Installing a SSH server for GIT

Date: 29/09/2011
Object: The document details how to install CYGWIN and then configure openssh to be used with GIT
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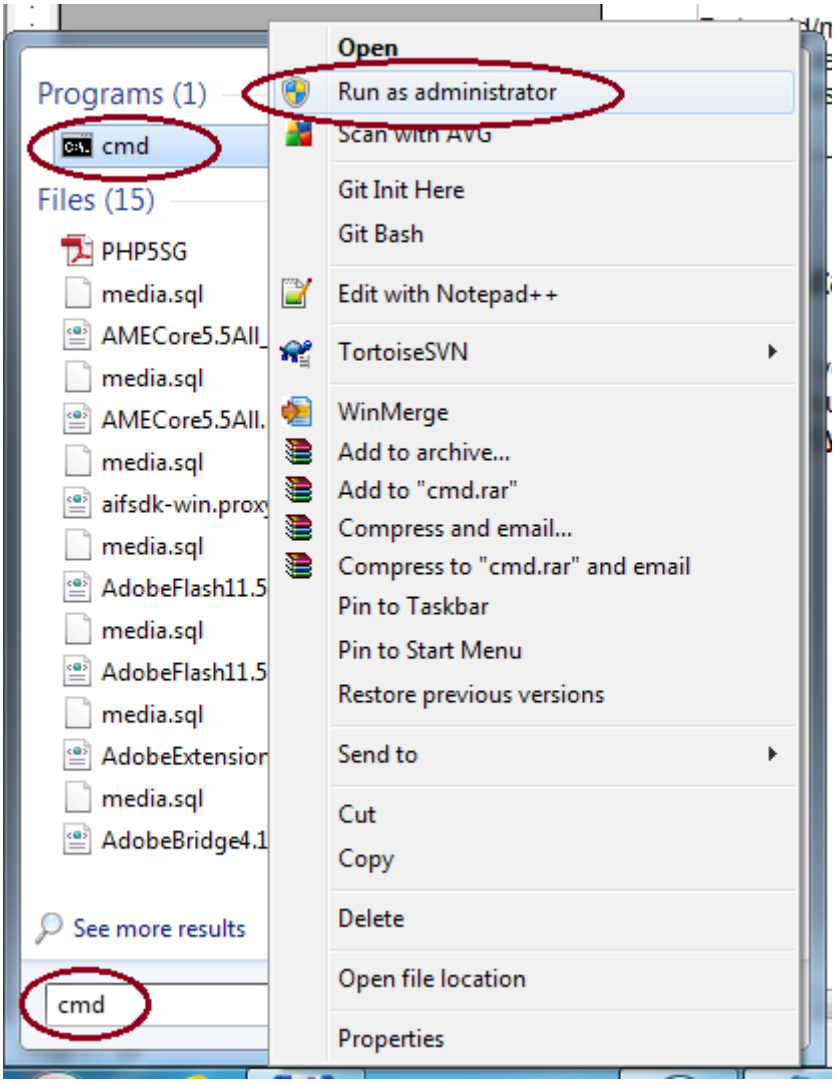
Uninstall Cygwin

If you already tried to install Cygwin and the SSH server and failed, follow these steps to clean up the previous install. If this is your first time installing Cygwin and the SSH server you may skip to the **"Install Cygwin"** chapter.

1)

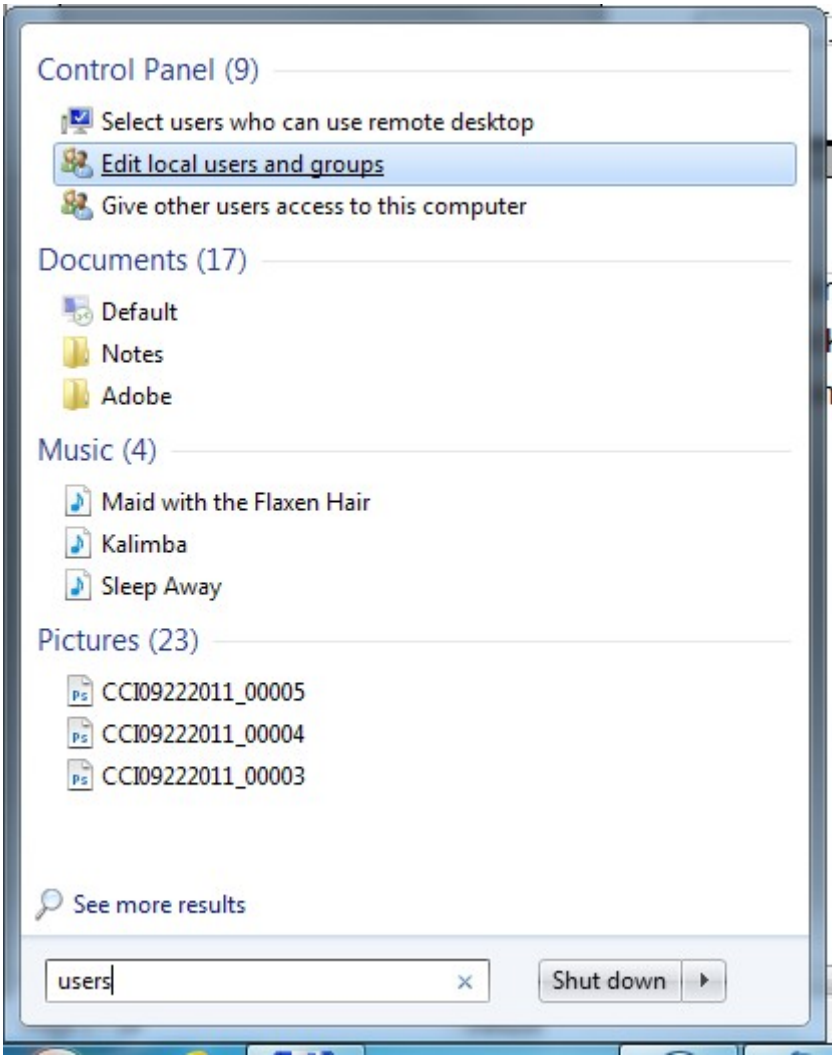


In the Windows 7 Start Menu, type "***cmd***"

Right click *cmd* and click on *Run as administrator*

In the command prompt window, type: "***sc delete sshd***"

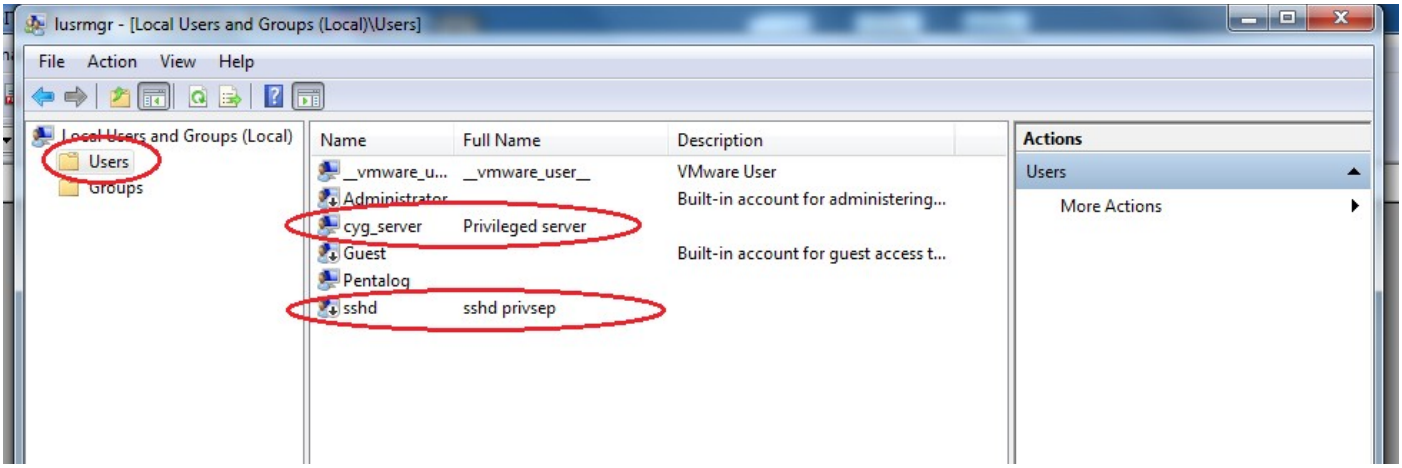
2)



In the Windows 7 Start Menu, type "***users***"

Click on *Edit local users and groups*

3)



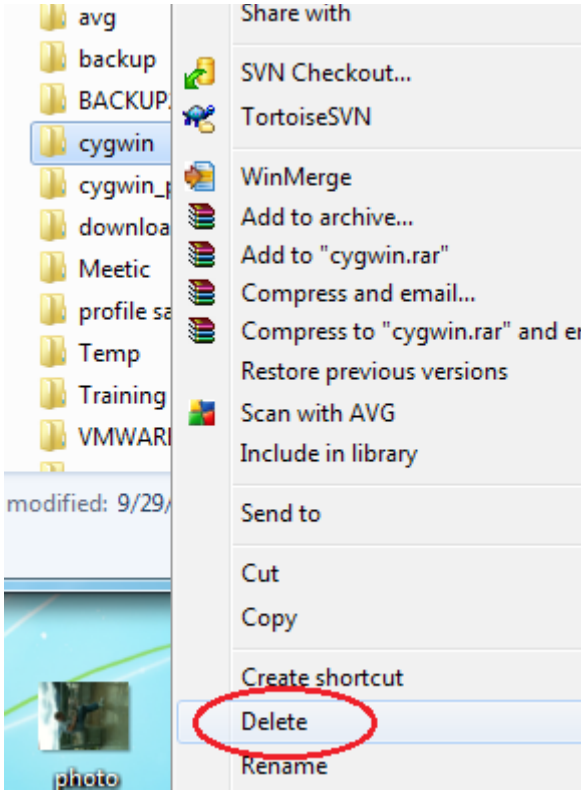
In the window that opens, double click on *Users*

Delete the *cyg_server* and *sshd* users.

4) Restart your computer

5)

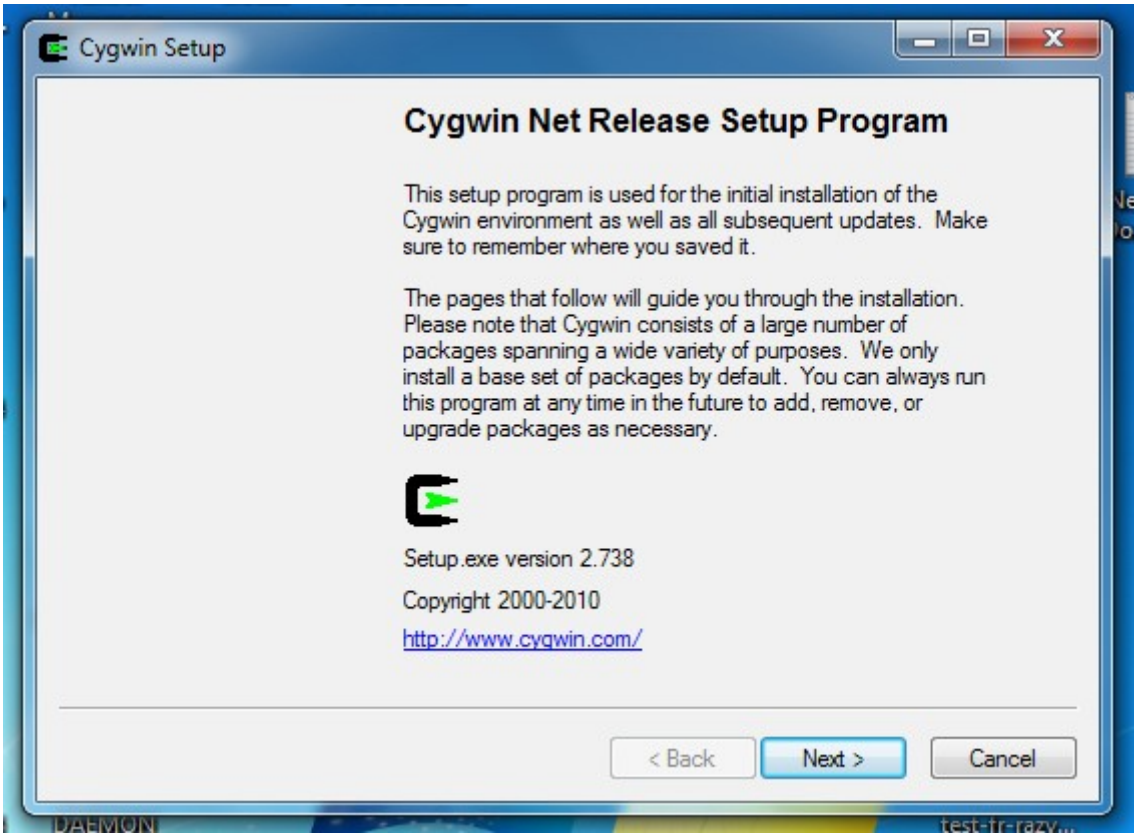
Delete the folder where CYGWIN was installed



Install Cygwin

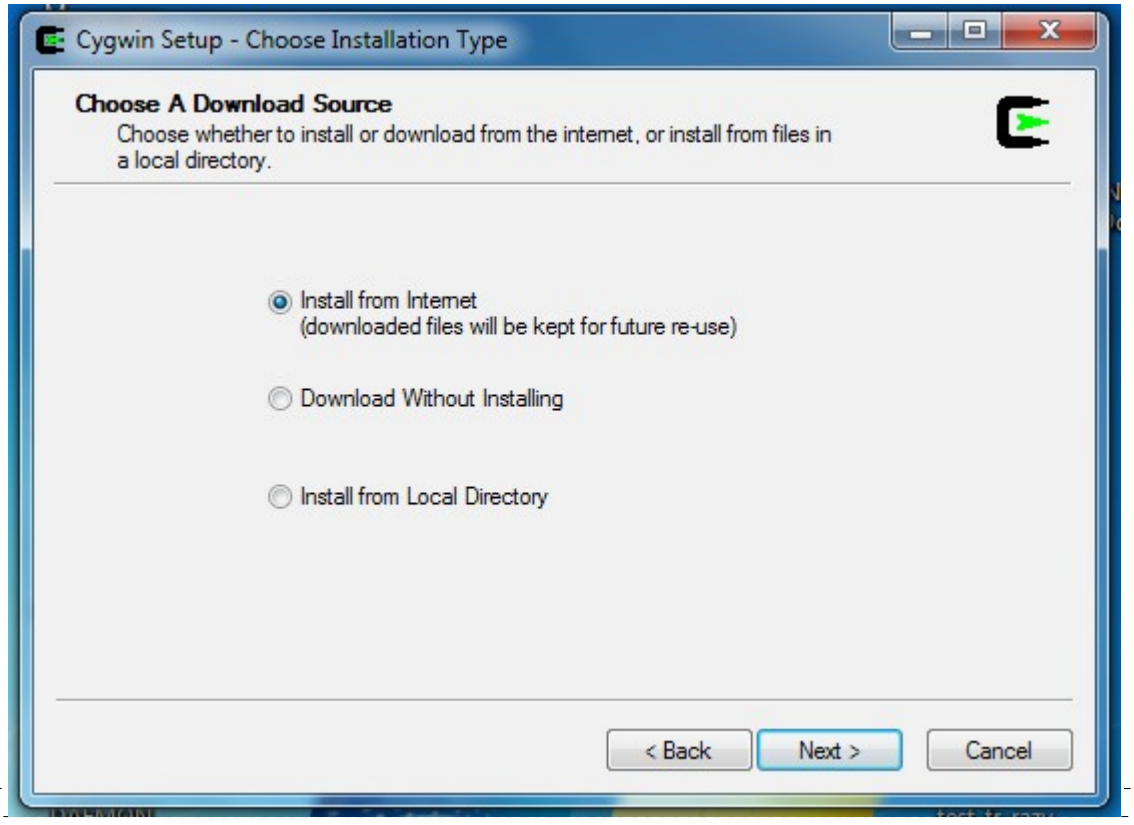
Download and run the Cygwin setup from **http://www.cygwin.com/setup.exe**

1)



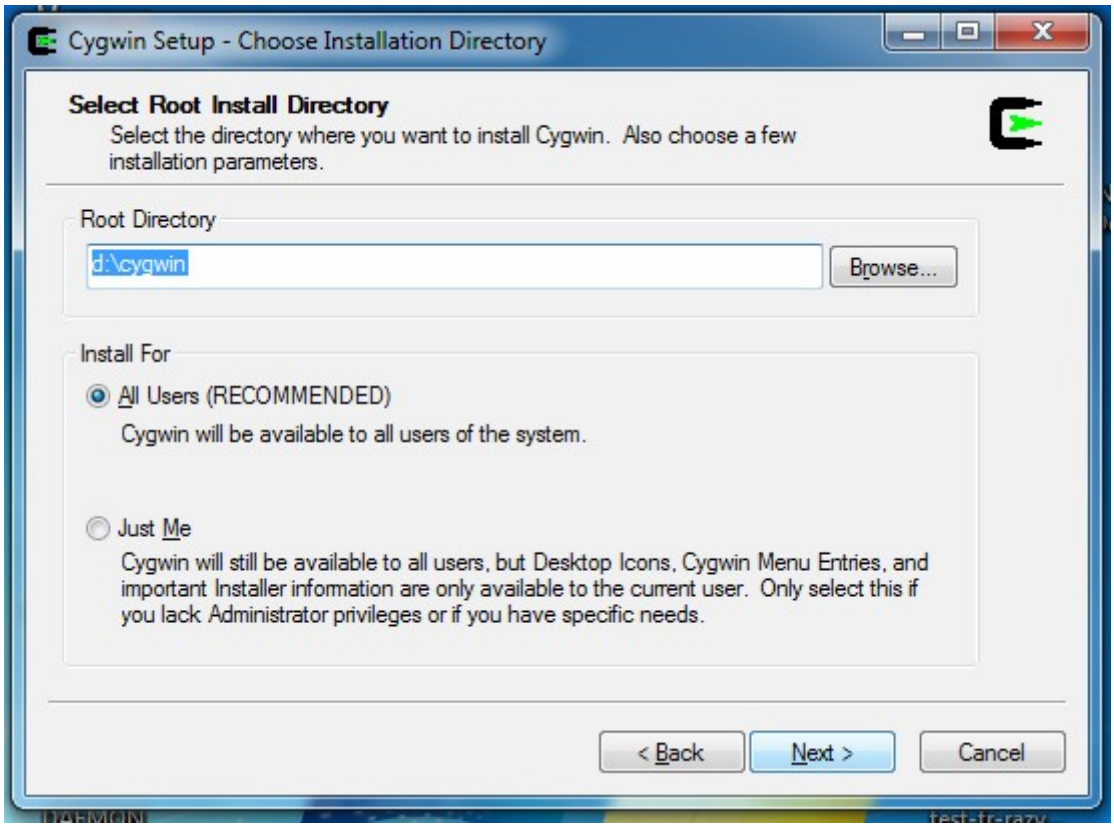
Click “Next >”

2)



Select “Install from Internet”, and click “Next >”

3)

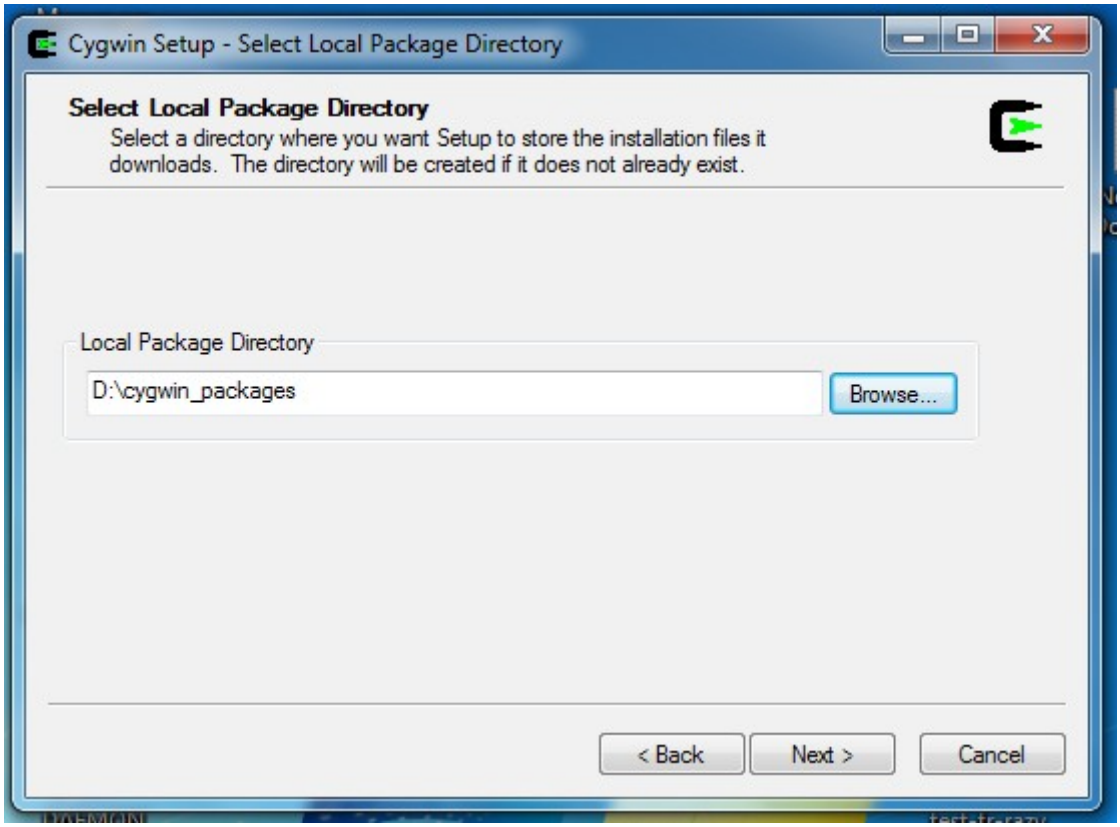


Select a path where to install CYGWIN, avoid using paths that contain SPACES or special characters (accents, etc).

