How To Setup and TFTP from Raspberry Pi to a Pico W

Revision V1, 2023-03-12

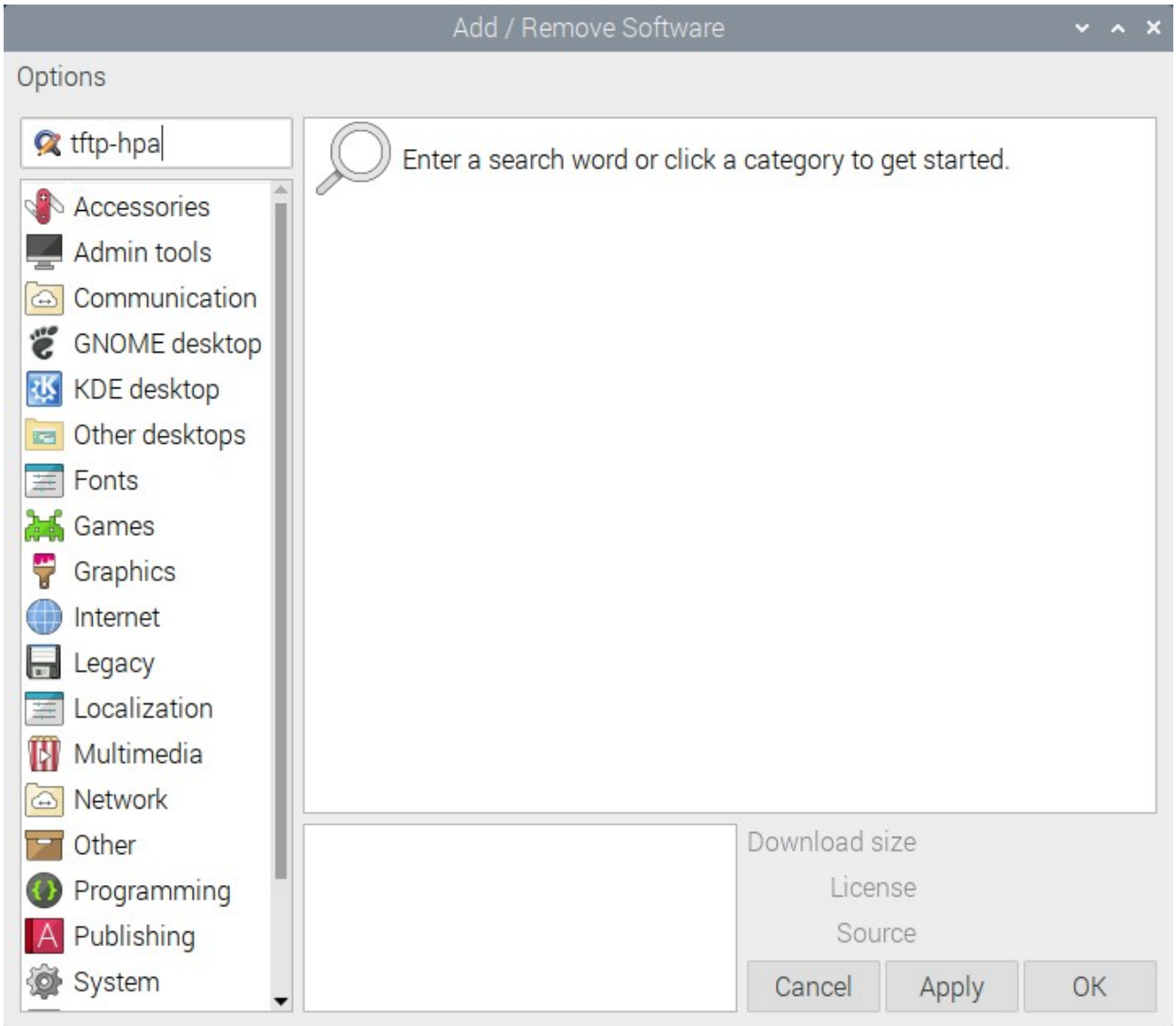
NB NOTE: Please make sure you have updated the operating system before proceeding!

