

# **OsmoSTP VTY Reference**

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<b>COLLABORATORS</b>
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<i>ACTION</i>	<i>NAME</i>	<i>DATE</i>	<i>SIGNATURE</i>
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## Chapter 1

# VTY reference

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

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

Table 1.1: VTY Parameter Patterns

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

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

## Common Commands

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

## end

### Command

```
end
```

### Parameters

end

End current mode and change to enable mode.

## exit

### Command

```
exit
```

### Parameters

exit

Exit current mode and down to previous mode

## help

### Command

```
help
```

### Parameters

help

Description of the interactive help system

## list

### Command

```
list
```

### Parameters

list

Print command list

---

## show running-config

### Command

```
show running-config
```

### Parameters

#### show

Show running system information

#### running-config

running configuration

## write

### Command

```
write
```

### Parameters

#### write

Write running configuration to memory, network, or terminal

## write file

### Command

```
write file
```

### Parameters

#### write

Write running configuration to memory, network, or terminal

#### file

Write to configuration file

## 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)

---

## write terminal

### Command

```
write terminal
```

### Parameters

#### write

Write running configuration to memory, network, or terminal

#### terminal

Write to terminal

## 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.

## enable

### Command

```
enable
```

### Parameters

#### enable

Turn on privileged mode command

## 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

---

## logging disable

### Command

```
logging disable
```

### Parameters

#### logging

Configure logging

#### disable

Disables logging to this vty

## 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

## 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

---

## logging level (lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loa...

### Command

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

### Parameters

#### logging

Configure logging

#### level

Set the log level for a specified category

#### lglobal

Library-internal global log family

#### llapd

LAPD in libosmogsm

#### linp

A-bis Input Subsystem

#### lmux

A-bis B-Subchannel TRAU Frame Multiplex

#### lmi

A-bis Input Driver for Signalling

#### lmib

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

#### lsms

Layer3 Short Message Service (SMS)

#### lctrl

Control Interface

#### lgtp

GPRS GTP library

#### lstats

Statistics messages and logging

#### lgsup

Generic Subscriber Update Protocol

#### loap

Osmocom Authentication Protocol

#### lss7

libosmo-sigtran Signalling System 7

#### lsccp

libosmo-sigtran SCCP Implementation



**lsua**

libosmo-sigtran SCCP User Adaptation

**lm3ua**

libosmo-sigtran MTP3 User Adaptation

**lmgcp**

libosmo-mgcp Media Gateway Control Protocol

**ljibuf**

libosmo-netif Jitter Buffer

**lrspro**

Remote SIM protocol

**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

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

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

**Parameters****logging**

Configure logging

**level**

Set the log level for a specified category

**force-all**

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

**debug**

Log debug messages and higher levels

**info**

Log informational messages and higher levels

**notice**

Log noticeable messages and higher levels

**error**

Log error messages and higher levels

**fatal**

Log only fatal messages

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

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

**Parameters****logging**

Configure logging

**level**

Set the log level for a specified category

**set-all**

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

**debug**

Log debug messages and higher levels

**info**

Log informational messages and higher levels

**notice**

Log noticeable messages and higher levels

**error**

Log error messages and higher levels

**fatal**

Log only fatal messages

**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

### 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>')

### 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

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

### Command

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

### Parameters

#### logging

Configure logging

#### print

Log output settings

#### file

Configure log message

#### 0

Don't prefix each log message

#### 1

Prefix each log message with the source file and line

#### basename

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

#### [last]

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

## 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

---

## 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

## 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

## no logging level force-all

### Command

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

### Parameters

#### no

Negate a command or set its defaults

#### logging

Configure logging

#### level

Set the log level for a specified category

#### force-all

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

## show alarms

### Command

```
show alarms
```

### Parameters

show

Show running system information

alarms

Show current logging configuration

## show asciidoc counters

### Command

```
show asciidoc counters
```

### Parameters

show

Show running system information

asciidoc

Asciidoc generation

counters

Generate table of all registered counters

## 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

---

**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

## &lt;0-15&gt;

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

**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

## &lt;0-15&gt;

An instance of the SS7 stack

## asp

Application Server Process (ASP)

