

Virtual Machine Installation Walkthrough

If running a production G-OnRamp server is either impractical or unnecessary, or for those who wish to experiment freely in a sandboxed environment, a [virtual appliance](#) is provided for use with virtualization software.

Broadly, there are 5 steps:

- [acquire virtualization software](#)
- [configure VirtualBox](#)
- [acquire G-OnRamp virtual appliance](#)
- [import the virtual appliance](#)
- [launch the server](#)

Acquiring Virtualization software

In this step, we acquire the software necessary to run our virtual G-OnRamp appliance. While there are [many virtualization software packages](#), this walkthrough uses Oracle's [VirtualBox](#), as it is freely available, open-source, cross-platform, and has been the software used in development of G-OnRamp's virtual appliance.

To acquire VirtualBox:

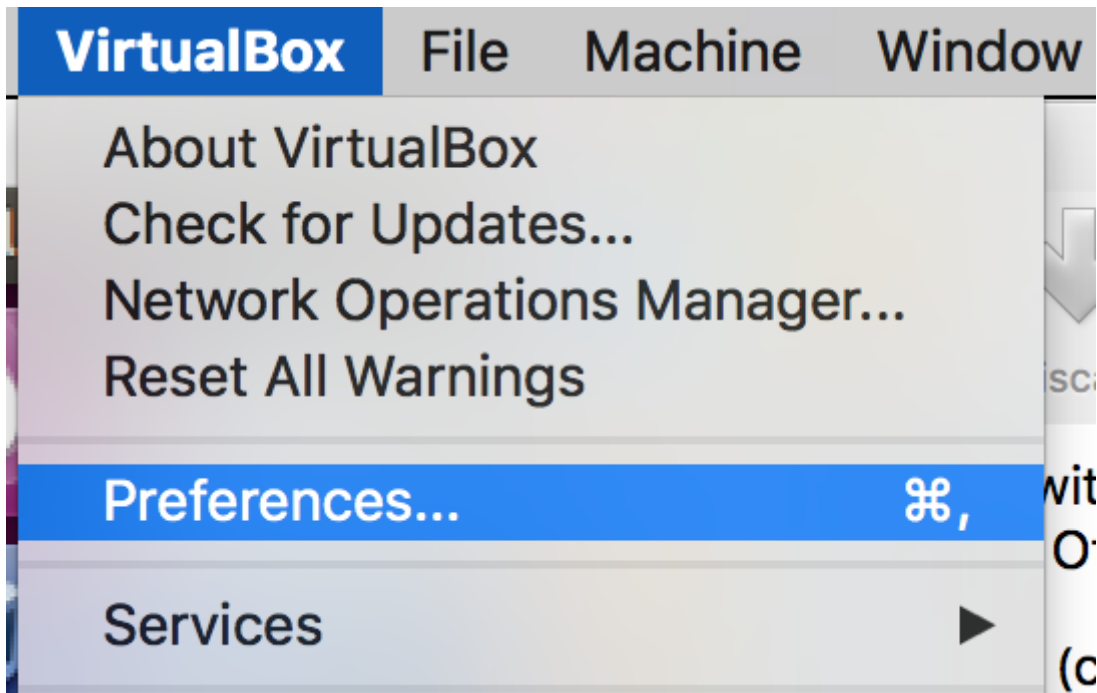
- Navigate to the [official VirtualBox page](http://www.virtualbox.org): www.virtualbox.org
- Left-click on the "[Download VirtualBox](#)" button in the center of the screen
- Under the 'VirtualBox binaries' sub-heading 'Virtualbox platform packages,' click on the link matching your host type
 - *the 'host' is the operating system the software will run on, while the 'guest' is the OS you wish to run; e.g. if you are installing to OS X, select 'OS X hosts'. In the case of G-OnRamp, the guest OS is Ubuntu Linux 14.04*
- Install the software, following any on-screen instructions