Select “All Users”

Click “Next >”

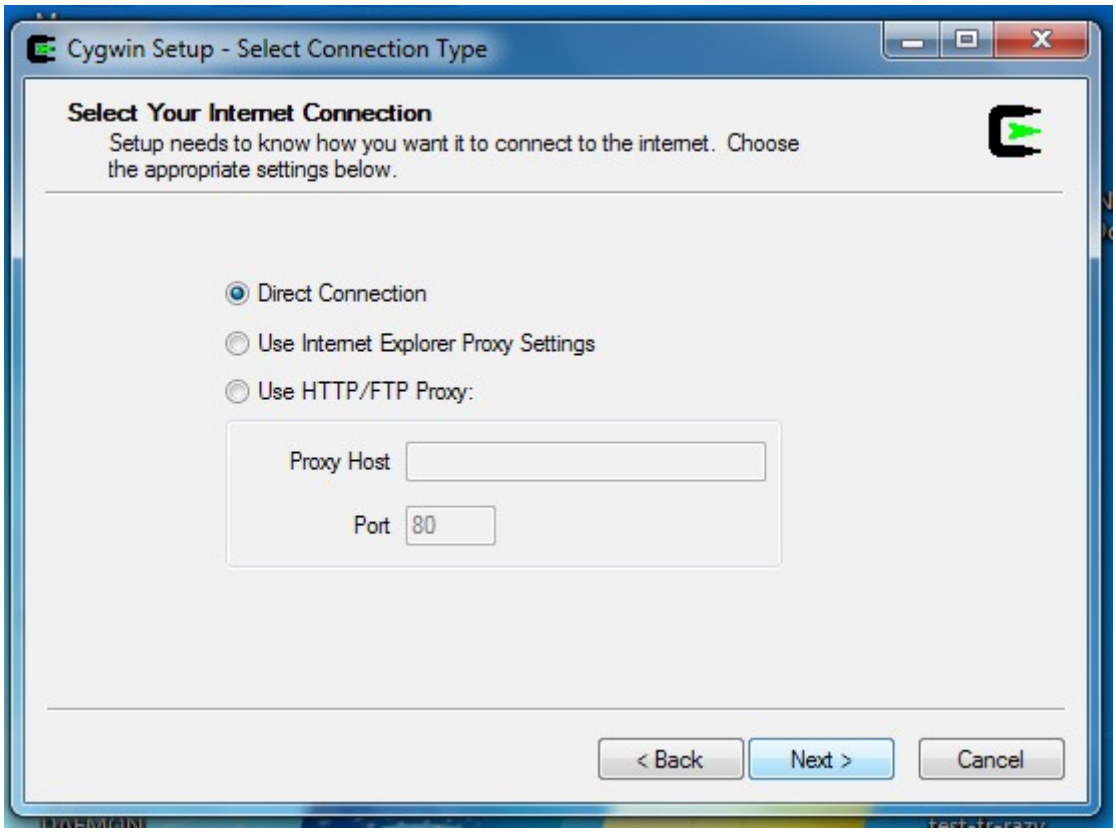
4)



Select a path for CYGWIN to store downloaded packages.

Click “Next >”

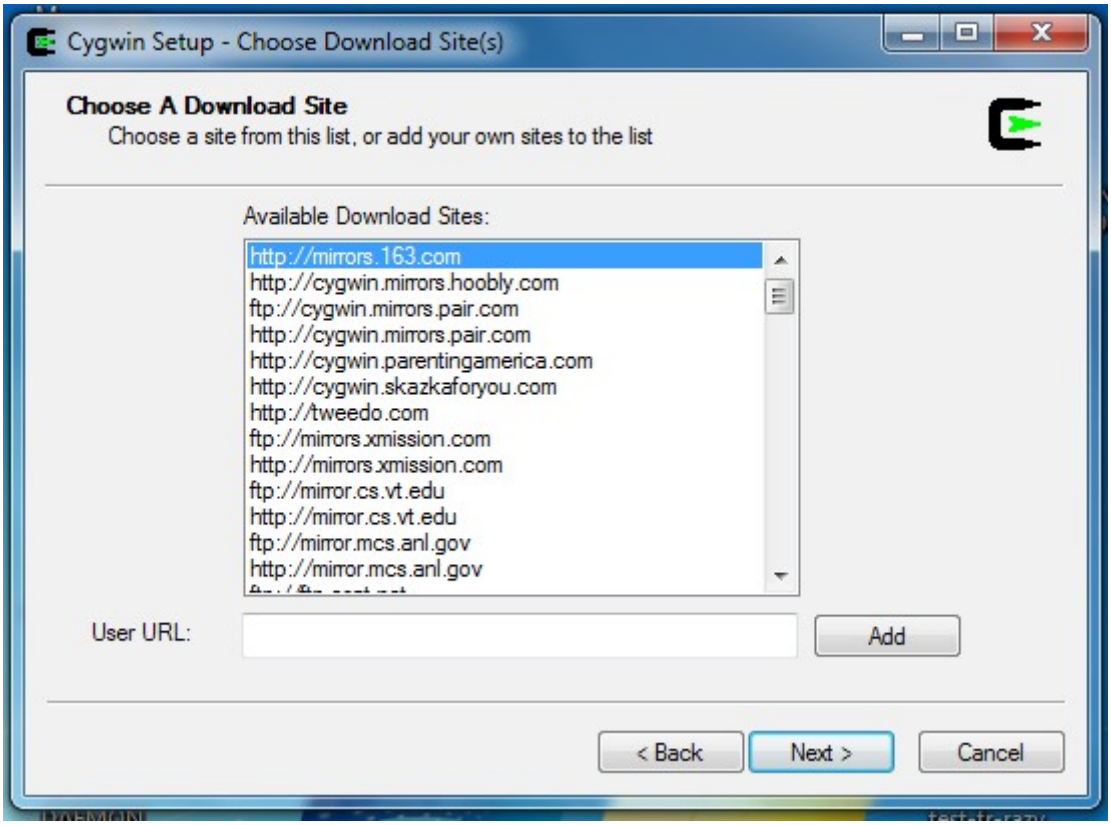
5)



Select “Direct Connection”,

Click “Next >”

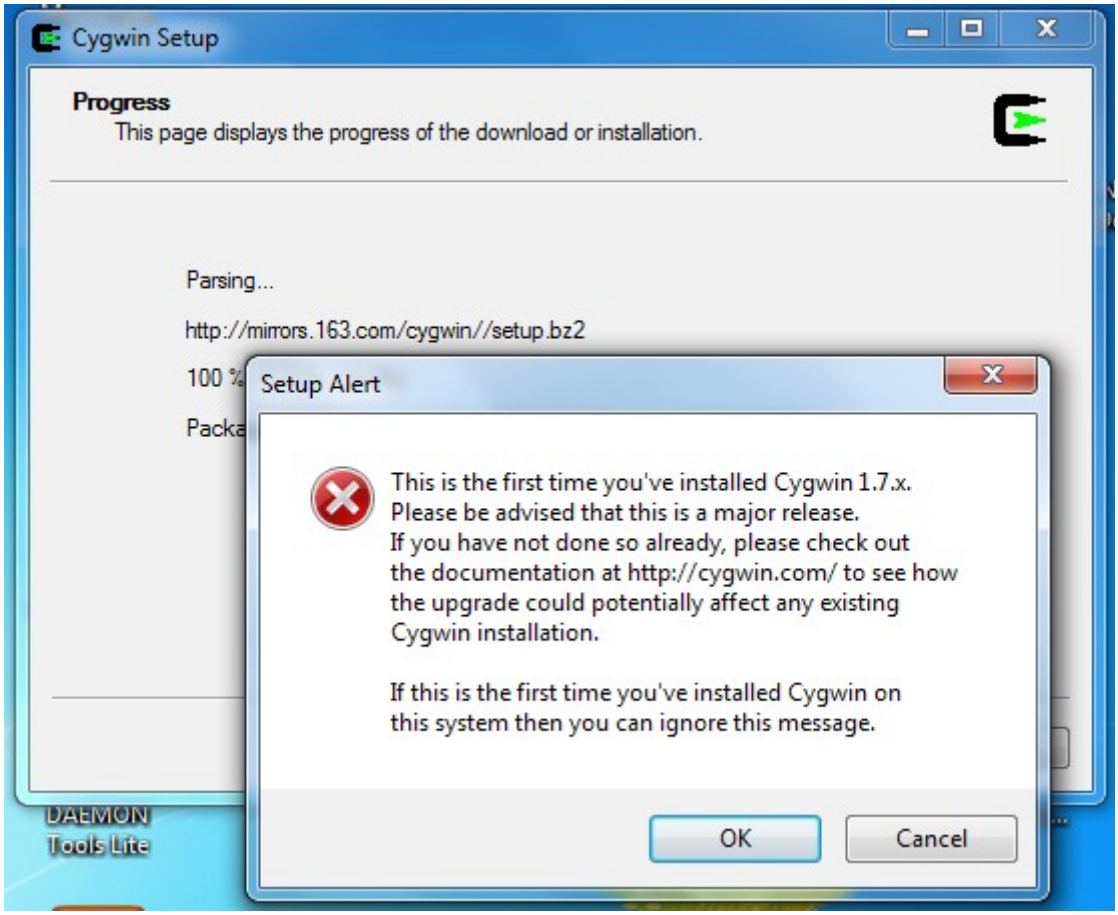
6)



Select a server from where to download the CYGWIN packages,

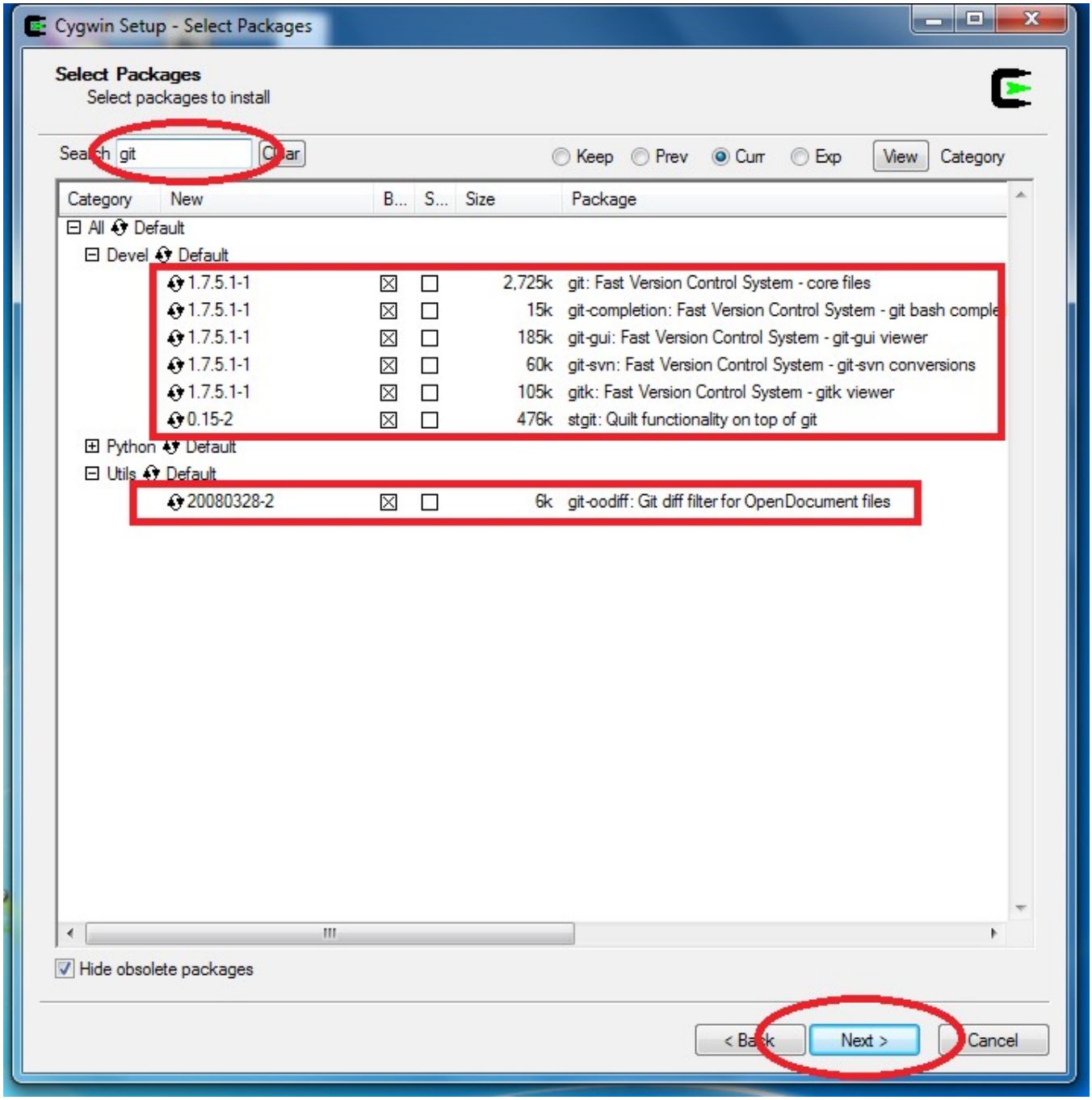
Click “Next >”

7)



If the above window appears, click “OK”

8)

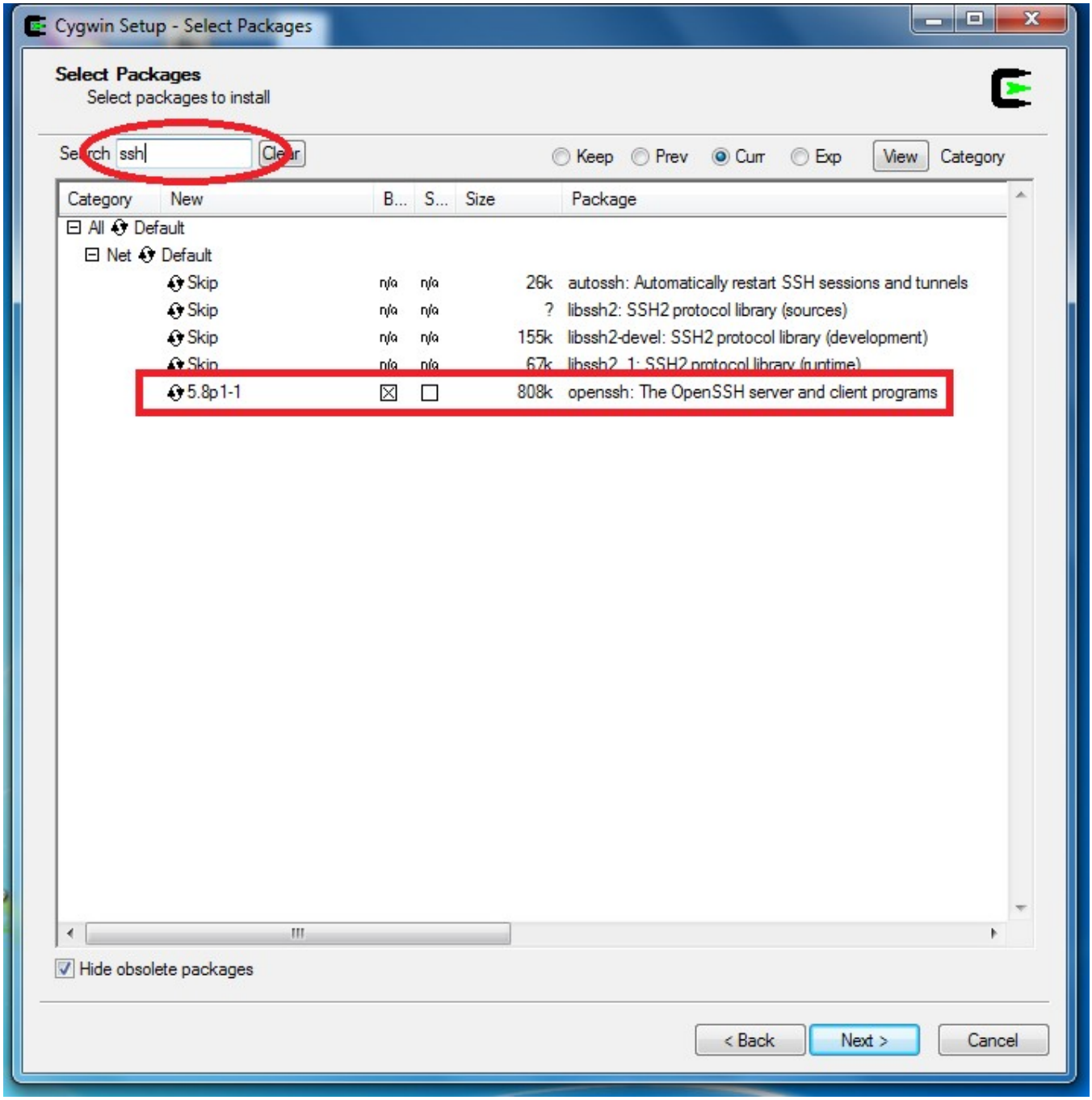


In the “Search:” field, type “***git***”

Select all binary packages under “Devel” and “Utils” for installation.

Don't click “Next >”

9)

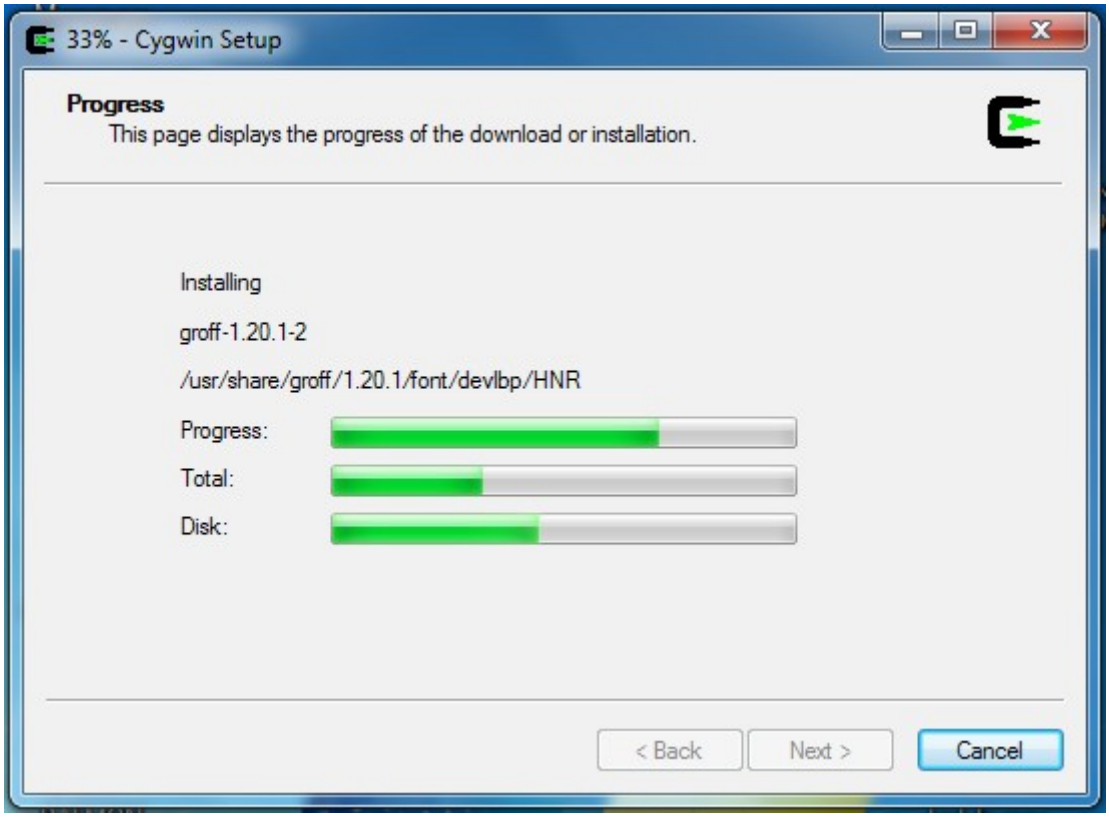


In the “Search:” field type “***ssh***”

Select the binary *openssh* package for installation.

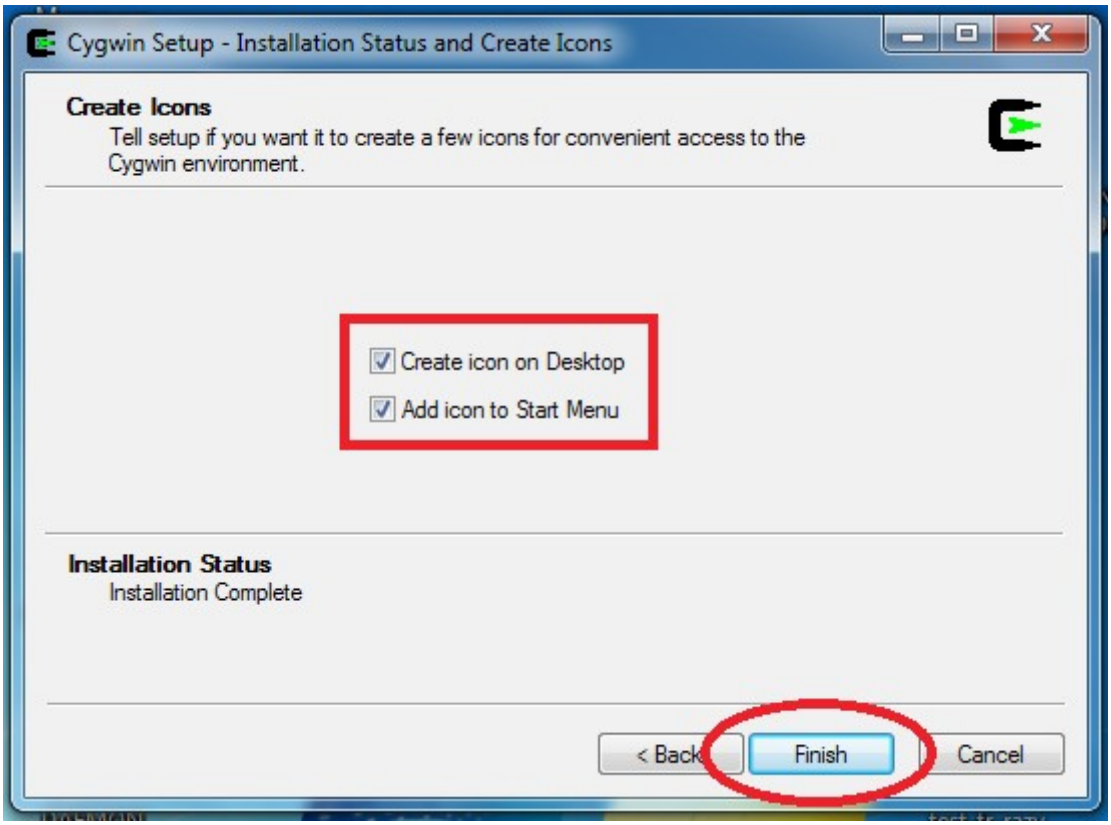
Click “Next >”

10)



Wait for the installer to finish.

11)



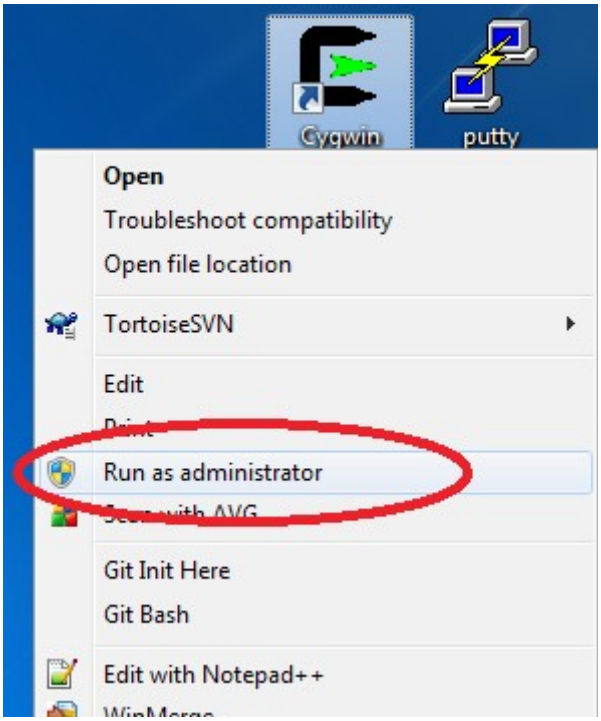
Tick the checkboxes.

Click “Finish”

Setup OpenSSH

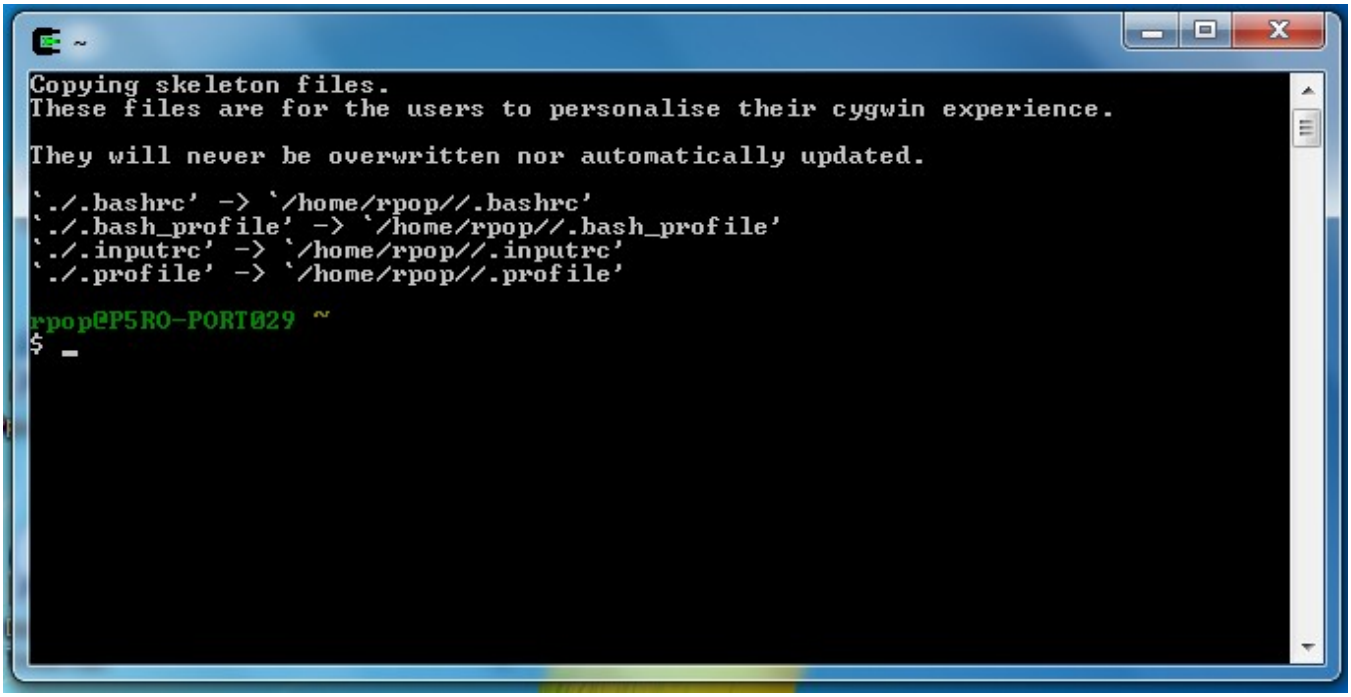
1)

On the *Desktop*, look for the *Cygwin* icon.



Right click on the *Cygwin* icon and click *Run as administrator*

2)



In the window that opens, type "***ssh-host-config***"

The ***ssh-host-config*** script will ask a series of questions, below are the answers you need to type for each question:

***** Query: Should privilege separation be used? (yes/no)**

type: ***yes***

***** Info: Administrator privileges. Should this script attempt to create a**

***** Query: new local account 'sshd'? (yes/no)**

type: ***yes***

***** Query: Do you want to install sshd as a service?**

***** Query: (Say "no" if it is already installed as a service) (yes/no)**

type: ***yes***

***** Query: Enter the value of CYGWIN for the daemon: []**

type: ***sshd***

***** Info: This script plans to use 'cyg_server'.**

***** Info: 'cyg_server' will only be used by registered services.**

***** Query: Do you want to use a different name? (yes/no)**

type: ***no***

***** Query: Create new privileged user account 'cyg_server'? (yes/no)**

type: ***yes***

***** Info: Please enter a password for new user cyg_server. Please be sure**

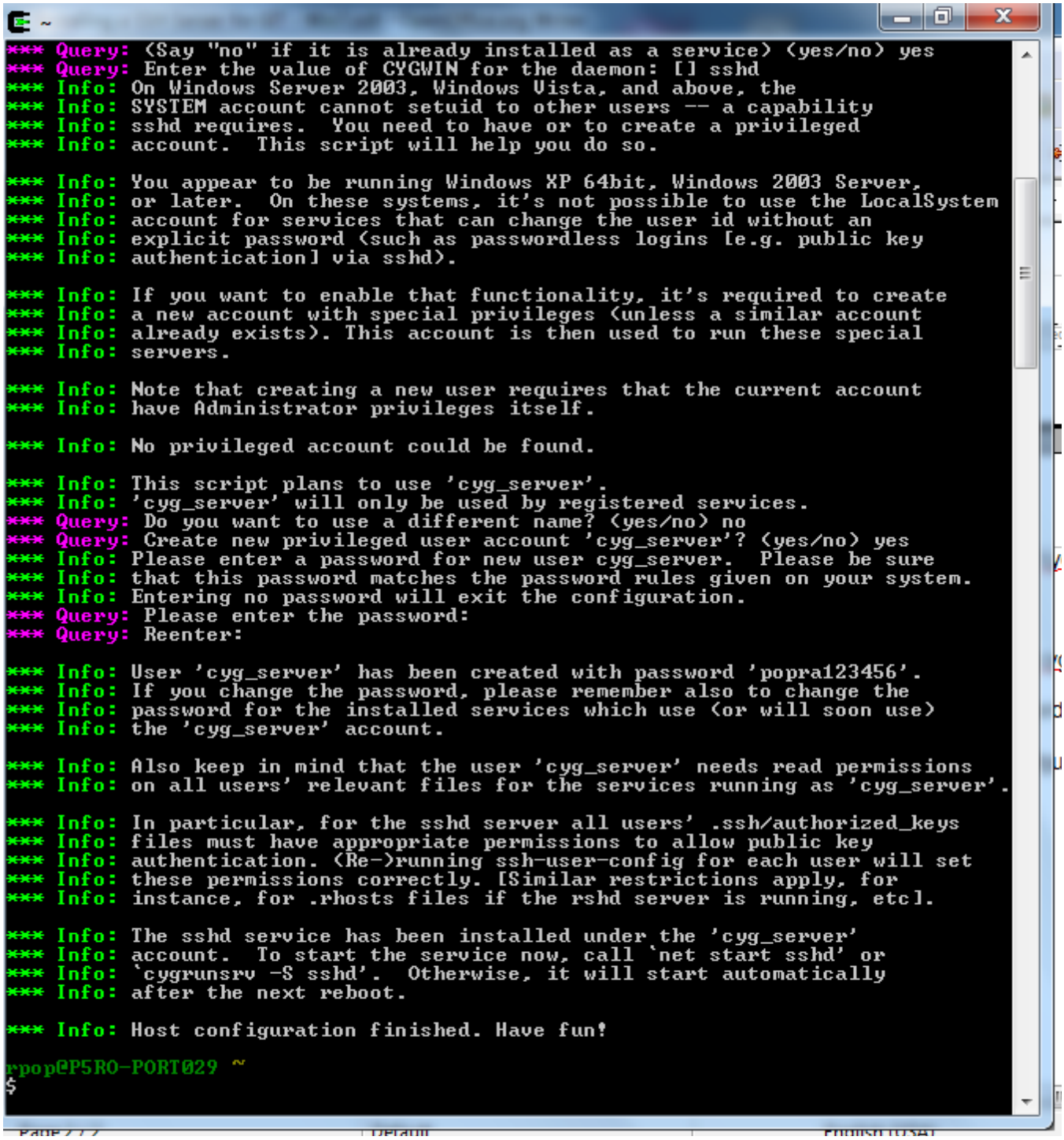
***** Info: that this password matches the password rules given on your system.**

***** Info: Entering no password will exit the configuration.**

***** Query: Please enter the password:**

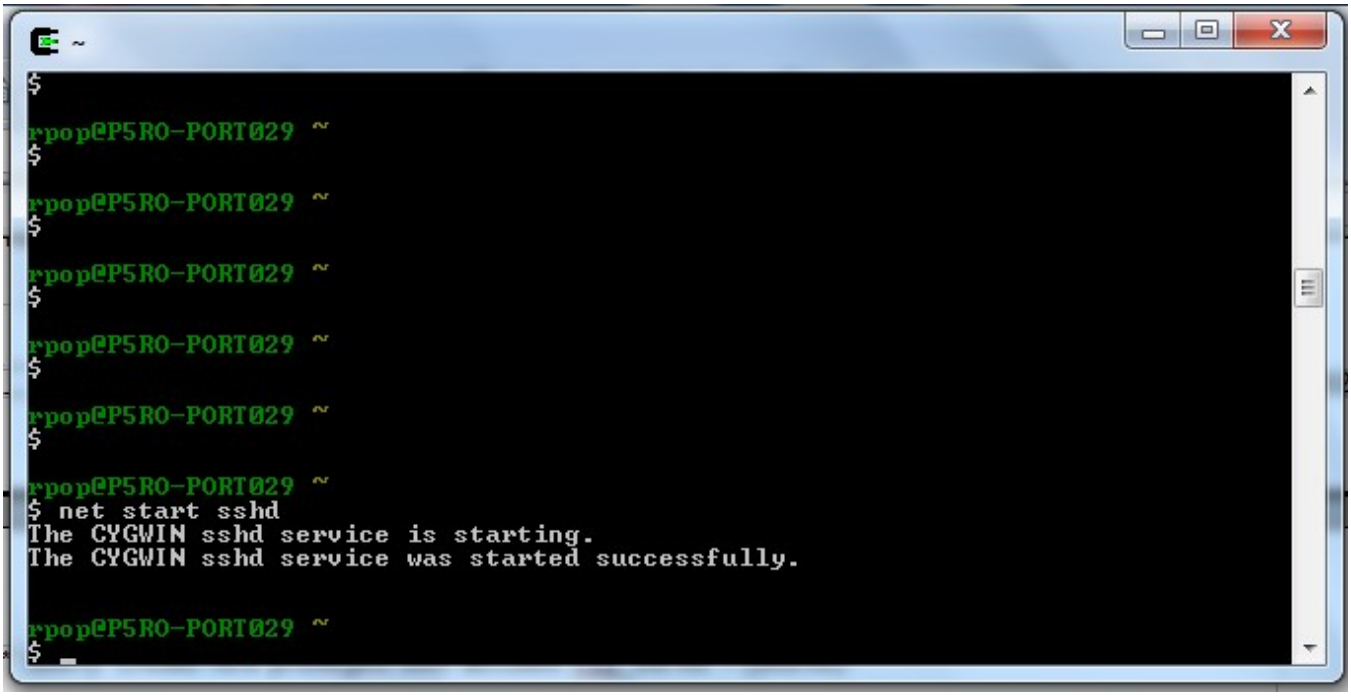
***** Query: Reenter:**

Type in a password twice. The password needs to be in conformance with your password policy.



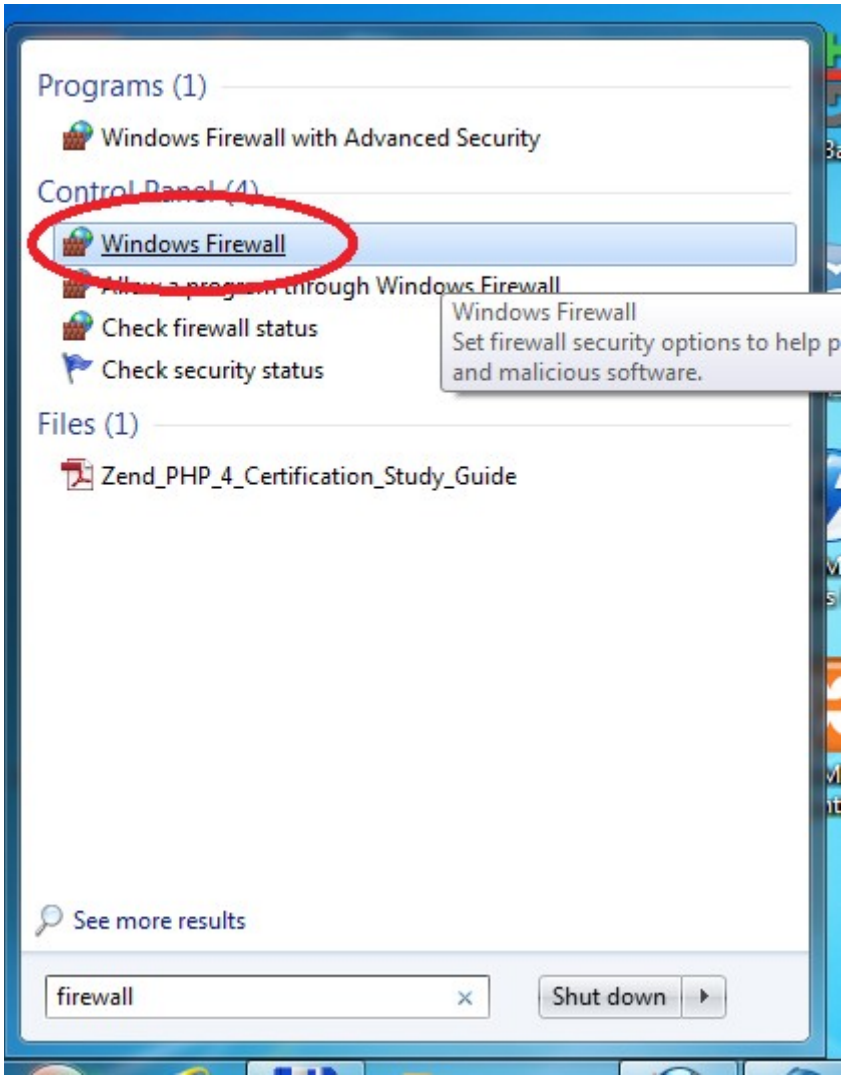
3)

Start the ssh server, by typing "***net start sshd***"


~
$
rpop@P5RO-PORT029 ~
$
rpop@P5RO-PORT029 ~
$
rpop@P5RO-PORT029 ~
$
rpop@P5RO-PORT029 ~
$
rpop@P5RO-PORT029 ~
$
rpop@P5RO-PORT029 ~
$ net start sshd
The CYGWIN sshd service is starting.
The CYGWIN sshd service was started successfully.
rpop@P5RO-PORT029 ~
$

Configure the Windows Firewall

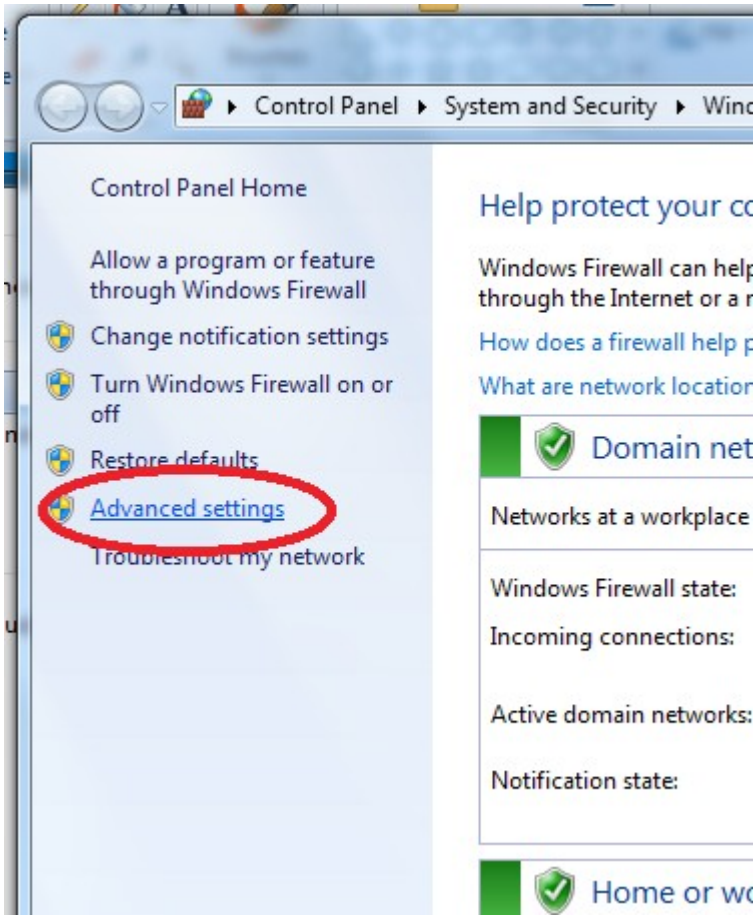
1)



In the Windows 7 Start menu, type "***firewall***".

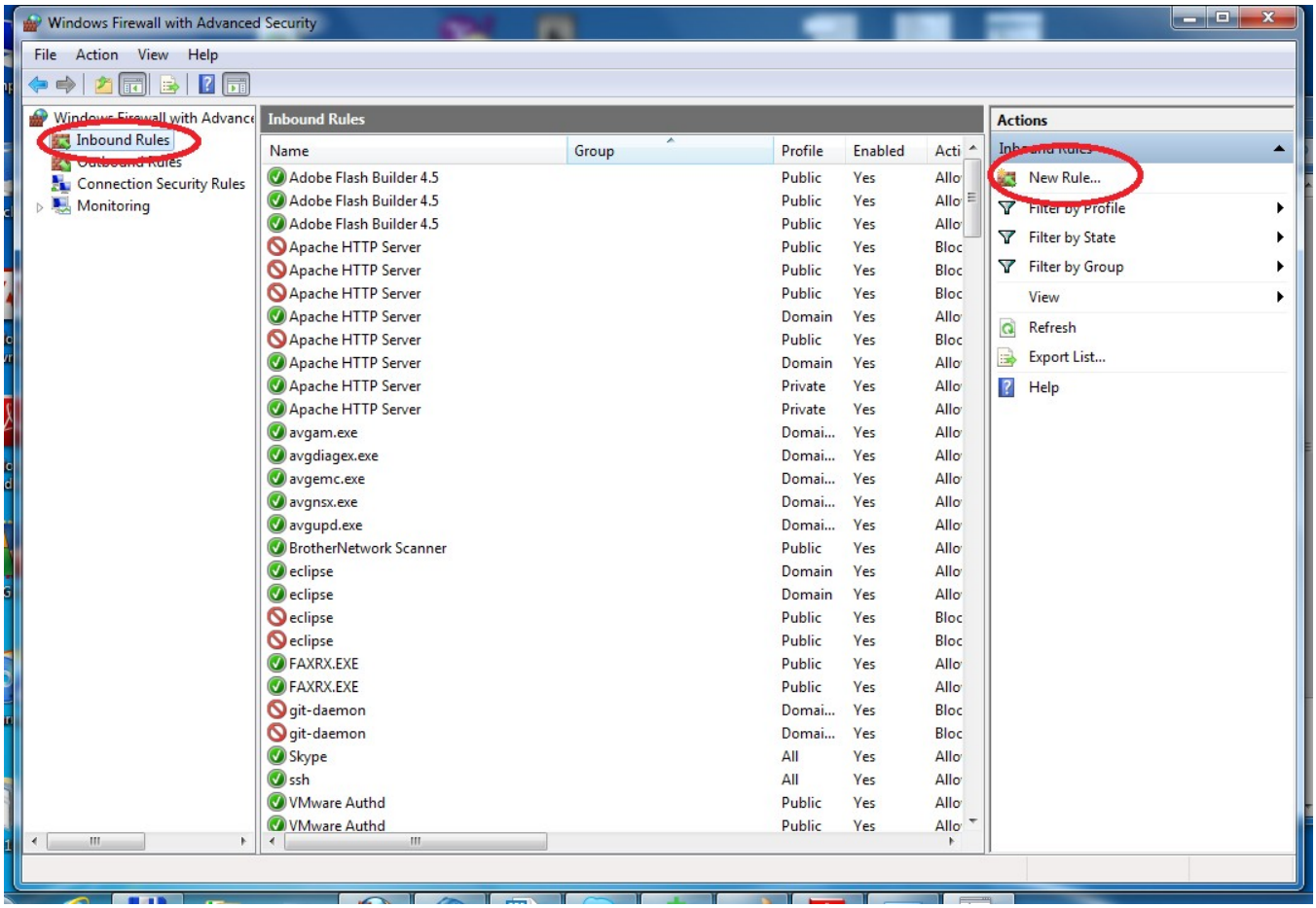
Click on *Windows Firewall*

2)



In the window that opens, click on *Advanced Settings*

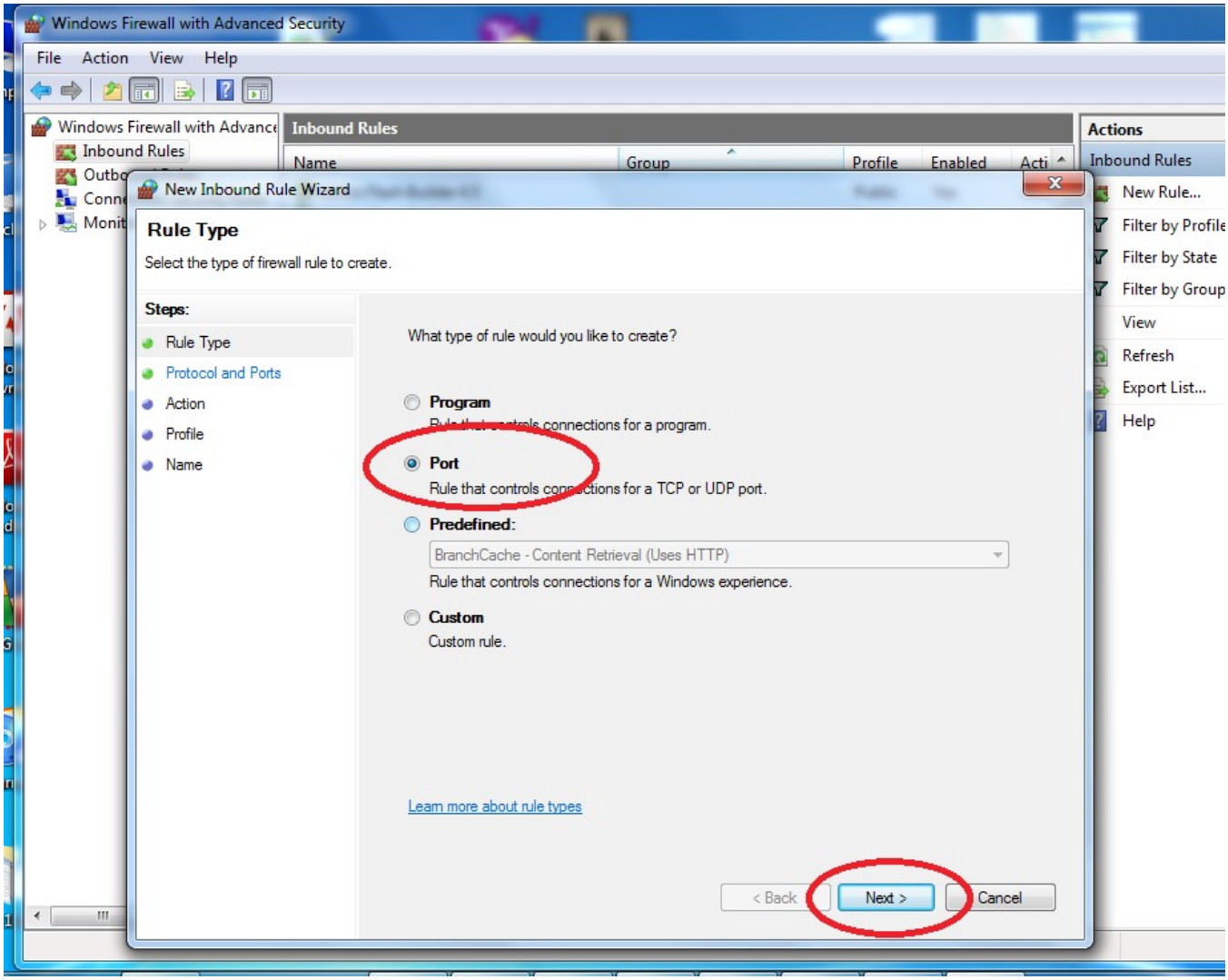
3)



In the window that opens, click on *Inbound Rulles*

Then, click on *New Rule...*

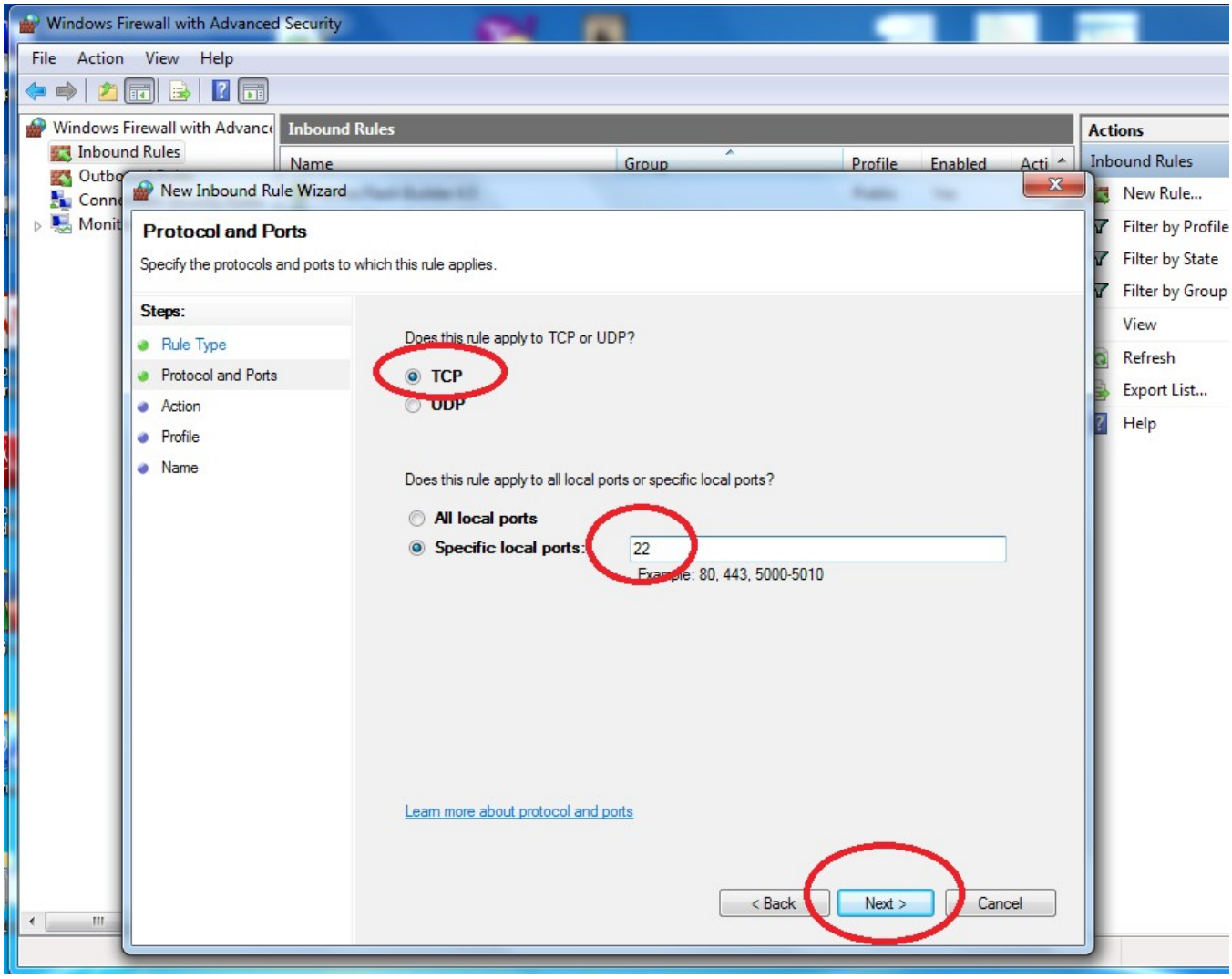
4)



In the window that opens, select *Port*

Click “Next >”

5)

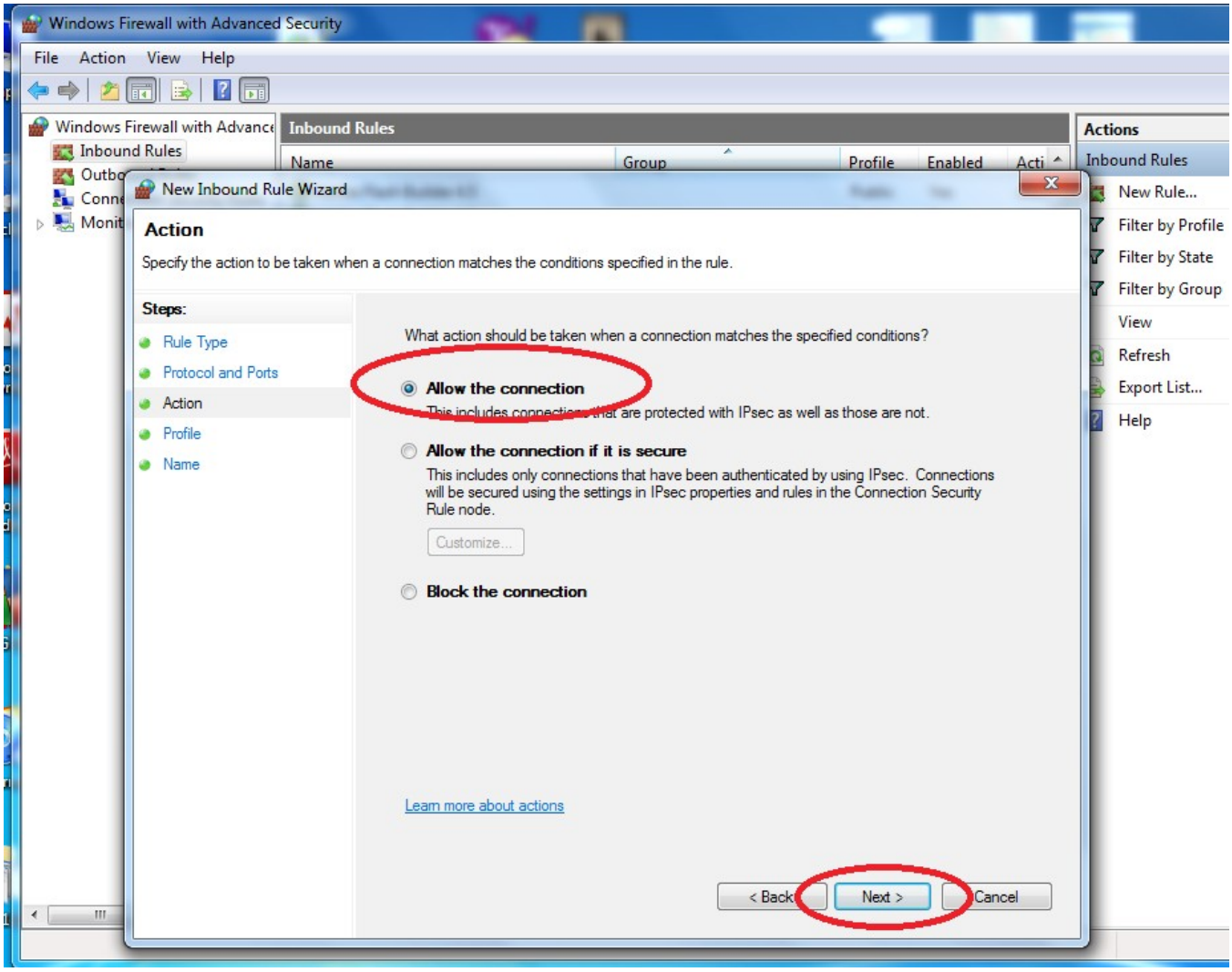


Select *TCP*

Enter "**22**", in the textbox next to *Specific local ports:*

Click "Next >"

