Nordic Messaging Technologies

SMS Gateway

User's Guide 4.4

Contents

1. Overview

SMS Gateway is a UNIX-based messaging software for sending messages to GSM mobile phones and pagers (like Minicall Text in Sweden). It offers a numbers of features including defining custom gateways. SMS or Short Message Service is the name for message transmission between GSM subscribers. A message in the SMS can be up to 160 characters. A Minicall Text message can be up to 400 characters.

A number of client programs are used to send messages and display message information. Starting with release 3.0 it also supports direct HTTP and SMTP access to the server.

SMS Gateway support dial-up, telnet and direct IP connections from the gateway to the SMSC, the operator's SMS Central or Message Switch. Very high performance is achieved by using static IP connections, or a connection pool, which significantly reduces the overhead.

SMS Gateway supports the following gateway to SMSC protocols ERMES/UCP (Universal Communications Protocol), Ericsson's implementation of UCPE (UCP/Extended), CIMD (Computer Interface to Message Distribution), TAP (Telecor Application Protocol) and THS.
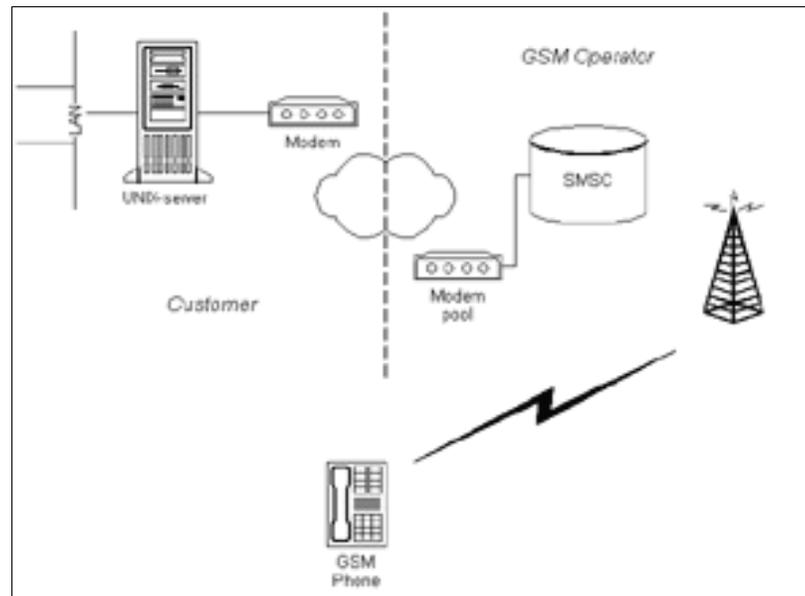
The default configuration in the software is set up for the Swedish market that includes the three SMS operators (Tele2/Comviq, Europolitan and Telia Mobitel) and the Minicall Text paging service from Telia Mobitel. Connection to the MS is by default through dial-up.

Note!

This software has not in any way been run through any security evaluation or certification process. If exposed to non-trusted networks or hosts a firewall or other proxy software should protect it. We do not guarantee any level of security in the software and do not take any responsibility for damage caused by unauthorized access through SMS Gateway.

1.1 Various modes of operation

The software can accept and relay messages in several different ways. Specifically you can inject a message into the SMS Gateway through:

Executables

Messages can be sent from the command line using the sms command.

SMTP

SMS Gateway accepts SMTP calls on port 25 or as indicated by the SMTP_PORT keyword.

HTTP

SMS Gateway accepts HTTP calls on port 7181 or as indicated by the HTTP_PORT keyword. When using HTTP delivery can either be spooled or direct. Spooled delivery means the message will be put in the outgoing queue and will then be sent as soon as possible. Direct delivery when using HTTP is used typically for static IP configurations (see below for more information) when a response can be delivered to the user after an immediate try for transmission.

The messages can be delivered to the Message Switch through:

Dial-up

Messages can be delivered to the MS using a Hayes-compatible modem. Messages are put in a queue and are delivered in a first-in first-serve manner.

Direct RS232

Messages can be delivered to the MS using a serial RS-232 connection via a null-modem.

Dynamic IP

Messages can be delivered to the MS using IP over dynamic IP connections. Dynamic means for each message an IP connection is opened, the message is sent to the MS and then the connection is closed down. This is quite similar to the method used by dial-up.

Static IP

Messages can be delivered to the MS using IP over a configurable number of static IP connections. Static means that the IP connections are opened up to the MS on demand but they are not closed until the server is shut down. This reduces the overhead you experience when opening up and closing down connections for every message. Static IP is the best way to

achieve very high performance (typically 20+ messages per second using proper hardware).

