

OsmoSGSN 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 bssgp bvc nsei <0-65535> bvci <0-65535> reset

Command

```
bssgp bvc nsei <0-65535> bvci <0-65535> reset
```

Parameters

bssgp

Initiate BVC RESET procedure for a given NSEI and BVCI

bvc

Filter based on BSSGP Virtual Connection

nsei

NSEI of the BVC to be filtered

<0-65535>

Network Service Entity Identifier (NSEI)

bvci

BVCI of the BVC to be filtered

<0-65535>

BSSGP Virtual Connection Identifier (BVCI)

reset

Perform reset procedure

1.1.2 echo .MESSAGE

Command

```
echo .MESSAGE
```

Parameters

echo

Echo a message back to the vty

.MESSAGE

The message to echo

1.1.3 enable

Command

```
enable
```

Parameters

enable

Turn on privileged mode command

1.1.4 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

1.1.5 help

Command

```
help
```

Parameters

help

Description of the interactive help system

1.1.6 list

Command

```
list
```

Parameters

list

Print command list

1.1.7 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

1.1.8 logging disable

Command

```
logging disable
```

Parameters

logging

Configure log message to this terminal

disable

Disables logging to this vty

1.1.9 logging enable

Command

```
logging enable
```

Parameters

logging

Configure log message to this terminal

enable

Enables logging to this vty

1.1.10 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

1.1.11 logging filter bvc nsei <0-65535> bvci <0-65535>

Command

```
logging filter bvc nsei <0-65535> bvci <0-65535>
```

Parameters

logging

Configure log message to this terminal

filter

Filter log messages

bvc

Filter based on BSSGP Virtual Connection

nsei

NSEI of the BVC to be filtered

<0-65535>

Network Service Entity Identifier (NSEI)

bvci

BVCI of the BVC to be filtered

<0-65535>

BSSGP Virtual Connection Identifier (BVCI)

1.1.12 logging filter nsvc (nsei|nsvci) <0-65535>

Command

```
logging filter nsvc (nsei|nsvci) <0-65535>
```

Parameters

logging

Configure log message to this terminal

filter

Filter log messages

nsvc

Filter based on NS Virtual Connection

nsei

Identify NS-VC by NSEI

nsvci

Identify NS-VC by NSVCI

<0-65535>

Numeric identifier

1.1.13 logging level (all|mm|pag|meas|ref|gprs|ns|bssgp|llc|sndcp|slhc|ranap|sua|v42bis...

Command

```
logging level (all|mm|pag|meas|ref|gprs|ns|bssgp|llc|sndcp|slhc|ranap|sua|v42bis| ↵  
lglobal|llapd|linp|lmux|lmi|lmib|lms|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

mm

Layer3 Mobility Management (MM)

pag

Paging Subsystem

meas

Radio Measurement Processing

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 (SND CP)

slhc

RFC1144 TCP/IP Header compression (SLHC)

ranap

RAN Application Part (RANAP)

sua

SCCP User Adaptation (SUA)

v42bis
V.42bis data compression (SNDTCP)

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

1.1.14 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

1.1.15 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

1.1.16 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

1.1.17 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

1.1.18 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

1.1.19 show alarms

Command

```
show alarms
```

Parameters

show

Show running system information

alarms

Show current logging configuration

1.1.20 show asciidoc counters

Command

```
show asciidoc counters
```

Parameters

show

Show running system information

asciidoc

Asciidoc generation

counters

Generate table of all registered counters

1.1.21 show bssgp

Command

```
show bssgp
```

Parameters

show

Show running system information

bssgp

Show information about the BSSGP protocol

1.1.22 show bssgp nsei <0-65535> [stats]

Command

```
show bssgp nsei <0-65535> [stats]
```

Parameters

show

Show running system information

bssgp

Show information about the BSSGP protocol

nsei

Show all BVCs on one NSE

<0-65535>

The NSEI

[stats]

Include Statistics

1.1.23 show bssgp stats

Command

```
show bssgp stats
```

Parameters

show

Show running system information

bssgp

Show information about the BSSGP protocol

stats

Include statistics

1.1.24 show history

Command

```
show history
```

Parameters

show

Show running system information

history

Display the session command history

1.1.25 show llc

Command

```
show llc
```

Parameters

show

Show running system information

llc

Display information about the LLC protocol

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 mm-context all [pdp]

Command

```
show mm-context all [pdp]
```

Parameters

show

Show running system information

mm-context

MM Context

all

All MM Contexts

[pdp]

Include PDP Context Information

1.1.28 show mm-context imsi IMSI [pdp]

Command

```
show mm-context imsi IMSI [pdp]
```

Parameters

show

Show running system information

mm-context

MM Context

imsi

Identify by IMSI

IMSI

IMSI of the MM Context

[pdp]

Include PDP Context Information

1.1.29 show ns

Command

```
show ns
```

Parameters

show

Show running system information

ns

Display information about the NS protocol

1.1.30 show ns (nsei|nsvc) <0-65535> [stats]

Command