Installation:

To install TFTP Client on the Raspberry Pi start by opening;

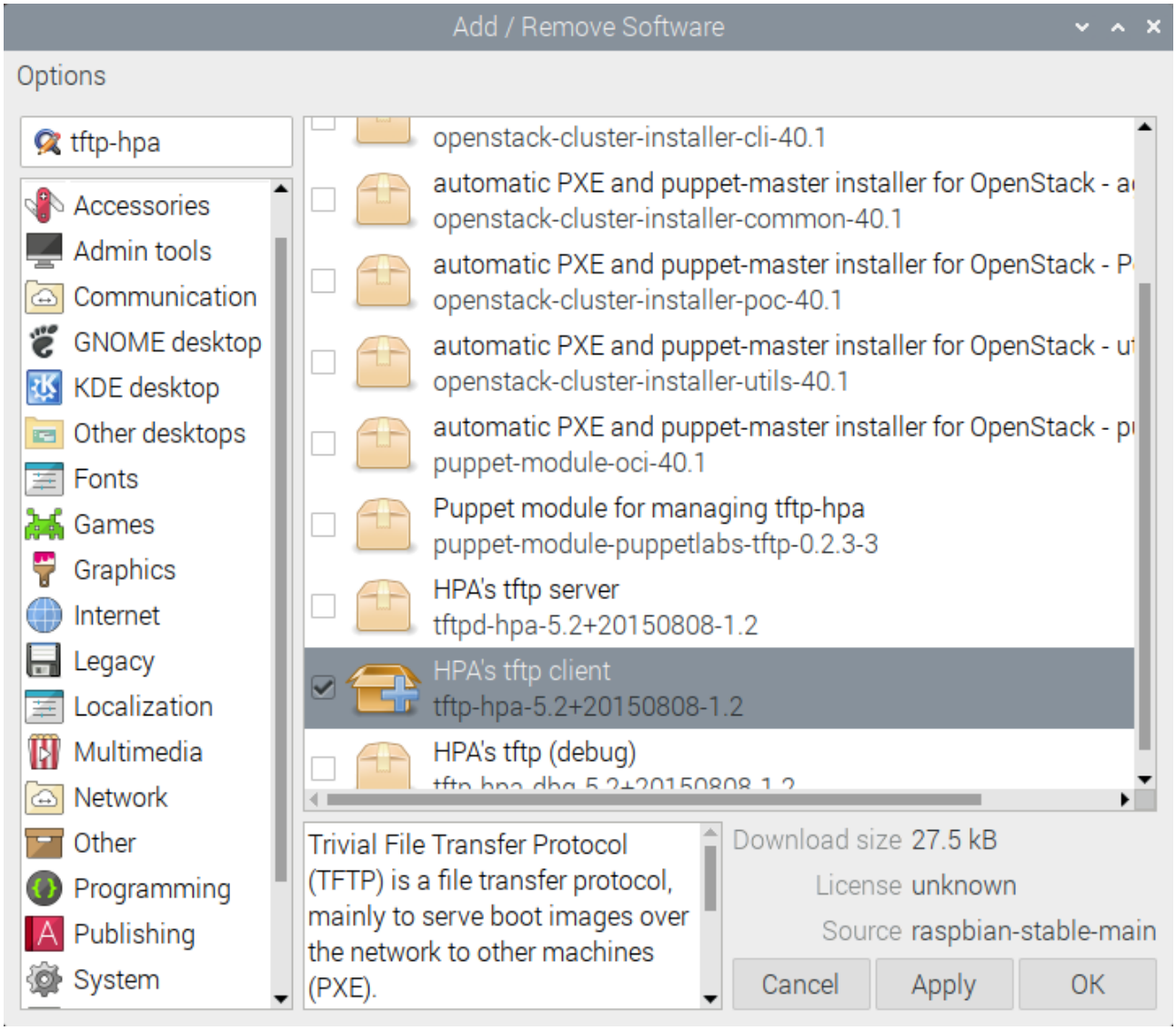
Applications menu → Preferences → Add / Remove Software

You will see this window, type tftp-hpa in the search area and hit ENTER.



The software will search for the key word.

