

# **OsmoHNBGW VTY Reference**

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<b>COLLABORATORS</b>
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	<i>TITLE :</i>		
	OsmoHNBGW VTY Reference		
<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
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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 [with-flags]	2
1.1.5	show running-config	3
1.1.6	show vty-attributes	3
1.1.7	show vty-attributes (application library global)	3
1.1.8	write	4
1.1.9	write file [PATH]	4
1.1.10	write memory	4
1.1.11	write terminal	4
1.2	view	5
1.2.1	enable [expert-mode]	5
1.2.2	logging color (0 1)	5
1.2.3	logging disable	5
1.2.4	logging enable	6
1.2.5	logging filter all (0 1)	6
1.2.6	logging level (main hnb ap lran ap lglobal lpad l in pl mux l mill mb l s ms l ctrl ...)	6
1.2.7	logging level force-all (debug info notice error fatal)	9
1.2.8	logging level set-all (debug info notice error fatal)	9
1.2.9	logging print category (0 1)	10
1.2.10	logging print category-hex (0 1)	10
1.2.11	logging print extended-timestamp (0 1)	11
1.2.12	logging print file (0 1 basename) [last]	11
1.2.13	logging print level (0 1)	12
1.2.14	logging print thread-id (0 1)	12
1.2.15	logging set-log-mask MASK	13
1.2.16	logging timestamp (0 1)	13

1.2.17	logp (main hnb prua ranap lg obal lapd linpl mux l mill mi bl s ms l ctrl l gtp l sta...	13
1.2.18	no logging level force-all	16
1.2.19	show alarms	16
1.2.20	show cnlink	16
1.2.21	show cs7 (su alm 3 ual ipa) [<0-65534>]	17
1.2.22	show cs7 config	17
1.2.23	show cs7 instance <0-15> as (act ive l all m 3 ual sua)	17
1.2.24	show cs7 instance <0-15> asp	18
1.2.25	show cs7 instance <0-15> route	19
1.2.26	show cs7 instance <0-15> sccp addressbook	19
1.2.27	show cs7 instance <0-15> sccp connections	20
1.2.28	show cs7 instance <0-15> sccp ssn <0-65535>	20
1.2.29	show cs7 instance <0-15> sccp timers	21
1.2.30	show cs7 instance <0-15> sccp users	21
1.2.31	show cs7 instance <0-15> users	22
1.2.32	show history	22
1.2.33	show hnb NAME	22
1.2.34	show hnb all	23
1.2.35	show logging vty	23
1.2.36	show online-help	23
1.2.37	show pid	24
1.2.38	show talloc	24
1.2.39	show ue all	24
1.2.40	show uptime	25
1.2.41	show version	25
1.2.42	terminal length <0-512>	25
1.2.43	terminal no length	26
1.2.44	who	26
1.3	enable	26
1.3.1	configure terminal	26
1.3.2	copy running-config startup-config	27
1.3.3	disable	27
1.3.4	logging color (0 1)	27
1.3.5	logging disable	28
1.3.6	logging enable	28
1.3.7	logging filter all (0 1)	28
1.3.8	logging level (main hnb prua ranap lg obal lapd linpl mux l mill mi bl s ms l ctrl l gtp l sta...	29
1.3.9	logging level force-all (debug info notice error fatal)	31
1.3.10	logging level set-all (debug info notice error fatal)	31

1.3.11	logging print category (01)	32
1.3.12	logging print category-hex (01)	32
1.3.13	logging print extended-timestamp (01)	33
1.3.14	logging print file (01 basename) [last]	33
1.3.15	logging print level (01)	34
1.3.16	logging print thread-id (01)	34
1.3.17	logging set-log-mask MASK	35
1.3.18	logging timestamp (01)	35
1.3.19	logp (main hnbap rua ranap l global l lapd l in l mux l m l m b l s m l c t r l g t p l sta...	36
1.3.20	no logging level force-all	38
1.3.21	show alarms	38
1.3.22	show cnlink	38
1.3.23	show cs7 (sualm3ualipa) [<0-65534>]	39
1.3.24	show cs7 config	39
1.3.25	show cs7 instance <0-15> as (activelalllm3ualsua)	39
1.3.26	show cs7 instance <0-15> asp	40
1.3.27	show cs7 instance <0-15> route	41
1.3.28	show cs7 instance <0-15> sccp addressbook	41
1.3.29	show cs7 instance <0-15> sccp connections	42
1.3.30	show cs7 instance <0-15> sccp ssn <0-65535>	42
1.3.31	show cs7 instance <0-15> sccp timers	43
1.3.32	show cs7 instance <0-15> sccp users	43
1.3.33	show cs7 instance <0-15> users	44
1.3.34	show history	44
1.3.35	show hnb NAME	44
1.3.36	show hnb all	45
1.3.37	show logging vty	45
1.3.38	show online-help	45
1.3.39	show startup-config	46
1.3.40	show talloc	46
1.3.41	show ue all	46
1.3.42	show version	47
1.3.43	shutdown	47
1.3.44	terminal length <0-512>	47
1.3.45	terminal monitor	47
1.3.46	terminal no length	48
1.3.47	terminal no monitor	48
1.3.48	who	48
1.4	config	48

