

# Remote Access with Tunneling VNC Over SSH

ZHENG Huan Qun  
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This guide is intended for users who use Windows platform and need to login Linux workstations remotely. It is tested on Windows 7 with VNC Viewer and PuTTY.

To connect from Personal Computer (PC) to Linux workstation, user must go through three processes: **Download** (downloading software), **Setup** (configure the software), and **Login** (login to Linux workstation from PC with the software). The three processes are illustrated below in details. After setting up the downloaded software correctly, what user needs to do is simply following the steps listed in the **session - Login** to login/exit Linux workstation remotely.

## **Download:**

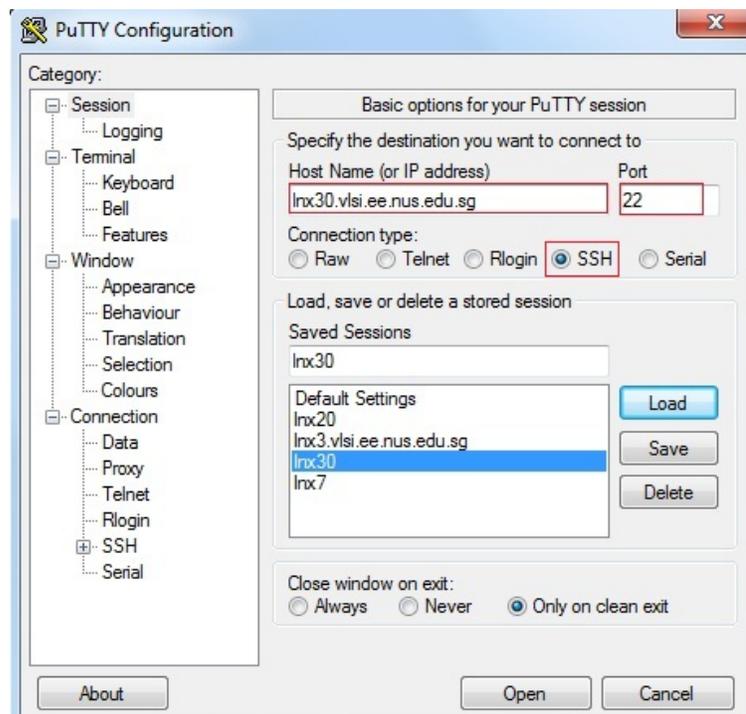
Two software need to be downloaded. They are VNC Viewer and PuTTY.

- 1) Download Putty at <http://www.putty.org>;
- 2) Download VNC Viewer at <http://www.realvnc.com/download/viewer/>.

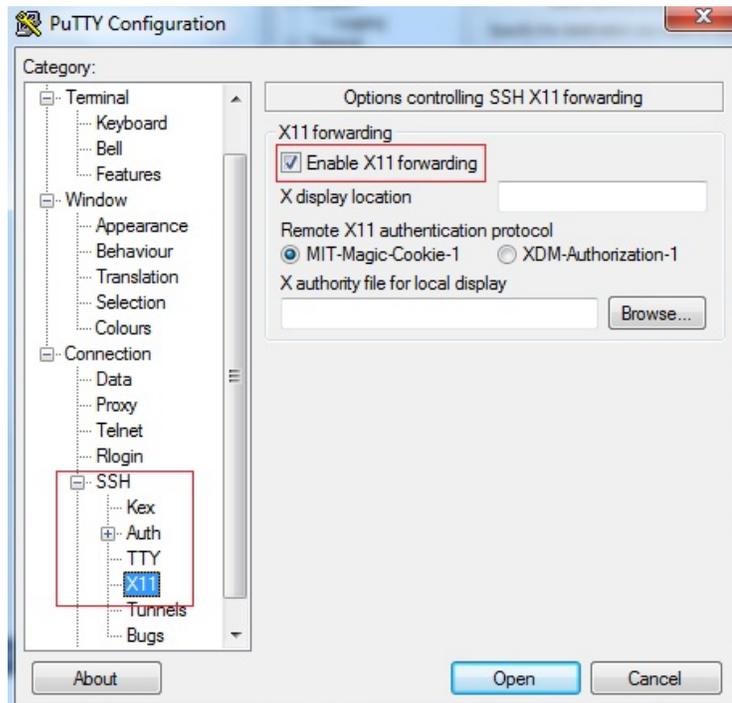
## **Setup:**

### **A. Configure PuTTY Login Session**

- 1) Launch PuTTY by clicking on `putty.exe`. PuTTY Configuration window appears.
- 2) Fill in the fields: **Host Name (or IP address)** and **Port**, and enable **SSH**, referring to Picture 1.  
Check with your system administrator if you don't know the host name.
- 3) On the left hand menu, click **SSH → X11** and tick the box "**Enable X11 forwarding**", referring to Picture 2.