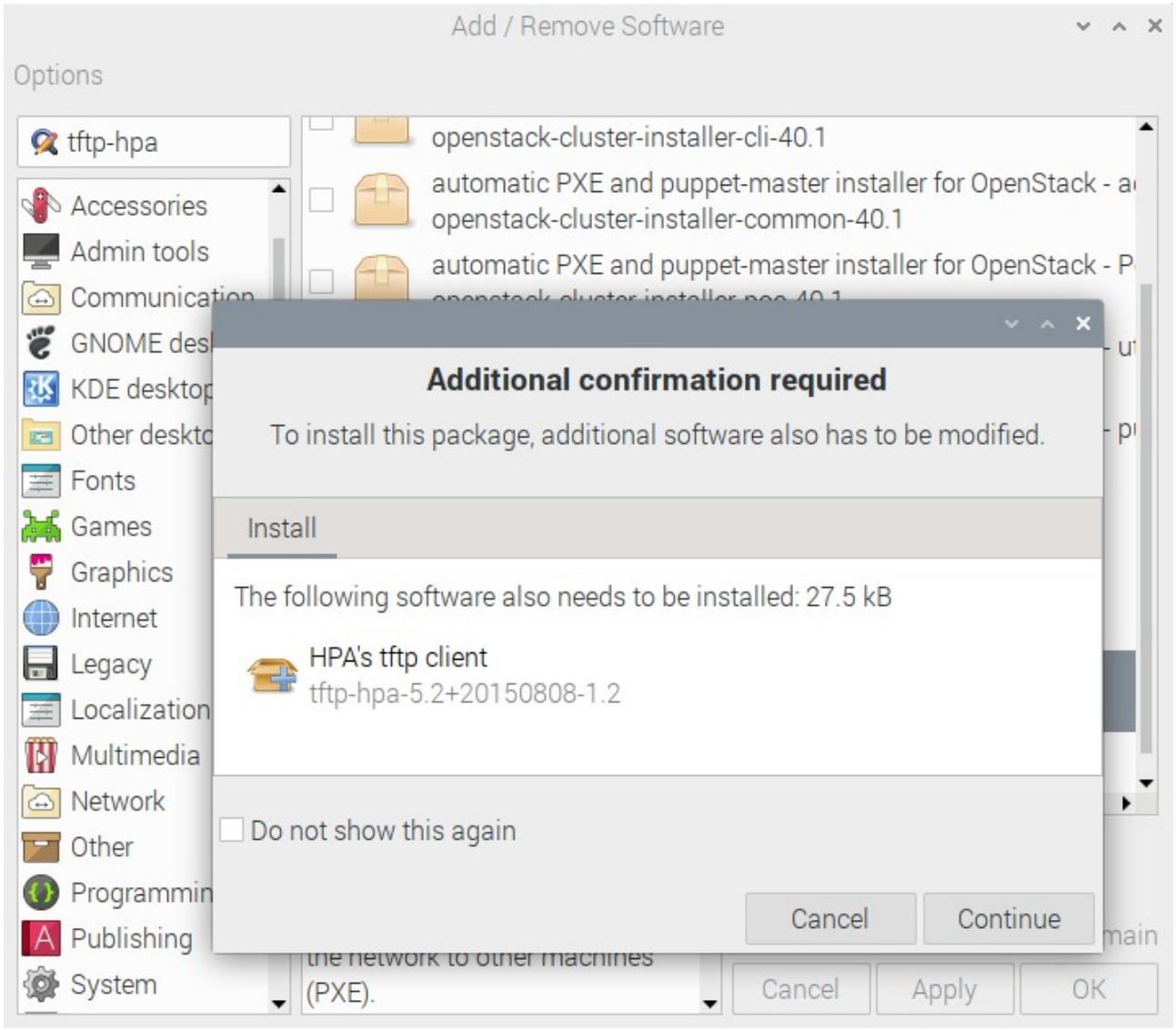
At the following window check mark the CLIENT software **NOT THE SERVER SOFTWARE**.



Click APPLY or OK.

