)

1.3.8 **bts <0-255> trx <0-255> timeslot <0-7> sub-slot <0-7> (activate|deactivate) (hr|...)**

Command

```
bts <0-255> trx <0-255> timeslot <0-7> sub-slot <0-7> (activate|deactivate) (hr|fr|efr| ↔  
amr) [<0-7>]
```

Parameters

bts

BTS related commands

<0-255>

BTS Number

trx

Transceiver

<0-255>

Transceiver Number

timeslot

TRX Timeslot

<0-7>

Timeslot Number

sub-slot

Sub-Slot Number

<0-7>

Sub-Slot Number

activate

Manual Channel Activation (e.g. for BER test)

deactivate

Manual Channel Deactivation (e.g. for BER test)

hr

Half-Rate v1

fr

Full-Rate

efr

Enhanced Full Rate

amr

Adaptive Multi-Rate

[<0-7>]

AMR Mode

1.3.9 **bts** <0-255> **trx** <0-255> **timeslot** <0-7> **sub-slot** <0-7> **mdcx** A.B.C.D <0-65535>

Command

```
bts <0-255> trx <0-255> timeslot <0-7> sub-slot <0-7> mdcx A.B.C.D <0-65535>
```

Parameters

bts

BTS related commands

<0-255>

BTS Number

trx

Transceiver

<0-255>

Transceiver Number

timeslot

TRX Timeslot

<0-7>

Timeslot Number

sub-slot

Sub-Slot

<0-7>

Sub-Slot Number

mdcx

Modify RTP Connection

A.B.C.D

MGW IP Address

<0-65535>

MGW UDP Port

1.3.10 configure terminal

Command

```
configure terminal
```

Parameters

configure

Configuration from vty interface

terminal

Configuration terminal

1.3.11 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)

1.3.12 ctrl-interface generate-trap TRAP VALUE

Command

```
ctrl-interface generate-trap TRAP VALUE
```

Parameters

ctrl-interface

Commands related to the CTRL Interface

generate-trap

Generate a TRAP for test purpose

TRAP

Identity/Name of the TRAP variable

VALUE

Value of the TRAP variable

1.3.13 disable

Command

```
disable
```

Parameters

disable

Turn off privileged mode command

1.3.14 drop bts connection <0-65535> (oml|rs1)

Command

```
drop bts connection <0-65535> (oml|rs1)
```

Parameters

drop

Debug/Simulation command to drop Abis/IP BTS

bts

Debug/Simulation command to drop Abis/IP BTS

connection

Debug/Simulation command to drop Abis/IP BTS

<0-65535>

BTS NR

oml

Drop OML Connection

rs1

Drop RSL Connection

1.3.15 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

1.3.16 logging disable

Command

```
logging disable
```

Parameters

logging

Configure logging

disable

Disables logging to this vty

1.3.17 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

1.3.18 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

1.3.19 logging filter imsi IMSI

Command

```
logging filter imsi IMSI
```

Parameters

logging

Configure logging

filter

Filter log messages

imsi

Filter log messages by IMSI

IMSI

IMSI to be used as filter

1.3.20 logging level (rll|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gprs|ns...

Command

```
logging level (rll|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gprs|ns|bssgp| ↔
llc|sndcp|nat|ctrl|smpp|filter|ranap|sua|pcu|lglobal|llapd|linp|lmux|lmi|lmib|lsms| ↔
lctrl|lgtp|lstats|lgsup|loap|lss7|lsccp|lsua|lm3ua|lmgcp|ljibuf|lrspro) (debug|info ↔
|notice|error|fatal)
```

Parameters

logging

Configure logging

level

Set the log level for a specified category

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 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 (SNDCP)

nat
GSM 08.08 NAT/Multiplexer

ctrl
Control interface

smpp
SMPP interface for external SMS apps

filter
BSC/NAT IMSI based filtering

ranap
Radio Access Network Application Part Protocol

sua
SCCP User Adaptation Protocol

pcu
PCU Interface

lglobal
Library-internal global log family

llapd
LAPD in libosmogsm

linp
A-bis Input Subsystem

lmux
A-bis B-Subchannel TRAU Frame Multiplex

lmi
A-bis Input Driver for Signalling

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

lsms
Layer3 Short Message Service (SMS)

lctrl
Control Interface

lgtp
GPRS GTP library

lstats
Statistics messages and logging

lgsup
Generic Subscriber Update Protocol

loap
Osmocom Authentication Protocol

lss7
libosmo-sigtran Signalling System 7

lscpp
libosmo-sigtran SCCP Implementation

lsua
libosmo-sigtran SCCP User Adaptation

lm3ua
libosmo-sigtran MTP3 User Adaptation

lmgcp
libosmo-mgcp Media Gateway Control Protocol

ljibuf
libosmo-netif Jitter Buffer

lrspro
Remote SIM protocol

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

1.3.21 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

1.3.22 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

1.3.23 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

1.3.24 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>')

1.3.25 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

1.3.26 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.

1.3.27 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

1.3.28 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

1.3.29 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

1.3.30 meas-feed scenario NAME

Command

```
meas-feed scenario NAME
```

Parameters

meas-feed

Measurement export related

scenario

scenario

NAME

Name up to 31 characters included in report

1.3.31 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>'

1.3.32 restart-bts <0-65535>

Command

```
restart-bts <0-65535>
```

Parameters

restart-bts

Restart ip.access nanoBTS through OML

<0-65535>

BTS Number

1.3.33 show alarms

Command

```
show alarms
```

Parameters

show

Show running system information

alarms

Show current logging configuration

1.3.34 show asciidoc counters

Command

```
show asciidoc counters
```

Parameters

show

Show running system information

asciidoc

Asciidoc generation

counters

Generate table of all registered counters

1.3.35 show bts [<0-255>]

Command

```
show bts [<0-255>]
```

Parameters

show

Show running system information

bts

Display information about a BTS

[<0-255>]

BTS number

1.3.36 show e1_driver

Command

```
show e1_driver
```

Parameters

show

Show running system information

e1_driver

Display information about available E1 drivers

1.3.37 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

1.3.38 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

1.3.39 show fsm NAME

Command

```
show fsm NAME
```

Parameters

show

Show running system information

fsm

Show information about finite state machines

NAME

Display information about a single named finite state machine

1.3.40 show fsm all

Command

```
show fsm all
```

Parameters

show

Show running system information

fsm

Show information about finite state machines

all

Display a list of all registered finite state machines

1.3.41 show fsm-instances NAME

Command

```
show fsm-instances NAME
```

Parameters

show

Show running system information

fsm-instances

Show information about finite state machine instances

NAME

Display a list of all FSM instances of the named finite state machine

1.3.42 show fsm-instances all

Command

```
show fsm-instances all
```

Parameters

show

Show running system information

fsm-instances

Show information about finite state machine instances

all

Display a list of all FSM instances of all finite state machine

1.3.43 show history

Command

```
show history
```

Parameters

show

Show running system information

history

Display the session command history

1.3.44 show lchan [<0-255>] [<0-255>] [<0-7>] [lchan_nr]

Command

```
show lchan [<0-255>] [<0-255>] [<0-7>] [lchan_nr]
```

Parameters

show

Show running system information

lchan

Display information about a logical channel

[<0-255>]

BTS Number

[<0-255>]

TRX Number

[<0-7>]

Timeslot Number

[lchan_nr]

Logical Channel Number

1.3.45 show lchan summary [<0-255>] [<0-255>] [<0-7>] [lchan_nr]

Command

```
show lchan summary [<0-255>] [<0-255>] [<0-7>] [lchan_nr]
```

Parameters

show

Show running system information

lchan

Display information about a logical channel

summary

Short summary

[<0-255>]

BTS Number

[<0-255>]

TRX Number

[<0-7>]

Timeslot Number

[lchan_nr]

Logical Channel Number

1.3.46 show logging vty

Command

```
show logging vty
```

Parameters

show

Show running system information

logging

Show current logging configuration

vtty

Show current logging configuration for this vty

1.3.47 show network

Command

```
show network
```

Parameters

show

Show running system information

network

Display information about a GSM NETWORK

1.3.48 show online-help

Command

```
show online-help
```

Parameters

show

Show running system information

online-help

Online help

1.3.49 show paging [<0-255>]

Command

```
show paging [<0-255>]
```

Parameters

show

Show running system information

paging

Display information about paging reuquests of a BTS

[<0-255>]

BTS Number

1.3.50 show paging-group <0-255> IMSI

Command

```
show paging-group <0-255> IMSI
```

Parameters

show

Show running system information

paging-group

Display the paging group

<0-255>

BTS Number

IMSI

IMSI

1.3.51 show rate-counters

Command

```
show rate-counters
```

Parameters

show

Show running system information

rate-counters

Show all rate counters

1.3.52 show smpp esme

Command

```
show smpp esme
```

Parameters

show

Show running system information

smpp

SMPP Interface

esme

SMPP External SMS Entity

1.3.53 show sms-queue

Command

```
show sms-queue
```

Parameters

show

Show running system information

sms-queue

Display SMSqueue statistics

1.3.54 show startup-config

Command

```
show startup-config
```

Parameters

show

Show running system information

startup-config

Contentes of startup configuration

1.3.55 show statistics

Command

```
show statistics
```

Parameters

show

Show running system information

statistics

Display network statistics

1.3.56 show stats

Command

```
show stats
```

Parameters

show

Show running system information

stats

Show statistical values

1.3.57 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

1.3.58 show subscriber (extension|imsi|tmsi|id) ID

Command

```
show subscriber (extension|imsi|tmsi|id) ID
```

Parameters

show

Show running system information

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

1.3.59 show subscriber cache

Command

```
show subscriber cache
```

Parameters

show

Show running system information

subscriber

Show information about subscribers

cache

Display contents of subscriber cache

1.3.60 show timeslot [<0-255>] [<0-255>] [<0-7>]

Command

```
show timeslot [<0-255>] [<0-255>] [<0-7>]
```

Parameters

show

Show running system information

timeslot

Display information about a TS

[<0-255>]

BTS Number

[<0-255>]

TRX Number

[<0-7>]

Timeslot Number

1.3.61 show trx [<0-255>] [<0-255>]

Command

```
show trx [<0-255>] [<0-255>]
```

Parameters

show

Show running system information

trx

Display information about a TRX

[<0-255>]

BTS Number

[<0-255>]

TRX Number

1.3.62 show version

Command

```
show version
```

Parameters

show

Show running system information

version

Displays program version

1.3.63 sms send pending

Command

```
sms send pending
```

Parameters

sms

SMS related commands

send

SMS Sending related commands

pending

Send all pending SMS

1.3.64 sms-queue clear

Command

```
sms-queue clear
```

Parameters

sms-queue

SMS Queue

clear

Clear the queue of pending SMS

1.3.65 sms-queue max-failure <1-500>

Command

```
sms-queue max-failure <1-500>
```

Parameters

sms-queue

SMS Queue

max-failure

Maximum amount of delivery failures

<1-500>

Amount

1.3.66 sms-queue max-pending <1-500>

Command

```
sms-queue max-pending <1-500>
```

Parameters

sms-queue

SMS Queue

max-pending

SMS to deliver in parallel

<1-500>

Amount

1.3.67 sms-queue trigger

Command

```
sms-queue trigger
```

Parameters

sms-queue

SMS Queue

trigger

Trigger sending messages

1.3.68 subscriber (extension|imsi|tmsi|id) ID a3a8 (none|xor|comp128v1|comp128v2|comp128v3) [← KI]