1.2 Definitions

There are a number of important words and abbreviations in the SMS world.

SMSC
Short Message Service Center.

VP
Validity period. The period of time a message will be kept in the SMSC if it cannot be delivered to the recipient. When the VP expires the message is deleted.

1.3 Enterprise Messaging Gateway

Enterprise Messaging Gateway (EMG) is the next-generation messaging platform from Nordic Messaging Technologies. It offers impressive performance and full control over the options and possibilities in the message protocols.

For more information please visit http://www.nordicmessaging.se.

1.4 Support

For more information, online help and other resources available to get the most out of our products, please visit http://www.nordicmessaging.se or send us an email at support@nordicmessaging.se.

2. The life of a message

2.1 Spooled Connections

When a message is placed in the outgoing queue for transmission, by using the sms command, a corresponding file is created in SPOOLDIR. Smsd the tries to send the message the number of times specified by MAX_RETRIES in the config file. After the message has been sent or could not be sent the program defined by EXECUTE_AFTER_SEND is executed. Finally the file in SPOOLDIR is removed and a corresponding entry for the message is added to the statistics file, stats.

2.2 Direct connections

Message delivery takes place immediately. Log information is written to smsd.* in SMSDIR/Log.

3. Installation

The software is distributed in a tar archive, which extracts into a temporary directory, /tmp/sms. After the extraction you run a installation script, /tmp/sms/ INSTALL, which asks questions about your configuration and then puts every-thing in its right place.

Go to the root directory

```
cd /
```

Extract the archive, smsaix.tar for AIX for example

```
tar xvf smsaix.tar
```

Execute the installation script

```
sh /tmp/sms/INSTALL
```

Check the installation by running smsd -v which should display software infor-mation provided that
a./etc/sms is used for the configuration files or the variable SMSDIR is set to the directory used.
b.the directory for the executables is included in PATH.

Now you can start the SMS daemon, smsd, and you are ready to send your first message.

We use the following names for the various directories used by SMS Gateway:

SMSDIR
        Directory for the configuration files (default is /etc/sms)

SPOOLDIR
        Directory for messages in the outgoing queue (default is /usr/spool/sms)

BINDIR
        Directory for the executables (default is /usr/bin)

Some important files

SMSDIR/config
        Configuration file

SMSDIR/stats
        Statistics file

SMSDIR/LCK.smsd
        The smsd lock file that indicates the smsd is running

4. Configuring the software

The behavior of SMS Gateway is mainly controlled by a number of keywords used in the configuration file, SMSDIR/config. You can alter the way SMS Gateway acts by modifying config and then restarting smsd. You restart the smsd by finding the process id, kill the process and then start the daemon again. Do not use the –9 option when killing smsd.

4.1 Keywords

To use a new keyword in the configuration file add the keyword, preferably at the end of the file, and then restart smsd.

Examples of some useful keywords when connecting through dial-up:

DIAL_PREFIX
> Dial prefix, for example "0" to get out through a PBX

INIT_STRING
> Initilisation string for modem

XON_XOFF
> Specifies XON/XOFF flow control is to be used

FLOWFLOW=0
> Specifies do not try CTS/RTS flow control

EXECUTE_AFTER_SEND
> Specifies a program to be executed after transmission

MAX_RETRIES
> Maximum number of tries to send a message

RETRY_TIME
> Time, in seconds, between tries

ROUND_ROBIN
> Used with multiple modem devices

There are about 50 different keywords used by SMS Gateway.

4.2 SMS and Minicall Text in Sweden

By default SMS Gateway is configured with four gateways for the three Swedish SMS operators and Telia Mobitel's paging service Minicall Text. When sending a message using the sms command the message and the recipients are sent to smsd. Smsd looks at the first digits of the recipient's number to determine which gateway to use:

0702, 0703, 0705, 0706, 0730
> Telia

0704, 0707, 0736, 0739
Tele2/Comviq

0708, 0709, 0733
Europolitan

0740, 0746
Minicall Text

It then tries to send as many messages as possible to the gateway for the first message in the send list. The cost for the message is the following:

Comviq
The gateway is on a 0707 GSM number so the cost is the normal cost for a mobile phone call.

Europolitan
A 0708 number is used. Otherwise same as Comviq.

Telia
A 0740 number is used which cost SEK 2 for 1 message.

Minicall Text
The cost depends on the number of characters in the message. The cost is invoiced to the customer who needs a special "sändarabonnemang" from Telia Mobitel.

