https://wiki.teltonika-networks.com/view/Template:Gsmctl_commands

Template:Gsmctl commands

The information in this page is shown in accordance with firmware versions {{{fw_version}}}.

□

Contents

Introduction

gsmctl is an SSH command used to communicate with a {{{name}}} router's modem. In other words, *gsmctl* relays **AT** commands (a set of instructions used to control a modem) to the router's modem; thus, providing the user with a way to control and obtain information from the modem via SSH. This can be used to either obtain certain modem related variables (signal strength, operator, connection state, etc.) or to execute certain actions (sending SMS messages, changing the frequency band, etc.).

This article provides a complete overview on *gsmctl* commands available in {{{name}}} routers.

Prerequisites

gsmctl commands can be used on all {{{name}}} routers via any type of command line interface (CLI) supported by the router. So all you need is:

- a {{{name}}} router
- knowledge on how to login via a **command line interface**

gsmctl options

gsmctl commands are used in tandem with various options that specify what type of action should be executed.

Example structure

Individual options are described in separate subsections of this article. To find the information you are looking for faster, refer to the table of contents at the top of the page or use your browser's "Find in page" feature (**Control + F**).

Each option is presented with its usage syntax and an example command. For easier differentiation of the different elements that make up the examples, different colors are used:

- options are highlighted in blue
- responses are highlighted in red
- additional parameters are highlighted in purple

Two execution methods

Each option can be executed in two distinct ways. One is shorter, the other is longer and more descriptive. For example, to obtain the modem's IMEI you can either use:

- short version: ***gsmctl -i***
- long version: ***gsmctl --imei***

In both cases, you just type the desired command and press the "Enter" key on your keyboard to execute that command. The response will be printed out as a **standard output** (**stdout**) string in your terminal window.

Combined options

Multiple options can be combined together to obtain more than one parameter at a time. For example, to obtain the name of the operator used, signal strength and connection type with one command you can use one of the following:

- short version: ***gsmctl -oqt***
- long version: ***gsmctl --operator --signal --conntype***

Note that in the shorter version multiple options can be used together with one hyphen (-) symbol with no spacing, while in the longer version different options must be separated by spaces and before each option a double hyphen (--) is required.

Basic options

This section overviews basic *gsmctl* options, usually related to obtaining certain modem related information.

Get IP address of logical interface

Note: From FW version *R_00.07.03* this option is deprecated. IP addresses can be called with `ubus call network.interface.<interface> status`.

To obtain the IP address of a network interface, use ***-p*** or ***--ip*** options.

Usage syntax:

```
gsmctl -p, --ip <INTERFACE>
```

Where <*INTERFACE*> is the name of a network interface.

Example: obtaining the IP address of the mobile connection interface:

```
root@Teltonika:~# gsmctl -p wwan0
10.139.75.221
```

Where ***wwan0*** is the name of the mobile interface when the connection type is set to QMI (default). You can use the ***ifconfig*** command to check the names of existing network interfaces.

Get number of bytes sent

To obtain the number of bytes sent (TX bytes) by a network interface, use ***-e*** or ***--bsent*** options.

Usage syntax:

```
gsmctl -e, --bsent <INTERFACE>
```

Where *<INTERFACE>* is the name of a network interface.

Example: obtaining the number of bytes sent (TX bytes) by the mobile connection interface:

```
root@Teltonika:~# gsmctl -e wwan0
36335
```

Where ***wwan0*** is the name of the mobile interface when the connection type is set to QMI (default). You can use the ***ifconfig*** command to check the names of existing network interfaces.

Possible responses:

- An integer number representing **bytes** (not bits) sent

Get number of bytes received

To obtain the number of bytes received (RX bytes) by a network interface, use ***-r*** or ***--brecv*** options.

Usage syntax:

```
gsmctl -r, --brecv <INTERFACE>
```

Where *<INTERFACE>* is the name of a network interface.

Example: obtaining the number of bytes received (RX bytes) by the mobile connection interface:

```
root@Teltonika:~# gsmctl -r wwan0
92551
```

Where ***wwan0*** is the name of the mobile interface when the connection type is set to QMI (default). You can use the ***ifconfig*** command to check the names of existing network interfaces.

Possible responses:

- An integer number representing **bytes** (not bits) received

Get network connection state

To obtain the network connection state, use ***-j*** or ***--connstate*** options.

Usage syntax:

```
gsmctl -j, --connstate
```

Example: obtaining the current network connection state:

```
root@Teltonika:~# gsmctl -j
connected
```

Possible responses:

- connected
- disconnected

Get network link state

To obtain the registration state of the mobile network, use ***-g*** or ***--netstate*** options.

