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Configuration Management. Lection 1.



# Automation Configuration Management Tools

**ANSIBLE** 



Chef



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Puppet

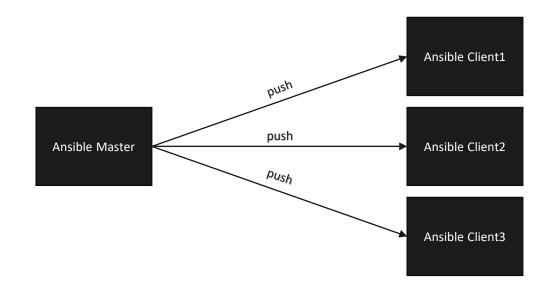




**CFEngine** 

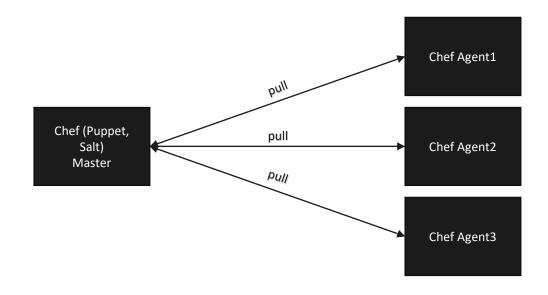


# Automation Configuration Management Tools





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# www.ansible.com

#### Master (Control) Server Requirements:

- 1. Linux
- 2. Python 2.6+ or 3.5+

#### **Controlled Servers Requirements:**

- 1. Linux & admin\_credentials & SSH\_keys & python2.6+
- 2. Windows & admin\_credentials & PowerShell3.0+ &

& script (ConfigureRemotingForAnsibe.ps1)

Linux – port 22 (SSH)

Windows – port 5986 (WinRM)