To be able to send Minicall Text messages you need a "sändarabonnemang" from Telia Mobitel. This will get you a specific id and password that the software uses to log on to the gateway. You tell the software which id and password to use by using the keywords MINICALL_ID and MINICALL_PASSWORD in the configuration file. Telia Mobitel will send an invoice directly to the customer for the cost of the messages.

4.3 Defining a custom gateway

A custom gateway needs to be defined using the GATEWAY keyword for operation outside of Sweden and when not connecting through dial-up. The syntax is in the configuration file is GATEWAY="prefix:name:connmode:address:port:protocol[:extra]"

The parameters mean the following:

Prefix
The prefix in the recipient's number. You can also use DEFAULT for a default gateway.

Name
Name for the gateway. Used in lists.

Connmode
Connection mode for the gateway. Possible values: IP, MODEM, TELNET

Adress

Destination address. Depending on the connection mode, either a host-
name, an IP address or a phone number.

Port

Used for IP and TELNET gateways. Specifies the port to connect to.

Protocol

Protocol to be used for the gateway.
Possible values: CIMD, CIMD2, SMPP, TAP, THS, UCP, UCPE

Extra

Gateway-specific parameters. See the keyword reference section for mote
information

4.4 Adding actions

You can tell smsd that it should execute a specific script or program after a mes-
sage has been sent or could not be sent. This could be useful if you want to
update your own database or similar and is done by using the
EXECUTE_AFTER_SEND keyword in the configuration file:

EXECUTE_AFTER_SEND=/usr/local/bin/smsafter

The specified program will be called with the following parameters: ID of the
message, recipient's number, return code, number of tries, note, total time con-
nected, time on the format YYMMDD HH:MM, login of the user that sent the
message, SCTS and error text.

4.5 Implementing the software

There are a number of situations where it could be nice to receive a message
when a certain action takes place or an error occurs. What about the following
examples:

◎ Notification when new mail arrives
◎ Used by a network management software like HP OpenView to send alerts to
  system administators
◎ On an intranet to send information to colleagues

There are probably as many ideas as people using the software but the ones
above are a few of the most common situations.

4.6 Configuring a CIMD2 gateway

The SMSC from Nokia uses the CIMD2 protocol. SMS Gateway support bi-
directional messaging using CIMD2. It operates in polling mode meaning SMS
Gateway asks the SMSC if there are incoming messages and then retrieves the
messages.

There are a number of parameters concerning the CIMD2 protocol.

4.7 Configuring a SMPP gateway

SMS Gateway supports SMPP 3.3 which can also be used to connect to SMPP 3.4 SMSCs since SMPP 3.4 in general is backwards compatible with SMPP 3.3.

4.8 Configuring a UCP gateway

The SMSC from CMG Holland uses the UCP/EMI protocol. There are a number of parameters concerning the UCP protocol.

These include UCP_MT, UCP_NRQ, UCP_OT and UCP_VP.

When using authentication though UCP operation 60 you need to specify the following parameters for the GATEWAY: AUTHTON, AUTHNPI, SESSION_USERNAME and SESSION_PASSWORD.

5. Sending a message

To send a message you can use the sms command. Before you can send a message the SMS daemon, smsd, must be running.

Start smsd like this:

```
# smsd
```

When smsd is started it creates a lockfile called LCK.smsd in SMDIR. If you get a message that smsd is already running whent you try to start it although you know it is not, the lockfile has not been removed properly from the SMSDIR directory. Remove it manually. You can use the -debug option to get smsd print debug information on stdout.

The basic way of using the sms command is by supplying a recipient number and a message as argument:

```
# sms 0707123456 "Hello world!"
```

This will send the message "Hello world!" to the recipient 0707123456.

5.1 Scheduling a message

You can schedule a message for transmission at a specific time by using the -t option to sms.

```
# sms -t 22:00 0707123456 "Test message"
```

This will send the message 22:00 in the evening.

5.2 Specifying the sender a message

It is possible to set the sender, or originating address, on a per-message basis. Please not that all SMSCs (Nokia SMSC via CIMD2 for example) allow the application to specify the sender.

```
# sms -sender 46123456 0707123456 "Test message"
```

5.3 Sending a flash SMS

It is possible to send a so-called flash SMS by using the -msgclass parameter. A flash SMS is a SMS that will be immediately displayed in the phone displayed and that will not be stored on the SIM card..

```
# sms -msgclass 0 0707123456 "Test message"
```

A value of 0 means a flash SMS, the default value is 1 (message stored on SIM card).

5.4 Using a list of recipients

You can send the same message to many recipients by using the –l option with sms. The format of the file is one recipient number per row.

```
# sms -l reclist "Test message"
```

This will send the message to all recipients in the file reclist.

