Preparation in Windows

How to Connect to The Workstation
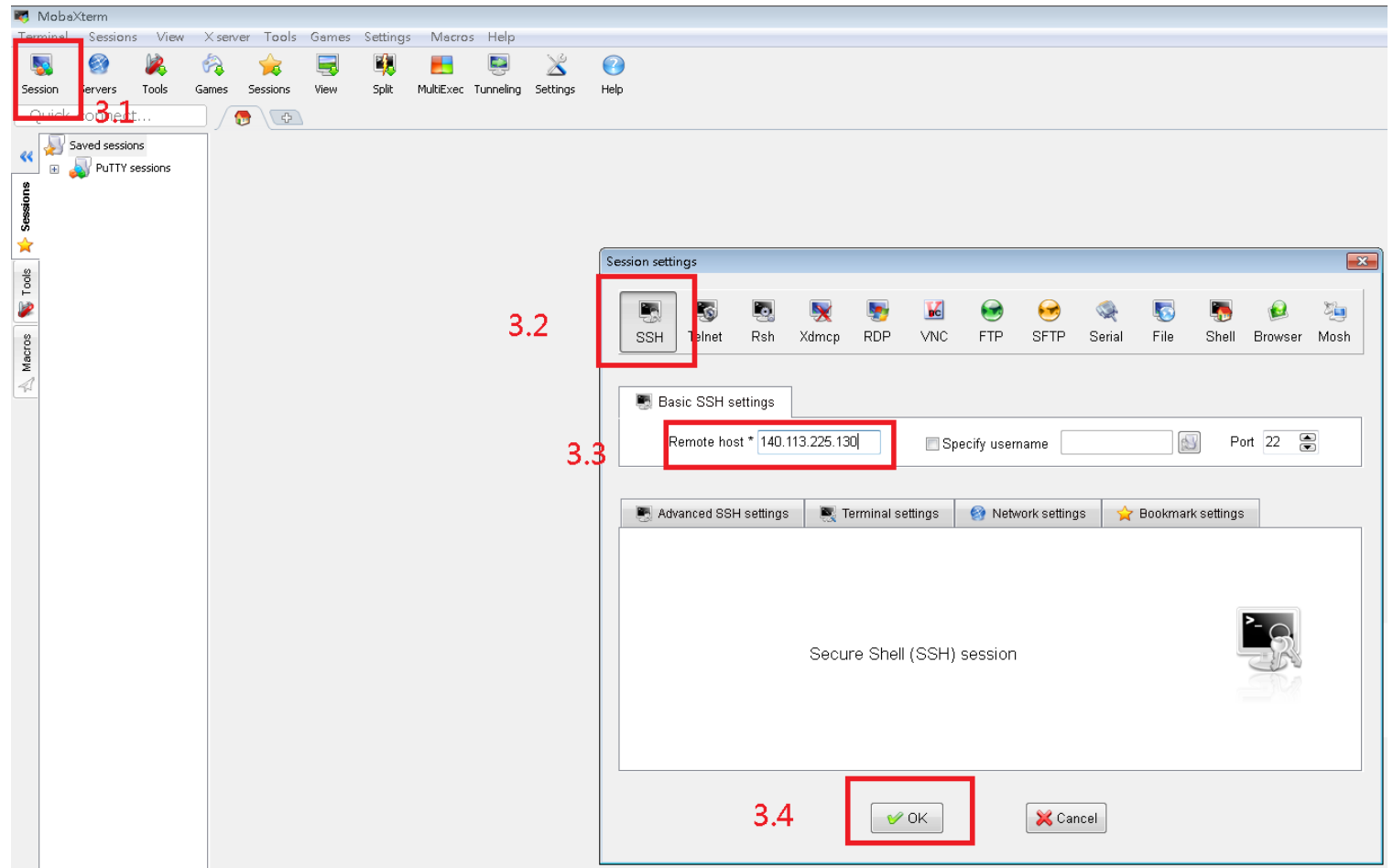
- 1. Download "mobaXterm"
