

# OsmoMSC 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	echo .MESSAGE	4
1.2.2	enable	4
1.2.3	logging color (01)	5
1.2.4	logging disable	5
1.2.5	logging enable	5
1.2.6	logging filter all (01)	6
1.2.7	logging filter imsi IMSI	6
1.2.8	logging level (all rl lcl mml rr l mncc pag m msc m gcp h oldb refl ctrl smp pr anap v rl ...	7
1.2.9	logging print category (01)	9
1.2.10	logging print category-hex (01)	10
1.2.11	logging print extended-timestamp (01)	10
1.2.12	logging print file (01 basename)	11
1.2.13	logging print level (01)	11
1.2.14	logging set log mask MASK	12
1.2.15	logging set-log-mask MASK	12
1.2.16	logging timestamp (01)	12
1.2.17	show alarms	13
1.2.18	show asciidoc counters	13

1.2.19	show connection	13
1.2.20	show cs7 (sualm3ualipa) [<0-65534>]	14
1.2.21	show cs7 instance <0-15> as (activelalllm3ualsua)	14
1.2.22	show cs7 instance <0-15> asp	15
1.2.23	show cs7 instance <0-15> users	15
1.2.24	show fsm NAME	16
1.2.25	show fsm all	16
1.2.26	show fsm-instances NAME	16
1.2.27	show fsm-instances all	17
1.2.28	show history	17
1.2.29	show logging vty	17
1.2.30	show online-help	18
1.2.31	show smpp esme	18
1.2.32	show sms-queue	18
1.2.33	show statistics	19
1.2.34	show stats	19
1.2.35	show stats level (globalpeerlsubscriber)	19
1.2.36	show subscriber (extensionlimsiltmsilid) ID	20
1.2.37	show subscriber cache	20
1.2.38	show talloc-context (applicationlall) (fullbrieflDEPTH)	21
1.2.39	show talloc-context (applicationlall) (fullbrieflDEPTH) filter REGEXP	21
1.2.40	show talloc-context (applicationlall) (fullbrieflDEPTH) tree ADDRESS	22
1.2.41	show transaction	22
1.2.42	show version	23
1.2.43	sms delete expired	23
1.2.44	sms send pending	23
1.2.45	subscriber (extensionlimsiltmsilid) ID ms-test close-loop (alblcldeflfi)	24
1.2.46	subscriber (extensionlimsiltmsilid) ID ms-test open-loop	25
1.2.47	subscriber (extensionlimsiltmsilid) ID silent-call start (anyltch/fltch/anylsdcc...	25
1.2.48	subscriber (extensionlimsiltmsilid) ID silent-call stop	26
1.2.49	subscriber (extensionlimsiltmsilid) ID silent-sms sender (extensionlimsiltmsilid...	27
1.2.50	subscriber (extensionlimsiltmsilid) ID sms sender (extensionlimsiltmsilid) SENDE...	28
1.2.51	subscriber (extensionlimsiltmsilid) ID update	29
1.2.52	subscriber (extensionlimsiltmsilid) ID ussd-notify (0l1l2) .TEXT	29
1.2.53	subscriber create imsi ID	30
1.2.54	terminal length <0-512>	30
1.2.55	terminal no length	31
1.2.56	who	31
1.3	enable	31

1.3.1	configure terminal	31
1.3.2	copy running-config startup-config	32
1.3.3	disable	32
1.3.4	echo .MESSAGE	32
1.3.5	logging color (0 1)	33
1.3.6	logging disable	33
1.3.7	logging enable	33
1.3.8	logging filter all (0 1)	34
1.3.9	logging filter imsi IMSI	34
1.3.10	logging level (all rl lcl mml rr mnccl pag mssc mgcpl holdb reflctr lsmpp ranapl vrl...	35
1.3.11	logging print category (0 1)	37
1.3.12	logging print category-hex (0 1)	38
1.3.13	logging print extended-timestamp (0 1)	38
1.3.14	logging print file (0 1 basename)	39
1.3.15	logging print level (0 1)	39
1.3.16	logging set log mask MASK	40
1.3.17	logging set-log-mask MASK	40
1.3.18	logging timestamp (0 1)	40
1.3.19	show alarms	41
1.3.20	show asciidoc counters	41
1.3.21	show connection	41
1.3.22	show cs7 (sualm3ualipa) [<0-65534>]	42
1.3.23	show cs7 instance <0-15> as (active all m3ualsua)	42
1.3.24	show cs7 instance <0-15> asp	43
1.3.25	show cs7 instance <0-15> users	43
1.3.26	show fsm NAME	44
1.3.27	show fsm all	44
1.3.28	show fsm-instances NAME	44
1.3.29	show fsm-instances all	45
1.3.30	show history	45
1.3.31	show logging vty	45
1.3.32	show online-help	46
1.3.33	show smpp esme	46
1.3.34	show sms-queue	46
1.3.35	show startup-config	47
1.3.36	show statistics	47
1.3.37	show stats	47
1.3.38	show stats level (global peer subscriber)	48
1.3.39	show subscriber (extension ims tms id) ID	48

1.3.40	show subscriber cache	49
1.3.41	show talloc-context (applicationall) (fullbrief DEPTH)	49
1.3.42	show talloc-context (applicationall) (fullbrief DEPTH) filter REGEXP	50
1.3.43	show talloc-context (applicationall) (fullbrief DEPTH) tree ADDRESS	50
1.3.44	show transaction	51
1.3.45	show version	51
1.3.46	sms delete expired	52
1.3.47	sms send pending	52
1.3.48	sms-queue clear	52
1.3.49	sms-queue max-failure <1-500>	53
1.3.50	sms-queue max-pending <1-500>	53
1.3.51	sms-queue trigger	53
1.3.52	subscriber (extensionlimsiltmsilid) ID a3a8 (nonelxorlcomp128v1) [KI]	54
1.3.53	subscriber (extensionlimsiltmsilid) ID expire	54
1.3.54	subscriber (extensionlimsiltmsilid) ID ms-test close-loop (ablcldlelfi)	55
1.3.55	subscriber (extensionlimsiltmsilid) ID ms-test open-loop	56
1.3.56	subscriber (extensionlimsiltmsilid) ID silent-call start (anytch/fltch/anylsdcc...	56
1.3.57	subscriber (extensionlimsiltmsilid) ID silent-call stop	57
1.3.58	subscriber (extensionlimsiltmsilid) ID silent-sms sender (extensionlimsiltmsilid...	58
1.3.59	subscriber (extensionlimsiltmsilid) ID sms pending-send	59
1.3.60	subscriber (extensionlimsiltmsilid) ID sms sender (extensionlimsiltmsilid) SENDE...	59
1.3.61	subscriber (extensionlimsiltmsilid) ID update	60
1.3.62	subscriber (extensionlimsiltmsilid) ID ussd-notify (0 1 2) .TEXT	61
1.3.63	subscriber create imsi ID	62
1.3.64	terminal length <0-512>	62
1.3.65	terminal monitor	62
1.3.66	terminal no length	63
1.3.67	terminal no monitor	63
1.3.68	who	63
1.4	config	63
1.4.1	banner motd default	64
1.4.2	banner motd file [FILE]	64
1.4.3	cs7 instance <0-15>	64
1.4.4	ctrl	65
1.4.5	enable password (8 ) WORD	65
1.4.6	enable password LINE	65
1.4.7	hlr	66
1.4.8	hostname WORD	66
1.4.9	line vty	66

1.4.10	log alarms <2-32700>	66
1.4.11	log file .FILENAME	67
1.4.12	log gsmzap [HOSTNAME]	67
1.4.13	log stderr	67
1.4.14	log syslog (authpriv cron daemon ftp lpr mail news user uucp)	68
1.4.15	log syslog local <0-7>	68
1.4.16	mncc-int	69
1.4.17	msc	69
1.4.18	network	69
1.4.19	no banner motd	69
1.4.20	no enable password	70
1.4.21	no hostname [HOSTNAME]	70
1.4.22	no log alarms	70
1.4.23	no log file .FILENAME	71
1.4.24	no log stderr	71
1.4.25	no log syslog	71
1.4.26	no service advanced-vty	72
1.4.27	no service terminal-length [<0-512>]	72
1.4.28	no stats reporter log	72
1.4.29	no stats reporter statsd	73
1.4.30	password (8) WORD	73
1.4.31	password LINE	73
1.4.32	service advanced-vty	74
1.4.33	service terminal-length <0-512>	74
1.4.34	show history	74
1.4.35	smpp	75
1.4.36	stats interval <1-65535>	75
1.4.37	stats reporter log	75
1.4.38	stats reporter statsd	76
1.5	config-log	76
1.5.1	logging color (01)	76
1.5.2	logging filter all (01)	77
1.5.3	logging filter imsi IMSI	77
1.5.4	logging level (all rl lcl mml rr mncc pag msc mgcp holdb reflctr l smpp ranap vrl...)	78
1.5.5	logging print category (01)	80
1.5.6	logging print category-hex (01)	81
1.5.7	logging print extended-timestamp (01)	81
1.5.8	logging print file (01 basename)	82
1.5.9	logging print level (01)	82



