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#  CLI Command List

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# Introduction

The CLI Command formation is in following, but there still have a few exceptions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |

And some of them also need extracommand “apply” to take effect

# Status

## Basic Network

### WAN & Uplink

#### WAN Interface IPv4 Network Status

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| status | 1 | wiface\_ipv4 | ?? | n: 3g index 1 |

#### WAN Interface IPv6 Network Status

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| status | 0 | wiface\_ipv6 | ?? |  |

#### LAN Interface Network Status

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| status | 0 | liface | ?? |  |

#### 3G/4G Modem Status List

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| status | 0 | 3g | ?? |  |
| status | 1 | 3g\_modem | ?? | n: 3g index 1 |
| status | 1 | 3g\_sim | ?? | n: 3g index 1 |
| status | 1 | 3g\_service | ?? | n: 3g index 1 |

### LAN

#### LAN Client List

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| status | 0 | lan\_client | ?? |  |

## DDNS

#### DDNS Status

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| status | 0 | ddns\_status | ?? |  |

# Basic Network

## WAN & Uplink

### physical interface

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| eth | 0 | device\_mode | 0/1 | 0: NAT1: Modem |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| apply | eth |  |  |  |

##### Lan

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| eth | 21 | ipaddr | Ip |  |
| eth | 21 | mask | Ip |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| apply | dhcp |  |  |  |

##### connection

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| sim | 1 | profile\_a | 0/1 | 0: auto-detection1: Manual-configuration |
| sim | 1 | ip\_type\_a | 0/1/2 | 0: IPv41: IPv62:IPv4/6 |
| sim | 1 | pin\_code\_a | pin\_code |  |

##### Manual-configuration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| sim | 1 | apn\_a | str\_apn |  |
| sim | 1 | username\_a | name | 3g/4g |
| sim | 1 | password\_a | passwd | 3g/4g |
| sim | 1 | auth\_a | 0/1/2 | 0: auto 1: pap 2: chap |

##### IP mode

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| sim | 1 | ip\_mode\_a | 0/1 | 0:Dynamic IP1:Static IP |
| sim | 1 | ip\_a | IP Address | Ex:10.10.10.1 |
| sim | 1 | mask\_a | IP Address | Ex:255.255.255.0 |
| sim | 1 | gateway\_a | IP Address | Ex:10.10.10.2 |
| sim | 1 | dns1\_a | IP Address | Ex:168.95.1.1 |
| sim | 1 | dns2\_a | IP Address | Ex:8.8.8.8 |

##### MTU

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| sim | 1 | mtu | 0,68~1500 | 0(disable) |

##### Keep Alive

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| sim | 1 | keep\_alive | on/off | on:enableoff:disable |
| sim | 1 | ka\_ip | IP Address | Ex:8.8.8.8 |
| sim | 1 | ka\_Interval | 2~14400 | unit:sec |

##### SIM Select

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| sim | 0 | sel\_mode | 0/1/2 | 0:auto1:external2:internal |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| apply | sim |  |  |  |

## Port Forwarding

### Remote Adaminstrator

#### Configuration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| nb | 0 | conf\_vs\_enable | on/off | off: Disableon: Enable |
| apply | vs |  |  |  |

#### List

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| nb | 0 | vs\_list | ?? |  |
| nb | 1 | vs\_public\_port |  | specificport: xport range: x-x |
| nb | 1 | vs\_name |  |  |
| nb | 1 | vs\_server\_ip |  |  |
| nb | 1 | vs\_private\_port |  | specificport: xport range: x-x |
| nb | 1 | vs\_protocol | 0/1/2/3 | 0: TCP(6) & UDP(17)1: TCP2: UDP3:Other  |
| nb | 1 | vs\_protocol\_other |  |  |
| nb | 1 | vs\_enable | on/off | off: Disableon: Enable |
| nb | 0 | vs\_del | n |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| apply | vs |  |  |  |

## DDNS

### Configuration

#### Dynamic DNS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| dydns | 0 | enable | on/off |  |
| dydns | 0 | provider | 0/1/2/ | 0: DynDNS.org (Dynamic)1: No-IP.com2: TZO.com |
| dydns | 0 | hostname |  |  |
| dydns | 0 | username |  |  |
| dydns | 0 | password |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| apply | ddns |  |  |  |

## System Operation

### Password & MMI

#### Password

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| sysrelated | 0 | change\_pwd | oldpassword | Enter the old password before change to the new password.The maximum length of the passwordis 9. |

#### MMI

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| mmi | 0 | ui\_loginpwdatkmax | 3 ~ 10 |  |
| mmi | 0 | ui\_admintimeouten | on/off | off: Disableon: Enable |
| mmi | 0 | ui\_admintimeout | 30 ~ 65535 | sec |

### System Information

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| sysrelated | 0 | fw\_version | ?? |  |
| sysrelated | 0 | fw\_date | ?? |  |
| sysrelated | 0 | model\_name | ?? |  |
| sysrelated | 0 | device\_serial\_number | ?? |  |
| sysrelated | 0 | sys\_time | ?? |  |
| sysrelated | 0 | up\_time | ?? |  |