Usage syntax:

```
gsmctl -g, --netstate
```

Example: obtaining the registration state of the mobile network:

```
root@Teltonika:~# gsmctl -g
registered (home)
```

Possible responses:

- registered (home)
- registered (roaming)
- unregistered
- searching
- unknown

Get device IMEI

To obtain the modem's International Mobile Equipment Identity (IMEI), use ***-i*** or ***--imei*** options.

Usage syntax:

```
gsmctl -i, --imei
```

Example: obtaining the modem's IMEI:

```
root@Teltonika:~# gsmctl -i
990000862471854
```

Possible responses:

- a 15 digit sequence of decimal numbers

Get SIM ICCID

To obtain the Integrated Circuit Card Identifier (ICCID) of the SIM card that is currently in use, use ***-J*** or ***--iccid*** options.

Usage syntax:

```
gsmctl -J, --iccid
```

Example: obtaining the ICCID of the SIM card in use:

```
root@Teltonika:~# gsmctl -J
89310410106543789301
```

Possible responses:

- a 19 or 20 digit sequence of decimal numbers

Get device model

To obtain the modem's model name, use ***-m*** or ***--model*** options.

Usage syntax:

```
gsmctl -m, --model
```

Example: obtaining the modem's model name

```
root@Teltonika:~# gsmctl -m
model_name
```

Possible responses:

- a string of letters and digits representing the model name

Get device manufacturer

To obtain the modem's manufacturer's name, use ***-w*** or ***--manuf*** options.

Usage syntax:

```
gsmctl -w, --manuf
```

Example: obtaining the modem's manufacturer's name:

```
root@Teltonika:~# gsmctl -w
manufacturers_name
```

Possible responses:

- a string of letters and digits representing the manufacturer's name

Get device serial number

To obtain the modem's serial number, use ***-a*** or ***--serial*** options.

Usage syntax:

```
gsmctl -a, --serial
```

Example: obtaining the modem's serial number:

```
root@Teltonika:~# gsmctl -a
990000862471854
```

Possible responses:

- a 15 digit sequence.

Get device revision number

To obtain the modem's revision number (firmware version), use ***-y*** or ***--revision*** options.

Usage syntax:

```
gsmctl -y, --revision
```

Example: obtaining the modem's revision number:

```
root@Teltonika:~# gsmctl -y
EC25EFAR02A08M4G
```

Possible responses:

- a string of letters and digits representing the revision number (firmware version)

Get IMSI

To obtain the International Mobile Subscriber Identity (IMSI), use ***-x*** or ***--imsi*** options.

Usage syntax:

```
gsmctl -x, --imsi
```

Example: obtaining IMSI:

```
root@Teltonika:~# gsmctl -x
246029999999999
```

Possible responses:

- a 15 digit (or less) sequence of decimal numbers

Get SIM card state

To obtain the state of the SIM card currently in use, use ***-z*** or ***--simstate*** options.

Usage syntax:

```
gsmctl -z, --simstate
```

Example: obtaining the current SIM state:

```
root@Teltonika:~# gsmctl -z
inserted
```

Possible responses:

- inserted
- not inserted

Get PIN state

To obtain the PIN state of the SIM card currently in use, use ***-u*** or ***--pinstate*** options.

Usage syntax:

```
gsmctl -u, --pinstate
```

Example: obtaining the PIN state:

```
root@Teltonika:~# gsmctl -u
OK
```

Possible responses:

- OK
- SIM not inserted.

Get GSM signal (RSSI) level

To obtain the router's current signal strength (RSSI) value, use ***-q*** or ***--signal*** options.

Usage syntax:

```
gsmctl -q, --signal
```

Example: obtaining the router's current signal strength:

```
root@Teltonika:~# gsmctl -q
-55
```

Note: From FW version *R_00.07.03* this argument returns all signal related values.

- Example for **3G** network type:

```
root@Teltonika:~# gsmctl -q
RSSI: -67
RSCP: -68
ECIO: -5
```

- Example for **4G** network type:

```
root@Teltonika:~# gsmctl -q
RSSI: -60
RSRP: -103
SINR: 2
RSRQ: -16
```

Possible responses:

- an integer number ranging from -113 to -51 (in dBm)

Get WCDMA RSCP level

To obtain the router's current WCDMA RSCP level, use ***-X*** or ***--rscp*** options.

Note: From FW version *R_00.07.03* this value has been moved under -q argument.