5.5 Sending raw messages

Sometimes a character translation will be done on messages before they are sent out. This can be avoided using the "-raw" parameter with faxsend. If specified the messages will be sent out exactly as supplied.

5.6 Using mappings

It is possible to apply a character mapping to an outgoing message. The mapping, which is a one-to-one mapping must be defined in the config file and then referenced using the -mapping command with faxsend.

Sample mapping (in config file) translating all 'a' into 'B'.

```
MAPPING atoB <
# Map ASCII 97 ('a') to ASCII 66 ('B')
97=66
>
```

Sample command line using the mapping:

```
# sms -mapping atoB 123456 "Test message with letter a"
```

6. Receiving a message

When SMS Gateway connects to an SMSC using a protocol that supports bi-directional messaging it is possible to receive messages sent from a mobile device.

After receiving a message SMS Gateway executes a program or script defined by the configuration keyword

```
EXECUTE_AFTER_RECEIVE.
```

Example gateway definition for a bi-directional SMSC:

```
GATEWAY=DEFAULT:Default:IP:192.165.99.208:9971:CIMD2:MODE=SR
RETRIEVE_MESSAGE=20
EXECUTE_AFTER_RECEIVE=/usr/local/bin/smsafter
```

Using the above SMS Gateway will poll the SMSC for new messages every 20 seconds and when a message arrives it will be passed on to /usr/local/bin/smsafter.

7. Administration

There are a number of command for displaying and manipulating the message queues and the statistics file.

7.1 Displaying message queues - smsq

The system separates messages into three different queues, which can be shown by giving the parameters shown below as an argument to the command smsq.

ArgumentQueue

none, -p
   Outgoing message

-s

   Transmitted messages

-f

   Not transmitted due to a fault

E.g.:

```
# smsq
Outgoing
ID     Recipient       Enqueued        Next  St Try LC   User  Len
14     0701234567      11:01 19980430 11:41 SE   1 BUSY stenor  1
15     0707654321      11:33 19980430 11:33 PE   1 NOAN davcar  3
>>>> Infoflex System AB, Lars
18     0702871254      11:45 19980430 11:45  PE   2      davcar  1
```

The information that is in the columns above is in sequence:

The message ID number, the recipient's number, the time and date when the message was placed in the queue, the time for the next transmission attempt, status, priority, the number of attempts to date, the latest status code, the user who placed the message in the queue plus the number of characters in the message.

The following codes occur in the status column:

SE

   Sending

PE

   Pending

HO

   Holding

The status codes can be found in the chapter *Status codes*.

7.2 Displaying message statistics - smsstat

You use smsstat to display statistics for message transmission through the various gateways.

7.3 Canceling a message - smsrm

To cancel an outgoing message you use smsrm. As argument you use the ID of the message which is displayed by smsq.

```
# smsrm 7
```

remove the message with ID 7 from the outgoing queue.

You also use smsrm to mark entries in the statistics file as deleted.

```
# smsrm -all s
```

marks all successfully sent messages as deleted.

Together with –all you can use –to which deletes messages in a specific queue that is older than the date specified.

```
# smsrm -all s –to 19990706
```

7.4 Cleaning the statistics file - smsclean

You can remove entries from the statistics file permanently by using the smsclean command.

7.5 Displaying users connected to the smsd - smswho

You can display the users that are connected to smsd by using the smswho command.

8. The integrated SMTP server

SMS Gateway features an integrated SMTP server. The SMTP server supports RFC-822 and does currently not support MIME. It cannot be used for direct delivery. When receiving a message it parses the To address which should be on the form recipient@<anything>. That is it only looks at the left-hand side of the address for the recipient.

You need to enable the SMTP server in order to use it (see SMTP_ENABLE). The default port the server listens to is 7181, this can be changed using SMTP_PORT in the config file.

In order to limit access to the SMTP server you can specify hosts or networks that can access the server, see ACCESS_SMTP. You can also specify users and password using USER_FILE.

Keywords used by the SMTP server:

```
SMTP_ENABLE, SMTP_PORT, ACCESS_SMTP, USER_FILE
```

Status codes

The status code are displayed in text in queues and passed in numeric form to the action scripts, for example as defined by EXECUTE_AFTER_SEND.

Text	Numeric	Description
NOCA	3	No carrier, the link was broken before connection was made (no carrier)
NODT	6	No dial tone
BUSY	7	Line busy
NOAN	8	No answer
LINE	19	Communication with the modem is not functioning
INTR	20	Transmission interrupted
PROTO	31	Protocol error
LOGIN	32	Login attempt to gateway failed
ERCOM	33	Communications failure
ERGW	34	Gateway error
ERMSG	35	Error in message
ERREC	36	Invalid recipient
CSUM	37	Checksum error
ERFORM	38	Error
ERSEND	39	Invalid sender
ERPASS	40	Wrong password
ERBUSY	41	Gateway busy
UNKN		Unspecified error

10. The integrated HTTP server

SMS Gateway features an integrated HTTP server which makes it possible to use a browser and surf in to the SMS server and send a message, display the message queues etc.