---

1.5.10	logging timestamp (01)	83
1.6	config-stats	83
1.6.1	disable	83
1.6.2	enable	83
1.6.3	level (globalpeersubscriber)	84
1.6.4	local-ip ADDR	84
1.6.5	mtu <100-65535>	84
1.6.6	no local-ip	85
1.6.7	no mtu	85
1.6.8	no prefix	85
1.6.9	prefix PREFIX	85
1.6.10	remote-ip ADDR	86
1.6.11	remote-port <1-65535>	86
1.7	config-line	86
1.7.1	bind A.B.C.D	86
1.7.2	login	87
1.7.3	no login	87
1.8	config-ctrl	87
1.8.1	bind A.B.C.D	87
1.9	config-cs7	88
1.9.1	as NAME (sualm3ualipa)	88
1.9.2	asp NAME <0-65535> <0-65535> (sualm3ualipa)	88
1.9.3	description .TEXT	89
1.9.4	network-indicator (international   national   reserved   spare)	89
1.9.5	no as NAME	89
1.9.6	no asp NAME	90
1.9.7	no sccp-address NAME	90
1.9.8	point-code POINT_CODE	90
1.9.9	point-code delimiter (defaultldash)	91
1.9.10	point-code format <1-24> [<1-23>] [<1-22>]	91
1.9.11	point-code format default	91
1.9.12	sccp-address NAME	92
1.9.13	show cs7 instance <0-15> sccp-addressbook	92
1.9.14	xua rkm routing-key-allocation (static-only dynamic-permitted)	93
1.10	config-cs7-as	93
1.10.1	asp NAME	93
1.10.2	description .TEXT	93
1.10.3	no asp NAME	94
1.10.4	point-code override dpc PC	94

---

1.10.5	qos-class <0-255>	94
1.10.6	recovery-timeout <1-2000>	95
1.10.7	routing-key RCONTEXT DPC	95
1.10.8	routing-key RCONTEXT DPC si (aal2lbicclb-isuplh248lisuplsat-isuplsceptup)	95
1.10.9	routing-key RCONTEXT DPC si (aal2lbicclb-isuplh248lisuplsat-isuplsceptup) ssn S...	96
1.10.10	routing-key RCONTEXT DPC ssn SSN	97
1.10.11	traffic-mode (broadcast   loadshare   roundrobin   override)	97
1.11	config-cs7-asp	98
1.11.1	block	98
1.11.2	description .TEXT	98
1.11.3	local-ip A.B.C.D	98
1.11.4	qos-class <0-255>	99
1.11.5	remote-ip A.B.C.D	99
1.11.6	shutdown	99
1.12	config-cs7-sccpaddr	99
1.12.1	global-title	99
1.12.2	no global-title	100
1.12.3	no point-code	100
1.12.4	no subsystem-number	100
1.12.5	point-code POINT_CODE	100
1.12.6	routing-indicator (GTIPCIIP)	101
1.12.7	subsystem-number <0-4294967295>	101
1.13	config-cs7-sccpaddr-gt	101
1.13.1	digits DIGITS	101
1.13.2	global-title-indicator <0-15>	102
1.13.3	nature-of-address-indicator <0-127>	102
1.13.4	numbering-plan-indicator <0-15>	102
1.13.5	translation-type <0-255>	102
1.14	config-net	103
1.14.1	authentication (optional required)	103
1.14.2	encryption a5 <0-3> [<0-3>] [<0-3>] [<0-3>]	103
1.14.3	long name NAME	104
1.14.4	mm info (011)	104
1.14.5	mobile network code <0-999>	104
1.14.6	network country code <1-999>	105
1.14.7	no periodic location update	105
1.14.8	no timezone	105
1.14.9	periodic location update <6-1530>	106
1.14.10	rrlp mode (nonelms-based lms-preferred lass-preferred)	106

1.14.11 short name NAME . . . . .	107
1.14.12 timezone <-19-19> (0115130145) . . . . .	107
1.14.13 timezone <-19-19> (0115130145) <0-2> . . . . .	107
1.15 config-msc . . . . .	108
1.15.1 asn1 debug (110) . . . . .	108
1.15.2 asn1 xer-print (110) . . . . .	108
1.15.3 assign-tmsi . . . . .	109
1.15.4 auth-tuple-max-reuse-count <-1-2147483647> . . . . .	109
1.15.5 auth-tuple-reuse-on-error (011) . . . . .	109
1.15.6 cs7-instance-a <0-15> . . . . .	110
1.15.7 cs7-instance-iu <0-15> . . . . .	110
1.15.8 emergency-call route-to-msisdn MSISDN . . . . .	110
1.15.9 iu rab-assign-addr-enc (x213lv4raw) . . . . .	111
1.15.10 mgcpwgw bts-base <0-65534> . . . . .	111
1.15.11 mgcpwgw endpoint-range <1-65534> <1-65534> . . . . .	111
1.15.12 mgcpwgw local-ip A.B.C.D . . . . .	112
1.15.13 mgcpwgw local-port <0-65535> . . . . .	112
1.15.14 mgcpwgw remote-ip A.B.C.D . . . . .	112
1.15.15 mgcpwgw remote-port <0-65535> . . . . .	113
1.15.16 mgw bts-base <0-65534> . . . . .	113
1.15.17 mgw endpoint-range <1-65534> <1-65534> . . . . .	113
1.15.18 mgw local-ip A.B.C.D . . . . .	114
1.15.19 mgw local-port <0-65535> . . . . .	114
1.15.20 mgw remote-ip A.B.C.D . . . . .	114
1.15.21 mgw remote-port <0-65535> . . . . .	115
1.15.22 no assign-tmsi . . . . .	115
1.15.23 paging response-timer (default<1-65535>) . . . . .	115
1.16 config-mncc-int . . . . .	116
1.16.1 default-codec tch-f (frleflamr) . . . . .	116
1.16.2 default-codec tch-h (hrlamr) . . . . .	116
1.17 config-smpp . . . . .	116
1.17.1 esme NAME . . . . .	117
1.17.2 local-tcp-ip A.B.C.D <1-65535> . . . . .	117
1.17.3 local-tcp-port <1-65535> . . . . .	117
1.17.4 no esme NAME . . . . .	118
1.17.5 no smpp-first . . . . .	118
1.17.6 policy (accept-allclosed) . . . . .	118
1.17.7 smpp-first . . . . .	119
1.17.8 system-id ID . . . . .	119

---

---

1.18	config-smpp-esme . . . . .	119
1.18.1	dcs-transparent . . . . .	119
1.18.2	default-route . . . . .	119
1.18.3	deliver-src-imsi . . . . .	120
1.18.4	no dcs-transparent . . . . .	120
1.18.5	no default-route . . . . .	120
1.18.6	no deliver-src-imsi . . . . .	120
1.18.7	no osmocom-extensions . . . . .	121
1.18.8	no password . . . . .	121
1.18.9	no route prefix (unknown international national network subscriber alpha abbrev)... . . . . .	121
1.18.10	osmocom-extensions . . . . .	122
1.18.11	password PASSWORD . . . . .	123
1.18.12	route prefix (unknown international national network subscriber alpha abbrev) (u... . . . .	123
1.19	config-hlr . . . . .	124
1.19.1	remote-ip A.B.C.D . . . . .	124
1.19.2	remote-port <1-65535> . . . . .	125

---

# 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 echo .MESSAGE

#### Command

```
echo .MESSAGE
```

#### Parameters

##### echo

Echo a message back to the vty

##### .MESSAGE

The message to echo

### 1.2.2 enable

#### Command

```
enable
```

#### Parameters

##### enable

Turn on privileged mode command

### 1.2.3 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

### 1.2.4 logging disable

#### Command

```
logging disable
```

#### Parameters

##### logging

Configure logging

##### disable

Disables logging to this vty

### 1.2.5 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

---

## 1.2.6 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

## 1.2.7 logging filter imsi IMSI

### Command

```
logging filter imsi IMSI
```

### Parameters

#### logging

Configure logging

#### filter

Filter log messages

#### imsi

Filter log messages by IMSI

#### IMSI

IMSI to be used as filter

## 1.2.8 logging level (all|rll|cc|mm|rr|mncc|pag|msc|mgcp|ho|db|ref|ctrl|smpp|ranap|vlr|...

### Command

```
logging level (all|rll|cc|mm|rr|mncc|pag|msc|mgcp|ho|db|ref|ctrl|smpp|ranap|vlr|iucs| ↔  
bssap|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loap|lss7|lscpp ↔  
|lsua|lm3ua|lmgcp|ljibuf) (everything|debug|info|notice|error|fatal)
```

### Parameters

#### logging

Configure logging

#### level

Set the log level for a specified category

#### all

Global setting for all subsystems

#### rll

A-bis Radio Link Layer (RLL)

#### cc

Layer3 Call Control (CC)

#### mm

Layer3 Mobility Management (MM)

#### rr

Layer3 Radio Resource (RR)

#### mncc

MNCC API for Call Control application

#### pag

Paging Subsystem

#### msc

Mobile Switching Center

#### mgcp

Media Gateway Control Protocol

#### ho

Hand-Over

#### db

Database Layer

#### ref

Reference Counting

#### ctrl

Control interface

---

smpp  
SMPP interface for external SMS apps

ranap  
Radio Access Network Application Part Protocol

vlr  
Visitor Location Register

iucs  
Iu-CS Protocol

bssap  
BSSAP Protocol (A Interface)

lglobal  
Library-internal global log family

llapd  
LAPD in libosmogsm

linp  
A-bis Input Subsystem

lmux  
A-bis B-Subchannel TRAU Frame Multiplex

lmi  
A-bis Input Driver for Signalling

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

lsms  
Layer3 Short Message Service (SMS)

lctrl  
Control Interface

lgtp  
GPRS GTP library

lstats  
Statistics messages and logging

lgsup  
Generic Subscriber Update Protocol

loap  
Osmocom Authentication Protocol

lss7  
libosmo-sigtran Signalling System 7

lscpp  
libosmo-sigtran SCCP Implementation

---

lsua	libosmo-sigtran SCCP User Adaptation
lm3ua	libosmo-sigtran MTP3 User Adaptation
lmgcp	libosmo-mgcp Media Gateway Control Protocol
ljibuf	libosmo-netif Jitter Buffer
everything	Don't use. It doesn't log anything
debug	Log debug messages and higher levels
info	Log informational messages and higher levels
notice	Log noticeable messages and higher levels
error	Log error messages and higher levels
fatal	Log only fatal messages

### 1.2.9 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 YYYYMMDDhhmmssnn

### 1.2.12 logging print file (0|1|basename)

#### Command

```
logging print file (0|1|basename)
```

#### 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

### 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

Decide which categories to output.