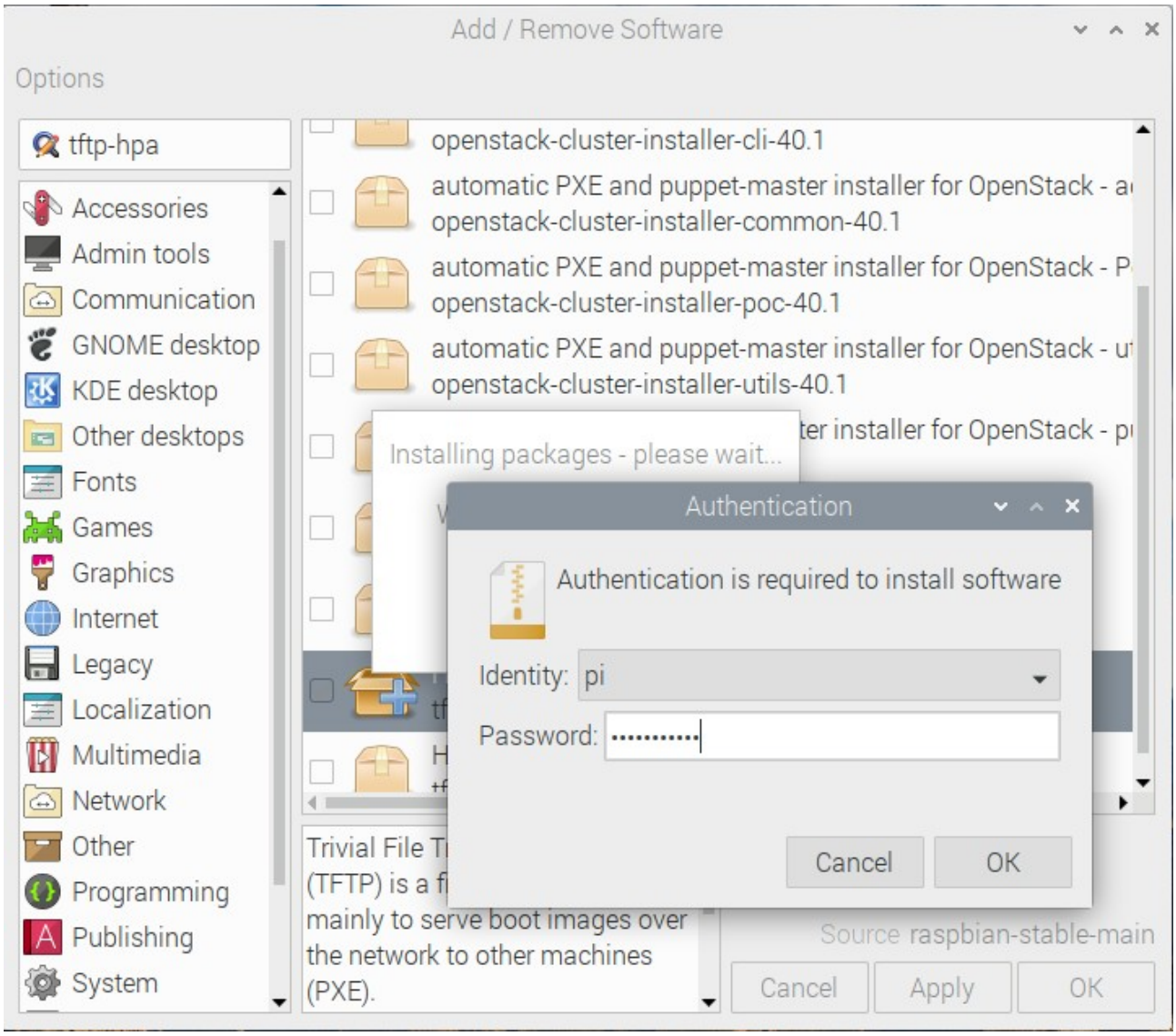
APPLY will leave the screen there to add more software and OK will close the window when the install is finished.

The installer will tell you that addition confirmation is required, click CONTINUE.



It is **not recommended** to check the box Do not show this again.

Next you must provide the password for your Pi user to continue. Click OK.



Once the software is installed you will not find it in any menu, it runs at the command line.