```
show ns (nsei|nsvc) <0-65535> [stats]
```

Parameters

show

Show running system information

ns

Display information about the NS protocol

nsei

Select one NSE by its NSE Identifier

nsvc

Select one NSE by its NS-VC Identifier

<0-65535>

The Identifier of selected type

[stats]

Include Statistics

1.1.31 show ns stats

Command

```
show ns stats
```

Parameters

show

Show running system information

ns

Display information about the NS protocol

stats

Include statistics

1.1.32 show online-help

Command

```
show online-help
```

Parameters

show

Show running system information

online-help

Online help

1.1.33 show pdp-context all

Command

```
show pdp-context all
```

Parameters

show

Show running system information

pdp-context

Display information on PDP Context

all

Show everything

1.1.34 show sgsn

Command

```
show sgsn
```

Parameters

show

Show running system information

sgsn

Display information about the SGSN

1.1.35 show sndcp

Command

```
show sndcp
```

Parameters

show

Show running system information

sndcp

Display information about the SNDCP protocol

1.1.36 show stats

Command

```
show stats
```

Parameters

show

Show running system information

stats

Show statistical values

1.1.37 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

1.1.38 show subscriber cache

Command

```
show subscriber cache
```

Parameters

show

Show running system information

subscriber

Show information about subscribers

cache

Display contents of subscriber cache

1.1.39 show version

Command

```
show version
```

Parameters

show

Show running system information

version

Displays program version

1.1.40 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)

1.1.41 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

1.1.42 who

Command

```
who
```

Parameters

who

Display who is on vty

1.2

1.2.1 bssgp bvc nsei <0-65535> bvci <0-65535> reset

Command

```
bssgp bvc nsei <0-65535> bvci <0-65535> reset
```

Parameters

bssgp

Initiate BVC RESET procedure for a given NSEI and BVCI

bvc

Filter based on BSSGP Virtual Connection

nsei

NSEI of the BVC to be filtered

<0-65535>

Network Service Entity Identifier (NSEI)

bvci

BVCI of the BVC to be filtered

<0-65535>

BSSGP Virtual Connection Identifier (BVCI)

reset

Perform reset procedure

1.2.2 configure terminal

Command

```
configure terminal
```

Parameters

configure

Configuration from vty interface

terminal

Configuration terminal

1.2.3 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)

1.2.4 disable

Command

```
disable
```

Parameters

disable

Turn off privileged mode command

1.2.5 echo .MESSAGE

Command

```
echo .MESSAGE
```

Parameters

echo

Echo a message back to the vty

.MESSAGE

The message to echo

1.2.6 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

1.2.7 help

Command

```
help
```

Parameters

help

Description of the interactive help system

1.2.8 list

Command

```
list
```

Parameters

list

Print command list

1.2.9 logging color (0|1)

Command

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

Parameters

logging

Configure log message to this terminal

color

Configure color-printing for log messages

0

Don't use color for printing messages

1

Use color for printing messages

1.2.10 logging disable

Command

```
logging disable
```

Parameters

logging

Configure log message to this terminal

disable

Disables logging to this vty

1.2.11 logging enable

Command

```
logging enable
```

Parameters

logging

Configure log message to this terminal

enable

Enables logging to this vty

1.2.12 logging filter all (0|1)

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

1.2.13 logging filter bvc nsei <0-65535> bvci <0-65535>

Command

```
logging filter bvc nsei <0-65535> bvci <0-65535>
```

Parameters

logging

Configure log message to this terminal

filter

Filter log messages

bvc

Filter based on BSSGP Virtual Connection

nsei

NSEI of the BVC to be filtered

<0-65535>

Network Service Entity Identifier (NSEI)

bvci

BVCI of the BVC to be filtered

<0-65535>

BSSGP Virtual Connection Identifier (BVCI)

1.2.14 logging filter nsvc (nsei|nsvci) <0-65535>

Command

```
logging filter nsvc (nsei|nsvci) <0-65535>
```

Parameters

logging

Configure log message to this terminal

filter

Filter log messages

nsvc

Filter based on NS Virtual Connection

nsei

Identify NS-VC by NSEI

nsvci

Identify NS-VC by NSVCI

<0-65535>

Numeric identifier

1.2.15 logging level (all|mm|pag|meas|ref|gprs|ns|bssgp|llc|sndcp|slhc|ranap|sua|v42bis...

Command

```
logging level (all|mm|pag|meas|ref|gprs|ns|bssgp|llc|sndcp|slhc|ranap|sua|v42bis| ↵
lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtpl|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

mm

Layer3 Mobility Management (MM)

pag

Paging Subsystem

meas

Radio Measurement Processing

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)

slhc

RFC1144 TCP/IP Header compression (SLHC)

ranap

RAN Application Part (RANAP)

sua

SCCP User Adaptation (SUA)

v42bis

V.42bis data compression (SNDCP)

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

1.2.16 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

1.2.17 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

1.2.18 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

1.2.19 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

1.2.20 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

1.2.21 nsvc (nsei|nsvci) <0-65535> (block|unblock|reset)

