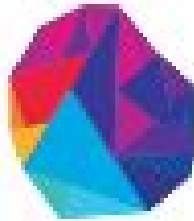


ASSESSMENT

ON :

ANSIBLE 1

**TO
THE
NEW**



★ Prerequisite=

Make entry of your hosts in /etc/ansible/myhosts file

```
# Ex 1: Ungrouped hosts, specify before any group headers.
54.152.107.128 ansible_user=ubuntu
52.55.210.105 ansible_user=ubuntu
## green.example.com
```

```
diksha@diksha:/etc/ansible$ ansible -i myhosts all -m ping
54.152.107.128 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
52.55.210.105 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": false,
  "ping": "pong"
}
```

1.Run Ansible Ad-hoc commands:

1.1 To execute command in bash and see the result

```
diksha@diksha:~/myansible$ ansible all -m shell -a '/bin/bash -c "ec2=`uname -n` ; touch /var/tmp/$ec2;"' -i myhosts
52.55.210.105 | CHANGED | rc=0 >>
54.152.107.128 | CHANGED | rc=0 >>
```

```
diksha@diksha:~/myansible$ ansible all -m shell -a '/bin/bash -c "ls /var/tmp/;"' -i myhosts
52.55.210.105 | CHANGED | rc=0 >>
cloud-init
systemd-private-eb13941e345144febb3d8017468f7b23-systemd-resolved.service-VxdxIh
systemd-private-eb13941e345144febb3d8017468f7b23-systemd-timesyncd.service-p9fZpT
54.152.107.128 | CHANGED | rc=0 >>
cloud-init
systemd-private-4662bf3741e3434281d3645a77a03a7c-systemd-resolved.service-1D3sfD
systemd-private-4662bf3741e3434281d3645a77a03a7c-systemd-timesyncd.service-gGLNmd
diksha@diksha:~/myansible$
```

1.2 To check all running processes on node.

```
diksha@diksha:~/myansible$ ansible all -m shell -a '/bin/bash -c "ps -aux;"' -i myhosts
54.152.107.128 | CHANGED | rc=0 >>
USER          PID %CPU %MEM    VSZ   RSS TTY      STAT START   TIME COMMAND
root           1  0.0  0.9 159744  9160 ?        Ss   06:48   0:02 /sbin/init
root           2  0.0  0.0      0     0 ?        S    06:48   0:00 [kthreadd]
root           3  0.0  0.0      0     0 ?        I    06:48   0:00 [kworker/0:0]
root           4  0.0  0.0      0     0 ?        I<   06:48   0:00 [kworker/0:0H]
root           6  0.0  0.0      0     0 ?        I<   06:48   0:00 [mm_percpu_wq]
root           7  0.0  0.0      0     0 ?        S    06:48   0:00 [ksoftirqd/0]
root           8  0.0  0.0      0     0 ?        I    06:48   0:00 [rcu_sched]
root           9  0.0  0.0      0     0 ?        I    06:48   0:00 [rcu_bh]
```

1.3 To copying files to multiple nodes concurrently.

```
diksha@diksha:~/myansible$ ls
file1.txt file2.txt myhosts
diksha@diksha:~/myansible$ ansible all -m copy -a "src=/home/diksha/myansible/file1.txt dest=/var/tmp/"
-i myhosts

54.152.107.128 | CHANGED => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": true,
  "checksum": "da39a3ee5e6b4b0d3255bfe95601890afd80709",
  "dest": "/var/tmp/file1.txt",
  "gid": 1000,
  "group": "ubuntu",
  "md5sum": "d41d8cd98f00b204e9800998ecf8427e",
  "mode": "0664",
  "owner": "ubuntu",
  "size": 0,
  "src": "/home/ubuntu/.ansible/tmp/ansible-tmp-1584605116.42-135003062292017/source",
  "state": "file",
  "uid": 1000
}
```

```
diksha@diksha:~/myansible$ ansible all -m shell -a '/bin/bash -c "ls /var/tmp/;"' -i myhosts
52.55.210.105 | CHANGED | rc=0 >>
cloud-init
file1.txt
systemd-private-eb13941e345144febb3d8017468f7b23-systemd-resolved.service-VxdxIh
systemd-private-eb13941e345144febb3d8017468f7b23-systemd-timesyncd.service-p9fZpT
54.152.107.128 | CHANGED | rc=0 >>
cloud-init
file1.txt
systemd-private-4662bf3741e3434281d3645a77a03a7c-systemd-resolved.service-1D3sfD
systemd-private-4662bf3741e3434281d3645a77a03a7c-systemd-timesyncd.service-gGLNmd
```