#### Time Server

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| sysrelated | 0 | time\_zone |  | enter command “sysrelated 0 time\_zone” can query time zone number |
| sysrelated | 0 | time\_server |  |  |
| sysrelated | 0 | time\_daylight\_en | on/off | off: Disableon: Enable |
| sysrelated | 0 | time\_daylight\_shour | 0~23 |  |
| sysrelated | 0 | time\_daylight\_sday | 1~31 |  |
| sysrelated | 0 | time\_daylight\_smonth | 1~12 |  |
| sysrelated | 0 | time\_daylight\_ehour | 0~23 |  |
| sysrelated | 0 | time\_daylight\_eday | 1~31 |  |
| sysrelated | 0 | time\_daylight\_emonth  | 1~12 |  |
| apply | time |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| sysrelated | 0 | time\_syncwithserver | 1 | Synchronize immediately |
|  |  |  |  |  |

### Reboot & Reset

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| reboot |  |  |  |  |
| factory\_reset |  |  |  |  |

### Language

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| sysrelated | 0 | set\_language | 1-5 | 1 or others : English5 : Japanese |

### Schedule

#### Configuration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| schedule | 1 | schedule\_name | name |  |
| schedule | 1 | schedule\_policy | 0/1 | 0: Inactivate1:activate |
| schedule | 1 | schedule\_wday1 | 1/2/4/8/16/32/64/127 | 1: Sunday2: Monday4: Tuesday8: Wednesday16: Thursday32: Friday64: Saturday127: Every Day |
| schedule | 1 | schedule\_stime1 | hh:mm |  |
| schedule | 1 | schedule\_etime1 | hh:mm |  |
| schedule | 0 | schedule\_list | ?? |  |
| schedule | 1 | schedule\_del | 0 | n: Time Schedule ID |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| apply | schedule |  |  |  |

# Administration

## Configure & Manage

### SSH

#### Configuration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| sysmgmt | 0 | ssh\_lan\_en | on/off |  |
| sysmgmt | 0 | ssh\_wan\_en | on/off |  |
| sysmgmt | 0 | ssh\_port |  | 1~65535 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| apply | telnet\_ssh |  |  |  |

## AT&NMEA

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Entity | Instance | Parameter | Values | Description |
| at\_nmea\_conf |  |  | on/off |  |

# Example

## CLI thru SSH with Python

**Purpose: Without webGUI accessing to get the related MDG100 information on WInPC/LinuxPC at LAN side.**

**Steps : Create a MDG100\_ssh\_input.py and give a password argument.**

Ex: python MDG100\_ssh\_input.py web\_password

MDG100\_ssh\_input.py code as below:

import paramiko

import sys

if \_\_name\_\_ == '\_\_main\_\_':

 if len(sys.argv) < 2:

 print('no password input')

 sys.exit()

username = "admin"

password = sys.argv[1]

hostname = "172.16.0.1"

port = 22

try:

 client = paramiko.SSHClient()

 client.set\_missing\_host\_key\_policy(paramiko.AutoAddPolicy())

 client.connect(hostname, port, username, password)

 client.exec\_command('cd /tmp')

 print ("==========DHCP Client=========")

 stdin, stdout, stderr = client.exec\_command('status 0 lan\_client ??')

 result = stdout.readlines()

 print (result)

 print ("==========Mode================")

 stdin, stdout, stderr = client.exec\_command('eth 0 device\_mode ??')

 result = stdout.readlines()

 print (result)

 print ("0:NAT 1:bridge")

 print ("=======SIM select==============")

 stdin, stdout, stderr = client.exec\_command('sim 0 sel\_mode ??')

 result = stdout.readlines()

 print (result)

 print ("SIM select 0:auto 1:external 2:internal")

 print ("========== FW date=============")

 stdin, stdout, stderr = client.exec\_command('sysrelated 0 fw\_date ??')

 result = stdout.readlines()

 print (result)

 print ("========== FW Version==========")

 stdin, stdout, stderr = client.exec\_command('sysrelated 0 fw\_version ??')

 result = stdout.readlines()

 print (result)

 print ("=======Cellular status=========")

 stdin, stdout, stderr = client.exec\_command('status 0 3g ??')

 result = stdout.readlines()

 print (result)

 print ("=======Cellular FW=============")

 stdin, stdout, stderr = client.exec\_command('status 1 3g\_modem ??')

 result = stdout.readlines()

 print (result)

 print ("=======SIM status==============")

 stdin, stdout, stderr = client.exec\_command('status 1 3g\_sim ??')

 result = stdout.readlines()

 print (result)

 print ("=======APN name================")

 stdin, stdout, stderr = client.exec\_command('sim 1 apn\_a ??')