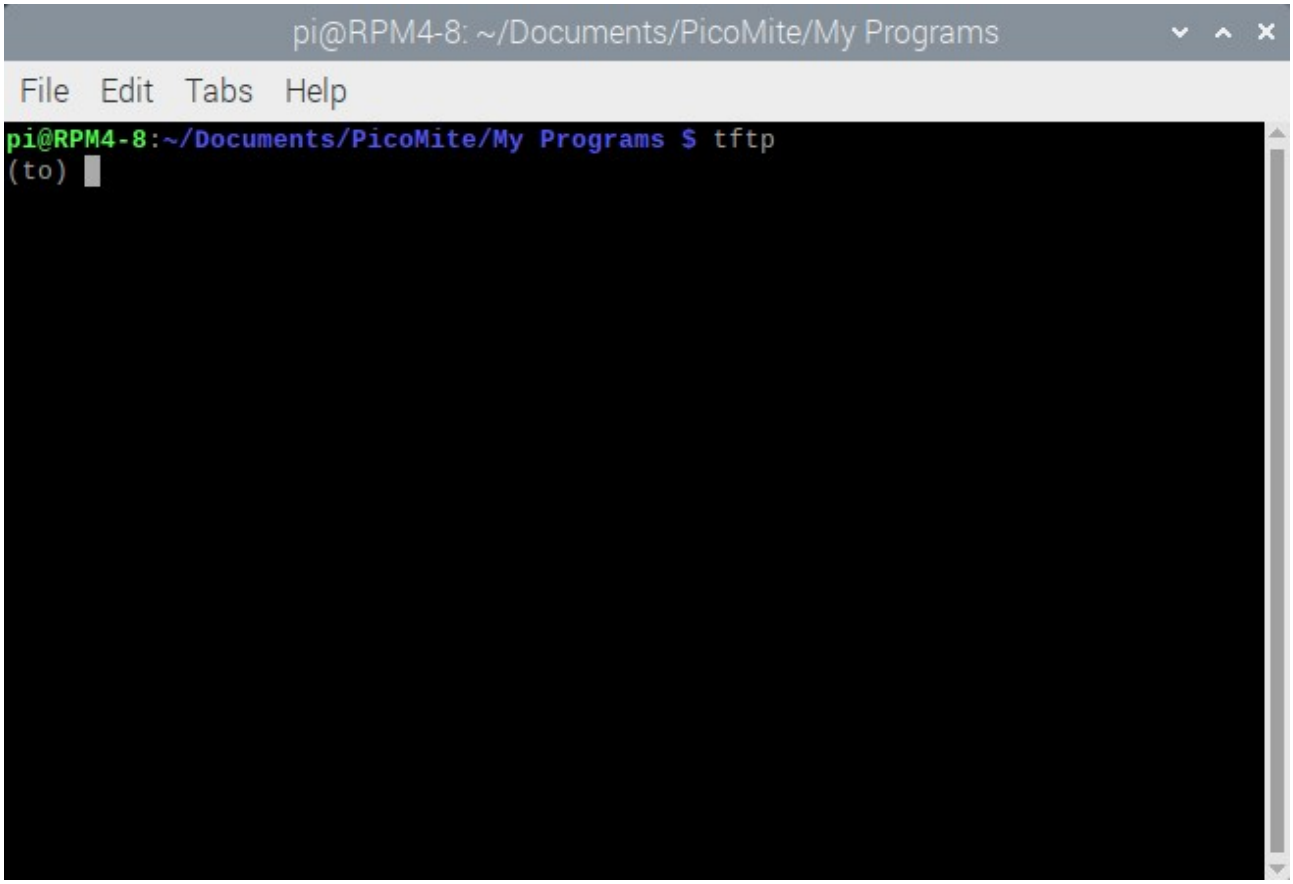
A reboot is not required.

Usage:

Now open your file manager and navigate to the folder you store you PICO W MMBasic programs are in and hit F4. This will open the terminal program and position you for the easiest way to to send or receive files to and from the PICO W.

