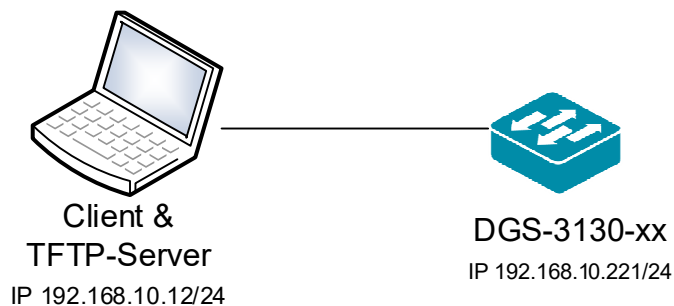


HowTo: Firmware Update DGS-3130 Series on CLI

[Requirements]

1. DGS-3130-xx Stack (or single unit) with firmware version below 1.10B21
2. TFTP-Server tool (f.e. TFTP32)

[Topology]



[Preparations]

- ⇒ the DGS-3130-xx uses by default and in factory settings the IP 10.90.90.90/8
- ⇒ before proceeding, either change your PCs or Switch's IP according to you environment
- ⇒ please enable and define SSH or Telnet access on the WebGUI before updating the firmware by CLI

1. connect to the switch/stack by telnet/ssh/console
 - a. enter for your session the „Enable“ level

```

UART Init ..... 100%
Device Discovery ..... 100%
Configuration Init ..... 100%

Press any key to login...

DGS-3130-30S Gigabit Ethernet Switch

Command Line Interface
Firmware: 1.10.B013
Copyright(C) 2018 D-Link Corporation. All rights reserved.

Switch>
Switch>
Switch>
Switch>enable
Switch#

```

2. check your stacking status and of how many devices are within the stack
 - a. show stack

```

Switch#
Switch#shou stack

Stacking technology is Stacking Lite Ver 0.1
The number of box can be stacked is restricted by max box count and max stack cost.
Stacking Mode : Enabled
Max Stack Cost : 12
Max Box Count : 9
Current Stack Cost : 2
Current Box Count : 2
My Box ID : 1
Master Box ID : 1
BK Master Box ID : 2

Box ID Module Name Priority MAC PROM/Runtime Version H/W Ver. Switch Status Stack Cost
-----
1 DGS-3130-30TS Unassign 58:D5:6E:42:C0:00 1.00.006/1.10.B020 A1 OK 1
2 DGS-3130-30TS Unassign 58:D5:6E:42:BF:80 1.00.005/1.10.B020 A1 OK 1
3 -- -- -- -- -- -- -- Not Present -
4 -- -- -- -- -- -- -- Not Present -
5 -- -- -- -- -- -- -- Not Present -
6 -- -- -- -- -- -- -- Not Present -
7 -- -- -- -- -- -- -- Not Present -
8 -- -- -- -- -- -- -- Not Present -
9 -- -- -- -- -- -- -- Not Present -

Stack Bandwidth:
Box ID Interface Link Status Link Speed (Gb/s) Link Partner Box ID
-----
1 0/29 Link Up 10 2
1 0/30 Link Up 10 2
2 0/29 Link Up 10 1
2 0/30 Link Up 10 1

Running-Config Synchronization to BK Master:
Status : Synchronized
Time Since Last Sync. : 0 days 2 hrs 34 mins 35 secs

Switch#

```

3. check which are the boot files to ensure not to delete the active files
 - a. show boot

```
Switch#show boot
Unit 1
Boot image: /c:/runtime1120.had
Boot config: /c:/config1
Unit 2
Boot image: /c:/RUN_1108020
Boot config: /c:/config1
Switch#
```

4. check the free space of the unit/units
 - a. dir unit1:/c:
 - b. dir unit2:/c:
 - c. repeat this command until you reached the last unit (f.e. dir unit5:/c:)

```
Switch#
Switch#dir unit1:/c:
Directory of c:
1 drw          0 Jan 01 1970 01:00:49 crashlogs
2 -rw          829 May 28 2019 14:27:46 config1
3 -rw    26138485 May 28 2019 14:49:14 runtime1120.had
4 -rw    25977895 May 28 2019 14:35:35 runtime1014.had
94371840 bytes total (42253312 bytes free)
Switch#dir unit2:/c:
Directory of /unit2:/c:
1 drw          0 Jan 01 1970 00:00:47 crashlogs
2 -rw    26138485 May 27 2019 09:51:33 RUN_1108020
3 -rw    25100111 May 24 2019 13:40:05 RUN_1018027
4 -rw          687 May 27 2019 10:29:21 config1
94371840 bytes total (43130880 bytes free)
Switch#
```

5. if there are already 2 or more firmware files existing it is required to delete the ones not used
 - a. delete /unit1:/c:/runtime1014.had
 - b. delete /unit2:/c:/RUN_101B027
 - c. repeat this for all your other units

```
Switch#delete /unit1:/c:/runtime1014.had
Delete /unit1:/c:/runtime1014.had? (y/n) [n] y
File is deleted

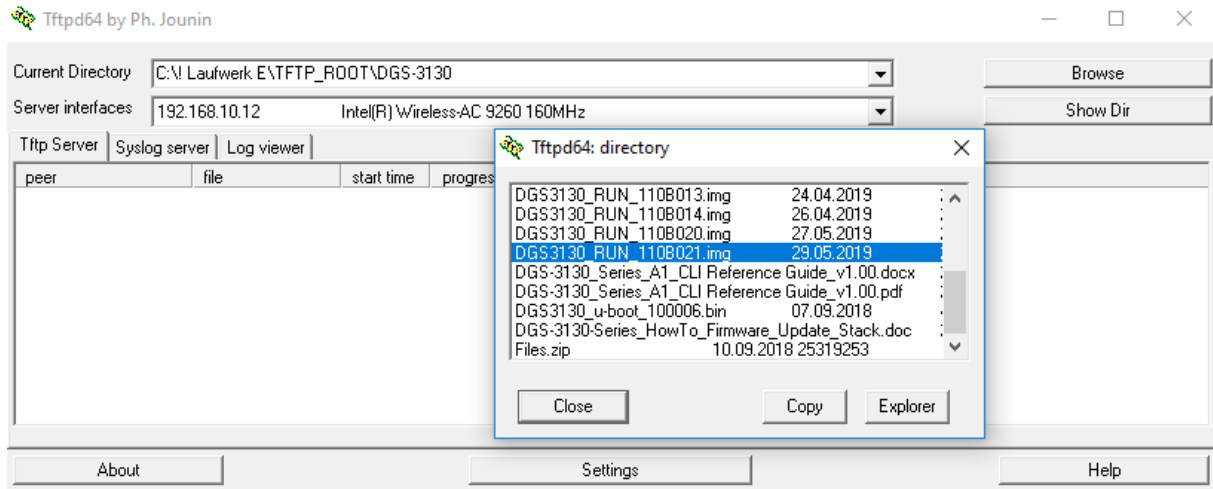
Switch#delete /unit2:/c:/RUN_101B027
Delete /unit2:/c:/RUN_101B027? (y/n) [n] y
File is deleted
Switch#
```

6. check the free space of the unit/units again
 - a. dir unit1:/c:
 - b. dir unit2:/c:
 - c. repeat this command until you reached the last unit (f.e. dir unit5:/c:)

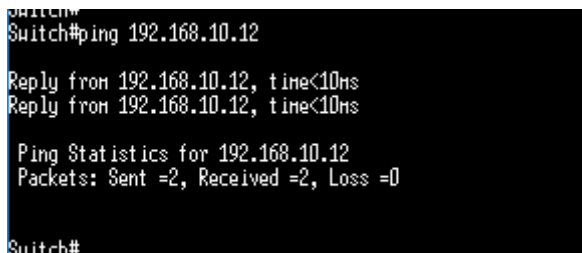
```
Switch#
Switch#dir unit1:/c:
Directory of c:
1  drw          0 Jan 01 1970 01:00:49  crashlogs
2  -rw         829 May 28 2019 14:27:46  config1
3  -rw        26138485 May 28 2019 14:49:14  runtime1120.had
94371840 bytes total (68231168 bytes free)

Switch#dir unit2:/c:
Directory of /unit2:/c:
1  drw          0 Jan 01 1970 00:00:47  crashlogs
2  -rw        26138485 May 27 2019 09:51:33  RUN_110B020
3  -rw          687 May 27 2019 10:29:21  config1
94371840 bytes total (68231168 bytes free)
Switch#
```