Command

```
nsvc (nsei|nsvci) <0-65535> (block|unblock|reset)
```

Parameters

nsvc

Perform an operation on a NSVC

nsei

NSEI to identify NS-VC Identifier (NS-VCI)

nsvci

NS-VC Identifier (NS-VCI)

<0-65535>

The NSEI

block

Initiate BLOCK procedure

unblock

Initiate UNBLOCK procedure

reset

Initiate RESET procedure

1.2.22 show alarms

Command

```
show alarms
```

Parameters

show

Show running system information

alarms

Show current logging configuration

1.2.23 show asciidoc counters

Command

```
show asciidoc counters
```

Parameters

show

Show running system information

asciidoc

Asciidoc generation

counters

Generate table of all registered counters

1.2.24 show bssgp

Command

```
show bssgp
```

Parameters

show

Show running system information

bssgp

Show information about the BSSGP protocol

1.2.25 show bssgp nsei <0-65535> [stats]

Command

```
show bssgp nsei <0-65535> [stats]
```

Parameters

show

Show running system information

bssgp

Show information about the BSSGP protocol

nsei

Show all BVCs on one NSE

<0-65535>

The NSEI

[stats]

Include Statistics

1.2.26 show bssgp stats

Command

```
show bssgp stats
```

Parameters

show

Show running system information

bssgp

Show information about the BSSGP protocol

stats

Include statistics

1.2.27 show history

Command

```
show history
```

Parameters

show

Show running system information

history

Display the session command history

1.2.28 show llc

Command

```
show llc
```

Parameters

show

Show running system information

llc

Display information about the LLC protocol

1.2.29 show logging vty

Command

```
show logging vty
```

Parameters

show

Show running system information

logging

Show current logging configuration

vty

Show current logging configuration for this vty

1.2.30 show mm-context all [pdp]

Command

```
show mm-context all [pdp]
```

Parameters

show

Show running system information

mm-context

MM Context

all

All MM Contexts

[pdp]

Include PDP Context Information

1.2.31 show mm-context imsi IMSI [pdp]

Command

```
show mm-context imsi IMSI [pdp]
```

Parameters

show

Show running system information

mm-context

MM Context

imsi

Identify by IMSI

IMSI

IMSI of the MM Context

[pdp]

Include PDP Context Information

1.2.32 show ns

Command

```
show ns
```

Parameters

show

Show running system information

ns

Display information about the NS protocol

1.2.33 show ns (nsei|nsvc) <0-65535> [stats]

Command

```
show ns (nsei|nsvc) <0-65535> [stats]
```

Parameters

show

Show running system information

ns

Display information about the NS protocol

nsei

Select one NSE by its NSE Identifier

nsvc

Select one NSE by its NS-VC Identifier

<0-65535>

The Identifier of selected type

[stats]

Include Statistics

1.2.34 show ns stats

Command

```
show ns stats
```

Parameters

show

Show running system information

ns

Display information about the NS protocol

stats

Include statistics

1.2.35 show online-help

Command

```
show online-help
```

Parameters

show

Show running system information

online-help

Online help

1.2.36 show pdp-context all

Command

```
show pdp-context all
```

Parameters

show

Show running system information

pdp-context

Display information on PDP Context

all

Show everything

1.2.37 show running-config

Command

```
show running-config
```

Parameters

show

Show running system information

running-config

running configuration

1.2.38 show sgsn

Command

```
show sgsn
```

Parameters

show

Show running system information

sgsn

Display information about the SGSN

1.2.39 show sndcp

Command

```
show sndcp
```

Parameters

show

Show running system information

sndcp

Display information about the SNDTCP protocol

1.2.40 show startup-config

Command

```
show startup-config
```

Parameters

show

Show running system information

startup-config

Contentes of startup configuration

1.2.41 show stats

Command

```
show stats
```

Parameters

show

Show running system information

stats

Show statistical values

1.2.42 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

1.2.43 show subscriber cache

Command

```
show subscriber cache
```

Parameters

show

Show running system information

subscriber

Show information about subscribers

cache

Display contents of subscriber cache

1.2.44 show version

Command

```
show version
```

Parameters

show

Show running system information

version

Displays program version

1.2.45 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)

1.2.46 terminal monitor

Command

```
terminal monitor
```

Parameters

terminal

Set terminal line parameters

monitor

Copy debug output to the current terminal line

1.2.47 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

1.2.48 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

1.2.49 update-subscriber imsi IMSI cancel (update-procedure|subscription-withdraw)

Command

```
update-subscriber imsi IMSI cancel (update-procedure|subscription-withdraw)
```

Parameters

update-subscriber

Update subscriber list

imsi

Use the IMSI to select the subscriber

IMSI

The IMSI

cancel

Cancel (remove) subscriber record

update-procedure

The MS moved to another SGSN

subscription-withdraw

The subscription is no longer valid

1.2.50 update-subscriber imsi IMSI create

Command

```
update-subscriber imsi IMSI create
```

Parameters

update-subscriber

Update subscriber list

imsi

Use the IMSI to select the subscriber

IMSI

The IMSI

create

Create a subscriber entry

1.2.51 update-subscriber imsi IMSI destroy**Command**

```
update-subscriber imsi IMSI destroy
```