Command

```
subscriber (extension|imsi|tmsi|id) ID a3a8 (none|xor|comp128v1|comp128v2|comp128v3) [ ← KI]
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id
Identify subscriber by database ID

ID
Identifier for the subscriber

a3a8
Set a3a8 parameters for the subscriber

none
Use No A3A8 algorithm

xor
Use XOR algorithm

comp128v1
Use COMP128v1 algorithm

comp128v2
Use COMP128v2 algorithm

comp128v3
Use COMP128v3 algorithm

[KI]
Encryption Key Ki

1.3.69 subscriber (extension|imsi|tmsi|id) ID authorized (0|1)

Command

```
subscriber (extension|imsi|tmsi|id) ID authorized (0|1)
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

authorized

(De-)Authorize subscriber in HLR

0

Subscriber should NOT be authorized

1

Subscriber should be authorized

1.3.70 subscriber (extension|imsi|tmsi|id) ID delete

Command

```
subscriber (extension|imsi|tmsi|id) ID delete
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

delete

Delete subscriber in HLR

1.3.71 subscriber (extension|imsi|tmsi|id) ID expire

Command

```
subscriber (extension|imsi|tmsi|id) ID expire
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

expire

Expire the subscriber Now

1.3.72 subscriber (extension|imsi|tmsi|id) ID extension EXTENSION

Command

```
subscriber (extension|imsi|tmsi|id) ID extension EXTENSION
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

extension

Set the extension (phone number) of the subscriber

EXTENSION

Extension (phone number)

1.3.73 subscriber (extension|imsi|tmsi|id) ID handover BTS_NR

Command

```
subscriber (extension|imsi|tmsi|id) ID handover BTS_NR
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

handover

Handover the active connection

BTS_NR

Number of the BTS to handover to

1.3.74 subscriber (extension|imsi|tmsi|id) ID ms-test close-loop (a|b|c|d|e|f|i)

Command

```
subscriber (extension|imsi|tmsi|id) ID ms-test close-loop (a|b|c|d|e|f|i)
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

ms-test

Send a TS 04.14 MS Test Command to subscriber

close-loop

Close a TCH Loop inside the MS

- a
Loop Type A
- b
Loop Type B
- c
Loop Type C
- d
Loop Type D
- e
Loop Type E
- f
Loop Type F
- i
Loop Type I

1.3.75 subscriber (extension|imsi|tmsi|id) ID ms-test open-loop

Command

```
subscriber (extension|imsi|tmsi|id) ID ms-test open-loop
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

ms-test

Send a TS 04.14 MS Test Command to subscriber

open-loop

Open a TCH Loop inside the MS

1.3.76 subscriber (extension|imsi|tmsi|id) ID name .NAME

Command

```
subscriber (extension|imsi|tmsi|id) ID name .NAME
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

name

Set the name of the subscriber

.NAME

Name of the Subscriber

1.3.77 subscriber (extension|imsi|tmsi|id) ID silent-call start (any|tch/f|tch/any|sdcc...

Command

```
subscriber (extension|imsi|tmsi|id) ID silent-call start (any|tch/f|tch/any|sdcc...
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

silent-call

Silent call operation

start

Start silent call

any

Any channel

tch/f

TCH/F channel

tch/any

Any TCH channel

sdccch

SDCCCH channel

1.3.78 subscriber (extension|imsi|tmsi|id) ID silent-call stop

Command

```
subscriber (extension|imsi|tmsi|id) ID silent-call stop
```

Parameters**subscriber**

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

silent-call

Silent call operation

stop

Stop silent call

1.3.79 subscriber (extension|imsi|tmsi|id) ID silent-sms sender (extension|imsi|tmsi|id...

Command

```
subscriber (extension|imsi|tmsi|id) ID silent-sms sender (extension|imsi|tmsi|id) ←  
SENDER_ID send .LINE
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

silent-sms

Silent SMS Operations

sender

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

SENDER_ID

Identifier for the subscriber

send

Send SMS

.LINE

Actual SMS Text

1.3.80 subscriber (extension|imsi|tmsi|id) ID sms pending-send

Command

```
subscriber (extension|imsi|tmsi|id) ID sms pending-send
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

sms

SMS Operations

pending-send

Send pending SMS

1.3.81 subscriber (extension|imsi|tmsi|id) ID sms sender (extension|imsi|tmsi|id) SENDE...

Command

```
subscriber (extension|imsi|tmsi|id) ID sms sender (extension|imsi|tmsi|id) SENDER_ID ↔  
send .LINE
```

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id
Identify subscriber by database ID

ID
Identifier for the subscriber

sms
SMS Operations

sender
Operations on a Subscriber

extension
Identify subscriber by extension (phone number)

imsi
Identify subscriber by IMSI

tmsi
Identify subscriber by TMSI

id
Identify subscriber by database ID

SENDER_ID
Identifier for the subscriber

send
Send SMS

.LINE
Actual SMS Text

1.3.82 subscriber (extension|imsi|tmsi|id) ID update

Command

```
subscriber (extension|imsi|tmsi|id) ID update
```

Parameters

subscriber
Operations on a Subscriber

extension
Identify subscriber by extension (phone number)

imsi
Identify subscriber by IMSI

tmsi
Identify subscriber by TMSI

id
Identify subscriber by database ID

ID

Identifier for the subscriber

update

Update the subscriber data from the dabase.

1.3.83 subscriber (extension|imsi|tmsi|id) ID ussd-notify (0|1|2) .TEXT**Command**

```
subscriber (extension|imsi|tmsi|id) ID ussd-notify (0|1|2) .TEXT
```

Parameters**subscriber**

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

ussd-notify

Send a USSD notify to the subscriber

0

Alerting Level 0

1

Alerting Level 1

2

Alerting Level 2

.TEXT

Text of USSD message to send

1.3.84 subscriber create imsi ID

Command

```
subscriber create imsi ID
```

Parameters

subscriber

Operations on a Subscriber

create

Create new subscriber

imsi

Identify the subscriber by his IMSI

ID

Identifier for the subscriber

1.3.85 subscriber purge-inactive

Command

```
subscriber purge-inactive
```

Parameters

subscriber

Operations on a Subscriber

purge-inactive

Purge subscribers with a zero use count.

1.3.86 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)

1.3.87 terminal monitor

Command

```
terminal monitor
```

Parameters

terminal

Set terminal line parameters

monitor

Copy debug output to the current terminal line

1.3.88 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

1.3.89 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

1.3.90 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 ctrl

Command

```
ctrl
```

Parameters

ctrl

Configure the Control Interface

1.4.4 e1_input

Command

```
e1_input
```

Parameters

e1_input

Configure E1/T1/J1 TDM input

1.4.5 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

1.4.6 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

1.4.7 hostname WORD

Command

```
hostname WORD
```

Parameters

hostname

Set system's network name

WORD

This system's network name

1.4.8 line vty

Command

```
line vty
```

Parameters

line

Configure a terminal line

vtty

Virtual terminal

1.4.9 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

1.4.10 log file .FILENAME

Command

```
log file .FILENAME
```

Parameters

log

Configure logging sub-system

file

Logging to text file

.FILENAME

Filename

1.4.11 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)

1.4.12 log stderr

Command

```
log stderr
```

Parameters

log

Configure logging sub-system

stderr

Logging via STDERR of the process

1.4.13 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

1.4.14 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

1.4.15 mncc-int

Command

```
mncc-int
```

Parameters

mncc-int

Configure internal MNCC handler

1.4.16 network

Command

```
network
```

Parameters

network

Configure the GSM network

1.4.17 nitb

Command

```
nitb
```

Parameters

nitb

Configure NITB options

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 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

1.4.26 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)

1.4.27 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

1.4.28 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

1.4.29 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

1.4.30 password LINE

Command

```
password LINE
```

Parameters

password

Assign the terminal connection password

LINE

The UNENCRYPTED (cleartext) line password

1.4.31 service advanced-vty

Command

```
service advanced-vty
```

Parameters

service

Set up miscellaneous service

advanced-vty

Enable advanced mode vty interface

1.4.32 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)

1.4.33 show history

Command

```
show history
```

Parameters

show

Show running system information

history

Display the session command history

1.4.34 smpp

Command

```
smpp
```

Parameters

smpp

Configure SMPP SMS Interface

1.4.35 stats interval <1-65535>

Command

```
stats interval <1-65535>
```

Parameters

stats

Configure stats sub-system

interval

Set the reporting interval

<1-65535>

Interval in seconds

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 filter imsi IMSI

Command

```
logging filter imsi IMSI
```

Parameters

logging

Configure logging

filter

Filter log messages

imsi

Filter log messages by IMSI

IMSI

IMSI to be used as filter

1.5.4 logging level (rll|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gprs|ns...**Command**

```
logging level (rll|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gprs|ns|bssgp| ←
llc|sndcp|nat|ctrl|smpp|filter|ranap|sua|pcu|lglobal|llapd|linp|lmux|lmi|lmib|lsms| ←
lctrl|lgtp|lstats|lgsup|loap|lss7|lsccp|lsua|lm3ua|lmgcp|ljibuf|lrspro) (debug|info ←
|notice|error|fatal)
```

Parameters**logging**

Configure logging

level

Set the log level for a specified category

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 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 (SNDCP)

nat
GSM 08.08 NAT/Multiplexer

ctrl
Control interface

smpp
SMPP interface for external SMS apps

filter
BSC/NAT IMSI based filtering

ranap
Radio Access Network Application Part Protocol

sua
SCCP User Adaptation Protocol

pcu
PCU Interface

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

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 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

1.5.6 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

1.5.7 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

1.5.8 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>')

1.5.9 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

1.5.10 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.

1.5.11 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

1.5.12 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 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

1.6.4 local-ip ADDR

Command

```
local-ip ADDR
```

Parameters

local-ip

Set the IP address to which we bind locally

ADDR

IP Address

1.6.5 mtu <100-65535>

Command

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

Parameters

mtu

Set the maximum packet size

<100-65535>

Size in byte

1.6.6 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

1.6.7 no mtu

Command

```
no mtu
```

Parameters

no

Negate a command or set its defaults

mtu

Set the maximum packet size

1.6.8 no prefix

Command

```
no prefix
```

Parameters

no

Negate a command or set its defaults

prefix

Set the item name prefix

1.6.9 prefix PREFIX

Command

```
prefix PREFIX
```

Parameters

prefix

Set the item name prefix

PREFIX

The prefix string

1.6.10 remote-ip ADDR

Command

```
remote-ip ADDR
```

Parameters

remote-ip

Set the remote IP address to which we connect

ADDR

IP Address

1.6.11 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|ipa|unixsocket)

Command

```
e1_line <0-255> driver (misdn|misdn_lapd|dahdi|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

ipa

IPA TCP/IP input

unixsocket

HSL TCP/IP input

1.8.2 e1_line <0-255> keepalive

Command

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

Parameters

e1_line

Configure E1/T1/J1 Line

<0-255>

Line Number

keepalive

Enable keep-alive probing

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

Command

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

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

1.8.4 e1_line <0-255> name .LINE

Command

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

Parameters

e1_line

Configure E1/T1/J1 Line

<0-255>

Line Number

name

Set name for this line

.LINE

Human readable name

1.8.5 e1_line <0-255> port <0-255>

Command

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

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

1.8.6 e1_line <0-255> socket .SOCKET

Command

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

Parameters

e1_line

Configure E1/T1/J1 Line

<0-255>

Line Number

socket

Set socket path for unixsocket

.SOCKET

socket path

1.8.7 ipa bind A.B.C.D

Command

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

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)

1.8.8 no e1_line <0-255> keepalive

Command

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

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

1.9 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-net

1.10.1 auth policy (closed|accept-all|regex|token)

Command

```
auth policy (closed|accept-all|regex|token)
```

Parameters

auth

Authentication (not cryptographic)

policy

Set the GSM network authentication policy

closed

Require the MS to be activated in HLR

accept-all

Accept all MS, whether in HLR or not

regex

Use regular expression for IMSI authorization decision

token

Use SMS-token based authentication

1.10.2 authorized-regexp REGEXP

Command

