

# **OsmoNITB VTY Reference**

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**COLLABORATORS**

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# Chapter 1

## VTY reference

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

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

Table 1.1: VTY Parameter Patterns

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

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

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

Table 1.2: VTY port numbers

## 1.1

### 1.1.1 echo .MESSAGE

### Command

```
echo .MESSAGE
```

### Parameters

echo

Echo a message back to the vty

.MESSAGE

The message to echo

## 1.1.2 enable

### Command

```
enable
```

### Parameters

enable

Turn on privileged mode command

## 1.1.3 exit

### Command

```
exit
```

### Parameters

exit

Exit current mode and down to previous mode

## 1.1.4 help

### Command

```
help
```

### Parameters

help

Description of the interactive help system

---

### 1.1.5 list

#### Command

```
list
```

#### Parameters

list

Print command list

### 1.1.6 logging color (0|1)

#### Command

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

#### Parameters

logging

Configure log message to this terminal

color

Configure color-printing for log messages

0

Don't use color for printing messages

1

Use color for printing messages

### 1.1.7 logging disable

#### Command

```
logging disable
```

#### Parameters

logging

Configure log message to this terminal

disable

Disables logging to this vty

---

### 1.1.8 logging enable

#### Command

```
logging enable
```

#### Parameters

##### logging

Configure log message to this terminal

##### enable

Enables logging to this vty

### 1.1.9 logging filter all (0|1)

The logging framework has the concept of filters. This can be used to only show log messages that apply to a given timeslot or subscriber. The all filter allows all messages to pass unfiltered.

#### Command

```
logging filter all (0|1)
```

#### Parameters

##### logging

Configure log message to this terminal

##### filter

Filter log messages

##### all

Do you want to log all messages?

##### 0

Only print messages matched by other filters

##### 1

Bypass filter and print all messages

### 1.1.10 logging filter imsi IMSI

#### Command

```
logging filter imsi IMSI
```

#### Parameters

##### logging

Configure log message to this terminal

**filter**

Filter log messages

**imsi**

Filter log messages by IMSI

**IMSI**

IMSI to be used as filter

**1.1.11 logging level (all|rl|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gpr...****Command**

```
logging level (all|rl|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|lglobal|llapd|linp|lmux|lmi|lmib|↔
             lsms|lctrl|lgtp|lstats) (everything|debug|info|notice|error|fatal)
```

**Parameters****logging**

Configure log message to this terminal

**level**

Set the log level for a specified category

**all**

Global setting for all subsystems

**rl**

A-bis Radio Link Layer (RLL)

**cc**

Layer3 Call Control (CC)

**mm**

Layer3 Mobility Management (MM)

**rr**

Layer3 Radio Resource (RR)

**rsl**

A-bis Radio Siganlling Link (RSL)

**nm**

A-bis Network Management / O&amp;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

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
everything	Don't use. It doesn't log anything
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

### 1.1.12 logging print category (0|1)

#### Command

```
logging print category (0|1)
```

#### Parameters

##### logging

Configure log message to this terminal

##### print

Log output settings

---



**category**

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem name

### 1.1.13 logging print extended-timestamp (0|1)

**Command**

```
logging print extended-timestamp (0|1)
```

**Parameters****logging**

Configure log message to this terminal

**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

### 1.1.14 logging set log mask MASK

**Command**

```
logging set log mask MASK
```

**Parameters****logging**

Configure log message to this terminal

**set**

Decide which categories to output.

**log**

Log commands

**mask**

Mask commands

**MASK**

The logmask to use

---

### 1.1.15 logging set-log-mask MASK

#### Command

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

#### Parameters

##### logging

Configure log message to this terminal

##### set-log-mask

Set the logmask of this logging target

##### MASK

The logmask to use

### 1.1.16 logging timestamp (0|1)

#### Command

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

#### Parameters

##### logging

Configure log message to this terminal

##### timestamp

Configure log message timestamping

##### 0

Don't prefix each log message

##### 1

Prefix each log message with current timestamp

### 1.1.17 show alarms

#### Command

```
show alarms
```

#### Parameters

##### show

Show running system information

##### alarms

Show current logging configuration

### 1.1.18 show asciidoc counters

#### Command

```
show asciidoc counters
```

#### Parameters

show

Show running system information

asciidoc

Asciidoc generation

counters

Generate table of all registered counters

### 1.1.19 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

### 1.1.20 show e1\_driver

#### Command

```
show e1_driver
```

#### Parameters

show

Show running system information

e1\_driver

Display information about available E1 drivers

### 1.1.21 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

### 1.1.22 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

### 1.1.23 show history

#### Command

```
show history
```

#### Parameters

##### show

Show running system information

##### history

Display the session command history

---

### 1.1.24 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

### 1.1.25 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

### 1.1.26 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

### 1.1.27 show network

#### Command

```
show network
```

#### Parameters

##### show

Show running system information

##### network

Display information about a GSM NETWORK

### 1.1.28 show online-help

#### Command

```
show online-help
```

#### Parameters

##### show

Show running system information

##### online-help

Online help

### 1.1.29 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

### 1.1.30 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

### 1.1.31 show sms-queue

#### Command

```
show sms-queue
```

#### Parameters

##### show

Show running system information

##### sms-queue

Display SMSqueue statistics

---

### 1.1.32 show statistics

#### Command

```
show statistics
```

#### Parameters

##### show

Show running system information

##### statistics

Display network statistics

### 1.1.33 show stats

#### Command

```
show stats
```

#### Parameters

##### show

Show running system information

##### stats

Show statistical values

### 1.1.34 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

---



### 1.1.35 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

### 1.1.36 show subscriber cache

#### Command

```
show subscriber cache
```

#### Parameters

##### show

Show running system information

##### subscriber

Show information about subscribers

##### cache

Display contents of subscriber cache

### 1.1.37 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

### 1.1.38 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

### 1.1.39 show version

#### Command

```
show version
```

#### Parameters

show

Show running system information

version

Displays program version

### 1.1.40 sms send pending

#### Command

```
sms send pending
```

#### Parameters

sms

SMS related commands

send

SMS Sending related commands

pending

Send all pending SMS

### 1.1.41 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

### 1.1.42 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

### 1.1.43 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

#### 1.1.44 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

### 1.1.45 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.

### 1.1.46 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

---

### 1.1.47 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

### 1.1.48 terminal length <0-512>

#### Command

```
terminal length <0-512>
```

#### Parameters

##### terminal

Set terminal line parameters

##### length

Set number of lines on a screen

##### <0-512>

Number of lines on screen (0 for no pausing)