 result = stdout.readlines()

 print (result)

 print ("=======APN profile=============")

 stdin, stdout, stderr = client.exec\_command('sim 1 profile\_a ??')

 result = stdout.readlines()

 print ("0:auto 1:manual")

 print (result)

 print ("=======Cellular Signal=========")

 stdin, stdout, stderr = client.exec\_command('status 1 3g\_service ??')

 result = stdout.readlines()

 print (result)

 print ("=======WAN state================")

 stdin, stdout, stderr = client.exec\_command('status 1 wiface\_ipv4 ??')

 result = stdout.readlines()

 print (result)

 print ("=======LAN state===============")

 stdin, stdout, stderr = client.exec\_command('status 0 liface ??')

 result = stdout.readlines()

 print (result)

except Exception:

 print ('Exception!!')

 raise

## Results

==========DHCP Client=========

[' IP Address: 172.16.0.7\n', ' Host Name: AMO\n', ' MAC Address: 7E:F2:2F:CF:7B:F7\n', ' Remaining Lease Time: 1662458054 sec.\n']

==========Mode================

['0\n']

0:NAT 1:bridge

=======SIM select==============

['1\n']

SIM select 0:auto 1:external 2:internal

========== FW date=============

['2022/07/20\n']

========== FW Version==========

['00004D0.M61\_e61.0000\_07201200\n']

=======Cellular status=========

[' Card Info: EC25\n', ' Link Status: Connected\n', ' Signal Strength: 87\n', ' Network Name: Chunghwa Telecom\n']

=======Cellular FW=============

['Module Name: EC25\n', 'IMEI/MEID: 865546046045627\n', 'FW Version: EC25EUGAR06A01M4G\n', 'Temprature: 42\n', 'Band Capability: B1,B3,B7,B8,B20,B28,B38,B40,B41\n']

=======SIM status==============

['PIN Code Status: Ready\n', 'PIN Code Remaining Times: 3\n', 'PUK Code Remaining Times: 10\n']

=======APN name================

['\n']

=======APN profile=============

0:auto 1:manual

['1\n']

=======Cellular Signal=========

['Operator: Chunghwa Telecom\n', 'IMSI: 466924253070800\n', 'MCC: 466\n', 'MNC: 92\n', 'LAC: N/A\n', 'TAC: 8E30\n', 'Cell ID: 960DD0D\n', 'Service Type: LTE\n', 'Band: Band 3\n', 'CS Register Status: Registered\n', 'Roaming Status: Not Roaming\n', 'RSSI: 59\n', 'RSRP: 91\n', 'RSRQ: 8\n', 'RSCP: N/A\n', 'EcIo: N/A\n', 'SINR: 15\n', 'ICCID: 89886920042530708002\n']

=======WAN state================

[' IP: 10.222.26.139\n', ' Subnet Mask: 255.255.255.248\n', ' Gateway: 10.222.26.140\n', ' dns1: 168.95.1.1\n', ' dns2: 168.95.192.1\n', 'Connect Status: Connected\n']

=======LAN state===============

[' IPv4 Address: 172.16.0.1\n', ' IPv4 Subnet Mask: 255.255.255.0\n', ' IPv6 Global IP Address: /64\n', ' MAC Address: 9A:5E:73:33:62:63\n']

## AT commands sample

username = "admin"

password = sys.argv[1]

hostname = "172.16.0.1"

port = 22

try:

 client = paramiko.SSHClient()

 client.set\_missing\_host\_key\_policy(paramiko.AutoAddPolicy())

 client.connect(hostname, port, username, password)

 client.exec\_command('cd /tmp')

 print ("==========cpin==========")

 stdin, stdout, stderr = client.exec\_command('sendATcmd -c at+cpin?')

 result = stdout.readlines()

 print (result)

 print ("=======cgcontrdp========")

 stdin, stdout, stderr = client.exec\_command('sendATcmd -c at+cgcontrdp')

 result = stdout.readlines()

 print (result)

 print ("========cgatt===========")

 stdin, stdout, stderr = client.exec\_command('sendATcmd -c at+cgatt?')

 result = stdout.readlines()

 print (result)

 print ("========cgact===========")

 stdin, stdout, stderr = client.exec\_command('sendATcmd -c at+cgact?')

 result = stdout.readlines()

 print (result)

 print ("========qnwinfo=========")

 stdin, stdout, stderr = client.exec\_command('sendATcmd -c at+qnwinfo')

 result = stdout.readlines()

 print (result)

 print ("=========cops===========")

 stdin, stdout, stderr = client.exec\_command('sendATcmd -c at+cops?')

 result = stdout.readlines()

 print (result)

 print ("==========cgreg=========")

 stdin, stdout, stderr = client.exec\_command('sendATcmd -c at+cgreg?')

 result = stdout.readlines()

 print (result)

 print ("=========creg===========")

 stdin, stdout, stderr = client.exec\_command('sendATcmd -c at+creg?')

 result = stdout.readlines()

 print (result)

except Exception:

 print ('Exception!!')

 raise