1.4.1	banner motd default	49
1.4.2	banner motd file [FILE]	49
1.4.3	cs7 instance <0-15>	49
1.4.4	ctrl	50
1.4.5	enable password (8l) WORD	50
1.4.6	enable password LINE	50
1.4.7	hnbgw	51
1.4.8	hostname WORD	51
1.4.9	line vty	51
1.4.10	log alarms <2-32700>	51
1.4.11	log file FILENAME [blocking-io]	52
1.4.12	log gsmmap [HOSTNAME]	52
1.4.13	log stderr [blocking-io]	52
1.4.14	log syslog (authpriv cron daemon ftp lpr mail news user uucp)	53
1.4.15	log syslog local <0-7>	53
1.4.16	log systemd-journal [raw]	54
1.4.17	no banner motd	54
1.4.18	no enable password	54
1.4.19	no hostname [HOSTNAME]	55
1.4.20	no log alarms	55
1.4.21	no log file FILENAME	55
1.4.22	no log gsmmap [HOSTNAME]	56
1.4.23	no log stderr	56
1.4.24	no log syslog	56
1.4.25	no log systemd-journal	57
1.4.26	no service advanced-vty	57
1.4.27	no service terminal-length [<0-512>]	57
1.4.28	password (8l) WORD	58
1.4.29	password LINE	58
1.4.30	service advanced-vty	58
1.4.31	service terminal-length <0-512>	59
1.4.32	show history	59
1.5	config-log	59
1.5.1	logging color (0l1)	59
1.5.2	logging filter all (0l1)	60
1.5.3	logging level (main hnbap lpr ranap l global l lapd l in l mux l mim l mib l sms l ctrl l ...	60
1.5.4	logging level force-all (debug info notice error fatal)	62
1.5.5	logging level set-all (debug info notice error fatal)	63
1.5.6	logging print category (0l1)	64

1.5.7	logging print category-hex (01)	64
1.5.8	logging print extended-timestamp (01)	65
1.5.9	logging print file (01 basename) [last]	65
1.5.10	logging print level (01)	66
1.5.11	logging print thread-id (01)	66
1.5.12	logging timestamp (01)	67
1.5.13	no logging level force-all	67
1.6	config-line	67
1.6.1	bind A.B.C.D [<0-65535>]	67
1.6.2	login	68
1.6.3	no login	68
1.7	config-ctrl	68
1.7.1	bind A.B.C.D [<0-65535>]	68
1.8	config-cs7	69
1.8.1	as NAME (sualm3ualipa)	69
1.8.2	asp NAME <0-65535> <0-65535> (sualm3ualipa)	69
1.8.3	description .TEXT	70
1.8.4	network-indicator (international   national   reserved   spare)	70
1.8.5	no as NAME	71
1.8.6	no asp NAME	71
1.8.7	no sccp-address NAME	72
1.8.8	point-code POINT_CODE	72
1.8.9	point-code delimiter (default dash)	72
1.8.10	point-code format <1-24> [<1-23>] [<1-22>]	73
1.8.11	point-code format default	74
1.8.12	sccp-address NAME	74
1.8.13	sccp-timer (conn_est ias iar rellrepeat_rellint guard reset reassembly) <1-99999...>	74
1.8.14	xua rkm routing-key-allocation (static-only dynamic-permitted)	75
1.9	config-cs7-as	76
1.9.1	asp NAME	76
1.9.2	description .TEXT	76
1.9.3	no asp NAME	77
1.9.4	no traffic-mode	77
1.9.5	point-code override dpc PC	77
1.9.6	point-code override patch-sccp (disabled both)	78
1.9.7	qos-class <0-255>	78
1.9.8	recovery-timeout <1-2000>	79
1.9.9	routing-key RCONTEXT DPC	79
1.9.10	routing-key RCONTEXT DPC si (aal2 bic b-isup h248 isup sat-isup sccp tup)	79



