

# **OsmoHNBGW VTY Reference**

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**COLLABORATORS**

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# Contents

<b>1</b>	<b>VTY reference</b>	<b>1</b>
1.1	Common Commands	1
1.1.1	end	2
1.1.2	exit	2
1.1.3	help	2
1.1.4	list	2
1.1.5	show running-config	3
1.1.6	write	3
1.1.7	write file	3
1.1.8	write memory	3
1.1.9	write terminal	4
1.2	view	4
1.2.1	enable	4
1.2.2	logging color (0 1)	4
1.2.3	logging disable	5
1.2.4	logging enable	5
1.2.5	logging filter all (0 1)	5
1.2.6	logging level (main hnb pru al ranap l global l lapd l inpl mux l mi l mi b l sms l ctrl ...)	6
1.2.7	logging level force-all (debug info notice error fatal)	7
1.2.8	logging level set-all (debug info notice error fatal)	8
1.2.9	logging print category (0 1)	9
1.2.10	logging print category-hex (0 1)	9
1.2.11	logging print extended-timestamp (0 1)	10
1.2.12	logging print file (0 1 basename) [last]	10
1.2.13	logging print level (0 1)	11
1.2.14	logging set-log-mask MASK	11
1.2.15	logging timestamp (0 1)	11
1.2.16	no logging level force-all	12
1.2.17	show alarms	12
1.2.18	show cnlink	13

1.2.19	show cs7 (sualm3ualipa) [<0-65534>]	13
1.2.20	show cs7 instance <0-15> as (activelalllm3ualsua)	13
1.2.21	show cs7 instance <0-15> asp	14
1.2.22	show cs7 instance <0-15> sccp addressbook	15
1.2.23	show cs7 instance <0-15> sccp connections	15
1.2.24	show cs7 instance <0-15> sccp ssn <0-65535>	16
1.2.25	show cs7 instance <0-15> sccp timers	16
1.2.26	show cs7 instance <0-15> sccp users	17
1.2.27	show cs7 instance <0-15> users	17
1.2.28	show history	18
1.2.29	show hnb NAME	18
1.2.30	show hnb all	18
1.2.31	show logging vty	19
1.2.32	show online-help	19
1.2.33	show talloc	19
1.2.34	show ue all	20
1.2.35	show version	20
1.2.36	terminal length <0-512>	20
1.2.37	terminal no length	21
1.2.38	who	21
1.3	enable	21
1.3.1	configure terminal	21
1.3.2	copy running-config startup-config	22
1.3.3	disable	22
1.3.4	logging color (01)	22
1.3.5	logging disable	23
1.3.6	logging enable	23
1.3.7	logging filter all (01)	23
1.3.8	logging level (main hnbap rual ranap lglobal lapd linp lmux lmil mib lsm lctrl...)	24
1.3.9	logging level force-all (debug info notice error fatal)	25
1.3.10	logging level set-all (debug info notice error fatal)	26
1.3.11	logging print category (01)	27
1.3.12	logging print category-hex (01)	27
1.3.13	logging print extended-timestamp (01)	28
1.3.14	logging print file (01 basename) [last]	28
1.3.15	logging print level (01)	29
1.3.16	logging set-log-mask MASK	29
1.3.17	logging timestamp (01)	29
1.3.18	no logging level force-all	30

---

1.3.19	show alarms	30
1.3.20	show cnlink	31
1.3.21	show cs7 (sualm3ualipa) [<0-65534>]	31
1.3.22	show cs7 instance <0-15> as (activelalllm3ualsua)	31
1.3.23	show cs7 instance <0-15> asp	32
1.3.24	show cs7 instance <0-15> sccp addressbook	33
1.3.25	show cs7 instance <0-15> sccp connections	33
1.3.26	show cs7 instance <0-15> sccp ssn <0-65535>	34
1.3.27	show cs7 instance <0-15> sccp timers	34
1.3.28	show cs7 instance <0-15> sccp users	35
1.3.29	show cs7 instance <0-15> users	35
1.3.30	show history	36
1.3.31	show hnb NAME	36
1.3.32	show hnb all	36
1.3.33	show logging vty	37
1.3.34	show online-help	37
1.3.35	show startup-config	37
1.3.36	show talloc	38
1.3.37	show ue all	38
1.3.38	show version	38
1.3.39	terminal length <0-512>	39
1.3.40	terminal monitor	39
1.3.41	terminal no length	39
1.3.42	terminal no monitor	40
1.3.43	who	40
1.4	config	40
1.4.1	banner motd default	40
1.4.2	banner motd file [FILE]	41
1.4.3	cs7 instance <0-15>	41
1.4.4	enable password (8l) WORD	41
1.4.5	enable password LINE	42
1.4.6	hnbgw	42
1.4.7	hostname WORD	42
1.4.8	line vty	42
1.4.9	log alarms <2-32700>	43
1.4.10	log file .FILENAME	43
1.4.11	log gsmtap [HOSTNAME]	43
1.4.12	log stderr	44
1.4.13	log syslog (authpriv cron daemon ftplib prmail news user uucp)	44

---

1.4.14	log syslog local <0-7>	45
1.4.15	no banner motd	45
1.4.16	no enable password	45
1.4.17	no hostname [HOSTNAME]	46
1.4.18	no log alarms	46
1.4.19	no log file .FILENAME	46
1.4.20	no log stderr	47
1.4.21	no log syslog	47
1.4.22	no service advanced-vty	47
1.4.23	no service terminal-length [<0-512>]	48
1.4.24	password (8) WORD	48
1.4.25	password LINE	48
1.4.26	service advanced-vty	49
1.4.27	service terminal-length <0-512>	49
1.4.28	show history	49
1.5	config-log	49
1.5.1	logging color (01)	50
1.5.2	logging filter all (01)	50
1.5.3	logging level (main hn bap lru anap lg loball lapd linp lmux lmillmib lsm lctrl ...	51
1.5.4	logging level force-all (debug info notice error fatal)	52
1.5.5	logging level set-all (debug info notice error fatal)	53
1.5.6	logging print category (01)	54
1.5.7	logging print category-hex (01)	54
1.5.8	logging print extended-timestamp (01)	55
1.5.9	logging print file (01 basename) [last]	55
1.5.10	logging print level (01)	56
1.5.11	logging timestamp (01)	56
1.5.12	no logging level force-all	56
1.6	config-line	57
1.6.1	bind A.B.C.D [<0-65535>]	57
1.6.2	login	57
1.6.3	no login	57
1.7	config-cs7	58
1.7.1	as NAME (su alm3 ualipa)	58
1.7.2	asp NAME <0-65535> <0-65535> (su alm3 ualipa)	58
1.7.3	description .TEXT	59
1.7.4	network-indicator (international   national   reserved   spare)	59
1.7.5	no as NAME	59
1.7.6	no asp NAME	60