http://mobaxterm.mobatek.net/download-home-edition.html
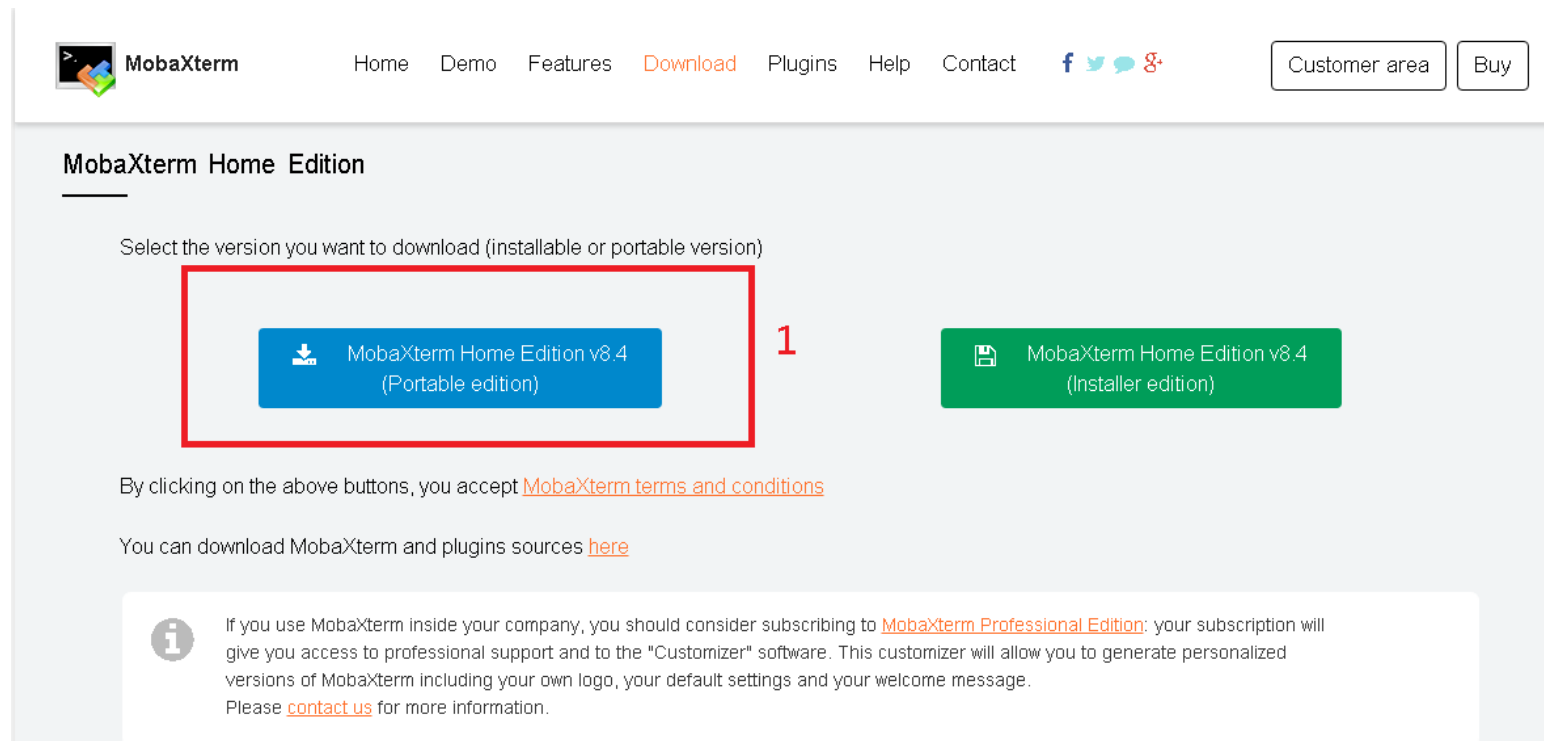
How to Connect to The Workstation