1.9.11	routing-key RCONTEXT DPC si (aal2lbiclb-isuplh248lisuplsat-isuplscpptup) ssn S...	80
1.9.12	routing-key RCONTEXT DPC ssn SSN	81
1.9.13	traffic-mode (broadcast   loadshare   roundrobin   override)	82
1.10	config-cs7-asp	82
1.10.1	block	82
1.10.2	description .TEXT	83
1.10.3	local-ip (A.B.C.D X::X:X)	83
1.10.4	no quirk (no_notify daud_in_asplsnm_inactive)	83
1.10.5	qos-class <0-255>	84
1.10.6	quirk (no_notify daud_in_asplsnm_inactive)	84
1.10.7	remote-ip (A.B.C.D X::X:X)	85
1.10.8	role (sglasplisp)	85
1.10.9	sctp-role (clientserver)	86
1.10.10	shutdown	86
1.11	config-cs7-sccpaddr	86
1.11.1	global-title	86
1.11.2	no global-title	87
1.11.3	no point-code	87
1.11.4	no subsystem-number	87
1.11.5	point-code POINT_CODE	88
1.11.6	routing-indicator (GTIPC IP)	88
1.11.7	subsystem-number <0-4294967295>	89
1.12	config-cs7-sccpaddr-gt	89
1.12.1	digits DIGITS	89
1.12.2	global-title-indicator <0-15>	89
1.12.3	nature-of-address-indicator <0-127>	90
1.12.4	numbering-plan-indicator <0-15>	90
1.12.5	translation-type <0-255>	91
1.13	config-hnbgw	91
1.13.1	iucs	91
1.13.2	iuh	91
1.13.3	iups	91
1.13.4	log-prefix (hnb-idlumts-cell-id)	92
1.13.5	rnc-id <0-65535>	92
1.14	config-hnbgw-iuh	92
1.14.1	hnbap-allow-tmsi (0 1)	92
1.14.2	local-ip A.B.C.D	93
1.14.3	local-port <1-65535>	93
1.15	config-hnbgw-iucs	93
1.15.1	remote-addr NAME	93
1.16	config-hnbgw-iups	94
1.16.1	remote-addr NAME	94

# 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 [with-flags]

#### Command

```
list [with-flags]
```

#### Parameters

list

Print command list

[with-flags]

Also print the VTY attribute flags

---

### 1.1.5 show running-config

#### Command

```
show running-config
```

#### Parameters

show

Show running system information

running-config

running configuration

### 1.1.6 show vty-attributes

#### Command

```
show vty-attributes
```

#### Parameters

show

Show running system information

vtty-attributes

List of VTY attributes

### 1.1.7 show vty-attributes (application|library|global)

#### Command

```
show vty-attributes (application|library|global)
```

#### Parameters

show

Show running system information

vtty-attributes

List of VTY attributes

application

Application specific attributes only

library

Library specific attributes only

global

Global attributes only

---

### 1.1.8 write

Command

```
write
```

Parameters

write

Write running configuration to memory, network, or terminal

### 1.1.9 write file [PATH]

Command

```
write file [PATH]
```

Parameters

write

Write running configuration to memory, network, or terminal

file

Write to configuration file

[PATH]

Set file path to store the config, or replace if already exists

### 1.1.10 write memory

Command

```
write memory
```

Parameters

write

Write running configuration to memory, network, or terminal

memory

Write configuration to the file (same as write file)

### 1.1.11 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 [expert-mode]

#### Command

```
enable [expert-mode]
```

#### Parameters

enable

Turn on privileged mode command

[expert-mode]

Enable the expert mode (show hidden commands)

### 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|lms|lbssgp|lmsdata| ↵
lnssignal|liuup|lpfcp|lcsn1) (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

lns  
GPRS NS layer

lbssgp  
GPRS BSSGP layer

lnsdata  
GPRS NS layer data PDU

lnsignal  
GPRS NS layer signal PDU

liuup  
Iu UP layer

lpfcp  
libosmo-pfcp Packet Forwarding Control Protocol

lcsn1  
libosmo-csn1 Concrete Syntax Notation 1 codec

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 print thread-id (0|1)

#### Command

```
logging print thread-id (0|1)
```

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### thread-id

Configure log message logging Thread ID

0

Don't prefix each log message

1

Prefix each log message with current Thread ID

### 1.2.15 logging set-log-mask MASK

#### Command

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

#### Parameters

##### logging

Configure logging

##### set-log-mask

Set the logmask of this logging target

#### MASK

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

### 1.2.16 logging timestamp (0|1)

#### Command

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

#### Parameters

##### logging

Configure logging

##### timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp

### 1.2.17 logp (main|hnbap|rua|ranap|lglobal||lapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lsta...

#### Command

```
logp (main|hnbap|rua|ranap|lglobal||lapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats| ↵
lgsup|loap|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp|lnsdata|lnssignal| ↵
liuup|lpfcp|lcsn1) (debug|info|notice|error|fatal) .LOGMESSAGE
```

#### Parameters

##### logp

Print a message on all log outputs; useful for placing markers in test logs

---

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

lns  
GPRS NS layer

lbssgp  
GPRS BSSGP layer

lnsdata  
GPRS NS layer data PDU

lnsignal  
GPRS NS layer signal PDU

liuup  
Iu UP layer

lpfcp  
libosmo-pfcp Packet Forwarding Control Protocol

lcsn1  
libosmo-csn1 Concrete Syntax Notation 1 codec

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

.LOGMESSAGE  
Arbitrary message to log on given category and log level

---

### 1.2.18 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>'

### 1.2.19 show alarms

#### Command

```
show alarms
```

#### Parameters

show

Show running system information

alarms

Show current logging configuration

### 1.2.20 show cnlink

#### Command

```
show cnlink
```

#### Parameters

show

Show running system information

cnlink

Display information on core network link

### 1.2.21 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

### 1.2.22 show cs7 config

#### Command

```
show cs7 config
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

config

Currently running cs7 configuration

### 1.2.23 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

### 1.2.24 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)

### 1.2.25 show cs7 instance <0-15> route

#### Command

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

#### 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

route

Routing Table

### 1.2.26 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

### 1.2.27 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

### 1.2.28 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)

### 1.2.29 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

### 1.2.30 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

### 1.2.31 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

### 1.2.32 show history

#### Command