### 1.1.49 terminal no length

#### Command

```
terminal no length
```

#### Parameters

##### terminal

Set terminal line parameters

##### no

Negate a command or set its defaults

##### length

Set number of lines on a screen

---



### 1.1.50 who

#### Command

```
who
```

#### Parameters

who

Display who is on vty

## 1.2

### 1.2.1 **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

### 1.2.2 **bits <0-255> om2000 class <0-255> <0-255> <0-255> <0-255>**

#### Command

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

#### Parameters

bits  
    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

### 1.2.3 **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

#### 1.2.4 **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

### 1.2.5 **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)

### 1.2.6 **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)

### 1.2.7 configure terminal

Command

```
configure terminal
```

Parameters

configure

Configuration from vty interface

terminal

Configuration terminal

### 1.2.8 copy running-config startup-config

Command

```
copy running-config startup-config
```

Parameters

copy

Copy configuration

running-config

Copy running config to...

startup-config

Copy running config to startup config (same as write file)

---

### 1.2.9 disable

#### Command

```
disable
```

#### Parameters

##### disable

Turn off privileged mode command

### 1.2.10 drop bts connection <0-65535> (oml|rsl)

#### Command

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

#### 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

##### rsl

Drop RSL Connection

### 1.2.11 echo .MESSAGE

#### Command

```
echo .MESSAGE
```

#### Parameters

##### echo

Echo a message back to the vty

##### .MESSAGE

The message to echo

---

### 1.2.12 exit

#### Command

```
exit
```

#### Parameters

exit

Exit current mode and down to previous mode

### 1.2.13 help

#### Command

```
help
```

#### Parameters

help

Description of the interactive help system

### 1.2.14 list

#### Command

```
list
```

#### Parameters

list

Print command list

### 1.2.15 logging color (0|1)

#### Command

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

#### Parameters

logging

Configure log message to this terminal

color

Configure color-printing for log messages

0

Don't use color for printing messages

1

Use color for printing messages

---



### 1.2.16 logging disable

#### Command

```
logging disable
```

#### Parameters

##### logging

Configure log message to this terminal

##### disable

Disables logging to this vty

### 1.2.17 logging enable

#### Command

```
logging enable
```

#### Parameters

##### logging

Configure log message to this terminal

##### enable

Enables logging to this vty

### 1.2.18 logging filter all (0|1)

The logging framework has the concept of filters. This can be used to only show log messages that apply to a given timeslot or subscriber. The all filter allows all messages to pass unfiltered.

#### Command

```
logging filter all (0|1)
```

#### Parameters

##### logging

Configure log message to this terminal

##### filter

Filter log messages

##### all

Do you want to log all messages?

##### 0

Only print messages matched by other filters

##### 1

Bypass filter and print all messages

---

### 1.2.19 logging filter imsi IMSI

#### Command

```
logging filter imsi IMSI
```

#### Parameters

##### logging

Configure log message to this terminal

##### filter

Filter log messages

##### imsi

Filter log messages by IMSI

##### IMSI

IMSI to be used as filter

### 1.2.20 logging level (all|rll|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gpr...

#### Command

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

#### Parameters

##### logging

Configure log message to this terminal

##### level

Set the log level for a specified category

##### all

Global setting for all subsystems

##### rll

A-bis Radio Link Layer (RLL)

##### cc

Layer3 Call Control (CC)

##### mm

Layer3 Mobility Management (MM)

##### rr

Layer3 Radio Resource (RR)

##### rsl

A-bis Radio Signalling Link (RSL)

---

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

mncc  
MNCC API for Call Control application

pag  
Paging Subsystem

meas  
Radio Measurement Processing

sccp  
SCCP Protocol

msc  
Mobile Switching Center

mgcp  
Media Gateway Control Protocol

ho  
Hand-Over

db  
Database Layer

ref  
Reference Counting

gprs  
GPRS Packet Service

ns  
GPRS Network Service (NS)

bssgp  
GPRS BSS Gateway Protocol (BSSGP)

llc  
GPRS Logical Link Control Protocol (LLC)

sndcp  
GPRS Sub-Network Dependent Control Protocol (SNDTCP)

nat  
GSM 08.08 NAT/Multiplexer

ctrl  
Control interface

smpp  
SMPP interface for external SMS apps

filter  
BSC/NAT IMSI based filtering

---

---

ranap  
Radio Access Network Application Part Protocol

sua  
SCCP User Adaptation Protocol

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

everything  
Don't use. It doesn't log anything

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

---

### 1.2.21 logging print category (0|1)

#### Command

```
logging print category (0|1)
```

#### Parameters

##### logging

Configure log message to this terminal

##### print

Log output settings

##### category

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem name

### 1.2.22 logging print extended-timestamp (0|1)

#### Command

```
logging print extended-timestamp (0|1)
```

#### Parameters

##### logging

Configure log message to this terminal

##### print

Log output settings

##### extended-timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp with YYYYMMDDhhmmssnnn

### 1.2.23 logging set log mask MASK

#### Command

```
logging set log mask MASK
```

#### Parameters

##### logging

Configure log message to this terminal

##### set

Decide which categories to output.