- 2. Open "MobaXterm_Personal_8.4"

- 3. Set configuration
  - Click session
  - Click SSH
  - Remote host
  - Click OK

- 4. Login

How to Connect to The Workstation

- 5. Get the package to your account by the command:
  $tar -xvf /tmp/Lab01.tar

- 6. Use the command "ls" to check the files

- 7. Use the command "cd" to change the directory

```
Welcome to Ubuntu 14.04.1 LTS (GNU/Linux 3.13.0-32-generic x86_64)

 * Documentation:  https://help.ubuntu.com/

545 packages can be updated.
252 updates are security updates.

Last login: Tue Dec  8 12:44:55 2015 from 140.113.225.123
ca30@ed520-BA5190-A500:~$ tar -xvf /tmp/Lab01.tar          5.
./Lab01/
./Lab01/MM/
./Lab01/MM/00_Report/
./Lab01/MM/mm.cl
./Lab01/MM/mm
./Lab01/MM/parameter.h
./Lab01/MM/09_CLEAN_REPORT.sh
./Lab01/MM/00_Configuration/
./Lab01/MM/00_Configuration/cpu-config.ini
./Lab01/MM/00_Configuration/mem-config.ini
./Lab01/MM/00_Configuration/gpu-config.ini
./Lab01/MM/04_RUN_ON_M2S.sh
./Lab01/MM/mm.c
./Lab01/MM/03_COMPILE_ON_M2S.sh
./Lab01/MM/01_COMPILE_ON_NATIVE.sh
./Lab01/MM/README.txt
./Lab01/EXAMPLE/
./Lab01/EXAMPLE/vector_add
./Lab01/EXAMPLE/vector_add.c
./Lab01/EXAMPLE/vector_add.cl
./Lab01/EXAMPLE/Makefile                       6.
ca30@ed520-BA5190-A500:~$ ls
Lab01
ca30@ed520-BA5190-A500:~$ cd Lab01/MM/         7.
ca30@ed520-BA5190-A500:~/Lab01/MM$
```

How to Connect to The Workstation

- 8. Use "vim" to open the text file: $vim mm.c
- 9. Then, you could write your code


```
ca30@ed520-BA5190-A500:~$ ls
Lab01                                              8
ca30@ed520-BA5190-A500:~$ cd Lab01/MM/
ca30@ed520-BA5190-A500:~/Lab01/MM$ vim mm.c
mm.c    mm.cl
ca30@ed520-BA5190-A500:~/Lab01/MM$ vim mm.c
```



```
2.140.113.225.130

 1 #include <stdio.h>
 2 #include <stdlib.h>
 3 #include <string.h>
 4 #include <math.h>                           9.
 5 #include <time.h>
 6 #include <CL/cl.h>
 7
 8 #include "parameter.h"
 9
10
11
12 // ---------- Function for OpenCL structure
13
14 // Create a device structure
15 cl_device_id create_device() {
16
17     cl_platform_id platform;
18     cl_device_id dev;
19     int err;
20
21     // Identify a platform
22     err = clGetPlatformIDs(1, &platform, NULL);
23     if(err < 0) {
24         printf("Couldn't identify a platform: %d\n", err);
25         exit(1);
26     }
27
28     // Access a device
29     err = clGetDeviceIDs(platform, CL_DEVICE_TYPE_GPU, 1, &dev, NULL);
30     if(err == CL_DEVICE_NOT_FOUND) {
31         err = clGetDeviceIDs(platform, CL_DEVICE_TYPE_CPU, 1, &dev, NULL);
32     }
33     if(err < 0) {
34         printf("Couldn't access any devices: %d\n", err);
35         exit(1);
36     }
37
38     return dev;
39 }
40
```

How to Use "vim"

- After you open the file the following hot keys you will need:
  - "i" to enter the edit mode, esc for exit.
  - ":wq" to save and exit the file.
  - "q!" to exit the file forced.
  - More detailed in google.

How to Run Your Code

- For Native:
  - Compile your code
    $./01_COMPILE_ON_NATIVE.sh
  - Run
    $./mm

How to Run Your Code

- For Multi2sim:
  - Compile your code
    $./03_COMPILE_ON_M2S.sh
  - Run
    $ ./04_RUN_ON_M2S.sh

Another Editor: Notepad++

(If you don't like to use the editor "vim" in the workstation, it's much easier for Windows users)