```
show history
```

#### Parameters

show

Show running system information

history

Display the session command history

### 1.2.33 show hnb NAME

#### Command

```
show hnb NAME
```

#### Parameters

show

Show running system information

hnb

Display information about a HNB

NAME

(null)

---



### 1.2.34 show hnb all

#### Command

```
show hnb all
```

#### Parameters

show

Show running system information

hnb

Display information about all HNB

all

(null)

### 1.2.35 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

### 1.2.36 show online-help

#### Command

```
show online-help
```

#### Parameters

show

Show running system information

online-help

Online help

### 1.2.37 show pid

#### Command

```
show pid
```

#### Parameters

show

Show running system information

pid

Displays the process ID

### 1.2.38 show talloc

#### Command

```
show talloc
```

#### Parameters

show

Show running system information

talloc

Display talloc info

### 1.2.39 show ue all

#### Command

```
show ue all
```

#### Parameters

show

Show running system information

ue

Display information about a UE

all

(null)

---

### 1.2.40 show uptime

#### Command

```
show uptime
```

#### Parameters

##### show

Show running system information

##### uptime

Displays how long the program has been running

### 1.2.41 show version

#### Command

```
show version
```

#### Parameters

##### show

Show running system information

##### version

Displays program version

### 1.2.42 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)

---

### 1.2.43 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

### 1.2.44 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|lns|lbssgp|lnsdata| ←  
lnssignal|liuup|lpfcp|lcsn1) (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

lsccp  
libosmo-sigtran SCCP Implementation

lsua  
libosmo-sigtran SCCP User Adaptation

lm3ua  
libosmo-sigtran MTP3 User Adaptation

lmgcp  
libosmo-mgcp Media Gateway Control Protocol

ljibuf  
libosmo-netif Jitter Buffer

lrspro  
Remote SIM protocol

lns  
GPRS NS layer

lbssgp  
GPRS BSSGP layer

lnsdata  
GPRS NS layer data PDU

lnsignal  
GPRS NS layer signal PDU

liuup  
Iu UP layer

lpfcp  
libosmo-pfcp Packet Forwarding Control Protocol

lcsn1  
libosmo-csn1 Concrete Syntax Notation 1 codec

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 print thread-id (0|1)

Command

```
logging print thread-id (0|1)
```

Parameters

logging

Configure logging

print

Log output settings

thread-id

Configure log message logging Thread ID

0

Don't prefix each log message

1

Prefix each log message with current Thread ID

### 1.3.17 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

### 1.3.18 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

### 1.3.19 logp (main|hnbap|rua|ranap|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lsta...

#### Command

```
logp (main|hnbap|rua|ranap|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats| ←  
      lgsup|loap|lss7|lscpp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp|lnsdata|lnssignal| ←  
      liuup|lpfcp|lcsn1) (debug|info|notice|error|fatal) .LOGMESSAGE
```

#### Parameters

##### logp

Print a message on all log outputs; useful for placing markers in test logs

##### 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

lns  
GPRS NS layer

lbssgp  
GPRS BSSGP layer

lnsdata  
GPRS NS layer data PDU

lnsignal  
GPRS NS layer signal PDU

liuup  
Iu UP layer

lpfcp  
libosmo-pfcp Packet Forwarding Control Protocol

lcsn1  
libosmo-csn1 Concrete Syntax Notation 1 codec

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

.LOGMESSAGE

Arbitrary message to log on given category and log level

### 1.3.20 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>'

### 1.3.21 show alarms

Command

```
show alarms
```

Parameters

show

Show running system information

alarms

Show current logging configuration

### 1.3.22 show cnlink

Command

```
show cnlink
```

Parameters

show

Show running system information

cnlink

Display information on core network link



### 1.3.23 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

### 1.3.24 show cs7 config

#### Command

```
show cs7 config
```

#### Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

config

Currently running cs7 configuration

### 1.3.25 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

### 1.3.26 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)

### 1.3.27 show cs7 instance <0-15> route

#### Command

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

#### 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

route

Routing Table

### 1.3.28 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

### 1.3.29 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

### 1.3.30 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)

---

### 1.3.31 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

### 1.3.32 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

### 1.3.33 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

### 1.3.34 show history

#### Command

```
show history
```

#### Parameters

show

Show running system information

history

Display the session command history

### 1.3.35 show hnb NAME

#### Command