1.7.7	no sccp-address NAME	60
1.7.8	point-code POINT_CODE	60
1.7.9	point-code delimiter (default dash)	61
1.7.10	point-code format <1-24> [<1-23>] [<1-22>]	61
1.7.11	point-code format default	61
1.7.12	sccp-address NAME	62
1.7.13	sccp-timer (conn_est ias iar rellrepeat_rellint guard reset reassembly) <1-99999...	62
1.7.14	xua rkm routing-key-allocation (static-only dynamic-permitted)	63
1.8	config-cs7-as	63
1.8.1	asp NAME	63
1.8.2	description .TEXT	64
1.8.3	no asp NAME	64
1.8.4	point-code override dpc PC	64
1.8.5	qos-class <0-255>	65
1.8.6	recovery-timeout <1-2000>	65
1.8.7	routing-key RCONTEXT DPC	65
1.8.8	routing-key RCONTEXT DPC si (aal2 bic lb-isup lh248 lisup lsat-isup lsccptup)	66
1.8.9	routing-key RCONTEXT DPC si (aal2 bic lb-isup lh248 lisup lsat-isup lsccptup) ssn S...	66
1.8.10	routing-key RCONTEXT DPC ssn SSN	67
1.8.11	traffic-mode (broadcast   loadshare   roundrobin   override)	68
1.9	config-cs7-asp	68
1.9.1	block	68
1.9.2	description .TEXT	68
1.9.3	local-ip A.B.C.D	69
1.9.4	qos-class <0-255>	69
1.9.5	remote-ip A.B.C.D	69
1.9.6	shutdown	69
1.10	config-cs7-sccpaddr	70
1.10.1	global-title	70
1.10.2	no global-title	70
1.10.3	no point-code	70
1.10.4	no subsystem-number	70
1.10.5	point-code POINT_CODE	71
1.10.6	routing-indicator (GT PC IP)	71
1.10.7	subsystem-number <0-4294967295>	71
1.11	config-cs7-sccpaddr-gt	72
1.11.1	digits DIGITS	72
1.11.2	global-title-indicator <0-15>	72
1.11.3	nature-of-address-indicator <0-127>	72



---

1.11.4	numbering-plan-indicator <0-15>	73
1.11.5	translation-type <0-255>	73
1.12	config-hnbgw	73
1.12.1	iucs	73
1.12.2	iuh	73
1.12.3	iups	74
1.12.4	rnc-id <0-65535>	74
1.13	config-hnbgw-iuh	74
1.13.1	hnwap-allow-tmsi (011)	74
1.13.2	local-ip A.B.C.D	75
1.13.3	local-port <1-65535>	75
1.14	config-hnbgw-iucs	75
1.14.1	remote-addr NAME	75
1.15	config-hnbgw-iups	76
1.15.1	remote-addr NAME	76

---

# List of Tables

1.1	VTY Parameter Patterns . . . . .	1
1.2	VTY port numbers . . . . .	1

# Chapter 1

## VTY reference

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

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

Table 1.1: VTY Parameter Patterns

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

The following table lists the TCP port numbers of the VTY for the various Osmocom GSM related programs as used on 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 Common Commands

These commands are available on all VTY nodes. They are listed here only once, to unclutter the VTY reference.

### 1.1.1 end

#### Command

```
end
```

#### Parameters

end

End current mode and change to enable mode.

### 1.1.2 exit

#### Command

```
exit
```

#### Parameters

exit

Exit current mode and down to previous mode

### 1.1.3 help

#### Command

```
help
```

#### Parameters

help

Description of the interactive help system

### 1.1.4 list

#### Command

```
list
```

#### Parameters

list

Print command list

---

### 1.1.5 show running-config

#### Command

```
show running-config
```

#### Parameters

##### show

Show running system information

##### running-config

running configuration

### 1.1.6 write

#### Command

```
write
```

#### Parameters

##### write

Write running configuration to memory, network, or terminal

### 1.1.7 write file

#### Command

```
write file
```

#### Parameters

##### write

Write running configuration to memory, network, or terminal

##### file

Write to configuration file

### 1.1.8 write memory

#### Command

```
write memory
```

#### Parameters

##### write

Write running configuration to memory, network, or terminal

##### memory

Write configuration to the file (same as write file)

---

### 1.1.9 write terminal

#### Command

```
write terminal
```

#### Parameters

##### write

Write running configuration to memory, network, or terminal

##### terminal

Write to terminal

## 1.2 view

The view node is the default node when connecting to the VTY interface. This node does not require any additional permission and allows to introspect the application.

### 1.2.1 enable

#### Command

```
enable
```

#### Parameters

##### enable

Turn on privileged mode command

### 1.2.2 logging color (0|1)

#### Command

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

#### Parameters

##### logging

Configure logging

##### color

Configure color-printing for log messages

##### 0

Don't use color for printing messages

##### 1

Use color for printing messages

---

### 1.2.3 logging disable

#### Command

```
logging disable
```

#### Parameters

##### logging

Configure logging

##### disable

Disables logging to this vty

### 1.2.4 logging enable

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

#### Command

```
logging enable
```

#### Parameters

##### logging

Configure logging

##### enable

Enables logging to this vty

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

Disable/enable general log output on a given target. Typically, 'logging filter all 1' allows to see the usual log output on a given target. Setting to '0' can be useful when logging to the telnet VTY console: mute all log output to allow typing VTY commands on the telnet prompt without interference from log output; 'logging filter all 1' then re-enables logging in the same log output configuration as before. Some applications provide more specific filters, e.g. to log a given IMSI only. To employ such filters, set 'logging filter all 0' to disable general logging, and then enable a more specific filter instead.

#### Command

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

#### Parameters

##### logging

Configure logging

##### filter

Filter log messages

##### all

Do you want to log all messages?

##### 0

Only print messages matched by other filters

##### 1

Bypass filter and print all messages

## 1.2.6 logging level (main|hnbap|rua|ranap|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|...

### Command

```
logging level (main|hnbap|rua|ranap|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp| ←  
lstats|lgsup|loap|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf|lrspro) (debug|info|notice| ←  
error|fatal)
```

### Parameters

#### logging

Configure logging

#### level

Set the log level for a specified category

#### main

Main program

#### hnbap

Home Node B Application Part

#### rua

RANAP User Adaptation

#### ranap

RAN Application Part

#### lglobal

Library-internal global log family

#### llapd

LAPD in libosmogsm

#### linp

A-bis Input Subsystem

#### lmux

A-bis B-Subchannel TRAU Frame Multiplex

#### lmi

A-bis Input Driver for Signalling

#### lmib

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

#### lsms

Layer3 Short Message Service (SMS)

#### lctrl

Control Interface

#### lgtp

GPRS GTP library



lstats	Statistics messages and logging
lgsup	Generic Subscriber Update Protocol
loap	Osmocom Authentication Protocol
lss7	libosmo-sigtran Signalling System 7
lscpp	libosmo-sigtran SCCP Implementation
lsua	libosmo-sigtran SCCP User Adaptation
lm3ua	libosmo-sigtran MTP3 User Adaptation
lmgcp	libosmo-mgcp Media Gateway Control Protocol
ljibuf	libosmo-netif Jitter Buffer
lrspro	Remote SIM protocol
debug	Log debug messages and higher levels
info	Log informational messages and higher levels
notice	Log noticeable messages and higher levels
error	Log error messages and higher levels
fatal	Log only fatal messages

### 1.2.7 logging level force-all (debug|info|notice|error|fatal)

#### Command

```
logging level force-all (debug|info|notice|error|fatal)
```

#### Parameters

##### logging

Configure logging

**level**

Set the log level for a specified category

**force-all**

Globally force all logging categories to a specific level. This is released by the 'no logging level force-all' command. Note: any 'logging level <category> <level>' commands will have no visible effect after this, until the forced level is released.