```
authorized-regexp REGEXP
```

Parameters

authorized-regexp

Set regexp for IMSI which will be used for authorization decision

REGEXP

Regular expression, IMSIs matching it are allowed to use the network

1.10.3 bts <0-255>

Command

```
bts <0-255>
```

Parameters

bts

Select a BTS to configure

<0-255>

BTS Number

1.10.4 dyn_ts_allow_tch_f (0|1)

Command

```
dyn_ts_allow_tch_f (0|1)
```

Parameters

dyn_ts_allow_tch_f

Allow or disallow allocating TCH/F on TCH_F_TCH_H_PDCH timeslots

0

Disallow TCH/F on TCH_F_TCH_H_PDCH (default)

1

Allow TCH/F on TCH_F_TCH_H_PDCH

1.10.5 encryption a5 (0|1|2|3)

Command

```
encryption a5 (0|1|2|3)
```

Parameters

encryption

Encryption options

a5

A5 encryption

0

A5/0: No encryption

1

A5/1: Encryption

2

A5/2: Export-grade Encryption

3

A5/3: 'New' Secure Encryption

1.10.6 handover (0|1)

Command

```
handover (0|1)
```

Parameters

handover

Handover Options

0

Don't perform in-call handover

1

Perform in-call handover

1.10.7 handover maximum distance <0-9999>

Command

```
handover maximum distance <0-9999>
```

Parameters

handover

Handover Options

maximum

How big is the maximum timing advance before HO is forced

distance

Distance

<0-9999>

Number

1.10.8 handover power budget hysteresis <0-999>

Command

```
handover power budget hysteresis <0-999>
```

Parameters

handover

Handover Options

power

Power Budget

budget

How many dB does a neighbor to be stronger to become a HO candidate

hysteresis

Hysteresis

<0-999>

Number

1.10.9 handover power budget interval <1-99>

Command

```
handover power budget interval <1-99>
```

Parameters

handover

Handover Options

power

Power Budget

budget

How often to check if we have a better cell (SACCH frames)

interval

Interval

<1-99>

Number

1.10.10 handover window rxlev averaging <1-10>

Command

```
handover window rxlev averaging <1-10>
```

Parameters

handover

Handover Options

window

Measurement Window

rxlev

Received Level Averaging

averaging

How many RxLev measurements are used for averaging

<1-10>

Amount to use for Averaging

1.10.11 handover window rxlev neighbor averaging <1-10>

Command

```
handover window rxlev neighbor averaging <1-10>
```

Parameters

handover

Handover Options

window

Measurement Window

rxlev

Received Level Averaging

neighbor

Neighbor

averaging

How many RxQual measurements are used for averaging

<1-10>

Amount to use for Averaging

1.10.12 handover window rxqual averaging <1-10>

Command

```
handover window rxqual averaging <1-10>
```

Parameters

handover

Handover Options

window

Measurement Window

rxqual

Received Quality Averaging

averaging

How many RxQual measurements are used for averaging

<1-10>

Amount to use for Averaging

1.10.13 location updating reject cause <2-111>

Command

```
location updating reject cause <2-111>
```

Parameters

location

Set the reject cause of location updating reject

updating

Set the reject cause of location updating reject

reject

Set the reject cause of location updating reject

cause

Set the reject cause of location updating reject

<2-111>

Cause Value as Per GSM TS 04.08

1.10.14 long name NAME

Command

```
long name NAME
```

Parameters

long

Set the long GSM network name

name

Name Commands

NAME

Name to use

1.10.15 mm info (0|1)

Command

```
mm info (0|1)
```

Parameters

mm

Mobility Management

info

Send MM INFO after LOC UPD ACCEPT

0

Disable

1

Enable

1.10.16 mobile network code <0-999>

Command

```
mobile network code <0-999>
```

Parameters

mobile

Set the GSM mobile network code

network

Network Commands

code

Code commands

<0-999>

Mobile Network Code to use

1.10.17 neci (0|1)

Command

```
neci (0|1)
```

Parameters

neci

New Establish Cause Indication

0

Don't set the NECI bit

1

Set the NECI bit

1.10.18 network country code <1-999>

Command

```
network country code <1-999>
```

Parameters

network

Set the GSM network country code

country

Country commands

code

Code commands

<1-999>

Network Country Code to use

1.10.19 no timezone

Command

```
no timezone
```

Parameters

no

Negate a command or set its defaults

timezone

Disable network timezone override, use system tz

1.10.20 paging any use tch (0|1)

Command

```
paging any use tch (0|1)
```

Parameters

paging

Assign a TCH when receiving a Paging Any request

any

Any Channel

use

Use

tch

TCH

0

Do not use TCH for Paging Request Any

1

Do use TCH for Paging Request Any

1.10.21 rrlp mode (none|ms-based|ms-preferred|ass-preferred)

Command

```
rrlp mode (none|ms-based|ms-preferred|ass-preferred)
```

Parameters

rrlp

Radio Resource Location Protocol

mode

Set the Radio Resource Location Protocol Mode

none

Don't send RRLP request

ms-based

Request MS-based location

ms-preferred

Request any location, prefer MS-based

ass-preferred

Request any location, prefer MS-assisted

1.10.22 short name NAME

Command

```
short name NAME
```

Parameters

short

Set the short GSM network name

name

Name Commands

NAME

Name to use

1.10.23 subscriber-keep-in-ram (0|1)

Command

```
subscriber-keep-in-ram (0|1)
```

Parameters

subscriber-keep-in-ram

Keep unused subscribers in RAM.

0

Delete unused subscribers

1

Keep unused subscribers

1.10.24 timer t3101 (default|<1-65535>)

Command

```
timer t3101 (default|<1-65535>)
```

Parameters

timer

Configure GSM Timers

t3101

Set the timeout value for IMMEDIATE ASSIGNMENT (default: 10 seconds)

default

Set to default timer value (10 seconds)

<1-65535>

Timer Value in seconds

1.10.25 timer t3103 (default|<1-65535>)

Command

```
timer t3103 (default|<1-65535>)
```

Parameters

timer

Configure GSM Timers

t3103

Set the timeout value for HANDOVER (default: 5 seconds)

default

Set to default timer value (5 seconds)

<1-65535>

Timer Value in seconds

1.10.26 timer t3105 (default|<1-65535>)

Command

```
timer t3105 (default|<1-65535>)
```

Parameters

timer

Configure GSM Timers

t3105

Set the timer for repetition of PHYSICAL INFORMATION (default: 100 seconds)

default

Set to default timer value (100 seconds)

<1-65535>

Timer Value in seconds

1.10.27 timer t3107 (default|<1-65535>)

Command

```
timer t3107 (default|<1-65535>)
```

Parameters

timer

Configure GSM Timers

t3107

Currently not used (default: 5 seconds)

default

Set to default timer value (5 seconds)

<1-65535>

Timer Value in seconds

1.10.28 timer t3109 (default|<1-65535>)

Command

```
timer t3109 (default|<1-65535>)
```

Parameters

timer

Configure GSM Timers

t3109

Set the RSL SACCH deactivation timeout (default: 19 seconds)

default

Set to default timer value (19 seconds)

<1-65535>

Timer Value in seconds

1.10.29 timer t3111 (default|<1-65535>)

Command

```
timer t3111 (default|<1-65535>)
```

Parameters

timer

Configure GSM Timers

t3111

Set the RSL timeout to wait before releasing the RF Channel (default: 2 seconds)

default

Set to default timer value (2 seconds)

<1-65535>

Timer Value in seconds

1.10.30 timer t3113 (default|<1-65535>)

Command

```
timer t3113 (default|<1-65535>)
```

Parameters

timer

Configure GSM Timers

t3113

Set the time to try paging a subscriber (default: 60 seconds)

default

Set to default timer value (60 seconds)

<1-65535>

Timer Value in seconds

1.10.31 timer t3115 (default|<1-65535>)

Command

```
timer t3115 (default|<1-65535>)
```

Parameters

timer

Configure GSM Timers

t3115

Currently not used (default: 10 seconds)

default

Set to default timer value (10 seconds)

<1-65535>

Timer Value in seconds

1.10.32 timer t3117 (default|<1-65535>)

Command

```
timer t3117 (default|<1-65535>)
```

Parameters

timer

Configure GSM Timers

t3117

Currently not used (default: 10 seconds)

default

Set to default timer value (10 seconds)

<1-65535>

Timer Value in seconds

1.10.33 timer t3119 (default|<1-65535>)

Command

```
timer t3119 (default|<1-65535>)
```

Parameters

timer

Configure GSM Timers

t3119

Currently not used (default: 10 seconds)

default

Set to default timer value (10 seconds)

<1-65535>

Timer Value in seconds

1.10.34 timer t3122 (default|<1-65535>)

Command

```
timer t3122 (default|<1-65535>)
```

Parameters

timer

Configure GSM Timers

t3122

Default waiting time (seconds) after IMM ASS REJECT (default: 10 seconds)

default

Set to default timer value (10 seconds)

<1-65535>

Timer Value in seconds

1.10.35 timer t3141 (default|<1-65535>)

Command

```
timer t3141 (default|<1-65535>)
```

Parameters

timer

Configure GSM Timers

t3141

Currently not used (default: 10 seconds)

default

Set to default timer value (10 seconds)

<1-65535>

Timer Value in seconds

1.10.36 timezone <-19-19> (0|15|30|45)

Command

```
timezone <-19-19> (0|15|30|45)
```

Parameters

timezone

Set the Timezone Offset of the network

<-19-19>

Timezone offset (hours)

0

Timezone offset (00 minutes)

15

Timezone offset (15 minutes)

30

Timezone offset (30 minutes)

45

Timezone offset (45 minutes)

1.10.37 **timezone** <-19-19> (0|15|30|45) <0-2>

Command

```
timezone <-19-19> (0|15|30|45) <0-2>
```

Parameters

timezone

Set the Timezone Offset of the network

<-19-19>

Timezone offset (hours)

0

Timezone offset (00 minutes)

15

Timezone offset (15 minutes)

30

Timezone offset (30 minutes)

45

Timezone offset (45 minutes)

<0-2>

DST offset (hours)

1.11 **config-net-bts**

1.11.1 **abis-lower-transport** (single-timeslot|super-channel)

Command

```
abis-lower-transport (single-timeslot|super-channel)
```

Parameters

abis-lower-transport

Configure thee Abis Lower Transport

single-timeslot

Single Timeslot (classic Abis)

super-channel

SuperChannel (Packet Abis)

1.11.2 access-control-class-ramping

Command

```
access-control-class-ramping
```

Parameters

access-control-class-ramping

Enable Access Control Class ramping

1.11.3 access-control-class-ramping-step-interval (<30-600>|dynamic)

Command

```
access-control-class-ramping-step-interval (<30-600>|dynamic)
```

Parameters

access-control-class-ramping-step-interval

Configure Access Control Class ramping step interval

<30-600>

Set a fixed step interval (in seconds)

dynamic

Use dynamic step interval based on BTS channel load

1.11.4 access-control-class-ramping-step-size (<1-10>)

Command

```
access-control-class-ramping-step-size (<1-10>)
```

Parameters

access-control-class-ramping-step-size

Configure Access Control Class ramping step size

<1-10>

Set the number of Access Control Classes to enable per ramping step

1.11.5 amr tch-f hysteresis (ms|bts) <0-15>

Command

```
amr tch-f hysteresis (ms|bts) <0-15>
```

Parameters

amr

Adaptive Multi Rate settings

tch-f

Full Rate

hysteresis

AMR hysteresis between codecs

ms

MS side

bts

BTS side

<0-15>

Hysteresis between codec 1 and 2

1.11.6 amr tch-f hysteresis (ms|bts) <0-15> <0-15>

Command

