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## VNC server on Ubuntu 18.04 Bionic Beaver Linux

👤 Lubos RendeK ➦ Ubuntu 18.04 ⌚ 22 August 2018

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### Objective

The objective is to setup VNC server on Ubuntu 18.04 Bionic Beaver Linux.

### Operating System and Software Versions

- **Operating System:** - Ubuntu 18.04 Bionic Beaver

### Requirements

Privileged access to your Ubuntu System as root or via `sudo` command is required.

### Difficulty

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### Conventions

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- **#** - requires given [linux commands \(/linux-commands\)](#) to be executed with root privileges either directly as a root user or by use of `sudo` command
- **\$** - requires given [linux commands \(/linux-commands\)](#) to be executed as a regular non-privileged user

## Instructions

### Ubuntu VNC server setup

Let's start by the installation of the VNC server and the Xfce desktop manager core files:

```
$ sudo apt install vnc4server xfce4 xfce4-goodies
```

Once the VNC server is installed we can begin the configuration by setting up a user password to be used by a VNC client when creating a remote connection:

```
$ vncpasswd
```

Next, create the `~/.vnc/xstartup` file to start the Xfce4 desktop:

```
$ mkdir ~/.vnc
$ nano ~/.vnc/xstartup
```

Insert the the following content and save:

```
1 #!/bin/bash
2 startxfce4 &
```

Lastly, make the `~/.vnc/xstartup` file executable:

```
$ chmod +x ~/.vnc/xstartup
```

At this stage we are ready to start the VNC server. For this simply run the `vncserver` command from your home directory:

```
$ vnc4server

New 'ubuntu:1 (linuxconfig)' desktop is ubuntu:1

Starting applications specified in /home/linuxconfig/.vnc/xstartup
Log file is /home/linuxconfig/.vnc/ubuntu:1.log
```

The VNC server will open a new port for every new VNC desktop you create. Your Ubuntu system should now be listening on the port `5901` for incoming VNC connections:

```
1 $ ss -ltn
2 State      Recv-Q Send-Q Local Address:Port
3 LISTEN     0      128   0.0.0.0:22
4 LISTEN     0      128   0.0.0.0:6001
5 LISTEN     0      128   [::]:22
6 LISTEN     0       5     *:5901
```

In case you have the **UFW** firewall enabled, open the port `5901` for incoming connections or see below how to tunnel the VNC connections via the SSH protocol:

```
$ sudo ufw allow from any to any port 5901 proto tcp
Rule added
Rule added (v6)
```

If you wish to make your firewall rules more strict or allow range of ports for multiple VNC sessions visit our [How to](#)

[Open/Allow incoming firewall port guide \(how to open/allow incoming firewall port on Ubuntu 18.04 using UFW\)](#) for more information.

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## Connect to VNC server

You can now use any VNC client to connect to your new Ubuntu VNC server. This guide will use the `xvnc4viewer` client.

To install `xvnc4viewer` on your Ubuntu client system run:

```
$ sudo apt install xvnc4viewer
```

Once you have your VNC client installed you can establish a new connection to your VNC server with a host name eg. `ubuntu-vnc-server` using the following [linux command \(/linux-commands\)](#):

```
$ vncviewer ubuntu-vnc-server:1
```

Enter your password created previously as part of the above "Ubuntu VNC server setup" section.

If all went well, you will be presented with a Xfce4 desktop session running on the remote VNC server Ubuntu system:

[./images/01-ubuntu-vnc-server-18.04-bionic-beaver.png](#)  
Established VNC connection to Ubuntu 18.04 VNC server.

Note, it is also possible to run a secure VNC client/server connection via the SSH tunnel. Given that you have the SSH user access (in this case username `linuxconfig` is used) to your VNC server eg. `ubuntu-vnc-server`.

First, create an SSH tunnel on a local port `5901` leading to a remote port `5901` on your VNC server.

Example:

```
$ ssh -L 5901:127.0.0.1:5901 -N -f -l linuxconfig ubuntu
```

The above command will open a local port `5901` on a localhost loop-back network interface `127.0.0.1`:

```
1 $ ss -ltn
2 State      Recv-Q Send-Q Local Address:Port
3 LISTEN     0      128   0.0.0.0:22
4 LISTEN     0      5    127.0.0.1:631
5 LISTEN     0      128   127.0.0.1:6010
6 LISTEN     0      128   127.0.0.1:6011
7 LISTEN     0      128   0.0.0.0:38299
8 LISTEN     0      128   127.0.0.1:5901
```

Next, use the local port `5901` to connect to a remote VNC server via the SSH tunnel:

```
$ vncviewer localhost:1
```

## VNC server system startup script

multiple VNC desktop sessions.