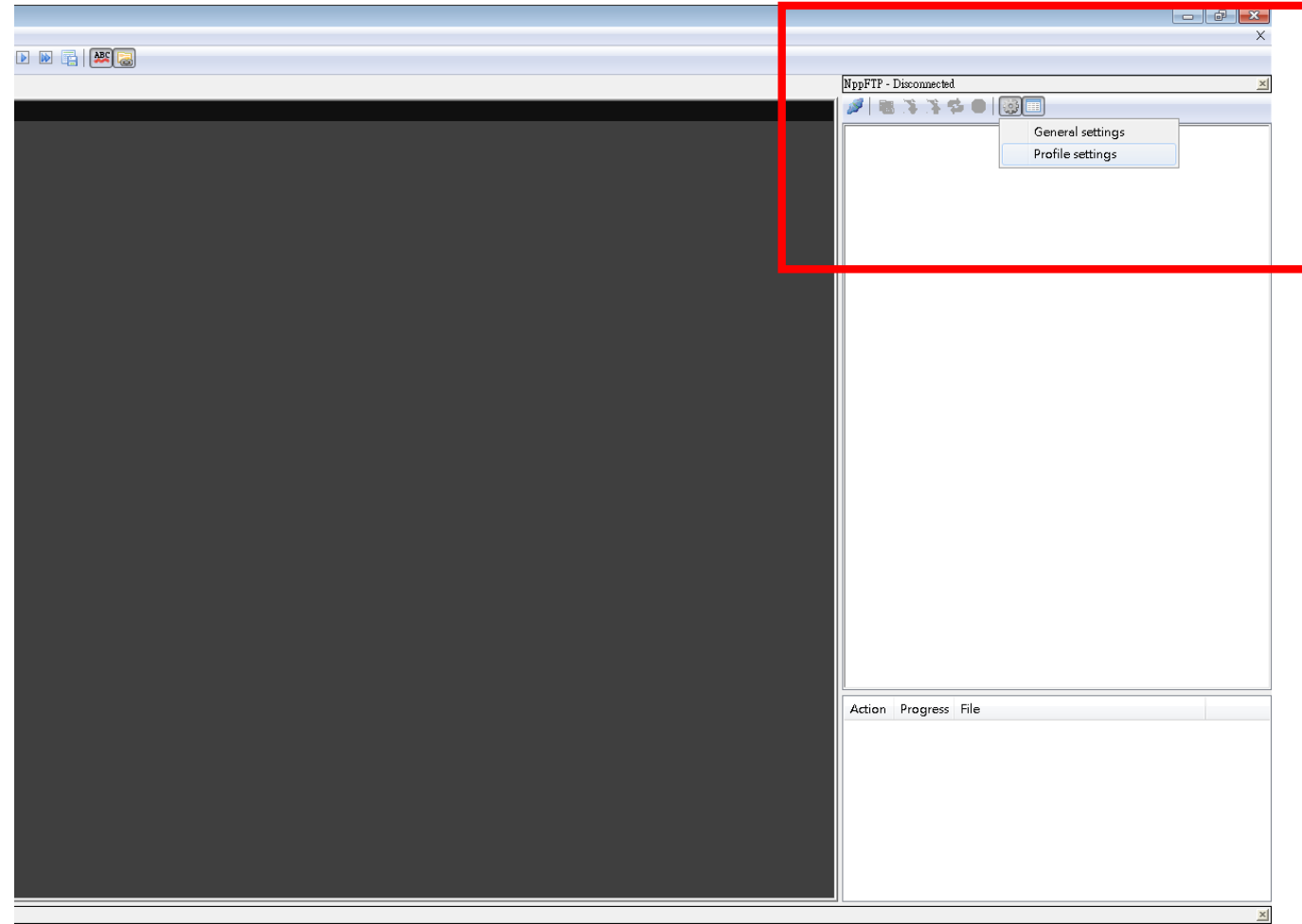# Another Editor: Notepad++

- 1. Download in official website https://notepad-plus-plus.org/