```
amr tch-f hysteresis (ms|bts) <0-15> <0-15>
```

Parameters

amr

Adaptive Multi Rate settings

tch-f

Full Rate

hysteresis

AMR hysteresis between codecs

ms

MS side

bts

BTS side

<0-15>

Hysteresis between codec 1 and 2

<0-15>

Hysteresis between codec 1 and 2

1.11.7 amr tch-f hysteresis (ms|bts) <0-15> <0-15> <0-15>

Command

```
amr tch-f hysteresis (ms|bts) <0-15> <0-15> <0-15>
```

Parameters

amr

Adaptive Multi Rate settings

tch-f

Full Rate

hysteresis

AMR hysteresis between codecs

ms

MS side

bts

BTS side

<0-15>

Hysteresis between codec 1 and 2

<0-15>

Hysteresis between codec 1 and 2

<0-15>

Hysteresis between codec 1 and 2

1.11.8 amr tch-f modes (0|1|2|3|4|5|6|7)

Command

```
amr tch-f modes (0|1|2|3|4|5|6|7)
```

Parameters

amr

Adaptive Multi Rate settings

tch-f

Full Rate

modes

Codec modes to use with AMR codec

0

4,75k

1

5,15k

2	5,90k
3	6,70k
4	7,40k
5	7,95k
6	10,2k
7	12,2k

1.11.9 amr tch-f modes (0|1|2|3|4|5|6|7) (0|1|2|3|4|5|6|7)

Command

```
amr tch-f modes (0|1|2|3|4|5|6|7) (0|1|2|3|4|5|6|7)
```

Parameters

amr

Adaptive Multi Rate settings

tch-f

Full Rate

modes

Codec modes to use with AMR codec

0	4,75k
1	5,15k
2	5,90k
3	6,70k
4	7,40k
5	7,95k
6	10,2k

7
12,2k
0
4,75k
1
5,15k
2
5,90k
3
6,70k
4
7,40k
5
7,95k
6
10,2k
7
12,2k

1.11.10 amr tch-f modes (0|1|2|3|4|5|6|7) (0|1|2|3|4|5|6|7) (0|1|2|3|4|5|6|7)

Command

```
amr tch-f modes (0|1|2|3|4|5|6|7) (0|1|2|3|4|5|6|7) (0|1|2|3|4|5|6|7)
```

Parameters

amr

Adaptive Multi Rate settings

tch-f

Full Rate

modes

Codec modes to use with AMR codec

0
4,75k
1
5,15k
2
5,90k
3
6,70k

- 4
7,40k
 - 5
7,95k
 - 6
10,2k
 - 7
12,2k
 - 0
4,75k
 - 1
5,15k
 - 2
5,90k
 - 3
6,70k
 - 4
7,40k
 - 5
7,95k
 - 6
10,2k
 - 7
12,2k
 - 0
4,75k
 - 1
5,15k
 - 2
5,90k
 - 3
6,70k
 - 4
7,40k
 - 5
7,95k
 - 6
10,2k
 - 7
12,2k
-

1.11.11 amr tch-f modes (0|1|2|3|4|5|6|7) (0|1|2|3|4|5|6|7) (0|1|2|3|4|5|6|7) (0|1|2|3|4...

Command

```
amr tch-f modes (0|1|2|3|4|5|6|7) (0|1|2|3|4|5|6|7) (0|1|2|3|4|5|6|7) (0|1|2|3|4|5|6|7)
```

Parameters

amr

Adaptive Multi Rate settings

tch-f

Full Rate

modes

Codec modes to use with AMR codec

0

4,75k

1

5,15k

2

5,90k

3

6,70k

4

7,40k

5

7,95k

6

10,2k

7

12,2k

0

4,75k

1

5,15k

2

5,90k

3

6,70k

4

7,40k

-
- 5
7,95k
 - 6
10,2k
 - 7
12,2k
 - 0
4,75k
 - 1
5,15k
 - 2
5,90k
 - 3
6,70k
 - 4
7,40k
 - 5
7,95k
 - 6
10,2k
 - 7
12,2k
 - 0
4,75k
 - 1
5,15k
 - 2
5,90k
 - 3
6,70k
 - 4
7,40k
 - 5
7,95k
 - 6
10,2k
 - 7
12,2k
-

1.11.12 amr tch-f start-mode (auto|1|2|3|4)

Command

```
amr tch-f start-mode (auto|1|2|3|4)
```

Parameters

amr

Adaptive Multi Rate settings

tch-f

Full Rate

start-mode

Initial codec to use with AMR

auto

Automatically

1

First codec

2

Second codec

3

Third codec

4

Fourth codec

1.11.13 amr tch-f threshold (ms|bts) <0-63>

Command

```
amr tch-f threshold (ms|bts) <0-63>
```

Parameters

amr

Adaptive Multi Rate settings

tch-f

Full Rate

threshold

AMR threshold between codecs

ms

MS side

bts

BTS side

<0-63>

Threshold between codec 1 and 2

1.11.14 amr tch-f threshold (ms|bts) <0-63> <0-63>

Command

```
amr tch-f threshold (ms|bts) <0-63> <0-63>
```

Parameters

amr

Adaptive Multi Rate settings

tch-f

Full Rate

threshold

AMR threshold between codecs

ms

MS side

bts

BTS side

<0-63>

Threshold between codec 1 and 2

<0-63>

Threshold between codec 1 and 2

1.11.15 amr tch-f threshold (ms|bts) <0-63> <0-63> <0-63>

Command

```
amr tch-f threshold (ms|bts) <0-63> <0-63> <0-63>
```

Parameters

amr

Adaptive Multi Rate settings

tch-f

Full Rate

threshold

AMR threshold between codecs

ms

MS side

bts

BTS side

<0-63>

Threshold between codec 1 and 2

<0-63>

Threshold between codec 1 and 2

<0-63>

Threshold between codec 1 and 2

1.11.16 amr tch-h hysteresis (ms|bts) <0-15>

Command

```
amr tch-h hysteresis (ms|bts) <0-15>
```

Parameters

amr

Adaptive Multi Rate settings

tch-h

Half Rate

hysteresis

AMR hysteresis between codecs

ms

MS side

bts

BTS side

<0-15>

Hysteresis between codec 1 and 2

1.11.17 amr tch-h hysteresis (ms|bts) <0-15> <0-15>

Command

```
amr tch-h hysteresis (ms|bts) <0-15> <0-15>
```

Parameters

amr

Adaptive Multi Rate settings

tch-h

Half Rate

hysteresis

AMR hysteresis between codecs

ms

MS side

bts

BTS side

<0-15>

Hysteresis between codec 1 and 2

<0-15>

Hysteresis between codec 1 and 2

1.11.18 amr tch-h hysteresis (ms|bts) <0-15> <0-15> <0-15>

Command

```
amr tch-h hysteresis (ms|bts) <0-15> <0-15> <0-15>
```

Parameters

amr

Adaptive Multi Rate settings

tch-h

Half Rate

hysteresis

AMR hysteresis between codecs

ms

MS side

bts

BTS side

<0-15>

Hysteresis between codec 1 and 2

<0-15>

Hysteresis between codec 1 and 2

<0-15>

Hysteresis between codec 1 and 2

1.11.19 amr tch-h modes (0|1|2|3|4|5)

Command

```
amr tch-h modes (0|1|2|3|4|5)
```

Parameters

amr

Adaptive Multi Rate settings

tch-h

Half Rate

modes

Codec modes to use with AMR codec

0

4,75k

1

5,15k

2

5,90k

3

6,70k

4

7,40k

5

7,95k

1.11.20 amr tch-h modes (0|1|2|3|4|5) (0|1|2|3|4|5)

Command

```
amr tch-h modes (0|1|2|3|4|5) (0|1|2|3|4|5)
```

Parameters

amr

Adaptive Multi Rate settings

tch-h

Half Rate

modes

Codec modes to use with AMR codec

0

4,75k

1

5,15k

2

5,90k

3

6,70k

4

7,40k

5	7,95k
0	4,75k
1	5,15k
2	5,90k
3	6,70k
4	7,40k
5	7,95k

1.11.21 amr tch-h modes (0|1|2|3|4|5) (0|1|2|3|4|5) (0|1|2|3|4|5)

Command

```
amr tch-h modes (0|1|2|3|4|5) (0|1|2|3|4|5) (0|1|2|3|4|5)
```

Parameters

amr

Adaptive Multi Rate settings

tch-h

Half Rate

modes

Codec modes to use with AMR codec

0	4,75k
1	5,15k
2	5,90k
3	6,70k
4	7,40k
5	7,95k

0
4,75k

1
5,15k

2
5,90k

3
6,70k

4
7,40k

5
7,95k

0
4,75k

1
5,15k

2
5,90k

3
6,70k

4
7,40k

5
7,95k

1.11.22 amr tch-h modes (0|1|2|3|4|5) (0|1|2|3|4|5) (0|1|2|3|4|5) (0|1|2|3|4|5)

Command

```
amr tch-h modes (0|1|2|3|4|5) (0|1|2|3|4|5) (0|1|2|3|4|5) (0|1|2|3|4|5)
```

Parameters

amr

Adaptive Multi Rate settings

tch-h

Half Rate

modes

Codec modes to use with AMR codec

0

4,75k

1
5,15k

2
5,90k

3
6,70k

4
7,40k

5
7,95k

0
4,75k

1
5,15k

2
5,90k

3
6,70k

4
7,40k

5
7,95k

0
4,75k

1
5,15k

2
5,90k

3
6,70k

4
7,40k

5
7,95k

0
4,75k

1
5,15k

- 2
5,90k
- 3
6,70k
- 4
7,40k
- 5
7,95k

1.11.23 amr tch-h start-mode (auto|1|2|3|4)

Command

```
amr tch-h start-mode (auto|1|2|3|4)
```

Parameters

amr

Adaptive Multi Rate settings

tch-h

Half Rate

start-mode

Initial codec to use with AMR

auto

Automatically

1

First codec

2

Second codec

3

Third codec

4

Fourth codec

1.11.24 amr tch-h threshold (ms|bts) <0-63>

Command

```
amr tch-h threshold (ms|bts) <0-63>
```

Parameters

amr

Adaptive Multi Rate settings

tch-h

Half Rate

threshold

AMR threshold between codecs

ms

MS side

bts

BTS side

<0-63>

Threshold between codec 1 and 2

1.11.25 amr tch-h threshold (ms|bts) <0-63> <0-63>

Command

```
amr tch-h threshold (ms|bts) <0-63> <0-63>
```

Parameters

amr

Adaptive Multi Rate settings

tch-h

Half Rate

threshold

AMR threshold between codecs

ms

MS side

bts

BTS side

<0-63>

Threshold between codec 1 and 2

<0-63>

Threshold between codec 1 and 2

1.11.26 amr tch-h threshold (ms|bts) <0-63> <0-63> <0-63>

Command

```
amr tch-h threshold (ms|bts) <0-63> <0-63> <0-63>
```

Parameters

amr

Adaptive Multi Rate settings

tch-h

Half Rate

threshold

AMR threshold between codecs

ms

MS side

bts

BTS side

<0-63>

Threshold between codec 1 and 2

<0-63>

Threshold between codec 1 and 2

<0-63>

Threshold between codec 1 and 2

1.11.27 band BAND

Command

```
band BAND
```

Parameters

band

Set the frequency band of this BTS

BAND

Frequency band

1.11.28 base_station_id_code <0-63>

Command

```
base_station_id_code <0-63>
```

Parameters

base_station_id_code

Set the Base Station Identity Code (BSIC) of this BTS

<0-63>

BSIC of this BTS

1.11.29 cell bar qualify (0|1)

Command