Parameters**update-subscriber**

Update subscriber list

imsi

Use the IMSI to select the subscriber

IMSI

The IMSI

destroy

Destroy a subscriber entry

1.2.52 update-subscriber imsi IMSI insert auth-triplet <1-5> sres SRES rand RAND kc KC**Command**

```
update-subscriber imsi IMSI insert auth-triplet <1-5> sres SRES rand RAND kc KC
```

Parameters**update-subscriber**

Update subscriber list

imsi

Use the IMSI to select the subscriber

IMSI

The IMSI

insert

Insert data into the subscriber record

auth-triplet

Update authentication triplet

<1-5>

Triplet index

sres

Set SRES value

SRES

SRES value (4 byte) in hex

rand

Set RAND value

RAND

RAND value (16 byte) in hex

kc

Set Kc value

KC

Kc value (8 byte) in hex

1.2.53 update-subscriber imsi IMSI update-auth-info

Command

```
update-subscriber imsi IMSI update-auth-info
```

Parameters

update-subscriber

Update subscriber list

imsi

Use the IMSI to select the subscriber

IMSI

The IMSI

update-auth-info

Complete the send authentication info procedure

1.2.54 update-subscriber imsi IMSI update-location-result (ok|system-failure|data-missi...

Command

```
update-subscriber imsi IMSI update-location-result (ok|system-failure|data-missing| ←  
unexpected-data-value|unknown-subscriber|roaming-not-allowed)
```

Parameters

update-subscriber

Update subscriber list

imsi

Use the IMSI to select the subscriber

IMSI

The IMSI

update-location-result

Complete the update location procedure

ok

The update location request succeeded

system-failure

Force error code SystemFailure

data-missing

Force error code DataMissing

unexpected-data-value

Force error code UnexpectedDataValue

unknown-subscriber

Force error code UnknownSubscriber

roaming-not-allowed

Force error code RoamingNotAllowed

1.2.55 who

Command

```
who
```

Parameters

who

Display who is on vty

1.2.56 write

Command

```
write
```

Parameters

write

Write running configuration to memory, network, or terminal

1.2.57 write file

Command

```
write file
```

Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

1.2.58 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)

1.2.59 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 bssgp

Command

```
bssgp
```

Parameters

bssgp

Configure the GPRS BSS Gateway Protocol

1.3.4 ctrl

Command

```
ctrl
```

Parameters

ctrl

Configure the Control Interface

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

vtty

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 no banner motd

Command

```
no banner motd
```

Parameters

no

Negate a command or set its defaults

banner

Set banner string

motd

Strings for motd

1.3.20 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

1.3.21 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

1.3.22 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

1.3.23 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

1.3.24 no log stderr

Command

```
no log stderr
```

Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

stderr

Logging via STDERR of the process

1.3.25 no log syslog

Command

```
no log syslog
```

Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

syslog

Logging via syslog

1.3.26 no service advanced-vty

Command

```
no service advanced-vty
```

Parameters

no

Negate a command or set its defaults

service

Set up miscellaneous service

advanced-vty

Enable advanced mode vty interface

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

Command

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

Parameters

no

Negate a command or set its defaults

service

Set up miscellaneous service

terminal-length

System wide terminal length configuration

[<0-512>]

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

1.3.28 no stats reporter log

Command

```
no stats reporter log
```

Parameters

no

Negate a command or set its defaults

stats

Configure stats sub-system

reporter

Configure a stats reporter

log

Report to the logger

1.3.29 no stats reporter statsd

Command

```
no stats reporter statsd
```

Parameters

no

Negate a command or set its defaults

stats

Configure stats sub-system

reporter

Configure a stats reporter

statsd

Report to a STATSD server

1.3.30 ns

Command

```
ns
```

Parameters

ns

Configure the GPRS Network Service

1.3.31 password (8|) WORD

Command

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

Parameters

password

Assign the terminal connection password

8

Specifies a HIDDEN password will follow

dummy string

WORD

The HIDDEN line password string

1.3.32 password LINE

Command

```
password LINE
```

Parameters

password

Assign the terminal connection password

LINE

The UNENCRYPTED (cleartext) line password

1.3.33 service advanced-vty

Command

```
service advanced-vty
```

Parameters

service

Set up miscellaneous service

advanced-vty

Enable advanced mode vty interface

1.3.34 service terminal-length <0-512>

Command

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

Parameters

service

Set up miscellaneous service

terminal-length

System wide terminal length configuration

<0-512>

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

1.3.35 sgsn

Command

```
sgsn
```

Parameters

sgsn

Configure the SGSN

1.3.36 show history

Command

```
show history
```

Parameters

show

Show running system information

history

Display the session command history

1.3.37 show running-config

Command

```
show running-config
```

Parameters

show

Show running system information

running-config

running configuration

1.3.38 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

1.3.39 stats reporter log

Command

```
stats reporter log
```

Parameters

stats

Configure stats sub-system

reporter

Configure a stats reporter

log

Report to the logger

1.3.40 stats reporter statsd

Command

```
stats reporter statsd
```

Parameters

stats

Configure stats sub-system

reporter

Configure a stats reporter

statsd

Report to a STATSD server

1.3.41 write

Command

```
write
```

Parameters

write

Write running configuration to memory, network, or terminal

1.3.42 write file

Command

```
write file
```

Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

1.3.43 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)