---

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

## Command

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

## Parameters

## show

Show running system information

## cs7

ITU-T Signaling System 7

## instance

An instance of the SS7 stack

## &lt;0-15&gt;

An instance of the SS7 stack

## route

Routing Table

**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

## &lt;0-15&gt;

An instance of the SS7 stack

## sccp

Signalling Connection Control Part

## addressbook

List all SCCP addressbook entries

---



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

## Command

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

## Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

&lt;0-15&gt;

An instance of the SS7 stack

sccp

Signalling Connection Control Part

connections

Show List of active SCCP connections

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

## Command

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

## Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

&lt;0-15&gt;

An instance of the SS7 stack

sccp

Signalling Connection Control Part

ssn

Find an SCCP User registered for the given SSN

&lt;0-65535&gt;

Subsystem Number (SSN)

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

## Command

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

## Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

&lt;0-15&gt;

An instance of the SS7 stack

sccp

Signaling Connection Control Part

timers

Show List of SCCP timers

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

## Command

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

## Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

&lt;0-15&gt;

An instance of the SS7 stack

sccp

Signalling Connection Control Part

users

Show List of SCCP Users registered

## 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

## 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

## 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

---

## 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

## 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

## show history

### Command

```
show history
```

### Parameters

show

Show running system information

history

Display the session command history

## show logging vty

### Command

```
show logging vty
```

### Parameters

#### show

Show running system information

#### logging

Show current logging configuration

#### vtty

Show current logging configuration for this vty

## show online-help

### Command

```
show online-help
```

### Parameters

#### show

Show running system information

#### online-help

Online help

## show rate-counters

### Command

```
show rate-counters
```

### Parameters

#### show

Show running system information

#### rate-counters

Show all rate counters

## show stats

### Command

```
show stats
```

### Parameters

#### show

Show running system information

#### stats

Show statistical values

## 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

## 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

### **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

## **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)

## **show version**

### Command

```
show version
```

### Parameters

#### show

Show running system information

#### version

Displays program version



## 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)

## 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

## who

### Command

```
who
```

### Parameters

#### who

Display who is on vty

## 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.

---

## configure terminal

### Command

```
configure terminal
```

### Parameters

#### configure

Configuration from vty interface

#### terminal

Configuration terminal

## 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)

## disable

### Command

```
disable
```

### Parameters

#### disable

Turn off privileged mode command

---

## 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

## logging disable

### Command

```
logging disable
```

### Parameters

#### logging

Configure logging

#### disable

Disables logging to this vty

## 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

---

## 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

## logging level (lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loa...

### Command

```
logging level (lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loap|lss7| ↵  
lsccp|lsua|lm3ua|lmgcp|ljibuf|lrspro) (debug|info|notice|error|fatal)
```

### Parameters

#### logging

Configure logging

#### level

Set the log level for a specified category

#### lglobal

Library-internal global log family

#### llapd

LAPD in libosmogsm

#### linp

A-bis Input Subsystem

---

lmux  
A-bis B-Subchannel TRAU Frame Multiplex

lmi  
A-bis Input Driver for Signalling

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

lsms  
Layer3 Short Message Service (SMS)