##### log

Log commands

##### mask

Mask commands

##### MASK

The logmask to use

### 1.2.24 logging set-log-mask MASK

#### Command

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

#### Parameters

##### logging

Configure log message to this terminal

##### set-log-mask

Set the logmask of this logging target

##### MASK

The logmask to use

### 1.2.25 logging timestamp (0|1)

#### Command

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

#### Parameters

##### logging

Configure log message to this terminal

---

timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp

### 1.2.26 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

### 1.2.27 restart-bts <0-65535>

Command

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

Parameters

restart-bts

Restart ip.access nanoBTS through OML

<0-65535>

BTS Number

### 1.2.28 show alarms

Command

```
show alarms
```

Parameters

show

Show running system information

alarms

Show current logging configuration

### 1.2.29 show asciidoc counters

#### Command

```
show asciidoc counters
```

#### Parameters

show

Show running system information

asciidoc

Asciidoc generation

counters

Generate table of all registered counters

### 1.2.30 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

### 1.2.31 show e1\_driver

#### Command

```
show e1_driver
```

#### Parameters

show

Show running system information

e1\_driver

Display information about available E1 drivers



### 1.2.32 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

### 1.2.33 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

### 1.2.34 show history

#### Command

```
show history
```

#### Parameters

##### show

Show running system information

##### history

Display the session command history

### 1.2.35 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

### 1.2.36 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

### 1.2.37 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

### 1.2.38 show network

#### Command

```
show network
```

#### Parameters

##### show

Show running system information

##### network

Display information about a GSM NETWORK

### 1.2.39 show online-help

#### Command

```
show online-help
```

#### Parameters

##### show

Show running system information

##### online-help

Online help

### 1.2.40 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

### 1.2.41 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

### 1.2.42 show running-config

#### Command

```
show running-config
```

#### Parameters

##### show

Show running system information

##### running-config

running configuration

---

### 1.2.43 show sms-queue

#### Command

```
show sms-queue
```

#### Parameters

show

Show running system information

sms-queue

Display SMSqueue statistics

### 1.2.44 show startup-config

#### Command

```
show startup-config
```

#### Parameters

show

Show running system information

startup-config

Contentes of startup configuration

### 1.2.45 show statistics

#### Command

```
show statistics
```

#### Parameters

show

Show running system information

statistics

Display network statistics

### 1.2.46 show stats

#### Command

```
show stats
```

#### Parameters

show

Show running system information

stats

Show statistical values

### 1.2.47 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

### 1.2.48 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

### 1.2.49 show subscriber cache

#### Command

```
show subscriber cache
```

#### Parameters

##### show

Show running system information

##### subscriber

Show information about subscribers

##### cache

Display contents of subscriber cache

### 1.2.50 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

### 1.2.51 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

### 1.2.52 show version

Command

```
show version
```

Parameters

show

Show running system information

version

Displays program version

### 1.2.53 sms send pending

Command

```
sms send pending
```

Parameters

sms

SMS related commands

send

SMS Sending related commands

pending

Send all pending SMS

### 1.2.54 sms-queue clear

Command

```
sms-queue clear
```

Parameters

sms-queue

SMS Queue

clear

Clear the queue of pending SMS



### 1.2.55 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

### 1.2.56 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

### 1.2.57 sms-queue trigger

#### Command

```
sms-queue trigger
```

#### Parameters

sms-queue

SMS Queue

trigger

Trigger sending messages

### 1.2.58 subscriber (extension|imsi|tmsi|id) ID a3a8 (none|xor|comp128v1) [KI]

#### Command

```
subscriber (extension|imsi|tmsi|id) ID a3a8 (none|xor|comp128v1) [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

##### [KI]

Encryption Key Ki

### 1.2.59 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

### 1.2.60 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

---

### 1.2.61 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)

### 1.2.62 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

**1.2.63 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

**1.2.64 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**

SDCCH channel

### 1.2.65 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

**1.2.66 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

### 1.2.67 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

### 1.2.68 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

### 1.2.69 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.

### 1.2.70 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

---

### 1.2.71 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

### 1.2.72 subscriber purge-inactive

#### Command

```
subscriber purge-inactive
```

#### Parameters

##### subscriber

Operations on a Subscriber

##### purge-inactive

Purge subscribers with a zero use count.

### 1.2.73 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)

---

### 1.2.74 terminal monitor

#### Command

```
terminal monitor
```

#### Parameters

##### terminal

Set terminal line parameters

##### monitor

Copy debug output to the current terminal line

### 1.2.75 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

### 1.2.76 terminal no monitor

#### Command

```
terminal no monitor
```

#### Parameters

##### terminal

Set terminal line parameters

##### no

Negate a command or set its defaults

##### monitor

Copy debug output to the current terminal line

---

### 1.2.77 who

#### Command

```
who
```

#### Parameters

who

Display who is on vty

### 1.2.78 write

#### Command

```
write
```

#### Parameters

write

Write running configuration to memory, network, or terminal

### 1.2.79 write file

#### Command

```
write file
```

#### Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

### 1.2.80 write memory

#### Command

```
write memory
```

#### Parameters

write

Write running configuration to memory, network, or terminal

memory

Write configuration to the file (same as write file)

---

### 1.2.81 write terminal

#### Command

```
write terminal
```

#### Parameters

##### write

Write running configuration to memory, network, or terminal

##### terminal

Write to terminal

## 1.3

### 1.3.1 banner motd default

#### Command

```
banner motd default
```

#### Parameters

##### banner

Set banner string

##### motd

Strings for motd

##### default

Default string

### 1.3.2 banner motd file [FILE]

#### Command

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

#### Parameters

##### banner

Set banner

##### motd

Banner for motd

##### file

Banner from a file

##### [FILE]

Filename

---

### 1.3.3 ctrl

#### Command

```
ctrl
```

#### Parameters

ctrl

Configure the Control Interface

### 1.3.4 e1\_input

#### Command

```
e1_input
```

#### Parameters

e1\_input

Configure E1/T1/J1 TDM input

### 1.3.5 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

---

### 1.3.6 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

### 1.3.7 end

#### Command

```
end
```

#### Parameters

end

End current mode and change to enable mode.

### 1.3.8 exit

#### Command

```
exit
```

#### Parameters

exit

Exit current mode and down to previous mode

### 1.3.9 help

#### Command

```
help
```

#### Parameters

help

Description of the interactive help system

---



### 1.3.10 hostname WORD

#### Command

```
hostname WORD
```

#### Parameters

##### hostname

Set system's network name

##### WORD

This system's network name

### 1.3.11 line vty

#### Command

```
line vty
```

#### Parameters

##### line

Configure a terminal line

##### vty

Virtual terminal

### 1.3.12 list

#### Command

```
list
```

#### Parameters

##### list

Print command list

### 1.3.13 log alarms <2-32700>

#### Command

```
log alarms <2-32700>
```

#### Parameters

##### log

Configure logging sub-system

##### alarms

Logging alarms to osmo\_strrb

##### <2-32700>

Maximum number of messages to log

---

### 1.3.14 log file .FILENAME

#### Command

```
log file .FILENAME
```

#### Parameters

log

Configure logging sub-system

file

Logging to text file

.FILENAME

Filename

### 1.3.15 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)

### 1.3.16 log stderr

#### Command

```
log stderr
```

#### Parameters

log

Configure logging sub-system

stderr

Logging via STDERR of the process

### 1.3.17 log syslog (authpriv|cron|daemon|ftp|lpr|mail|news|user|uucp)

#### Command

```
log syslog (authpriv|cron|daemon|ftp|lpr|mail|news|user|uucp)
```

#### Parameters

log

Configure logging sub-system

syslog

Logging via syslog

authpriv

Security/authorization messages facility

cron

Clock daemon (cron/at) facility

daemon

General system daemon facility

ftp

Ftp daemon facility

lpr

Line printer facility

mail

Mail facility

news

News facility

user

Generic facility

uucp

UUCP facility

### 1.3.18 log syslog local <0-7>

#### Command