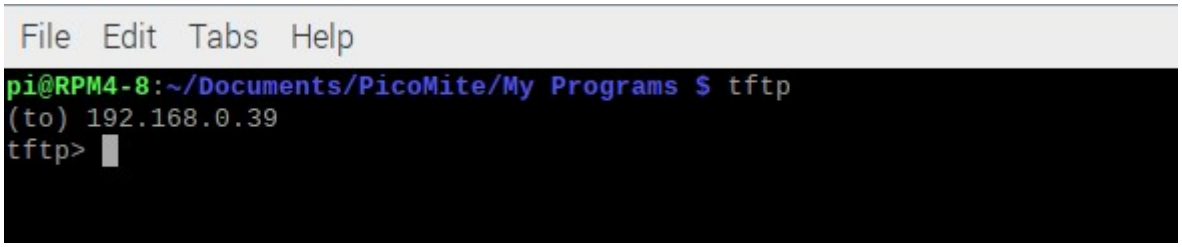
When the TERMINAL opens it should be at the folder that your programs are in.

Now type tftp and hit ENTER.



Notice the (to) prompt. This is where you type the IP Address of the PICO W and hit ENTER.

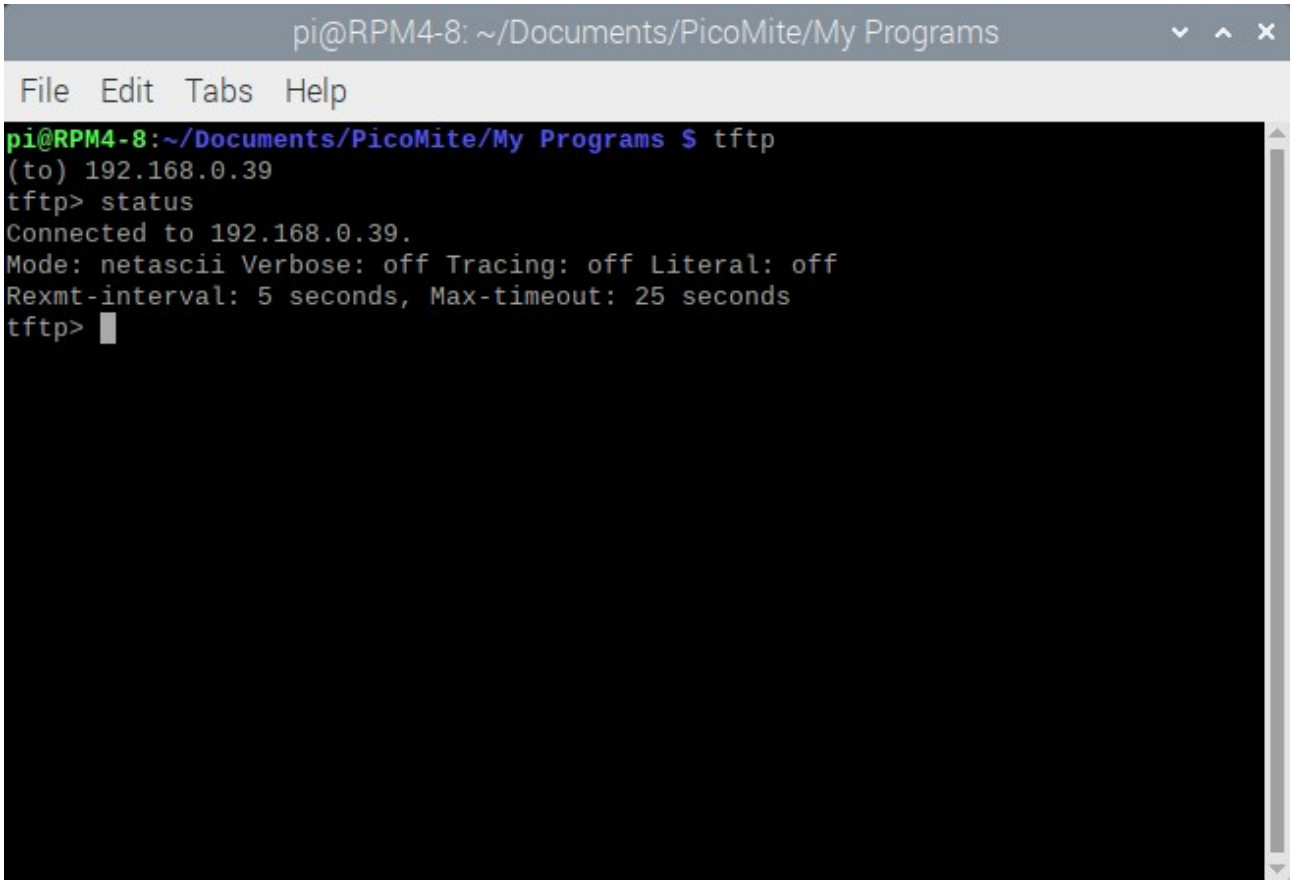
Alternatively you may type tftp ip address ENTER.



