CLI in Metel Switches

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REV: Development version: 20240809

About CLI

CLI (Command-Line Interface)

is available for all G series switches.
This document describes how to configure switches via the console on METEL devices and basic information about the console.
You can start a CLI session through an SSH connection via LAN thernet or localy via USB.

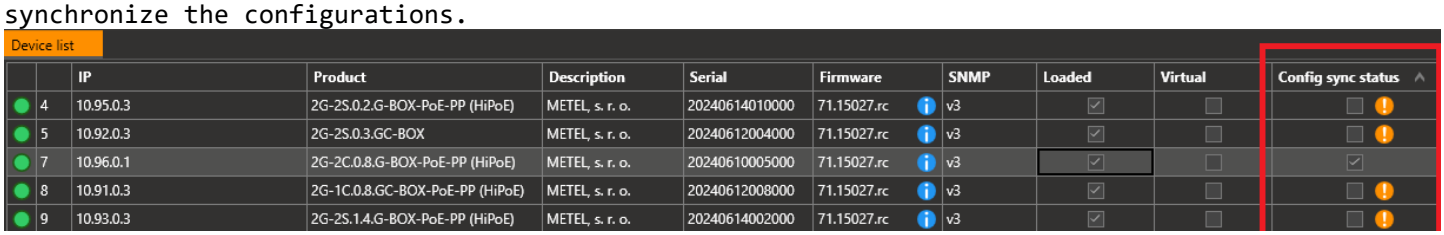
Default credential to CLI

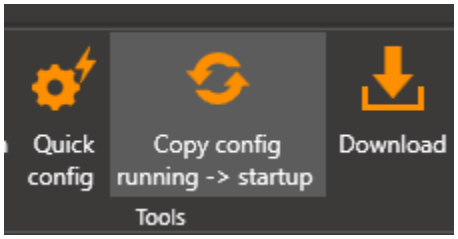
user:metel
password:metel
It is recommended to change the password after the first login. The change is made using the command ***passwd***.

```
login as: metel
metel@10.94.0.3's password:

 ||\/||  ||'''  ''||''  ||'''  ||      ||'''  || ||
 ||  ||  ||''     ||    ||''   ||   :: ||''   || ||
 ''  ''  '''''    ''    '''''  ''''    '''''  '''''

 www.metel.eu                  SECURITY & AUTOMATION
 ------------------------------------------------
generating CLI - ports
generating CLI - rings
SW version 1.1701.15081
HW version "2G-2S.0.3.G-BOX-PoE (PoE+)"
```

Startup and running configuration

Switches G series has two separated configuration named startup and running. The running configuration is the currently running configuration in the switch. The startup configuration is the configuration of the switch that will be loaded after its restart. Every configuration change is automatically saved in the running configuration. When the switch is rebooted, the startup configuration is loaded. Simuland displays whether the startup and running configuration are the same, and displays a warning in the event of a mismatch. If the running configuration is in order according to the customer's requirements, it is necessary to synchronize the configurations.





In the console, you can use the "***show diff***" command to see if the configurations are identical, and if synchronization is necessary, you can use the "***cfg copy running-to-startup***" command.

Supprted Commands

Commands are valid for version

SW version 1.1701.15081

Console control

The command is executed after pressing the <Enter> key, the command must be complete and is always written in full form. Use <**tab**> to display help for available commands. The given list shows all supported commands, but the switch may not support all commands, it depends on the type of switch.

Command beginning with "SHOW"

Displays switch statistics and settings, e.g. port active, PoE enabled, switch IP address, etc. Table shows supported commands:

Command	Description
bootvar	Information about actual running image and version, switch supports two images.
clock	Show the actual time in the switch.
diff	Information if the running and startup config are same or different.
interfaces	Ports information.
description	Description ports.
status	Informations about the all ports.
mac	Mac address.
address-table	Show the learning mac addresses in switch.
power	Show the PoE power.
Px	Show the PoE power for exact port.
all	Show the PoE power for all ports.
privilege	Show the privilege, a value of 15 means the highest authority (administrator). S value of 0 would mean the lowest privilege.
sntp	Status of Simple Network Time Protocol.
configuration	Show the configuration of SNTP.
status	Show the status from SNTP.
version	Show SW and HW version.
running-config	Show actual running configuration.

Command beginning with "CFG"

The config command sets the switch parameters.