Please note that this HTTP server is designed for this specific implementation and does not replace an ordinary web server. If you want to use this as one part of a external or internal web site you should use an ordinary web server for the regular web pages and link to the SMS Gateway HTTP server URL where appropriate. An URL that points directly to the send message form would be http://www.host.dom/sendmessage.

You need to enable the HTTP server in order to use it (see HTTP_ENABLE). The default port the server listens to is 7181, this can be changed using HTTP_PORT in the config file.

If the server is enabled and is using the default port, point your browser to http://hostname:7181.

In order to limit access to the HTTP server you can specify hosts or networks that can access the server, see ACCESS_HTTP. You can also specify users and password using USER_FILE.

Keywords used by the HTTP server:

```
HTTP_ENABLE, HTTP_PORT, ACCESS_HTTP, USER_FILE
```

10.1 Customizing the send message form

You can design your own send message form by creating a HTML-document that fulfill the following requirements:

◎ The HTML file must be named SMSDIR/www/sendmessage.html
◎ It must include a form with METHOD=POST and ACTION=/dosendmessage
◎ The recipient field in the form must be named recipient
◎ The message field in the form must be named message

You can also include the fields mt (=message type), legcode (=UCP legitimation code).

Example:

```
<FORM METHOD=POST ACTION=/dosendmessage>
Recipient:<BR>
<INPUT NAME=recipient><P>
Message:<BR>
<TEXTAREA NAME=message ROWS=4 COLS=40></TEXTAREA><P>
<INPUT TYPE=Submit VALUE="Send message">
</FORM>
```

10.2 Customizing the send message response (direct connections)

You can design your own send message response form by creating a HTML-document that fulfill the following requirements:

◎ The HTML file must be named SMSDIR/www/sendresponse.html

The directory SMSDIR/www is the document root used by the HTTP server and images used in the documents should be placed in this directory as well.

11. Command reference

Here we describe the syntax of each command in the software. You can use -v as an option for most of the commands to get syntax information for the command. To get debug information, especially good for smsd, use the –debug option.

11.1 Commands

11.1.1 sms

Place a message in queue

Parameters:

-v	Display software version and command syntax
-	Read data from stdin
-id	Display the id of the message after it has been placed in the outgoing queue
-l file	Read recipients from the specified file
-n string	Add a note to the message. Displayed in the message queues
-t hh:mm	Schedule the message for transmission at a specific time
-c id	Specify a character set to use for the message
-s id	Specify a symbol set to use for the message
-q	Do not send messages to stdout (quiet)
-u username	Send the message as the specified user

11.1.2 smsclean

Remove entries from the statistics

Parameters:

-v	Display software version and command syntax
-older days	Remove entries older than specified number of days
-to date	Remove entries until specified date

11.1.3 smsd

The SMS Gateway daemon

Parameters:

-v	Display software version and command syntax
-debug	Print debug information to stdout

	-gateways	Display defined gateways

11.1.4 smsmime

Parses MIME messages

Parameters:

-v	Display software version and command syntax

11.1.5 smsq

Display the message queues

Parameters:

-v	Display software version and command syntax
-p	Display the outgoing message queue (default)
-s	Display the message queue for successfully sent messages
-f	Display the message queue for failed messages
-n id	Reschedule the message for transmission now
-reverse	Display the queue in reversed order (last message first)
-t hh:mm id	Reschedule the message for transmission at the specified time
-x	Display extra information about the messages

11.1.6 smsrm

Remove a message from a queue

When used with the successfully sent or failed queues, the entries are not physically removed from the statistics file, they are only marked as deleted. Smsclean is used to delete entries permanently from the statistics file.

Parameters:

-v	Display software version and command syntax
-all [p|s|f]	Remove all messages in the specified queue(s)
-to yyyymmdd	Remove all messages until the specified date

11.1.7 smsstat

Display message statistics (per gateway)

Parameters:

-v	Display software version and command syntax
-g	Show graph

11.1.8 smswho

Display users connected to smsd

Parameters:

-v	Display software version and command syntax
-u	Only display unique user names

11.2 Exit codes

The client programs use the following exit codes:

2	Error in serialisation file
3	Error in configuration file
4	Invalid argument
6	Could not connect to smsd
13	Invalid recipient
16	Could not read recipients file
52	Out of disk space

12. Keyword reference

Here we describe the syntax of each keyword in the configuration file, SMSDIR/config.