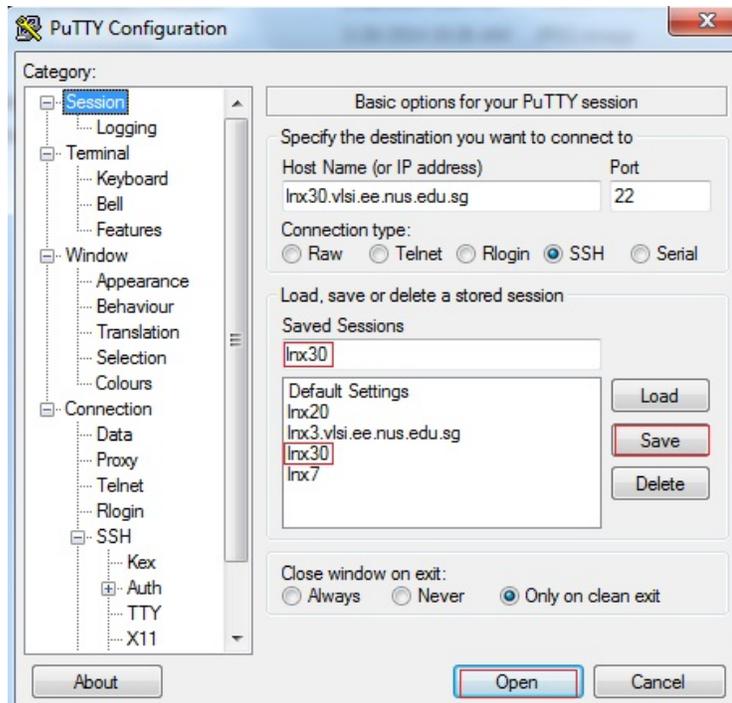


Picture 1



Picture 2

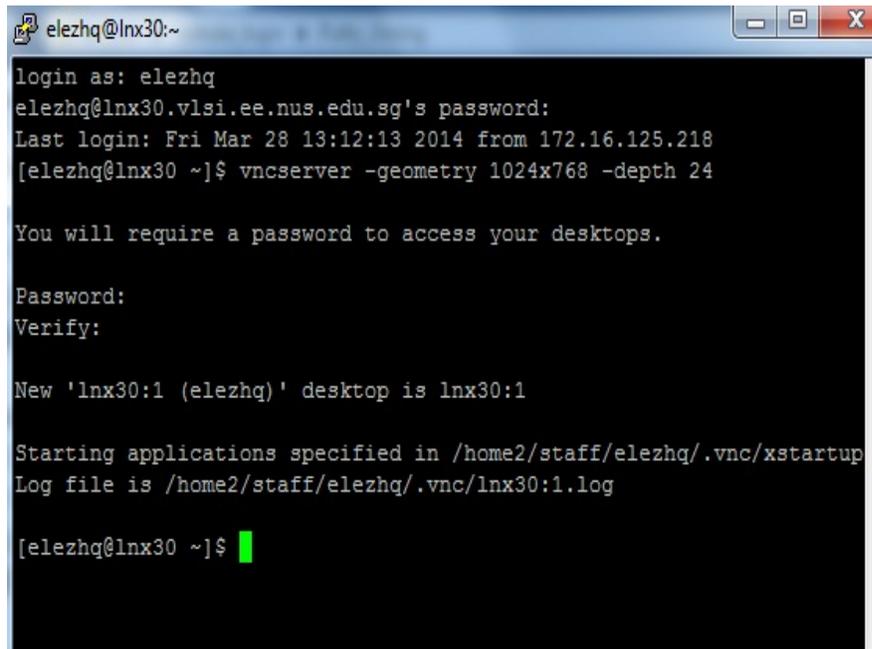
- 4) Back to **Session**, type a name in the field of **Saved Sessions** , for example **lnx30**, which can be any given name, and then click **Save**, referring to Picture 3. The session name (lnx30) is saved and appears in the box below Saved Sessions.



Picture 3

**B. Start VNC Server**

- 1) Click on **Open** to open the session saved just now (example: lnx30), referring to Picture 3. PuTTY login window pops up.
- 2) Login your account and start vncserver with the command **vncserver -geometry 1024x768 -depth 24**, referring to Picture 4. Check with **man vncserver** if you don't know how to use the command vncserver.
- 3) Enter **vncserver password** and then **Verify** the password, accordingly to the prompts. **New 'lnx30:1 (elezhq)' desktop is lnx30:1** follows, referring to Picture 4, where the digital number **1** in the **lnx30:1** is **the display number** of the vnc desktop. The display number is different for different users and it is required for configuring PuTTY SSH Tunnels later.