Table cfg supported commands:

Command	Description.
boot	The image can be downloaded or uploaded using the SCP protocol they are uploaded to the working memory, which is deleted after the restart.
system	Start the upgrade process | ***cfg boot system /tmp/230502.172.1494.tar***

copy	
running-to-startup	Copy running configuration to startup.
interface	Selecting of interface on the switch.
PortEthernet	Selecting the ethernet port.
Gx,Px	Number of port.
poe_enable	Enable PoE on the port.
poe_disable	Disable PoE on the port.
shutdown	Disable the port.
no_shutdown	Enable the port.
vlan	IP parameters of management switch.
1	Default value for IP parameters.
ip_address	Change IP address | ***cfg interface vlan 1 ip_address 10.1.2.3***
mask	Change mask | ***cfg interface vlan 1 mask 255.255.255.0***
reload	Reboot the switch.
ring	
x	Number of RING.
disable	Disable the ring protocol.
enable	Enable the ring protocol.
sntp	Configuration of SNTP protocol.
enable	Enable the SNTP protocol.
disable	Disable the SNTP protocol.
server1-3	Change IP address for SNTP servers 1 - 3.

bootvar

```
metel@metel:~$ show bootvar
Active-image: 3
  Version: 1.1701.15081
  MD5 Digest: --
  Date: --
  Time: --
Inactive-image: --
  Version: --
  MD5 Digest: --
  Date: --
  Time: --
```

Active-image: Is a value that shows whether the active image is 3 or 4. Switch has two images.
Version: Is software version of image.

---

clock

```
metel@metel:~$ show clock
20:06:12 Nov 11 2023
```

The value **20:06:12** means the time in **HH:MM:SS** format.
The value **NOV 11 2023** means a date in the format **name_month day year.**

---

diff

STARTUP configuration, which will be applied after (re)starting the switch.
Unable to list configuration. But it can be written that there has been a change.
If configurations are same:

```
metel@metel:~$ show diff
startup-config = running-config
```

If the running configuration is different, the following dump occurs:

```
metel@metel:~$ show diff
startup config differs from current running config
```

---

interfaces

Display port description.

```
metel@metel:~$ show interfaces description
Port      Description
-------   -----------
P1        "PORT 1"
P2        "PORT 2"
P3        "PORT 3"
G1        "PORT 4"
G2        "PORT 5"
```

Link status

```
metel@metel:~$ show interfaces status
                                          Flow Link          Back   Mdix
Port     Type         Duplex  Speed Neg      ctrl State       Pressure Mode
-------- ------------ ------  ----- -------- ---- ----------- -------- -------
P1       PORT         --      --    --       --   down        --       --
P2       PORT         --      --    --       --   down        --       --
P3       PORT         --      --    --       --   down        --       --
G1       PORT         --      --    --       --   up          --       --
G2       PORT         --      --    --       --   up          --       --
```

The value **up** means an **active line.**
The value **down** means an **inactive line.**
The value -- means an **unsupported** value.

mac

Show mac address.

```
metel@metel:~$ show mac address-table
  Aging time is 300 sec

    Vlan          Mac Address         Port       Type
------------ --------------------- ---------- ----------
       1       00:23:36:5E:00:03      CPU        self
```

The **CPU** value means the **internal port** on which the processor is connected.
The value **self** means the **device's own MAC address.**
A value of P1 would mean port P1.

---

power

Show the PoE status on the port.

```
metel@metel:~$ show power P1
Current (mA): 59
Power Delivered [mW]: 30000
Voltage (V): 479
```

Show the PoE status on all ports.

```
metel@metel:~$ show power all
                     Power
Port     Current (mA) Delivered [mW] Voltage (V)
-------- ------------ -------------- -----------
P1                 55          30000         479
P2                  0          30000           0
P3                  0          30000           0
G1                 --             --          --
G2                 --             --          --
```

---

privilege

```
metel@metel:~$ show privilege
Current privilege level is 15
```

A value of **15** means the **highest** authority (administrator).
A value of **0** would mean the **lowest** privilege.