```
cell bar qualify (0|1)
```

Parameters

cell

Cell Parameters

bar

Cell Bar Qualify

qualify

Cell Bar Qualify

0

Set CBQ to 0

1

Set CBQ to 1

1.11.30 cell barred (0|1)

Command

```
cell barred (0|1)
```

Parameters

cell

Should this cell be barred from access?

barred

Should this cell be barred from access?

0

Cell should NOT be barred

1

Cell should be barred

1.11.31 cell reselection hysteresis <0-14>

Command

```
cell reselection hysteresis <0-14>
```

Parameters

cell

Cell Parameters

reselection

Cell re-selection parameters

hysteresis

Cell Re-Selection Hysteresis in dB

<0-14>

Cell Re-Selection Hysteresis in dB

1.11.32 cell reselection offset <0-126>

Command

```
cell reselection offset <0-126>
```

Parameters

cell

Cell Parameters

reselection

Cell Re-Selection Parameters

offset

Cell Re-Selection Offset (CRO) in dB

<0-126>

Cell Re-Selection Offset (CRO) in dB

1.11.33 cell_identity <0-65535>

Command

```
cell_identity <0-65535>
```

Parameters

cell_identity

Set the Cell identity of this BTS

<0-65535>

Cell Identity

1.11.34 channel allocator (ascending|descending)

Command

```
channel allocator (ascending|descending)
```

Parameters

channel

Channel Allocator

allocator

Channel Allocator

ascending

Allocate Timeslots and Transceivers in ascending order

descending

Allocate Timeslots and Transceivers in descending order

1.11.35 channel-description attach (0|1)

Command

```
channel-description attach (0|1)
```

Parameters

channel-description

Channel Description

attach

Set if attachment is required

0

Attachment is NOT required

1

Attachment is required (standard)

1.11.36 channel-description bs-ag-blks-res <0-7>

Command

```
channel-description bs-ag-blks-res <0-7>
```

Parameters

channel-description

Channel Description

bs-ag-blks-res

Set number of blocks reserved for access grant

<0-7>

Number of blocks reserved for access grant

1.11.37 channel-description bs-pa-mfrms <2-9>

Command

```
channel-description bs-pa-mfrms <2-9>
```

Parameters

channel-description

Channel Description

bs-pa-mfrms

Set number of multiframe periods for paging groups

<2-9>

Number of multiframe periods for paging groups

1.11.38 codec-support fr

Command

```
codec-support fr
```

Parameters

codec-support

Codec Support settings

fr

Fullrate

1.11.39 codec-support fr (hr|efr|amr)

Command

```
codec-support fr (hr|efr|amr)
```

Parameters

codec-support

Codec Support settings

fr

Fullrate

hr

Half Rate

efr

Enhanced Full Rate

amr

Adaptive Multirate

1.11.40 codec-support fr (hr|efr|amr) (hr|efr|amr)

Command

```
codec-support fr (hr|efr|amr) (hr|efr|amr)
```

Parameters

codec-support

Codec Support settings

fr

Fullrate

hr

Half Rate

efr

Enhanced Full Rate

amr

Adaptive Multirate

hr

Half Rate

efr

Enhanced Full Rate

amr

Adaptive Multirate

1.11.41 codec-support fr (hr|efr|amr) (hr|efr|amr) (hr|efr|amr)

Command

```
codec-support fr (hr|efr|amr) (hr|efr|amr) (hr|efr|amr)
```

Parameters

codec-support

Codec Support settings

fr

Fullrate

hr

Half Rate

efr

Enhanced Full Rate

amr

Adaptive Multirate

hr
Half Rate

efr
Enhanced Full Rate

amr
Adaptive Multirate

hr
Half Rate

efr
Enhanced Full Rate

amr
Adaptive Multirate

1.11.42 **codec-support fr (hr|efr|amr) (hr|efr|amr) (hr|efr|amr) (hr|efr|amr)**

Command

```
codec-support fr (hr|efr|amr) (hr|efr|amr) (hr|efr|amr) (hr|efr|amr)
```

Parameters

codec-support
Codec Support settings

fr
Fullrate

hr
Half Rate

efr
Enhanced Full Rate

amr
Adaptive Multirate

hr
Half Rate

efr
Enhanced Full Rate

amr
Adaptive Multirate

hr
Half Rate

efr
Enhanced Full Rate

amr
Adaptive Multirate

hr
Half Rate

efr
Enhanced Full Rate

amr
Adaptive Multirate

1.11.43 con-connection-group <1-31>

Command

```
con-connection-group <1-31>
```

Parameters

con-connection-group
Configure a CON (Concentrator) Connection Group

<1-31>
CON Connection Group Number

1.11.44 del-connection-group <1-31>

Command

```
del-connection-group <1-31>
```

Parameters

del-connection-group
Delete a CON (Concentrator) Connection Group

<1-31>
CON Connection Group Number

1.11.45 depends-on-bts <0-255>

Command

```
depends-on-bts <0-255>
```

Parameters

depends-on-bts
This BTS can only be started if another one is up

<0-255>
BTS Number

1.11.46 **depeneds-on-bts <0-255>**

Command

```
depeneds-on-bts <0-255>
```

Parameters

depeneds-on-bts

Negate a command or set its defaults

<0-255>

This BTS can only be started if another one is up

1.11.47 **description .TEXT**

Command

```
description .TEXT
```

Parameters

description

Save human-readable description of the object

.TEXT

Text until the end of the line

1.11.48 **dtx downlink**

Command

```
dtx downlink
```

Parameters

dtx

Configure discontinuous transmission

downlink

Enable Downlink DTX for this BTS

1.11.49 dtx uplink [force]

Command

```
dtx uplink [force]
```

Parameters

dtx

Configure discontinuous transmission

uplink

Enable Uplink DTX for this BTS

[force]

MS 'shall' use DTXu instead of 'may' use (might not be supported by older phones).

1.11.50 early-classmark-sending (allowed|forbidden)

Command

```
early-classmark-sending (allowed|forbidden)
```

Parameters

early-classmark-sending

Early Classmark Sending

allowed

Early Classmark Sending is allowed

forbidden

Early Classmark Sending is forbidden

1.11.51 early-classmark-sending-3g (allowed|forbidden)

Command

```
early-classmark-sending-3g (allowed|forbidden)
```

Parameters

early-classmark-sending-3g

3G Early Classmark Sending

allowed

3G Early Classmark Sending is allowed

forbidden

3G Early Classmark Sending is forbidden

1.11.52 force-combined-si

Command

```
force-combined-si
```

Parameters

force-combined-si

Force the generation of a single SI (no ter/bis)

1.11.53 gprs 11bit_rach_support_for_egprs (0|1)

Command

```
gprs 11bit_rach_support_for_egprs (0|1)
```

Parameters

gprs

GPRS Packet Network

11bit_rach_support_for_egprs

11 bit RACH options

0

Disable 11 bit RACH for EGPRS

1

Enable 11 bit RACH for EGPRS

1.11.54 gprs cell bvci <2-65535>

Command

```
gprs cell bvci <2-65535>
```

Parameters

gprs

GPRS Packet Network

cell

GPRS Cell Settings

bvci

GPRS BSSGP VC Identifier

<2-65535>

GPRS BSSGP VC Identifier

1.11.55 gprs cell timer (blocking-timer|blocking-retries|unblocking-retries|reset-timer|...

Command

```
gprs cell timer (blocking-timer|blocking-retries|unblocking-retries|reset-timer|reset- ↵  
retries|suspend-timer|suspend-retries|resume-timer|resume-retries|capability-update ↵  
-timer|capability-update-retries) <0-255>
```

Parameters

gprs

GPRS Packet Network

cell

Cell / BSSGP

timer

Cell/BSSGP Timer

blocking-timer

Tbvc-block timeout

blocking-retries

Tbvc-block retries

unblocking-retries

Tbvc-unblock retries

reset-timer

Tbvcc-reset timeout

reset-retries

Tbvc-reset retries

suspend-timer

Tbvc-suspend timeout

suspend-retries

Tbvc-suspend retries

resume-timer

Tbvc-resume timeout

resume-retries

Tbvc-resume retries

capability-update-timer

Tbvc-capa-update timeout

capability-update-retries

Tbvc-capa-update retries

<0-255>

Timer Value

1.11.56 gprs control-ack-type-rach

Command

```
gprs control-ack-type-rach
```

Parameters

gprs

GPRS Packet Network

control-ack-type-rach

Set GPRS Control Ack Type for PACKET CONTROL ACKNOWLEDGMENT message to four access bursts format instead of default RLC/MAC control block

1.11.57 gprs mode (none|gprs|egprs)

Command

```
gprs mode (none|gprs|egprs)
```

Parameters

gprs

GPRS Packet Network

mode

GPRS Mode for this BTS

none

GPRS Disabled on this BTS

gprs

GPRS Enabled on this BTS

egprs

EGPRS (EDGE) Enabled on this BTS

1.11.58 gprs network-control-order (nc0|nc1|nc2)

Command

```
gprs network-control-order (nc0|nc1|nc2)
```

Parameters

gprs

GPRS Packet Network

network-control-order

GPRS Network Control Order

nc0

MS controlled cell re-selection, no measurement reporting

nc1

MS controlled cell re-selection, MS sends measurement reports

nc2

Network controlled cell re-selection, MS sends measurement reports

1.11.59 gprs ns timer (tns-block|tns-block-retries|tns-reset|tns-reset-retries|tns-test|...

Command

```
gprs ns timer (tns-block|tns-block-retries|tns-reset|tns-reset-retries|tns-test|tns- ↵  
alive|tns-alive-retries|tsns-prov) <0-255>
```

Parameters

gprs

GPRS Packet Network

ns

Network Service

timer

Network Service Timer

tns-block

(un)blocking Timer (Tns-block) timeout

tns-block-retries

(un)blocking Timer (Tns-block) number of retries

tns-reset

Reset Timer (Tns-reset) timeout

tns-reset-retries

Reset Timer (Tns-reset) number of retries

tns-test

Test Timer (Tns-test) timeout

tns-alive

Alive Timer (Tns-alive) timeout

tns-alive-retries

Alive Timer (Tns-alive) number of retries

tsns-prov

SNS Provision Timer (Tsns-prov) timeout

<0-255>

Timer Value

1.11.60 gprs nsei <0-65535>

Command

```
gprs nsei <0-65535>
```

Parameters

gprs

GPRS Packet Network

nsei

GPRS NS Entity Identifier

<0-65535>

GPRS NS Entity Identifier

1.11.61 gprs nsvc <0-1> local udp port <0-65535>

Command

```
gprs nsvc <0-1> local udp port <0-65535>
```

Parameters

gprs

GPRS Packet Network

nsvc

Network Service Virtual Connection (NS-VC)

<0-1>

NSVC Logical Number

local

GPRS NS Local UDP Port

udp

GPRS NS Local UDP Port

port

GPRS NS Local UDP Port

<0-65535>

GPRS NS Local UDP Port Number

1.11.62 gprs nsvc <0-1> nsvci <0-65535>

Command

```
gprs nsvc <0-1> nsvci <0-65535>
```

Parameters

gprs

GPRS Packet Network

nsvc

Network Service Virtual Connection (NS-VC)

<0-1>

NSVC Logical Number

nsvci

NS Virtual Connection Identifier

<0-65535>

GPRS NS VC Identifier

1.11.63 gprs nsvc <0-1> remote ip A.B.C.D

Command

```
gprs nsvc <0-1> remote ip A.B.C.D
```

Parameters

gprs

GPRS Packet Network

nsvc

Network Service Virtual Connection (NS-VC)

<0-1>

NSVC Logical Number

remote

GPRS NS Remote IP Address

ip

GPRS NS Remote IP Address

A.B.C.D

GPRS NS Remote IP Address

1.11.64 gprs nsvc <0-1> remote udp port <0-65535>

Command