1.3.44 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 bvc nsei <0-65535> bvci <0-65535>

Command

```
logging filter bvc nsei <0-65535> bvci <0-65535>
```

Parameters

logging

Configure log message to this terminal

filter

Filter log messages

bvc

Filter based on BSSGP Virtual Connection

nsei

NSEI of the BVC to be filtered

<0-65535>

Network Service Entity Identifier (NSEI)

bvci

BVCI of the BVC to be filtered

<0-65535>

BSSGP Virtual Connection Identifier (BVCI)

1.4.8 logging filter nsvc (nsei|nsvci) <0-65535>

Command

```
logging filter nsvc (nsei|nsvci) <0-65535>
```

Parameters

logging

Configure log message to this terminal

filter

Filter log messages

nsvc

Filter based on NS Virtual Connection

nsei

Identify NS-VC by NSEI

nsvci

Identify NS-VC by NSVCI

<0-65535>

Numeric identifier

1.4.9 logging level (all|mm|pag|meas|ref|gprs|ns|bssgp|llc|sndcp|slhc|ranap|sua|v42bis...

Command

```
logging level (all|mm|pag|meas|ref|gprs|ns|bssgp|llc|sndcp|slhc|ranap|sua|v42bis| ↵  
lglobal|llapd|linp|lmux|lmi|lmib|lms|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

mm

Layer3 Mobility Management (MM)

pag

Paging Subsystem

meas

Radio Measurement Processing

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 (SND CP)

slhc

RFC1144 TCP/IP Header compression (SLHC)

ranap

RAN Application Part (RANAP)

sua

SCCP User Adaptation (SUA)

v42bis
V.42bis data compression (SNDTCP)

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

1.4.10 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 YYYYMMDDhhmmssnn

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 encapsulation framerelay-gre enabled (1|0)

Command

```
encapsulation framerelay-gre enabled (1|0)
```

Parameters

encapsulation

NS encapsulation options

framerelay-gre

NS over Frame Relay over GRE Encapsulation

enabled

Enable or disable Frame Relay over GRE

1

Enable

0

Disable

1.6.2 encapsulation framerelay-gre local-ip A.B.C.D

Command

```
encapsulation framerelay-gre local-ip A.B.C.D
```

Parameters

encapsulation

NS encapsulation options

framerelay-gre

NS over Frame Relay over GRE Encapsulation

local-ip

Set the IP address on which we listen for NS/FR/GRE

A.B.C.D

IP Address

1.6.3 encapsulation udp dscp <0-255>

Command

```
encapsulation udp dscp <0-255>
```

Parameters

encapsulation

NS encapsulation options

udp

NS over UDP Encapsulation

dscp

Set DSCP/TOS on the UDP socket

<0-255>

DSCP Value

1.6.4 encapsulation udp local-ip A.B.C.D

Command

```
encapsulation udp local-ip A.B.C.D
```

Parameters

encapsulation

NS encapsulation options

udp

NS over UDP Encapsulation

local-ip

Set the IP address on which we listen for NS/UDP

A.B.C.D

IP Address

1.6.5 encapsulation udp local-port <0-65535>

Command

```
encapsulation udp local-port <0-65535>
```

Parameters

encapsulation

NS encapsulation options

udp

NS over UDP Encapsulation

local-port

Set the UDP port on which we listen for NS/UDP

<0-65535>

UDP port 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 list

Command

```
list
```

Parameters

list

Print command list

1.6.10 no nse <0-65535>

Command

```
no nse <0-65535>
```

Parameters

no

Delete Persistent NS Entity

nse

Delete Persistent NS Entity

<0-65535>

NS Entity ID (NSEI)

1.6.11 nse <0-65535> encapsulation (udp|framerelay-gre)

Command

```
nse <0-65535> encapsulation (udp|framerelay-gre)
```

Parameters

nse

Persistent NS Entity

<0-65535>

NS Entity ID (NSEI)

encapsulation

Encapsulation for NS

udp

UDP/IP Encapsulation

framerelay-gre

Frame-Relay/GRE/IP Encapsulation

1.6.12 nse <0-65535> fr-dlci <16-1007>

Command

```
nse <0-65535> fr-dlci <16-1007>
```

Parameters

nse

Persistent NS Entity

<0-65535>

NS Entity ID (NSEI)

fr-dlci

Frame Relay DLCI

<16-1007>

Frame Relay DLCI Number

1.6.13 nse <0-65535> nsvci <0-65534>

Command