```
log syslog local <0-7>
```

#### Parameters

log

Configure logging sub-system

syslog

Logging via syslog

local

Syslog LOCAL facility

<0-7>

Local facility number

### 1.3.19 mncc-int

Command

```
mncc-int
```

Parameters

mncc-int

Configure internal MNCC handler

### 1.3.20 network

Command

```
network
```

Parameters

network

Configure the GSM network

### 1.3.21 nitb

Command

```
nitb
```

Parameters

nitb

Configure NITB options

### 1.3.22 no banner motd

Command

```
no banner motd
```

Parameters

no

Negate a command or set its defaults

banner

Set banner string

motd

Strings for motd

### 1.3.23 no enable password

#### Command

```
no enable password
```

#### Parameters

no

Negate a command or set its defaults

enable

Modify enable password parameters

password

Assign the privileged level password

### 1.3.24 no hostname [HOSTNAME]

#### Command

```
no hostname [HOSTNAME]
```

#### Parameters

no

Negate a command or set its defaults

hostname

Reset system's network name

[HOSTNAME]

Host name of this router

### 1.3.25 no log alarms

#### Command

```
no log alarms
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

alarms

Logging alarms to osmo\_strrb

### 1.3.26 no log file .FILENAME

#### Command

```
no log file .FILENAME
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

file

Logging to text file

.FILENAME

Filename

### 1.3.27 no log stderr

#### Command

```
no log stderr
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

stderr

Logging via STDERR of the process

### 1.3.28 no log syslog

#### Command

```
no log syslog
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

syslog

Logging via syslog

### 1.3.29 no service advanced-vty

#### Command

```
no service advanced-vty
```

#### Parameters

no

Negate a command or set its defaults

service

Set up miscellaneous service

advanced-vty

Enable advanced mode vty interface

### 1.3.30 no service terminal-length [<0-512>]

#### Command

```
no service terminal-length [<0-512>]
```

#### Parameters

no

Negate a command or set its defaults

service

Set up miscellaneous service

terminal-length

System wide terminal length configuration

[<0-512>]

Number of lines of VTY (0 means no line control)

### 1.3.31 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

### 1.3.32 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

### 1.3.33 password (8|) WORD

#### Command

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

#### Parameters

password

Assign the terminal connection password

8

Specifies a HIDDEN password will follow

dummy string

WORD

The HIDDEN line password string

### 1.3.34 password LINE

#### Command

```
password LINE
```

#### Parameters

password

Assign the terminal connection password

LINE

The UNENCRYPTED (cleartext) line password

---



### 1.3.35 service advanced-vty

#### Command

```
service advanced-vty
```

#### Parameters

##### service

Set up miscellaneous service

##### advanced-vty

Enable advanced mode vty interface

### 1.3.36 service terminal-length <0-512>

#### Command

```
service terminal-length <0-512>
```

#### Parameters

##### service

Set up miscellaneous service

##### terminal-length

System wide terminal length configuration

##### <0-512>

Number of lines of VTY (0 means no line control)

### 1.3.37 show history

#### Command

```
show history
```

#### Parameters

##### show

Show running system information

##### history

Display the session command history

### 1.3.38 show running-config

#### Command

```
show running-config
```

#### Parameters

show

Show running system information

running-config

running configuration

### 1.3.39 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

### 1.3.40 stats reporter log

#### Command

```
stats reporter log
```

#### Parameters

stats

Configure stats sub-system

reporter

Configure a stats reporter

log

Report to the logger

### 1.3.41 stats reporter statsd

#### Command

```
stats reporter statsd
```

#### Parameters

stats

Configure stats sub-system

reporter

Configure a stats reporter

statsd

Report to a STATSD server

### 1.3.42 write

#### Command

```
write
```

#### Parameters

write

Write running configuration to memory, network, or terminal

### 1.3.43 write file

#### Command

```
write file
```

#### Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

### 1.3.44 write memory

#### Command

```
write memory
```

#### Parameters

write

Write running configuration to memory, network, or terminal

memory

Write configuration to the file (same as write file)

---

### 1.3.45 write terminal

Command

```
write terminal
```

Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

## 1.4

### 1.4.1 end

Command

```
end
```

Parameters

end

End current mode and change to enable mode.

### 1.4.2 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

### 1.4.3 help

Command

```
help
```

Parameters

help

Description of the interactive help system

---

#### 1.4.4 list

##### Command

```
list
```

##### Parameters

list

Print command list

#### 1.4.5 logging color (0|1)

##### Command

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

##### Parameters

logging

Configure log message to this terminal

color

Configure color-printing for log messages

0

Don't use color for printing messages

1

Use color for printing messages

#### 1.4.6 logging filter all (0|1)

The logging framework has the concept of filters. This can be used to only show log messages that apply to a given timeslot or subscriber. The all filter allows all messages to pass unfiltered.

##### Command

```
logging filter all (0|1)
```

##### Parameters

logging

Configure log message to this terminal

filter

Filter log messages

all

Do you want to log all messages?

0

Only print messages matched by other filters

1

Bypass filter and print all messages

---

### 1.4.7 logging filter imsi IMSI

#### Command

```
logging filter imsi IMSI
```

#### Parameters

##### logging

Configure log message to this terminal

##### filter

Filter log messages

##### imsi

Filter log messages by IMSI

##### IMSI

IMSI to be used as filter

### 1.4.8 logging level (all|rl|cc|mm|rr|rsl|nm|mncc|pag|meas|sccp|msc|mgcp|ho|db|ref|gpr...

#### Command

```
logging level (all|rl|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|lglobal|llapd|linp|lmux|lmi|lmib|↔
             lsms|lctrl|lgtp|lstats) (everything|debug|info|notice|error|fatal)
```

#### Parameters

##### logging

Configure log message to this terminal

##### level

Set the log level for a specified category

##### all

Global setting for all subsystems

##### rl

A-bis Radio Link Layer (RLL)

##### cc

Layer3 Call Control (CC)

##### mm

Layer3 Mobility Management (MM)

##### rr

Layer3 Radio Resource (RR)

##### rsl

A-bis Radio Signalling Link (RSL)

---

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

mncc  
MNCC API for Call Control application

pag  
Paging Subsystem

meas  
Radio Measurement Processing

sccp  
SCCP Protocol

msc  
Mobile Switching Center

mgcp  
Media Gateway Control Protocol

ho  
Hand-Over

db  
Database Layer

ref  
Reference Counting

gprs  
GPRS Packet Service

ns  
GPRS Network Service (NS)

bssgp  
GPRS BSS Gateway Protocol (BSSGP)

llc  
GPRS Logical Link Control Protocol (LLC)

sndcp  
GPRS Sub-Network Dependent Control Protocol (SNDTCP)

nat  
GSM 08.08 NAT/Multiplexer

ctrl  
Control interface

smpp  
SMPP interface for external SMS apps

filter  
BSC/NAT IMSI based filtering

---

---

ranap  
Radio Access Network Application Part Protocol

sua  
SCCP User Adaptation Protocol

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

everything  
Don't use. It doesn't log anything

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

---



### 1.4.9 logging level sms (everything|debug|info|notice|error|fatal)

#### Command

