

NAM HUY LINUX

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How to install VNC Server on Debian 7

05/07/2014 by namhuy — 22 Comments

Even though most people will think Ubuntu is the most popular Linux distribution, but did you know Ubuntu is based on Debian! Interesting fact isn't it. Well I'm going to show you How to install VNC Server on Debian 7 wheezy today. If you are not using Debian but Ubuntu, I have also written [How to install VNC Server on Ubuntu 14.04](#).

Update and Upgrade Debian 7 Wheezy

Before we start to install or configure anything, we should always update our Debian 7 Wheezy system is up to date

```
1 $ su -
```

```
1 # apt-get update; apt-get dist-upgrade -y --force-yes
```

Install GUI on Debian 7 Wheezy

There are several GUIs available for you to choose. Gnome, KDE, Xfce, LXDE ... Take your pick, I have written a tutorial how to [Install GUI on debian 7 wheezy](#) which includes most of the popular GUIs available for Debian. Unlike Ubuntu 14.04, gnome seems to work fine over VNC, I have tested gnome session and it works with VNC. It's not I don't like gnome, but I would prefer xfce over gnome since xfce is very light weight and it has what I need for.

To install xfce on Debian 7 Wheezy

```
1 # apt-get install xorg xfce4 xfce4-goodies thunar-archive-plugin synaptic gdebi wicd iceweasel
```

Install VNC Server on Debian 7 Wheezy

Very similar to Ubuntu (since Ubuntu is based on Debian), you only need to use vnc4server package to install VNC Server

```
1 # apt-get install vnc4server
```

Configure VNC Server to work on Ubuntu 14.04

You can use any privileged user or root user to login to your VNC Server, but for security reason,

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Now set vncuser's password

```
1 # passwd vncuser
```

We now switch to vncuser to create some VNC configuration's files.

```
1 # su - vncuser
```

With regular or privileged user, start vncserver for vncserver to creates it's necessary files.

```
1 $ vncserver
```

After you started VNC Server, you will be asked to create VNC's password (VNC password can be different or the same password as your user's password)

```
1 vncuser@namhuy:~$ vncserver
2 You will require a password to access your desktops.
3 Password:
4 Verify:
5 xauth: file /home/vncuser/.Xauthority does not exist
6
7 New 'namhuy:1 (vncuser)' desktop is namhuy:1
8
9 Creating default startup script /home/vncuser/.vnc/xstartup
10 Starting applications specified in /home/vncuser/.vnc/xstartup
11 Log file is /home/vncuser/.vnc/namhuy:1.log
```

After VNC Server generated files, we have to kill it in order to configure xstartup file.

```
1 $ vncserver -kill :1
```

To modify xstartup file

```
1 $ cd ~
2 $ > .vnc/xstartup
3 $ nano .vnc/xstartup
```

With the content

```
1 #!/bin/sh
2 unset SESSION_MANAGER
3 unset DBUS_SESSION_BUS_ADDRESS
4 startxfce4 &
5
6 [ -x /etc/vnc/xstartup ] && exec /etc/vnc/xstartup
7 [ -r $HOME/.Xresources ] && xrdb $HOME/.Xresources
8 xsetroot -solid grey
9 vncconfig -iconic &
```

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KDE-Desktop Environment

```
1 startkde &
```

MATE-Desktop Environment

```
1 mate-session &
```

LXDE-Desktop Environment

```
1 startlxde &
```

Cinnamon-Desktop Environment

```
1 cinnamon &
```

Openbox-Desktop Environment

```
1 openbox &
```

Save xstartup when you are done. The next step is to create VNC Server statup script. You must do this with root user

```
1 $ su -  
2 # nano /etc/init.d/vncserver
```

With the content

```
1 #!/bin/bash  
2 ### BEGIN INIT INFO  
3 # Provides:          tightvncserver  
4 # Required-Start:    $syslog  
5 # Required-Stop:     $syslog  
6 # Default-Start:     2 3 4 5  
7 # Default-Stop:      0 1 6  
8 # Short-Description: vnc server  
9 # Description:       http://www.namhuy.net  
10 #  
11 ### END INIT INFO  
12  
13 unset VNCSERVERARGS  
14 VNCSERVERS=""  
15 [ -f /etc/vncserver/vncservers.conf ] && . /etc/vncserver/vncservers.conf  
16 prog="VNC server"  
17 start() {  
18 . /lib/lsb/init-functions  
19 REQ_USER=$2
```