```
nse <0-65535> nsvci <0-65534>
```

Parameters

nse

Persistent NS Entity

<0-65535>

NS Entity ID (NSEI)

nsvci

NS Virtual Connection

<0-65534>

NS Virtual Connection ID (NSVCI)

1.6.14 nse <0-65535> remote-ip A.B.C.D

Command

```
nse <0-65535> remote-ip A.B.C.D
```

Parameters

nse

Persistent NS Entity

<0-65535>

NS Entity ID (NSEI)

remote-ip

Remote IP Address

A.B.C.D

Remote IP Address

1.6.15 nse <0-65535> remote-port <0-65535>

Command

```
nse <0-65535> remote-port <0-65535>
```

Parameters

nse

Persistent NS Entity

<0-65535>

NS Entity ID (NSEI)

remote-port

Remote UDP Port

<0-65535>

Remote UDP Port Number

1.6.16 nse <0-65535> remote-role (sgsn|bss)

Command

```
nse <0-65535> remote-role (sgsn|bss)
```

Parameters

nse

Persistent NS Entity

<0-65535>

NS Entity ID (NSEI)

remote-role

Remote NSE Role

sgsn

Remote Peer is SGSN

bss

Remote Peer is BSS

1.6.17 show running-config

Command

```
show running-config
```

Parameters

show

Show running system information

running-config

running configuration

1.6.18 timer (tns-block|tns-block-retries|tns-reset|tns-reset-retries|tns-test|tns-aliv...

Command

```
timer (tns-block|tns-block-retries|tns-reset|tns-reset-retries|tns-test|tns-alive|tns- ↵  
alive-retries) <0-65535>
```

Parameters

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

<0-65535>

Timer Value

1.6.19 write

Command

```
write
```

Parameters

write

Write running configuration to memory, network, or terminal

1.6.20 write file

Command

```
write file
```

Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

1.6.21 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)

1.6.22 write terminal

Command

```
write terminal
```

Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

1.7

1.7.1 end

Command

```
end
```

Parameters

end

End current mode and change to enable mode.

1.7.2 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

1.7.3 help

Command

```
help
```

Parameters

help

Description of the interactive help system

1.7.4 list

Command

```
list
```

Parameters

list

Print command list

1.7.5 show running-config

Command

```
show running-config
```

Parameters

show

Show running system information

running-config

running configuration

1.7.6 write

Command

```
write
```

Parameters

write

Write running configuration to memory, network, or terminal

1.7.7 write file

Command

```
write file
```

Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

1.7.8 write memory

Command

```
write memory
```

Parameters

write

Write running configuration to memory, network, or terminal

memory

Write configuration to the file (same as write file)

1.7.9 write terminal

Command

```
write terminal
```

Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal

1.8

1.8.1 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)

1.9

1.9.1 access-point-name NAME

Globally allow the given APN name for all subscribers.

Command

```
access-point-name NAME
```

Parameters

access-point-name

Configure a global list of allowed APNs

NAME

Add this NAME to the list

1.9.2 apn APNAME ggsn <0-255>

Map the given APN Name to the given GGSN number.

Command

```
apn APNAME ggsn <0-255>
```

Parameters

apn

Configure the information per APN

APNAME

The APN gateway name optionally prefixed by '*' (wildcard)

ggsn

Select the GGSN to use when the APN gateway prefix matches

<0-255>

The GGSN id

1.9.3 apn APNAME imsi-prefix IMSIPRE ggsn <0-255>

Command

```
apn APNAME imsi-prefix IMSIPRE ggsn <0-255>
```

Parameters

apn

Configure the information per APN

APNAME

The APN gateway name optionally prefixed by '*' (wildcard)

imsi-prefix

Restrict rule to a certain IMSI prefix

IMSIPRE

An IMSI prefix

ggsn

Select the GGSN to use when APN gateway and IMSI prefix match

<0-255>

The GGSN id

1.9.4 auth-policy (accept-all|closed|acl-only|remote)

Configure the Authorization policy of the SGSN. This setting determines which subscribers are permitted to register to the network.

Command

```
auth-policy (accept-all|closed|acl-only|remote)
```

Parameters

auth-policy

Authorization Policy of SGSN

accept-all

Accept all IMSIs (DANGEROUS)

closed

Accept only home network subscribers or those in the ACL

acl-only

Accept only subscribers in the ACL

remote

Use remote subscription data only (HLR)

1.9.5 cdr filename NAME

Set the file name for the call-data-record file, logging the data usage of each subscriber.

Command

```
cdr filename NAME
```

Parameters

cdr

CDR

filename

Set filename

NAME

name

1.9.6 cdr interval <1-2147483647>

Set the interval (in seconds) for the call-data-record file.

Command

```
cdr interval <1-2147483647>
```

Parameters

cdr

CDR

interval

PDP periodic log interval

<1-2147483647>

Seconds

1.9.7 compression rfc1144 active slots <1-256>

Command

