

Yún – How to use an SD card

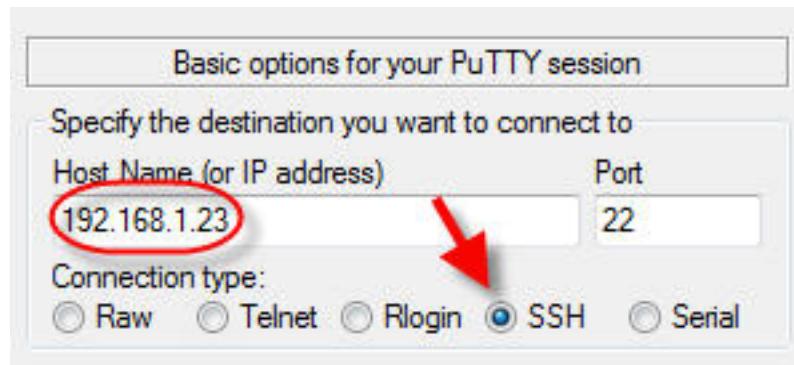
luca 12/11/2013 [6](#)

Working with Arduino Yun, it is suggested the use of an external SD card to save your files, because of the limited number of writes the internal memory can manage. In this tutorial, you'll learn how to do it...

First insert the SD card in the Arduino Yun's *slot*:



Now, connect to the Yun using SSH: if your PC is running Windows, you can use the free [PuTTY](#) program. Type the IP address of your board and choose **SSH** as connection type:



Type **root** as login account and the password you chose for your Yun:

```
192.168.1.23 - PuTTY  
login as root  
root@192.168.1.23's password:  
  
BusyBox v1.19.4 (2013-08-07 16:16:02 CEST) built-in shell (ash)  
Enter 'help' for a list of built-in commands.
```

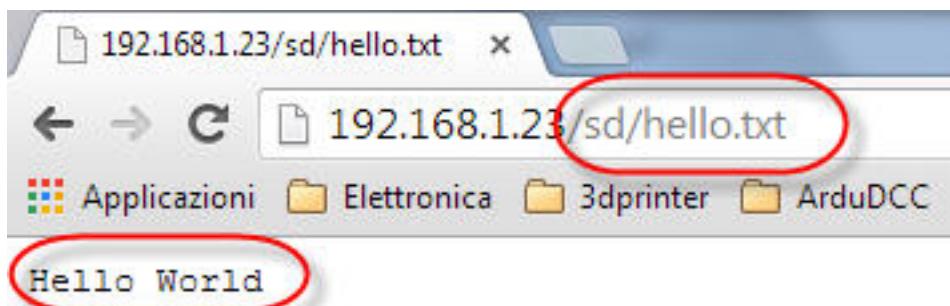
Now enter the **dmesg** command to show all the *system messages*. If the SD card was correctly detected, you'll find something like the *screenshot* below. The "name" your SD card has in Linino is **sda1**:

```
root@YunLuca:~# dmesg  
[ 1703.750000] sda: detected capacity change from 1979711488 to 3866624 512-byte logical blocks (1979711488 bytes: 19G 18M 16K)  
[ 1712.860000] sd 0:0:0:0: [sda] 3866624 512-byte logical blocks (1979711488 bytes: 19G 18M 16K)  
[ 1712.860000] sd 0:0:0:0: [sda] No Caching mode page present  
[ 1712.860000] sd 0:0:0:0: [sda] Assuming drive cache: write throu  
[ 1712.950000] sd 0:0:0:0: [sda] No Caching mode page present  
[ 1712.950000] sd 0:0:0:0: [sda] Assuming drive cache: write throu  
[ 1712.960000] sda: sda1  
root@YunLuca:~#
```

You must create two folders in the SD card: the first named **arduino** and, inside that, a second named **www**; you can use the **mkdir** command. At the end, create also a test file with the text *Hello World*:

```
root@YunLuca:/mnt/sda1# mkdir arduino  
root@YunLuca:/mnt/sda1# cd arduino/  
root@YunLuca:/mnt/sda1/arduino# mkdir www  
root@YunLuca:/mnt/sda1/arduino# cd www/  
root@YunLuca:/mnt/sda1/arduino/www# echo Hello World >hello.txt  
root@YunLuca:/mnt/sda1/arduino/www# ls  
hello.txt  
root@YunLuca:/mnt/sda1/arduino/www#
```

Unmount the SD card (**umount /dev/sda1**), then remove and insert again it. Now its content is available using a *web browser*, at the address http://yun_ip/sd; for example to view the file created before:



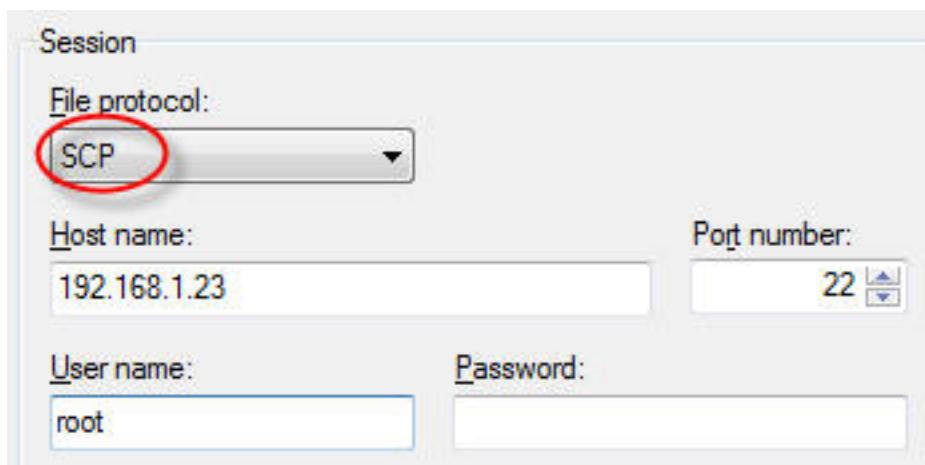
How does it work?

The uHTTPD *webserver* has the folder **/www** as its *document root* (i.e. the “main” folder where the Yun’s web interface is stored). When an SD card is inserted, if the path /arduino/www is detected, a **symlink** is automatically created in the /www folder:

```
root@YunLuca:/www# ls -ll
drwxr-xr-x    2          27 Aug 19 16:22 cgi-bin
-rw-r--r--    1        436 Jul 30 15:06 index.html
drwxr-xr-x    2          53 Aug 19 16:22 keystore_manager_example
drwxr-xr-x    4          61 Aug 19 16:21 luci-static
lrwxrwxrwx    1        21 Nov 11 22:02 sd -> /mnt/sda1/arduino
root@YunLuca:/www#
```

WinSCP

You can manage the Linino files, including the ones stored in the SD card, also using a graphical interface. For Windows, you can download [WinSCP](#). Type again the IP address of your Yun and choose **SCP** as file protocol:



In the left window, you’ll be able to explore folders and files:

