

Step 1. Install a fresh image of Debian Stretch.

This will guide you through performing a Netinstall of Debian Stretch onto an Intel 64bit platform. Although I haven't tried, it should work just the same for other platforms. A Netinstall uses an installer package to download and install the Debian Stretch OS over the internet.

I have assumed that the target computer for the Debian installation is able to be booted from a USB device.

Firstly, I recommend that you read through this as a general background to the installation process;

<http://d-i.debian.org/manual/en.i386/apa.html>

and there's more information here;

<https://www.debian.org/releases/stable/amd64/>

Let's get started...

Navigate to this web page;

<https://www.debian.org/devel/debian-installer/>

This is where we will obtain the installer package. Part way down the page is a section 'Official release'. Under the subsection 'CD', click on 'amd64'. This will take you to another page where the download files can be found (at the bottom of the page). Click on the link 'debian-stretch-DI-alpha4-amd64-netinst.iso' and save the file to your computer.

Note: in my experience these downloads are quite slow and occasionally fail. Be patient and be prepared to start over.

In the same list as the downloads are the checksum files that enable you to confirm that the download is correct and hasn't been tampered with (a good idea from a security perspective). If you want to check your download read the section 'How can I verify my download is correct and exactly what has been created by Debian?' I use a package called 'winMd5Sum' (Google it) to verify downloads with an Md5 checksum.

Once you have the installer package safely on you PC and verified you need to turn it into an image that your target PC can boot from. For this I use a package called 'Win32DiskImager'. The package will take your downloaded file and process it onto a suitable USB stick (suggest minimum 8Gb capacity) after which it will be used to boot your target PC. Insert the USB stick and open Win32DiskImager (allow it to make changes). Make sure the USB stick is selected under the device pulldown then, under the image file section, browse to the file you downloaded previously. When you're setup click 'Write'. When it's done, close Win32DiskImager and remove the USB stick.

Note: Win32DiskImager will overwrite anything on the USB stick so best to make sure that its nothing important.

We're now ready to work on the target computer.

Set the BIOS of the target computer so that it will boot from a USB stick. Insert the USB stick and reboot the computer. It should boot from the USB stick and you should see the Debian graphical installer page, if so, follow these instructions;

<http://d-i.debian.org/manual/en.i386/apas03.html>

I recommend taking default/recommended options when they're offered. Make sure you are able to recall the passwords you set, otherwise you'll be doing this again. When asked about what modules you want to install, if you plan to only use the target computer for NAA duties, choose to only install the core components as you won't need a GUI etc.

When the dust has settled you should have a target computer running Debian Stretch; it wasn't that difficult was it. We're not done yet though.

Step 2. Enabling Remote Access

If you plan to use the target computer just for NAA duties you'll probably want to run it headless (no monitor, keyboard or mouse), in which case you'll need to be able to access it remotely. On your normal PC, download and install a package called 'PuTTY'.

Find the IP address of your target computer (it'll be shown in the connected device list on your network router and will likely be something like 192.168.1.nnn). Start PuTTY check the 'SSH' radio button, enter the IP address and click 'Open'. You should see a command console for the target PC with a login prompt (can you recall the username/password you set up during the install?). If you can log in.

Assuming all is well you can now dispense with the monitor/keyboard and mouse on the target computer. It should boot if you press the on button and shutdown if you press it again.

Now we're ready to install the packages needed to run the target computer as an HQPlayer NAA

Step 3. Install HQPlayer NAA

Use PuTTY to access and login to the target computer.

Run the following commands to install networkaudiod;

```
wget http://ftp.uk.debian.org/debian/pool/main/g/gcc-5/gcc-5-base_5.2.1-23_armhf.deb
```

```
sudo dpkg -i gcc-5-base_5.2.1-23_armhf.deb
```

```
wget http://ftp.uk.debian.org/debian/pool/main/g/gcc-5/libstdc++6_5.2.1-23_armhf.deb
```

```
sudo dpkg -i libstdc++6_5.2.1-23_armhf.deb
```

```
wget https://www.signalyst.eu/bins/naa/v3/stretch/networkaudiod_3.1.1-27_armhf.deb
```

```
sudo dpkg -i networkaudiod_3.1.1-27_armhf.deb
```

Note: when you prefix a command with 'sudo' you are essentially saying 'run this as Root' (i.e. as the system administrator) and you will be prompted for the root password before the command will execute.

When you're done run the command

```
sudo shutdown -r now
```

This will restart the computer (it will disconnect your PuTTY session so will need to open another one when the reboot has finished).

HQPlayer NAA (networkaudiod) should automatically startup when the target computer boots, however, there is a known issue when sometimes it fails to do so. To check if it is running run the command;

```
systemctl
```

peruse the list of processes looking for 'networkaudiod' and check its status. If the status is shown as failed run this command;

```
systemctl start networkaudiod
```

The target computer should now be running as an NAA, but only until the computer is next rebooted as it is likely that networkaudiod will fail again.

Step 4. Fix the NAA so it runs at startup

To be added