```
logging level sms (everything|debug|info|notice|error|fatal)
```

#### Parameters

##### logging

.HIDDEN

##### level

Obsolete

##### sms

Obsolete

##### everything

Obsolete

##### debug

Obsolete

##### info

Obsolete

##### notice

Obsolete

##### error

Obsolete

##### fatal

Obsolete

### 1.4.10 logging print category (0|1)

#### Command

```
logging print category (0|1)
```

#### Parameters

##### logging

Configure log message to this terminal

##### print

Log output settings

##### category

Configure log message

##### 0

Don't prefix each log message

##### 1

Prefix each log message with category/subsystem name

---

### 1.4.11 logging print extended-timestamp (0|1)

#### Command

```
logging print extended-timestamp (0|1)
```

#### Parameters

##### logging

Configure log message to this terminal

##### 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

### 1.4.12 logging timestamp (0|1)

#### Command

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

#### Parameters

##### logging

Configure log message to this terminal

##### timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp

### 1.4.13 show running-config

#### Command

```
show running-config
```

#### Parameters

##### show

Show running system information

##### running-config

running configuration

### 1.4.14 write

#### Command

```
write
```

#### Parameters

write

Write running configuration to memory, network, or terminal

### 1.4.15 write file

#### Command

```
write file
```

#### Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

### 1.4.16 write memory

#### Command

```
write memory
```

#### Parameters

write

Write running configuration to memory, network, or terminal

memory

Write configuration to the file (same as write file)

### 1.4.17 write terminal

#### Command

```
write terminal
```

#### Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

---

## 1.5

### 1.5.1 bind A.B.C.D

#### Command

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

#### Parameters

bind

Accept VTY telnet connections on local interface

A.B.C.D

Local interface IP address (default: 127.0.0.1)

### 1.5.2 end

#### Command

```
end
```

#### Parameters

end

End current mode and change to enable mode.

### 1.5.3 exit

#### Command

```
exit
```

#### Parameters

exit

Exit current mode and down to previous mode

### 1.5.4 help

#### Command

```
help
```

#### Parameters

help

Description of the interactive help system

---

### 1.5.5 list

#### Command

```
list
```

#### Parameters

list

Print command list

### 1.5.6 login

#### Command

```
login
```

#### Parameters

login

Enable password checking

### 1.5.7 no login

#### Command

```
no login
```

#### Parameters

no

Negate a command or set its defaults

login

Enable password checking

### 1.5.8 show running-config

#### Command

```
show running-config
```

#### Parameters

show

Show running system information

running-config

running configuration

---

### 1.5.9 write

#### Command

```
write
```

#### Parameters

write

Write running configuration to memory, network, or terminal

### 1.5.10 write file

#### Command

```
write file
```

#### Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

### 1.5.11 write memory

#### Command

```
write memory
```

#### Parameters

write

Write running configuration to memory, network, or terminal

memory

Write configuration to the file (same as write file)

### 1.5.12 write terminal

#### Command

```
write terminal
```

#### Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

---

## 1.6

### 1.6.1 e1\_line <0-255> driver (misdn|misdn\_lapd|dahdi|ipa)

#### Command

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

#### 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

### 1.6.2 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

### 1.6.3 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

### 1.6.4 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



### 1.6.5 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

### 1.6.6 end

#### Command

```
end
```

#### Parameters

end

End current mode and change to enable mode.

### 1.6.7 exit

#### Command

```
exit
```

#### Parameters

exit

Exit current mode and down to previous mode

### 1.6.8 help

#### Command

```
help
```

#### Parameters

help

Description of the interactive help system

---

### 1.6.9 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)

### 1.6.10 list

#### Command

```
list
```

#### Parameters

list

Print command list

### 1.6.11 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

---

### 1.6.12 show running-config

#### Command

```
show running-config
```

#### Parameters

show

Show running system information

running-config

running configuration

### 1.6.13 write

#### Command

```
write
```

#### Parameters

write

Write running configuration to memory, network, or terminal

### 1.6.14 write file

#### Command

```
write file
```

#### Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

### 1.6.15 write memory

#### Command

```
write memory
```

#### Parameters

write

Write running configuration to memory, network, or terminal

memory

Write configuration to the file (same as write file)

---

## 1.6.16 write terminal

### Command

```
write terminal
```

### Parameters

#### write

Write running configuration to memory, network, or terminal

#### terminal

Write to terminal

## 1.7

### 1.7.1 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)

## 1.8

### 1.8.1 auth policy (closed|accept-all|regexp|token)

### Command

```
auth policy (closed|accept-all|regexp|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

regexp

Use regular expression for IMSI authorization decision

token

Use SMS-token based authentication

### 1.8.2 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

### 1.8.3 bts <0-255>

Command

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

Parameters

bts

Select a BTS to configure

<0-255>

BTS Number

### 1.8.4 dtx-used (0|1)

Command

```
dtx-used (0|1)
```

Parameters

dtx-used

.HIDDEN

0

Obsolete

1

Obsolete

---

### 1.8.5 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

### 1.8.6 end

#### Command

```
end
```

#### Parameters

##### end

End current mode and change to enable mode.

### 1.8.7 exit

#### Command

```
exit
```

#### Parameters

##### exit

Exit current mode and down to previous mode

### 1.8.8 handover (0|1)

#### Command

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

#### Parameters

##### handover

Handover Options

0

Don't perform in-call handover

1

Perform in-call handover

### 1.8.9 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

### 1.8.10 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

### 1.8.11 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

### 1.8.12 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

---



### 1.8.13 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

### 1.8.14 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

### 1.8.15 help

#### Command

```
help
```

#### Parameters

help

Description of the interactive help system

### 1.8.16 list

#### Command

```
list
```

#### Parameters

list

Print command list

### 1.8.17 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

---

### 1.8.18 long name NAME

#### Command

```
long name NAME
```

#### Parameters

long

Set the long GSM network name

name

Name Commands

NAME

Name to use

### 1.8.19 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

### 1.8.20 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

---

### 1.8.21 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

### 1.8.22 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

### 1.8.23 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

### 1.8.24 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

### 1.8.25 short name NAME

Command

```
short name NAME
```

Parameters

short  
    Set the short GSM network name

name  
    Name Commands

NAME  
    Name to use

### 1.8.26 show running-config

#### Command

```
show running-config
```

#### Parameters

show

Show running system information

running-config

running configuration

### 1.8.27 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

### 1.8.28 timer t3101 <0-65535>

#### Command

```
timer t3101 <0-65535>
```

#### Parameters

timer

Configure GSM Timers

t3101

Set the timeout value for IMMEDIATE ASSIGNMENT.