- 2. Install

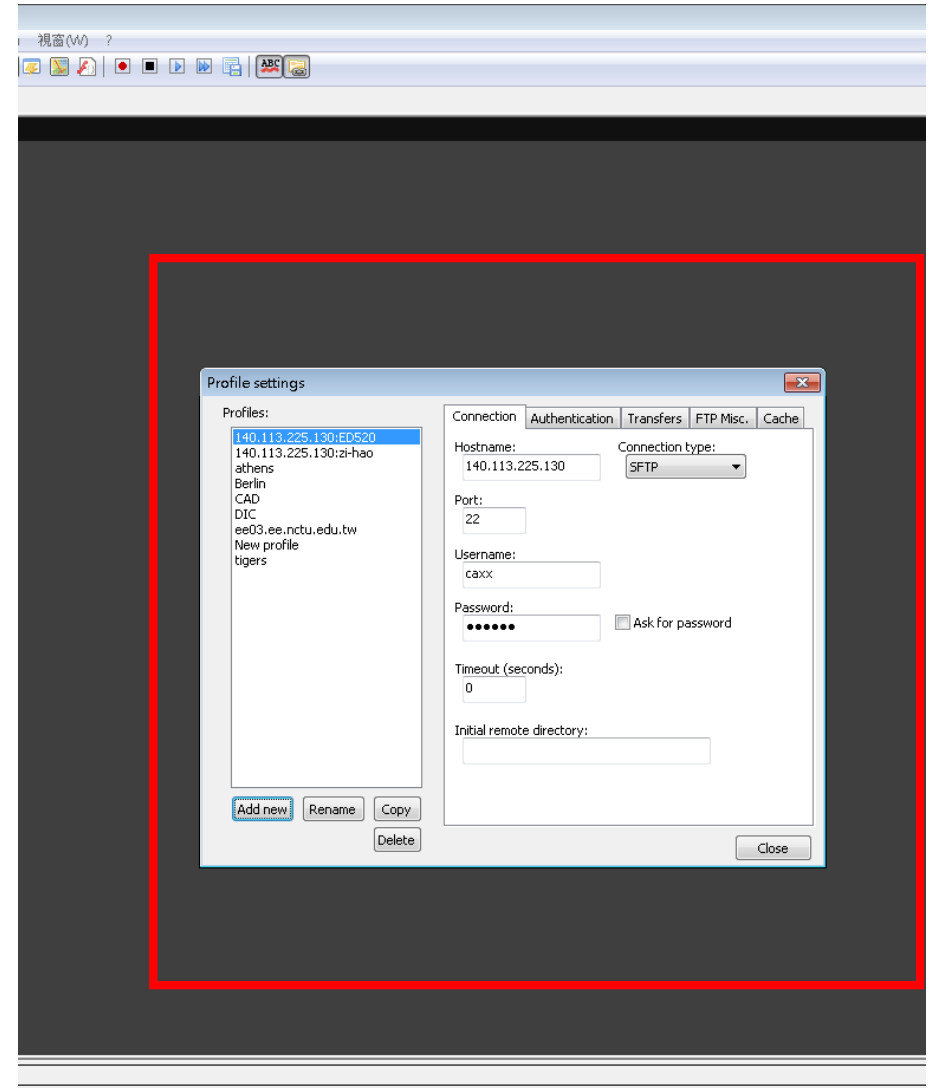# 3. Connect to the workstation in Notepad++