**debug**

Log debug messages and higher levels

**info**

Log informational messages and higher levels

**notice**

Log noticeable messages and higher levels

**error**

Log error messages and higher levels

**fatal**

Log only fatal messages

### 1.2.8 logging level set-all (debug|info|notice|error|fatal)

**Command**

```
logging level set-all (debug|info|notice|error|fatal)
```

**Parameters****logging**

Configure logging

**level**

Set the log level for a specified category

**set-all**

Once-off set all categories to the given log level. There is no single command to take back these changes -- each category is set to the given level, period.

**debug**

Log debug messages and higher levels

**info**

Log informational messages and higher levels

**notice**

Log noticeable messages and higher levels

**error**

Log error messages and higher levels

**fatal**

Log only fatal messages

---

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

#### Command

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

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### category

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem name

### 1.2.10 logging print category-hex (0|1)

#### Command

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

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### category-hex

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem nr in hex ('<000b>')

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

#### Command

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

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### extended-timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp with YYYYMMDDhhmmssnnn

### 1.2.12 logging print file (0|1|basename) [last]

#### Command

```
logging print file (0|1|basename) [last]
```

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### file

Configure log message

0

Don't prefix each log message

1

Prefix each log message with the source file and line

##### basename

Prefix each log message with the source file's basename (strip leading paths) and line

##### [last]

Log source file info at the end of a log line. If omitted, log source file info just before the log text.

### 1.2.13 logging print level (0|1)

#### Command

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

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### level

Configure log message

##### 0

Don't prefix each log message

##### 1

Prefix each log message with the log level name

### 1.2.14 logging set-log-mask MASK

#### Command

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

#### Parameters

##### logging

Configure logging

##### set-log-mask

Set the logmask of this logging target

##### MASK

List of logging categories to log, e.g. 'abc:mno:xyz'. Available log categories depend on the specific application, refer to the 'logging level' command. Optionally add individual log levels like 'abc,1:mno,3:xyz,5', where the level numbers are LOGL\_DEBUG=1 LOGL\_INFO=3 LOGL\_NOTICE=5 LOGL\_ERROR=7 LOGL\_FATAL=8

### 1.2.15 logging timestamp (0|1)

#### Command

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

#### Parameters

## logging

Configure logging

## timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp

### 1.2.16 no logging level force-all

#### Command

```
no logging level force-all
```

#### Parameters

no

Negate a command or set its defaults

#### logging

Configure logging

#### level

Set the log level for a specified category

#### force-all

Release any globally forced log level set with 'logging level force-all <level>'

### 1.2.17 show alarms

#### Command

```
show alarms
```

#### Parameters

show

Show running system information

alarms

Show current logging configuration

### 1.2.18 show cnlink

#### Command

```
show cnlink
```

#### Parameters

##### show

Show running system information

##### cnlink

Display information on core network link

### 1.2.19 show cs7 (sua|m3ua|ipa) [<0-65534>]

#### Command

```
show cs7 (sua|m3ua|ipa) [<0-65534>]
```

#### Parameters

##### show

Show running system information

##### cs7

ITU-T Signaling System 7

##### sua

SCCP User Adaptation

##### m3ua

MTP3 User Adaptation

##### ipa

IPA Multiplex (SCCP Lite)

##### [<0-65534>]

Port Number

### 1.2.20 show cs7 instance <0-15> as (active|all|m3ua|sua)

#### Command

```
show cs7 instance <0-15> as (active|all|m3ua|sua)
```

#### Parameters

##### show

Show running system information

cs7  
ITU-T Signaling System 7

instance  
An instance of the SS7 stack

<0-15>  
An instance of the SS7 stack

as  
Application Server (AS)

active  
Display all active ASs

all  
Display all ASs (default)

m3ua  
Display all m3ua ASs

sua  
Display all SUA ASs

### 1.2.21 show cs7 instance <0-15> asp

#### Command

```
show cs7 instance <0-15> asp
```

#### Parameters

show  
Show running system information

cs7  
ITU-T Signaling System 7

instance  
An instance of the SS7 stack

<0-15>  
An instance of the SS7 stack

asp  
Application Server Process (ASP)



### 1.2.22 show cs7 instance <0-15> sccp addressbook

#### Command

```
show cs7 instance <0-15> sccp addressbook
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

sccp

Signalling Connection Control Part

addressbook

List all SCCP addressbook entries

### 1.2.23 show cs7 instance <0-15> sccp connections

#### Command

```
show cs7 instance <0-15> sccp connections
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

sccp

Signalling Connection Control Part

connections

Show List of active SCCP connections

### 1.2.24 show cs7 instance <0-15> sccp ssn <0-65535>

#### Command

```
show cs7 instance <0-15> sccp ssn <0-65535>
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

sccp

Signalling Connection Control Part

ssn

Find an SCCP User registered for the given SSN

<0-65535>

Subsystem Number (SSN)

### 1.2.25 show cs7 instance <0-15> sccp timers

#### Command

```
show cs7 instance <0-15> sccp timers
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

sccp

Signaling Connection Control Part

timers

Show List of SCCP timers

### 1.2.26 show cs7 instance <0-15> sccp users

#### Command

```
show cs7 instance <0-15> sccp users
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

sccp

Signalling Connection Control Part

users

Show List of SCCP Users registered

### 1.2.27 show cs7 instance <0-15> users

#### Command

```
show cs7 instance <0-15> users
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

users

User Table

### 1.2.28 show history

#### Command

```
show history
```

#### Parameters

show

Show running system information

history

Display the session command history

### 1.2.29 show hnb NAME

#### Command

```
show hnb NAME
```

#### Parameters

show

Show running system information

hnb

Display information about a HNB

NAME

(null)

### 1.2.30 show hnb all

#### Command

```
show hnb all
```

#### Parameters

show

Show running system information

hnb

Display information about all HNB

all

(null)

### 1.2.31 show logging vty

#### Command

```
show logging vty
```

#### Parameters

show

Show running system information

logging

Show current logging configuration

vtty

Show current logging configuration for this vty

### 1.2.32 show online-help

#### Command

```
show online-help
```

#### Parameters

show

Show running system information

online-help

Online help

### 1.2.33 show talloc

#### Command

```
show talloc
```

#### Parameters

show

Show running system information

talloc

Display talloc info

### 1.2.34 show ue all

#### Command

```
show ue all
```

#### Parameters

show

Show running system information

ue

Display information about a UE

all

(null)

### 1.2.35 show version

#### Command

```
show version
```

#### Parameters

show

Show running system information

version

Displays program version

### 1.2.36 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)

---

### 1.2.37 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

### 1.2.38 who

#### Command

```
who
```

#### Parameters

##### who

Display who is on vty

## 1.3 enable

The enable node is a privileged node, allowing to make changes to the configuration and to access further commands like 'configure'. All commands seen on the view node are also available here.

### 1.3.1 configure terminal

#### Command

```
configure terminal
```

#### Parameters

##### configure

Configuration from vty interface

##### terminal

Configuration terminal

### 1.3.2 copy running-config startup-config

#### Command

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

#### Parameters

##### copy

Copy configuration

##### running-config

Copy running config to...

