

**TO  
THE  
NEW™**



## **Assessment -20**

### **ANSIBLE-2**

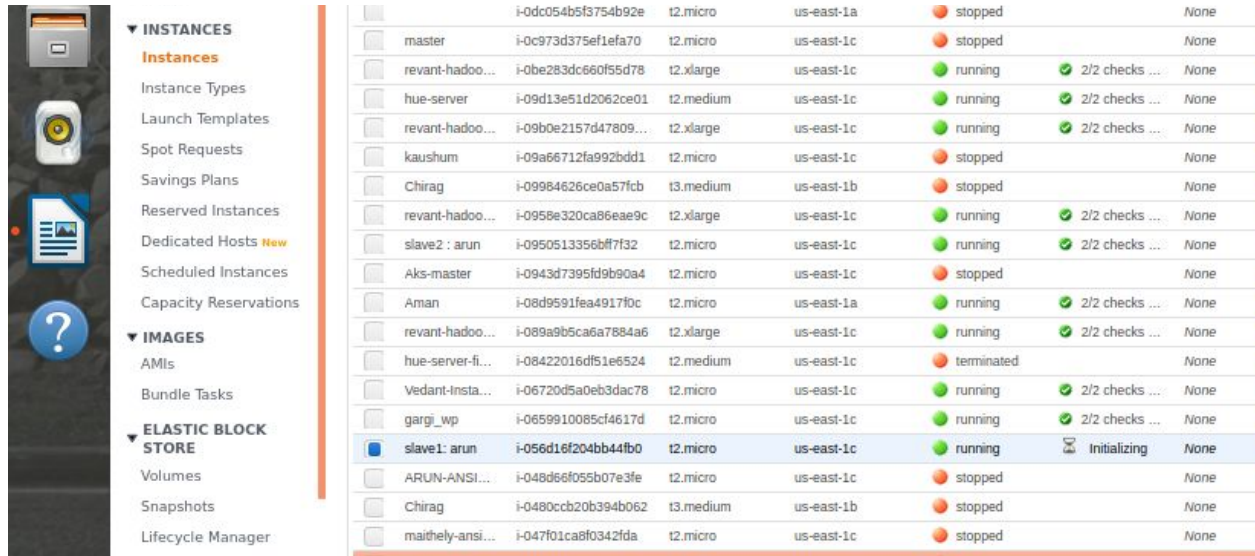
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College: UPES

1. Create two nodes with tag:key role and tag:value master & slave respectively. Setup the dynamic inventory on ansible control nodes.

Initiate two instances: slave1 and slave2 with different tags:



		i-0dc054b5f3754b92e	t2.micro	us-east-1a	stopped	None
master		i-0c973d375ef1efa70	t2.micro	us-east-1c	stopped	None
revant-hadoo...		i-0be283dc660f55d78	t2.xlarge	us-east-1c	running	2/2 checks ... None
hue-server		i-09d13e51d2062ce01	t2.medium	us-east-1c	running	2/2 checks ... None
revant-hadoo...		i-09b0e2157d47809...	t2.xlarge	us-east-1c	running	2/2 checks ... None
kaushum		i-09a66712fa992bdd1	t2.micro	us-east-1c	stopped	None
Chirag		i-09984626ce0a57fcb	t3.medium	us-east-1b	stopped	None
revant-hadoo...		i-0958e320ca86eae9c	t2.xlarge	us-east-1c	running	2/2 checks ... None
slave2 : arun		i-0950513356bf7f32	t2.micro	us-east-1c	running	2/2 checks ... None
Aks-master		i-0943d7395fd9b90a4	t2.micro	us-east-1c	stopped	None
Aman		i-08d9591fea4917f0c	t2.micro	us-east-1a	running	2/2 checks ... None
revant-hadoo...		i-089a9b5ca6a7884a6	t2.xlarge	us-east-1c	running	2/2 checks ... None
hue-server-fi...		i-08422016df51e6524	t2.medium	us-east-1c	terminated	None
Vedant-Insta...		i-06720d5a0eb3dac78	t2.micro	us-east-1c	running	2/2 checks ... None
gargi_wp		i-0659910085cf4617d	t2.micro	us-east-1c	running	2/2 checks ... None
slave1: arun		i-056d16f204bb44fb0	t2.micro	us-east-1c	running	Initializing None
ARUN-ANSI...		i-048d66f055b07e3fe	t2.micro	us-east-1c	stopped	None
Chirag		i-0480ccb20b394b062	t3.medium	us-east-1b	stopped	None
maithely-ansi...		i-047f01ca8f0342fda	t2.micro	us-east-1c	stopped	None