Configuring VirtualBox

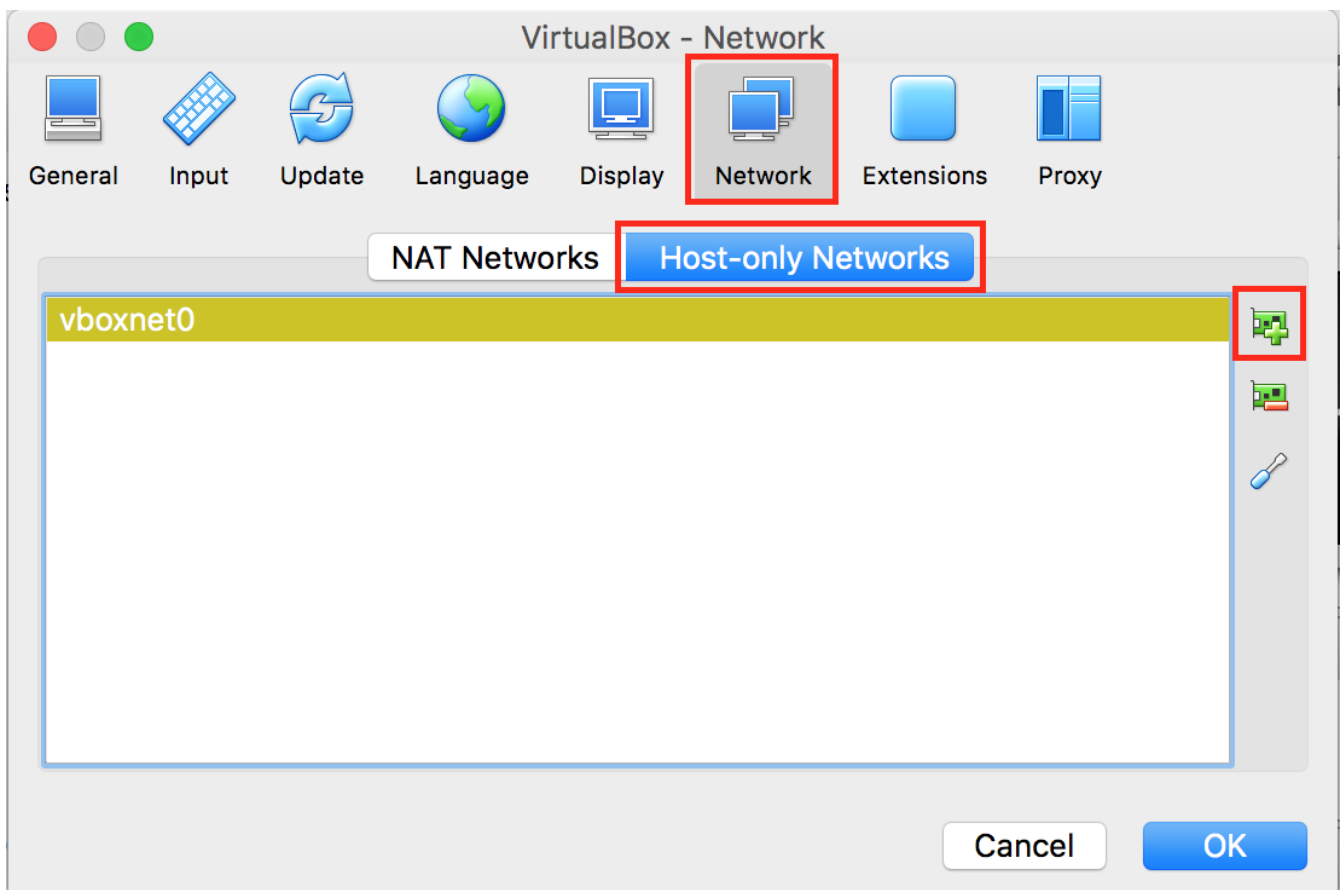
The G-OnRamp virtual appliance requires a 'host-only network' to facilitate communication between the guest and host systems. This is not enabled by default, so some configuration is required.

To add a host-only network:

- Go to the VirtualBox 'Preferences' menu



- Select the 'Network' button at the top, then select the 'Host-only Networks' tab, then click on the icon to the right with the green '+' symbol to add a host-only network



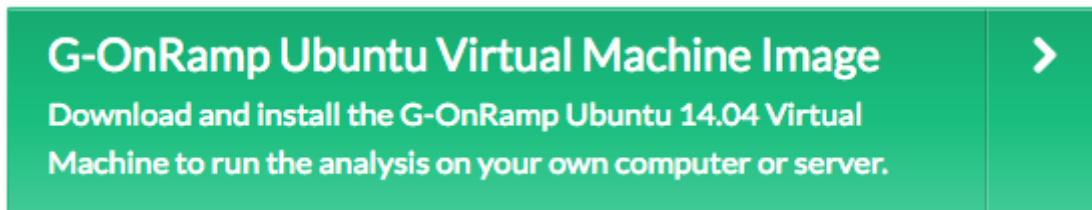
- Click on the 'OK' button

Acquiring the G-OnRamp virtual appliance

The G-OnRamp virtual appliance is effectively a snapshot of the state of a complete, pre-configured G-OnRamp production server.