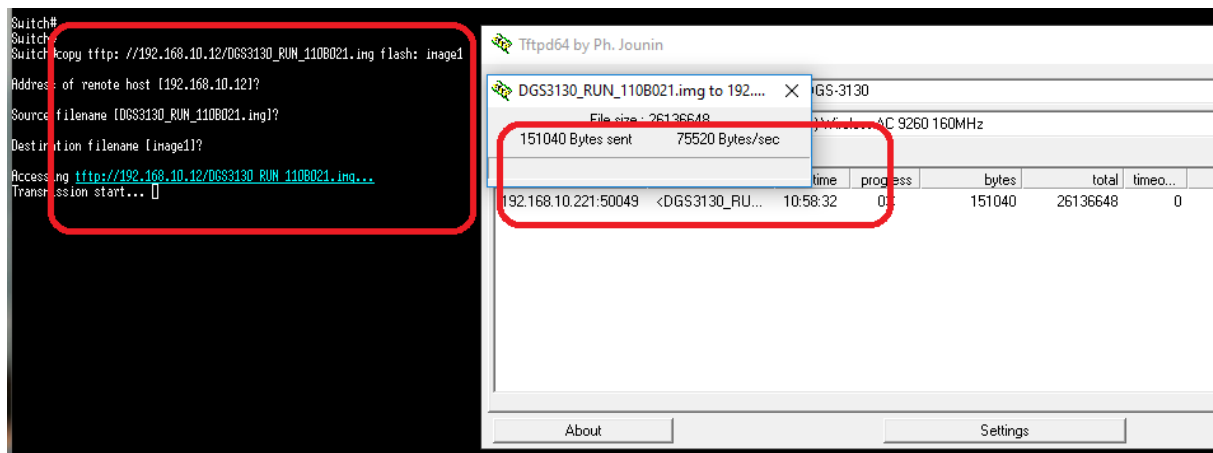
7. Start your TFTP-Server (f.e. TFTP32)
 - a. if you use a windows client, ensure to have created the required windows-firewall rules, or disable the local windows firewall for this
 - b. check that you have the correct folder selected



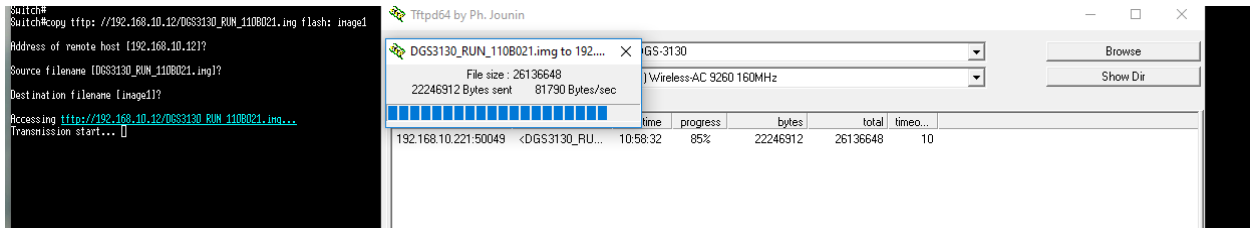
- c. if you selected the file correctly, check that your switch can reach the TFTP-Server by ping (f.e. ping 192.168.10.12)



8. download the firmware files to the switch
 - a. copy tftp://192.168.10.12/DGS3130_RUN_110B021.img flash: image1



Wait until the file has been transferred completely and then distributes the new firmware to all switches within the stack



```
Switch#
Switch#copy tftp://192.168.10.12/DGS3130_RUN_1108021.img flash: image1
Address of remote host [192.168.10.12]?
Source filename [DGS3130_RUN_1108021.img]?
Destination filename [image1]?
Accessing tftp://192.168.10.12/DGS3130_RUN_1108021.img...
Transmission start...
Transmission finished, file length 26136648 bytes.
Transmission to slave start..... Done.
Please wait, programming flash..... Done.
Wait slave programming flash complete... Done.

Switch#
#95 2019-05-29 10:22:37 INFO(6) Firmware downloaded by Console successfully. (Username: admin, IP: 192.168.10.221, MAC: 58:d5:6e:42:c0:02, Server IP: 192.168.10.12, File Name: DGS3130_RUN_1108021.img)
```