Usage syntax:

```
gsmctl -X, --rscp
```

Example: obtaining the RSCP level:

```
root@Teltonika:~# gsmctl -X
-77
```

Possible responses:

- an integer number ranging from -124 to 0
- service mode not supported (this response is returned when the router's current service mode is not WCDMA)

Get WCDMA EC/IO level

To obtain the router's current WCDMA EC/IO level, use ***-E*** or ***--ecio*** options.

Note: From FW version *R_00.07.03* this value has been moved under -q argument.

Usage syntax:

```
gsmctl -E, --ecio
```

Example: obtaining the EC/IO level:

```
root@Teltonika:~# gsmctl -E
-4.000000
```

Possible responses:

- an integer number ranging from -20 to 0
- service mode not supported (this response is returned when the router's current service mode is not WCDMA)

Get LTE RSRP level

To obtain the router's current LTE RSRP level, use ***-W*** or ***--rsrp*** options.

Note: From FW version *R_00.07.03* this value has been moved under -q argument.

Usage syntax:

```
gsmctl -W, --rsrp
```

Example: obtaining the RSRP level:

```
root@Teltonika:~# gsmctl -W
-103
```

Possible responses:

- an integer number ranging from >= -80 to <= -100 (dBm)
- service mode not supported (this response is returned when the router's current service mode is not LTE)

Get LTE SINR level

To obtain the router's current SINR level, use ***-Z*** or ***--sinr*** options.

Note: From FW version *R_00.07.03* this value has been moved under -q argument.

Usage syntax:

```
gsmctl -Z, --sinr
```

Example: obtaining the SINR level:

```
root@Teltonika:~# gsmctl -Z
16.9
```

Possible responses:

- a real number ranging from 0.0 to 20.0 (dB)
- service mode not supported (this response is returned when the router's current service mode is not LTE)

Get LTE RSRQ level

To obtain the router's current RSRQ level, use ***-M*** or ***--rsrq*** options.

Note: From FW version *R_00.07.03* this value has been moved under -q argument.

Usage syntax:

```
gsmctl -M, --rsrq
```

Example: obtaining the RSRQ level:

```
root@Teltonika:~# gsmctl -M
-8.000000
```

Possible responses:

- an integer number ranging from <= - 20 to >= -10 (dB)
- service mode not supported (this response is returned when the router's current service mode is not LTE)

Get cell ID parameter

To obtain the ID of the cell that the SIM card is connected to, use ***-C*** or ***--cellid*** options.

Usage syntax:

```
gsmctl -C, --cellid
```

Example: obtaining the cell ID:

```
root@Teltonika:~# gsmctl -C
1037089
```

Possible responses:

- a 7 digit sequence of decimal numbers indicating the cell ID
- N/A - returned when the SIM card is not inserted or unregistered

Get name of operator used

To obtain the name of the operator used, use ***-o*** or ***--operator*** options.

Usage syntax:

```
gsmctl -o, --operator
```

Example: obtaining the operator name:

```
root@Teltonika:~# gsmctl -o
LT BITE GSMC
```

Possible responses:

- a string of text representing the network operator's name
- N/A - returned when the SIM card is not connected to any operator

Get operator number

To obtain the network operator's number, use ***-f*** or ***--opernum*** options.

Usage syntax:

```
gsmctl -f, --opernum
```

Example: obtaining the network operator's number:

```
root@Teltonika:~# gsmctl -f
24602
```

Possible responses:

- a 6 digit sequence of decimal numbers
- N/A - returned when the SIM card is not connected to any operator

Get data carrier type

To obtain the connection type, use ***-t*** or ***--conntype*** options.

Usage syntax:

```
gsmctl -t, --conntype
```

Example: obtaining the connection type:

```
root@Teltonika:~# gsmctl -t
LTE
```

Possible responses:

- NOSERVICE - NOSERVICE mode
- GSM - GSM/GPRS/EDGE mode
- WCDMA - WCDMA/HSDPA/HSPA mode
- TDSCDMA - TDSCDMA mode
- LTE - LTE mode

- CDMA - CDMA mode
- EVDO - EV-DO/eHRPD mode
- CDMA-EVDO - CDMA/EV-DO(eHRPD) mode

Get module temperature

To obtain the module's temperature, use ***-c*** or ***--temp*** options.

Usage syntax:

```
gsmctl -c, --temp
```

Example: obtaining the module's temperature:

```
root@Teltonika:~# gsmctl -c
360
```

Possible responses:

- an integer number representing the module's current temperature (in 0.1 degrees Celsius (°C))

Get PIN/PUK count

To obtain the PIN/PUK count, use ***-B*** or ***--pincount*** options.