- Enable NppFTP window
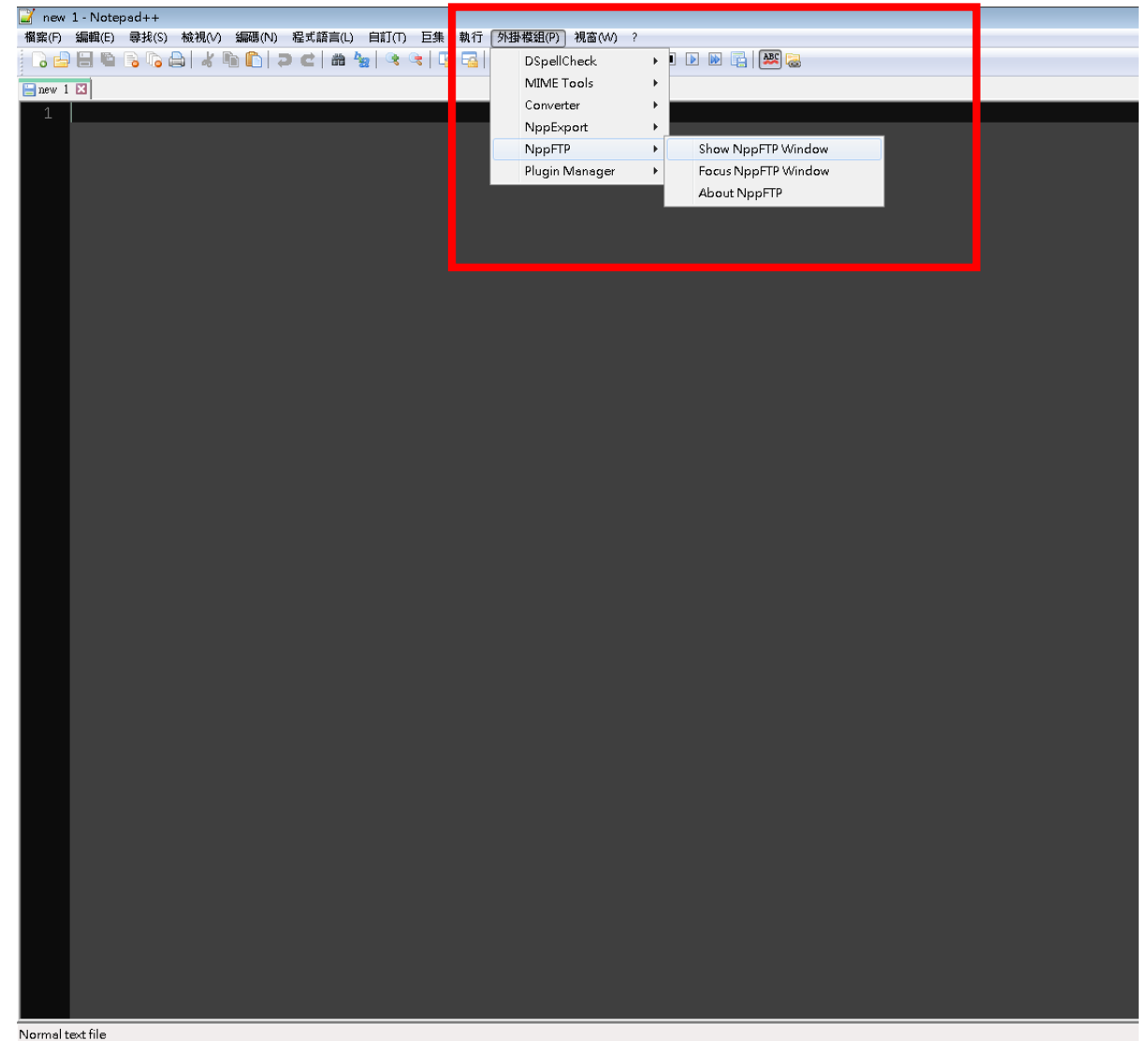
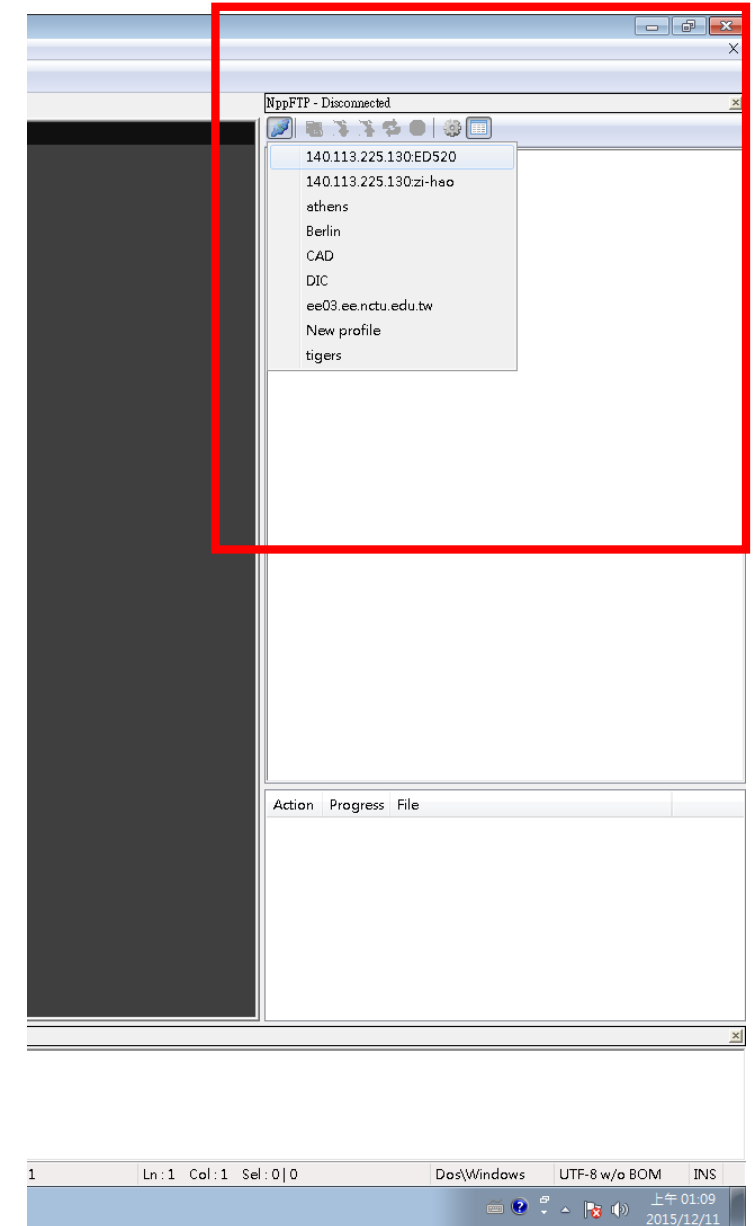# 4. Connect to the workstation in Notepad++