The keywords below are used in the configuration file SMSDIR/config. The file can be modified with an ordinary text editor. After modifying the file the smsd has to be stopped and restarted for the changes to become activated.

When using multiple modem devices keywords specific for a certain tty (local keywords) can be used by using the following syntax:

```
LINE tty <
keyword
keyword
…
>
```

For example:

```
LINE tty1a <
INIT_STRING="AT&H3"
DIAL_PREFIX="0W"
>
```

This makes it possible to use different modems etc.

Please note that the global keywords, keywords used for all lines, must be defined before the local keywords. If a keyword is used more than once the last instance will be used.

12.1 General parameters

12.1.1 LINES

LINES=tty1[:tty2...]

Defines which port(s) to use. /dev should not be included in the name. Please note that the number of ports used is limited by the license as well.
Example: LINES=tty1A

12.1.2 ACCESS_HTTP

ACCESS_HTTP=string

Specifies which hosts or network can access the HTTP server.

Example:

```
ACCESS_HTTP=10.1.11.10/32,10.5.1.0/24
```

See also: USER_FILE

12.1.3 ACCESS_SMTP

ACCESS_SMTP="string"

Specifies which hosts or network can access the SMTP server.

Example:

```
ACCESS_SMTP=10.1.11.10/32,10.5.1.0/24
```

See also: USER_FILE

12.1.4 ACCEPT_USERS

ACCEPT_USERS="user1[:user2 ...]"

Specifies that only the given users are allowed to use a modem device. Useful when having multiple devices where a specific device should be dedicated to specific users.

See also: DENY_USERS

12.1.5 ADMINISTRATOR

ADMINISTRATOR="string"

Defines which users are system administrators. As a SMS system administrator you can display and manage all users message queues. More than one administrator can be defined by separating user names with colon ":". Example:

```
ADMINISTRATOR="root:kalle".
```

12.1.6 BROKEN_SELECT

BROKEN_SELECT

Not used.

12.1.7 BUSY_FAIL

BUSY_FAIL=tries

Defines the number of transmission tries when the recipient number is busy. If BUSY_FAIL is not defined the number of tries is defined by MAX_TRIES.

12.1.8 CHAR_SET

CHAR_SET=character set or
CHARACTER_SET=character set

Specifies the character set to be used.

Default: 5 (swedish 7-bit mapping)

12.1.9 CIMD_LOGIN

CIMD_LOGIN=login

Specifies the login to use with the CIMD protocol.

12.1.10 CIMD_PASSWORD

CIMD_PASSWORD=password

Specifies the password to use with the CIMD protocol.

12.1.11 CIMD_VP

CIMD_VP=seconds

Defines, for the CIMD protocol, how long, in seconds, a message will be stored in the SMSC. A negative number indicates that the message should not be stored if it cannot be sent immediately.

12.1.12 DEBUG

DEBUG

Write debug information to standard output, that is to the display.

12.1.13 DEFAULT_GATEWAYS

DEFAULT_GATEWAYS

Specifies that the default gateways (dial-up gateways for swedish operators) should be added. This makes it possible to add a gateway to the existing ones. If DEFAULT_GATEWAYS is omitted none of the default gateways will be added if there is a GATEWAY definition in the config file.

12.1.14 DENY_USERS

DENY_USERS="user1[:user2 ...]"

Specifies that the given users are not allowed to use a modem device. Useful when having multiple devices where a specific device should not be available to specific users.
See also: ACCEPT_USERS

12.1.15 DIAL_PREFIX

DIAL_PREFIX="string"

Defines a prefix added to the phone number when dialing out. For example, use something like DIAL_PREFIX="0W" to get through a switchboard.

12.1.16 DIAL_TIMEOUT

DIAL_TIMEOUT=seconds

Defines the number of seconds to wait after dialing the phone number, before the try is considered a failure if a connection has not been established.

12.1.17 DIRECT

DIRECT=bps,bits,parity,stop bits

Used to define a direct serial connection instead of a modem connection to the SMSC.

12.1.18 DOMAIN

DOMAIN=domain

Specifies the domain name to use when sending e-mail.

12.1.19 EXEC_WORKDIR

EXEC_WORKDIR=directory

Defines the work directory to use for commands executed by EXECUTE_AFTER_SEND.

12.1.20 EXECUTE_AFTER_RECEIVE

EXECUTE_AFTER_RECEIVE=program

Gives a program which is executed after receiving a message.The program is executed with the following arguments in the sequence given:

Sender	The sender of the message.
Recipient	The recipient of the message (may be emtpy).
Message	The actual message.

