

Ansible Installation Guide

Installation Notes

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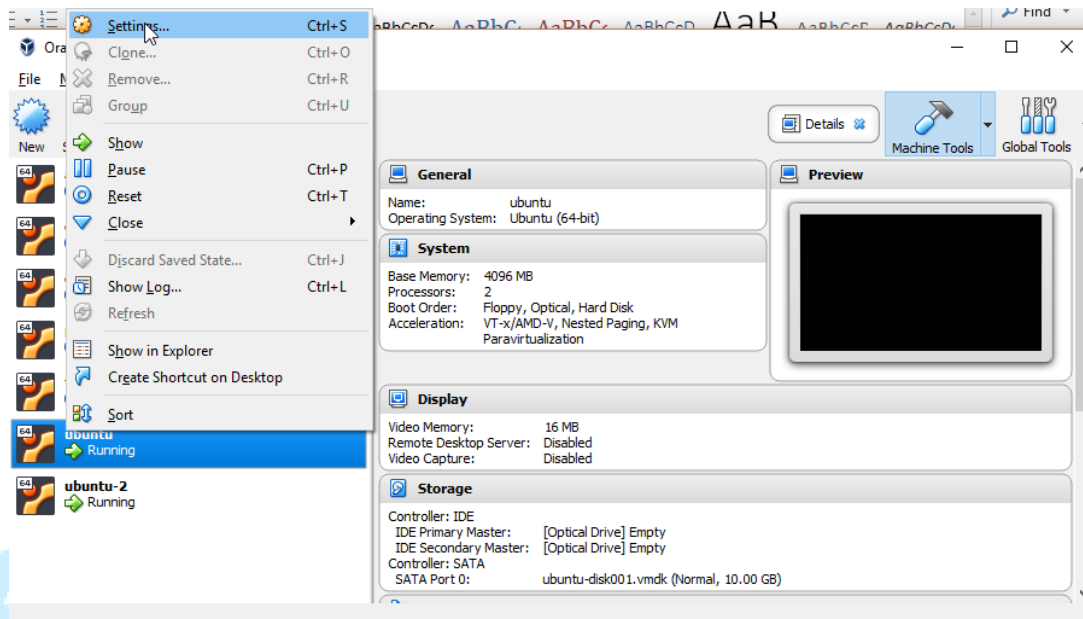
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Prerequisite:

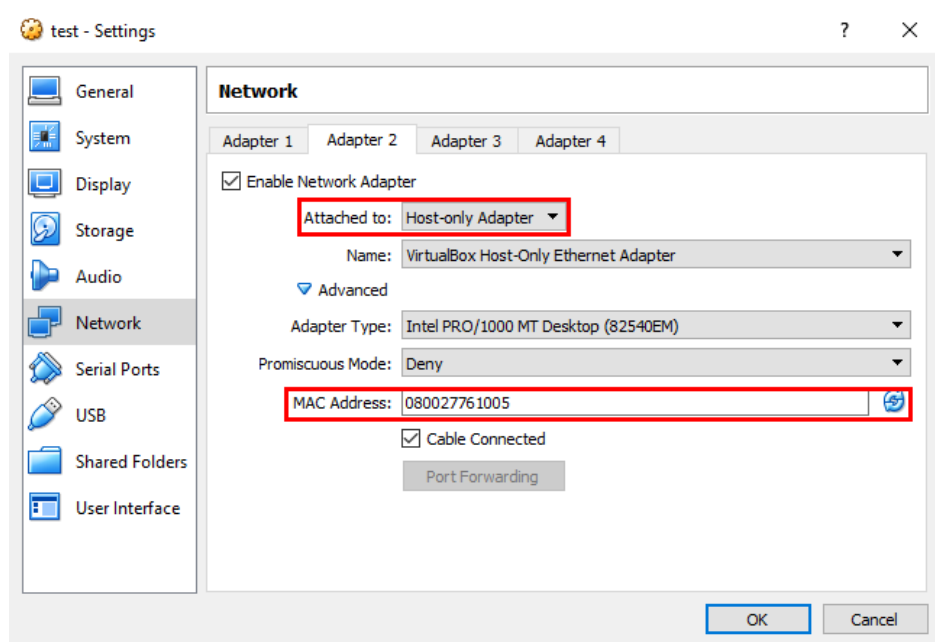
Setup the Virtual machines before installing Puppet.

Step 1: Right click on the Machine and switch to Network tab



Step 2: Add 2nd adapter in the virtual machine settings and set it to Host-only Adapter

Note: Remember to change the MAC addresses of all the subsequent cloned machines for both the adapters.



Step 3: Now, for every machine, edit the interfaces file in the network folder to make the IP address static

Syntax: `sudo vi /etc/network/interfaces`

And add the following code to it:

```
auto enp0s8
```

```
iface enp0s8 inet static
```

```
address <ip address>
```

```
edureka@edureka1:~$ sudo vi /etc/network/interfaces
```

```
## interfaces(5) file used by ifup(8) and ifdown(8)
auto lo
iface lo inet loopback

auto enp0s8
iface enp0s8 inet static
address 192.168.56.101
```

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Setting up SSH

- Ansible uses SSH to communicate between nodes
- To set up SSH install the openssh-server package on all of your machines

Syntax: `sudo apt-get install openssh-server`

```
edureka@edureka:~$ sudo apt-get install openssh-server
[sudo] password for edureka:
Reading package lists... Done
Building dependency tree
Reading state information... Done
Suggested packages:
  ssh-askpass rssh molly-guard monkeysphere
```