```
show hnb NAME
```

#### Parameters

show

Show running system information

hnb

Display information about a HNB

NAME

(null)

---

### 1.3.36 show hnb all

#### Command

```
show hnb all
```

#### Parameters

show

Show running system information

hnb

Display information about all HNB

all

(null)

### 1.3.37 show logging vty

#### Command

```
show logging vty
```

#### Parameters

show

Show running system information

logging

Show current logging configuration

vtty

Show current logging configuration for this vty

### 1.3.38 show online-help

#### Command

```
show online-help
```

#### Parameters

show

Show running system information

online-help

Online help

### 1.3.39 show startup-config

#### Command

```
show startup-config
```

#### Parameters

show

Show running system information

startup-config

Contentes of startup configuration

### 1.3.40 show talloc

#### Command

```
show talloc
```

#### Parameters

show

Show running system information

talloc

Display talloc info

### 1.3.41 show ue all

#### Command

```
show ue all
```

#### Parameters

show

Show running system information

ue

Display information about a UE

all

(null)

---



### 1.3.42 show version

#### Command

```
show version
```

#### Parameters

show

Show running system information

version

Displays program version

### 1.3.43 shutdown

#### Command

```
shutdown
```

#### Parameters

shutdown

Request a shutdown of the program

### 1.3.44 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)

### 1.3.45 terminal monitor

#### Command

```
terminal monitor
```

#### Parameters

terminal

Set terminal line parameters

monitor

Copy debug output to the current terminal line

---

### 1.3.46 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

### 1.3.47 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

### 1.3.48 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>
```

#### Global attributes

##### Flag: !

This command applies immediately

#### Parameters

##### cs7

ITU-T Signaling System 7

##### instance

Configure a SS7 Instance

##### <0-15>

An instance of the SS7 stack

#### 1.4.4 ctrl

##### Command

```
ctrl
```

##### Parameters

ctrl

Configure the Control Interface

#### 1.4.5 enable password (8|) WORD

##### Command

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

##### Parameters

enable

Modify enable password parameters

password

Assign the privileged level password

8

Specifies a HIDDEN password will follow

dummy string

WORD

The HIDDEN 'enable' password string

#### 1.4.6 enable password LINE

##### Command

```
enable password LINE
```

##### Parameters

enable

Modify enable password parameters

password

Assign the privileged level password

LINE

The UNENCRYPTED (cleartext) 'enable' password

---

### 1.4.7 hnbgw

#### Command

```
hnbgw
```

#### Parameters

hnbgw

Configure HNBGW options

### 1.4.8 hostname WORD

#### Command

```
hostname WORD
```

#### Parameters

hostname

Set system's network name

WORD

This system's network name

### 1.4.9 line vty

#### Command

```
line vty
```

#### Parameters

line

Configure a terminal line

vtty

Virtual terminal

### 1.4.10 log alarms <2-32700>

#### Command

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

#### Parameters

log

Configure logging sub-system

alarms

Logging alarms to osmo\_strb

<2-32700>

Maximum number of messages to log

### 1.4.11 log file FILENAME [blocking-io]

#### Command

```
log file FILENAME [blocking-io]
```

#### Parameters

log

Configure logging sub-system

file

Logging to text file

FILENAME

Filename

[blocking-io]

Use blocking, synchronous I/O

### 1.4.12 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)

### 1.4.13 log stderr [blocking-io]

#### Command

```
log stderr [blocking-io]
```

#### Parameters

log

Configure logging sub-system

stderr

Logging via STDERR of the process

[blocking-io]

Use blocking, synchronous I/O

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

#### Command

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

#### Parameters

log

Configure logging sub-system

syslog

Logging via syslog

authpriv

Security/authorization messages facility

cron

Clock daemon (cron/at) facility

daemon

General system daemon facility

ftp

Ftp daemon facility

lpr

Line printer facility

mail

Mail facility

news

News facility

user

Generic facility

uucp

UUCP facility

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

#### Command

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

#### Parameters

log

Configure logging sub-system

syslog

Logging via syslog

local

Syslog LOCAL facility

<0-7>

Local facility number

### 1.4.16 log systemd-journal [raw]

Command

```
log systemd-journal [raw]
```

Parameters

log

Configure logging sub-system

systemd-journal

Logging to systemd-journal

[raw]

Offload rendering of the meta information (location, category) to systemd

### 1.4.17 no banner motd

Command

```
no banner motd
```

Parameters

no

Negate a command or set its defaults

banner

Set banner string

motd

Strings for motd

### 1.4.18 no enable password

Command

```
no enable password
```

Parameters

no

Negate a command or set its defaults

enable

Modify enable password parameters

password

Assign the privileged level password



### 1.4.19 no hostname [HOSTNAME]

#### Command

```
no hostname [HOSTNAME]
```

#### Parameters

no

Negate a command or set its defaults

hostname

Reset system's network name

[HOSTNAME]