```
gprs nsvc <0-1> remote udp port <0-65535>
```

Parameters

gprs

GPRS Packet Network

nsvc

Network Service Virtual Connection (NS-VC)

<0-1>

NSVC Logical Number

remote

GPRS NS Remote UDP Port

udp

GPRS NS Remote UDP Port

port

GPRS NS Remote UDP Port

<0-65535>

GPRS NS Remote UDP Port Number

1.11.65 gprs routing area <0-255>

Command

```
gprs routing area <0-255>
```

Parameters

gprs

GPRS Packet Network

routing

GPRS Routing Area Code

area

GPRS Routing Area Code

<0-255>

GPRS Routing Area Code

1.11.66 ip.access rsl-ip A.B.C.D

Command

```
ip.access rsl-ip A.B.C.D
```

Parameters

ip.access

Abis/IP specific options

rsl-ip

Set the IPA RSL IP Address of the BSC

A.B.C.D

Destination IP address for RSL connection

1.11.67 ip.access unit_id <0-65534> <0-255>

Command

```
ip.access unit_id <0-65534> <0-255>
```

Parameters

ip.access

Abis/IP specific options

unit_id

Set the IPA BTS Unit ID

<0-65534>

Unit ID (Site)

<0-255>

Unit ID (BTS)

1.11.68 is-connection-list (add|del) <0-2047> <0-2047> <0-255>

Command

```
is-connection-list (add|del) <0-2047> <0-2047> <0-255>
```

Parameters

is-connection-list

Interface Switch Connection List

add

Add to IS list

del

Delete from IS list

<0-2047>

ICP1

<0-2047>

ICP2

<0-255>

Contiguity Index

1.11.69 location_area_code <0-65535>

Command

```
location_area_code <0-65535>
```

Parameters

location_area_code

Set the Location Area Code (LAC) of this BTS

<0-65535>

LAC

1.11.70 ms max power <0-40>

Command

```
ms max power <0-40>
```

Parameters

ms

MS Options

max

Maximum transmit power of the MS

power

Maximum transmit power of the MS

<0-40>

Maximum transmit power of the MS in dBm

1.11.71 neighbor-list (add|del) arfcn <0-1023>

Command

```
neighbor-list (add|del) arfcn <0-1023>
```

Parameters

neighbor-list

Neighbor List

add

Add to manual neighbor list

del

Delete from manual neighbor list

arfcn

ARFCN of neighbor

<0-1023>

ARFCN of neighbor

1.11.72 neighbor-list mode (automatic|manual|manual-si5)

Command

```
neighbor-list mode (automatic|manual|manual-si5)
```

Parameters

neighbor-list

Neighbor List

mode

Mode of Neighbor List generation

automatic

Automatically from all BTS in this OpenBSC

manual

Manual

manual-si5

Manual with different lists for SI2 and SI5

1.11.73 no access-control-class-ramping

Command

```
no access-control-class-ramping
```

Parameters

no

Negate a command or set its defaults

access-control-class-ramping

Disable Access Control Class ramping

1.11.74 no description

Command

```
no description
```

Parameters

no

Negate a command or set its defaults

description

Remove description of the object

1.11.75 no dtx downlink

Command

```
no dtx downlink
```

Parameters

no

Negate a command or set its defaults

dtx

Configure discontinuous transmission

downlink

Disable Downlink DTX for this BTS

1.11.76 no dtx uplink

Command

```
no dtx uplink
```

Parameters

no

Negate a command or set its defaults

dtx

Configure discontinuous transmission

uplink

Disable Uplink DTX for this BTS

1.11.77 no force-combined-si

Command

```
no force-combined-si
```

Parameters

no

Negate a command or set its defaults

force-combined-si

Force the generation of a single SI (no ter/bis)

1.11.78 no gprs control-ack-type-rach

Command

```
no gprs control-ack-type-rach
```

Parameters

no

Negate a command or set its defaults

gprs

GPRS Packet Network

control-ack-type-rach

Set GPRS Control Ack Type for PACKET CONTROL ACKNOWLEDGMENT message to four access bursts format instead of default RLC/MAC control block

1.11.79 no periodic location update

Command

```
no periodic location update
```

Parameters

no

Negate a command or set its defaults

periodic

Periodic Location Updating Interval

location

Periodic Location Updating Interval

update

Periodic Location Updating Interval

1.11.80 no rf-lock-exclude

Command

```
no rf-lock-exclude
```

Parameters

no

Negate a command or set its defaults

rf-lock-exclude

Exclude this BTS from the global RF Lock

1.11.81 nokia_site bts-reset-timer <15-100>

Command

```
nokia_site bts-reset-timer <15-100>
```

Parameters

nokia_site

Nokia *Site related commands

bts-reset-timer

The amount of time (in sec.) between BTS_RESET is sent,

<15-100>

and the BTS is being bootstrapped.

1.11.82 nokia_site no-local-rel-conf (0|1)

Command

```
nokia_site no-local-rel-conf (0|1)
```

Parameters

nokia_site

Nokia *Site related commands

no-local-rel-conf

Do not wait for RELease CONFirm message when releasing channel locally

0

Wait for RELease CONFirm

1

Do not wait for RELease CONFirm

1.11.83 nokia_site skip-reset (0|1)

Command

```
nokia_site skip-reset (0|1)
```

Parameters

nokia_site

Nokia *Site related commands

skip-reset

Skip the reset step during bootstrap process of this BTS

0

Do NOT skip the reset

1

Skip the reset

1.11.84 oml e1 line E1_LINE timeslot <1-31> sub-slot (0|1|2|3|full)

Command

```
oml e1 line E1_LINE timeslot <1-31> sub-slot (0|1|2|3|full)
```

Parameters

oml

Organization & Maintenance Link

e1
OML E1/T1 Configuration

line
E1/T1 line number to be used for OML

E1_LINE
E1/T1 line number to be used for OML

timeslot
E1/T1 timeslot to be used for OML

<1-31>
E1/T1 timeslot to be used for OML

sub-slot
E1/T1 sub-slot to be used for OML

0
Use E1/T1 sub-slot 0

1
Use E1/T1 sub-slot 1

2
Use E1/T1 sub-slot 2

3
Use E1/T1 sub-slot 3

full
Use full E1 slot 3

1.11.85 oml e1 tei <0-63>

Command

```
oml e1 tei <0-63>
```

Parameters

oml
Organization & Maintenance Link

e1
OML E1/T1 Configuration

tei
Set the TEI to be used for OML

<0-63>
TEI Number

1.11.86 oml ip.access stream_id <0-255> line E1_LINE

Command

```
oml ip.access stream_id <0-255> line E1_LINE
```

Parameters

oml

Organization & Maintenance Link

ip.access

A-bis/IP Specific Options

stream_id

Set the ip.access Stream ID of the OML link of this BTS

<0-255>

Stream Identifier

line

Virtual E1 Line Number

E1_LINE

Virtual E1 Line Number

1.11.87 paging free <-1-1024>

Command

```
paging free <-1-1024>
```

Parameters

paging

Paging options

free

Only page when having a certain amount of free slots

<-1-1024>

amount of required free paging slots. -1 to disable

1.11.88 pcu-socket PATH

Command

```
pcu-socket PATH
```

Parameters

pcu-socket

PCU Socket Path for using OsmoPCU co-located with BSC (legacy BTS)

PATH

Path in the file system for the unix-domain PCU socket

1.11.89 penalty time <20-620>

Command

```
penalty time <20-620>
```

Parameters

penalty

Cell selection penalty time

time

Cell selection penalty time

<20-620>

Cell selection penalty time in seconds (by 20s increments)

1.11.90 penalty time reserved

Command

```
penalty time reserved
```

Parameters

penalty

Cell selection penalty time

time

Cell selection penalty time

reserved

Set cell selection penalty time to reserved value 31, (indicate that CELL_RESELECT_OFFSET is subtracted from C2 and TEMPORARY_OFFSET is ignored)

1.11.91 periodic location update <6-1530>

Command

```
periodic location update <6-1530>
```

Parameters

periodic

Periodic Location Updating Interval

location

Periodic Location Updating Interval

update

Periodic Location Updating Interval

<6-1530>

Periodic Location Updating Interval in Minutes

1.11.92 rach access-control-class (0|1|2|3|4|5|6|7|8|9|11|12|13|14|15) (barred|allowed)

Command

```
rach access-control-class (0|1|2|3|4|5|6|7|8|9|11|12|13|14|15) (barred|allowed)
```

Parameters

rach

Random Access Control Channel

access-control-class

Set access control class

0

Access control class 0

1

Access control class 1

2

Access control class 2

3

Access control class 3

4

Access control class 4

5

Access control class 5

6

Access control class 6

7

Access control class 7

8

Access control class 8

9

Access control class 9

11

Access control class 11 for PLMN use

12

Access control class 12 for security services

13

Access control class 13 for public utilities (e.g. water/gas suppliers)

14

Access control class 14 for emergency services

15

Access control class 15 for PLMN staff

barred

barred to use access control class

allowed

allowed to use access control class

1.11.93 rach emergency call allowed (0|1)

Command

```
rach emergency call allowed (0|1)
```

Parameters

rach

Random Access Control Channel

emergency

Should this cell allow emergency calls?

call

Should this cell allow emergency calls?

allowed

Should this cell allow emergency calls?

0

Do NOT allow emergency calls

1

Allow emergency calls

1.11.94 rach max transmission (1|2|4|7)

Command

```
rach max transmission (1|2|4|7)
```

Parameters

rach

Random Access Control Channel

max

Set the maximum number of RACH burst transmissions

transmission

Set the maximum number of RACH burst transmissions

- 1
Maximum number of 1 RACH burst transmissions
- 2
Maximum number of 2 RACH burst transmissions
- 4
Maximum number of 4 RACH burst transmissions
- 7
Maximum number of 7 RACH burst transmissions

1.11.95 rach nm busy threshold <0-255>

Command

```
rach nm busy threshold <0-255>
```

Parameters

rach

Random Access Control Channel

nm

Network Management

busy

Set the NM Busy Threshold

threshold

Set the NM Busy Threshold

<0-255>

NM Busy Threshold in dB

1.11.96 rach nm load average <0-65535>

Command

```
rach nm load average <0-65535>
```

Parameters

rach

Random Access Control Channel

nm

Network Management

load

Set the NM Loadaverage Slots value

average

Set the NM Loadaverage Slots value

<0-65535>

NM Loadaverage Slots value

1.11.97 rach tx integer <0-15>

Command

```
rach tx integer <0-15>
```

Parameters

rach

Random Access Control Channel

tx

Set the raw tx integer value in RACH Control parameters IE

integer

Set the raw tx integer value in RACH Control parameters IE

<0-15>

Raw tx integer value in RACH Control parameters IE

1.11.98 radio-link-timeout <4-64>

Command

```
radio-link-timeout <4-64>
```

Parameters

radio-link-timeout

Radio link timeout criterion (BTS side)

<4-64>

Radio link timeout value (lost SACCH block)

1.11.99 radio-link-timeout infinite

Command

```
radio-link-timeout infinite
```

Parameters

radio-link-timeout

Radio link timeout criterion (BTS side)

infinite

Infinite Radio link timeout value (use only for BTS RF testing)

1.11.100 rf-lock-exclude

Command

```
rf-lock-exclude
```

Parameters

rf-lock-exclude

Exclude this BTS from the global RF Lock

1.11.101 rxlev access min <0-63>

Command