IAM role for EC2 full access for control node or master

Activities Firefox Web Browser Tue 13:12

IAM Management Console - Mozilla Firefox

https://console.aws.amazon.com/iam/home?region=us-east-1#/roles\$new?step=revi 67%

aws Services Resource Groups

arun.parmar@tothenew.com @ Global Support

### Create role

1 2 3 4

#### Review

Provide the required information below and review this role before you create it.

**Role name\*** fullaccessforcontrolnode  
Use alphanumeric and "+", "@", "\_" characters. Maximum 64 characters.

**Role description**  
Allows EC2 instances to call AWS services on your behalf.  
Maximum 1000 characters. Use alphanumeric and "+", "@", "\_" characters.

**Trusted entities** AWS service: ec2.amazonaws.com

**Policies**  
AmazonECSFullAccess  
AmazonEC2FullAccess

**Permissions boundary** Permissions boundary is not set

The new role will receive the following tags

Key	Value
owner	arun
purpose	ansible

\* Required

Cancel Previous Create role

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Activities Firefox Web Browser Tue 13:13

Attach/Replace IAM Role | EC2 Management Console - Mozilla Firefox

https://console.aws.amazon.com/ec2/v2/home?region=us-east-1#AttachReplaceIAM 67%

aws Services Resource Groups

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### Attach/Replace IAM Role

Instances > Attach/Replace IAM Role

Select an IAM role to attach to your instance. If you don't have any IAM roles, choose Create new IAM role to create a role in the IAM console. If an IAM role is already attached to your instance, the IAM role you choose will replace the existing role.

Instance ID i-0b9b175051a78abea (master: arun) ⓘ

IAM role\* fullaccessforcontrolnode ⓘ Create new IAM role ⓘ

\* Required

Cancel Apply

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```
Activities Terminal Tue 17:40 ● ubuntu@ip-172-31-39-121: /etc/ansible

Processing triggers for mime-support (3.6ubuntu1) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
ubuntu@ip-172-31-39-121:~$ cd /etc/ansible
ubuntu@ip-172-31-39-121:/etc/ansible$ ls
ansible.cfg  hosts  roles
ubuntu@ip-172-31-39-121:/etc/ansible$ cd
ubuntu@ip-172-31-39-121:~$ sudo mv ec2.py /etc/ansible
mv: cannot stat 'ec2.py': No such file or directory
ubuntu@ip-172-31-39-121:~$ wget https://raw.githubusercontent.com/ansible/ansible/stable-2.2/contrib/inventory/ec2.py
--2020-04-07 12:10:26-- https://raw.githubusercontent.com/ansible/ansible/stable-2.2/contrib/inventory/ec2.py
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 151.101.248.133
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)[151.101.248.133]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 63782 (62K) [text/plain]
Saving to: 'ec2.py'

ec2.py                               100%[=====] 62.29K --.-KB/s   in 0.001s

2020-04-07 12:10:26 (51.7 MB/s) - 'ec2.py' saved [63782/63782]

ubuntu@ip-172-31-39-121:~$ wget https://raw.githubusercontent.com/ansible/ansible/stable-2.2/contrib/inventory/ec2.ini
--2020-04-07 12:10:30-- https://raw.githubusercontent.com/ansible/ansible/stable-2.2/contrib/inventory/ec2.ini
Resolving raw.githubusercontent.com (raw.githubusercontent.com)... 151.101.248.133
Connecting to raw.githubusercontent.com (raw.githubusercontent.com)[151.101.248.133]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 8142 (8.0K) [text/plain]
Saving to: 'ec2.ini'

ec2.ini                               100%[=====] 7.95K --.-KB/s   in 0s

2020-04-07 12:10:30 (94.6 MB/s) - 'ec2.ini' saved [8142/8142]

ubuntu@ip-172-31-39-121:~$ sudo mv ec2.py /etc/ansible
ubuntu@ip-172-31-39-121:~$ sudo mv ec2.ini /etc/ansible
ubuntu@ip-172-31-39-121:~$ cd /etc/ansible
ubuntu@ip-172-31-39-121:/etc/ansible$ ls
ansible.cfg  ec2.ini  ec2.py  hosts  roles
ubuntu@ip-172-31-39-121:/etc/ansible$
```

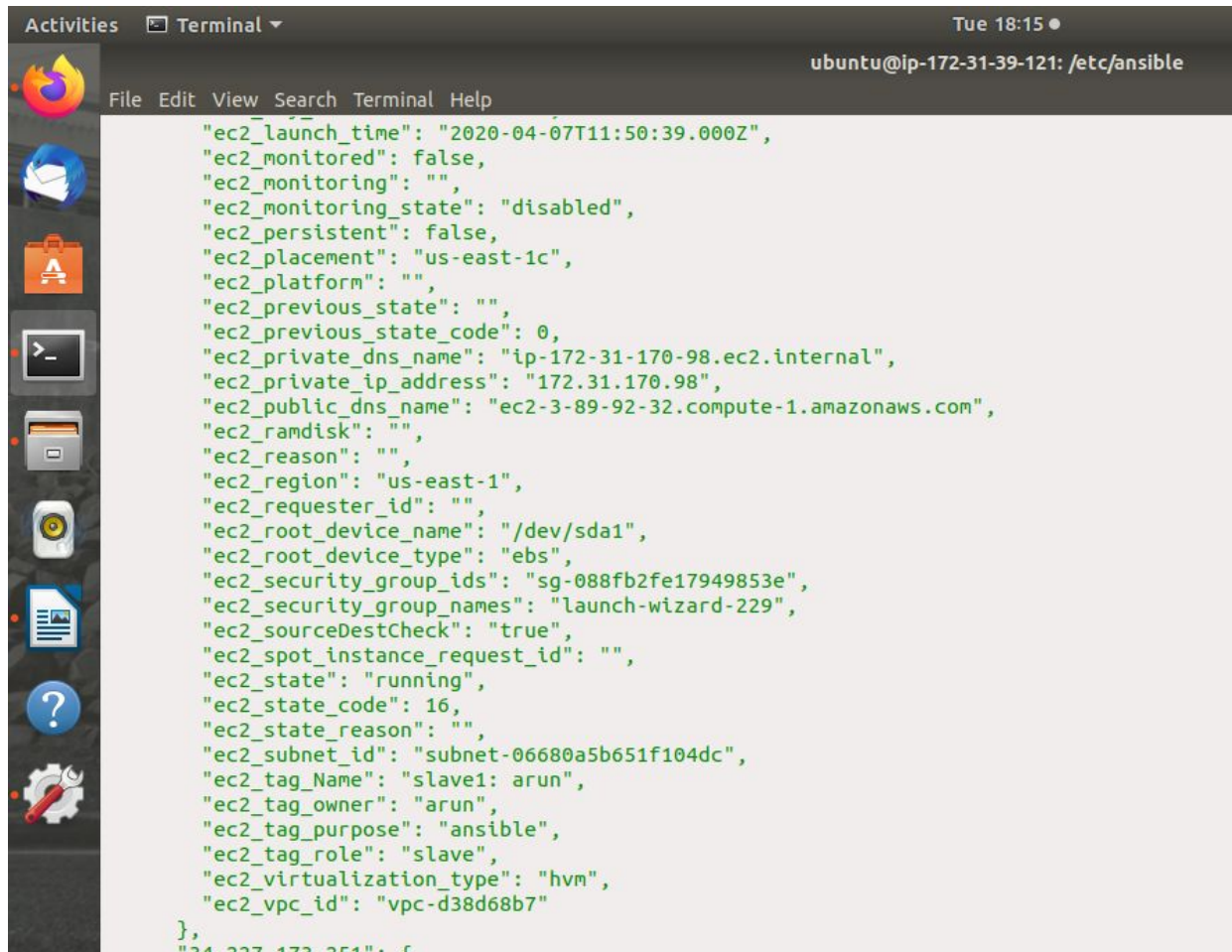
```
Activities Terminal Tue 18:13 ● ubuntu@ip-172-31-39-121: /etc/ansible

ansible.cfg  ec2.ini  ec2.py  hosts  roles
ubuntu@ip-172-31-39-121:/etc/ansible$ sudo vi ec2.ini
ubuntu@ip-172-31-39-121:/etc/ansible$ ./ec2.py --list
{
  "_meta": {
    "hostvars": {
      "100.26.97.1": {
        "ansible_ssh_host": "100.26.97.1",
        "ec2_in_monitoring_element": false,
        "ec2_ami_launch_index": "2",
        "ec2_architecture": "x86_64",
        "ec2_block_devices": {
          "sda1": "vol-0ea90a48667f6483f"
        },
        "ec2_client_token": "",
        "ec2_dns_name": "ec2-100-26-97-1.compute-1.amazonaws.com",
        "ec2_ebs_optimized": false,
        "ec2_eventsSet": "",
        "ec2_group_name": "",
        "ec2_hypervisor": "xen",
        "ec2_id": "i-0958e320ca860ae9c",
        "ec2_image_id": "ami-07ebfd5b3428b6f4d",
        "ec2_instance_profile": "",
        "ec2_instance_type": "t2.xlarge",
        "ec2_ip_address": "100.26.97.1",
        "ec2_item": "",
        "ec2_kernel": "",
        "ec2_key_name": "revant_hadoop",
        "ec2_launch_time": "2020-04-07T05:21:32.000Z",
        "ec2_monitored": false,
        "ec2_monitoring": "",
        "ec2_monitoring_state": "disabled",
        "ec2_persistent": false,
        "ec2_placement": "us-east-1c",
        "ec2_platform": "",
        "ec2_previous_state": "",
        "ec2_previous_state_code": 0,
        "ec2_private_dns_name": "ip-172-31-89-93.ec2.internal",
        "ec2_private_ip_address": "172.31.89.93"
      }
    }
  }
}
```

Activities Terminal Tue 18:15 ●  
ubuntu@ip-172-31-39-121: /etc/ansible

```
File Edit View Search Terminal Help
"ec2_ip_address": "35.175.141.101",
"ec2_item": "",
"ec2_kernel": "",
"ec2_key_name": "ttnaccount",
"ec2_launch_time": "2020-04-07T11:50:39.000Z",
"ec2_monitored": false,
"ec2_monitoring": "",
"ec2_monitoring_state": "disabled",
"ec2_persistent": false,
"ec2_placement": "us-east-1c",
"ec2_platform": "",
"ec2_previous_state": "",
"ec2_previous_state_code": 0,
"ec2_private_dns_name": "ip-172-31-36-243.ec2.internal",
"ec2_private_ip_address": "172.31.36.243",
"ec2_public_dns_name": "ec2-35-175-141-101.compute-1.amazonaws.com",
"ec2_ramdisk": "",
"ec2_reason": "",
"ec2_region": "us-east-1",
"ec2_requester_id": "",
"ec2_root_device_name": "/dev/sda1",
"ec2_root_device_type": "ebs",
"ec2_security_group_ids": "sg-0a489bd47a8d90c91",
"ec2_security_group_names": "launch-wizard-228",
"ec2_sourceDestCheck": "true",
"ec2_spot_instance_request_id": "",
"ec2_state": "running",
"ec2_state_code": 16,
"ec2_state_reason": "",
"ec2_subnet_id": "subnet-06680a5b651f104dc",
"ec2_tag_Name": "slave2 : arun",
"ec2_tag_owner": "arun",
"ec2_tag_purpose": "ansible",
"ec2_tag_role": "master",
"ec2_virtualization_type": "hvm",
"ec2_vpc_id": "vpc-d38d68b7"
```



A terminal window titled 'Terminal' with a menu bar (File, Edit, View, Search, Terminal, Help) and a status bar (Tue 18:15, ubuntu@ip-172-31-39-121: /etc/ansible). The terminal displays a JSON object representing an EC2 instance. The JSON includes fields for launch time, monitoring state, placement, platform, previous state, private and public DNS names, RAM disk, region, requester ID, root device name and type, security group IDs and names, source/destination check, spot instance request ID, state, state code and reason, subnet ID, tag name, owner, purpose, role, virtualization type, and VPC ID. The instance is in the 'running' state.

```
"ec2_launch_time": "2020-04-07T11:50:39.000Z",
"ec2_monitored": false,
"ec2_monitoring": "",
"ec2_monitoring_state": "disabled",
"ec2_persistent": false,
"ec2_placement": "us-east-1c",
"ec2_platform": "",
"ec2_previous_state": "",
"ec2_previous_state_code": 0,
"ec2_private_dns_name": "ip-172-31-170-98.ec2.internal",
"ec2_private_ip_address": "172.31.170.98",
"ec2_public_dns_name": "ec2-3-89-92-32.compute-1.amazonaws.com",
"ec2_ramdisk": "",
"ec2_reason": "",
"ec2_region": "us-east-1",
"ec2_requester_id": "",
"ec2_root_device_name": "/dev/sda1",
"ec2_root_device_type": "ebs",
"ec2_security_group_ids": "sg-088fb2fe17949853e",
"ec2_security_group_names": "launch-wizard-229",
"ec2_sourceDestCheck": "true",
"ec2_spot_instance_request_id": "",
"ec2_state": "running",
"ec2_state_code": 16,
"ec2_state_reason": "",
"ec2_subnet_id": "subnet-06680a5b651f104dc",
"ec2_tag_Name": "slave1: arun",
"ec2_tag_owner": "arun",
"ec2_tag_purpose": "ansible",
"ec2_tag_role": "slave",
"ec2_virtualization_type": "hvm",
"ec2_vpc_id": "vpc-d38d68b7"
},
"24 227 172 251": 5
```

**Run the following modules using tag key-value:**  
**1.1 Ping master node and slave node separately.**

```
[WARNING]: NO HOSTS MATCHED, NOTHING TO DO
ubuntu@ip-172-31-39-121:/etc/ansible$ ansible -i ec2.py tag_role_slave -m ping
[DEPRECATION WARNING]: The TRANSFORM_INVALID_GROUP_CHARS settings is set to allow bad characters in
but still be user configurable on deprecation. This feature will be removed in version 2.10. Deprecat
deprecation_warnings=False in ansible.cfg.
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
3.89.92.32 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
ubuntu@ip-172-31-39-121:/etc/ansible$ ansible -i ec2.py tag_role_master -m ping
[DEPRECATION WARNING]: The TRANSFORM_INVALID_GROUP_CHARS settings is set to allow bad characters in
but still be user configurable on deprecation. This feature will be removed in version 2.10. Deprecat
deprecation_warnings=False in ansible.cfg.
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
The authenticity of host '35.175.141.101 (35.175.141.101)' can't be established.
ECDSA key fingerprint is SHA256:I92Qu9Dvh03WKPnJg+y05oISQAJWW9pSj2FjzqiwnCY.
Are you sure you want to continue connecting (yes/no)? yes
35.175.141.101 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
ubuntu@ip-172-31-39-121:/etc/ansible$
```

## 1.2 To check all running processes on slave node.

```
[Errno 2] No such file or directory: b'ux\xe2\x80\x9d': b'ux\xe2\x80\x9d'
ubuntu@ip-172-31-39-121:/etc/ansible$ ansible -i ec2.py tag_role_slave -a "ps -aux"
[DEPRECATION WARNING]: The TRANSFORM_INVALID_GROUP_CHARS settings is set to allow bad characters in gr
but still be user configurable on deprecation. This feature will be removed in version 2.10. Deprecat
deprecation_warnings=False in ansible.cfg.
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
3.89.92.32 | CHANGED | rc=0 >>
USER          PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root           1  0.0  0.9 159808  9196 ?        Ss   11:51   0:03 /sbin/init
root           2  0.0  0.0      0     0 ?        S    11:51   0:00 [kthreadd]
root           4  0.0  0.0      0     0 ?        I<   11:51   0:00 [kworker/0:0H]
root           6  0.0  0.0      0     0 ?        I<   11:51   0:00 [mm_percpu_wq]
root           7  0.0  0.0      0     0 ?        S    11:51   0:00 [ksoftirqd/0]
root           8  0.0  0.0      0     0 ?        I    11:51   0:00 [rcu_sched]
root           9  0.0  0.0      0     0 ?        I    11:51   0:00 [rcu_bh]
root          10  0.0  0.0      0     0 ?        S    11:51   0:00 [migration/0]
root          11  0.0  0.0      0     0 ?        S    11:51   0:00 [watchdog/0]
root          12  0.0  0.0      0     0 ?        S    11:51   0:00 [cpuhp/0]
root          13  0.0  0.0      0     0 ?        S    11:51   0:00 [kdevtmpfs]
root          14  0.0  0.0      0     0 ?        I<   11:51   0:00 [netns]
root          15  0.0  0.0      0     0 ?        S    11:51   0:00 [rcu_tasks_kthre]
root          16  0.0  0.0      0     0 ?        S    11:51   0:00 [kauditd]
root          17  0.0  0.0      0     0 ?        S    11:51   0:00 [xenbus]
root          18  0.0  0.0      0     0 ?        S    11:51   0:00 [xenwatch]
root          19  0.0  0.0      0     0 ?        I    11:51   0:00 [kworker/0:1]
root          20  0.0  0.0      0     0 ?        S    11:51   0:00 [khungtaskd]
root          21  0.0  0.0      0     0 ?        S    11:51   0:00 [oom_reaper]
root          22  0.0  0.0      0     0 ?        I<   11:51   0:00 [writeback]
```

## 1.3 To copying files to both nodes concurrently.

A terminal window with a dark background and a sidebar of application icons on the left. The terminal shows the execution of an Ansible command to copy a file. The output includes deprecation warnings and a detailed JSON response for the file copy operation.

```
ansible.cfg  arun.txt  ec2.yml  ec2.py  hosts  roles
ubuntu@ip-172-31-39-121:/etc/ansible$ ansible -i ec2.py tag_role.* -m copy -a "src=/etc/ansible/arun.txt dest=/home/ubuntu/"
[DEPRECATION WARNING]: The TRANSFORM_INVALID_GROUP_CHARS settings is set to allow bad characters in group names by default, this will change,
but still be user configurable on deprecation. This feature will be removed in version 2.10. Deprecation warnings can be disabled by setting
deprecation_warnings=False in ansible.cfg.
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details
35.175.141.101 | CHANGED => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": true,
  "checksum": "da39a3ee5e6b4b0d3255bfef95601890afd80709",
  "dest": "/home/ubuntu/arun.txt",
  "gid": 1000,
  "group": "ubuntu",
  "md5sum": "d41d8cd98f00b204e9800998ecf8427e",
  "mode": "0664",
  "owner": "ubuntu",
  "size": 0,
  "src": "/home/ubuntu/.ansible/tmp/ansible-tmp-1586266200.4-172482700472942/source",
  "state": "file",
  "uid": 1000
}
3.89.92.32 | CHANGED => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": true,
  "checksum": "da39a3ee5e6b4b0d3255bfef95601890afd80709",
  "dest": "/home/ubuntu/arun.txt",
  "gid": 1000,
  "group": "ubuntu",
  "md5sum": "d41d8cd98f00b204e9800998ecf8427e",
  "mode": "0664",
  "owner": "ubuntu",
  "size": 0,
  "src": "/home/ubuntu/.ansible/tmp/ansible-tmp-1586266200.41-118592471731564/source",
  "state": "file",
  "uid": 1000
}
ubuntu@ip-172-31-39-121:/etc/ansible$
```

## 2. Setup nginx on both nodes with a single custom configuration template, on master nginx should run on 8000 while on slave nginx would listen on port 80. [Jinja2+conditional]

Set up server configuration file using jinja2 and conditionals



```
ubuntu@ip-172-31-39-121:/etc/ansible/templates$ cat nginx.conf
#Default server configuration
server{
    {% if ec2_tag_Name == "slave1_arun" %}
        listen 8000 default_server;
        listen [::]:8000 default_server;
    {% endif %}

    {% if ec2_tag_Name == "slave2_arun" %}
        listen 80 default_server;
        listen [::]:80 default_server;
    {% endif %}
    root /var/www/html;

    index index.html index.nginx-debian.html;
}
ubuntu@ip-172-31-39-121:/etc/ansible/templates$
```

Now create an ansible playbook to run nginx and copy the configuration file

```

--
- hosts: tag_Name*_arun
  gather_facts: true
  become: true
  tasks:
    - name: Update cache
      apt:
        update_cache: yes
    - name: Ensure latest version
      apt:
        name: nginx
        state: latest
    - name: start nginx
      service:
        name: nginx
        state: started
    - name: Add nginx configuration
      template:
        src: /etc/ansible/templates/nginx.conf
        dest: "/etc/nginx/sites-available/nginx.conf"
    - name: Delete default file
      file:
        path: "/etc/nginx/sites-enabled/default"
        state: absent
"nginx.yml" 35L, 1091C

```

```

- name: Delete default file
  file:
    path: "/etc/nginx/sites-enabled/default"
    state: absent
- name: Enable nginx config template
  file:
    src: /etc/nginx/sites-available/nginx.conf
    dest: "/etc/nginx/sites-enabled/nginx.conf"
    state: link
- name: Restart nginx
  service:
    name: nginx
    state: restarted

```

Run ansible playbook nginx.yml

```

ubuntu@ip-172-31-39-121:/etc/ansible$ ansible-playbook -i ec2.py nginx.yml
[DEPRECATION WARNING]: The TRANSFORM_INVALID_GROUP_CHARS settings is set to allow bad characters in group
names by default, this will change, but still be user configurable on deprecation. This feature will be
removed in version 2.10. Deprecation warnings can be disabled by setting deprecation_warnings=False in
ansible.cfg.
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details

PLAY [tag_Name_*_arun] *****

TASK [Gathering Facts] *****
ok: [3.86.211.228]
ok: [3.95.19.97]

TASK [Update cache] *****
changed: [3.86.211.228]
changed: [3.95.19.97]

TASK [Ensure latest version] *****
changed: [3.95.19.97]
changed: [3.86.211.228]

TASK [start nginx] *****
ok: [3.95.19.97]
ok: [3.86.211.228]

```

Now curl localhost:8000 on master and localhost:80 on slave

On master:

```

ubuntu@ip-172-31-170-98:/etc$ curl localhost:8000
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
    body {
        width: 35em;
        margin: 0 auto;
        font-family: Tahoma, Verdana, Arial, sans-serif;
    }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>

```

On slave:

```
ubuntu@ip-172-31-36-243:~$ curl localhost:80
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
    body {
        width: 35em;
        margin: 0 auto;
        font-family: Tahoma, Verdana, Arial, sans-serif;
    }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>If you see this page, the nginx web server is successfully installed and
working. Further configuration is required.</p>

<p>For online documentation and support please refer to
<a href="http://nginx.org/">nginx.org</a>.<br/>
Commercial support is available at
<a href="http://nginx.com/">nginx.com</a>.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
```

**3. Setup mysql on a remote server, create a user with password. Passwords should be encrypted using Ansible vault. Verify the setup by log in to mysql.**

Encrypt the mysql login password using ansible vault.

```
ubuntu@ip-172-31-39-121:/etc/ansible$ ansible-vault encrypt_string --vault-id @prompt upes@123
New vault password (default):
Confirm new vault password (default):
!vault |
     $ANSIBLE_VAULT;1.1;AES256
34666638343664383466313335336533316635386464613363326438613531616161646462353130
6231383038663236653266346533626131353234633733390a336534613062333730306534326136
37623330316132653439383239366232626434313266633965353930353436656661666462303534
3133663661336533610a633632613362613235363961383764373634633363393137333335636437
3331
Encryption successful
```

Create a playbook mysql.yml



```
--
- hosts: tag_Name*_arun
  gather_facts: False
  become: true
  vars:
    mysql_user_password: !vault |
      $ANSIBLE_VAULT;1.1;AES256
      34666638343664383466313335336533316635386464613363326438613531616161646462353130
      6231383038663236653266346533626131353234633733390a336534613062333730306534326136
      37623330316132653439383239366232626434313266633965353930353436656661666462303534
      3133663661336533610a633632613362613235363961383764373634633363393137333335636437
      3331
  tasks:
    - name: Ensure mysql is in the latest version
      apt:
        name: "{{ iten }}"
        update_cache: yes
        state: present
      with_items:
        - python-mysqldb
        - mysql-server
    - name: Start mysql
      service:
        name: mysql
```

1,3

```
- name: Start mysql
  service:
    name: mysql
    state: started
- name: Adding a mysql user
  mysql_user:
    user: mysql_user
    password: "{{ mysql_user_password }}"
    priv: '*.*:ALL'
    host: "%"
- name: restart mysql
  service:
    name: mysql
    state: restarted
```

35,12 Bot

Now run the playbook.

**ansible-playbook -i ec2.py mysql.yml --ask-vault-pass**

```
ubuntu@ip-172-31-107-66:/etc/ansible$ ansible-playbook -i ec2.py mysql.yml --ask-vault-pass
Vault password:
[DEPRECATION WARNING]: The TRANSFORM_INVALID_GROUP_CHARS settings is set to allow bad characters in group
names by default, this will change, but still be user configurable on deprecation. This feature will be
removed in version 2.10. Deprecation warnings can be disabled by setting deprecation_warnings=False in
ansible.cfg.
[WARNING]: Invalid characters were found in group names but not replaced, use -vvvv to see details

PLAY RECAP *****
54.173.24.148      : ok=4    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ig
nored=0
54.87.132.248     : ok=4    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ig
nored=0
```

Now ssh to the remote servers and check mysql login with the newly created user and password.

On slave1:

```
ubuntu@ip-172-31-80-74:~$ mysql -u mysql_user -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> █
```

On slave2:

```
ubuntu@ip-172-31-187-0:~$ mysql -u mysql_user -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.7.29-0ubuntu0.18.04.1 (Ubuntu)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> █
```