Host name of this router

### 1.4.20 no log alarms

#### Command

```
no log alarms
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

alarms

Logging alarms to osmo\_strrb

### 1.4.21 no log file FILENAME

#### Command

```
no log file FILENAME
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

file

Logging to text file

FILENAME

Filename

---

### 1.4.22 no log gsmtap [HOSTNAME]

#### Command

```
no log gsmtap [HOSTNAME]
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

gsmtap

Logging via GSMTAP

[HOSTNAME]

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

### 1.4.23 no log stderr

#### Command

```
no log stderr
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

stderr

Logging via STDERR of the process

### 1.4.24 no log syslog

#### Command

```
no log syslog
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

syslog

Logging via syslog

### 1.4.25 no log systemd-journal

#### Command

```
no log systemd-journal
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

systemd-journal

Logging to systemd-journal

### 1.4.26 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

### 1.4.27 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)

---

### 1.4.28 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

### 1.4.29 password LINE

#### Command

```
password LINE
```

#### Parameters

##### password

Assign the terminal connection password

##### LINE

The UNENCRYPTED (cleartext) line password

### 1.4.30 service advanced-vty

#### Command

```
service advanced-vty
```

#### Parameters

##### service

Set up miscellaneous service

##### advanced-vty

Enable advanced mode vty interface

### 1.4.31 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)

### 1.4.32 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|lscdp|lsua|lm3ua|lmgcp|ljibuf|lrspro|lns|lbssgp|lnsdata| ←
lnssignal|liuup|lpfcp|lcsn1) (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

lsccp  
libosmo-sigtran SCCP Implementation

lsua  
libosmo-sigtran SCCP User Adaptation

lm3ua  
libosmo-sigtran MTP3 User Adaptation

lmgcp  
libosmo-mgcp Media Gateway Control Protocol

ljibuf  
libosmo-netif Jitter Buffer

---

lrspro	Remote SIM protocol
lrs	GPRS NS layer
lbssgp	GPRS BSSGP layer
lrsdata	GPRS NS layer data PDU
lrsignal	GPRS NS layer signal PDU
liuup	Iu UP layer
lpfcp	libosmo-pfcp Packet Forwarding Control Protocol
lcsn1	libosmo-csn1 Concrete Syntax Notation 1 codec
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 print thread-id (0|1)

#### Command

```
logging print thread-id (0|1)
```

#### Parameters

##### logging

Configure logging

##### print

Log output settings

##### thread-id

Configure log message logging Thread ID

0

Don't prefix each log message

1

Prefix each log message with current Thread ID

## 1.5.12 logging timestamp (0|1)

### Command

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

### Parameters

#### logging

Configure logging

#### timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp

## 1.5.13 no logging level force-all

### Command

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

### Parameters

no

Negate a command or set its defaults

#### logging

Configure logging

#### level

Set the log level for a specified category

#### force-all

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

## 1.6 config-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-ctrl****1.7.1 bind A.B.C.D [<0-65535>]****Command**

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

**Parameters****bind**

Set bind address to listen for Control connections

**A.B.C.D**

Local IP address (default 127.0.0.1)

**[<0-65535>]**

Local TCP port number

---

## 1.8 config-cs7

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

#### Command

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

#### Global attributes

Flag: !

This command applies immediately

#### 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)

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

#### Command

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

#### Global attributes

Flag: @

This command applies on VTY node exit

#### 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)

### 1.8.3 description .TEXT

Command

```
description .TEXT
```

Parameters

description

Save human-readable description of the object

.TEXT

Text until the end of the line

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

Command

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

Global attributes

Flag: !

This command applies immediately

Parameters

network-indicator

Configure the Network Indicator

international

International Network

national

National Network

reserved

Reserved Network

spare

Spare Network



### 1.8.5 no as NAME

#### Command

```
no as NAME
```

#### Global attributes

Flag: !

This command applies immediately

#### Parameters

no

Negate a command or set its defaults

as

Disable Application Server

NAME

Name of AS

### 1.8.6 no asp NAME

#### Command

```
no asp NAME
```

#### Global attributes

Flag: !

This command applies immediately

#### Parameters

no

Negate a command or set its defaults

asp

Disable Application Server Process

NAME

Name of ASP

### 1.8.7 no sccp-address NAME

#### Command

```
no sccp-address NAME
```

#### Global attributes

Flag: !

This command applies immediately

#### Parameters

no

Negate a command or set its defaults

sccp-address

Delete an SCCP addressbook entry

NAME

Name of the SCCP Address

### 1.8.8 point-code POINT\_CODE

#### Command

```
point-code POINT_CODE
```

#### Global attributes

Flag: !

This command applies immediately

#### Parameters

point-code

Configure the local Point Code

POINT\_CODE

Point Code

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

#### Command

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

#### Global attributes

---

Flag: !

This command applies immediately

Parameters

point-code

Point Code

delimiter

Configure Point Code Delimiter

default

Use dot as delimiter

dash

User dash as delimiter

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

Command

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

Global attributes

Flag: !