12.1.21 EXECUTE_AFTER_SEND

EXECUTE_AFTER_SEND=program

Defines a program, or script, to be executed after a message has been transmitted or is considered a failure.The program is executed with the following parameters:

ID	Message id
Rec number	The recipient number
Result code	A numeric value: 0 - OK 6 – No Dialtone 7 – Busy 8 – No Answer
Tries	Number of transmission tries
Note	Note attached to the message. Added with the –n parameter for sms
Secs connected	Number of seconds connected during the transmission tries

Finished	Time when the message was finished, that is sent or failed
User	User who sent the fax
SCTS	Service Center Time Stamp from SMSC (may be emtpy)
Error text	Error text from SMSC (may be emtpy)
Message	The actual message

12.1.22 EXIT_STRING

EXIT_STRING="string"

Specifies a command string to be sent to the modem after a transmission. Please note that ATZ (reset) is always sent to the modem before the specified string.

12.1.23 FLOW

FLOW=value

Use FLOW=0 to disable hardware flow control for modem connections.

12.1.24 GATEWAY

GATEWAY=prefix:name:type:address:port:protocol[:extra]

Makes it possible to define custom gateways.

Europolitan via modem:

```
GATEWAY=0708:Euro:MODEM:0708222109:0:CIMD
```

Generic UCP via IP (port 7169):

```
GATEWAY=DEFAULT:Generic:IP:10.1.2.3:7169:UCP
```

Prefix	Prefix for gateway, for example 0708 for Europolitan. Can also be DEFAULT.
Name	Name of the gateway.
Type	Type of connection: IP or MODEM.
Address	IP-address or phone number.
Port	If IP is used the port number is entered here. Not used when not using IP.
Protocol	Protocol to use CIMD, COMVIQ, CIMD2, EURO, SMPP, TAP, TELIA, THS, UCP or UCPE.
Extra	Parameters as in the *Gateway keywords* section below.

12.1.25 HOST

HOST=string

Specifies which host that runs the SMS Gateway server, smsd, usually the local machine. An IP address or host name can be used. If a host name is used the name resolver must work. Hence, using an IP address is more reliable but has to be changed if the IP address of the machine changes.

12.1.26 HTTP_ACCESS

HTTP_ACCESS=string

Specifiy rules for HTTP access.

12.1.27 HTTP_ENABLE

HTTP_ENABLE

Enable the SMS Gateway integrated HTTP server.

12.1.28 HTTP_PORT

HTTP_PORT=number

Specifies which port the HTTP server should listen on.

Default: 7181

12.1.29 ID

ID=string

Specifies the sender or originator for a message. This, for example, corresponds to the OAdC field in UCP. Usually the originating GSM subscriber number which the recipient would reply to.

12.1.30 INIT_STRING

INIT_STRING="string"

Defines a initialisation string to be sent to the modem before dialing out. Here you can add modem-specific commands needed to set up flow control etc. Example:

```
INIT_STRING="AT&K4M1L2"
```

12.1.31 INT_PREFIX

INT_PREFIX=string

Specifies the prefix for international calls. 00 in Sweden.

12.1.32 LANG

LANG=language code or
LANGUAGE=language code

Specifies the language to be used. Possible values eng, swe and swe8.
Default: eng

12.1.33 LD_PREFIX

LD_PREFIX=string

Specifies the long-distance prefix. Default: 0 in Sweden

12.1.34 LINE_FAIL

LINE_FAIL=tries

Specifies the number of tries when the modem cannot be initiated.

12.1.35 LOCK_DIR

LOCK_DIR=library

Specifies which directory to use for tty lock files.

12.1.36 LOCKING_STYLE

LOCKING_STYLE=value

Indicates which type of locked files should be created when locking fax lines.
This is dependent on the operating system.

Values:

1	Linux
2)	SCO
3	System V.4
4	HP-UX

12.1.37 MAIL_ON_ERROR

MAIL_ON_ERROR

Specifies that an email should be sent to the user sending the message when the
message could not be sent.

12.1.38 MAIL_ON_SUCCESS

MAIL_ON_SUCCESS

Specifies that an email should be sent to the user sending the message after the
message has been sent.

12.1.39 MAX_RETRIES

MAX_RETRIES=tries

Specifies the maximum number of tries to send a message before the message is
put in the failed messages queue.

12.1.40 MAX_SEND_ENTRIES

MAX_SEND_ENTRIES=number

Specifies the maximum number of messages to send to the SMSC during one session. Some SMSC's only accept a certain number of messages during one session.