To acquire the virtual appliance:

- Navigate to the G-OnRamp official website at gonramp.wustl.edu
- Scroll to the bottom of the screen and click on the 'G-OnRamp Ubuntu Virtual Machine Image' button



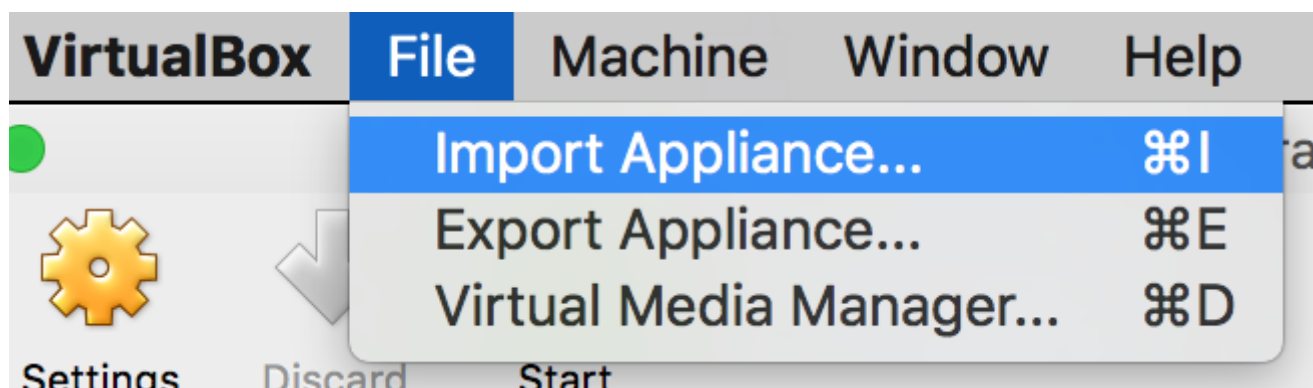
- Left-click on the 'G-OnRamp.ova' file, then the 'Download' button

Importing the Virtual Appliance into VirtualBox

Once the virtual appliance has been acquired, it must be imported into the previously-acquired virtualization software (VirtualBox).

To import the G-OnRamp appliance:

- From VirtualBox, select 'File -> Import Appliance'



- Select the downloaded virtual appliance, then click 'Continue'
- Make any modifications you wish from the 'Appliance settings' page, ensuring the 'Reinitialize the MAC address of all network cards' checkbox is checked
 - *while any field is modifiable, the defaults provide reasonable resources for basic navigation and experimentation*

- provisioning the appliance with more CPUs or more RAM will positively impact guest performance, but might negatively impact host performance

Description	Configuration
Virtual System 1	
Name	custom name
Guest OS Type	Ubuntu (64-bit)
CPU	2
RAM	4096 MB
DVD	<input checked="" type="checkbox"/>

Reinitialize the MAC address of all network cards

Appliance is not signed

Restore Defaults Go Back **Import** Cancel

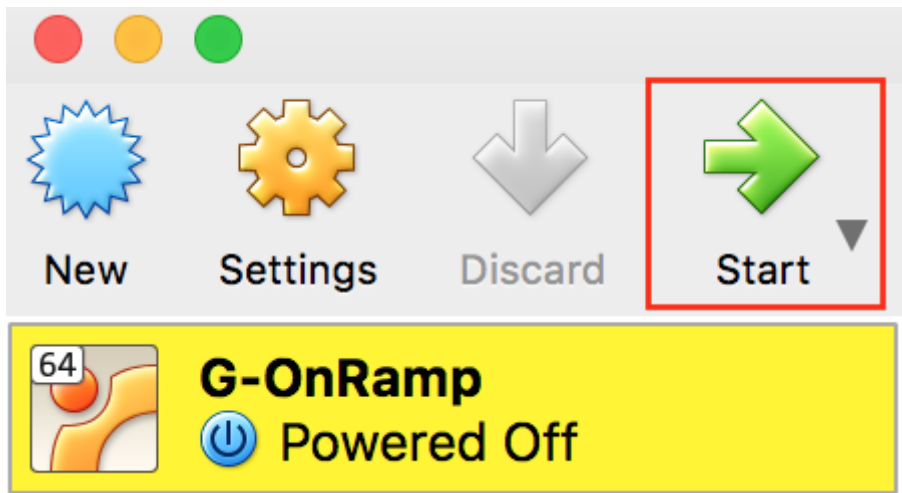
- Click 'Import'
 - Import time will vary, but is on the order of a few minutes for most systems. The dialogue box that opens following clicking the 'Import' button will often cite a much greater number (20+ minutes), but will soon correct itself to the expected, shorter import duration.

Launching the G-OnRamp Server

Now that the appliance is installed, the virtual machine must be launched to use the G-OnRamp server (this is analogous to starting up a computer with Galaxy installed and configured with G-OnRamp tools and workflows).

To launch G-OnRamp:

- From VirtualBox, select the machine then click on the green arrow icon (➡)
 - Double-clicking on the device also launches the virtual machine



- A separate window will open with your VM's output; once you see the G-OnRamp logo the server will be ready to use
 - *below the logo will be various details, such as system credentials, Galaxy administrator credentials, the server address, and a login prompt. Logging in to the OS in is neither necessary nor advisable as the server is accessible without logging in, but advanced users may wish to analyze or modify the underlying operating system or change Galaxy parameters*
- In a web browser on your host machine, navigate to the server IP address (192.168.56.18)
 - Default G-OnRamp admin login information:
 - username: gonramp
 - password: admin

Congratulations, you have successfully installed the G-OnRamp VM!