1.4 To add and delete users.

```
diksha@diksha:~/myansible$ mkpasswd --method=sha-512
Password:
$6$XpcAmVzxS$F42bfoIiQK6if9k8ykmhpJ6wIEWxZwPrJA9HXugHp9T1gI8EU1aHrnh39AojKqpjS438xnqi83zJwuVNs
12I31
```

```
diksha@diksha:~/myansible$ ansible all -b -m user -a "name=diksha password=s$6$XpcAmVzxS$F42bfoIiQK6if9k8ykmhpJ6wIEWxZwPrJA9HXugHp9T1gI8EU1aHrnh39AojKqpjS438xnqi83zJwuVNs12I31" -i myhosts
[WARNING]: The input password appears not to have been hashed.
The 'password' argument must be encrypted for this module to work properly.
54.86.20.184 | CHANGED => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python3"
  },
  "changed": true,
  "comment": "",
  "create_home": true,
  "group": 1001,
  "home": "/home/dik*****ha",
  "name": "dik*****ha",
  "password": "NOT_LOGGING_PASSWORD",
  "shell": "/bin/*****h",
  "state": "present",
  "system": "VALUE_SPECIFIED_IN_NO_LOG_PARAMETER",
  "uid": 1001
}
```

2. Create nginx ansible-playbook and run the node, also check if nginx service and default page is running or not.

```
--
- hosts: all
  tasks:
    - name: ensure nginx is at the latest version
      apt: name=nginx state=latest
    - name: start nginx
      service:
        name: nginx
        state: started
```

Update

ansible all -i myhosts -m apt -a "upgrade=yes update_cache=yes" -b

The -b tells ansible to become root on the remote server using sudo

```
diksha@diksha:~/myansible$ ansible-playbook -b -i myhosts playbook.yml
PLAY [all] *****
TASK [Gathering Facts] *****
ok: [52.55.210.105]
TASK [ensure nginx is at the latest version] *****
changed: [52.55.210.105]
TASK [start nginx] *****
ok: [52.55.210.105]
TASK [apt-get update] *****
ok: [52.55.210.105]
PLAY RECAP *****
52.55.210.105 : ok=4  changed=1  unreachable=0  failed=0  skipped=0  rescued=0  ignored=0
```

3. Create the roles for the same playbook and use custom conf file and index.html.

```
- name: diksha-nginx
  hosts: all
  gather_facts: true
  become: yes
  roles:
    - nginx

~
"playbook.yml" 6L, 97C written
```

```
diksha@diksha:~/myansible$ ansible-galaxy init nginx/
- Role nginx/ was created successfully
```



```
server {
    listen 80;
    root /var/www/html;
    index index.html;
    server_name {{ ansible_hostname }};
}
~
~
"nginxconfig" 6L, 121C written
```

```
diksha@diksha:~/myansible/nginx/templates$ cd ../files/
diksha@diksha:~/myansible/nginx/files$ vim index.html
diksha@diksha:~/myansible/nginx/files$ cat index.html
This is my index page
diksha@diksha:~/myansible/nginx/files$
```

```
diksha@diksha:~/myansible$ tree nginx/
nginx/
├── defaults
│   └── main.yml
├── files
│   └── index.html
├── handlers
│   └── main.yml
├── meta
│   └── main.yml
├── README.md
├── tasks
│   └── main.yml
├── templates
│   └── nginxconfig
├── tests
│   ├── inventory
│   └── test.yml
└── vars
    └── main.yml
```

```

- - -
# tasks file for nginx/
- name: Updating
  apt:
    update_cache: true
    state: present
- name: installing nginx
  apt:
    name: nginx
    state: present
- name: copy the nginx config file and restart nginx
  template:
    src: nginxconfig
    dest: /etc/nginx/sites-available/default
    group: root
    owner: root
    mode: "0644"
    become: yes
- name: copy index file
  copy:
    src: index.html
    dest: /var/www/html/
    group: root
    owner: root
    mode: "0644"

- name: restart nginx
  command: service nginx reload

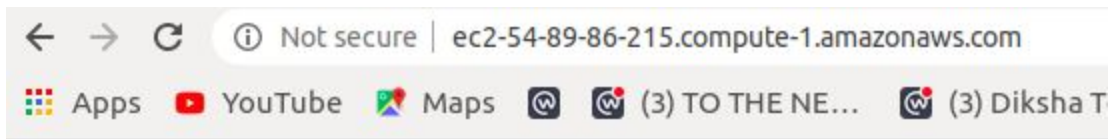
```