```
rxlev access min <0-63>
```

Parameters

rxlev

Minimum RxLev needed for cell access

access

Minimum RxLev needed for cell access

min

Minimum RxLev needed for cell access

<0-63>

Minimum RxLev needed for cell access (better than -110dBm)

1.11.102 si2quarter neighbor-list add earfcn <0-65535> thresh-hi <0-31> thresh-lo <0-32> p...

Command

```
si2quarter neighbor-list add earfcn <0-65535> thresh-hi <0-31> thresh-lo <0-32> prio ←  
<0-8> qrxlv <0-32> meas <0-8>
```

Parameters

si2quarter

SI2quarter Neighbor List

neighbor-list

SI2quarter Neighbor List

add

Add to manual SI2quarter neighbor list

earfcn

EARFCN of neighbor

<0-65535>

EARFCN of neighbor

thresh-hi

threshold high bits

<0-31>

threshold high bits

thresh-lo

threshold low bits

<0-32>

threshold low bits (32 means NA)

prio

priority

<0-8>

priority (8 means NA)

qrxlv

QRXLEVMIN

<0-32>

QRXLEVMIN (32 means NA)

meas

measurement bandwidth

<0-8>

measurement bandwidth (8 means NA)

1.11.103 si2quater neighbor-list add uarfcn <0-16383> <0-511> <0-1>

Command

```
si2quater neighbor-list add uarfcn <0-16383> <0-511> <0-1>
```

Parameters

si2quater

SI2quater Neighbor List

neighbor-list

SI2quater Neighbor List

add

Add to manual SI2quater neighbor list

uarfcn

UARFCN of neighbor

<0-16383>

UARFCN of neighbor

<0-511>

scrambling code

<0-1>

diversity bit

1.11.104 si2quater neighbor-list del earfcn <0-65535>

Command

```
si2quater neighbor-list del earfcn <0-65535>
```

Parameters

si2quater

SI2quater Neighbor List

neighbor-list

SI2quater Neighbor List

del

Delete from SI2quater manual neighbor list

earfcn

EARFCN of neighbor

<0-65535>

EARFCN

1.11.105 si2quater neighbor-list del uarfcn <0-16383> <0-511>

Command

```
si2quater neighbor-list del uarfcn <0-16383> <0-511>
```

Parameters

si2quater

SI2quater Neighbor List

neighbor-list

SI2quater Neighbor List

del

Delete from SI2quater manual neighbor list

uarfcn

UARFCN of neighbor

<0-16383>

UARFCN

<0-511>

scrambling code

1.11.106 si5 neighbor-list (add|del) arfcn <0-1023>

Command

```
si5 neighbor-list (add|del) arfcn <0-1023>
```

Parameters

si5

SI5 Neighbor List

neighbor-list

SI5 Neighbor List

add

Add to manual SI5 neighbor list

del

Delete from SI5 manual neighbor list

arfcn

ARFCN of neighbor

<0-1023>

ARFCN of neighbor

1.11.107 system-information (1|2|3|4|5|6|7|8|9|10|13|16|17|18|19|20|2bis|2ter|2quater|5bi...

Command

```
system-information (1|2|3|4|5|6|7|8|9|10|13|16|17|18|19|20|2bis|2ter|2quater|5bis|5ter) ↔  
mode (static|computed)
```

Parameters

system-information

System Information Messages

1

System Information Type 1

2

System Information Type 2

3

System Information Type 3

4

System Information Type 4

5

System Information Type 5

6
System Information Type 6

7
System Information Type 7

8
System Information Type 8

9
System Information Type 9

10
System Information Type 10

13
System Information Type 13

16
System Information Type 16

17
System Information Type 17

18
System Information Type 18

19
System Information Type 19

20
System Information Type 20

2bis
System Information Type 2bis

2ter
System Information Type 2ter

2quater
System Information Type 2quater

5bis
System Information Type 5bis

5ter
System Information Type 5ter

mode
System Information Mode

static
Static user-specified

computed
Dynamic, BSC-computed

1.11.108 system-information (1|2|3|4|5|6|7|8|9|10|13|16|17|18|19|20|2bis|2ter|2quater|5bi...

Command

```
system-information (1|2|3|4|5|6|7|8|9|10|13|16|17|18|19|20|2bis|2ter|2quater|5bis|5ter) ↔  
static HEXSTRING
```

Parameters

system-information

System Information Messages

1

System Information Type 1

2

System Information Type 2

3

System Information Type 3

4

System Information Type 4

5

System Information Type 5

6

System Information Type 6

7

System Information Type 7

8

System Information Type 8

9

System Information Type 9

10

System Information Type 10

13

System Information Type 13

16

System Information Type 16

17

System Information Type 17

18

System Information Type 18

19

System Information Type 19

20
System Information Type 20

2bis
System Information Type 2bis

2ter
System Information Type 2ter

2quater
System Information Type 2quater

5bis
System Information Type 5bis

5ter
System Information Type 5ter

static
Static System Information filling

HEXSTRING
Static user-specified SI content in HEX notation

1.11.109 temporary offset <0-60>

Command

```
temporary offset <0-60>
```

Parameters

temporary

Cell selection temporary negative offset

offset

Cell selection temporary negative offset

<0-60>

Cell selection temporary negative offset in dB

1.11.110 temporary offset infinite

Command

```
temporary offset infinite
```

Parameters

temporary

Cell selection temporary negative offset

offset

Cell selection temporary negative offset

infinite

Sets cell selection temporary negative offset to infinity

1.11.111 **trx <0-255>**

Command

```
trx <0-255>
```

Parameters

trx

Radio Transceiver

<0-255>

Select a TRX to configure

1.11.112 **type (unknown|bs11|nanobts|rbs2000|nokia_site|sysmobts)**

Command

```
type (unknown|bs11|nanobts|rbs2000|nokia_site|sysmobts)
```

Parameters

type

BTS Vendor/Type

unknown

Unknown BTS Type

bs11

Siemens BTS (BS-11 or compatible)

nanobts

ip.access nanoBTS or compatible

rbs2000

Ericsson RBS2000 Series

nokia_site

Nokia {Metro,Ultra,In}Site

sysmobts

sysmocom sysmoBTS

1.12 **config-net-bts-trx**

1.12.1 **arfcn <0-1023>**

Command

```
arfcn <0-1023>
```

Parameters

arfcn

Set the ARFCN for this TRX

<0-1023>

Absolute Radio Frequency Channel Number

1.12.2 description .TEXT

Command

```
description .TEXT
```

Parameters

description

Save human-readable description of the object

.TEXT

Text until the end of the line

1.12.3 max_power_red <0-100>

Command

```
max_power_red <0-100>
```

Parameters

max_power_red

Reduction of maximum BS RF Power (relative to nominal power)

<0-100>

Reduction of maximum BS RF Power in dB

1.12.4 no description

Command

```
no description
```

Parameters

no

Negate a command or set its defaults

description

Remove description of the object

1.12.5 nominal power <0-100>

Command

```
nominal power <0-100>
```

Parameters

nominal

Nominal TRX RF Power in dBm

power

Nominal TRX RF Power in dBm

<0-100>

Nominal TRX RF Power in dBm

1.12.6 rf_locked (0|1)

Command

```
rf_locked (0|1)
```

Parameters

rf_locked

Set or unset the RF Locking (Turn off RF of the TRX)

0

TRX is NOT RF locked (active)

1

TRX is RF locked (turned off)

1.12.7 rsl e1 line E1_LINE timeslot <1-31> sub-slot (0|1|2|3|full)

Command

```
rsl e1 line E1_LINE timeslot <1-31> sub-slot (0|1|2|3|full)
```

Parameters

rsl

RSL Parameters

e1

E1/T1 interface to be used for RSL

line

E1/T1 interface to be used for RSL

E1_LINE

E1/T1 Line Number to be used for RSL

timeslot

E1/T1 Timeslot to be used for RSL

<1-31>

E1/T1 Timeslot to be used for RSL

sub-slot

E1/T1 Sub-slot to be used for RSL

0

E1/T1 Sub-slot 0 is to be used for RSL

1

E1/T1 Sub-slot 1 is to be used for RSL

2

E1/T1 Sub-slot 2 is to be used for RSL

3

E1/T1 Sub-slot 3 is to be used for RSL

full

E1/T1 full timeslot is to be used for RSL

1.12.8 rsl e1 tei <0-63>**Command**

```
rsl e1 tei <0-63>
```

Parameters**rsl**

RSL Parameters

e1

Set the TEI to be used for RSL

tei

Set the TEI to be used for RSL

<0-63>

TEI to be used for RSL

1.12.9 timeslot <0-7>

Command

```
timeslot <0-7>
```

Parameters

timeslot

Select a Timeslot to configure

<0-7>

Timeslot number

1.13 config-net-bts-trx-ts

1.13.1 e1 line E1_LINE timeslot <1-31> sub-slot (0|1|2|3|full)

Command

```
e1 line E1_LINE timeslot <1-31> sub-slot (0|1|2|3|full)
```

Parameters

e1

E1/T1 channel connected to this on-air timeslot

line

E1/T1 channel connected to this on-air timeslot

E1_LINE

E1/T1 line connected to this on-air timeslot

timeslot

E1/T1 timeslot connected to this on-air timeslot

<1-31>

E1/T1 timeslot connected to this on-air timeslot

sub-slot

E1/T1 sub-slot connected to this on-air timeslot

0

E1/T1 sub-slot 0 connected to this on-air timeslot

1

E1/T1 sub-slot 1 connected to this on-air timeslot

2

E1/T1 sub-slot 2 connected to this on-air timeslot

3

E1/T1 sub-slot 3 connected to this on-air timeslot

full

Full E1/T1 timeslot connected to this on-air timeslot

1.13.2 hopping arfcn add <0-1023>

Command

```
hopping arfcn add <0-1023>
```

Parameters

hopping

Configure frequency hopping

arfcn

Configure hopping ARFCN list

add

Add an entry to the hopping ARFCN list

<0-1023>

ARFCN

1.13.3 hopping arfcn del <0-1023>

Command

```
hopping arfcn del <0-1023>
```

Parameters

hopping

Configure frequency hopping

arfcn

Configure hopping ARFCN list

del

Delete an entry to the hopping ARFCN list

<0-1023>

ARFCN

1.13.4 hopping enabled (0|1)

Command

```
hopping enabled (0|1)
```

Parameters

hopping

Configure frequency hopping

enabled

Enable or disable frequency hopping

0

Disable frequency hopping

1

Enable frequency hopping

1.13.5 hopping maio <0-63>

Command

```
hopping maio <0-63>
```

Parameters

hopping

Configure frequency hopping

maio

Which hopping MAIO to use for this channel

<0-63>

Mobile Allocation Index Offset (MAIO)

1.13.6 hopping sequence-number <0-63>

Command

```
hopping sequence-number <0-63>
```

Parameters

hopping

Configure frequency hopping

sequence-number

Which hopping sequence to use for this channel

<0-63>

Hopping Sequence Number (HSN)

1.13.7 phys_chan_config (none|ccch|ccch+sdccch4|tch/f|tch/h|sdccch8|pdch|tch/f_pdch|unkno...

Command

```
phys_chan_config (none|ccch|ccch+sdccch4|tch/f|tch/h|sdccch8|pdch|tch/f_pdch|unknown|ccch ↔
+sdccch4+cbch|sdccch8+cbch|tch/f_tch/h_pdch)
```

Parameters

phys_chan_config

Physical Channel Combination

none

Physical Channel not configured

ccch

FCCH + SCH + BCCH + CCCH (Comb. IV)

ccch+sdccch4

FCCH + SCH + BCCH + CCCH + 4 SDCCH + 2 SACCH (Comb. V)

tch/f

TCH/F + FACCH/F + SACCH (Comb. I)

tch/h

2 TCH/H + 2 FACCH/H + 2 SACCH (Comb. II)

sdccch8

8 SDCCH + 4 SACCH (Comb. VII)

pdch

Packet Data Channel for GPRS/EDGE

tch/f_pdch

Dynamic TCH/F or GPRS PDCH

unknown

Unknown / Unsupported channel combination

ccch+sdccch4+cbch

FCCH + SCH + BCCH + CCCH + CBCH + 3 SDCCH + 2 SACCH (Comb. V)

sdccch8+cbch

7 SDCCH + 4 SACCH + CBCH (Comb. VII)

tch/f_tch/h_pdch

Dynamic TCH/F or TCH/H or GPRS PDCH

1.13.8 training_sequence_code <0-7>

Command