9. check the file system of the unit/units again to ensure that the new firmware file is existing on all units
 - a. dir unit1:/c:
 - b. dir unit2:/c:
 - c. repeat this command until you reached the last unit (f.e. dir unit5:/c:)

```
Switch#
Switch#dir unit1:/c:

Directory of c:
 1  drw          0 Jan 01 1970 01:00:49  crashlogs
 2  -rw          829 May 28 2019 14:27:46  config1
 3  -rw        26136648 May 29 2019 10:22:08  image1
 4  -rw        26138485 May 28 2019 14:49:14  runtime1120.had

94371840 bytes total (42094592 bytes free)

Switch#dir unit2:/c:

Directory of /unit2:/c:
 1  drw          0 Jan 01 1970 00:00:47  crashlogs
 2  -rw        26138485 May 27 2019 09:51:33  RUN_1108020
 3  -rw          687 May 27 2019 10:29:21  config1
 4  -rw        26136648 May 29 2019 09:23:19  image1

94371840 bytes total (42094592 bytes free)

Switch#
```

10. Activate the new firmware as boot-up firmware
 - a. change into “configure terminal” mode
 - b. boot image unit1:/c:/image1
 - c. boot image unit2:/c:/image1
 - d. repeat this for all the units within your stack
 - e. check boot file for all units again

```
Switch#
Switch#configure terminal

Switch(config)#
Switch(config)#
Switch(config)#
Switch(config)#boot image unit2:/c:/image1
Copy in progress.....100%

Switch(config)#boot image unit1:/c:/image1
Copy in progress.....100%

Switch(config)#show boot

Unit 1
  Boot image: /c:/image1
  Boot config: /c:/config1

Unit 2
  Boot image: /c:/image1
  Boot config: /c:/config1

Switch(config)#
```

11. Leave the configuration mode then save your configuration and reboot the device/stack
 - a. leave configuration mode with “exit”
 - b. save config with “copy running-config startup-config”
 - c. reboot stack with “reboot”

```
Switch(config)#exit
Switch#copy running-config startup-config
Destination filename startup-config? [y/n]: y
Saving all configurations to NV-RAM..... Done.

Switch#
#101 2019-05-29 10:33:31 INFO(6) Configuration saved to flash by console (Username: admin)

Switch#
Switch#reboot

Are you sure you want to proceed with the system reboot? (y/n) y
```

12. after reboot check the new firmware of the switch/stack
 - a. show version
 - b. show stack

```
Switch#show version
Device MAC Address: 58:05:6E:42:C0:00
System MAC Address: 58:05:6E:42:C0:01

Unit ID  Module Name      Versions
-----  -
1         DGS-3130-30TS         H/W:A1
                        Boot loader:1.00.006
                        Runtime:1.10.B021
2         DGS-3130-30TS         H/W:A1
                        Boot loader:1.00.005
                        Runtime:1.10.B021

Switch#show stack

Stacking technology is Stacking Lite Ver 0.1
The number of box can be stacked is restricted by max box count and max stack cost.
Stacking Mode      : Enabled
Max Stack Cost     : 12
Max Box Count      : 9
Current Stack Cost : 2
Current Box Count  : 2
My Box ID          : 1
Master Box ID      : 1
BK Master Box ID   : 2

Box  Module      Priority MAC          PROM/Runtime      H/W  Switch  Stack
ID   Name         Unassign MAC          Version           Ver. Status  Cost
-----
1    DGS-3130-30TS Unassign 58:05:6E:42:C0:00  1.00.006/1.10.B021 A1   OK       1
2    DGS-3130-30TS Unassign 58:05:6E:42:BF:80  1.00.005/1.10.B021 A1   OK       1
3    --             -         --                 --                -    Not Present -
4    --             -         --                 --                -    Not Present -
5    --             -         --                 --                -    Not Present -
6    --             -         --                 --                -    Not Present -
7    --             -         --                 --                -    Not Present -
8    --             -         --                 --                -    Not Present -
9    --             -         --                 --                -    Not Present -

Stack Bandwidth:
Box  Link      Link      Link Partner
ID   Interface Status   Speed (Gb/s) Box ID
-----
1    0/29      Link Up   10         2
1    0/30      Link Up   10         2
2    0/29      Link Up   10         1
2    0/30      Link Up   10         1

Running-Config Synchronization to BK Master:
Status          : Synchronized
Time Since Last Sync. : 0 days 0 hrs 0 mins 4 secs
```