lctrl  
Control Interface

lgtp  
GPRS GTP library

lstats  
Statistics messages and logging

lgsup  
Generic Subscriber Update Protocol

loap  
Osmocom Authentication Protocol

lss7  
libosmo-sigtran Signalling System 7

lsccp  
libosmo-sigtran SCCP Implementation

lsua  
libosmo-sigtran SCCP User Adaptation

lm3ua  
libosmo-sigtran MTP3 User Adaptation

lmgcp  
libosmo-mgcp Media Gateway Control Protocol

ljibuf  
libosmo-netif Jitter Buffer

lrspro  
Remote SIM protocol

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

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

Command

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

Parameters

logging

Configure logging

level

Set the log level for a specified category

force-all

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

debug

Log debug messages and higher levels

info

Log informational messages and higher levels

notice

Log noticeable messages and higher levels

error

Log error messages and higher levels

fatal

Log only fatal messages

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

Command

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

Parameters

logging

Configure logging

level

Set the log level for a specified category

---

**set-all**

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

**debug**

Log debug messages and higher levels

**info**

Log informational messages and higher levels

**notice**

Log noticeable messages and higher levels

**error**

Log error messages and higher levels

**fatal**

Log only fatal messages

**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

**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>')

## 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

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

Command

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

Parameters

logging

Configure logging

print

Log output settings

file

Configure log message



0

Don't prefix each log message

1

Prefix each log message with the source file and line

basename

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

[last]

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

## 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

## 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

## 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

## no logging level force-all

### Command

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

### Parameters

no

Negate a command or set its defaults

#### logging

Configure logging

#### level

Set the log level for a specified category

#### force-all

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

## show alarms

### Command

```
show alarms
```

### Parameters

#### show

Show running system information

#### alarms

Show current logging configuration

---

## show asciidoc counters

### Command

```
show asciidoc counters
```

### Parameters

show

Show running system information

asciidoc

Asciidoc generation

counters

Generate table of all registered counters

## 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

## 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

### **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)

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

## Command

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

## Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

&lt;0-15&gt;

An instance of the SS7 stack

route

Routing Table

**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

&lt;0-15&gt;

An instance of the SS7 stack

sccp

Signalling Connection Control Part

addressbook

List all SCCP addressbook entries

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

## Command

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

## Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

&lt;0-15&gt;

An instance of the SS7 stack

sccp

Signalling Connection Control Part

connections

Show List of active SCCP connections

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

## Command

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

## Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

&lt;0-15&gt;

An instance of the SS7 stack

sccp

Signalling Connection Control Part

ssn

Find an SCCP User registered for the given SSN

&lt;0-65535&gt;

Subsystem Number (SSN)

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

## Command

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

## Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

&lt;0-15&gt;

An instance of the SS7 stack

sccp

Signaling Connection Control Part

timers

Show List of SCCP timers

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

## Command

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

## Parameters

show

Show running system information

cs7

ITU-T Signaling System 7

instance

An instance of the SS7 stack

&lt;0-15&gt;