You are now in the TFTP program awaiting commands.

TFTP STATUS:

At the tftp> prompt you can type commands to the tftp program such as status then ENTER.



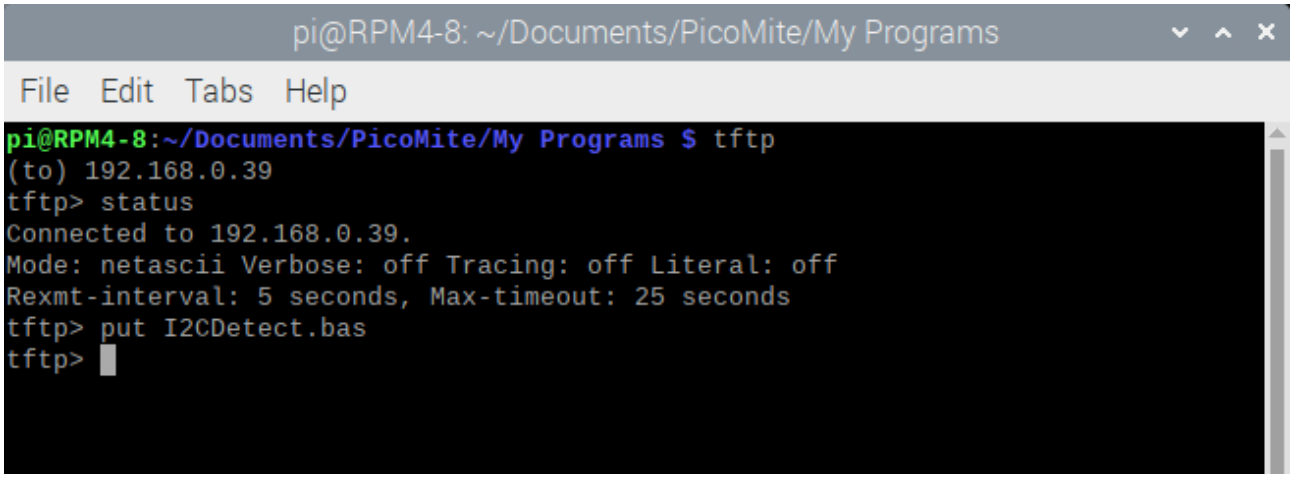
This will show if you are connected and the defaults for the tftp program

We are now ready to PUT (send) files or GET (receive) files to and from the PICO W.

