REAL VNC

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VNC® and the Raspberry Pi

RealVNC® are pleased to announce that our flagship <u>VNC</u> product is now available for the Raspberry Pi:

- Professional-class software from the original inventors of VNC.

- VNC Server can run in different <u>modes</u>, for remote access in different circumstances.

- Free VNC Viewers to connect in from virtually any Windows, Mac, Linux or UNIX <u>computer</u>, or <u>iOS</u>, <u>Android</u> or <u>Chrome</u> device.

- Enable the <u>feature set</u> that suits you best by applying a Free, Personal, or Enterprise license to VNC Server on your Pi.

Note: All the commands on this page can be run over SSH if you're setting up VNC remotely, unless otherwise stated.

Downloading, installing, and licensing VNC

1. On your Pi, either download the appropriate VNC package from <u>this page</u>, or run the following commands:

```
curl -L -o VNC.tar.gz https://www.realvnc.com/download/binary/latest/debian/arm/
tar xvf VNC.tar.gz
```

2. Install VNC Server (installing VNC Viewer as well means you can remotely access computers from your Pi, if you wish):
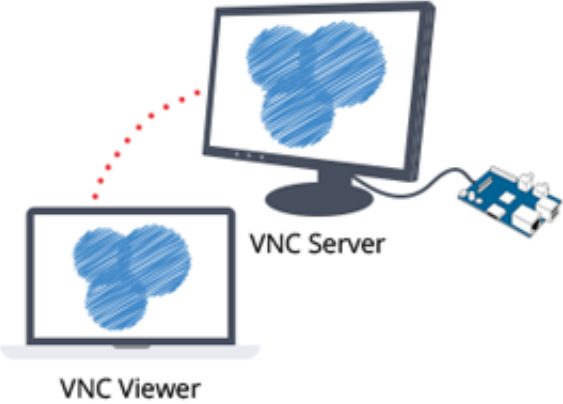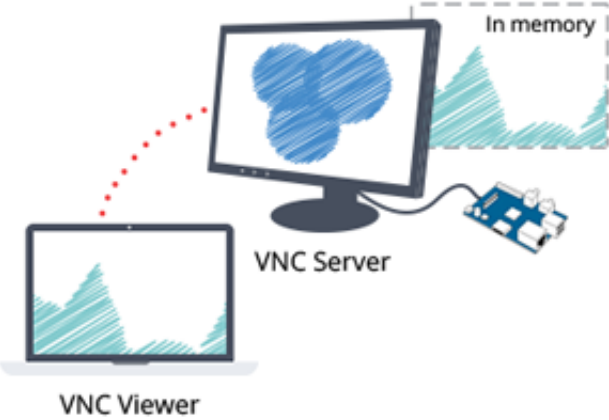
```
sudo dpkg -i <VNC-Server-package-name>.deb <VNC-Viewer-package-name>.deb
```

3. Apply a license key to VNC Server (typically received via email):

```
sudo vnclicense -add <license-key>
```

Getting connected

We recommend the following modes for VNC Server on the Pi (why not try both?)

Service Mode	Virtual Mode
VNC Server remotes your graphical desktop on the Pi. Connected VNC Viewer users see exactly what a person sitting in front of the Pi would see.	VNC Server creates and remotes a *virtual desktop*. Connected VNC Viewer users therefore do *not* see what a person sitting in front of the Pi would see. Instead, they gain access to a persistent private workspace.
Set a password before you start VNC Server the first time. With a Free license, you must create a new VNC password: `sudo vncpasswd -service` With a Personal or Enterprise license, there's nothing to	There's nothing to do here. With a Free license, you'll be prompted to create a new VNC password when you start VNC Server the first time (see below). With a Personal or Enterprise license, your `pi` username

do. Your `pi` username and password will work out-of-the-box.