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```

27 unset BASH_ENV ENV
28 unset BASH_ENV ENV
29 DISP="${display%:*}"
30 export VNCUSERARGS="${VNCSERVERARGS[${DISP}]}"
31 su ${USER} -c "cd ~${USER} && [ -f .vnc/passwd ] && vncserver :${DISP} ${VNCUSERARGS}"
32 fi
33 done
34 }
35 stop() {
36 . /lib/lsb/init-functions
37 REQ_USER=$2
38 echo -n "Shutting down VNCServer: "
39 for display in ${VNCSERVERS}
40 do
41 export USER="${display##*:}"
42 if test -z "${REQ_USER}" -o "${REQ_USER}" == ${USER} ; then
43 echo -n "${display} "
44 unset BASH_ENV ENV
45 export USER="${display##*:}"
46 su ${USER} -c "vncserver -kill :${display%:*}" >/dev/null 2>&1
47 fi
48 done
49 echo -e "\n"
50 echo "VNCServer Stopped"
51 }
52 case "$1" in
53 start)
54 start $@
55 ;;
56 stop)
57 stop $@
58 ;;
59 restart|reload)
60 stop $@
61 sleep 3
62 start $@
63 ;;
64 condrestart)
65 if [ -f /var/lock/subsys/vncserver ]; then
66 stop $@
67 sleep 3
68 start $@
69 fi
70 ;;
71 status)
72 status Xvnc
73 ;;
74 *)
75 echo $"Usage: $0 {start|stop|restart|condrestart|status}"
76 exit 1
77 esac

```

Now make vncserver startup script executable

```
1 # chmod +x /etc/init.d/vncserver
```

Save vncserver startup script. The next step is to create VNC Server configuration file in /etc/ directory

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```
1 VNCSERVERS="1:vncuser"  
2 VNCSERVERARGS[1]="-geometry 1024x768"
```

The first line VNCSERVERS is to set the user to access VNC server with the VNC port. Number 1 means port 1 or 5901. The VNC port will increase to 2 or 5902 or so if you keep adding user to access your VNC Server.

The second line VNCSERVERARGS is to set screen size for the VNC session. You can change the VNC screen size here to fit your screen.

The last step is to make VNC Server starts on boot

```
1 # update-rc.d vncserver defaults 99
```

You will see missing LSB information warning, just ignore it. Reboot your Debian 7 system and test out your new VNC Server on Debian 7 Wheezy

```
1 # reboot
```

You can login to your remote server via VNC with domain or IP. The VNC port is the port you configured in /etc/vncservers.conf for the specific user.



If you can't access your VNC Server, make sure you allow VNC ports in iptables

```
1 # iptables -L
```

```
1 # iptables -A INPUT -m state --state NEW -m tcp -p tcp -m multiport --dports 5901:5903,6001:6003
```

```
1 # iptables-save
```


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are either a) old, or b) using a different VNC software, not sure if everything applies)...

How would I go about integrating this into SSH, to secure the connection? I didn't really care about that, until I realized that vnc4server (and others, apparently) only utilize an 8 character password. For some reason, that just makes me paranoid (even though my VNC user is just a regular user, that user has quite a bit of control on the server).

Thanks in advance!

Reply

namhuy says

08/20/2014 at 11:16 pm

you can use this command on your local machine to make a tunnel to your remote ssh/vnc server

```
1 $ ssh -p 22 -L 5901:127.0.0.1:5901 -N -f -l remoteuser remoteaddress
```

replace *remoteuser* with your user on your remote server, and replace *remoteaddress* with your remote ssh/vnc server. After you used the above command, it will ask you for your ssh password (not vnc password)

The next step is to start vncviewer or xtightvncviewer (<http://www.namhuy.net/3106/install-vnc-server-ubuntu-14-04.html#comment-1179>) on your local machine to connect to your remove vnc server.

```
1 $ xtightvncviewer 127.0.0.1:5901
```

Yes you will vnc to your localhost or 127.0.0.1 since you already have an opened ssh tunnel from your local machine to your remote ssh/vnc server. This time you should type in your vnc password.