##### log

Log commands

##### mask

Mask commands

##### MASK

'set log mask' is deprecated, please refer to the docs of 'set-log-mask' instead

### 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 show alarms

Command

```
show alarms
```

Parameters

show

Show running system information

alarms

Show current logging configuration

### 1.2.18 show asciidoc counters

Command

```
show asciidoc counters
```

Parameters

show

Show running system information

asciidoc

Asciidoc generation

counters

Generate table of all registered counters

### 1.2.19 show connection

Command

```
show connection
```

Parameters

show

Show running system information

connection

Subscriber Connections

## 1.2.20 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

## 1.2.21 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

### 1.2.22 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)

### 1.2.23 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

### 1.2.24 show fsm NAME

#### Command

```
show fsm NAME
```

#### Parameters

show

Show running system information

fsm

Show information about finite state machines

NAME

Display information about a single named finite state machine

### 1.2.25 show fsm all

#### Command

```
show fsm all
```

#### Parameters

show

Show running system information

fsm

Show information about finite state machines

all

Display a list of all registered finite state machines

### 1.2.26 show fsm-instances NAME

#### Command

```
show fsm-instances NAME
```

#### Parameters

show

Show running system information

fsm-instances

Show information about finite state machine instances

NAME

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

---

### 1.2.27 show fsm-instances all

#### Command

```
show fsm-instances all
```

#### Parameters

##### show

Show running system information

##### fsm-instances

Show information about finite state machine instances

##### all

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

### 1.2.28 show history

#### Command

```
show history
```

#### Parameters

##### show

Show running system information

##### history

Display the session command history

### 1.2.29 show logging vty

#### Command

```
show logging vty
```

#### Parameters

##### show

Show running system information

##### logging

Show current logging configuration

##### vty

Show current logging configuration for this vty

### 1.2.30 show online-help

#### Command

```
show online-help
```

#### Parameters

show

Show running system information

online-help

Online help

### 1.2.31 show smpp esme

#### Command

```
show smpp esme
```

#### Parameters

show

Show running system information

smpp

SMPP Interface

esme

SMPP Extrenal SMS Entity

### 1.2.32 show sms-queue

#### Command

```
show sms-queue
```

#### Parameters

show

Show running system information

sms-queue

Display SMSqueue statistics

### 1.2.33 show statistics

#### Command

```
show statistics
```

#### Parameters

show

Show running system information

statistics

Display network statistics

### 1.2.34 show stats

#### Command

```
show stats
```

#### Parameters

show

Show running system information

stats

Show statistical values

### 1.2.35 show stats level (global|peer|subscriber)

#### Command

```
show stats level (global|peer|subscriber)
```

#### Parameters

show

Show running system information

stats

Show statistical values

level

Set the maximum group level

global

Show global groups only

peer

Show global and network peer related groups

subscriber

Show global, peer, and subscriber groups

---



### 1.2.36 show subscriber (extension|imsi|tmsi|id) ID

#### Command

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

#### Parameters

show

Show running system information

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

### 1.2.37 show subscriber cache

#### Command

```
show subscriber cache
```

#### Parameters

show

Show running system information

subscriber

Show information about subscribers

cache

Display contents of subscriber cache

### 1.2.38 show talloc-context (application|all) (full|brief|DEPTH)

#### Command

```
show talloc-context (application|all) (full|brief|DEPTH)
```

#### Parameters

show

Show running system information

talloc-context

Show talloc memory hierarchy

application

Application's context

all

All contexts, if NULL-context tracking is enabled

full

Display a full talloc memory hierarchy

brief

Display a brief talloc memory hierarchy

DEPTH

Specify required maximal depth value

### 1.2.39 show talloc-context (application|all) (full|brief|DEPTH) filter REGEXP

#### Command

```
show talloc-context (application|all) (full|brief|DEPTH) filter REGEXP
```

#### Parameters

show

Show running system information

talloc-context

Show talloc memory hierarchy

application

Application's context

all

All contexts, if NULL-context tracking is enabled

full

Display a full talloc memory hierarchy

brief

Display a brief talloc memory hierarchy

**DEPTH**

Specify required maximal depth value

**filter**

Filter chunks using regular expression

**REGEXP**

Regular expression

**1.2.40 show talloc-context (application|all) (full|brief|DEPTH) tree ADDRESS****Command**

```
show talloc-context (application|all) (full|brief|DEPTH) tree ADDRESS
```

**Parameters****show**

Show running system information

**talloc-context**

Show talloc memory hierarchy

**application**

Application's context

**all**

All contexts, if NULL-context tracking is enabled

**full**

Display a full talloc memory hierarchy

**brief**

Display a brief talloc memory hierarchy

**DEPTH**

Specify required maximal depth value

**tree**

Display only a specific memory chunk

**ADDRESS**

Chunk address (e.g. 0xdeadbeef)

**1.2.41 show transaction****Command**

```
show transaction
```

**Parameters****show**

Show running system information

**transaction**

Transactions

### 1.2.42 show version

#### Command

```
show version
```

#### Parameters

show

Show running system information

version

Displays program version

### 1.2.43 sms delete expired

#### Command

```
sms delete expired
```

#### Parameters

sms

SMS related commands

delete

SMS Database related commands

expired

Delete all expired SMS

### 1.2.44 sms send pending

#### Command

```
sms send pending
```

#### Parameters

sms

SMS related commands

send

SMS Sending related commands

pending

Send all pending SMS

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

### Command

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

### Parameters

#### subscriber

Operations on a Subscriber

#### extension

Identify subscriber by extension (phone number)

#### imsi

Identify subscriber by IMSI

#### tmsi

Identify subscriber by TMSI

#### id

Identify subscriber by database ID

#### ID

Identifier for the subscriber

#### ms-test

Send a TS 04.14 MS Test Command to subscriber

#### close-loop

Close a TCH Loop inside the MS

#### a

Loop Type A

#### b

Loop Type B

#### c

Loop Type C

#### d

Loop Type D

#### e

Loop Type E

#### f

Loop Type F

#### i

Loop Type I

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

### Command

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

### Parameters

#### subscriber

Operations on a Subscriber

#### extension

Identify subscriber by extension (phone number)

#### imsi

Identify subscriber by IMSI

#### tmsi

Identify subscriber by TMSI

#### id

Identify subscriber by database ID

#### ID

Identifier for the subscriber

#### ms-test

Send a TS 04.14 MS Test Command to subscriber

#### open-loop

Open a TCH Loop inside the MS

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

### Command

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

### Parameters

#### subscriber

Operations on a Subscriber

#### extension

Identify subscriber by extension (phone number)

#### imsi

Identify subscriber by IMSI

#### tmsi

Identify subscriber by TMSI

#### id

Identify subscriber by database ID

**ID**

Identifier for the subscriber

**silent-call**

Silent call operation

**start**

Start silent call

**any**

Any channel

**tch/f**

TCH/F channel

**tch/any**

Any TCH channel

**sdccch**

SDCCCH channel

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

**Command**

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

**Parameters****subscriber**

Operations on a Subscriber

**extension**

Identify subscriber by extension (phone number)

**imsi**

Identify subscriber by IMSI

**tmsi**

Identify subscriber by TMSI

**id**

Identify subscriber by database ID

**ID**

Identifier for the subscriber

**silent-call**

Silent call operation

**stop**

Stop silent call

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

### Command

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

### Parameters

#### subscriber

Operations on a Subscriber

#### extension

Identify subscriber by extension (phone number)

#### imsi

Identify subscriber by IMSI

#### tmsi

Identify subscriber by TMSI

#### id

Identify subscriber by database ID

#### ID

Identifier for the subscriber

#### silent-sms

Silent SMS Operations

#### sender

Operations on a Subscriber

#### extension

Identify subscriber by extension (phone number)

#### imsi

Identify subscriber by IMSI

#### tmsi

Identify subscriber by TMSI

#### id

Identify subscriber by database ID

#### SENDER\_ID

Identifier for the subscriber

#### send

Send SMS

#### .LINE

Actual SMS Text



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

### Command

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

### Parameters

#### subscriber

Operations on a Subscriber

#### extension

Identify subscriber by extension (phone number)

#### imsi

Identify subscriber by IMSI

#### tmsi

Identify subscriber by TMSI

#### id

Identify subscriber by database ID

#### ID

Identifier for the subscriber

#### sms

SMS Operations

#### sender

Operations on a Subscriber

#### extension

Identify subscriber by extension (phone number)

#### imsi

Identify subscriber by IMSI

#### tmsi

Identify subscriber by TMSI

#### id

Identify subscriber by database ID

#### SENDER\_ID

Identifier for the subscriber

#### send

Send SMS

#### .LINE

Actual SMS Text

### 1.2.51 subscriber (extension|imsi|tmsi|id) ID update

#### Command

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

#### Parameters

##### subscriber

Operations on a Subscriber

##### extension

Identify subscriber by extension (phone number)

##### imsi

Identify subscriber by IMSI

##### tmsi

Identify subscriber by TMSI

##### id

Identify subscriber by database ID

##### ID

Identifier for the subscriber

##### update

Update the subscriber data from the dabase.