```
compression rfc1144 active slots <1-256>
```

Parameters

compression

Configure compression

rfc1144

RFC1144 Header compression scheme

active

Compression is actively proposed

slots

Number of compression state slots

<1-256>

Number of compression state slots

1.9.8 compression rfc1144 passive

Command

```
compression rfc1144 passive
```

Parameters

compression

Configure compression

rfc1144

RFC1144 Header compression scheme

passive

Compression is available on request

1.9.9 compression v42bis active direction (ms|sgsn|both) codewords <512-65535> strlen ...

Command

```
compression v42bis active direction (ms|sgsn|both) codewords <512-65535> strlen <6-250>
```

Parameters

compression

Configure compression

v42bis

V.42bis data compression scheme

active

Compression is actively proposed

direction

Direction in which the compression shall be active (p0)

ms

Compress ms->sgsn direction only

sgsn

Compress sgsn->ms direction only

both

Both directions

codewords

Number of codewords (p1)

<512-65535>

Number of codewords

strlen

Maximum string length (p2)

<6-250>

Maximum string length

1.9.10 compression v42bis passive

Command

```
compression v42bis passive
```

Parameters

compression

Configure compression

v42bis

V.42bis data compression scheme

passive

Compression is available on request

1.9.11 encryption (GEA0|GEA1|GEA2|GEA3|GEA4)

Command

```
encryption (GEA0|GEA1|GEA2|GEA3|GEA4)
```

Parameters

encryption

Set encryption algorithm for SGSN

GEA0

Use GEA0 (no encryption)

GEA1

Use GEA1

GEA2

Use GEA2

GEA3

Use GEA3

GEA4

Use GEA4

1.9.12 end

Command

```
end
```

Parameters

end

End current mode and change to enable mode.

1.9.13 exit

Command

```
exit
```

Parameters

exit

Exit current mode and down to previous mode

1.9.14 ggsn <0-255> gtp-version (0|1)

Configure whether to use GTPv0 or GTPv1 towards the specified GGSN number.

Command

```
ggsn <0-255> gtp-version (0|1)
```

Parameters

ggsn

Configure the GGSN information

<0-255>

GGSN Number

gtp-version

GTP Version

0

Version 0

1

Version 1

1.9.15 ggsn <0-255> remote-ip A.B.C.D

Configure a static GGSN with a given numeric identifier to use the specified remote IP address.

Command

```
ggsn <0-255> remote-ip A.B.C.D
```

Parameters

ggsn

Configure the GGSN information

<0-255>

GGSN Number

remote-ip

IP information

A.B.C.D

IPv4 Address

1.9.16 ggsn dynamic

Enable dynamic resolving of GGSNs based on DNS resolving the APN name like in a GRX-style setup. Changing this setting requires a re-start of the SGSN.

Command

```
ggsn dynamic
```

Parameters

ggsn

Configure the GGSN information

dynamic

Enable dynamic GRX based look-up (requires restart)

1.9.17 grx-dns-add A.B.C.D

Use the specified IP address for DNS-resolving the AP names to GGSN IP addresses

Command

```
grx-dns-add A.B.C.D
```

Parameters

grx-dns-add

Add DNS server

A.B.C.D

IPv4 address

1.9.18 gsup oap-id <0-65535>

Set the OAP client ID for authentication on the GSUP protocol. This setting only applies if auth-policy remote is used.

Command

```
gsup oap-id <0-65535>
```

Parameters

gsup

GSUP Parameters

oap-id

Set the SGSN's OAP client ID

<0-65535>

OAP client ID (0 == disabled)

1.9.19 gsup oap-k K

Set the OAP shared secret key K for authentication on the GSUP protocol. This setting only applies if auth-policy remote is used.

Command

```
gsup oap-k K
```

Parameters

gsup

GSUP Parameters

oap-k

Set the OAP shared secret K

K

K value (16 byte) hex

1.9.20 gsup oap-opc OPC

Set the OAP shared secret OPC for authentication on the GSUP protocol. This setting only applies if auth-policy remote is used.

Command

```
gsup oap-opc OPC
```

Parameters

gsup

GSUP Parameters

oap-opc

Set the OAP shared secret OPC

OPC

OPC value (16 byte) hex

1.9.21 gsup remote-ip A.B.C.D

Set the IP address of the HLR (gateway) for the GSUP protocol. This setting only applies if auth-policy remote is used.

Command

```
gsup remote-ip A.B.C.D
```

Parameters

gsup

GSUP Parameters

remote-ip

Set the IP address of the remote GSUP server

A.B.C.D

IPv4 Address

1.9.22 gsup remote-port <0-65535>

Command

```
gsup remote-port <0-65535>
```

Parameters

gsup

GSUP Parameters

remote-port

Set the TCP port of the remote GSUP server

<0-65535>

Remote TCP port

1.9.23 gtp local-ip A.B.C.D

Configure the local IP address to which the SGSN should bind for the Gp interface (towards the GGSNs). Please note that in case you would like to run the GGSN on the same machine as the SGSN, you can not run both on the same IP address. It is suggested to use 127.0.0.1 for the SGSN and 127.0.0.2 for the GGSN in such situations.

Command

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

Parameters

gtp

GTP Parameters

local-ip

Set the IP address for the local GTP bind

A.B.C.D

IPv4 Address

1.9.24 help

Command

```
help
```

Parameters

help

Description of the interactive help system

1.9.25 imsi-acl (add|del) IMSI

Add or delete the given IMSI to/from the global Access Control List.

Command

```
imsi-acl (add|del) IMSI
```

Parameters

imsi-acl

Access Control List of foreign IMSIs

add

Add IMSI to ACL

del

Remove IMSI from ACL

IMSI

IMSI of subscriber

1.9.26 list

Command

```
list
```

Parameters

list

Print command list

1.9.27 no access-point-name NAME

Command

```
no access-point-name NAME
```

Parameters

no

Negate a command or set its defaults

access-point-name

Configure a global list of allowed APNs

NAME

Remove entry with NAME

1.9.28 no cdr filename

Command

```
no cdr filename
```

Parameters

no

Negate a command or set its defaults

cdr

CDR

filename

Disable CDR generation

1.9.29 no compression rfc1144

Command

```
no compression rfc1144
```

Parameters

no

Negate a command or set its defaults

compression

Configure compression

rfc1144

disable rfc1144 TCP/IP header compression

1.9.30 no compression v42bis

Command

```
no compression v42bis
```

Parameters

no

Negate a command or set its defaults

compression

Configure compression

v42bis

disable V.42bis data compression

1.9.31 show running-config

Command

```
show running-config
```

Parameters

show

Show running system information

running-config

running configuration

1.9.32 timer t3312 <0-65535>

Command

```
timer t3312 <0-65535>
```

Parameters

timer

Configure GPRS Timers

t3312

Periodic RA Update timer (s)

<0-65535>

Timer Value in seconds

1.9.33 timer t3313 <0-65535>

Command

```
timer t3313 <0-65535>
```

Parameters

timer

Configure GPRS Timers

t3313

Waiting for paging response timer (s)

<0-65535>

Timer Value in seconds

1.9.34 timer t3314 <0-65535>

Command

```
timer t3314 <0-65535>
```

Parameters

timer

Configure GPRS Timers

t3314

Force to STANDBY on expiry timer (s)

<0-65535>

Timer Value in seconds

1.9.35 timer t3316 <0-65535>

Command

```
timer t3316 <0-65535>
```

Parameters

timer

Configure GPRS Timers

t3316

AA-Ready timer (s)

<0-65535>

Timer Value in seconds

1.9.36 timer t3322 <0-65535>

Command

```
timer t3322 <0-65535>
```

Parameters

timer

Configure GPRS Timers

t3322

Detach request -> accept timer (s)

<0-65535>

Timer Value in seconds

1.9.37 timer t3350 <0-65535>

Command

```
timer t3350 <0-65535>
```

Parameters

timer

Configure GPRS Timers

t3350

Waiting for ATT/RAU/TMSI_COMPL timer (s)

<0-65535>

Timer Value in seconds

1.9.38 timer t3360 <0-65535>

Command

```
timer t3360 <0-65535>
```

Parameters

timer

Configure GPRS Timers

t3360

Waiting for AUTH/CIPH response timer (s)

<0-65535>

Timer Value in seconds

1.9.39 timer t3370 <0-65535>

Command

```
timer t3370 <0-65535>
```

Parameters

timer

Configure GPRS Timers

t3370

Waiting for IDENTITY response timer (s)

<0-65535>

Timer Value in seconds

1.9.40 timer t3385 <0-65535>

Command

```
timer t3385 <0-65535>
```

Parameters

timer

Configure GPRS Timers

t3385

Wait for ACT PDP CTX REQ timer (s)

<0-65535>

Timer Value in seconds

1.9.41 timer t3386 <0-65535>

Command

```
timer t3386 <0-65535>
```

Parameters

timer

Configure GPRS Timers

t3386

Wait for MODIFY PDP CTX ACK timer (s)

<0-65535>

Timer Value in seconds

1.9.42 timer t3395 <0-65535>

Command

```
timer t3395 <0-65535>
```

Parameters

timer

Configure GPRS Timers

t3395

Wait for DEACT PDP CTX ACK timer (s)

<0-65535>

Timer Value in seconds

1.9.43 timer t3397 <0-65535>

Command

```
timer t3397 <0-65535>
```

Parameters

timer

Configure GPRS Timers

t3397

Wait for DEACT AA PDP CTX ACK timer (s)

<0-65535>

Timer Value in seconds

1.9.44 write

Command

```
write
```

Parameters

write

Write running configuration to memory, network, or terminal

1.9.45 write file

Command

```
write file
```

Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

1.9.46 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)

1.9.47 write terminal

Command

```
write terminal
```

Parameters

write

Write running configuration to memory, network, or terminal

terminal

Write to terminal