- Click Profile settings

5. Setting

- Click "Add new"

- Set host name: 140.113.225.130

- Connection type: SFTP

- Port: 22

- Username: ca01 ~ ca33
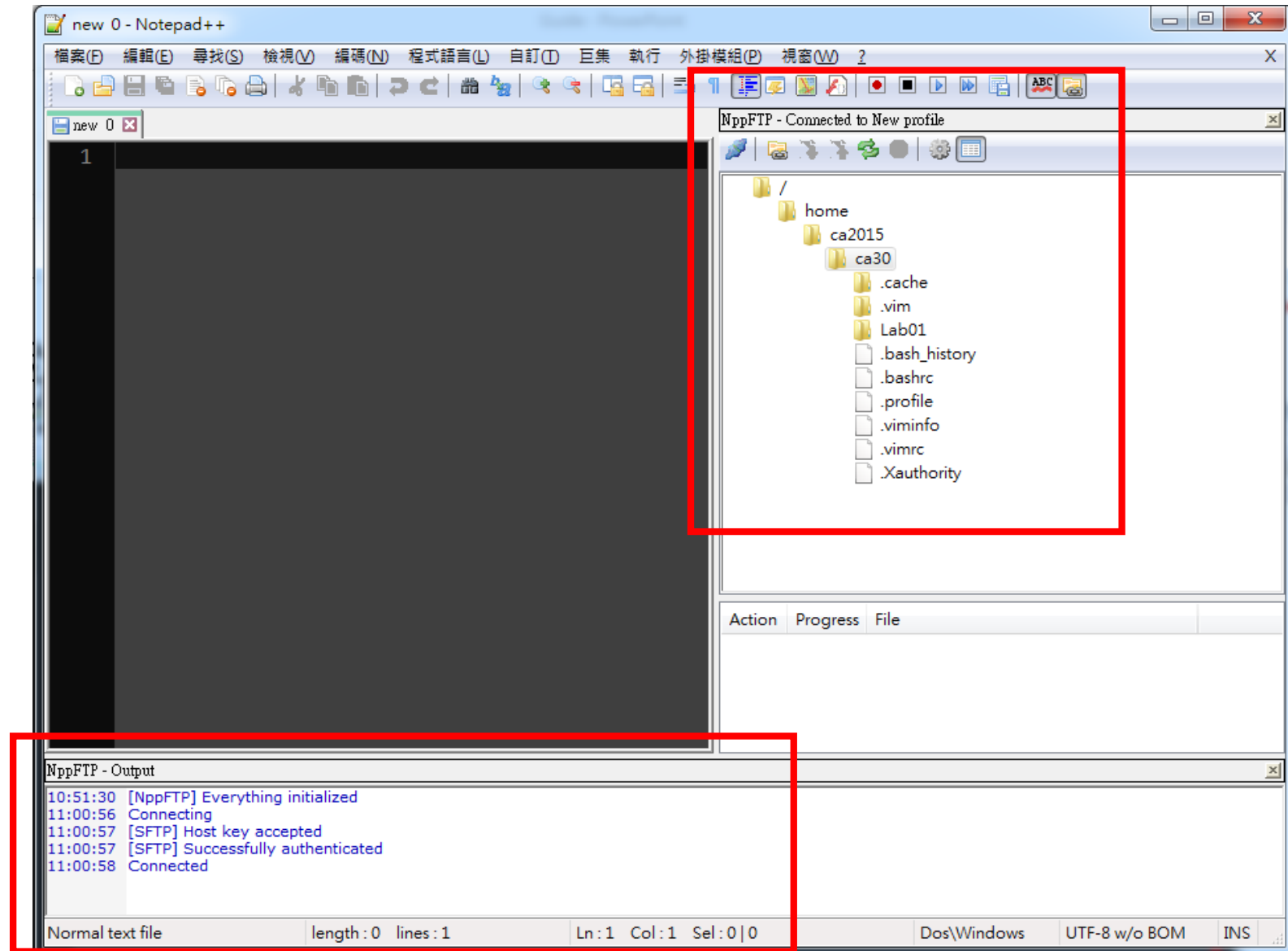
- Password: ca2015(default)