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

#### Command

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

#### Parameters

##### subscriber

Operations on a Subscriber

##### extension

Identify subscriber by extension (phone number)

##### imsi

Identify subscriber by IMSI

##### tmsi

Identify subscriber by TMSI

##### id

Identify subscriber by database ID

##### ID

Identifier for the subscriber

---

**ussd-notify**

Send a USSD notify to the subscriber

0

Alerting Level 0

1

Alerting Level 1

2

Alerting Level 2

.TEXT

Text of USSD message to send

### 1.2.53 subscriber create imsi ID

**Command**

```
subscriber create imsi ID
```

**Parameters**

**subscriber**

Operations on a Subscriber

**create**

Create new subscriber

**imsi**

Identify the subscriber by his IMSI

**ID**

Identifier for the subscriber

### 1.2.54 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)

---

### 1.2.55 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

### 1.2.56 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 echo .MESSAGE

#### Command

```
echo .MESSAGE
```

#### Parameters

##### echo

Echo a message back to the vty

##### .MESSAGE

The message to echo

---

### 1.3.5 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

### 1.3.6 logging disable

#### Command

```
logging disable
```

#### Parameters

##### logging

Configure logging

##### disable

Disables logging to this vty

### 1.3.7 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

### 1.3.8 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

### 1.3.9 logging filter imsi IMSI

#### Command

```
logging filter imsi IMSI
```

#### Parameters

##### logging

Configure logging

##### filter

Filter log messages

##### imsi

Filter log messages by IMSI

##### IMSI

IMSI to be used as filter

### 1.3.10 logging level (all|rll|cc|mm|rr|mncc|pag|mssc|mgcp|ho|db|ref|ctrl|smpp|ranap|vlr|...)

#### Command

```
logging level (all|rll|cc|mm|rr|mncc|pag|mssc|mgcp|ho|db|ref|ctrl|smpp|ranap|vlr|iucs| ↔  
bssap|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loap|lss7|lscpp ↔  
|lsua|lm3ua|lmgcp|ljibuf) (everything|debug|info|notice|error|fatal)
```

#### Parameters

##### logging

Configure logging

##### level

Set the log level for a specified category

##### all

Global setting for all subsystems

##### rll

A-bis Radio Link Layer (RLL)

##### cc

Layer3 Call Control (CC)

##### mm

Layer3 Mobility Management (MM)

##### rr

Layer3 Radio Resource (RR)

##### mncc

MNCC API for Call Control application

##### pag

Paging Subsystem

##### mssc

Mobile Switching Center

##### mgcp

Media Gateway Control Protocol

##### ho

Hand-Over

##### db

Database Layer

##### ref

Reference Counting

##### ctrl

Control interface



---

smpp  
SMPP interface for external SMS apps

ranap  
Radio Access Network Application Part Protocol

vlr  
Visitor Location Register

iucs  
Iu-CS Protocol

bssap  
BSSAP Protocol (A Interface)

lglobal  
Library-internal global log family

llapd  
LAPD in libosmogsm

linp  
A-bis Input Subsystem

lmux  
A-bis B-Subchannel TRAU Frame Multiplex

lmi  
A-bis Input Driver for Signalling

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

lsms  
Layer3 Short Message Service (SMS)

lctrl  
Control Interface

lgtp  
GPRS GTP library

lstats  
Statistics messages and logging

lgsup  
Generic Subscriber Update Protocol

loap  
Osmocom Authentication Protocol

lss7  
libosmo-sigtran Signalling System 7

lscpp  
libosmo-sigtran SCCP Implementation

---

lsua	libosmo-sigtran SCCP User Adaptation
lm3ua	libosmo-sigtran MTP3 User Adaptation
lmgcp	libosmo-mgcp Media Gateway Control Protocol
ljibuf	libosmo-netif Jitter Buffer
everything	Don't use. It doesn't log anything
debug	Log debug messages and higher levels
info	Log informational messages and higher levels
notice	Log noticeable messages and higher levels
error	Log error messages and higher levels
fatal	Log only fatal messages

### 1.3.11 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)

#### Command

```
logging print file (0|1|basename)
```

#### 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

### 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

Decide which categories to output.

##### log

Log commands

##### mask

Mask commands

#### MASK

'set log mask' is deprecated, please refer to the docs of 'set-log-mask' instead

### 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 show alarms

Command

```
show alarms
```

Parameters

show

Show running system information

alarms

Show current logging configuration

### 1.3.20 show asciidoc counters

Command

```
show asciidoc counters
```

Parameters

show

Show running system information

asciidoc

Asciidoc generation

counters

Generate table of all registered counters

### 1.3.21 show connection

Command

```
show connection
```

Parameters

show

Show running system information

connection

Subscriber Connections

### 1.3.22 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

### 1.3.23 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

### 1.3.24 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)

### 1.3.25 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



### 1.3.26 show fsm NAME

#### Command

```
show fsm NAME
```

#### Parameters

show

Show running system information

fsm

Show information about finite state machines

NAME

Display information about a single named finite state machine

### 1.3.27 show fsm all

#### Command

```
show fsm all
```

#### Parameters

show

Show running system information

fsm

Show information about finite state machines

all

Display a list of all registered finite state machines

### 1.3.28 show fsm-instances NAME

#### Command

```
show fsm-instances NAME
```

#### Parameters

show

Show running system information

fsm-instances

Show information about finite state machine instances

NAME

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

---

### 1.3.29 show fsm-instances all

#### Command

```
show fsm-instances all
```

#### Parameters

##### show

Show running system information

##### fsm-instances

Show information about finite state machine instances

##### all

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

### 1.3.30 show history

#### Command

```
show history
```

#### Parameters

##### show

Show running system information

##### history

Display the session command history

### 1.3.31 show logging vty

#### Command

```
show logging vty
```

#### Parameters

##### show

Show running system information

##### logging

Show current logging configuration

##### vty

Show current logging configuration for this vty

### 1.3.32 show online-help

#### Command

```
show online-help
```

#### Parameters

show

Show running system information

online-help

Online help

### 1.3.33 show smpp esme

#### Command

```
show smpp esme
```

#### Parameters

show

Show running system information

smpp

SMPP Interface

esme

SMPP Extrenal SMS Entity

### 1.3.34 show sms-queue

#### Command

```
show sms-queue
```

#### Parameters

show

Show running system information

sms-queue

Display SMSqueue statistics

### 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 statistics

#### Command

```
show statistics
```

#### Parameters

show

Show running system information

statistics

Display network statistics

### 1.3.37 show stats

#### Command

```
show stats
```

#### Parameters

show

Show running system information

stats

Show statistical values

### 1.3.38 show stats level (global|peer|subscriber)

#### Command

```
show stats level (global|peer|subscriber)
```

#### Parameters

show

Show running system information

stats

Show statistical values

level

Set the maximum group level

global

Show global groups only

peer

Show global and network peer related groups

subscriber

Show global, peer, and subscriber groups

### 1.3.39 show subscriber (extension|imsi|tmsi|id) ID

#### Command

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

#### Parameters

show

Show running system information

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

### 1.3.40 show subscriber cache

#### Command

```
show subscriber cache
```

#### Parameters

##### show

Show running system information

##### subscriber

Show information about subscribers

##### cache

Display contents of subscriber cache

### 1.3.41 show talloc-context (application|all) (full|brief|DEPTH)

#### Command

```
show talloc-context (application|all) (full|brief|DEPTH)
```

#### Parameters

##### show

Show running system information

##### talloc-context

Show talloc memory hierarchy

##### application

Application's context

##### all

All contexts, if NULL-context tracking is enabled

##### full

Display a full talloc memory hierarchy

##### brief

Display a brief talloc memory hierarchy

##### DEPTH

Specify required maximal depth value

### 1.3.42 show talloc-context (application|all) (full|brief|DEPTH) filter REGEXP

#### Command

```
show talloc-context (application|all) (full|brief|DEPTH) filter REGEXP
```

#### Parameters

show

Show running system information

talloc-context

Show talloc memory hierarchy

application

Application's context

all

All contexts, if NULL-context tracking is enabled

full

Display a full talloc memory hierarchy

brief

Display a brief talloc memory hierarchy

DEPTH

Specify required maximal depth value

filter

Filter chunks using regular expression

REGEXP

Regular expression

### 1.3.43 show talloc-context (application|all) (full|brief|DEPTH) tree ADDRESS

#### Command

```
show talloc-context (application|all) (full|brief|DEPTH) tree ADDRESS
```

#### Parameters

show

Show running system information

talloc-context

Show talloc memory hierarchy

application

Application's context

all

All contexts, if NULL-context tracking is enabled

full

Display a full talloc memory hierarchy

brief

Display a brief talloc memory hierarchy

DEPTH

Specify required maximal depth value

tree

Display only a specific memory chunk

ADDRESS

Chunk address (e.g. 0xdeadbeef)