Start VNC Server:

```
#Debian 8 'Jessie'
sudo systemctl start vncserver-x11-serviced.service
#Debian 7 'Wheezy'
sudo /etc/init.d/vncserver-x11-serviced start
```

It may be more convenient to have VNC Server start automatically when you power the Pi on:

```
#Debian 8 'Jessie'
sudo systemctl enable vncserver-x11-serviced.service
#Debian 7 'Wheezy'
sudo update-rc.d vncserver-x11-serviced defaults
```

Note that VNC Viewer users won't be able to connect in until you start your graphical desktop using `startx`. You can't run this command over SSH, so the easiest thing to do is use `raspi-config` to `Enable Boot to Desktop` automatically.
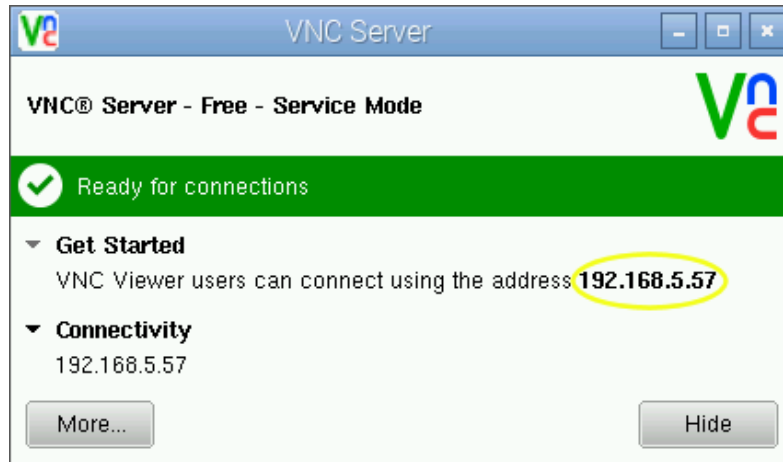
Start VNC Server:

```
vncserver
```

Note you don't (ever) have to start your graphical desktop using `startx`; VNC Server immediately creates the virtual desktop in memory and makes it available to VNC Viewer on the first available display, for example `:1`. This means you can run the Pi headless, but have graphical access over VNC.
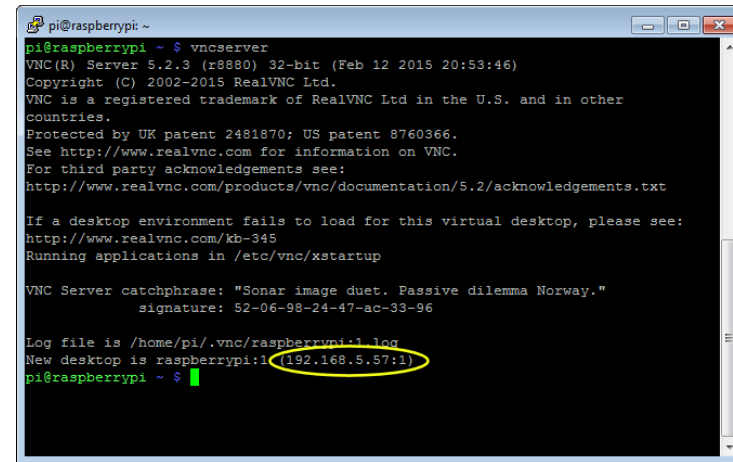
With a Free license, you can start VNC Server up to five times to create five separate virtual desktops. With a Personal or Enterprise license, you can start VNC Server as many times as your license [permits](#).

To connect in over a local network, enter the private IP address of your Pi into VNC Viewer.

You can find this out by running `ifconfig`, or from the **VNC Server** dialog:

To connect in over a local network, enter the private IP address and display number into VNC Viewer.

VNC Server prints the information you need to the console when you start it (click to enlarge):

Note if your Pi is headless and the screen you see is too small, you can [force a more convenient resolution](#).

Note: To connect in over the Internet, you must first configure any firewalls to enable VNC Server, port forward your router to the private IP address of the Pi, and enter the *public* IP address into VNC Viewer. [See how to do this](#).

To stop VNC Server:

```
#Debian 8 'Jessie'
sudo systemctl stop vncserver-x11-serviced.service
#Debian 7 'Wheezy'
sudo /etc/init.d/vncserver-x11-serviced stop
```

To stop VNC Server, apply the display number:

```
vncserver -kill :1
```

Restrictions and support

Please note VNC can't carry sound, and you can't yet play Minecraft over VNC, though we're working on support for that right now (follow [@RealVNC](#) for beta news). Otherwise, the remote control experience should be the same as though you were sitting in front

of your Pi.

For answers to other common questions, please see our FAQ.

If you encounter a problem, search our Knowledge base or contact Support.

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