An instance of the SS7 stack

sccp

Signalling Connection Control Part

users

Show List of SCCP Users registered

## 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

## 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

## 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

---



## 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

## 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

## show history

### Command

```
show history
```

### Parameters

#### show

Show running system information

#### history

Display the session command history

---

## show logging vty

### Command

```
show logging vty
```

### Parameters

#### show

Show running system information

#### logging

Show current logging configuration

#### vtty

Show current logging configuration for this vty

## show online-help

### Command

```
show online-help
```

### Parameters

#### show

Show running system information

#### online-help

Online help

## show rate-counters

### Command

```
show rate-counters
```

### Parameters

#### show

Show running system information

#### rate-counters

Show all rate counters

## show startup-config

### Command

```
show startup-config
```

### Parameters

show

Show running system information

startup-config

Contentes of startup configuration

## show stats

### Command

```
show stats
```

### Parameters

show

Show running system information

stats

Show statistical values

## 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

---

**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

**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

**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)

**show version****Command**

```
show version
```

**Parameters****show**

Show running system information

**version**

Displays program version

## 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)

## terminal monitor

### Command

```
terminal monitor
```

### Parameters

#### terminal

Set terminal line parameters

#### monitor

Copy debug output to the current terminal line

## 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

## 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

## who

### Command

```
who
```

### Parameters

#### who

Display who is on vty

## 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.

## banner motd default

### Command

```
banner motd default
```

### Parameters

#### banner

Set banner string

#### motd

Strings for motd

#### default

Default string

---

## banner motd file [FILE]

### Command

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

### Parameters

#### banner

Set banner

#### motd

Banner for motd

#### file

Banner from a file

#### [FILE]

Filename

## 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

## 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

---



## 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

## hostname WORD

### Command

```
hostname WORD
```

### Parameters

#### hostname

Set system's network name

#### WORD

This system's network name

## line vty

### Command

```
line vty
```

### Parameters

#### line

Configure a terminal line

#### vtty

Virtual terminal

## log alarms <2-32700>

### Command

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

### Parameters

log

Configure logging sub-system

alarms

Logging alarms to osmo\_strrb

<2-32700>

Maximum number of messages to log

## log file .FILENAME

### Command

```
log file .FILENAME
```

### Parameters

log

Configure logging sub-system

file

Logging to text file

.FILENAME

Filename

## 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)

---

## log stderr

### Command

```
log stderr
```

### Parameters

log

Configure logging sub-system

stderr

Logging via STDERR of the process

## 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

---

## 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

## no banner motd

### Command

```
no banner motd
```

### Parameters

no

Negate a command or set its defaults

banner

Set banner string

motd

Strings for motd

## 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

---

## 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

## 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

## 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

---

## 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

## 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

## 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

---

## 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)

## 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

## 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

## 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

## password LINE

Command

```
password LINE
```

Parameters

password

Assign the terminal connection password

LINE

The UNENCRYPTED (cleartext) line password

## service advanced-vty

Command

```
service advanced-vty
```

Parameters

service

Set up miscellaneous service

advanced-vty

Enable advanced mode vty interface



## 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)

## show history

### Command

```
show history
```

### Parameters

#### show

Show running system information

#### history

Display the session command history

## 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

---

## stats reporter log

### Command

```
stats reporter log
```

### Parameters

stats

Configure stats sub-system

reporter

Configure a stats reporter

log

Report to the logger

## stats reporter statsd

### Command

```
stats reporter statsd
```

### Parameters

stats

Configure stats sub-system

reporter

Configure a stats reporter

statsd

Report to a STATSD server

## 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.

## 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

**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

**logging level (lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loa...****Command**

```
logging level (lglobal|llapd|linp|lmux|lmi|lmib|lsms|lctrl|lgtp|lstats|lgsup|loap|lss7| ↵
lsccp|lsua|lm3ua|lmgcp|ljibuf|lrspro) (debug|info|notice|error|fatal)
```

**Parameters****logging**

Configure logging

level

Set the log level for a specified category

lglobal

Library-internal global log family

llapd

LAPD in libosmogsm

linp

A-bis Input Subsystem

lmux

A-bis B-Subchannel TRAU Frame Multiplex

lmi

A-bis Input Driver for Signalling

lmib

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

lsms

Layer3 Short Message Service (SMS)