### 1.3.44 show transaction

Command

```
show transaction
```

Parameters

show

Show running system information

transaction

Transactions

### 1.3.45 show version

Command

```
show version
```

Parameters

show

Show running system information

version

Displays program version



### 1.3.46 sms delete expired

#### Command

```
sms delete expired
```

#### Parameters

sms

SMS related commands

delete

SMS Database related commands

expired

Delete all expired SMS

### 1.3.47 sms send pending

#### Command

```
sms send pending
```

#### Parameters

sms

SMS related commands

send

SMS Sending related commands

pending

Send all pending SMS

### 1.3.48 sms-queue clear

#### Command

```
sms-queue clear
```

#### Parameters

sms-queue

SMS Queue

clear

Clear the queue of pending SMS

### 1.3.49 sms-queue max-failure <1-500>

#### Command

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

#### Parameters

sms-queue

SMS Queue

max-failure

Maximum amount of delivery failures

<1-500>

Amount

### 1.3.50 sms-queue max-pending <1-500>

#### Command

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

#### Parameters

sms-queue

SMS Queue

max-pending

SMS to deliver in parallel

<1-500>

Amount

### 1.3.51 sms-queue trigger

#### Command

```
sms-queue trigger
```

#### Parameters

sms-queue

SMS Queue

trigger

Trigger sending messages

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

#### Command

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

#### Parameters

##### subscriber

Operations on a Subscriber

##### extension

Identify subscriber by extension (phone number)

##### imsi

Identify subscriber by IMSI

##### tmsi

Identify subscriber by TMSI

##### id

Identify subscriber by database ID

##### ID

Identifier for the subscriber

##### a3a8

Set a3a8 parameters for the subscriber

##### none

Use No A3A8 algorithm

##### xor

Use XOR algorithm

##### comp128v1

Use COMP128v1 algorithm

##### [KI]

Encryption Key Ki

### 1.3.53 subscriber (extension|imsi|tmsi|id) ID expire

#### Command

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

#### Parameters

##### subscriber

Operations on a Subscriber

##### extension

Identify subscriber by extension (phone number)

---

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

expire

Expire the subscriber Now

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

Command

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

Parameters

subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

ms-test

Send a TS 04.14 MS Test Command to subscriber

close-loop

Close a TCH Loop inside the MS

a

Loop Type A

b

Loop Type B

c

Loop Type C

- d  
Loop Type D
- e  
Loop Type E
- f  
Loop Type F
- i  
Loop Type I

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

#### Command

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

#### Parameters

##### subscriber

Operations on a Subscriber

##### extension

Identify subscriber by extension (phone number)

##### imsi

Identify subscriber by IMSI

##### tmsi

Identify subscriber by TMSI

##### id

Identify subscriber by database ID

##### ID

Identifier for the subscriber

##### ms-test

Send a TS 04.14 MS Test Command to subscriber

##### open-loop

Open a TCH Loop inside the MS

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

#### Command

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

#### Parameters

**subscriber**

Operations on a Subscriber

**extension**

Identify subscriber by extension (phone number)

**imsi**

Identify subscriber by IMSI

**tmsi**

Identify subscriber by TMSI

**id**

Identify subscriber by database ID

**ID**

Identifier for the subscriber

**silent-call**

Silent call operation

**start**

Start silent call

**any**

Any channel

**tch/f**

TCH/F channel

**tch/any**

Any TCH channel

**sdccch**

SDCCH channel

**1.3.57 subscriber (extension|imsi|tmsi|id) ID silent-call stop****Command**

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

**Parameters****subscriber**

Operations on a Subscriber

**extension**

Identify subscriber by extension (phone number)

**imsi**

Identify subscriber by IMSI

**tmsi**

Identify subscriber by TMSI

id  
Identify subscriber by database ID

ID  
Identifier for the subscriber

silent-call  
Silent call operation

stop  
Stop silent call

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

Command

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

Parameters

subscriber  
Operations on a Subscriber

extension  
Identify subscriber by extension (phone number)

imsi  
Identify subscriber by IMSI

tmsi  
Identify subscriber by TMSI

id  
Identify subscriber by database ID

ID  
Identifier for the subscriber

silent-sms  
Silent SMS Operations

sender  
Operations on a Subscriber

extension  
Identify subscriber by extension (phone number)

imsi  
Identify subscriber by IMSI

tmsi  
Identify subscriber by TMSI

id  
Identify subscriber by database ID

SENDER\_ID  
Identifier for the subscriber

send  
Send SMS

.LINE  
Actual SMS Text

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

Command

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

Parameters

subscriber  
Operations on a Subscriber

extension  
Identify subscriber by extension (phone number)

imsi  
Identify subscriber by IMSI

tmsi  
Identify subscriber by TMSI

id  
Identify subscriber by database ID

ID  
Identifier for the subscriber

sms  
SMS Operations

pending-send  
Send pending SMS

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

Command

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

Parameters

---



subscriber

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

ID

Identifier for the subscriber

sms

SMS Operations

sender

Operations on a Subscriber

extension

Identify subscriber by extension (phone number)

imsi

Identify subscriber by IMSI

tmsi

Identify subscriber by TMSI

id

Identify subscriber by database ID

SENDER\_ID

Identifier for the subscriber

send

Send SMS

.LINE

Actual SMS Text

### 1.3.61 subscriber (extension|imsi|tmsi|id) ID update

Command

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

Parameters

subscriber

Operations on a Subscriber

---

**extension**

Identify subscriber by extension (phone number)

**imsi**

Identify subscriber by IMSI

**tmsi**

Identify subscriber by TMSI

**id**

Identify subscriber by database ID

**ID**

Identifier for the subscriber

**update**

Update the subscriber data from the dabase.

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

**Command**

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

**Parameters****subscriber**

Operations on a Subscriber

**extension**

Identify subscriber by extension (phone number)

**imsi**

Identify subscriber by IMSI

**tmsi**

Identify subscriber by TMSI

**id**

Identify subscriber by database ID

**ID**

Identifier for the subscriber

**ussd-notify**

Send a USSD notify to the subscriber

**0**

Alerting Level 0

**1**

Alerting Level 1

**2**

Alerting Level 2

**.TEXT**

Text of USSD message to send

### 1.3.63 subscriber create imsi ID

#### Command

```
subscriber create imsi ID
```

#### Parameters

##### subscriber

Operations on a Subscriber

##### create

Create new subscriber

##### imsi

Identify the subscriber by his IMSI

##### ID

Identifier for the subscriber

### 1.3.64 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)

### 1.3.65 terminal monitor

#### Command

```
terminal monitor
```

#### Parameters

##### terminal

Set terminal line parameters

##### monitor

Copy debug output to the current terminal line

---

### 1.3.66 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

### 1.3.67 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

### 1.3.68 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 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 hlr

#### Command

```
hlr
```

#### Parameters

hlr

Configure connection to the HLR

### 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

#### Command

```
log file .FILENAME
```

#### Parameters

log

Configure logging sub-system

file

Logging to text file

.FILENAME

Filename

### 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

#### Command

```
log stderr
```

#### Parameters

log

Configure logging sub-system

stderr

Logging via STDERR of the process



### 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 mncc-int

Command

```
mncc-int
```

Parameters

mncc-int

Configure internal MNCC handler

#### 1.4.17 msc

Command

```
msc
```

Parameters

msc

Configure MSC options

#### 1.4.18 network

Command

```
network
```

Parameters

network

Configure the GSM network

#### 1.4.19 no banner motd

Command

```
no banner motd
```

Parameters

no

Negate a command or set its defaults

banner

Set banner string

motd

Strings for motd

### 1.4.20 no enable password

#### Command

```
no enable password
```

#### Parameters

no

Negate a command or set its defaults

enable

Modify enable password parameters

password

Assign the privileged level password

### 1.4.21 no hostname [HOSTNAME]

#### Command

```
no hostname [HOSTNAME]
```

#### Parameters

no

Negate a command or set its defaults

hostname

Reset system's network name

[HOSTNAME]

Host name of this router

### 1.4.22 no log alarms

#### Command

```
no log alarms
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

alarms

Logging alarms to osmo\_strrb

### 1.4.23 no log file .FILENAME

#### Command

```
no log file .FILENAME
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

file

Logging to text file

.FILENAME

Filename

### 1.4.24 no log stderr

#### Command

```
no log stderr
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

stderr

Logging via STDERR of the process

### 1.4.25 no log syslog

#### Command