<0-65535>

Timer Value in seconds

---

### 1.8.29 timer t3103 <0-65535>

#### Command

```
timer t3103 <0-65535>
```

#### Parameters

timer

Configure GSM Timers

t3103

Set the timeout value for HANDOVER.

<0-65535>

Timer Value in seconds

### 1.8.30 timer t3105 <0-65535>

#### Command

```
timer t3105 <0-65535>
```

#### Parameters

timer

Configure GSM Timers

t3105

Set the timer for repetition of PHYSICAL INFORMATION.

<0-65535>

Timer Value in seconds

### 1.8.31 timer t3107 <0-65535>

#### Command

```
timer t3107 <0-65535>
```

#### Parameters

timer

Configure GSM Timers

t3107

Currently not used.

<0-65535>

Timer Value in seconds

---

### 1.8.32 timer t3109 <0-65535>

#### Command

```
timer t3109 <0-65535>
```

#### Parameters

timer

Configure GSM Timers

t3109

Set the RSL SACCH deactivation timeout.

<0-65535>

Timer Value in seconds

### 1.8.33 timer t3111 <0-65535>

#### Command

```
timer t3111 <0-65535>
```

#### Parameters

timer

Configure GSM Timers

t3111

Set the RSL timeout to wait before releasing the RF Channel.

<0-65535>

Timer Value in seconds

### 1.8.34 timer t3113 <0-65535>

#### Command

```
timer t3113 <0-65535>
```

#### Parameters

timer

Configure GSM Timers

t3113

Set the time to try paging a subscriber.

<0-65535>

Timer Value in seconds

---



### 1.8.35 timer t3115 <0-65535>

#### Command

```
timer t3115 <0-65535>
```

#### Parameters

timer

Configure GSM Timers

t3115

Currently not used.

<0-65535>

Timer Value in seconds

### 1.8.36 timer t3117 <0-65535>

#### Command

```
timer t3117 <0-65535>
```

#### Parameters

timer

Configure GSM Timers

t3117

Currently not used.

<0-65535>

Timer Value in seconds

### 1.8.37 timer t3119 <0-65535>

#### Command

```
timer t3119 <0-65535>
```

#### Parameters

timer

Configure GSM Timers

t3119

Currently not used.

<0-65535>

Timer Value in seconds

### 1.8.38 timer t3122 <0-65535>

#### Command

```
timer t3122 <0-65535>
```

#### Parameters

timer

Configure GSM Timers

t3122

Waiting time (seconds) after IMM ASS REJECT

<0-65535>

Timer Value in seconds

### 1.8.39 timer t3141 <0-65535>

#### Command

```
timer t3141 <0-65535>
```

#### Parameters

timer

Configure GSM Timers

t3141

Currently not used.

<0-65535>

Timer Value in seconds

### 1.8.40 write

#### Command

```
write
```

#### Parameters

write

Write running configuration to memory, network, or terminal

### 1.8.41 write file

#### Command

```
write file
```

#### Parameters

##### write

Write running configuration to memory, network, or terminal

##### file

Write to configuration file

### 1.8.42 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)

### 1.8.43 write terminal

#### Command

```
write terminal
```

#### Parameters

##### write

Write running configuration to memory, network, or terminal

##### terminal

Write to terminal

## 1.9

### 1.9.1 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

### 1.9.2 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

### 1.9.3 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

### 1.9.4 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

### 1.9.5 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

### 1.9.6 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

---



## 1.9.7 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
-

### 1.9.8 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

### 1.9.9 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

---

### 1.9.10 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

### 1.9.11 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

### 1.9.12 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

### 1.9.13 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

#### 1.9.14 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

#### 1.9.15 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

### 1.9.16 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

### 1.9.17 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

### 1.9.18 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

### 1.9.19 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

### 1.9.20 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

### 1.9.21 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

### 1.9.22 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

### 1.9.23 band BAND

#### Command

```
band BAND
```

#### Parameters

band

Set the frequency band of this BTS

BAND

Frequency band

### 1.9.24 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

### 1.9.25 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

### 1.9.26 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

---

### 1.9.27 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

### 1.9.28 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

### 1.9.29 cell\_identity <0-65535>

#### Command

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

#### Parameters

cell\_identity

Set the Cell identity of this BTS

<0-65535>

Cell Identity

---

### 1.9.30 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

### 1.9.31 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)

### 1.9.32 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

---



### 1.9.33 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

### 1.9.34 codec-support fr

#### Command

```
codec-support fr
```

#### Parameters

codec-support

Codec Support settings

fr

Fullrate

### 1.9.35 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

---

### 1.9.36 **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

### 1.9.37 **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

### 1.9.38 **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

### 1.9.39 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

### 1.9.40 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

### 1.9.41 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

### 1.9.42 description .TEXT

#### Command

```
description .TEXT
```

#### Parameters

##### description

Save human-readable description of the object

##### .TEXT

Text until the end of the line

### 1.9.43 dtx downlink

#### Command

```
dtx downlink
```

#### Parameters

##### dtx

Configure discontinuous transmission

##### downlink

Enable Downlink DTX for this BTS

### 1.9.44 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).

### 1.9.45 end

#### Command

```
end
```

#### Parameters

end

End current mode and change to enable mode.