"nginx/tasks/main.yml" 29L, 629C

```

diksha@diksha:~/myansible$ ansible-playbook playbook.yml -i myhosts
PLAY [diksha-nginx] *****
TASK [Gathering Facts] *****
ok: [52.55.210.105]
TASK [nginx : Updating] *****
changed: [52.55.210.105]
TASK [nginx : installing nginx] *****
ok: [52.55.210.105]
TASK [nginx : copy the nginx config file and restart nginx] *****
changed: [52.55.210.105]
TASK [nginx : copy index file] *****
changed: [52.55.210.105]
TASK [nginx : restart nginx] *****
changed: [52.55.210.105]
PLAY RECAP *****
52.55.210.105 : ok=6 changed=4 unreachable=0 failed=0 skipped=0 rescued=0
ignored=0

```



This is my index page

4. Using loops, copy multiple files from ansible machine to remote node.

```
- name: Play book
  hosts: all
  gather_facts: false
  become: no
  tasks:
    - name: Using loops to copy multiple files
      copy:
        src: "{{ item }}"
        dest: /home/ubuntu
      loop:
        - hi.txt
        - hello.txt
        - whatsapp.txt
```

```
diksha@diksha:~/myansible$ ansible-playbook loops.yml -i myhosts --check

PLAY [Play book] *****
*

TASK [Using loops to copy multiple files] *****
*
changed: [54.89.86.215] => (item=hi.txt)
changed: [54.89.86.215] => (item=hello.txt)
changed: [54.89.86.215] => (item=whatsapp.txt)

PLAY RECAP *****
*
54.89.86.215 : ok=1    changed=1    unreachable=0    failed=0
skipped=0    rescued=0    ignored=0
```

```
diksha@diksha:~/myansible$ ansible all -m shell -a "ls -l" -i myhosts
54.89.86.215 | CHANGED | rc=0 >>
total 12
-rw-rw-r-- 1 ubuntu ubuntu 6 Mar 20 09:08 hello.txt
-rw-rw-r-- 1 ubuntu ubuntu 3 Mar 20 09:08 hi.txt
-rw-rw-r-- 1 ubuntu ubuntu 8 Mar 20 09:08 whatsapp.txt
diksha@diksha:~/myansible$
```

```
ubuntu@ip-172-31-124-87:~$ ls
hello.txt hi.txt whatsapp.txt
```

5. Write a playbook to demonstrate the precedence of default and var file, override them from CLI.

```
diksha@diksha:~/myansible$ ansible-galaxy init var_precedence
- Role var_precedence was created successfully
diksha@diksha:~/myansible$ ls
file1.txt  hello.txt  loops.yml  nginx      site.yml      whatsapp.txt
file2.txt  hi.txt     myhosts    playbook.yml  var_precedence
diksha@diksha:~/myansible$ tree var_precedence/
var_precedence/
├── defaults
│   └── main.yml
├── files
├── handlers
│   └── main.yml
├── meta
│   └── main.yml
├── README.md
├── tasks
│   └── main.yml
├── templates
├── tests
│   ├── inventory
│   └── test.yml
└── vars
    └── main.yml
```

```
diksha@diksha:~/myansible$ vim site.yml
diksha@diksha:~/myansible$ cat site.yml
- name: variable precedence
  hosts: all
  gather-facts: false
  roles:
    - var_precedence
```



```
diksha@diksha:~/myansible$ cat var_precedence/tasks/main.yml
---
- name: Check
  debug:
    msg: "port is {{ ports }}"
```

```
diksha@diksha:~/myansible$ cat var_precedence/vars/main.yml
---
# vars file for var_precedence
ports: "8080"
diksha@diksha:~/myansible$ cat var_precedence/defaults/main.yml
---
# defaults file for var_precedence
ports: "80"
diksha@diksha:~/myansible$
```

```
diksha@diksha:~/myansible$ ansible-playbook site.yml -i myhosts

PLAY [variable precedence] *****
*

TASK [var_precedence : Check] *****
*
ok: [54.89.86.215] => {
  "msg": "port is 8080"
}

PLAY RECAP *****
*
54.89.86.215      : ok=1    changed=0    unreachable=0    failed=0
skipped=0      rescued=0    ignored=0
```

```
diksha@diksha:~/myansible$ ansible-playbook site.yml -e "ports=78" --check

PLAY [variable precedence] *****
*

TASK [var_precedence : Check] *****
*
ok: [ubuntu@18.212.67.223] => {
  "msg": "port is 78"
}

PLAY RECAP *****
*
ubuntu@18.212.67.223 : ok=1    changed=0    unreachable=0    failed=0
skipped=0      rescued=0    ignored=0
```