```
no log syslog
```

#### Parameters

no

Negate a command or set its defaults

log

Configure logging sub-system

syslog

Logging via syslog

### 1.4.26 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 no stats reporter log

#### Command

```
no stats reporter log
```

#### Parameters

no

Negate a command or set its defaults

stats

Configure stats sub-system

reporter

Configure a stats reporter

log

Report to the logger

### 1.4.29 no stats reporter statsd

#### Command

```
no stats reporter statsd
```

#### Parameters

no

Negate a command or set its defaults

stats

Configure stats sub-system

reporter

Configure a stats reporter

statsd

Report to a STATSD server

### 1.4.30 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

### 1.4.31 password LINE

#### Command

```
password LINE
```

#### Parameters

password

Assign the terminal connection password

LINE

The UNENCRYPTED (cleartext) line password

### 1.4.32 service advanced-vty

#### Command

```
service advanced-vty
```

#### Parameters

##### service

Set up miscellaneous service

##### advanced-vty

Enable advanced mode vty interface

### 1.4.33 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)

### 1.4.34 show history

#### Command

```
show history
```

#### Parameters

##### show

Show running system information

##### history

Display the session command history

### 1.4.35 smpp

#### Command

```
smpp
```

#### Parameters

smpp

Configure SMPP SMS Interface

### 1.4.36 stats interval <1-65535>

#### Command

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

#### Parameters

stats

Configure stats sub-system

interval

Set the reporting interval

<1-65535>

Interval in seconds

### 1.4.37 stats reporter log

#### Command

```
stats reporter log
```

#### Parameters

stats

Configure stats sub-system

reporter

Configure a stats reporter

log

Report to the logger



### 1.4.38 stats reporter statsd

#### Command

```
stats reporter statsd
```

#### Parameters

##### stats

Configure stats sub-system

##### reporter

Configure a stats reporter

##### statsd

Report to a STATSD server

## 1.5 config-log

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

### 1.5.1 logging color (0|1)

#### Command

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

#### Parameters

##### logging

Configure logging

##### color

Configure color-printing for log messages

##### 0

Don't use color for printing messages

##### 1

Use color for printing messages

---

## 1.5.2 logging filter all (0|1)

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

### Command

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

### Parameters

#### logging

Configure logging

#### filter

Filter log messages

#### all

Do you want to log all messages?

#### 0

Only print messages matched by other filters

#### 1

Bypass filter and print all messages

## 1.5.3 logging filter imsi IMSI

### Command

```
logging filter imsi IMSI
```

### Parameters

#### logging

Configure logging

#### filter

Filter log messages

#### imsi

Filter log messages by IMSI

#### IMSI

IMSI to be used as filter

## 1.5.4 logging level (all|rll|cc|mm|rr|mncc|pag|msc|mgcp|ho|db|ref|ctrl|smpp|ranap|vlr|...)

### Command

```
logging level (all|rll|cc|mm|rr|mncc|pag|msc|mgcp|ho|db|ref|ctrl|smpp|ranap|vlr|iucs| ↔  
bssap|lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loap|lss7|lscpp ↔  
|lsua|lm3ua|lmgcp|ljibuf) (everything|debug|info|notice|error|fatal)
```

### Parameters

#### logging

Configure logging

#### level

Set the log level for a specified category

#### all

Global setting for all subsystems

#### rll

A-bis Radio Link Layer (RLL)

#### cc

Layer3 Call Control (CC)

#### mm

Layer3 Mobility Management (MM)

#### rr

Layer3 Radio Resource (RR)

#### mncc

MNCC API for Call Control application

#### pag

Paging Subsystem

#### msc

Mobile Switching Center

#### mgcp

Media Gateway Control Protocol

#### ho

Hand-Over

#### db

Database Layer

#### ref

Reference Counting

#### ctrl

Control interface

---

smpp  
SMPP interface for external SMS apps

ranap  
Radio Access Network Application Part Protocol

vlr  
Visitor Location Register

iucs  
Iu-CS Protocol

bssap  
BSSAP Protocol (A Interface)

lglobal  
Library-internal global log family

llapd  
LAPD in libosmogsm

linp  
A-bis Input Subsystem

lmux  
A-bis B-Subchannel TRAU Frame Multiplex

lmi  
A-bis Input Driver for Signalling

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

lsms  
Layer3 Short Message Service (SMS)

lctrl  
Control Interface

lgtp  
GPRS GTP library

lstats  
Statistics messages and logging

lgsup  
Generic Subscriber Update Protocol

loap  
Osmocom Authentication Protocol

lss7  
libosmo-sigtran Signalling System 7

lscpp  
libosmo-sigtran SCCP Implementation

---

lsua	libosmo-sigtran SCCP User Adaptation
lm3ua	libosmo-sigtran MTP3 User Adaptation
lmgcp	libosmo-mgcp Media Gateway Control Protocol
ljibuf	libosmo-netif Jitter Buffer
everything	Don't use. It doesn't log anything
debug	Log debug messages and higher levels
info	Log informational messages and higher levels
notice	Log noticeable messages and higher levels
error	Log error messages and higher levels
fatal	Log only fatal messages

### 1.5.5 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

## 1.5.6 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>')

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

### Command

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

### Parameters

#### logging

Configure logging

#### print

Log output settings

#### extended-timestamp

Configure log message timestamping

0

Don't prefix each log message

1

Prefix each log message with current timestamp with YYYYMMDDhhmmssnn

### 1.5.8 logging print file (0|1|basename)

#### Command

```
logging print file (0|1|basename)
```

#### 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

### 1.5.9 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

## 1.5.10 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

## 1.6 config-stats

### 1.6.1 disable

#### Command

```
disable
```

### Parameters

#### disable

Disable the reporter

### 1.6.2 enable

#### Command

```
enable
```

### Parameters

#### enable

Enable the reporter

---



### 1.6.3 level (global|peer|subscriber)

#### Command

```
level (global|peer|subscriber)
```

#### Parameters

##### level

Set the maximum group level

##### global

Report global groups only

##### peer

Report global and network peer related groups

##### subscriber

Report global, peer, and subscriber groups

### 1.6.4 local-ip ADDR

#### Command

```
local-ip ADDR
```

#### Parameters

##### local-ip

Set the IP address to which we bind locally

##### ADDR

IP Address

### 1.6.5 mtu <100-65535>

#### Command

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

#### Parameters

##### mtu

Set the maximum packet size

##### <100-65535>

Size in byte

---

### 1.6.6 no local-ip

#### Command

```
no local-ip
```

#### Parameters

no

Negate a command or set its defaults

local-ip

Set the IP address to which we bind locally

### 1.6.7 no mtu

#### Command

```
no mtu
```

#### Parameters

no

Negate a command or set its defaults

mtu

Set the maximum packet size

### 1.6.8 no prefix

#### Command

```
no prefix
```

#### Parameters

no

Negate a command or set its defaults

prefix

Set the item name prefix

### 1.6.9 prefix PREFIX

#### Command

```
prefix PREFIX
```

#### Parameters

prefix

Set the item name prefix

PREFIX

The prefix string

## 1.6.10 remote-ip ADDR

### Command

```
remote-ip ADDR
```

### Parameters

#### remote-ip

Set the remote IP address to which we connect

#### ADDR

IP Address

## 1.6.11 remote-port <1-65535>

### Command

```
remote-port <1-65535>
```

### Parameters

#### remote-port

Set the remote port to which we connect

#### <1-65535>

Remote port number

## 1.7 config-line

### 1.7.1 bind A.B.C.D

### Command

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

### Parameters

#### bind

Accept VTY telnet connections on local interface

#### A.B.C.D

Local interface IP address (default: 127.0.0.1)

---

## 1.7.2 login

### Command

```
login
```

### Parameters

#### login

Enable password checking

## 1.7.3 no login

### Command

```
no login
```

### Parameters

#### no

Negate a command or set its defaults

#### login

Enable password checking

## 1.8 config-ctrl

### 1.8.1 bind A.B.C.D

### Command

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

### Parameters

#### bind

Set bind address to listen for Control connections

#### A.B.C.D

Local IP address (default 127.0.0.1)

---

## 1.9 config-cs7

### 1.9.1 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)

### 1.9.2 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)

### 1.9.3 description .TEXT

#### Command

```
description .TEXT
```

#### Parameters

##### description

Save human-readable description of the object

##### .TEXT

Text until the end of the line

### 1.9.4 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

### 1.9.5 no as NAME

#### Command

```
no as NAME
```

#### Parameters

##### no

Negate a command or set its defaults

##### as

Disable Application Server

##### NAME

Name of AS

### 1.9.6 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

### 1.9.7 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

### 1.9.8 point-code POINT\_CODE

#### Command

```
point-code POINT_CODE
```

#### Parameters

point-code

Configure the local Point Code

POINT\_CODE

Point Code

### 1.9.9 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

### 1.9.10 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

### 1.9.11 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)

### 1.9.12 sccp-address NAME

Command

```
sccp-address NAME
```

Parameters

sccp-address

Create/Modify an SCCP addressbook entry

NAME

Name of the SCCP Address

### 1.9.13 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-addressbook

List all SCCP addressbook entries

## 1.9.14 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

## 1.10 config-cs7-as

### 1.10.1 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

### 1.10.2 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 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

### 1.10.4 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

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

#### Command

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

#### Parameters

qos-class

Specify QoS Class of AS

<0-255>

QoS Class of AS

---

### 1.10.6 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

### 1.10.7 routing-key RCONTEXT DPC

#### Command