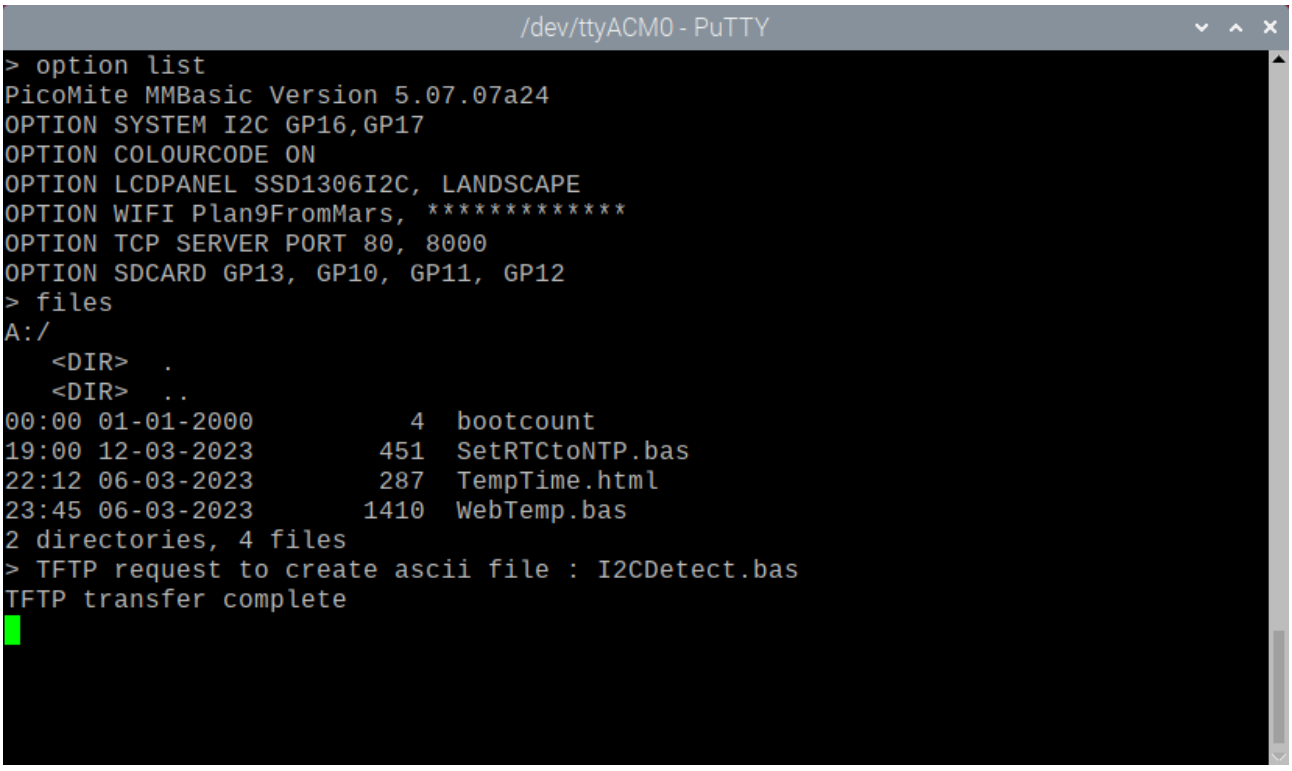
A quick note about file names, you should be sure that you file names have no spaces or you may receive errors. I tried to use (‘) singe quote and (“) double quotes but got a file not found error each time from the Pi.

PUT:

At the tftp prompt, type put and the file name you want to send, then ENTER.



On the PICO W you will see;



If the prompt returns with no errors the file will be on the PICO W in the default directory.

NOTE: If the file exists it will be overwritten

GET:

To get a file from the PICO W, at the tftp prompt, type get and the name of the file you want to receive then ENTER.

```
pi@RPM4-8:~/Documents/PicoMite/My Programs $ tftp
(to) 192.168.0.39
tftp> put I2CDetect.bas
tftp> get SetRTCtoNTP.bas
tftp>
```

The PICO W file system reveals the I2CDetect.bas is in the a:/ drive and the message that the file SetRTCtoNTP.bas was transferred to the Raspberry Pi.

```
/dev/ttyACM0 - PuTTY
> files
A:/
   <DIR>  .
   <DIR>  ..
00:00 01-01-2000          4  bootcount
19:00 12-03-2023        451  SetRTCtoNTP.bas
22:12 06-03-2023        287  TempTime.html
23:45 06-03-2023       1410  WebTemp.bas
2 directories, 4 files
> TFTP request to create ascii file : I2CDetect.bas
TFTP transfer complete
files
A:/
   <DIR>  .
   <DIR>  ..
00:00 01-01-2000          4  bootcount
00:24 01-01-2000        406  I2CDetect.bas
19:00 12-03-2023        451  SetRTCtoNTP.bas
22:12 06-03-2023        287  TempTime.html
23:45 06-03-2023       1410  WebTemp.bas
2 directories, 5 files
> TFTP request to read ascii file : SetRTCtoNTP.bas
TFTP transfer complete
```

Quit:

When you have finished with the tftp program, at the prompt type quit and ENTER. This will return you to the Raspberry Pi terminal command line. You can type exit and ENTER or click the X to return to the GUI.

```
pi@RPM4-8:~/Documents/PicoMite/My Programs $ tftp
(to) 192.168.0.39
tftp> put I2CDetect.bas
tftp> get SetRTCtoNTP.bas
tftp> quit
pi@RPM4-8:~/Documents/PicoMite/My Programs $
```