Usage syntax:

```
gsmctl -B, --pincount
```

Example: obtaining the

```
root@Teltonika:~# gsmctl -B
3
```

Possible responses:

- an integer number representing the amount of PIN/PUK attempts left
- N/A - returned when the SIM card is not inserted

Get network information

To obtain information related to the mobile network information, use ***-F*** or ***--network*** options.

Usage syntax:

```
gsmctl -F, --network
```

Example: obtaining mobile network information:

```
root@Teltonika:~# gsmctl -F
+QNWINFO: "FDD LTE",46001,"LTE BAND 3",1650
```

Possible responses:

- response syntax: +*QNWINFO: <Act>,<oper>,<band>,<channel>*
  Where:
  - ***<Act>*** - service mode
  - ***<oper>*** - operator number
  - ***<band>*** - frequency band used
  - ***<channel>*** - channel ID

Get serving cell information

To obtain the serving cell information, use ***-K*** or ***--serving*** options.

Usage syntax:

```
gsmctl -K, --serving
```

Example: obtaining the serving cell information

```
root@Teltonika:~# gsmctl -K
+QENG:
"servingcell","NOCONN","LTE","FDD",246,02,FD317,109,1850,3,5,5,92,-108,-12,-7
6,14,-
MEIG modem output:
+SGCELLINFOEX:LTE,FDD
LTE,246,02,1037079,109,4051,23,146,3,100,1850,19850,-63,-99,-13,199,19,4,255,
-,-,4,-,0,-,0,0,0
```

Note: From FW version *R_00.07.03* the values are returned in a different format. Example:

```
root@Teltonika:~# gsmctl -K
Access tech: LTE | TDD mode: FDD | MCC: 246 | MNC: 2 | UE state: 3
```

Get neighbour cell information

To obtain the neighbor cell information, use ***-I*** or ***--neighbour*** options.

Usage syntax:

```
gsmctl -I, --neighbour
```

Example: obtaining the neighbour cell information

```
root@Teltonika:~# gsmctl -I
+QENG: "neighbourcell intra","LTE",522,269,-9,-87,-58,0,-,-,-,-,-
```

Print gsmctl version

To find out the current *gsmctl* version, use ***-v*** or ***--version*** options.

Usage syntax:

```
gsmctl -v, --version
```

Example: obtaining the *gsmctl* version

```
root@Teltonika:~# gsmctl -v
GSMCTL version: 0.2b
```

Possible responses:

- a string type output indicating the *gsmctl* version

Get operator station time

To obtain the operator station, use ***-H*** or ***--modemtime*** options with time argument (1 - GMT, 2 - local).

Usage syntax:

```
gsmctl -H, --modemtime <1/2>
```

Example: obtaining the operator time

```
root@Teltonika:~# gsmctl -H 1
22/12/01,12:27:14
```

Get modem info in json format

To obtain the full modem information in JSON format, use ***-E*** or ***--info*** options.

Note: This argument is supported from FW version *R_00.07.03*.

Usage syntax:

```
gsmctl -E, --info
```

Example: obtaining the modem information

```
root@Teltonika:~# gsmctl -E
{
"name": "Quectel EG06-E",
"model": "EG06-E",
"manuf": "Quectel",
"driver": "Quectel EG06 AT",
"usb_id": "3-1",
...
```

Reboot the modem

To reboot the modem, use ***-Q*** or ***--reboot*** options. After the command is executed, the modem will start rebooting.

Usage syntax:

```
gsmctl -Q, --reboot
```

Example: rebooting the modem

```
root@Teltonika:~# gsmctl -Q
Modem was reset
```

Possible responses:

- Modem was reset

Shutdown the modem

To shutdown the modem, use ***-D*** or ***--shutdown*** options. After the command is executed, the modem will stay shut off up to a **maximum of 60 s.** and will then start up again.

Usage syntax:

```
gsmctl -D, --shutdown
```

Example: shutting down the modem

```
root@Teltonika:~# gsmctl -D
OK
```

Possible responses:

- OK

List available options

Using ***-h*** or ***--help*** options prints of all available *gsmctl* options with descriptions and usage syntax examples.

Usage syntax:

```
gsmctl -h, --help
```

Example: printing a list of available *gsmctl* options

```
root@Teltonika:~# gsmctl -h
usage: gsmctl OPTIONS
 -F, --network                  Get network information
 -e, --bsent <INTERFACE>        Get number of bytes sent
 -r, --brecv <INTERFACE>        Get number of bytes recieved
 ...
```

Possible responses:

- a list of options that can be used with *gsmctl*

SMS management options

This section overviews *gsmctl* options related to SMS management. Every SMS related command uses the "***-S***" or "***--sms***" along with another option.