```
routing-key RCONTEXT DPC
```

#### Parameters

##### routing-key

Define a routing key

##### RCONTEXT

Routing context number

##### DPC

Destination Point Code

### 1.10.8 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

### 1.10.9 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

### 1.10.10 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

### 1.10.11 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

## 1.11 config-cs7-asp

### 1.11.1 block

Command

```
block
```

Parameters

block

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

### 1.11.2 description .TEXT

Command

```
description .TEXT
```

Parameters

description

Save human-readable description of the object

.TEXT

Text until the end of the line

### 1.11.3 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

---

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

#### Command

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

#### Parameters

##### qos-class

Specify QoS Class of ASP

##### <0-255>

QoS Class of ASP

### 1.11.5 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

### 1.11.6 shutdown

#### Command

```
shutdown
```

#### Parameters

##### shutdown

Terminates SCTP association; New associations will be rejected

## 1.12 config-cs7-sccpaddr

### 1.12.1 global-title

#### Command

```
global-title
```

#### Parameters

##### global-title

Add/Modify Global Title



### 1.12.2 no global-title

#### Command

```
no global-title
```

#### Parameters

no

Negate a command or set its defaults

global-title

Remove Global Title

### 1.12.3 no point-code

#### Command

```
no point-code
```

#### Parameters

no

Negate a command or set its defaults

point-code

Remove point-code Number

### 1.12.4 no subsystem-number

#### Command

```
no subsystem-number
```

#### Parameters

no

Negate a command or set its defaults

subsystem-number

Remove Subsystem Number

### 1.12.5 point-code POINT\_CODE

#### Command

```
point-code POINT_CODE
```

#### Parameters

point-code

Add point-code Number

POINT\_CODE

PC

---

## 1.12.6 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

## 1.12.7 subsystem-number <0-4294967295>

### Command

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

### Parameters

subsystem-number

Add Subsystem Number

<0-4294967295>

SSN

## 1.13 config-cs7-sccpaddr-gt

### 1.13.1 digits DIGITS

#### Command

```
digits DIGITS
```

#### Parameters

digits

Set Global Title Digits

DIGITS

Number digits

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

#### Command

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

#### Parameters

global-title-indicator

Set Global Title Indicator

<0-15>

GTI

### 1.13.3 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

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

#### Command

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

#### Parameters

numbering-plan-indicator

Set Global Title Numbering Plan Indicator

<0-15>

NPI

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

#### Command

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

#### Parameters

translation-type

Set Global Title Translation Type

<0-255>

TT

---

## 1.14 config-net

### 1.14.1 authentication (optional|required)

Command

```
authentication (optional|required)
```

Parameters

authentication

Whether to enforce MS authentication in 2G

optional

Allow MS to attach via 2G BSC without authentication

required

Always do authentication

### 1.14.2 encryption a5 <0-3> [<0-3>] [<0-3>] [<0-3>]

Command

```
encryption a5 <0-3> [<0-3>] [<0-3>] [<0-3>]
```

Parameters

encryption

Encryption options

a5

GSM A5 Air Interface Encryption

<0-3>

A5/n Algorithm Number

[<0-3>]

A5/n Algorithm Number

[<0-3>]

A5/n Algorithm Number

[<0-3>]

A5/n Algorithm Number

### 1.14.3 long name NAME

#### Command

```
long name NAME
```

#### Parameters

long

Set the long GSM network name

name

Name Commands

NAME

Name to use

### 1.14.4 mm info (0|1)

#### Command

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

#### Parameters

mm

Mobility Management

info

Send MM INFO after LOC UPD ACCEPT

0

Disable

1

Enable

### 1.14.5 mobile network code <0-999>

#### Command

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

#### Parameters

mobile

Set the GSM mobile network code

network

Network Commands

code

Code commands

<0-999>

Mobile Network Code to use

---

### 1.14.6 network country code <1-999>

#### Command

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

#### Parameters

##### network

Set the GSM network country code

##### country

Country commands

##### code

Code commands

##### <1-999>

Network Country Code to use

### 1.14.7 no periodic location update

#### Command

```
no periodic location update
```

#### Parameters

##### no

Negate a command or set its defaults

##### periodic

Periodic Location Updating Interval

##### location

Periodic Location Updating Interval

##### update

Periodic Location Updating Interval

### 1.14.8 no timezone

#### Command

```
no timezone
```

#### Parameters

##### no

Negate a command or set its defaults

##### timezone

Disable network timezone override, use system tz

---

### 1.14.9 periodic location update <6-1530>

#### Command

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

#### Parameters

##### periodic

Periodic Location Updating Interval

##### location

Periodic Location Updating Interval

##### update

Periodic Location Updating Interval

##### <6-1530>

Periodic Location Updating Interval in Minutes

### 1.14.10 rrlp mode (none|ms-based|ms-preferred|ass-preferred)

#### Command

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

#### Parameters

##### rrlp

Radio Resource Location Protocol

##### mode

Set the Radio Resource Location Protocol Mode

##### none

Don't send RRLP request

##### ms-based

Request MS-based location

##### ms-preferred

Request any location, prefer MS-based

##### ass-preferred

Request any location, prefer MS-assisted

### 1.14.11 short name NAME

#### Command

```
short name NAME
```

#### Parameters

##### short

Set the short GSM network name

##### name

Name Commands

##### NAME

Name to use

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

#### Command

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

#### Parameters

##### timezone

Set the Timezone Offset of the network

##### <-19-19>

Timezone offset (hours)

##### 0

Timezone offset (00 minutes)

##### 15

Timezone offset (15 minutes)

##### 30

Timezone offset (30 minutes)

##### 45

Timezone offset (45 minutes)

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

#### Command

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

#### Parameters

---



## timezone

Set the Timezone Offset of the network

<-19-19>

Timezone offset (hours)

0

Timezone offset (00 minutes)

15

Timezone offset (15 minutes)

30

Timezone offset (30 minutes)

45

Timezone offset (45 minutes)

<0-2>

DST offset (hours)

## 1.15 config-msc

### 1.15.1 asn1 debug (1|0)

#### Command

```
asn1 debug (1|0)
```

#### Parameters

asn1

ASN.1 settings

debug

Enable ASN.1 debug messages

1

Log ASN.1 debug messages to stderr

0

Do not log ASN.1 debug messages to stderr

### 1.15.2 asn1 xer-print (1|0)

#### Command

```
asn1 xer-print (1|0)
```

#### Parameters

---

asn1

ASN.1 settings

xer-print

Log human readable representations of all ASN.1 messages to stderr

1

Log XML representation of all ASN.1 messages to stderr

0

Do not log decoded ASN.1 messages to stderr

### 1.15.3 assign-tmsi

Command

```
assign-tmsi
```

Parameters

assign-tmsi

Assign TMSI during Location Updating.

### 1.15.4 auth-tuple-max-reuse-count <-1-2147483647>

Command

```
auth-tuple-max-reuse-count <-1-2147483647>
```

Parameters

auth-tuple-max-reuse-count

Configure authentication tuple re-use

<-1-2147483647>

0 to use each auth tuple at most once (default), >0 to limit re-use, -1 to re-use infinitely (vulnerable!).

### 1.15.5 auth-tuple-reuse-on-error (0|1)

Command

```
auth-tuple-reuse-on-error (0|1)
```

Parameters

auth-tuple-reuse-on-error

Configure authentication tuple re-use when HLR is not responsive

0

0 = never re-use auth tuples beyond auth-tuple-max-reuse-count (default)

1

1 = if the HLR does not deliver new tuples, do re-use already available old ones.

### 1.15.6 cs7-instance-a <0-15>

#### Command

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

#### Parameters

##### cs7-instance-a

Set SS7 to be used by the A-Interface.

##### <0-15>

SS7 instance reference number

### 1.15.7 cs7-instance-iu <0-15>

#### Command

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

#### Parameters

##### cs7-instance-iu

Set SS7 to be used by the Iu-Interface.

##### <0-15>

SS7 instance reference number

### 1.15.8 emergency-call route-to-msisdn MSISDN

#### Command

```
emergency-call route-to-msisdn MSISDN
```

#### Parameters

##### emergency-call

Configure Emergency Call Behaviour

##### route-to-msisdn

MSISDN to which Emergency Calls are Dispatched

##### MSISDN

MSISDN (E.164 Phone Number)

---

### 1.15.9 iu rab-assign-addr-enc (x213|v4raw)

#### Command

```
iu rab-assign-addr-enc (x213|v4raw)
```

#### Parameters

iu

Iu interface protocol options

rab-assign-addr-enc

Choose RAB Assignment's Transport Layer Address encoding

x213

ITU-T X.213 compliant address encoding (default)

v4raw

32bit length raw IPv4 address (for ip.access nano3G)

### 1.15.10 mgcpgw bts-base <0-65534>

#### Command

```
mgcpgw bts-base <0-65534>
```

#### Parameters

mgcpgw

Configure MGCP connection to Media Gateway

bts-base

First UDP port allocated for the BTS side

<0-65534>

UDP Port number

### 1.15.11 mgcpgw endpoint-range <1-65534> <1-65534>

#### Command