##### startup-config

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

### 1.3.3 disable

#### Command

```
disable
```

#### Parameters

##### disable

Turn off privileged mode command

### 1.3.4 logging color (0|1)

#### Command

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

#### Parameters

##### logging

Configure logging

##### color

Configure color-printing for log messages

##### 0

Don't use color for printing messages

##### 1

Use color for printing messages

---



### 1.3.5 logging disable

#### Command

```
logging disable
```

#### Parameters

##### logging

Configure logging

##### disable

Disables logging to this vty

### 1.3.6 logging enable

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

#### Command

```
logging enable
```

#### Parameters

##### logging

Configure logging

##### enable

Enables logging to this vty

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

Disable/enable general log output on a given target. Typically, 'logging filter all 1' allows to see the usual log output on a given target. Setting to '0' can be useful when logging to the telnet VTY console: mute all log output to allow typing VTY commands on the telnet prompt without interference from log output; 'logging filter all 1' then re-enables logging in the same log output configuration as before. Some applications provide more specific filters, e.g. to log a given IMSI only. To employ such filters, set 'logging filter all 0' to disable general logging, and then enable a more specific filter instead.

#### Command

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

#### Parameters

##### logging

Configure logging

##### filter

Filter log messages

##### all

Do you want to log all messages?

##### 0

Only print messages matched by other filters

##### 1

Bypass filter and print all messages

### 1.3.8 logging level (main|hnbap|rua|ranap|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|...

#### Command

```
logging level (main|hnbap|rua|ranap|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp| ←  
lstats|lgsup|loap|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf|lrspro) (debug|info|notice| ←  
error|fatal)
```

#### Parameters

##### logging

Configure logging

##### level

Set the log level for a specified category

##### main

Main program

##### hnbap

Home Node B Application Part

##### rua

RANAP User Adaptation

##### ranap

RAN Application Part

##### lglobal

Library-internal global log family

##### llapd

LAPD in libosmogsm

##### linp

A-bis Input Subsystem

##### lmux

A-bis B-Subchannel TRAU Frame Multiplex

##### lmi

A-bis Input Driver for Signalling

##### lmib

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

##### lsms

Layer3 Short Message Service (SMS)

##### lctrl

Control Interface

##### lgtp

GPRS GTP library

lstats  
Statistics messages and logging

lgsup  
Generic Subscriber Update Protocol

loap  
Osmocom Authentication Protocol

lss7  
libosmo-sigtran Signalling System 7

lscpp  
libosmo-sigtran SCCP Implementation

lsua  
libosmo-sigtran SCCP User Adaptation

lm3ua  
libosmo-sigtran MTP3 User Adaptation

lmgcp  
libosmo-mgcp Media Gateway Control Protocol

ljibuf  
libosmo-netif Jitter Buffer

lrspro  
Remote SIM protocol

debug  
Log debug messages and higher levels

info  
Log informational messages and higher levels

notice  
Log noticeable messages and higher levels

error  
Log error messages and higher levels

fatal  
Log only fatal messages

### 1.3.9 logging level force-all (debug|info|notice|error|fatal)

Command

```
logging level force-all (debug|info|notice|error|fatal)
```

Parameters

logging

Configure logging

**level**

Set the log level for a specified category

**force-all**

Globally force all logging categories to a specific level. This is released by the 'no logging level force-all' command. Note: any 'logging level <category> <level>' commands will have no visible effect after this, until the forced level is released.

**debug**

Log debug messages and higher levels

**info**

Log informational messages and higher levels

**notice**

Log noticeable messages and higher levels

**error**

Log error messages and higher levels

**fatal**

Log only fatal messages

### 1.3.10 logging level set-all (debug|info|notice|error|fatal)

**Command**

```
logging level set-all (debug|info|notice|error|fatal)
```

**Parameters****logging**

Configure logging

**level**

Set the log level for a specified category

**set-all**

Once-off set all categories to the given log level. There is no single command to take back these changes -- each category is set to the given level, period.

**debug**

Log debug messages and higher levels

**info**

Log informational messages and higher levels

**notice**

Log noticeable messages and higher levels

**error**

Log error messages and higher levels

**fatal**

Log only fatal messages

---

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

#### Command

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

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### category

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem name

### 1.3.12 logging print category-hex (0|1)

#### Command

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

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### category-hex

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem nr in hex ('<000b>')

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

#### Command

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

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### extended-timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp with YYYYMMDDhhmmssnnn

### 1.3.14 logging print file (0|1|basename) [last]

#### Command

```
logging print file (0|1|basename) [last]
```

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### file

Configure log message

0

Don't prefix each log message

1

Prefix each log message with the source file and line

##### basename

Prefix each log message with the source file's basename (strip leading paths) and line

##### [last]

Log source file info at the end of a log line. If omitted, log source file info just before the log text.

### 1.3.15 logging print level (0|1)

#### Command

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

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### level

Configure log message

##### 0

Don't prefix each log message

##### 1

Prefix each log message with the log level name

### 1.3.16 logging set-log-mask MASK

#### Command

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

#### Parameters

##### logging

Configure logging

##### set-log-mask

Set the logmask of this logging target

##### MASK

List of logging categories to log, e.g. 'abc:mno:xyz'. Available log categories depend on the specific application, refer to the 'logging level' command. Optionally add individual log levels like 'abc,1:mno,3:xyz,5', where the level numbers are LOGL\_DEBUG=1 LOGL\_INFO=3 LOGL\_NOTICE=5 LOGL\_ERROR=7 LOGL\_FATAL=8

### 1.3.17 logging timestamp (0|1)

#### Command

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

#### Parameters

logging

Configure logging

timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp

### 1.3.18 no logging level force-all

Command

```
no logging level force-all
```

Parameters

no

Negate a command or set its defaults

logging

Configure logging

level

Set the log level for a specified category

force-all

Release any globally forced log level set with 'logging level force-all <level>'

### 1.3.19 show alarms

Command

```
show alarms
```

Parameters

show

Show running system information

alarms

Show current logging configuration



### 1.3.20 show cnlink

#### Command

```
show cnlink
```

#### Parameters

##### show

Show running system information

##### cnlink

Display information on core network link

### 1.3.21 show cs7 (sua|m3ua|ipa) [<0-65534>]

#### Command

```
show cs7 (sua|m3ua|ipa) [<0-65534>]
```

#### Parameters

##### show

Show running system information

##### cs7

ITU-T Signaling System 7

##### sua

SCCP User Adaptation

##### m3ua

MTP3 User Adaptation

##### ipa

IPA Multiplex (SCCP Lite)

##### [<0-65534>]

Port Number

### 1.3.22 show cs7 instance <0-15> as (active|all|m3ua|sua)

#### Command

```
show cs7 instance <0-15> as (active|all|m3ua|sua)
```

#### Parameters

##### show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

as

Application Server (AS)

active

Display all active ASs

all

Display all ASs (default)

m3ua

Display all m3ua ASs

sua

Display all SUA ASs

### 1.3.23 show cs7 instance <0-15> asp

Command

```
show cs7 instance <0-15> asp
```

Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

asp

Application Server Process (ASP)

### 1.3.24 show cs7 instance <0-15> sccp addressbook

#### Command

```
show cs7 instance <0-15> sccp addressbook
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

sccp

Signalling Connection Control Part

addressbook

List all SCCP addressbook entries

### 1.3.25 show cs7 instance <0-15> sccp connections

#### Command