Sample output when I connect to my remote vnc server through ssh tunnel

```
1 namhuy@namhuy-virtual-machine:~$ xtightvncviewer 127.0.0.1:5901
2 Connected to RFB server, using protocol version 3.8
3 Performing standard VNC authentication
4 Password:
5 Authentication successful
6 Desktop name "vnc:5901 (vncuser)"
```

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```
14 Please signle byte per se in each pixel.  
15 True colour: max red 255 green 255 blue 255, shift red 16 green 8 blue 0  
16 Same machine: preferring raw encoding
```

Reply

etnbln says

10/12/2014 at 9:33 am

I followed this tutorial, and it works mostly fine.

My problem is, that the vnc session that is created after reboot always has 1024 x 768 resolution, no matter what i enter in /etc/vncserver/vncservers.conf
any idea what is happening?

Reply

etnbln says

10/12/2014 at 9:35 am

oh, stupid mistake. i left the [1] put changed the port. problem fixed.

Reply

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Great tutorial, it really saved me a lot of time. Now I know how to add multiple desktops for VNC as well. Cheers.

Reply

Dicko says

01/25/2015 at 9:48 pm

Then there is also

```
sudo apt-get install xrdp
```

and you have vnc over windoze rdp, no muss no fuss.

Reply

Tim says

04/10/2015 at 2:04 pm

Great tutorial but a question if I may, how do I get a VNC session to to the current desktop that is currently in use rather than starting a new desktop or if the PC is at the gui login stage I get a vnc session to the gui login screen??

Reply

namhuy says

04/10/2015 at 6:59 pm

I believe vnc4server does not let you to vnc your current desktop session like you wanted to. I heard NX (**NoMachine**) lets you access the running X session on the console.

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Tom says

05/19/2015 at 3:00 am

Great. Thanks. I always check your site when I reinstall my Debian.

Reply

Totò says

06/05/2015 at 8:18 am

great.

How can I ask user to login to Debian after he connect via VNC?

Reply

namhuy says

06/09/2015 at 2:47 am

you can create separate vnc session for each user. The vnc's authentication is the same as user login authentication

Reply

Neil says

06/18/2015 at 5:03 am

I followed your tutorial and in lots of ways it works really well. However, when i try to configure a VPN connection i get an error "Connection add failed no session found for

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Could this be something to do with way the vnc session is set up?

I am new to Linux so its a very steep leaning curve at the moment.

Reply

namhuy says

06/18/2015 at 8:39 am

what does the vnc's log give you? the logs should be located in \$HOME/.vnc/ and /var/log/auth.log

Reply

Neil says

06/19/2015 at 7:39 pm

First I would like to say thank you for your quick reply.

In the .VNC log I get below when I connect and try to configure the VPN. I am using the same gateway information that I have used to configure through the normal keyboard.

Sat Jun 20 12:19:55 2015

VNCSTConnST: Server default pixel format depth 16 (16bpp) little-endian rgb565

VNCSTConnST: Client pixel format depth 24 (32bpp) little-endian rgb888

Gtk-Message: GtkDialog mapped without a transient parent. This is discouraged.

** (nm-connection-editor:9393): WARNING **: Invalid setting VPN: gateway

** (nm-connection-editor:9393): WARNING **: Failed to get zones from FirewallD: (2)

The name org.fedoraproject.FirewallD1 was not provided by any .service files

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(nmf-connection-editor:9595): WARNING: invalid setting vpn.gateway

Sat Jun 20 12:23:03 2015

Connections: closed: 0.0.0.0::49684 (Clean disconnection)

SMsgWriter: framebuffer updates 286

SMsgWriter: ZRLE rects 606, bytes 718880

SMsgWriter: raw bytes equivalent 20098916, compression ratio 27.958652

I dont get anything in the auth.log

Any thoughts

Reply

namhuy says

06/19/2015 at 8:48 pm

its likely an old bug, sorry i can't help much on the error.

<http://ubuntuforums.org/showthread.php?t=2028072>

<https://bugs.launchpad.net/ubuntu/+source/network-manager-openvpn/+bug/1254220>

tell me about your configuration? debian with gnome?

Reply

Neil says

06/19/2015 at 10:22 pm

I set it up just as you suggested with xfce

Reply

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did you install on a vps or dedicated server? how many network card do you have?
static ip or from dhcp? any firewall/iptables?

Reply

Neil says

06/22/2015 at 2:08 am

Its a normal standalone server, maybe 2 years old that was running win XP. I use a static IP address so its easy to connect to. I have not changed anything with firewall/iptables from default. I read the bug links above. I guess its similar I just get an error when I try and save new vpn connection I have created. I only need to set them up once, Is there anyway to create them normally and have them visible when I connect with the VNC.

I really appreciate your help with this. I am totally new to Linux so just about everything is a struggle.

Reply

namhuy says

06/22/2015 at 9:28 pm

how did you set your network? can you copy/paste your ifconfig output here?

Reply

Neil says

06/29/2015 at 4:07 am

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However if I right click and select connection information I get an error showing no valid active connections found.

Not sure how relivent this is but the network connection icon showing in the top right is different when I connect over vnc compared to a normal log in.

Reply

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