```
mgcpgw endpoint-range <1-65534> <1-65534>
```

#### Parameters

mgcpgw

Configure MGCP connection to Media Gateway

endpoint-range

usable range of endpoint identifiers

<1-65534>

set first useable endpoint identifier

<1-65534>

set the last useable endpoint identifier

### 1.15.12 mgcpgw local-ip A.B.C.D

#### Command

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

#### Parameters

##### mgcpgw

Configure MGCP connection to Media Gateway

##### local-ip

local bind to connect to MGCP gateway with

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

local bind IP address

### 1.15.13 mgcpgw local-port <0-65535>

#### Command

```
mgcpgw local-port <0-65535>
```

#### Parameters

##### mgcpgw

Configure MGCP connection to Media Gateway

##### local-port

local bind to connect to MGCP gateway with

##### <0-65535>

local bind port

### 1.15.14 mgcpgw remote-ip A.B.C.D

#### Command

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

#### Parameters

##### mgcpgw

Configure MGCP connection to Media Gateway

##### remote-ip

remote bind to connect to MGCP gateway with

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

remote bind IP address

---

### 1.15.15 mgcpgw remote-port <0-65535>

#### Command

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

#### Parameters

mgcpgw

Configure MGCP connection to Media Gateway

remote-port

remote bind to connect to MGCP gateway with

<0-65535>

remote bind port

### 1.15.16 mgw bts-base <0-65534>

#### Command

```
mgw bts-base <0-65534>
```

#### Parameters

mgw

Configure MGCP connection to Media Gateway

bts-base

First UDP port allocated for the BTS side

<0-65534>

UDP Port number

### 1.15.17 mgw endpoint-range <1-65534> <1-65534>

#### Command

```
mgw endpoint-range <1-65534> <1-65534>
```

#### Parameters

mgw

Configure MGCP connection to Media Gateway

endpoint-range

usable range of endpoint identifiers

<1-65534>

set first usable endpoint identifier

<1-65534>

set last usable endpoint identifier

### 1.15.18 mgw local-ip A.B.C.D

#### Command

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

#### Parameters

mgw

Configure MGCP connection to Media Gateway

local-ip

local bind to connect to MGW from

A.B.C.D

local bind IP address

### 1.15.19 mgw local-port <0-65535>

#### Command

```
mgw local-port <0-65535>
```

#### Parameters

mgw

Configure MGCP connection to Media Gateway

local-port

local port to connect to MGW from

<0-65535>

local bind port

### 1.15.20 mgw remote-ip A.B.C.D

#### Command

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

#### Parameters

mgw

Configure MGCP connection to Media Gateway

remote-ip

remote IP address to reach the MGW at

A.B.C.D

remote IP address

### 1.15.21 mgw remote-port <0-65535>

#### Command

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

#### Parameters

mgw

Configure MGCP connection to Media Gateway

remote-port

remote port to reach the MGW at

<0-65535>

remote port

### 1.15.22 no assign-tmsi

#### Command

```
no assign-tmsi
```

#### Parameters

no

Negate a command or set its defaults

assign-tmsi

Assign TMSI during Location Updating.

### 1.15.23 paging response-timer (default|<1-65535>)

#### Command

```
paging response-timer (default|<1-65535>)
```

#### Parameters

paging

Configure Paging

response-timer

Set Paging timeout, the minimum time to pass between (unsuccessful) Pagings sent towards BSS or RNC

default

Set to default timeout (10 seconds)

<1-65535>

Set paging timeout in seconds

---



## 1.16 config-mncc-int

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

### 1.16.1 default-codec tch-f (fr|efr|amr)

#### Command

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

#### Parameters

##### default-codec

Set default codec

##### tch-f

Codec for TCH/F

##### fr

Full-Rate

##### efr

Enhanced Full-Rate

##### amr

Adaptive Multi-Rate

### 1.16.2 default-codec tch-h (hr|amr)

#### Command

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

#### Parameters

##### default-codec

Set default codec

##### tch-h

Codec for TCH/H

##### hr

Half-Rate

##### amr

Adaptive Multi-Rate

## 1.17 config-smpp

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

### 1.17.1 esme NAME

#### Command

```
esme NAME
```

#### Parameters

##### esme

Configure a particular ESME

##### NAME

Alphanumeric System ID of the ESME to be configured

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

#### Command

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

#### Parameters

##### local-tcp-ip

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

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

Local IP address

##### <1-65535>

TCP port number

### 1.17.3 local-tcp-port <1-65535>

#### Command

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

#### Parameters

##### local-tcp-port

Set the local TCP port on which we listen for SMPP

##### <1-65535>

TCP port number

---

### 1.17.4 no esme NAME

#### Command

```
no esme NAME
```

#### Parameters

no

Negate a command or set its defaults

esme

Remove ESME configuration

NAME

Alphanumeric System ID of the ESME to be removed

### 1.17.5 no smpp-first

#### Command

```
no smpp-first
```

#### Parameters

no

Negate a command or set its defaults

smpp-first

Try SMPP before routes before the subscriber DB

### 1.17.6 policy (accept-all|closed)

#### Command

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

#### Parameters

policy

Set the authentication policy of this SMSC

accept-all

Accept all SMPP connections independent of system ID / passwd

closed

Accept only SMPP connections from ESMEs explicitly configured

### 1.17.7 smpp-first

Command

```
smpp-first
```

Parameters

smpp-first

Try SMPP routes before the subscriber DB

### 1.17.8 system-id ID

Command

```
system-id ID
```

Parameters

system-id

Set the System ID of this SMSC

ID

Alphanumeric SMSC System ID

## 1.18 config-smpp-esme

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

### 1.18.1 dcs-transparent

Command

```
dcs-transparent
```

Parameters

dcs-transparent

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

### 1.18.2 default-route

Command

```
default-route
```

Parameters

default-route

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

---

### 1.18.3 deliver-src-imsi

#### Command

```
deliver-src-imsi
```

#### Parameters

deliver-src-imsi

Enable the use of IMSI as source address in DELIVER

### 1.18.4 no dcs-transparent

#### Command

```
no dcs-transparent
```

#### Parameters

no

Negate a command or set its defaults

dcs-transparent

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

### 1.18.5 no default-route

#### Command

```
no default-route
```

#### Parameters

no

Negate a command or set its defaults

default-route

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

### 1.18.6 no deliver-src-imsi

#### Command

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

#### Parameters

no

Negate a command or set its defaults

deliver-src-imsi

Disable the use of IMSI as source address in DELIVER

---

### 1.18.7 no osmocom-extensions

#### Command

```
no osmocom-extensions
```

#### Parameters

no

Negate a command or set its defaults

osmocom-extensions

Disable the use of Osmocom SMPP Extensions for this ESME

### 1.18.8 no password

#### Command

```
no password
```

#### Parameters

no

Negate a command or set its defaults

password

Remove the password for this ESME

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

#### Command

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

#### Parameters

no

Negate a command or set its defaults

route

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

prefix

Prefix-match route

unknown

Unknown type-of-number

international

International type-of-number

---

national  
    National type-of-number

network  
    Network specific type-of-number

subscriber  
    Subscriber type-of-number

alpha  
    Alphanumeric type-of-number

abbrev  
    Abbreviated type-of-number

unknown  
    Unknown numbering plan

isdn  
    ISDN (E.164) numbering plan

x121  
    X.121 numbering plan

f69  
    F.69 numbering plan

e212  
    E.212 numbering plan

national  
    National numbering plan

private  
    Private numbering plan

ermes  
    ERMES numbering plan

ip  
    IP numbering plan

wap  
    WAP numbeing plan

PREFIX  
    Destination number prefix

### 1.18.10 osmocom-extensions

Command

```
osmocom-extensions
```

Parameters

osmocom-extensions

Enable the use of Osmocom SMPP Extensions for this ESME

---

### 1.18.11 password PASSWORD

#### Command

```
password PASSWORD
```

#### Parameters

##### password

Set the password for this ESME

##### PASSWORD

Alphanumeric password string

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

#### Command

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

#### Parameters

##### route

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

##### prefix

Prefix-match route

##### unknown

Unknown type-of-number

##### international

International type-of-number

##### national

National type-of-number

##### network

Network specific type-of-number

##### subscriber

Subscriber type-of-number

##### alpha

Alphanumeric type-of-number

##### abbrev

Abbreviated type-of-number

##### unknown

Unknown numbering plan



isdn  
ISDN (E.164) numbering plan

x121  
X.121 numbering plan

f69  
F.69 numbering plan

e212  
E.212 numbering plan

national  
National numbering plan

private  
Private numbering plan

ermes  
ERMES numbering plan

ip  
IP numbering plan

wap  
WAP numbeing plan

PREFIX  
Destination number prefix

## 1.19 config-hlr

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

Command

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

Parameters

remote-ip

Remote GSUP address of the HLR

A.B.C.D

Remote GSUP address (default: 127.0.0.1)

## 1.19.2 remote-port <1-65535>

### Command

```
remote-port <1-65535>
```

### Parameters

remote-port

Remote GSUP port of the HLR

<1-65535>

Remote GSUP port (default: MSC\_HLR\_REMOTE\_PORT\_DEFAULT)

---