12.1.41 MINICALL_GATEWAY

MINICALL_GATEWAY=telno

Specifies the number for Telia:s Minicall Text Gateway
Default: 020-910028

12.1.42 MINICALL_ID

MINICALL_ID=id

Specifies the user id for Minicall Text.

12.1.43 MINICALL_PASSWORD

MINICALL_PASSWORD=password

Specifies the password for Minicall Text.

12.1.44 NO_STATISTICS

NO_STATISTICS

Specifies that no statistics information should be written to ETCDIR/stats.

12.1.45 PORT

PORT=value

Specifies which port to use for communication between smsd and the client programs.
Default: 6002

12.1.46 PULSE

PULSE

Indicates that pulse dialing should be used.

12.1.47 QUIET

QUIET

Specifies that client programs should be quiet and not write information to stdout as done by default. This is the same as using the –q option with the sms commands.

12.1.48 RETRY_TIME

RETRY_TIME=minutes

Defines the number of minutes between two consecutive transmission tries.

12.1.49 SMTP_ENABLE

SMTP_ENABLE

Enable the SMS Gateway integrated SMTP server.

12.1.50 SMTP_PORT

SMTP_PORT=number

Specifies which port the SMTP server should listen on.

Default: 7183

12.1.51 SPOOLDIR

SPOOLDIR=directory

Defines the directory where files used during transmission are stored.
Default: /usr/spool/sms

12.1.52 SYMBOL_SET

SYMBOL_SET=character set

Defines the symbol set to be used.Values: 0 = Roman-8, 1 = Latin-1 (ISO 8859-1).
Default: 1 (Latin-1)

12.1.53 TAP_PASSWORD

TAP_PASSWORD=string

Specify the default password for a TAP gateway.

12.1.54 TONE

TONE

Specifies that tone dialing should be used (default).

12.1.55 UCP_MT

UCP_MT=string

Specifies the default message type for UCP.

12.1.56 UCP_NRQ

UCP_NRQ=string

Specifies the default NRQ for UCP. Set this to 1 if you want the delivery to be confirmed before the connection is dropped. 0 means to ignore whether the message could be delivered or not, always successful.

12.1.57 UCP_OT

UCP_OT=string

Specifies the OT (Operation Type) for UCP.

Default value: 51

12.1.58 UCP_VP

UCP_VP=string

Specifies the default validity period for UCP gateways. This is the period in number of seconds a message will be stored in the SMSC if it cannot be delivered.

12.1.59 USE_POOL

USE_POOL=connections

Specifies that we want static IP. The maximum number of connections is given as argument.

12.1.60 USE_SHM

USE_SHM

Specify that the server should use Share Memory for inter-process communication. Not all platforms support Shared Memory.

12.1.61 USER_FILE

USER_FILE=filename

Specifies a file to use for valid users of the HTTP or SMTP server.

Format of the file: username<TAB>password<TAB>type of server
Example:

```
user1                            secret          HTTP
user2                            moresecret
HTTP,SMTP
user@domain.com                  sec123
HTTP,SMTP
```

12.2 Gateway parameters

These parameters can be specified in the last field (extra) of a gateway definition. Multiple parameters can be specfied ","-separated.

12.2.1 AUTHNPI

AUTHTONNPI=integer

X.

12.2.2 AUTHTON

AUTHTON=integer

X.

12.2.3 MODE

MODE=string

String can containg the letters 'S' and 'R' to specify whether the gateway should be used for sending messages, receiving messages or both.

12.2.4 NOSCA

NOSCA

Specifies that SCA (Service Center Address) should not be included in PDU when sending messages.

12.2.5 OPERATION

OPERATION=string

If specified this operation will be used as send operation.

For example OPERATION=51 when using UCP will specify that the UCP operation 51 will be used to send messages.

12.2.6 PASSWORD

PASSWORD=string

If specified this password will be used when logging in to gateway.

12.2.7 SCA

SCA=string

If specified string will be used to set SCA (Sercice Center Address) during init of a GSM phone.

12.2.8 SESSION_PASSWORD

SESSION_PASSWORD=string

Specifies a password to use with the UCP session management operation, when logging in to a UCP SMSC.

12.2.9 SESSION_USERNAME

SESSION_USERNAME=string

Specifies a username/Large Account to use with the UCP session management operation, when logging in to a UCP SMSC.

12.2.10 SMSID

SMSID=string

Specifies a sender, originating address, for the specific gateway.

12.2.11 STORE

STORE=string

String can be "SM" or "ME" to specify which message store (SIM card or Memory) should be used when using a GSM device as gateway.

12.2.12 WAITFOR

WAITFOR=string

Specify a string to wait for after connect.