Picture 4

- 4) Type exit to logout from PuTTY.

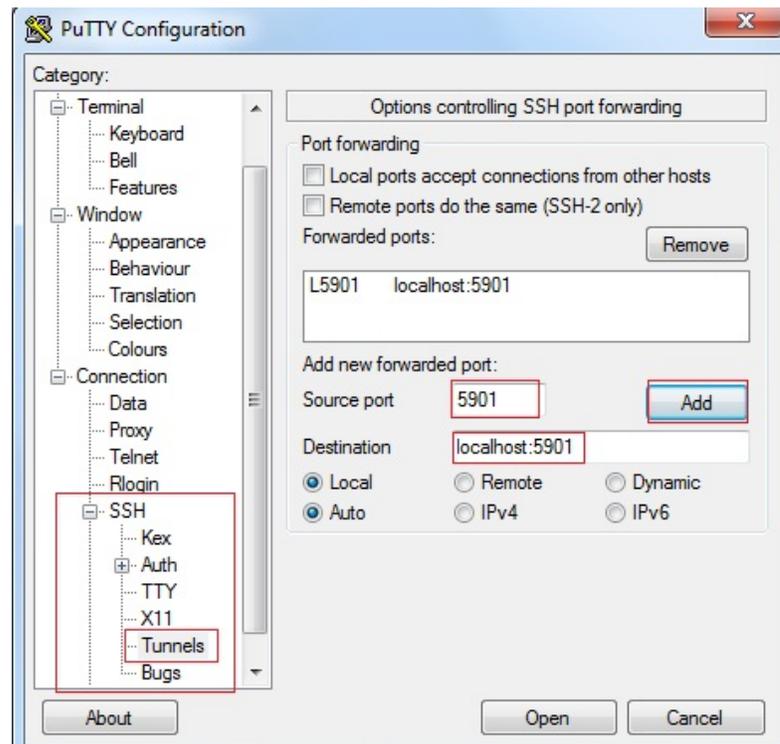
**C. Configure VNC Tunnel over PuTTY SSH**

- 1) Launch PuTTY session saved previously by click the session name( example: lnx30) and then **Load**.
- 2) On the left hand menu of PuTTY Configuration window, click **SSH →Tunnels**. Fill in the fields of **Source Port** and **Destination**, referring to Picture 5.

<b>Source Port</b>	5900 + <a href="#">the display number</a>	→	Example: 5901
<b>Destination</b>	localhost:5900 + <a href="#">the display number</a>	→	Example: localhost:5901

- 3) Click on **Add**. It is entered into the box - Forwarded ports, referring to Picture 5.
- 4) Save the above configuration by clicking on **Sessions** and then **Save**, where the session name keeps the same as [sub-session A](#) (example: lnx30).

The configuration for **Remote Access with Tunneling VNC Over SSH** is finished and done!

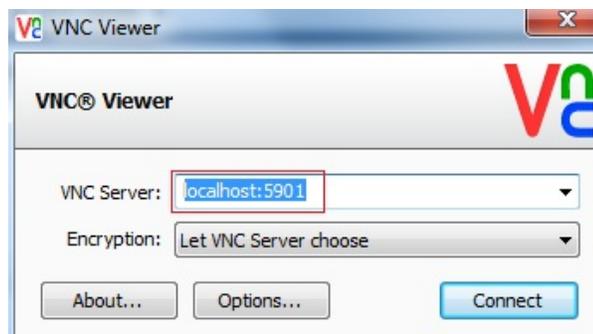


Picture 5

***Login:***

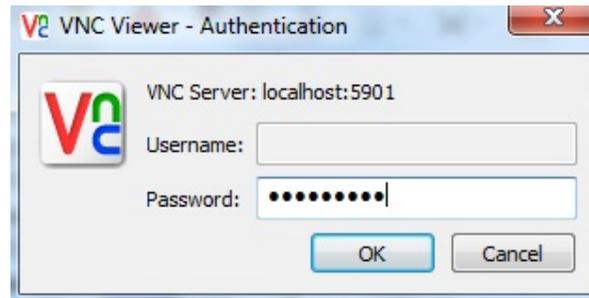
If you practice remote access at home, please log into NUS Web VPN first at [https://webvpn.nus.edu.sg/dana-na/auth/url\\_default/welcome.cgi](https://webvpn.nus.edu.sg/dana-na/auth/url_default/welcome.cgi) before starting the following steps. Check with NUS IT CARE if you have any problem with login to NUS VPN.