### 1.9.46 exit

#### Command

```
exit
```

#### Parameters

exit

Exit current mode and down to previous mode

### 1.9.47 force-combined-si

#### Command

```
force-combined-si
```

#### Parameters

force-combined-si

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

### 1.9.48 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

---

### 1.9.49 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

### 1.9.50 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

### 1.9.51 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

### 1.9.52 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



### 1.9.53 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

### 1.9.54 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) <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

<0-255>

Timer Value

### 1.9.55 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

### 1.9.56 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

### 1.9.57 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

### 1.9.58 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

### 1.9.59 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

### 1.9.60 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

### 1.9.61 help

#### Command

```
help
```

#### Parameters

help

Description of the interactive help system

### 1.9.62 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

### 1.9.63 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)

---

### 1.9.64 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

### 1.9.65 list

#### Command

```
list
```

#### Parameters

##### list

Print command list

### 1.9.66 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

---

### 1.9.67 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

### 1.9.68 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

### 1.9.69 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

### 1.9.70 no description

Command

```
no description
```

Parameters

no

Negate a command or set its defaults

description

Remove description of the object

### 1.9.71 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



### 1.9.72 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

### 1.9.73 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)

### 1.9.74 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

---

### 1.9.75 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

### 1.9.76 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

### 1.9.77 no timezone

#### Command

```
no timezone
```

#### Parameters

no

Negate a command or set its defaults

timezone

Disable BTS specific timezone

### 1.9.78 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.

### 1.9.79 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

### 1.9.80 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

### 1.9.81 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

### 1.9.82 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

### 1.9.83 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

### 1.9.84 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

---

### 1.9.85 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)

### 1.9.86 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)

### 1.9.87 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

---

### 1.9.88 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

### 1.9.89 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

### 1.9.90 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

### 1.9.91 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

### 1.9.92 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

### 1.9.93 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

### 1.9.94 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)

### 1.9.95 rf-lock-exclude

#### Command

```
rf-lock-exclude
```

#### Parameters

##### rf-lock-exclude

Exclude this BTS from the global RF Lock

---

### 1.9.96 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)

### 1.9.97 show running-config

#### Command

```
show running-config
```

#### Parameters

##### show

Show running system information

##### running-config

running configuration

### 1.9.98 si2quater neighbor-list add earfcn <0-65535> threshold <0-31> [<0-7>]

#### Command

```
si2quater neighbor-list add earfcn <0-65535> threshold <0-31> [<0-7>]
```

#### Parameters

##### si2quater

SI2quater Neighbor List

##### neighbor-list

SI2quater Neighbor List

##### add

Add to manual SI2quater neighbor list

---

earfcn

EARFCN of neighbor

<0-65535>

EARFCN of neighbor

threshold

threshold high bits

<0-31>

threshold high bits

[<0-7>]

measurement bandwidth

### 1.9.99 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

### 1.9.100 si2quater neighbor-list del earfcn <0-65535>

Command

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

Parameters

---

si2quarter

SI2quarter Neighbor List

neighbor-list

SI2quarter Neighbor List

del

Delete from SI2quarter manual neighbor list

earfcn

EARFCN of neighbor

<0-65535>

EARFCN

### 1.9.101 si2quarter neighbor-list del uarfcn <0-16383> <0-511>

Command

```
si2quarter neighbor-list del uarfcn <0-16383> <0-511>
```

Parameters

si2quarter

SI2quarter Neighbor List

neighbor-list

SI2quarter Neighbor List

del

Delete from SI2quarter manual neighbor list

uarfcn

UARFCN of neighbor

<0-16383>

UARFCN

<0-511>

scrambling code

### 1.9.102 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

### 1.9.103 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

### 1.9.104 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

---



2quarter

System Information Type 2quarter

5bis

System Information Type 5bis

5ter

System Information Type 5ter

static

Static System Information filling

HEXSTRING

Static user-specified SI content in HEX notation

### 1.9.105 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

### 1.9.106 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

---

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

#### Command

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

#### Parameters

##### timezone

Set the Timezone Offset of this BTS

##### <-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)

### 1.9.108 `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 this BTS

##### <-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)

---

### 1.9.109 training\_sequence\_code <0-7>

#### Command

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

#### Parameters

training\_sequence\_code

Set the Training Sequence Code (TSC) of this BTS

<0-7>

TSC

### 1.9.110 trx <0-255>

#### Command

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

#### Parameters

trx

Radio Transceiver

<0-255>

Select a TRX to configure

### 1.9.111 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

---

### 1.9.112 write

#### Command

```
write
```

#### Parameters

write

Write running configuration to memory, network, or terminal

### 1.9.113 write file

#### Command

```
write file
```

#### Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

### 1.9.114 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)

### 1.9.115 write terminal

#### Command

```
write terminal
```

#### Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

## 1.10

### 1.10.1 arfcn <0-1023>

#### Command

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

#### Parameters

arfcn

Set the ARFCN for this TRX

<0-1023>

Absolute Radio Frequency Channel Number

### 1.10.2 description .TEXT

#### Command

```
description .TEXT
```

#### Parameters

description

Save human-readable description of the object

.TEXT

Text until the end of the line

### 1.10.3 end

#### Command

```
end
```

#### Parameters

end

End current mode and change to enable mode.

### 1.10.4 exit

#### Command

```
exit
```

#### Parameters

exit

Exit current mode and down to previous mode

---

### 1.10.5 help

#### Command

```
help
```

#### Parameters

help

Description of the interactive help system

### 1.10.6 list

#### Command

```
list
```

#### Parameters

list

Print command list

### 1.10.7 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

### 1.10.8 no description

#### Command

```
no description
```

#### Parameters

no

Negate a command or set its defaults

description

Remove description of the object

---

### 1.10.9 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

### 1.10.10 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)

### 1.10.11 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

**1.10.12 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

---



### 1.10.13 show running-config

#### Command

```
show running-config
```

#### Parameters

show

Show running system information

running-config

running configuration

### 1.10.14 timeslot <0-7>

#### Command

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

#### Parameters

timeslot

Select a Timeslot to configure

<0-7>

Timeslot number

### 1.10.15 write

#### Command

```
write
```

#### Parameters

write

Write running configuration to memory, network, or terminal

### 1.10.16 write file

#### Command

```
write file
```

#### Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

---

### 1.10.17 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)

### 1.10.18 write terminal

#### Command

```
write terminal
```

#### Parameters

##### write

Write running configuration to memory, network, or terminal

##### terminal

Write to terminal

## 1.11

### 1.11.1 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

### 1.11.2 end

Command

```
end
```

Parameters

end

End current mode and change to enable mode.

### 1.11.3 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

### 1.11.4 help

Command

```
help
```

Parameters

help

Description of the interactive help system

---

### 1.11.5 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

### 1.11.6 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

### 1.11.7 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

### 1.11.8 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)

### 1.11.9 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)

### 1.11.10 list

Command

```
list
```

Parameters

list

Print command list

**1.11.11 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

### 1.11.12 phys\_chan\_config PCHAN

#### Command

```
phys_chan_config PCHAN
```

#### Parameters

phys\_chan\_config

Physical Channel configuration (TCH/SDCCH/...)