# www.ansible.com

Ubuntu 16.04

sudo apt-add-repository ppa:ansible/ansible

sudo apt update

sudo apt install ansible

ansible --version

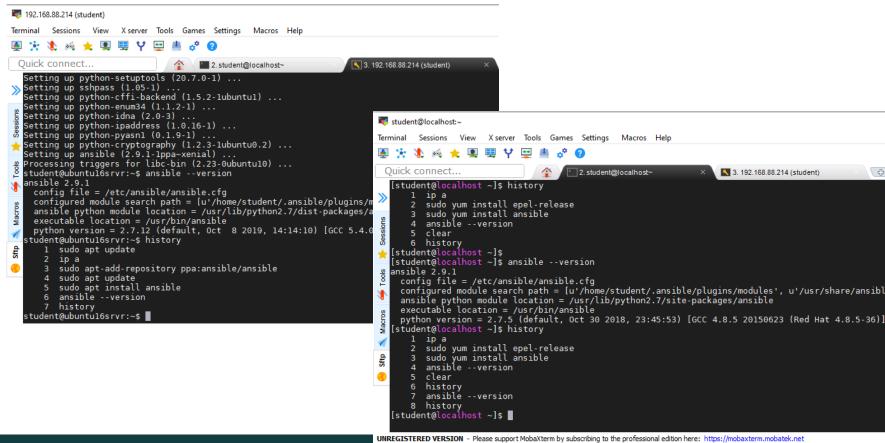
#### CentOS7

sudo yum install epel-release

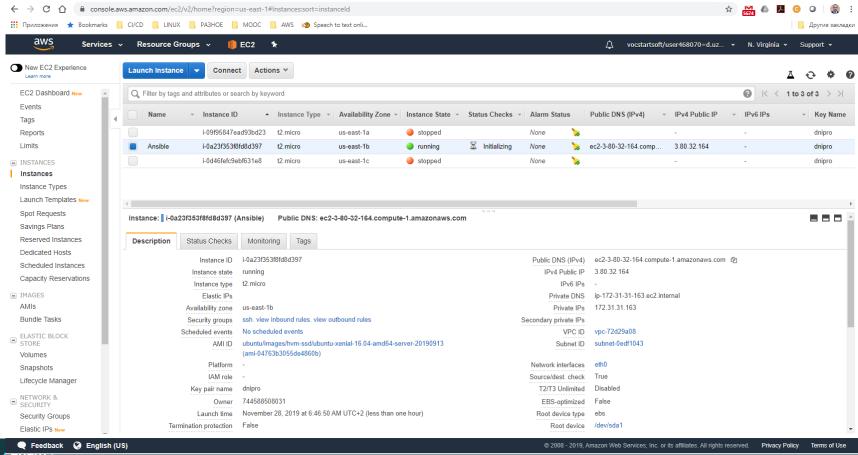
sudo yum install ansible

ansible --version

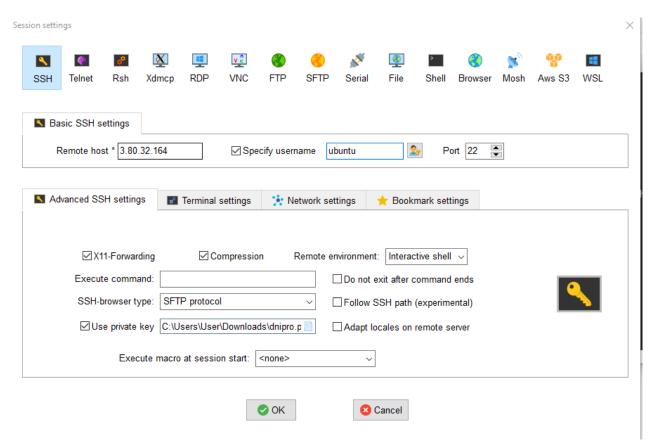
## www.ansible.com



# www.ansible.com



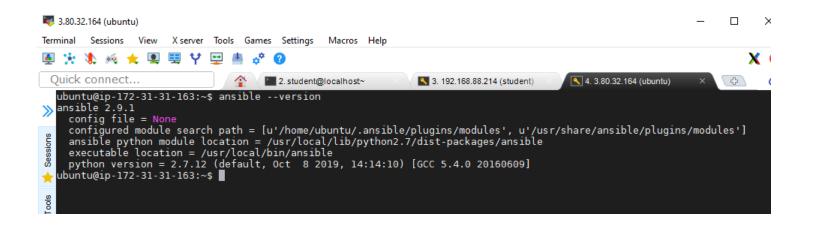
## www.ansible.comc



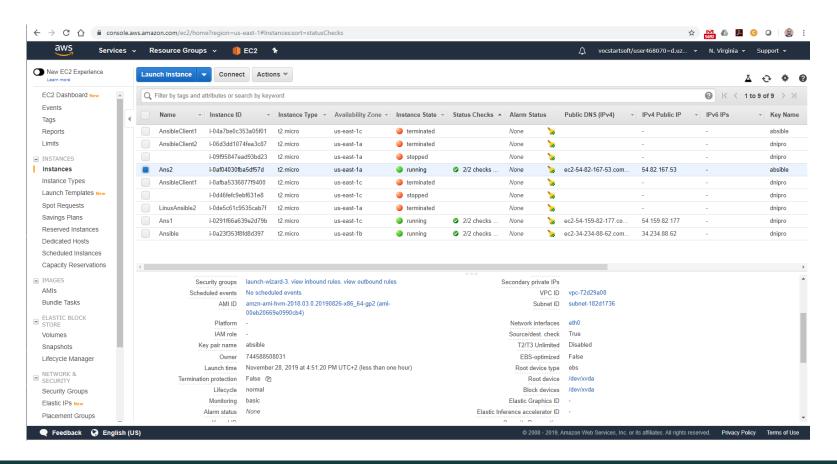


#### www.ansible.com

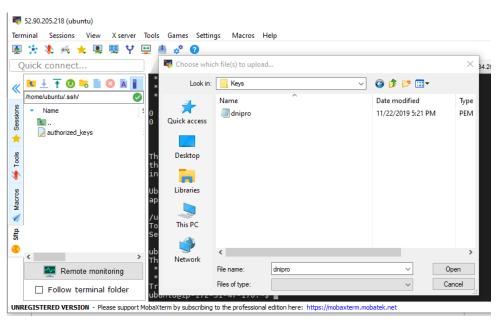
sudo apt install python-pip sudo pip install ansible ansible --version



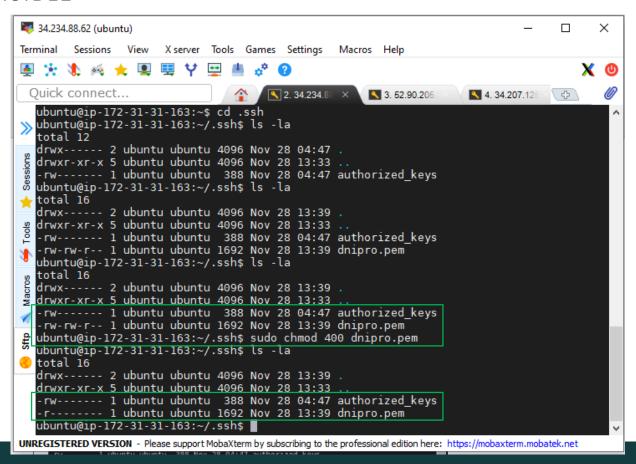


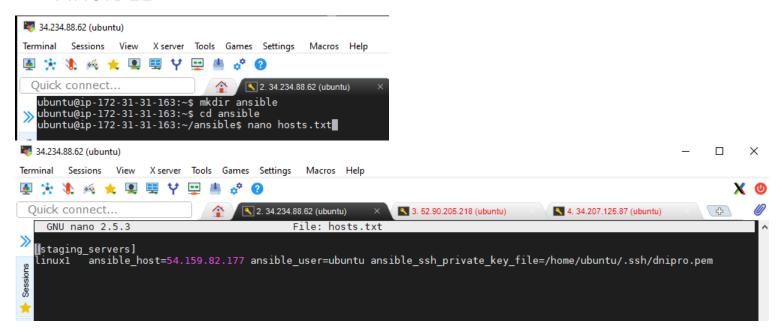






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34,234,88,62 (ubuntu)
Terminal Sessions View X server Tools Games Settings Macros Help
Ouick connect...
                                     2. 34.234.88.62 (ubuntu)
                                                             3. 52.90.205.218 (ubunti
  mkdir: cannot create directory '.ssh': File exists
 ubuntu@ip-172-31-31-163:~$ ls -la
  total 36
  drwxr-xr-x 5 ubuntu ubuntu 4096 Nov 28 13:33 .
  drwxr-xr-x 3 root root 4096 Nov 28 04:47 ...
  drwx----- 3 ubuntu ubuntu 4096 Nov 28 04:58 .ansible
  -rw-r--r-- 1 ubuntu ubuntu 220 Aug 31 2015 .bash logout
  -rw-r--r-- 1 ubuntu ubuntu 3771 Aug 31 2015 .bashrc
  drwx----- 2 ubuntu ubuntu 4096 Nov 28 04:52 .cache
  -rw-r--r-- 1 ubuntu ubuntu 655 Jul 12 19:26 .profile
  drwx----- 2 ubuntu ubuntu 4096 Nov 28 04:47 .ssh
  rw-r--r-- 1 ubuntu ubuntu     0 Nov 28 04:53 .sudo as admin successful-
  -rw------ 1 ubuntu ubuntu 62 Nov 28 13:33 .Xauthority
 ubuntu@ip-172-31-31-163:~$ cd .ssh
  ubuntu@ip-172-31-31-163:~/.ssh$ ls -la
 total 12
  drwx----- 2 ubuntu ubuntu 4096 Nov 28 04:47 .
  drwxr-xr-x 5 ubuntu ubuntu 4096 Nov 28 13:33 ...
  -rw------ 1 ubuntu ubuntu 388 Nov 28 04:47 authorized keys
  ubuntu@ip-172-31-31-163:~/.ssh$ ls -la
  total 16
  drwx----- 2 ubuntu ubuntu 4096 Nov 28 13:39 .
  drwxr-xr-x 5 ubuntu ubuntu 4096 Nov 28 13:33 ...
  -rw------ 1 ubuntu ubuntu 388 Nov 28 04:47 authorized keys
  -rw-rw-r-- 1 ubuntu ubuntu 1692 Nov 28 13:39 dnipro.pem
  ubuntu@ip-172-31-31-163:~/.ssh$
```

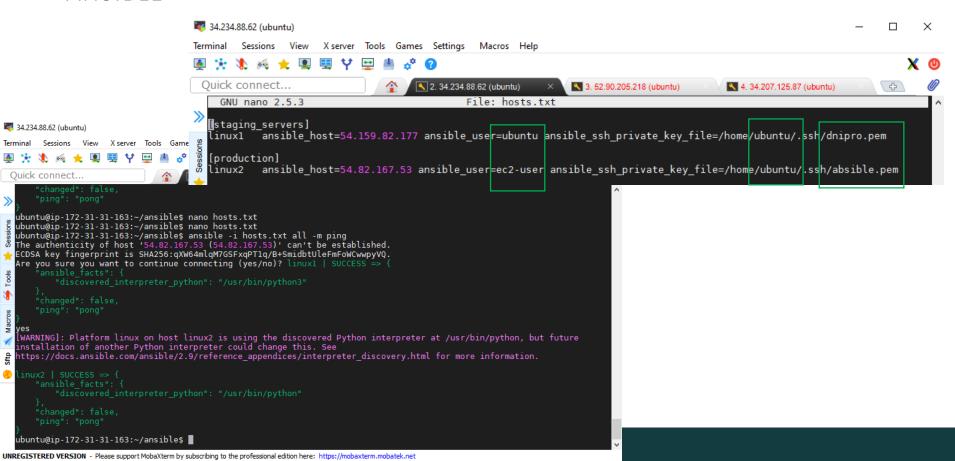


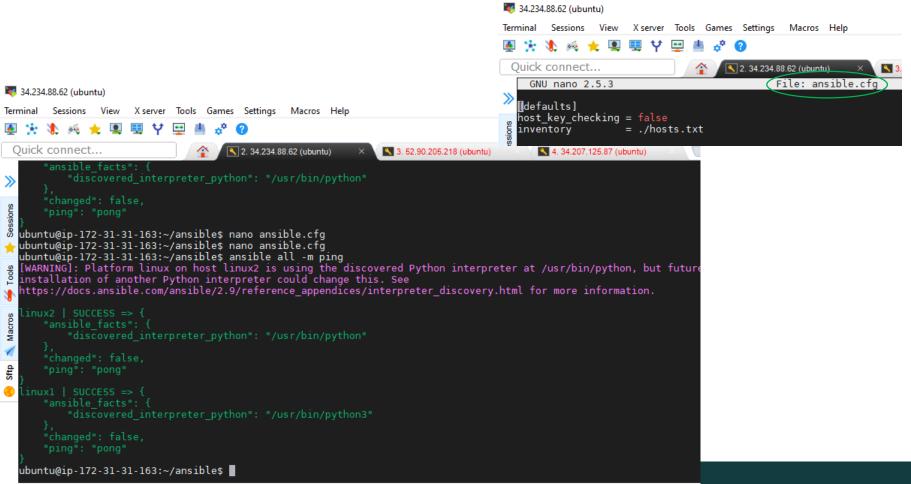


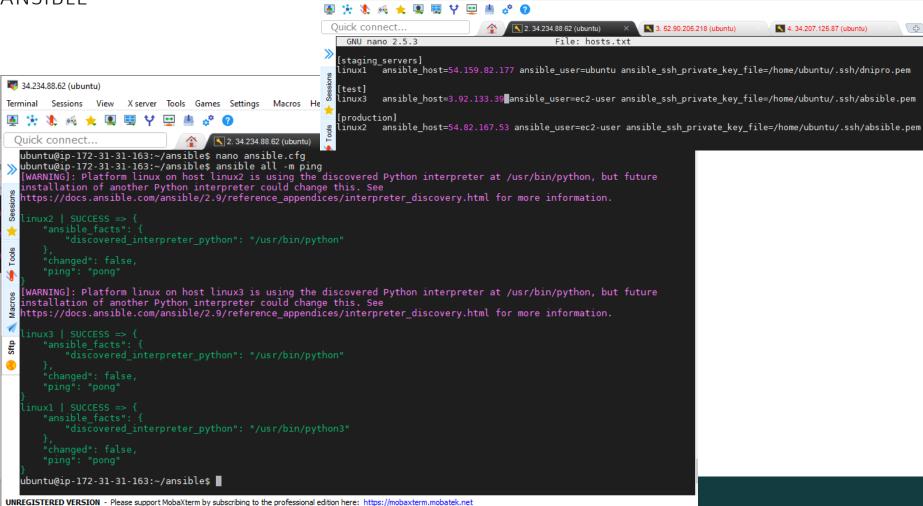


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                     X server Tools Games Settings Macros Help
 Ouick connect...
                                        2. 34.234.88.62 (ubuntu)
                                                                  3. 52.90.205.218 (ubuntu)
                                                                                               4. 34.207.125.87 (ubuntu)
  linux1 | UNREACHABLE! => {
      "changed": false,
      "msg": "Failed to connect to the host via ssh: no such identity: /home/ec2-user/.ssh/absible.pem: No such file or di
   rectory\r\nPermission denied (publickey).",
"unreachable": true
ubuntu@ip-172-31-31-163:~/ansible$ nano hosts.txt
  ubuntu@ip-172-31-31-163:~/ansible$ ansible -i hosts.txt all -m ping
  The authenticity of host '54.159.82.177 (54.159.82.177)' can't be established.
  ECDSA key fingerprint is SHA256:wyH6+dqH8gi6RYKvYSdWiWul+crQqxXjR7z7USiUpHU.
  Are you sure you want to continue connecting (yes/no)? yes
Macros
ubuntu@ip-172-31-31-163:~/ansible$ ansible -i hosts.txt all -m ping
```







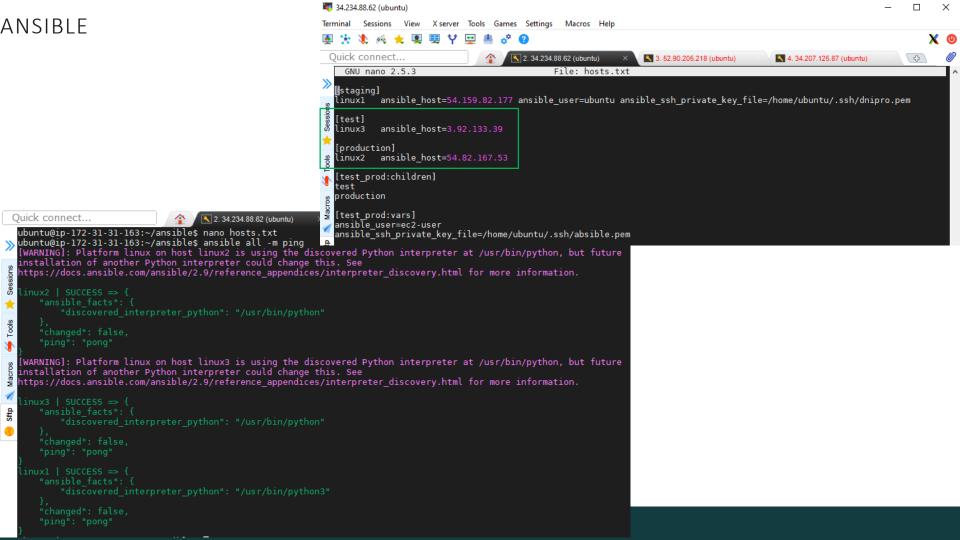


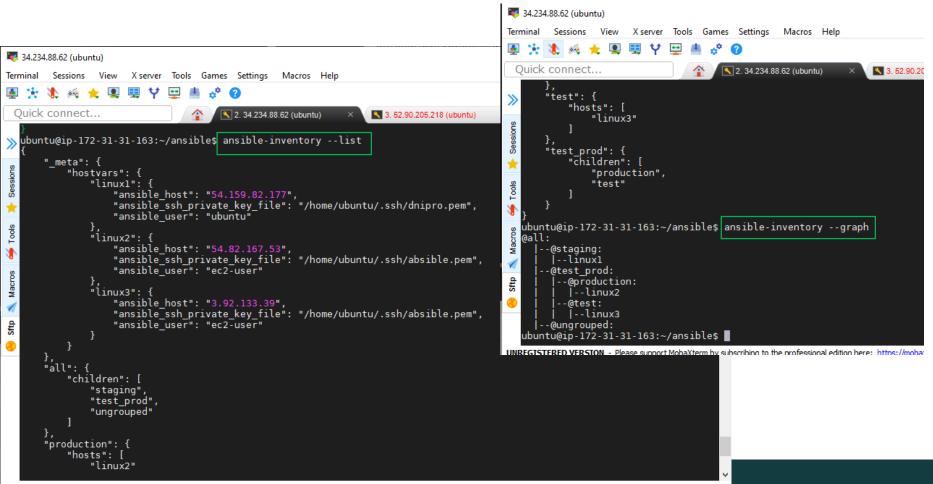
34.234.88.62 (ubuntu)

X server Tools Games Settings Macros Help

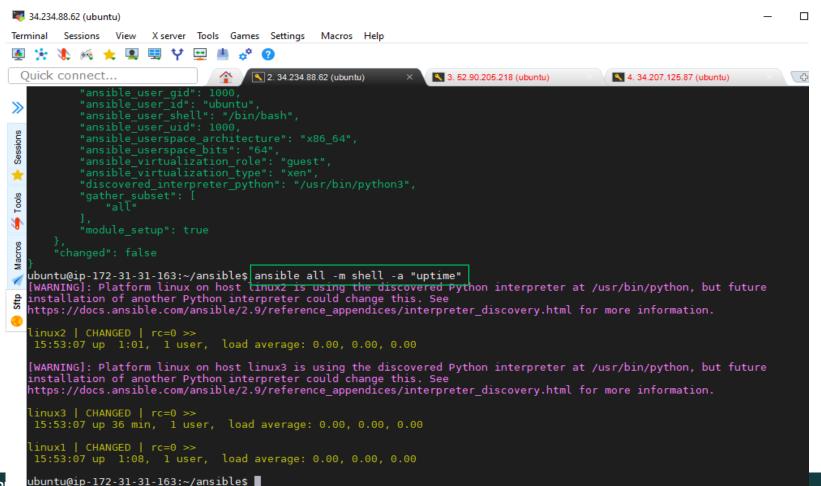
4. 34.207.125.87 (ubuntu)

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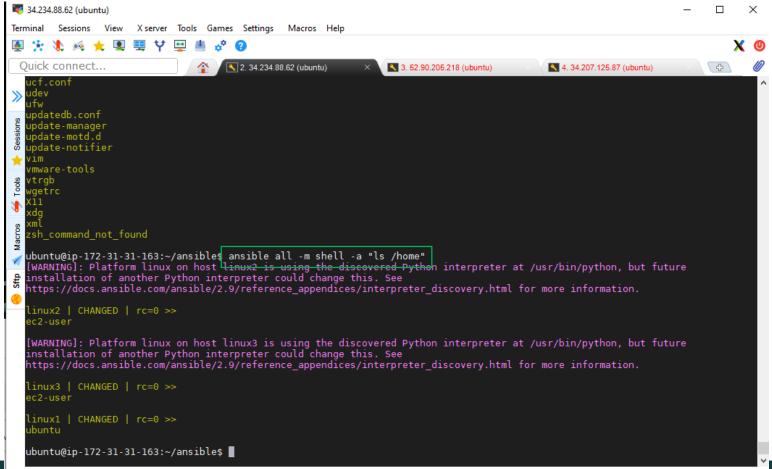


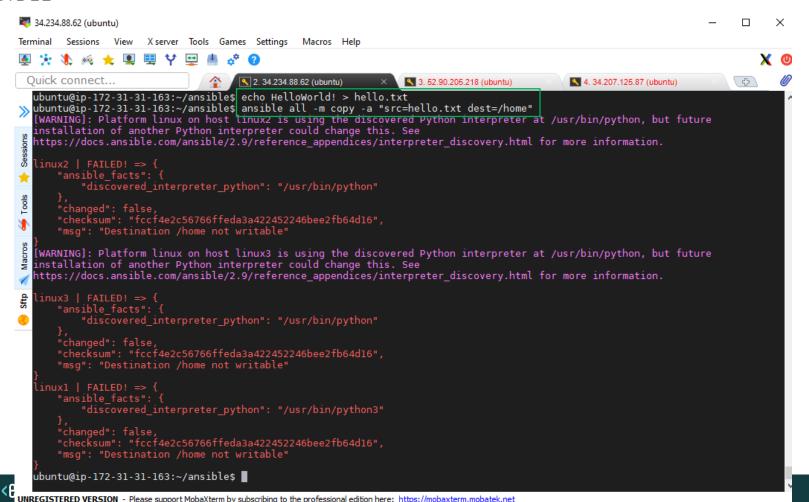


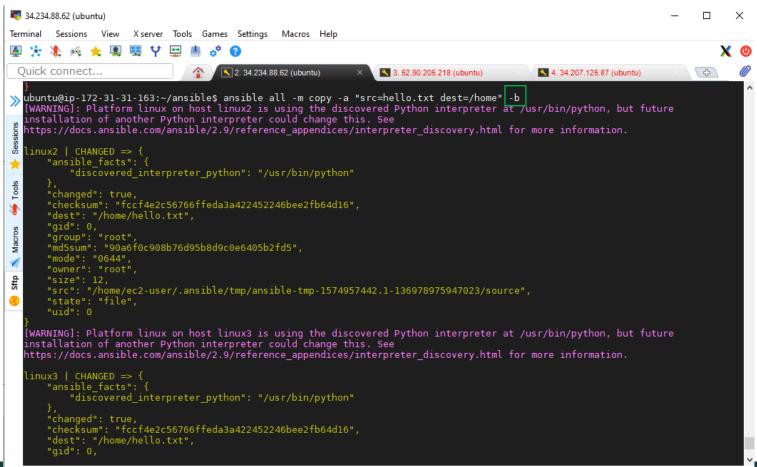
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34.234.88.62 (ubuntu)
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 Quick connect...
                                           2. 34.234.88.62 (ubuntu)
                                                                           3. 52.90.205.218 (ubuntu)
                                                                                                           4. 34.207.125.87 (ubuntu)
            I--linux2
          --@test:
         Ĭ--linux3
      --@ungrouped:
  ubuntu@ip-172-31-31-163:~/ansible$ ansible staging -m setup
Sessi
Tools
Macros
Sftp
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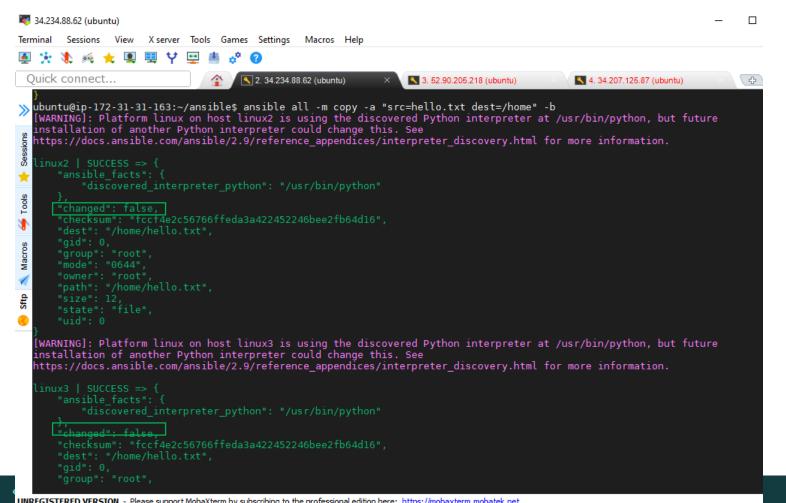


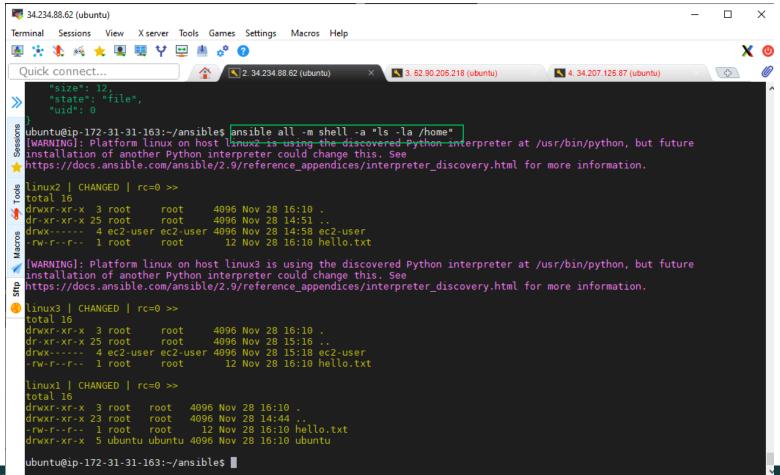
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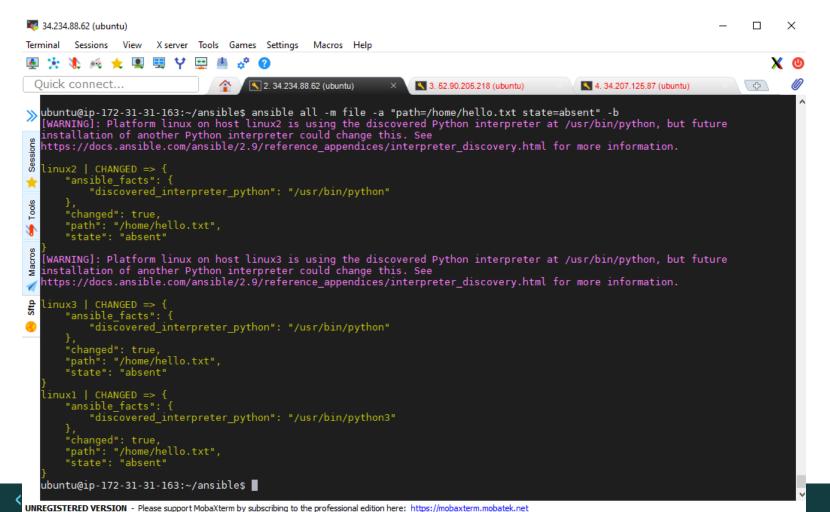






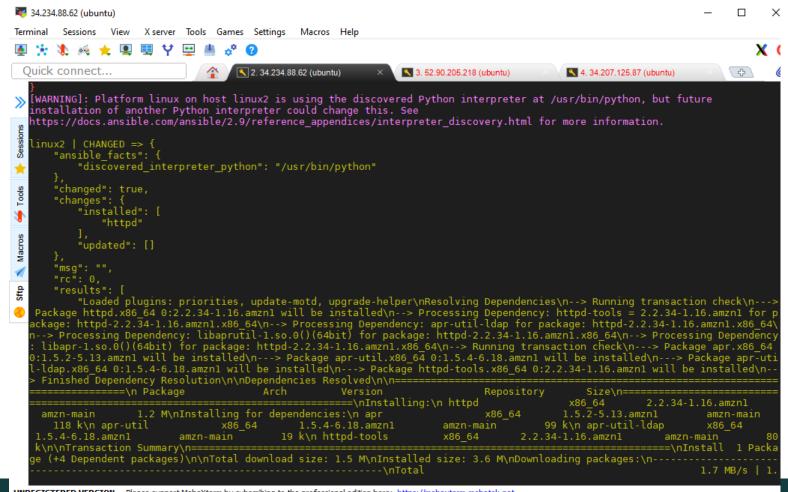


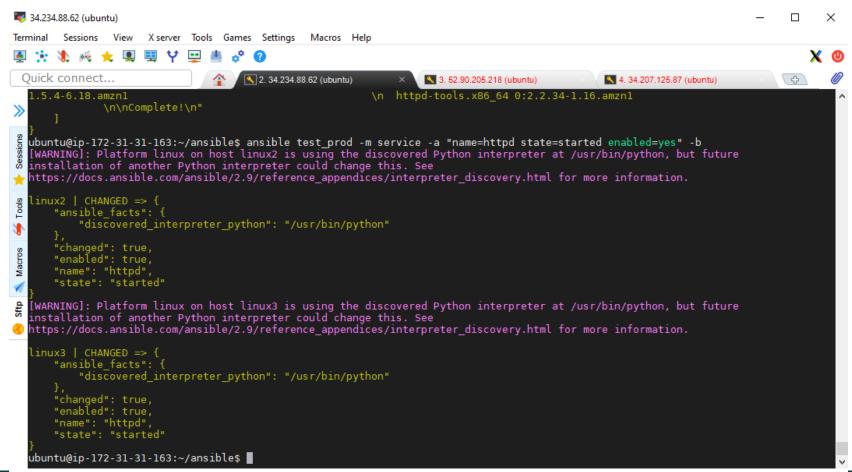


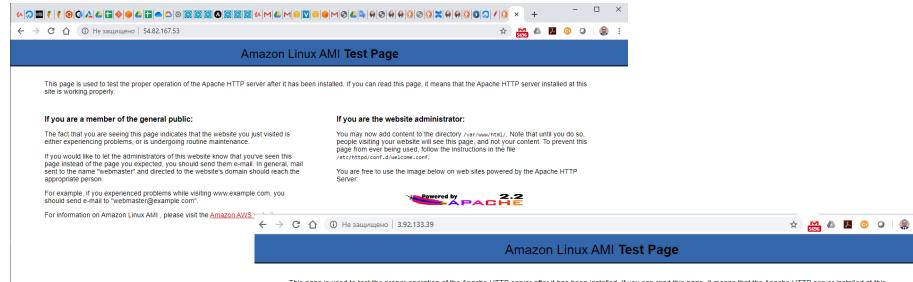


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Ouick connect...
                                               2. 34.234.88.62 (ubuntu)
                                                                                3. 52.90.205.218 (ubuntu)
                                                                                                                    4. 34.207.125.87 (ubuntu)
        "changed": true,
       "path": "/home/hello.txt",
        "state": "absent"
  ubuntu@ip-172-31-31-163:~/ansible$ ansible all -m yum -a "name=httpd state=latest" -b
             "discovered interpreter python": "/usr/bin/python3"
       "cache_update_time": 1568374726,
"cache_updated": false,
"changed": false,
   "msg": "'/usr/bin/apt-get -y -o \"Dpkg::Options::=--force-confdef\" -o \"Dpkg::Options::=--force-confold\"
httpd'' failed: E: Package 'httpd' has no installation candidate\n",
Macros
       "stderr": "E: Package 'httpd' has no installation candidate\n",
             "E: Package 'httpd' has no installation candidate"
    "stdout": "Reading package lists...\nBuilding dependency tree...\nReading state information...\nPackage httpd is a virtua package provided by:\n nginx-core 1.10.3-0ubuntu0.16.04.4\n apache2 2.4.18-2ubuntu3.12\n\n", "stdout_lines": [
            "Reading package lists...",
"Building dependency tree...",
"Reading state information...",
            "Package httpd is a virtual package provided by:",
               apache2 2.4.18-2ubuntu3.12",
   [WARNING]: Platform linux on host linux2 is using the discovered Python interpreter at /usr/bin/python, but future
   installation of another Python interpreter could change this. See
   https://docs.ansible.com/ansible/2.9/reference appendices/interpreter discovery.html for more information.
```









This page is used to test the proper operation of the Apache HTTP server after it has been installed. If you can read this page, it means that the Apache HTTP server installed at this site is working properly.

#### If you are a member of the general public:

The fact that you are seeing this page indicates that the website you just visited is either experiencing problems, or is undergoing routine maintenance.

If you would like to let the administrators of this website know that you've seen this page instead of the page you expected, you should send them e-mail. In general, mail sent to the name "webmaster" and directed to the website's domain should reach the appropriate person.

For example, if you experienced problems while visiting www.example.com, you should send e-mail to "webmaster@example.com".

For information on Amazon Linux AMI, please visit the Amazon AWS website.

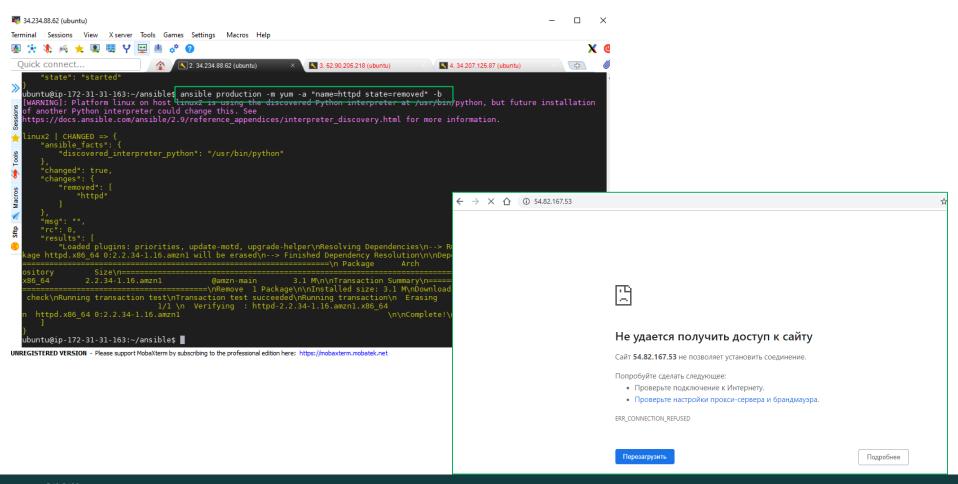
#### If you are the website administrator:

You may now add content to the directory /var/www/html/. Note that until you do so, people visiting your website will see this page, and not your content. To prevent this page from ever being used, follow the instructions in the file /etc/httpd/conf.d/welcome.conf.

You are free to use the image below on web sites powered by the Apache HTTP Server:







Q&A