- 1) Launch Putty login window with clicking on putty.exe. Load the saved session (example: lnx30) and then click at **Open**.
- 2) Login your account after the PuTTY login window pops up. **Keep PuTTY login session on! DO NOT close or exit PuTTY!**
- 3) Start VNC Viewer by double clicking on it. Enter the Destination code in the VNC Server field (example: **localhost:5901**), referring to Picture 6.
- 4) Then, click on **Connect**. Click on **Continue** on the **VNC Viewer – Encryption** window.



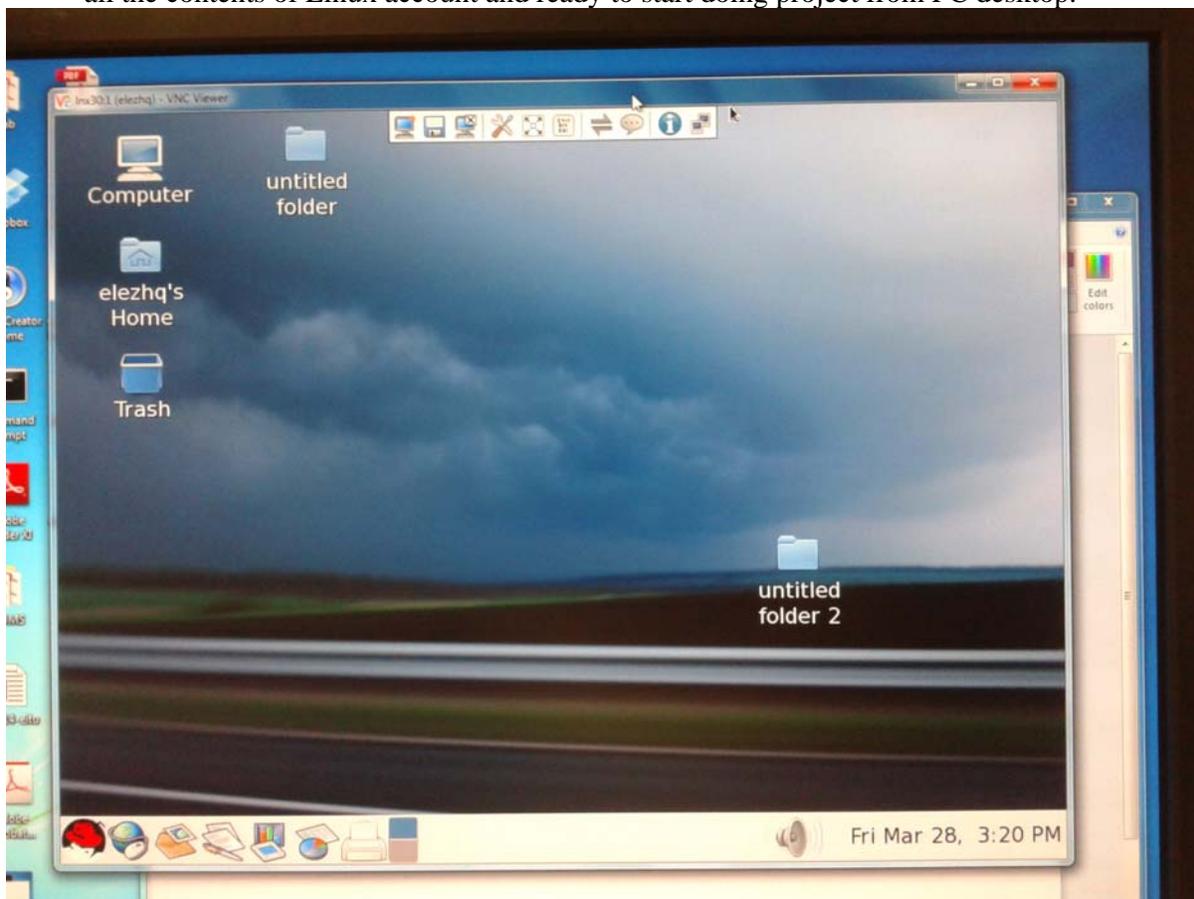
Picture 6

- 5) Enter the vncserver password in the **VNC Viewer – Authentication** window, referring to Picture 7.



Picture 7

- 6) Then click on **OK**. **VNC desktop** shows up as Picture 8. Now, user should be able to view all the contents of Linux account and ready to start doing project from PC desktop.



Picture 8

- 7) To logout from Linux workstation, close **VNC Viewer** first and then exit **PuTTY**.

Afterwards, repeating the steps 1 to 7 of [the session – Login](#) is the only thing to be done necessarily, for login and exit Linux workstation.

Hope the guide is helpful for users who need to work remotely from windows' desktop. It is welcome to feedback to Ms Zheng at 65168890 or [elezhq@nus.edu.sg](mailto:elezhq@nus.edu.sg).