PCHAN

Physical Channel

### 1.11.13 show running-config

#### Command

```
show running-config
```

#### Parameters

show

Show running system information

running-config

running configuration

### 1.11.14 training\_sequence\_code <0-7>

#### Command

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

#### Parameters

training\_sequence\_code

Training Sequence Code of the Timeslot

<0-7>

TSC

### 1.11.15 write

#### Command

```
write
```

#### Parameters

write

Write running configuration to memory, network, or terminal

---

### 1.11.16 write file

#### Command

```
write file
```

#### Parameters

##### write

Write running configuration to memory, network, or terminal

##### file

Write to configuration file

### 1.11.17 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)

### 1.11.18 write terminal

#### Command

```
write terminal
```

#### Parameters

##### write

Write running configuration to memory, network, or terminal

##### terminal

Write to terminal



## 1.12

### 1.12.1 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

### 1.12.2 end

#### Command

```
end
```

#### Parameters

##### end

End current mode and change to enable mode.

### 1.12.3 exit

#### Command

```
exit
```

#### Parameters

##### exit

Exit current mode and down to previous mode

### 1.12.4 help

#### Command

```
help
```

#### Parameters

help

Description of the interactive help system

### 1.12.5 list

#### Command

```
list
```

#### Parameters

list

Print command list

### 1.12.6 opstart

#### Command

```
opstart
```

#### Parameters

opstart

Send an OPSTART message to the object

### 1.12.7 show running-config

#### Command

```
show running-config
```

#### Parameters

show

Show running system information

running-config

running configuration

---

### 1.12.8 write

#### Command

```
write
```

#### Parameters

write

Write running configuration to memory, network, or terminal

### 1.12.9 write file

#### Command

```
write file
```

#### Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

### 1.12.10 write memory

#### Command

```
write memory
```

#### Parameters

write

Write running configuration to memory, network, or terminal

memory

Write configuration to the file (same as write file)

### 1.12.11 write terminal

#### Command

```
write terminal
```

#### Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

---

## 1.13

### 1.13.1 capabilities-request

Command

```
capabilities-request
```

Parameters

capabilities-request

Request MO capabilities

### 1.13.2 configuration-request

Command

```
configuration-request
```

Parameters

configuration-request

Send the configuration request for current MO

### 1.13.3 connect-command

Command

```
connect-command
```

Parameters

connect-command

Connect the MO

### 1.13.4 disable-request

Command

```
disable-request
```

Parameters

disable-request

Disable the MO

---

### 1.13.5 disconnect-command

#### Command

```
disconnect-command
```

#### Parameters

disconnect-command

Disconnect the MO

### 1.13.6 enable-request

#### Command

```
enable-request
```

#### Parameters

enable-request

Enable the MO

### 1.13.7 end

#### Command

```
end
```

#### Parameters

end

End current mode and change to enable mode.

### 1.13.8 exit

#### Command

```
exit
```

#### Parameters

exit

Exit current mode and down to previous mode

---

### 1.13.9 help

#### Command

```
help
```

#### Parameters

help

Description of the interactive help system

### 1.13.10 list

#### Command

```
list
```

#### Parameters

list

Print command list

### 1.13.11 operational-info <0-1>

#### Command

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

#### Parameters

operational-info

Set operational information

<0-1>

Set operational info to 0 or 1

### 1.13.12 reset-command

#### Command

```
reset-command
```

#### Parameters

reset-command

Reset the MO

---

### 1.13.13 show running-config

#### Command

```
show running-config
```

#### Parameters

show

Show running system information

running-config

running configuration

### 1.13.14 start-request

#### Command

```
start-request
```

#### Parameters

start-request

Start the MO

### 1.13.15 status-request

#### Command

```
status-request
```

#### Parameters

status-request

Get the MO Status

### 1.13.16 test-request

#### Command

```
test-request
```

#### Parameters

test-request

Test the MO

---

### 1.13.17 write

#### Command

```
write
```

#### Parameters

write

Write running configuration to memory, network, or terminal

### 1.13.18 write file

#### Command

```
write file
```

#### Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

### 1.13.19 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)

### 1.13.20 write terminal

#### Command

```
write terminal
```

#### Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

---



## 1.14

### 1.14.1 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

### 1.14.2 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

### 1.14.3 end

#### Command

```
end
```

#### Parameters

end

End current mode and change to enable mode.

### 1.14.4 exit

#### Command

```
exit
```

#### Parameters

exit

Exit current mode and down to previous mode

### 1.14.5 help

#### Command

```
help
```

#### Parameters

help

Description of the interactive help system

### 1.14.6 list

#### Command

```
list
```

#### Parameters

list

Print command list

---

### 1.14.7 show running-config

#### Command

```
show running-config
```

#### Parameters

show

Show running system information

running-config

running configuration

### 1.14.8 write

#### Command

```
write
```

#### Parameters

write

Write running configuration to memory, network, or terminal

### 1.14.9 write file

#### Command

```
write file
```

#### Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

### 1.14.10 write memory

#### Command

```
write memory
```

#### Parameters

write

Write running configuration to memory, network, or terminal

memory

Write configuration to the file (same as write file)

---

### 1.14.11 write terminal

#### Command

```
write terminal
```

#### Parameters

##### write

Write running configuration to memory, network, or terminal

##### terminal

Write to terminal

## 1.15

### 1.15.1 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

### 1.15.2 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

### 1.15.3 end

Command

```
end
```

Parameters

end

End current mode and change to enable mode.

### 1.15.4 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

### 1.15.5 help

Command

```
help
```

Parameters

help

Description of the interactive help system

### 1.15.6 list

Command

```
list
```

Parameters

list

Print command list

---

### 1.15.7 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

### 1.15.8 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

### 1.15.9 show running-config

#### Command

```
show running-config
```

#### Parameters

show

Show running system information

running-config

running configuration

### 1.15.10 write

#### Command

```
write
```

#### Parameters

write

Write running configuration to memory, network, or terminal

### 1.15.11 write file

#### Command

```
write file
```

#### Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

### 1.15.12 write memory

#### Command

```
write memory
```

#### Parameters

write

Write running configuration to memory, network, or terminal

memory

Write configuration to the file (same as write file)

### 1.15.13 write terminal

#### Command

```
write terminal
```

#### Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

## 1.16

### 1.16.1 assign-tmsi

#### Command

```
assign-tmsi
```

#### Parameters

assign-tmsi

Assign TMSI during Location Updating.

### 1.16.2 no assign-tmsi

#### Command

```
no assign-tmsi
```

#### Parameters

no

Negate a command or set its defaults

assign-tmsi

Assign TMSI during Location Updating.

### 1.16.3 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.

### 1.16.4 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

---



### 1.16.5 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