lctrl

Control Interface

lgtp

GPRS GTP library

lstats

Statistics messages and logging

lgsup

Generic Subscriber Update Protocol

loap

Osmocom Authentication Protocol

lss7

libosmo-sigtran Signalling System 7

lsccp

libosmo-sigtran SCCP Implementation

lsua

libosmo-sigtran SCCP User Adaptation

lm3ua

libosmo-sigtran MTP3 User Adaptation

lmgcp

libosmo-mgcp Media Gateway Control Protocol

ljibuf

libosmo-netif Jitter Buffer

### lrspro

Remote SIM protocol

### 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

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

### Command

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

### Parameters

#### logging

Configure logging

#### level

Set the log level for a specified category

#### force-all

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

#### debug

Log debug messages and higher levels

#### info

Log informational messages and higher levels

#### notice

Log noticeable messages and higher levels

#### error

Log error messages and higher levels

#### fatal

Log only fatal messages

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

### Command

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

### Parameters

#### logging

Configure logging

#### level

Set the log level for a specified category

#### set-all

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

#### debug

Log debug messages and higher levels

#### info

Log informational messages and higher levels

#### notice

Log noticeable messages and higher levels

#### error

Log error messages and higher levels

#### fatal

Log only fatal messages

## 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

---

## 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>')

## 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

---

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

### Command

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

### Parameters

#### logging

Configure logging

#### print

Log output settings

#### file

Configure log message

#### 0

Don't prefix each log message

#### 1

Prefix each log message with the source file and line

#### basename

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

#### [last]

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

## 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



## 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

## no logging level force-all

### Command

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

### Parameters

#### no

Negate a command or set its defaults

#### logging

Configure logging

#### level

Set the log level for a specified category

#### force-all

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

## config-stats

### disable

### Command

```
disable
```

### Parameters

#### disable

Disable the reporter

---

## enable

### Command

```
enable
```

### Parameters

#### enable

Enable the reporter

## 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

## local-ip ADDR

### Command

```
local-ip ADDR
```

### Parameters

#### local-ip

Set the IP address to which we bind locally

#### ADDR

IP Address

---

**mtu <100-65535>**

## Command

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

## Parameters

mtu

Set the maximum packet size

<100-65535>

Size in byte

**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

**no mtu**

## Command

```
no mtu
```

## Parameters

no

Negate a command or set its defaults

mtu

Set the maximum packet size

**no prefix**

## Command

```
no prefix
```

## Parameters

no

Negate a command or set its defaults

prefix

Set the item name prefix

---

## prefix PREFIX

### Command

```
prefix PREFIX
```

### Parameters

#### prefix

Set the item name prefix

#### PREFIX

The prefix string

## remote-ip ADDR

### Command

```
remote-ip ADDR
```

### Parameters

#### remote-ip

Set the remote IP address to which we connect

#### ADDR

IP Address

## 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

---

## config-line

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

#### Command

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

#### Parameters

##### bind

Accept VTY telnet connections on local interface

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

Local interface IP address (default: 127.0.0.1)

##### [<0-65535>]

Local TCP port number

## login

#### Command

```
login
```

#### Parameters

##### login

Enable password checking

## no login

#### Command

```
no login
```

#### Parameters

##### no

Negate a command or set its defaults

##### login

Enable password checking

## config-cs7

### 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)

### 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)

---

## description .TEXT

### Command

```
description .TEXT
```

### Parameters

#### description

Save human-readable description of the object

#### .TEXT

Text until the end of the line

## listen (sua|m3ua|ipa) <0-65534>

### Command

```
listen (sua|m3ua|ipa) <0-65534>
```

### Parameters

#### listen

Configure/Enable xUA Listener

#### sua

SCCP User Adaptation

#### m3ua

MTP3 User Adaptation

#### ipa

IPA Multiplex (SCCP Lite)

#### <0-65534>

SCTP Port number

## 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

## **no as NAME**

Command

```
no as NAME
```

Parameters

no

Negate a command or set its defaults

as

Disable Application Server

NAME

Name of AS

## **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



**no listen (sua|m3ua|ipa) <0-65534>**

## Command

```
no listen (sua|m3ua|ipa) <0-65534>
```

## Parameters

no

Negate a command or set its defaults

listen

Disable xUA Listener on given SCTP Port

sua

SCCP User Adaptation

m3ua

MTP3 User Adaptation

ipa

IPA Multiplex (SCCP Lite)

&lt;0-65534&gt;

SCTP Port number

**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

**point-code POINT\_CODE**

## Command

```
point-code POINT_CODE
```

## Parameters

point-code

Configure the local Point Code

POINT\_CODE

Point Code

## 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

## 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

## 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)

## route-table system

Command

```
route-table system
```

Parameters

route-table

Specify the name of the route table

system

Name of the route table

## sccp-address NAME

Command

```
sccp-address NAME
```

Parameters

sccp-address

Create/Modify an SCCP addressbook entry

NAME

Name of the SCCP Address

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

Command

```
sccp-timer (conn_est|ias|iar|rel|repeat_rel|int|guard|reset|reassembly) <1-99999>
```

