



Testing in DevOps

DOu – Certified Tester in DevOps (CTD)
Exercise Solutions

HO-6.1.3(HO-0)

Exercise - Demonstrate how various of IaC tools can be orchestrated and working in a harmonized way

- Setup nginx server by using Ansible
 - Create 2 AWS Ubuntu 18.04 instances(t2.micro, 8GB HD)with all traffic (Refer to “Testing in DevOps_Exercise-Solutions_Pre-requisite_V0.1” slide-deck)
 - Launch them using putty
 - Setup ansible on master machine
 - Setup python on slave machine
 - Make connection between master & slave machine using SSH
 - Create & run yaml(nginx server setup) on master machine & validate nginx server will run on slave machine

HO-6.1.3(HO-0)

Exercise Solution - Demonstrate how various of IaC tools can be orchestrated and working in a harmonized way

- Create 2 ubuntu machines(t2 micro with security group all traffic) → Refer to Setup AWS Ubuntu machine section
- Launch them using putty → Refer to Setup AWS Ubuntu machine section

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Setup ansible on master machine

- **Launch below commands on terminal:**

- `sudo apt-get update`
- `sudo apt-get install software-properties-common`
- `sudo apt-add-repository ppa:ansible/ansible`
- `sudo apt-get update`
- `sudo apt-get install ansible`
- `ansible --version`

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Setup python on slave machine

- **Launch below commands on terminal:**

- `sudo apt-get update`
- `sudo apt-get install python`
- `python --version`



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Make connection between master & slave machine using SSH

- **Ansible master machine:**

- Launch below commands on terminal:

- `cd .ssh`
- `ssh-keygen`

- Press “Enter” 3 times

- `cat id_rsa.pub`

- Copy the encrypted string

- E.g. `ssh-rsa`

```
AAAAB3NzaC1yc2EAAAADAQABAAQBAQCWHWOPHWymWTKaFu7afqJAzdTX16o8
JcrOqgzW2mAYViLyMAO89usP/ffaoAQderOil/nP5A8BiHaRqHxFGUTDv1xhJPkDV/4
X90dG1R7tFq73cq4iUhZYWFJbWRkw3mrFBNw9C4Akafmr3DjlvVnSZ2pqunteZYwGs
1RF5iKgydOe7StiYLpi50iXeh5sCM58fAwZp1LLcl4gENx3JL2tjFcS3JCvdhH12+JDxVsGE
Sl1ww+5j96LRa2HS0KIXKALAM/cC9nQ8tX+6lUkz7A0TLKSQsVzeKazpHcFNRIpTVHKj
ZBMX8sEbfHQNVrSk9VstZlJiTgs7xkdcibcSybH ubuntu@ip-172-31-32-64
```

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Make connection between master & slave machine using SSH...

- **Ansible slave machine:**

- Launch below commands on terminal:
 - `cd .ssh`
 - `sudo nano authorized_keys`
- Paste the encrypted string that is copied from master machine & save the file(press ctrl+x , y, enter)

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Make connection between master & slave machine using SSH...

- **Ansible master machine:**

- Launch below commands on terminal:

- `ssh ubuntu@<aws slave machine ip address>`
- E.g. `ssh ubuntu@3.80.237.76`
- `exit`
- Note: logout message will be displayed on terminal
- `sudo nano /etc/ansible/hosts`

- File will be opened, scroll down the page and enter below info in the last & save the file:

- [production]
- `slave1 ansible_ssh_host=<aws slave machine ip address>`
- E.g. `slave1 ansible_ssh_host=3.80.237.76`

- Run the below commands:

- `ansible -m ping all`
- OR
- `ansible -m ping production`
- OR
- `ansible -m ping slave1`

- Output will be SUCCESS ping:pong

```
slave1 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python"
  },
  "changed": false,
  "ping": "pong"
}
```


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Setup .yaml(e.g. ansible.yaml) on master machine

- **Launch below command on terminal:**
 - Create ansible.yaml file by running below command
 - `sudo nano ansible.yaml`
 - Copy the yaml code and paste it in above file, save it
- Note: yaml file code is given at next slide with attached ansible.yaml file