```
show cs7 instance <0-15> sccp connections
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

sccp

Signalling Connection Control Part

connections

Show List of active SCCP connections

### 1.3.26 show cs7 instance <0-15> sccp ssn <0-65535>

#### Command

```
show cs7 instance <0-15> sccp ssn <0-65535>
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

sccp

Signalling Connection Control Part

ssn

Find an SCCP User registered for the given SSN

<0-65535>

Subsystem Number (SSN)

### 1.3.27 show cs7 instance <0-15> sccp timers

#### Command

```
show cs7 instance <0-15> sccp timers
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

sccp

Signaling Connection Control Part

timers

Show List of SCCP timers

### 1.3.28 show cs7 instance <0-15> sccp users

#### Command

```
show cs7 instance <0-15> sccp users
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

sccp

Signalling Connection Control Part

users

Show List of SCCP Users registered

### 1.3.29 show cs7 instance <0-15> users

#### Command

```
show cs7 instance <0-15> users
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

<0-15>

An instance of the SS7 stack

users

User Table

### 1.3.30 show history

#### Command

```
show history
```

#### Parameters

show

Show running system information

history

Display the session command history

### 1.3.31 show hnb NAME

#### Command

```
show hnb NAME
```

#### Parameters

show

Show running system information

hnb

Display information about a HNB

NAME

(null)

### 1.3.32 show hnb all

#### Command

```
show hnb all
```

#### Parameters

show

Show running system information

hnb

Display information about all HNB

all

(null)

### 1.3.33 show logging vty

#### Command

```
show logging vty
```

#### Parameters

##### show

Show running system information

##### logging

Show current logging configuration

##### vtty

Show current logging configuration for this vty

### 1.3.34 show online-help

#### Command

```
show online-help
```

#### Parameters

##### show

Show running system information

##### online-help

Online help

### 1.3.35 show startup-config

#### Command

```
show startup-config
```

#### Parameters

##### show

Show running system information

##### startup-config

Contentes of startup configuration

### 1.3.36 show talloc

#### Command

```
show talloc
```

#### Parameters

show

Show running system information

talloc

Display talloc info

### 1.3.37 show ue all

#### Command

```
show ue all
```

#### Parameters

show

Show running system information

ue

Display information about a UE

all

(null)

### 1.3.38 show version

#### Command

```
show version
```

#### Parameters

show

Show running system information

version

Displays program version



### 1.3.39 terminal length <0-512>

#### Command

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

#### Parameters

##### terminal

Set terminal line parameters

##### length

Set number of lines on a screen

##### <0-512>

Number of lines on screen (0 for no pausing)

### 1.3.40 terminal monitor

#### Command

```
terminal monitor
```

#### Parameters

##### terminal

Set terminal line parameters

##### monitor

Copy debug output to the current terminal line

### 1.3.41 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

---

### 1.3.42 terminal no monitor

#### Command

```
terminal no monitor
```

#### Parameters

##### terminal

Set terminal line parameters

##### no

Negate a command or set its defaults

##### monitor

Copy debug output to the current terminal line

### 1.3.43 who

#### Command

```
who
```

#### Parameters

##### who

Display who is on vty

## 1.4 config

The config node is the root for all configuration commands, which are identical to the config file format. Changes made on the telnet VTY can be made persistent with the 'write file' command.

### 1.4.1 banner motd default

#### Command

```
banner motd default
```

#### Parameters

##### banner

Set banner string

##### motd

Strings for motd

##### default

Default string

---

### 1.4.2 banner motd file [FILE]

#### Command

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

#### Parameters

##### banner

Set banner

##### motd

Banner for motd

##### file

Banner from a file

##### [FILE]

Filename

### 1.4.3 cs7 instance <0-15>

#### Command

```
cs7 instance <0-15>
```

#### Parameters

##### cs7

ITU-T Signaling System 7

##### instance

Configure a SS7 Instance

##### <0-15>

An instance of the SS7 stack

### 1.4.4 enable password (8|) WORD

#### Command

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

#### Parameters

##### enable

Modify enable password parameters

##### password

Assign the privileged level password

##### 8

Specifies a HIDDEN password will follow

##### dummy string

##### WORD

The HIDDEN 'enable' password string

### 1.4.5 enable password LINE

#### Command

```
enable password LINE
```

#### Parameters

##### enable

Modify enable password parameters

##### password

Assign the privileged level password

##### LINE

The UNENCRYPTED (cleartext) 'enable' password

### 1.4.6 hnbgw

#### Command

```
hnbgw
```

#### Parameters

##### hnbgw

Configure HNBGW options

### 1.4.7 hostname WORD

#### Command

```
hostname WORD
```

#### Parameters

##### hostname

Set system's network name

##### WORD

This system's network name

### 1.4.8 line vty

#### Command

```
line vty
```

#### Parameters

##### line

Configure a terminal line

##### vty

Virtual terminal

---

### 1.4.9 log alarms <2-32700>

#### Command

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

#### Parameters

##### log

Configure logging sub-system

##### alarms

Logging alarms to osmo\_strrb

##### <2-32700>

Maximum number of messages to log

### 1.4.10 log file .FILENAME

#### Command

```
log file .FILENAME
```

#### Parameters

##### log

Configure logging sub-system

##### file

Logging to text file

##### .FILENAME

Filename

### 1.4.11 log gsmtap [HOSTNAME]

#### Command

```
log gsmtap [HOSTNAME]
```

#### Parameters

##### log

Configure logging sub-system

##### gsmtap

Logging via GSMTAP

##### [HOSTNAME]

Host name to send the GSMTAP logging to (UDP port 4729)

---

### 1.4.12 log stderr

#### Command

```
log stderr
```

#### Parameters

log

Configure logging sub-system

stderr

Logging via STDERR of the process

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

#### Command

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

#### Parameters

log

Configure logging sub-system

syslog

Logging via syslog

authpriv

Security/authorization messages facility

cron

Clock daemon (cron/at) facility

daemon

General system daemon facility

ftp

Ftp daemon facility

lpr

Line printer facility

mail

Mail facility

news

News facility

user

Generic facility

uucp

UUCP facility

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

#### Command

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

#### Parameters

log

Configure logging sub-system

syslog

Logging via syslog

local

Syslog LOCAL facility

<0-7>

Local facility number

### 1.4.15 no banner motd

#### Command

```
no banner motd
```

#### Parameters

no

Negate a command or set its defaults

banner

Set banner string

motd

Strings for motd

### 1.4.16 no enable password

#### Command

```
no enable password
```

#### Parameters

no

Negate a command or set its defaults

enable

Modify enable password parameters

password

Assign the privileged level password

---

### 1.4.17 no hostname [HOSTNAME]

#### Command

```
no hostname [HOSTNAME]
```

#### Parameters

no

Negate a command or set its defaults

hostname

Reset system's network name

[HOSTNAME]

Host name of this router

### 1.4.18 no log alarms

#### Command

```
no log alarms
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

alarms

Logging alarms to osmo\_strrb

### 1.4.19 no log file .FILENAME

#### Command

```
no log file .FILENAME
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

file

Logging to text file

.FILENAME

Filename



### 1.4.20 no log stderr

#### Command

```
no log stderr
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

stderr

Logging via STDERR of the process

### 1.4.21 no log syslog

#### Command

