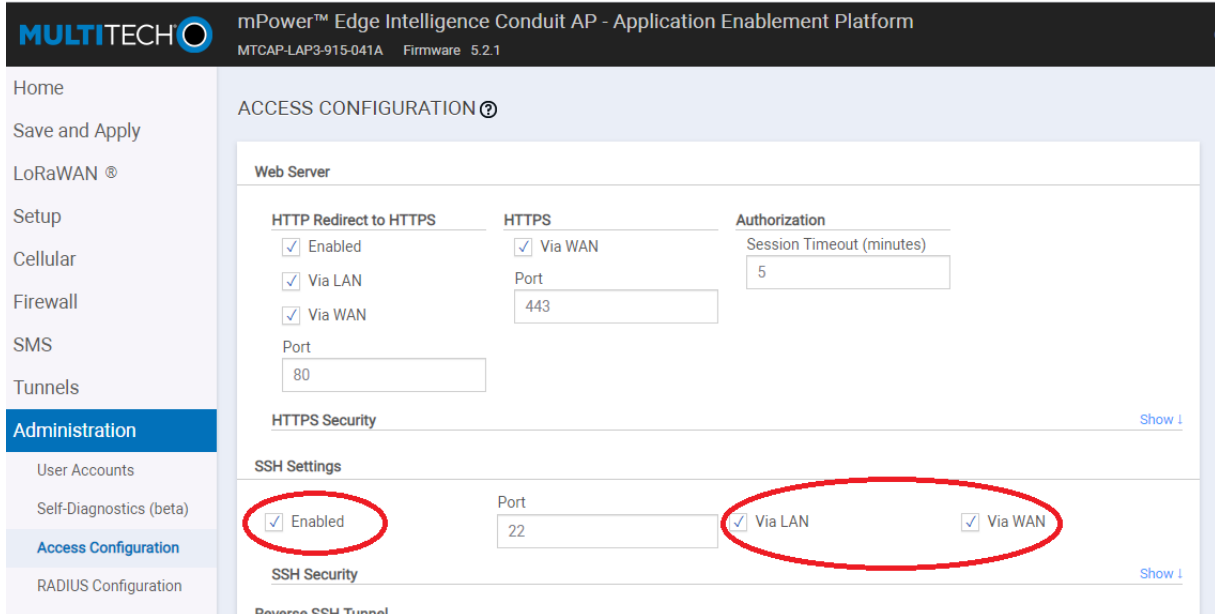**To use the MTCAP devices in AS923 with LBT, you will need to upgrade the FPGA from v.31**

Upgrade the FPGA for MTCAP, you will need to SSH to the devices.

Change the Access configuration in the Conduit AP unit.

Then using putty or other terminal program to SSH to the device

1) log in with your unique username and password after created in the commission mode

2) issue command sudo –s to enable the super user to access the root

3) Check the FPGA version by command
    mts-fpga-loader -c

        Checking hardware compatibility
        Found Valid Hardware: MTCAP-LORA-1.5
        Valid FPGA version: 31

4) Stop the Network server by command

    /etc/init.d/lora-network-server stop

    Stopping lora-network-server: OK

5) Install the v33 FPGA by using command

    mts-fpga-loader -i /usr/lib/mts-flash-biries/mtcap-fpga-v33.hex
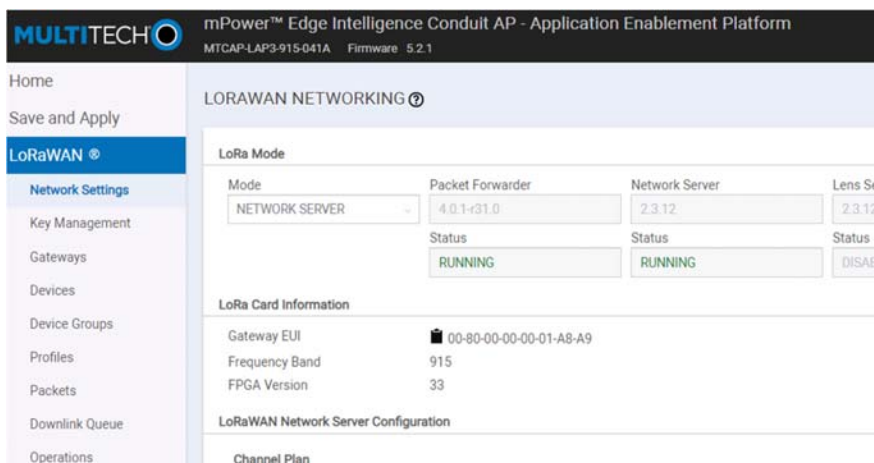
> Checking hardware compatibility
> Found Valid Hardware: MTCAP-LORA-1.5
> Checking file /usr/lib/mts-flash-binaries/mtcap-fpga-v33.hex
> File verified
> Erasing flash
> Programming flash
> Write Complete. Resetting FPGA
> Reading New FPGA configuration
> Checking hardware compatibility
> Found Valid Hardware: MTCAP-LORA-1.5
> Valid FPGA version: 33
> FPGA Upgrade Successful

6) Check again the FPGA version
    mts-fpga-loader -c

> Checking hardware compatibility
> Found Valid Hardware: MTCAP-LORA-1.5
> Valid FPGA version: 33

7) Reboot the machine and login again, then you will see it upgraded to V33

192.168.2.1 - PuTTY   —   □   ✕

Session   Special Command   Window   Logging   Files Transfer   Hangup   ?

```
login as: elecomes
########################################################
#       mPower(TM) Edge Intelligence Conduit AP AEP      #
########################################################
elecomes@192.168.2.1's password:
Last login: Fri Aug 28 12:32:40 2020
elecomes@mtcap:~$ mts-fpga-loader -c
-bash: mts-fpga-loader: command not found
elecomes@mtcap:~$ sudo -s
Password:
root@mtcap:/var/config/home/elecomes# mts-fpga-loader -c
Checking hardware compatibility
Found Valid Hardware: MTCAP-LORA-1.5
Valid FPGA version: 31
root@mtcap:/var/config/home/elecomes# /etc/init.d/lora-network-server stop
Stopping lora-network-server: OK
root@mtcap:/var/config/home/elecomes# mts-fpga-loader -i /usr/lib/mts-flash-bi
ries/mtcap-fpga-v33.hex
Checking hardware compatibility
Found Valid Hardware: MTCAP-LORA-1.5
Checking file /usr/lib/mts-flash-binaries/mtcap-fpga-v33.hex
File verified
Erasing flash
Programming flash
Write Complete. Resetting FPGA
Reading New FPGA configuration
Checking hardware compatibility
Found Valid Hardware: MTCAP-LORA-1.5
Valid FPGA version: 33
FPGA Upgrade Successful
root@mtcap:/var/config/home/elecomes# mts-fpga-loader -c
Checking hardware compatibility
Found Valid Hardware: MTCAP-LORA-1.5
Valid FPGA version: 33
root@mtcap:/var/config/home/elecomes# 
```

00:10:50 Connected   SSH/22