---

running-config

A listing of the RUNNING configuration that is currently running.

```
metel@metel:~$ show running-config
config-file-header
1.1701.15081
CLI v0.1
@
!
!
ip ssh server
ip http server
ip https server
!
interface vlan 1
 ip address 10.94.0.3 255.0.0.0
!
ip default-gateway 10.1.0.1
interface P1
 description "PORT 1"
!
interface P2
 description "PORT 2"
!
interface P3
 description "PORT 3"
!
interface G1
 description "PORT 4"
!
interface G2
 description "PORT 5"
!
interface ring 1
 run
!
exit
```

---

sntp

Configuration

```
metel@metel:~$ show sntp configuration
SNTP destination port : 123 .
No MD5 authentication keys.

Unicast Clients: Disabled
Unicast Clients Polling: Disabled

Server            : 192.168.6.100
  Polling         : Enabled
  Encryption Key  : Disabled

Server            : 195.113.144.201
  Polling         : Enabled
  Encryption Key  : Disabled

Server            : 128.249.1.10
  Polling         : Enabled
  Encryption Key  : Disabled


Broadcast Clients: disabled
Anycast Clients: disabled
No Broadcast Interfaces.
Source IPv4 interface:
```

Status

```
metel@metel:~$ show sntp status
Clock is unsynchronized

Unicast servers:

Server            : 192.168.6.100
  Source          : Static
  Stratum         : 255
  Status          : down
  Last Response   : 00:00:00.0  Jan 1 1900
  Offset          : 0.0000000 mSec
  Delay           : 0 mSec

Server            : 195.113.144.201
  Source          : Static
  Stratum         : 255
  Status          : down
  Last Response   : 00:00:00.0  Jan 1 1900
  Offset          : 0.0000000 mSec
  Delay           : 0 mSec

Server            : 128.249.1.10
  Source          : Static
  Stratum         : 255
  Status          : down
  Last Response   : 00:00:00.0  Jan 1 1900
  Offset          : 0.0000000 mSec
  Delay           : 0 mSec

Anycast server:

Broadcast:
```

---

version

```
metel@metel:~$ show version
SW version 1.1701.15081
HW version "2G-2S.0.3.G-BOX-PoE (PoE+)"
SW version is software image version.
HW version is hardware version (type of switch).
```

---

boot

Upload an image

The image can be downloaded and uploaded using the SCP protocol.
They are uploaded to the working memory, which is deleted after the restart.
To save permanently to the device, it is necessary to save with a command.

```
metel@metel:~$ cfg boot system /tmp/230502.172.1494.tar
```

The value **/tmp/1.1701.15081_secure.tar** means the location of the file.

---

copy

Copy running configuration to startup.

```
metel@metel:~$ cfg copy running-to-startup
1
startup-config = running-config
```

---

interface

PortEthernet

Port settings.

Enable/disable PoE

```
metel@metel:~$ cfg interface PortEthernet P1 poe_enable
1
metel@metel:~$ cfg interface PortEthernet P1 poe_disable
2
```

Disable/enable Port

```
metel@metel:~$ cfg interface PortEthernet P1 shutdown
2
metel@metel:~$ cfg interface PortEthernet P1 no_shutdown
1
```

Possible values for ports:
poe_enable: Enable PoE on the port.
poe_disable: Disable PoE on the port.
shutdown: Disable the port.
no_shutdown: Enable the port.

VLAN

1 is a default value for management

Change IP address

```
metel@metel:~$ cfg interface vlan 1 ip_address 192.168.61.7
```

Change MASK

```
metel@metel:~$ cfg interface vlan 1 mask 255.255.255.0
```

---

reload

The command for reboot is executed, confirmed and subsequently the device automatically restarts.

```
metel@metel:~$ cfg reload
reboot
```

---

ring

Disable LAN-RING protocol

```
metel@metel:~$ cfg ring 1 disable
ring SNMP index is 0
.1.3.6.1.4.1.38616.1.4.2.1.2.0 = INTEGER: 2
```

Enable LAN-RING protocol

```
metel@metel:~$ cfg ring 1 enable
ring SNMP index is 0
.1.3.6.1.4.1.38616.1.4.2.1.2.0 = INTEGER: 1
```

Value 1 is default value for switches which supports one RING connection.

---

sntp

Disable/Enable SNTP protocol

```
metel@metel:~$ cfg sntp disable
2
metel@metel:~$ cfg sntp enable
1
```

Change IP addres of SNTP server

```
metel@metel:~$ cfg sntp server2 195.113.144.201
195.113.144.201
/usr/libexec/metel-switch-cli/cfg: line 79:  1615 Alarm clock             /usr/sbin/ntpd -n -q -
$3
```

Is possible set up three sntp servers.