This command applies immediately

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

### 1.8.11 point-code format default

#### Command

```
point-code format default
```

#### Global attributes

#### Flag: !

This command applies immediately

#### Parameters

##### point-code

Point Code

##### format

Configure Point Code Format

##### default

Default Point Code Format (3.8.3)

### 1.8.12 sccp-address NAME

#### Command

```
sccp-address NAME
```

#### Global attributes

#### Flag: !

This command applies immediately

#### Parameters

##### sccp-address

Create/Modify an SCCP addressbook entry

##### NAME

Name of the SCCP Address

### 1.8.13 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>
```

#### Global attributes

---

Flag: !

This command applies immediately

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

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

Command

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

Global attributes

Flag: !

This command applies immediately

## 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

## 1.9 config-cs7-as

### 1.9.1 asp NAME

#### Command

```
asp NAME
```

#### Global attributes

Flag: !

This command applies immediately

#### Parameters

asp

Specify that a given ASP is part of this AS

NAME

Name of ASP to be added to AS

### 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 no asp NAME

#### Command

```
no asp NAME
```

#### Global attributes

Flag: !

This command applies immediately

#### 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

### 1.9.4 no traffic-mode

#### Command

```
no traffic-mode
```

#### Parameters

no

Negate a command or set its defaults

traffic-mode

Remove explicit traffic mode of operation of this AS

### 1.9.5 point-code override dpc PC

#### Command

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

#### Global attributes

Flag: !

This command applies immediately

#### 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

### 1.9.6 point-code override patch-sccp (disabled|both)

**Command**

```
point-code override patch-sccp (disabled|both)
```

**Global attributes****Flag: !**

This command applies immediately

**Parameters****point-code**

Point Code Specific Features

**override**

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

**patch-sccp**

Patch point code values into SCCP called/calling address

**disabled**

Don't patch any point codes into SCCP called/calling address

**both**

Patch both origin and destination point codes into SCCP called/calling address

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

**Command**

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

**Global attributes****Flag: !**

This command applies immediately

**Parameters****qos-class**

Specify QoS Class of AS

**<0-255>**

QoS Class of AS



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

#### Command

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

#### Global attributes

Flag: !

This command applies immediately

#### Parameters

recovery-timeout

Specifies the recovery timeout value in milliseconds

<1-2000>

Recovery Timeout in Milliseconds

### 1.9.9 routing-key RCONTEXT DPC

#### Command

```
routing-key RCONTEXT DPC
```

#### Global attributes

Flag: !

This command applies immediately

#### Parameters

routing-key

Define a routing key

RCONTEXT

Routing context number

DPC

Destination Point Code

### 1.9.10 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)
```

#### Global attributes

---

Flag: !

This command applies immediately

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

### 1.9.11 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
```

Global attributes

Flag: !

This command applies immediately

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

### 1.9.12 routing-key RCONTEXT DPC ssn SSN

Command

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

Global attributes

Flag: !

This command applies immediately

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

### 1.9.13 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

## 1.10 config-cs7-asp

### 1.10.1 block

Command

```
block
```

Global attributes

Flag: @

This command applies on VTY node exit

Parameters

block

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

### 1.10.2 description .TEXT

#### Command

```
description .TEXT
```

#### Parameters

##### description

Save human-readable description of the object

##### .TEXT

Text until the end of the line

### 1.10.3 local-ip (A.B.C.D|X:X::X:X)

#### Command

```
local-ip (A.B.C.D|X:X::X:X)
```

#### Global attributes

##### Flag: @

This command applies on VTY node exit

#### Parameters

##### local-ip

Specify Local IP Address from which to contact ASP

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

Local IPv4 Address from which to contact of ASP

##### X:X::X:X

Local IPv6 Address from which to contact of ASP

### 1.10.4 no quirk (no\_notify|daud\_in\_asp|snm\_inactive)

#### Command

```
no quirk (no_notify|daud_in_asp|snm_inactive)
```

#### Global attributes

##### Flag: !

This command applies immediately

#### Parameters

---

**no**  
Negate a command or set its defaults

**quirk**  
Disable quirk to work around interop issues

**no\_notify**  
Peer SG doesn't send NTFY(AS-INACTIVE) after ASP-UP

**daud\_in\_asp**  
Allow Rx of DAUD in ASP role

**snm\_inactive**  
Allow Rx of [S]SNM in AS-INACTIVE state

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

Command

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

Global attributes

Flag: @

This command applies on VTY node exit

Parameters

**qos-class**

Specify QoS Class of ASP

**<0-255>**

QoS Class of ASP

### 1.10.6 quirk (no\_notify|daud\_in\_asp|snm\_inactive)

Command

```
quirk (no_notify|daud_in_asp|snm_inactive)
```

Global attributes

Flag: !

This command applies immediately

Parameters

**quirk**

Enable quirk to work around interop issues

**no\_notify**

Peer SG doesn't send NTFY(AS-INACTIVE) after ASP-UP

**daud\_in\_asp**

Allow Rx of DAUD in ASP role

**snm\_inactive**

Allow Rx of [S]SNM in AS-INACTIVE state

### 1.10.7 remote-ip (A.B.C.D|X:X::X:X)

#### Command