```
training_sequence_code <0-7>
```

Parameters

training_sequence_code

Training Sequence Code of the Timeslot

<0-7>

TSC

1.14 oml

1.14.1 change-adm-state (locked|unlocked|shutdown|null)

Command

```
change-adm-state (locked|unlocked|shutdown|null)
```

Parameters

change-adm-state

Change the Administrative State

locked

Locked

unlocked

Unlocked

shutdown

Shutdown

null

NULL

1.14.2 opstart

Command

```
opstart
```

Parameters

opstart

Send an OPSTART message to the object

1.15 om2k

1.15.1 capabilities-request

Command

```
capabilities-request
```

Parameters

capabilities-request

Request MO capabilities

1.15.2 configuration-request

Command

```
configuration-request
```

Parameters

configuration-request

Send the configuration request for current MO

1.15.3 connect-command

Command

```
connect-command
```

Parameters

connect-command

Connect the MO

1.15.4 disable-request

Command

```
disable-request
```

Parameters

disable-request

Disable the MO

1.15.5 disconnect-command

Command

```
disconnect-command
```

Parameters

disconnect-command

Disconnect the MO

1.15.6 enable-request

Command

```
enable-request
```

Parameters

enable-request

Enable the MO

1.15.7 operational-info <0-1>

Command

```
operational-info <0-1>
```

Parameters

operational-info

Set operational information

<0-1>

Set operational info to 0 or 1

1.15.8 reset-command

Command

```
reset-command
```

Parameters

reset-command

Reset the MO

1.15.9 start-request

Command

```
start-request
```

Parameters

start-request

Start the MO

1.15.10 status-request

Command

```
status-request
```

Parameters

status-request

Get the MO Status

1.15.11 test-request

Command

```
test-request
```

Parameters

test-request

Test the MO

1.16 om2k-con-group

1.16.1 con-path (add|del) <0-2047> <0-255> concentrated <1-16>

Command

```
con-path (add|del) <0-2047> <0-255> concentrated <1-16>
```

Parameters

con-path

CON Path (In/Out)

add

Add CON Path to Concentration Group

del

Delete CON Path from Concentration Group

<0-2047>

CON Connection Point

<0-255>

Contiguity Index

concentrated

Concentrated in/outlet

<1-16>

Tag Number

1.16.2 con-path (add|del) <0-2047> <0-255> deconcentrated <0-63>

Command

```
con-path (add|del) <0-2047> <0-255> deconcentrated <0-63>
```

Parameters

con-path

CON Path (In/Out)

add

Add CON Path to Concentration Group

del

Delete CON Path from Concentration Group

<0-2047>

CON Connection Point

<0-255>

Contiguity Index

deconcentrated

De-concentrated in/outlet

<0-63>

TEI Value

1.17 config-mncc-int

This node allows to configure the default codecs for the internal call control handling.

1.17.1 default-codec tch-f (fr|EFR|amr)

Command

```
default-codec tch-f (fr|EFR|amr)
```

Parameters

default-codec

Set default codec

tch-f

Codec for TCH/F

fr

Full-Rate

EFR

Enhanced Full-Rate

amr

Adaptive Multi-Rate

1.17.2 default-codec tch-h (hr|amr)

Command

```
default-codec tch-h (hr|amr)
```

Parameters

default-codec

Set default codec

tch-h

Codec for TCH/H

hr

Half-Rate

amr

Adaptive Multi-Rate

1.17.3 meas-feed destination ADDR <0-65535>

Command

```
meas-feed destination ADDR <0-65535>
```

Parameters

meas-feed

Measurement export related

destination

destination

ADDR

address or hostname

<0-65535>

port number

1.17.4 meas-feed scenario NAME

Command

```
meas-feed scenario NAME
```

Parameters

meas-feed

Measurement export related

scenario

scenario

NAME

Name up to 31 characters included in report

1.18 config-nitb

1.18.1 assign-tmsi

Command

```
assign-tmsi
```

Parameters

assign-tmsi

Assign TMSI during Location Updating.

1.18.2 no assign-tmsi

Command

```
no assign-tmsi
```

Parameters

no

Negate a command or set its defaults

assign-tmsi

Assign TMSI during Location Updating.

1.18.3 no subscriber-create-on-demand

Command

```
no subscriber-create-on-demand
```

Parameters

no

Negate a command or set its defaults

subscriber-create-on-demand

Make a new record when a subscriber is first seen.

1.18.4 subscriber-create-on-demand [no-extension]

Command

```
subscriber-create-on-demand [no-extension]
```

Parameters

subscriber-create-on-demand

Make a new record when a subscriber is first seen.

[no-extension]

Do not automatically assign extension to created subscribers

1.18.5 subscriber-create-on-demand random <1-9999999999> <2-9999999999>

Command

```
subscriber-create-on-demand random <1-9999999999> <2-9999999999>
```

Parameters

subscriber-create-on-demand

Set random parameters for a new record when a subscriber is first seen.

random

Set random parameters for a new record when a subscriber is first seen.

<1-9999999999>

Minimum for subscriber extension

<2-9999999999>

Maximum for subscriber extension

1.19 config-smpp

This node allows to configure the SMPP interface for interfacing with external SMS applications. This section contains generic/common SMPP related configuration, and no per-ESME specific parameters.

1.19.1 esme NAME

Command

```
esme NAME
```

Parameters

esme

Configure a particular ESME

NAME

Alphanumeric System ID of the ESME to be configured

1.19.2 local-tcp-ip A.B.C.D <1-65535>

Command

```
local-tcp-ip A.B.C.D <1-65535>
```

Parameters

local-tcp-ip

Set the local IP address and TCP port on which we listen for SMPP

A.B.C.D

Local IP address

<1-65535>

TCP port number

1.19.3 local-tcp-port <1-65535>

Command

```
local-tcp-port <1-65535>
```

Parameters

local-tcp-port

Set the local TCP port on which we listen for SMPP

<1-65535>

TCP port number

1.19.4 no esme NAME

Command

```
no esme NAME
```

Parameters

no

Negate a command or set its defaults

esme

Remove ESME configuration

NAME

Alphanumeric System ID of the ESME to be removed

1.19.5 no smpp-first

Command

```
no smpp-first
```

Parameters

no

Negate a command or set its defaults

smpp-first

Try SMPP before routes before the subscriber DB

1.19.6 policy (accept-all|closed)

Command

```
policy (accept-all|closed)
```

Parameters

policy

Set the authentication policy of this SMSC

accept-all

Accept all SMPP connections independent of system ID / password

closed

Accept only SMPP connections from ESMEs explicitly configured

1.19.7 smpp-first

Command

```
smpp-first
```

Parameters

smpp-first

Try SMPP routes before the subscriber DB

1.19.8 system-id ID

Command

```
system-id ID
```

Parameters

system-id

Set the System ID of this SMSC

ID

Alphanumeric SMSC System ID

1.20 config-smpp-esme

This node allows to configure one particular SMPP ESME, which is an External SMS Entity such as a SMS based application server. You can define any number of ESME within the SMPP node of the OsmoNITB VTY.

1.20.1 alert-notifications

Command

```
alert-notifications
```

Parameters

alert-notifications

Disable sending of SMPP Alert Notifications for this ESME

1.20.2 dcs-transparent

Command

```
dcs-transparent
```

Parameters

dcs-transparent

Enable the transparent pass-through of TP-DCS to SMPP DataCoding

1.20.3 default-route

Command

```
default-route
```

Parameters

default-route

Set this ESME as default-route for all SMS to unknown destinations

1.20.4 deliver-src-imsi

Command

```
deliver-src-imsi
```

Parameters

deliver-src-imsi

Enable the use of IMSI as source address in DELIVER

1.20.5 no alert-notifications

Command

```
no alert-notifications
```

Parameters

no

Negate a command or set its defaults

alert-notifications

Disable sending of SMPP Alert Notifications for this ESME

1.20.6 no dcs-transparent

Command

```
no dcs-transparent
```

Parameters

no

Negate a command or set its defaults

dcs-transparent

Disable the transparent pass-through of TP-DCS to SMPP DataCoding

1.20.7 no default-route

Command

```
no default-route
```

Parameters

no

Negate a command or set its defaults

default-route

Remove this ESME as default-route for all SMS to unknown destinations

1.20.8 no deliver-src-imsi

Command

```
no deliver-src-imsi
```

Parameters

no

Negate a command or set its defaults

deliver-src-imsi

Disable the use of IMSI as source address in DELIVER

1.20.9 no osmocom-extensions

Command

```
no osmocom-extensions
```

Parameters

no

Negate a command or set its defaults

osmocom-extensions

Disable the use of Osmocom SMPP Extensions for this ESME

1.20.10 no password

Command

```
no password
```

Parameters

no

Negate a command or set its defaults

password

Remove the password for this ESME

1.20.11 no route prefix (unknown|international|national|network|subscriber|alpha|abbrev)...

Command

```
no route prefix (unknown|international|national|network|subscriber|alpha|abbrev) ( ←  
unknown|isdn|x121|f69|e212|national|private|ermes|ip|wap) PREFIX
```

Parameters

no

Negate a command or set its defaults

route

Configure a route for MO-SMS to be sent to this ESME

prefix

Prefix-match route

unknown

Unknown type-of-number

international

International type-of-number

national

National type-of-number

network

Network specific type-of-number

subscriber

Subscriber type-of-number

alpha

Alphanumeric type-of-number

abbrev

Abbreviated type-of-number

unknown

Unknown numbering plan

isdn

ISDN (E.164) numbering plan

x121

X.121 numbering plan

f69

F.69 numbering plan

e212

E.212 numbering plan

national

National numbering plan

private
 Private numbering plan

ermes
 ERMES numbering plan

ip
 IP numbering plan

wap
 WAP numbeing plan

PREFIX
 Destination number prefix

1.20.12 osmocom-extensions

Command

```
osmocom-extensions
```

Parameters

osmocom-extensions

Enable the use of Osmocom SMPP Extensions for this ESME

1.20.13 password PASSWORD

Command

```
password PASSWORD
```

Parameters

password

Set the password for this ESME

PASSWORD

Alphanumeric password string

1.20.14 route prefix (unknown|international|national|network|subscriber|alpha|abbrev) (u...

Command

```
route prefix (unknown|international|national|network|subscriber|alpha|abbrev) (unknown| ↔  
    isdn|x121|f69|e212|national|private|ermes|ip|wap) PREFIX
```

Parameters

route

Configure a route for MO-SMS to be sent to this ESME

prefix

Prefix-match route

unknown

Unknown type-of-number

international

International type-of-number

national

National type-of-number

network

Network specific type-of-number

subscriber

Subscriber type-of-number

alpha

Alphanumeric type-of-number

abbrev

Abbreviated type-of-number

unknown

Unknown numbering plan

isdn

ISDN (E.164) numbering plan

x121

X.121 numbering plan

f69

F.69 numbering plan

e212

E.212 numbering plan

national

National numbering plan

private

Private numbering plan

ermes

ERMES numbering plan

ip

IP numbering plan

wap

WAP numbeing plan

PREFIX

Destination number prefix