Parameters

sccp-timer

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

conn\_est

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

**ias**

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

**iar**

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

**rel**

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

**repeat\_rel**

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

**int**

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

**guard**

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

**reset**

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

**reassembly**

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

**<1-999999>**

Timer value, in seconds

## **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

---

## config-cs7-as

### 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

### description .TEXT

Command

```
description .TEXT
```

Parameters

description

Save human-readable description of the object

.TEXT

Text until the end of the line

### 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

## 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

## qos-class <0-255>

### Command

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

### Parameters

#### qos-class

Specity QoS Class of AS

#### <0-255>

QoS Class of AS

## 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

---

## routing-key RCONTEXT DPC

### Command

```
routing-key RCONTEXT DPC
```

### Parameters

#### routing-key

Define a routing key

#### RCONTEXT

Routing context number

#### DPC

Destination Point Code

## 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

## **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

---



## 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

## 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

---

## config-cs7-asp

### block

#### Command

```
block
```

#### Parameters

block

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

### description .TEXT

#### Command

```
description .TEXT
```

#### Parameters

description

Save human-readable description of the object

.TEXT

Text until the end of the line

### 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

### qos-class <0-255>

#### Command

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

#### Parameters

qos-class

Specify QoS Class of ASP

<0-255>

QoS Class of ASP

---

## 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

## shutdown

### Command

```
shutdown
```

### Parameters

#### shutdown

Terminates SCTP association; New associations will be rejected

## config-cs7-listen

### accept-asp-connections (pre-configured|dynamic-permitted)

### Command

```
accept-asp-connections (pre-configured|dynamic-permitted)
```

### Parameters

#### accept-asp-connections

Define what kind of ASP connections to accept

#### pre-configured

Accept only pre-configured ASPs (source IP/prt)

#### dynamic-permitted

Accept any connection and dynamically create an ASP definition

---

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

### Command

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

### Parameters

#### local-ip

Configure the Local IP Address for xUA

#### A.B.C.D

IP Address to use for XUA

## config-cs7-rt

### description .TEXT

### Command

```
description .TEXT
```

### Parameters

#### description

Save human-readable description of the object

#### .TEXT

Text until the end of the line

## remove route POINT\_CODE MASK

### Command

```
remove route POINT_CODE MASK
```

### Parameters

#### remove

Remove a Route

#### route

Remove a Route

#### POINT\_CODE

Destination Point Code

#### MASK

Point Code Mask

---

**update route POINT\_CODE MASK linkset LS\_NAME [priority PRIO] [qos-class (CLASS|d...**

## Command

```
update route POINT_CODE MASK linkset LS_NAME [priority PRIO] [qos-class (CLASS|default) ↔  
]
```

## Parameters

## update

Update the Route

## route

Update the Route

## POINT\_CODE

Destination Point Code

## MASK

Point Code Mask

## linkset

Point Code Length

## LS\_NAME

Specify Destination Linkset

## [priority

Linkset Name

## PRIO]

Specify Priority

## [qos-class

Priority

## CLASS

Specify QoS Class

## default

QoS Class

**config-cs7-sccpaddr****global-title**

## Command

```
global-title
```

## Parameters

## global-title

Add/Modify Global Title

## no global-title

### Command

```
no global-title
```

### Parameters

no

Negate a command or set its defaults

global-title

Remove Global Title

## no point-code

### Command

```
no point-code
```

### Parameters

no

Negate a command or set its defaults

point-code

Remove point-code Number

## no subsystem-number

### Command

```
no subsystem-number
```

### Parameters

no

Negate a command or set its defaults

subsystem-number

Remove Subsystem Number

## point-code POINT\_CODE

### Command

```
point-code POINT_CODE
```

### Parameters

point-code

Add point-code Number

POINT\_CODE

PC

---

## 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

## subsystem-number <0-4294967295>

### Command

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

### Parameters

subsystem-number

Add Subsystem Number

<0-4294967295>

SSN

## config-cs7-sccpaddr-gt

### digits DIGITS

### Command

```
digits DIGITS
```

### Parameters

digits

Set Global Title Digits

DIGITS

Number digits

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

## Command

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

## Parameters

global-title-indicator

Set Global Title Indicator

<0-15>

GTI

**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

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

## Command

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

## Parameters

numbering-plan-indicator

Set Global Title Numbering Plan Indicator

<0-15>

NPI

**translation-type <0-255>**

## Command

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

## Parameters

translation-type

Set Global Title Translation Type

<0-255>

TT

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