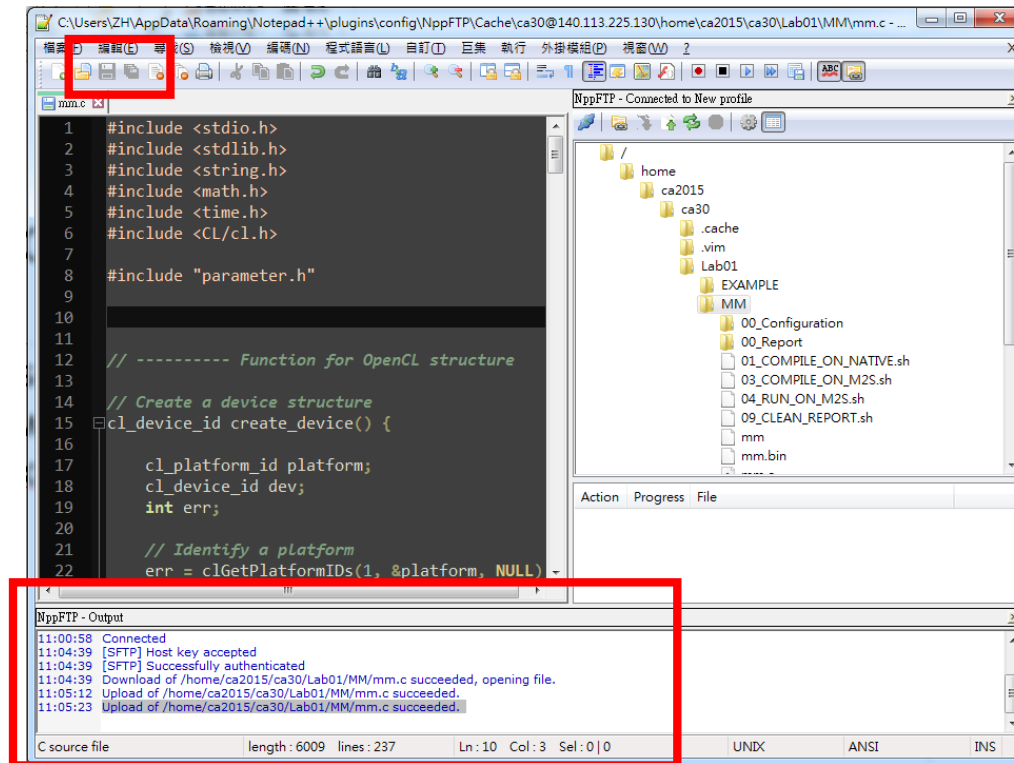- Click close

6. Connect

• Choose the workstation

7. Success

8. Write your code

- Don't forget to click "save" and check the state of the file.
  If it is successful, the window will show
  "Upload of xxxxxxxxxxxxxxx succeeded."

Notice

- You STILL must run your code in the Workstation!!
- Notepad++ is just for edit and writing your code.