```
no log syslog
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

syslog

Logging via syslog

### 1.4.22 no service advanced-vty

#### Command

```
no service advanced-vty
```

#### Parameters

no

Negate a command or set its defaults

service

Set up miscellaneous service

advanced-vty

Enable advanced mode vty interface

---

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

#### Command

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

#### Parameters

no

Negate a command or set its defaults

service

Set up miscellaneous service

terminal-length

System wide terminal length configuration

[<0-512>]

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

### 1.4.24 password (8|) WORD

#### Command

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

#### Parameters

password

Assign the terminal connection password

8

Specifies a HIDDEN password will follow

dummy string

WORD

The HIDDEN line password string

### 1.4.25 password LINE

#### Command

```
password LINE
```

#### Parameters

password

Assign the terminal connection password

LINE

The UNENCRYPTED (cleartext) line password

### 1.4.26 service advanced-vty

#### Command

```
service advanced-vty
```

#### Parameters

##### service

Set up miscellaneous service

##### advanced-vty

Enable advanced mode vty interface

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

#### Command

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

#### Parameters

##### service

Set up miscellaneous service

##### terminal-length

System wide terminal length configuration

##### <0-512>

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

### 1.4.28 show history

#### Command

```
show history
```

#### Parameters

##### show

Show running system information

##### history

Display the session command history

## 1.5 config-log

The log node is commonly available in all Osmocom programs and allows configuring logging to stderr and/or log files, including logging category and level filtering as well as output formatting options. Note that the 'logging enable' command is required to make logging commands available on the telnet VTY.

---

### 1.5.1 logging color (0|1)

#### Command

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

#### Parameters

##### logging

Configure logging

##### color

Configure color-printing for log messages

0

Don't use color for printing messages

1

Use color for printing messages

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

Disable/enable general log output on a given target. Typically, 'logging filter all 1' allows to see the usual log output on a given target. Setting to '0' can be useful when logging to the telnet VTY console: mute all log output to allow typing VTY commands on the telnet prompt without interference from log output; 'logging filter all 1' then re-enables logging in the same log output configuration as before. Some applications provide more specific filters, e.g. to log a given IMSI only. To employ such filters, set 'logging filter all 0' to disable general logging, and then enable a more specific filter instead.

#### Command

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

#### Parameters

##### logging

Configure logging

##### filter

Filter log messages

all

Do you want to log all messages?

0

Only print messages matched by other filters

1

Bypass filter and print all messages

### 1.5.3 logging level (main|hnbap|rua|ranap|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|...

#### Command

```
logging level (main|hnbap|rua|ranap|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp| ←  
lstats|lgsup|loap|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf|lrspro) (debug|info|notice| ←  
error|fatal)
```

#### Parameters

##### logging

Configure logging

##### level

Set the log level for a specified category

##### main

Main program

##### hnbap

Home Node B Application Part

##### rua

RANAP User Adaptation

##### ranap

RAN Application Part

##### lglobal

Library-internal global log family

##### llapd

LAPD in libosmogsm

##### linp

A-bis Input Subsystem

##### lmux

A-bis B-Subchannel TRAU Frame Multiplex

##### lmi

A-bis Input Driver for Signalling

##### lmib

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

##### lsms

Layer3 Short Message Service (SMS)

##### lctrl

Control Interface

##### lgtp

GPRS GTP library

lstats  
Statistics messages and logging

lgsup  
Generic Subscriber Update Protocol

loap  
Osmocom Authentication Protocol

lss7  
libosmo-sigtran Signalling System 7

lscpp  
libosmo-sigtran SCCP Implementation

lsua  
libosmo-sigtran SCCP User Adaptation

lm3ua  
libosmo-sigtran MTP3 User Adaptation

lmgcp  
libosmo-mgcp Media Gateway Control Protocol

ljibuf  
libosmo-netif Jitter Buffer

lrspro  
Remote SIM protocol

debug  
Log debug messages and higher levels

info  
Log informational messages and higher levels

notice  
Log noticeable messages and higher levels

error  
Log error messages and higher levels

fatal  
Log only fatal messages

#### 1.5.4 logging level force-all (debug|info|notice|error|fatal)

Command

```
logging level force-all (debug|info|notice|error|fatal)
```

Parameters

logging

Configure logging

**level**

Set the log level for a specified category

**force-all**

Globally force all logging categories to a specific level. This is released by the 'no logging level force-all' command. Note: any 'logging level <category> <level>' commands will have no visible effect after this, until the forced level is released.

**debug**

Log debug messages and higher levels

**info**

Log informational messages and higher levels

**notice**

Log noticeable messages and higher levels

**error**

Log error messages and higher levels

**fatal**

Log only fatal messages

### 1.5.5 logging level set-all (debug|info|notice|error|fatal)

**Command**

```
logging level set-all (debug|info|notice|error|fatal)
```

**Parameters****logging**

Configure logging

**level**

Set the log level for a specified category

**set-all**

Once-off set all categories to the given log level. There is no single command to take back these changes -- each category is set to the given level, period.

**debug**

Log debug messages and higher levels

**info**

Log informational messages and higher levels

**notice**

Log noticeable messages and higher levels

**error**

Log error messages and higher levels

**fatal**

Log only fatal messages

---

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

#### Command

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

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### category

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem name

### 1.5.7 logging print category-hex (0|1)

#### Command

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

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### category-hex

Configure log message

0

Don't prefix each log message

1

Prefix each log message with category/subsystem nr in hex ('<000b>')



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

#### Command

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

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### extended-timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp with YYYYMMDDhhmmssnnn

### 1.5.9 logging print file (0|1|basename) [last]

#### Command

```
logging print file (0|1|basename) [last]
```

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### file

Configure log message

0

Don't prefix each log message

1

Prefix each log message with the source file and line

##### basename

Prefix each log message with the source file's basename (strip leading paths) and line

##### [last]

Log source file info at the end of a log line. If omitted, log source file info just before the log text.

### 1.5.10 logging print level (0|1)

#### Command

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

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### level

Configure log message

0

Don't prefix each log message

1

Prefix each log message with the log level name

### 1.5.11 logging timestamp (0|1)

#### Command

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

#### Parameters

##### logging

Configure logging

##### timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp

### 1.5.12 no logging level force-all

#### Command

```
no logging level force-all
```

#### Parameters

---

no

Negate a command or set its defaults

logging

Configure logging

level

Set the log level for a specified category

force-all

Release any globally forced log level set with 'logging level force-all <level>'

## 1.6 config-line

### 1.6.1 bind A.B.C.D [<0-65535>]

Command

```
bind A.B.C.D [<0-65535>]
```

Parameters

bind

Accept VTY telnet connections on local interface

A.B.C.D

Local interface IP address (default: 127.0.0.1)

[<0-65535>]

Local TCP port number

### 1.6.2 login

Command

```
login
```

Parameters

login

Enable password checking

### 1.6.3 no login

Command

```
no login
```

Parameters

no

Negate a command or set its defaults

login

Enable password checking

## 1.7 config-cs7

### 1.7.1 as NAME (sua|m3ua|ipa)

#### Command

```
as NAME (sua|m3ua|ipa)
```

#### Parameters

as

Configure an Application Server

NAME

Name of the Application Server

sua

SCCP User Adaptation

m3ua

MTP3 User Adaptation

ipa

IPA Multiplex (SCCP Lite)

### 1.7.2 asp NAME <0-65535> <0-65535> (sua|m3ua|ipa)

#### Command

```
asp NAME <0-65535> <0-65535> (sua|m3ua|ipa)
```

#### Parameters

asp

Configure Application Server Process

NAME

Name of ASP

<0-65535>

Remote SCTP port number

<0-65535>

Local SCTP port number

sua

SCCP User Adaptation

m3ua

MTP3 User Adaptation

ipa

IPA Multiplex (SCCP Lite)

### 1.7.3 description .TEXT

#### Command

```
description .TEXT
```

#### Parameters

##### description

Save human-readable description of the object

##### .TEXT

Text until the end of the line

### 1.7.4 network-indicator (international | national | reserved | spare)

#### Command

```
network-indicator (international | national | reserved | spare)
```

#### Parameters

##### network-indicator

Configure the Network Indicator

##### international

International Network

##### national

National Network

##### reserved

Reserved Network

##### spare

Spare Network

### 1.7.5 no as NAME

#### Command

```
no as NAME
```

#### Parameters

##### no

Negate a command or set its defaults

##### as

Disable Application Server

##### NAME

Name of AS

---

### 1.7.6 no asp NAME

#### Command

```
no asp NAME
```

#### Parameters

no

Negate a command or set its defaults

asp

Disable Application Server Process

NAME

Name of ASP

### 1.7.7 no sccp-address NAME

#### Command

```
no sccp-address NAME
```

#### Parameters

no

Negate a command or set its defaults

sccp-address

Delete an SCCP addressbook entry

NAME

Name of the SCCP Address

### 1.7.8 point-code POINT\_CODE

#### Command

```
point-code POINT_CODE
```

#### Parameters

point-code

Configure the local Point Code

POINT\_CODE

Point Code

### 1.7.9 point-code delimiter (default|dash)

#### Command

```
point-code delimiter (default|dash)
```

#### Parameters

##### point-code

Point Code

##### delimiter

Configure Point Code Delimiter

##### default

Use dot as delimiter

##### dash

User dash as delimiter

### 1.7.10 point-code format <1-24> [<1-23>] [<1-22>]

#### Command

```
point-code format <1-24> [<1-23>] [<1-22>]
```

#### Parameters

##### point-code

Point Code

##### format

Configure Point Code Format

##### <1-24>

Length of first PC component

##### [<1-23>]

Length of second PC component

##### [<1-22>]

Length of third PC component

### 1.7.11 point-code format default

#### Command

```
point-code format default
```

#### Parameters

---

point-code

Point Code

format

Configure Point Code Format

default

Default Point Code Format (3.8.3)

### 1.7.12 sccp-address NAME

Command

```
sccp-address NAME
```

Parameters

sccp-address

Create/Modify an SCCP addressbook entry

NAME

Name of the SCCP Address

### 1.7.13 sccp-timer (conn\_est|ias|iar|rel|repeat\_rel|int|guard|reset|reassembly) <1-99999...

Command

```
sccp-timer (conn_est|ias|iar|rel|repeat_rel|int|guard|reset|reassembly) <1-999999>
```

Parameters

sccp-timer

Configure SCCP timer values, see ITU-T Q.714

conn\_est

Waiting for connection confirm message, 1 to 2 minutes (default: 60)

ias

Send keep-alive: on an idle connection, delay before sending an Idle Timer message, 5 to 10 minutes (default: 420)

iar

Receive keep-alive: on an idle connection, delay until considering a connection as stale, 11 to 21 minutes (default: 900)

rel

Waiting for release complete message, 10 to 20 seconds (default: 10)

repeat\_rel

Waiting for release complete message; or to repeat sending released message after the initial expiry, 10 to 20 seconds (default: 10)

int

Waiting for release complete message; or to release connection resources, freeze the LRN and alert a maintenance function after the initial expiry, extending to 1 minute (default: 60)



**guard**

Waiting to resume normal procedure for temporary connection sections during the restart procedure, 23 to 25 minutes (default: 1380)

**reset**

Waiting to release temporary connection section or alert maintenance function after reset request message is sent, 10 to 20 seconds (default: 10)

**reassembly**

Waiting to receive all the segments of the remaining segments, single segmented message after receiving the first segment, 10 to 20 seconds (default: 10)