Read SMS by index

To read a single SMS message, use ***-S -r*** or ***--sms --read*** options. Additionally you have to specify the ***<INDEX>*** of the message that you wish to read. The *<INDEX>* is an integer number that defines the position of a message in the SMS message list. It can range from 1 to however many messages your SMS memory can store.

Usage syntax:

```
gsmctl -S -r, --sms --read <INDEX>
```

Example: reading the first message in the SMS list

```
root@Teltonika:~# gsmctl -S -r 1
Index: 1
Date: 2018-08-02 10:33:20
Sender: +37061111111
Status: read
Text: Hello
```

Possible responses:

- five lines of string type output indicating the following information related to the SMS message:
  - Index - an integer number indicating the position of the message in the SMS message list
  - Date - the date the message was received
  - Sender - sender's phone number
  - Status - indicates whether the message has been previously read. (Possible values: *read* or *new*)
  - Text - the body of the message
- no message - indicates that an SMS message with the specified <*INDEX*> does not exist
- out of range - indicates that the specified <*INDEX*> is out of range of the SMS message list

List SMS by type

To print a list of SMS messages, use ***-S -l*** or ***--sms --list*** options. Additionally you have to specify the ***<TYPE>*** of the list. <*TYPE*> can either ***read***, ***new*** or ***all***

Usage syntax:

```
gsmctl -S -l, --sms --list <TYPE>
```

Example: printing the list of all new (unread) SMS messages

```
root@Teltonika:~# gsmctl -S -l new
Index: 19
Date: 2018-08-03 08:26:36
Sender: +37061111111
Text: status
Status: new
```

Possible responses:

- multiple entries comprised of five lines of string type output indicating the following information related to an SMS message:
  - Index - an integer number indicating the position of the message in the SMS message list
  - Date - the date the message was received
  - Sender - sender's phone number
  - Text - the body of the message
  - Status - indicates whether the message has been previously read. (Possible values: *read*

or *new*)

Print SMS memory usage

To check the SMS memory usage, use ***-S -t*** or ***--sms --total*** options.

Usage syntax:

```
gsmctl -S -t, --sms --total
```

Example: checking the SMS memory usage

```
root@Teltonika:~# gsmctl -S -t
Used: 28
Total: 50
```

Possible responses:

- two lines of string type output
  - Used - used memory space (integer)
  - Total - total memory space (integer)

Delete SMS by index

To delete an SMS message, use ***-S -d*** or ***--sms --delete*** options. Additionally you have to specify the ***<INDEX>*** of the message that you wish to delete. The *<INDEX>* is an integer number that defines the position of a message in the SMS message list. It can range from 1 to however many messages your SMS memory can store.

Usage syntax:

```
gsmctl -S -d, --sms --delete <INDEX>
```

Example: deleting the first SMS message

```
root@Teltonika:~# gsmctl -S -d 1
OK
```

Possible responses:

- OK - indicates that the message with specified <INDEX> has been deleted successfully
- out of range - indicates that the specified <INDEX> is out of range of the SMS message list

Send SMS

To send an SMS message, use ***-S -s*** or ***--sms --send*** options.

Usage syntax:

```
gsmctl -S -s, --sms --send "<NUMBER> <TEXT>"
```

Example: sending a "Hello" message to the number +37011111111

```
root@Teltonika:~# gsmctl -S -s "0037011111111 Hello"
```

Possible responses:

- If response in terminal "OK", SMS was sent successfully.

Send SMS encoded in base64

First you need to create a /tmp/.smstext file and append some text you want to send

Note: From FW version *R_00.07.03* this argument has been removed.

To send a base64 SMS message, use ***-S -b*** or ***--sms --send-b64*** options

Usage syntax:

```
gsmctl -S -b,--sms --send-b64 <NUMBER>
```

Example:

```
root@Teltonika:~# gsmctl -S -b +37061234567
```

Possible responses:

- If response in terminal "OK", SMS was sent successfully.

Auxiliary options

Send AT command to device

To send AT command to device, use ***-A*** or ***--at*** options.

Usage syntax:

```
gsmctl -A, --at 'AT+command'
```

Example:

```
root@Teltonika:~# gsmctl -A 'AT+CLCK="SC",2'
```

Possible responses:

- This example will return SIM card pin lock state ("+CLCK: 0" - pin lock disabled).

See also

- AT Commands