Create a new file

`/etc/systemd/system/vncserver@.service` using your favorite text editor eg. nano:

```
$ sudo nano /etc/systemd/system/vncserver@.service
```

Once you have the file opened insert the following lines while replacing the `linuxconfig` username with username of your VNC user on **Line 7** and **Line 10** . Optionally, change screen resolution settings and apply other `vncserver` options or arguments:

```
1 [Unit]
2 Description=Systemd VNC server startup script for U
3 After=syslog.target network.target
4
5 [Service]
6 Type=forking
7 User=linuxconfig
8 ExecStartPre=/usr/bin/vncserver -kill :%i &> /dev/
9 ExecStart=/usr/bin/vncserver -depth 24 -geometry 80
10 PIDFile=/home/linuxconfig/.vnc/%H:%i.pid
11 ExecStop=/usr/bin/vncserver -kill :%i
12
13 [Install]
14 WantedBy=multi-user.target
```

Next, reload the Systemd:

```
$ sudo systemctl daemon-reload
```

To start VNC desktop `1` enter:

```
$ sudo service vncserver@1 start
```

To stop VNC desktop `1` execute:

```
$ sudo service vncserver@1 stop
```

The following [linux command \(/linux-commands\)](#) will enable the VNC desktop `1` to start after reboot:

```
$ sudo systemctl enable vncserver@1
```

To start VNC desktop `2` enter:

```
$ sudo service vncserver@2 start
```

and so on..

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7 replies

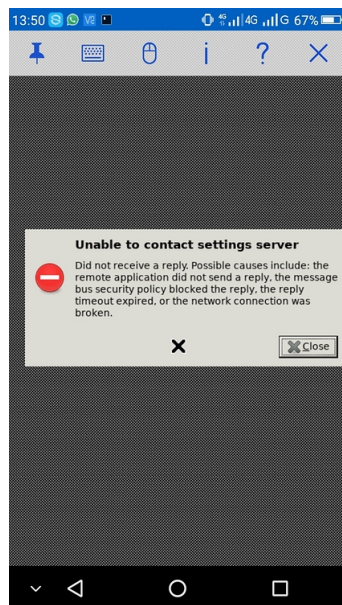


Qeis2007

Aug '18

I have this error using this article:

Unable to contact settings server. Did not receive a reply. Possible causes include: the remote application did not send a reply, the message bus security policy blocked the reply, the reply timeout expired, or the network connection was broken.



When i click close its give me one more error only quit button is exist

I use termux on android using ubuntu server 18.04 and android again for client using VNC Viewer app, server using vnc4server. [1 reply](#)



Lubos Moderator

[▶ Qeis2007](#) Aug '18

Hard to say, but I would try to follow the suggestions shown on the actual error message.

1. Are you able to correctly connect from some other vnc client
2. is it possible that the outgoing traffic from VNC server is blocked
3. Are you trying to connect via port forward? Is locally everything working as should



Hi. I followed exactly all the steps in the article and when I

try to connect to my VNC server, it works however I get a grey screen. When I do it from the same machine, to test from localhost, I get also grey screen and the icon in the taskbar on my ubuntu desktop has a sort of "unauthorized action" icon, circle with diagonal bar to it. Same when attempting from my laptop using win10 and ultraVNC client. Help?  
what am i doing wrong?  
thanks in advance.  
update: I tried again to do the VNC server setup steps, nothing changed.

[1 reply](#)



Lubos Moderator

[Isabelle\\_de\\_Montreal](#) Oct '18

Hello,

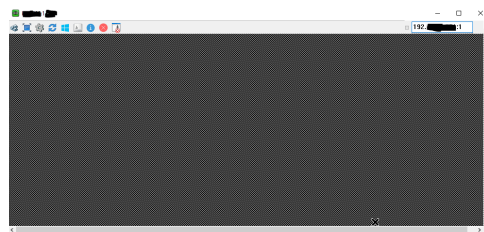
This seems to be a VNC server setup issue. Most likely the xfce session does not start. Have you tried to repeat the [VNC server on Ubuntu 18.04 Bionic Beaver Linux - LinuxConfig.org](#) section?

Lubos



Isabelle\_de\_Montreal

Oct '18



here is what I see from my windows client. [1 reply](#)



Isabelle\_de\_Montreal

[Isabelle\\_de\\_Montreal](#) Oct '18

I found a temporary workaround.  
In the Ubuntu VNC server setup, I repeated the steps setting password to starting the vnc4server all that as root doing sudo su. After that I was able to connect to my vnc server from the client I had installed in windows.  
That means my original setup, following the steps carefully was missing something in launching the xfce session.



MLaurenceFournier

Oct '18

I had the same grey screen problem. Using the following xstartup file solved it.

```
#!/bin/sh
unset SESSION_MANAGER
unset DBUS_SESSION_BUS_ADDRESS
startxfce4 &
```

I found the solution on this forum:

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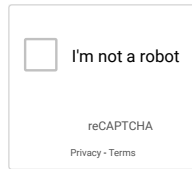
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