**<1-999999>**

Timer value, in seconds

### 1.7.14 xua rkm routing-key-allocation (static-only|dynamic-permitted)

**Command**

```
xua rkm routing-key-allocation (static-only|dynamic-permitted)
```

**Parameters****xua**

SIGTRAN xxxUA related

**rkm**

Routing Key Management

**routing-key-allocation**

Routing Key Management Allocation Policy

**static-only**

Only static (pre-configured) Routing Keys permitted

**dynamic-permitted**

Dynamically allocate Routing Keys for what ASPs request

## 1.8 config-cs7-as

### 1.8.1 asp NAME

**Command**

```
asp NAME
```

**Parameters****asp**

Specify that a given ASP is part of this AS

**NAME**

Name of ASP to be added to AS

### 1.8.2 description .TEXT

#### Command

```
description .TEXT
```

#### Parameters

##### description

Save human-readable description of the object

##### .TEXT

Text until the end of the line

### 1.8.3 no asp NAME

#### Command

```
no asp NAME
```

#### Parameters

##### no

Negate a command or set its defaults

##### asp

Specify ASP to be removed from this AS

##### NAME

Name of ASP to be removed

### 1.8.4 point-code override dpc PC

#### Command

```
point-code override dpc PC
```

#### Parameters

##### point-code

Point Code Specific Features

##### override

Override (force) a point-code to hard-coded value

##### dpc

Override Source Point Code

##### PC

Override Destination Point Code

---

### 1.8.5 qos-class <0-255>

#### Command

```
qos-class <0-255>
```

#### Parameters

##### qos-class

Specify QoS Class of AS

##### <0-255>

QoS Class of AS

### 1.8.6 recovery-timeout <1-2000>

#### Command

```
recovery-timeout <1-2000>
```

#### Parameters

##### recovery-timeout

Specifies the recovery timeout value in milliseconds

##### <1-2000>

Recovery Timeout in Milliseconds

### 1.8.7 routing-key RCONTEXT DPC

#### Command

```
routing-key RCONTEXT DPC
```

#### Parameters

##### routing-key

Define a routing key

##### RCONTEXT

Routing context number

##### DPC

Destination Point Code

### 1.8.8 routing-key RCONTEXT DPC si (aal2|bicc|b-isup|h248|isup|sat-isup|sccp|tup)

#### Command

```
routing-key RCONTEXT DPC si (aal2|bicc|b-isup|h248|isup|sat-isup|sccp|tup)
```

#### Parameters

##### routing-key

Define a routing key

##### RCONTEXT

Routing context number

##### DPC

Destination Point Code

##### si

Match on Service Indicator

##### aal2

ATM Adaption Layer 2

##### bicc

Bearer Independent Call Control

##### b-isup

Broadband ISDN User Part

##### h248

H.248

##### isup

ISDN User Part

##### sat-isup

Sattelite ISDN User Part

##### sccp

Signalling Connection Control Part

##### tup

Telephony User Part

### 1.8.9 routing-key RCONTEXT DPC si (aal2|bicc|b-isup|h248|isup|sat-isup|sccp|tup) ssn S...

#### Command

```
routing-key RCONTEXT DPC si (aal2|bicc|b-isup|h248|isup|sat-isup|sccp|tup) ssn SSN
```

#### Parameters

##### routing-key

Define a routing key

**RCONTEXT**

Routing context number

**DPC**

Destination Point Code

**si**

Match on Service Indicator

**aal2**

ATM Adaption Layer 2

**bicc**

Bearer Independent Call Control

**b-isup**

Broadband ISDN User Part

**h248**

H.248

**isup**

ISDN User Part

**sat-isup**

Sattelite ISDN User Part

**sccp**

Signalling Connection Control Part

**tup**

Telephony User Part

**ssn**

Match on Sub-System Number

**SSN**

Sub-System Number to match on

**1.8.10 routing-key RCONTEXT DPC ssn SSN****Command**

```
routing-key RCONTEXT DPC ssn SSN
```

**Parameters****routing-key**

Define a routing key

**RCONTEXT**

Routing context number

**DPC**

Destination Point Code

ssn

Match on Sub-System Number

SSN

Sub-System Number to match on

### 1.8.11 traffic-mode (broadcast | loadshare | roundrobin | override)

Command

```
traffic-mode (broadcast | loadshare | roundrobin | override)
```

Parameters

traffic-mode

Specifies traffic mode of operation of the ASP within the AS

broadcast

Broadcast to all ASP within AS

loadshare

Share Load among all ASP within AS

roundrobin

Round-Robin between all ASP within AS

override

Override

## 1.9 config-cs7-asp

### 1.9.1 block

Command

```
block
```

Parameters

block

Allows a SCTP Association with ASP, but doesn't let it become active

### 1.9.2 description .TEXT

Command

```
description .TEXT
```

Parameters

description

Save human-readable description of the object

.TEXT

Text until the end of the line

---

### 1.9.3 local-ip A.B.C.D

#### Command

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

#### Parameters

##### local-ip

Specify Local IP Address from which to contact ASP

##### A.B.C.D

Local IP Address from which to contact of ASP

### 1.9.4 qos-class <0-255>

#### Command

```
qos-class <0-255>
```

#### Parameters

##### qos-class

Specify QoS Class of ASP

##### <0-255>

QoS Class of ASP

### 1.9.5 remote-ip A.B.C.D

#### Command

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

#### Parameters

##### remote-ip

Specify Remote IP Address of ASP

##### A.B.C.D

Remote IP Address of ASP

### 1.9.6 shutdown

#### Command

```
shutdown
```

#### Parameters

##### shutdown

Terminates SCTP association; New associations will be rejected

---

## 1.10 config-cs7-sccpaddr

### 1.10.1 global-title

Command

```
global-title
```

Parameters

global-title

Add/Modify Global Title

### 1.10.2 no global-title

Command

```
no global-title
```

Parameters

no

Negate a command or set its defaults

global-title

Remove Global Title

### 1.10.3 no point-code

Command

```
no point-code
```

Parameters

no

Negate a command or set its defaults

point-code

Remove point-code Number

### 1.10.4 no subsystem-number

Command

```
no subsystem-number
```

Parameters

no

Negate a command or set its defaults

subsystem-number

Remove Subsystem Number



### 1.10.5 point-code POINT\_CODE

#### Command

```
point-code POINT_CODE
```

#### Parameters

point-code

Add point-code Number

POINT\_CODE

PC

### 1.10.6 routing-indicator (GT|PC|IP)

#### Command

```
routing-indicator (GT|PC|IP)
```

#### Parameters

routing-indicator

Add Routing Indicator

GT

by global-title

PC

by point-code

IP

by ip-address

### 1.10.7 subsystem-number <0-4294967295>

#### Command

```
subsystem-number <0-4294967295>
```

#### Parameters

subsystem-number

Add Subsystem Number

<0-4294967295>

SSN

---

## 1.11 config-cs7-sccpaddr-gt

### 1.11.1 digits DIGITS

Command

```
digits DIGITS
```

Parameters

digits

Set Global Title Digits

DIGITS

Number digits

### 1.11.2 global-title-indicator <0-15>

Command

```
global-title-indicator <0-15>
```

Parameters

global-title-indicator

Set Global Title Indicator

<0-15>

GTI

### 1.11.3 nature-of-address-indicator <0-127>

Command

```
nature-of-address-indicator <0-127>
```

Parameters

nature-of-address-indicator

Set Global Title Nature of Address Indicator

<0-127>

NAI

### 1.11.4 numbering-plan-indicator <0-15>

#### Command

```
numbering-plan-indicator <0-15>
```

#### Parameters

numbering-plan-indicator

Set Global Title Numbering Plan Indicator

<0-15>

NPI

### 1.11.5 translation-type <0-255>

#### Command

```
translation-type <0-255>
```

#### Parameters

translation-type

Set Global Title Translation Type

<0-255>

TT

## 1.12 config-hnbgw

### 1.12.1 iucs

#### Command

```
iucs
```

#### Parameters

iucs

Configure IuCS options

### 1.12.2 iuh

#### Command

```
iuh
```

#### Parameters

iuh

Configure Iuh options

### 1.12.3 iups

#### Command

```
iups
```

#### Parameters

iups

Configure IuPS options

### 1.12.4 rnc-id <0-65535>

#### Command

```
rnc-id <0-65535>
```

#### Parameters

rnc-id

Configure the HNBGW's RNC Id, the common RNC Id used for all connected hNodeB. It is sent to each hNodeB upon HNBAP HNB-Register-Accept, and the hNodeB will subsequently send this as RANAP InitialUE Messages' GlobalRNC-ID IE. Takes effect as soon as the hNodeB re-registers.

<0-65535>

RNC Id value

## 1.13 config-hnbgw-iuh

### 1.13.1 hnbap-allow-tmsi (0|1)

#### Command

```
hnbgw-allow-tmsi (0|1)
```

#### Parameters

hnbgw-allow-tmsi

Allow HNBAP UE Register messages with TMSI or PTMSI identity

0

Only accept IMSI identity, reject TMSI or PTMSI

1

Accept IMSI, TMSI or PTMSI as UE identity

### 1.13.2 local-ip A.B.C.D

#### Command

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

#### Parameters

##### local-ip

Accept Iuh connections on local interface

##### A.B.C.D

Local interface IP address (default: 0.0.0.0)

### 1.13.3 local-port <1-65535>

#### Command

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

#### Parameters

##### local-port

Accept Iuh connections on local port

##### <1-65535>

Local interface port (default: 29169)

## 1.14 config-hnbgw-iucs

### 1.14.1 remote-addr NAME

#### Command

```
remote-addr NAME
```

#### Parameters

##### remote-addr

SCCP address to send IuCS to (MSC)

##### NAME

SCCP address book entry name (see 'cs7-instance')

## 1.15 config-hnbgw-iups

### 1.15.1 remote-addr NAME

#### Command

```
remote-addr NAME
```

#### Parameters

##### remote-addr

SCCP address to send IuPS to (SGSN)

##### NAME

SCCP address book entry name (see 'cs7-instance')