```
remote-ip (A.B.C.D|X:X::X:X)
```

#### Global attributes

Flag: @

This command applies on VTY node exit

#### Parameters

remote-ip

Specify Remote IP Address of ASP

A.B.C.D

Remote IPv4 Address of ASP

X:X::X:X

Remote IPv6 Address of ASP

### 1.10.8 role (sg|asp|ipsp)

#### Command

```
role (sg|asp|ipsp)
```

#### Global attributes

Flag: @

This command applies on VTY node exit

#### Parameters

role

Specify the xUA role for this ASP

sg

SG (Signaling Gateway)

asp

ASP (Application Server Process)

ipsp

IPSP (IP Signalling Point)

## 1.10.9 sctp-role (client|server)

### Command

```
sctp-role (client|server)
```

### Global attributes

#### Flag: @

This command applies on VTY node exit

### Parameters

#### sctp-role

Specify the SCTP role for this ASP

#### client

Operate as SCTP client; connect to a server

#### server

Operate as SCTP server; wait for client connections

## 1.10.10 shutdown

### Command

```
shutdown
```

### Global attributes

#### Flag: @

This command applies on VTY node exit

### Parameters

#### shutdown

Terminates SCTP association; New associations will be rejected

## 1.11 config-cs7-sccpaddr

### 1.11.1 global-title

### Command

```
global-title
```

### Global attributes

#### Flag: !

This command applies immediately

### Parameters

#### global-title

Add/Modify Global Title



### 1.11.2 no global-title

#### Command

```
no global-title
```

#### Global attributes

#### Flag: !

This command applies immediately

#### Parameters

#### no

Negate a command or set its defaults

#### global-title

Remove Global Title

### 1.11.3 no point-code

#### Command

```
no point-code
```

#### Global attributes

#### Flag: !

This command applies immediately

#### Parameters

#### no

Negate a command or set its defaults

#### point-code

Remove point-code Number

### 1.11.4 no subsystem-number

#### Command

```
no subsystem-number
```

#### Global attributes

#### Flag: !

This command applies immediately

#### Parameters

#### no

Negate a command or set its defaults

#### subsystem-number

Remove Subsystem Number

### 1.11.5 point-code POINT\_CODE

#### Command

```
point-code POINT_CODE
```

#### Global attributes

Flag: !

This command applies immediately

#### Parameters

point-code

Add point-code Number

POINT\_CODE

PC

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

#### Command

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

#### Global attributes

Flag: !

This command applies immediately

#### Parameters

routing-indicator

Add Routing Indicator

GT

by global-title

PC

by point-code

IP

by ip-address

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

#### Command

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

#### Global attributes

Flag: !

This command applies immediately

#### Parameters

subsystem-number

Add Subsystem Number

<0-4294967295>

SSN

## 1.12 config-cs7-sccpaddr-gt

### 1.12.1 digits DIGITS

#### Command

```
digits DIGITS
```

#### Global attributes

Flag: !

This command applies immediately

#### Parameters

digits

Set Global Title Digits

DIGITS

Number digits

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

#### Command

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

#### Global attributes

---

Flag: !

This command applies immediately

Parameters

global-title-indicator

Set Global Title Indicator

<0-15>

GTI

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

Command

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

Global attributes

Flag: !

This command applies immediately

Parameters

nature-of-address-indicator

Set Global Title Nature of Address Indicator

<0-127>

NAI

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

Command

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

Global attributes

Flag: !

This command applies immediately

Parameters

numbering-plan-indicator

Set Global Title Numbering Plan Indicator

<0-15>

NPI

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

#### Command

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

#### Global attributes

Flag: !

This command applies immediately

#### Parameters

translation-type

Set Global Title Translation Type

<0-255>

TT

## 1.13 config-hnbgw

### 1.13.1 iucs

#### Command

```
iucs
```

#### Parameters

iucs

Configure IuCS options

### 1.13.2 iuh

#### Command

```
iuh
```

#### Parameters

iuh

Configure Iuh options

### 1.13.3 iups

#### Command

```
iups
```

#### Parameters

iups

Configure IuPS options

---

### 1.13.4 log-prefix (hnb-id|umts-cell-id)

Command

```
log-prefix (hnb-id|umts-cell-id)
```

Parameters

log-prefix

Configure the log message prefix

hnb-id

Use the hNB-ID as log message prefix

umts-cell-id

Use the UMTS Cell ID as log message prefix

### 1.13.5 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

## 1.14 config-hnbgw-iuh

### 1.14.1 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

### 1.14.2 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)

### 1.14.3 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)

## 1.15 config-hnbgw-iucs

### 1.15.1 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')

---

## 1.16 config-hnbgw-iups

### 1.16.1 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')