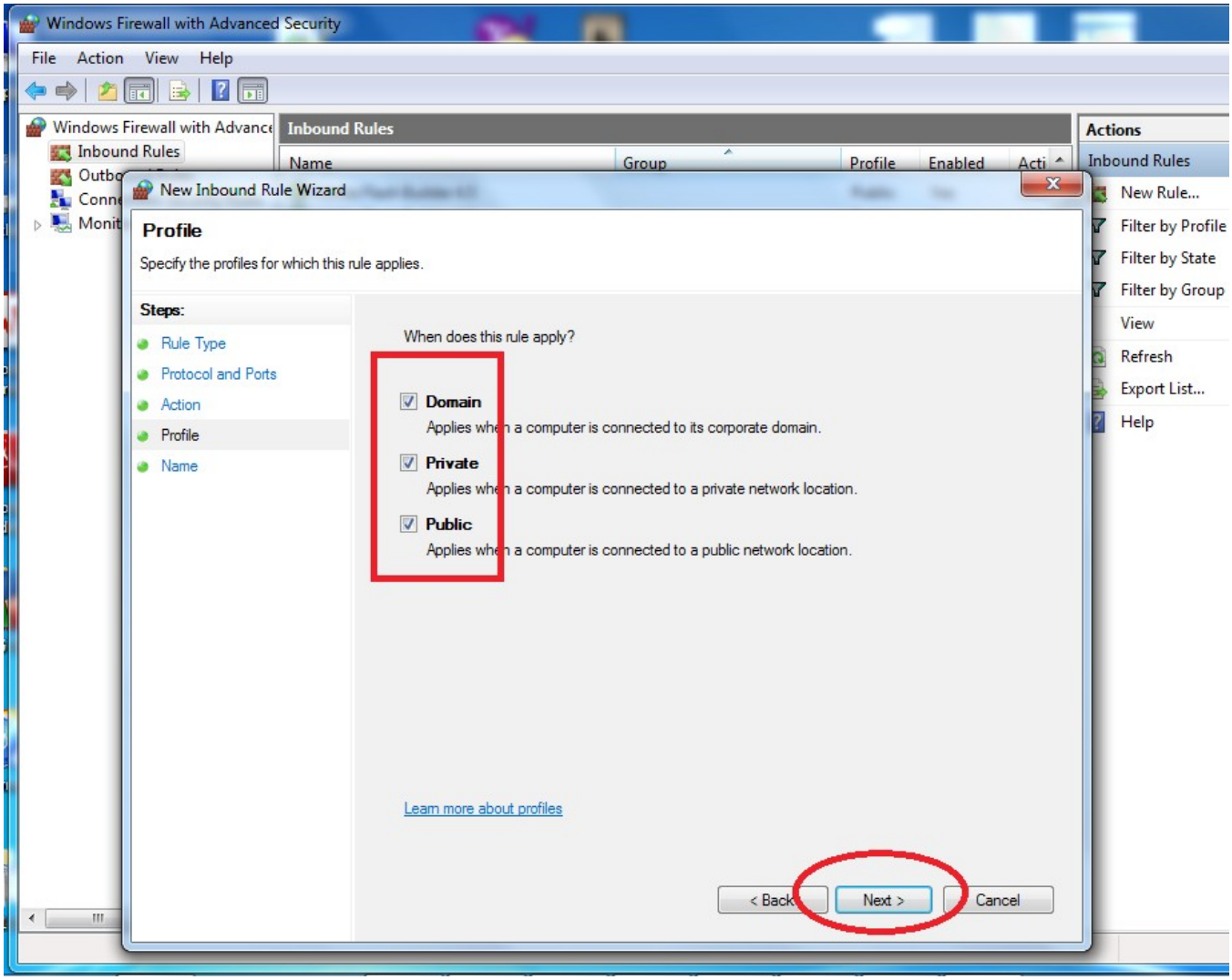
6)



Select *Allow the connection*

Click “Next >”

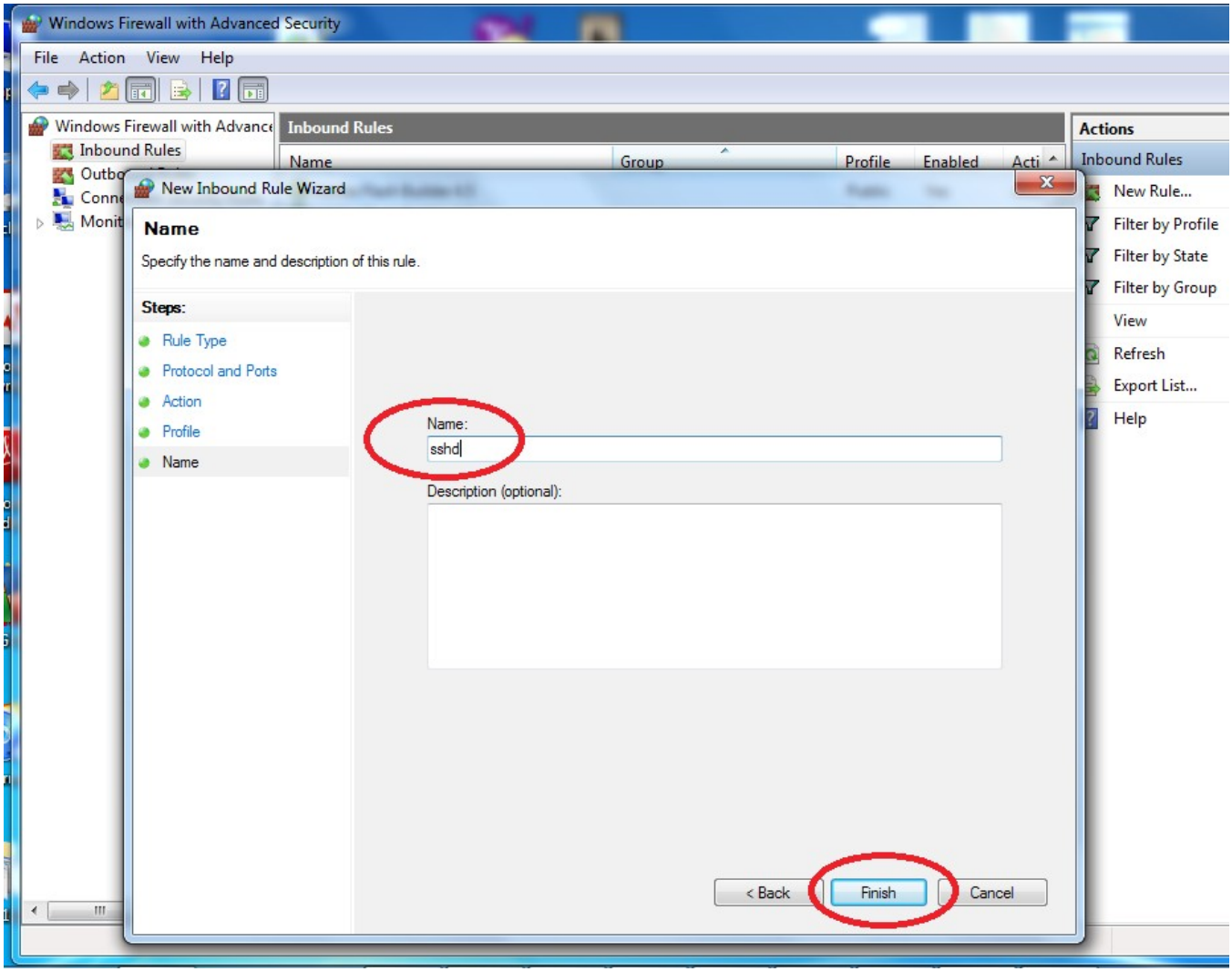
7)



Select on which networks to open the 22 port.

Click “Next >”

8)



In the textbox under *Name:*, type "***sshd***"

Click "Finish"

Add Active Directory Users

For other developers to be able to pull/clone GIT code from your computer using their own Active Directory user/password, you need to provide each of them with access to your ssh server.

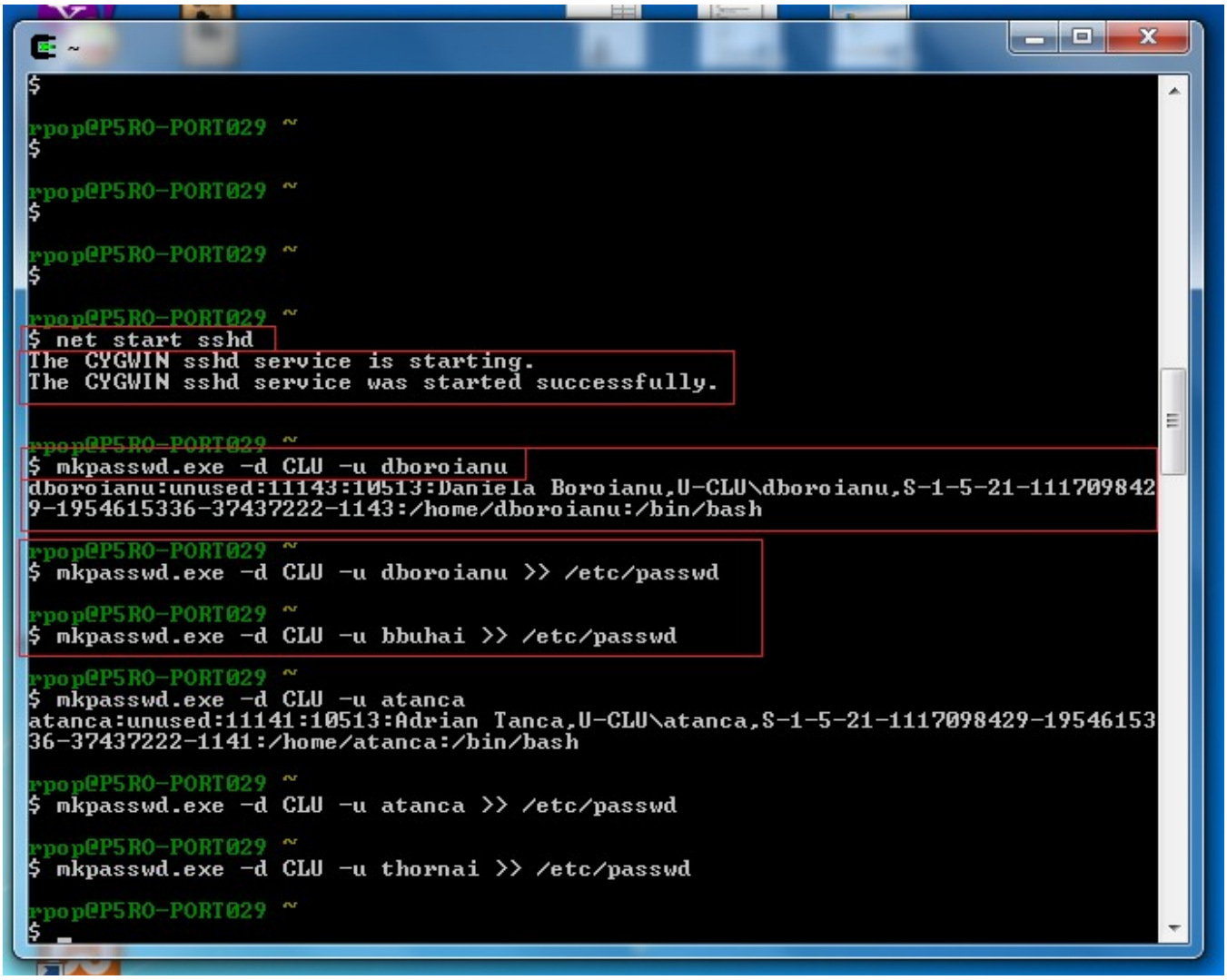
To do this, in the Cygwin window use the ***mkpasswd.exe*** command:

mkpasswd.exe -d WINDOWS_DOMAIN_NAME -u USER_NAME >> /etc/passwd

For example to allow the **CLU\dboroianu** user (user_name=**dboroianu**, windows_domain_name=**CLU**) to clone your GIT, you'll have to type:

mkpasswd.exe -d CLU -u dboroianu >> /etc/passwd

You don't have to provide your own username access to the SSH server.



Cloning/Pulling a repository

The address at which other developers can access your local repository is:

ssh://their_user_name@your_computer_name/cygdrive/windows_drive/path/to/repository

Underlined items need to be replaced with their proper values.

For example, my local repository can be reached by the remote user *dboroianu* at this address:

ssh://dboroianu@p5ro-port029/cygdrive/d/meetic/

p5ro-port029 – is the name of my computer

dboroianu – is the remote user pulling my GIT, the user will be prompted for his Active Directory password when connecting to my GIT

and my GIT tree is located on **D:\meetic\ (/d/meetic/)**