- On the machine with ansible, generate the SSH key

Syntax: `ssh-keygen`

```
edureka@edureka:~$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/home/edureka/.ssh/id_rsa):
Created directory '/home/edureka/.ssh'.
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/edureka/.ssh/id_rsa.
Your public key has been saved in /home/edureka/.ssh/id_rsa.pub.
The key fingerprint is:
SHA256:5RsJnIk++cU7ELpQfgpkj9ReXWKNb/nf8MKJ97EbLvo edureka@edureka
The key's randomart image is:
+---[RSA 2048]---+
|                 o                 |
|              + o                 |
|             .  o.+ .              |
|          + 000=. +               |
|        + *.oS.+ .                |
|       +.=.00 + o                 |
|      o++ .+ o B.                 |
|      oo .....* B                 |
|       . .ooE.*o                  |
+---[SHA256]-----+
```

- Copy the generated SSH keys onto the hosts using copy id command

Syntax: `ssh-copy-id hostName`

```
edureka@edureka:~$ ssh-copy-id app1
The authenticity of host 'app1 (192.168.56.101)' can't be established.
ECDSA key fingerprint is SHA256:NppMUfMmH8VxuLrhuaYS+slBg3v8iUldak9jy2GMdFE.
Are you sure you want to continue connecting (yes/no)? yes
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to install the new keys
edureka@app1's password:

Number of key(s) added: 1

Now try logging into the machine, with: "ssh 'app1'"
and check to make sure that only the key(s) you wanted were added.
```

- Now, check the SSH connection using the `ssh` command

Syntax: `ssh <nodeName>`

```
edureka@edureka:~$ ssh app1
Welcome to Ubuntu 16.04.3 LTS (GNU/Linux 4.10.0-28-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

411 packages can be updated.
226 updates are security updates.

edureka@edureka-1:~$
```

Installing Ansible

- Before installing ansible package add ansible repository to your system

Syntax: `sudo apt-add-repository ppa:ansible/ansible`

```
edureka@edureka:~$ sudo apt-add-repository ppa:ansible/ansible
[sudo] password for edureka:
Ansible is a radically simple IT automation platform that makes your applications and systems easier to deploy. Avoid writing scripts or custom code to deploy and update your applications— automate in a language that approaches plain English, using SSH, with no agents to install on remote systems.

http://ansible.com/
More info: https://launchpad.net/~ansible/+archive/ubuntu/ansible
Press [ENTER] to continue or ctrl-c to cancel adding it

gpg: keyring '/tmp/tmpgbauak5z/secring.gpg' created
gpg: keyring '/tmp/tmpgbauak5z/pubring.gpg' created
gpg: requesting key 78B9C367 from hkp server keyserver.ubuntu.com
gpg: /tmp/tmpgbauak5z/trustdb.gpg: trustdb created
gpg: key 78B9C367: public key "Launchpad PPA for Ansible, Inc." imported
gpg: Total number processed: 1
gpg:      imported: 1 (RSA: 1)
OK
edureka@edureka:~$
```

- Run the update command before installing to update existing packages

Syntax: `sudo apt-get update`

- Now install the ansible package

Syntax: `sudo apt-get install ansible`

```
edureka@edureka:~$ sudo apt-get install ansible
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  python-cffi-backend python-crypto python-cryptography python-ecdsa python-enum34 python-httplib2 python-idna python-ipaddress
  python-jinja2 python-markupsafe python-paramiko python-pkg-resources python-pyasn1 python-setuptools python-six python-yaml sshpass
Suggested packages:
  python-crypto-dbg python-crypto-doc python-cryptography-doc python-cryptography-vectors python-enum34-doc python-jinja2-doc
  python-setuptools-doc
The following NEW packages will be installed:
  ansible python-cffi-backend python-crypto python-cryptography python-ecdsa python-enum34 python-httplib2 python-idna python-ipaddress
  python-jinja2 python-markupsafe python-paramiko python-pkg-resources python-pyasn1 python-setuptools python-six python-yaml sshpass
0 upgraded, 18 newly installed, 0 to remove and 380 not upgraded.
Need to get 4,030 kB of archives.
After this operation, 29.6 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

- You can check if you're on the latest version of ansible by running the version command

Syntax: `ansible --version`

```
edureka@edureka:~$ ansible --version
ansible 2.4.3.0
  config file = /etc/ansible/ansible.cfg
  configured module search path = [u'/home/edureka/.ansible/plugins/modules', u'/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python2.7/dist-packages/ansible
  executable location = /usr/bin/ansible
  python version = 2.7.12 (default, Nov 19 2016, 06:48:10) [GCC 5.4.0 20160609]
edureka@edureka:~$
```

- If for some reason an older version of ansible is installed on your system you can run the update command again to get the latest version
- Install Python libraries using

Syntax: `sudo apt-get install python`

Setting up hosts

- To set up hosts you need to edit the **hosts** file in the ansible directory

Syntax: `sudo nano /etc/ansible/hosts`

```
edureka@edureka:~$ sudo nano /etc/ansible/hosts
edureka@edureka:~$
```

```
GNU nano 2.5.3                               File: /etc/ansible/hosts
[appservers]
app1
[dbservers]
db1
```

- Change your directory to `/etc/ansible`

Syntax: `cd /etc/ansible`

```
edureka@edureka:~$ cd /etc/ansible
edureka@edureka:/etc/ansible$
```

- Now you can check if ansible's connection with your hosts in your inventory file is good
- Use the ansible's ping module to check whether or not ansible is connecting to hosts

Syntax: `ansible -m ping <hosts>`

```
edureka@edureka:/etc/ansible$ ansible -m ping all
db1 | SUCCESS => {
  "changed": false,
  "ping": "pong"
}
app1 | SUCCESS => {
  "changed": false,
  "ping": "pong"
}
edureka@edureka:/etc/ansible$
```

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