



## System Provisioning and Configuration Module Lab

### **Executing Ad Hoc Commands**

Under the Guidance of: **Dr. Hitesh Kumar Sharma**

**Submitted by: Vibhav Khaneja**

**SAP: 500105662**

**Batch: DevOps-B1(N-H)**

**Roll No.: R2142220297**

# Lab Exercise 03

## Executing Ad Hoc Commands

**Objective:** To demonstrate ad hoc commands for quickly executing tasks on remote servers without writing full playbooks

**Tools required:** Ansible, Ubuntu OS

**Prerequisites:** None

Steps to be followed:

1. Generate SSH key pair on the main node
2. Copy the SSH key on the other two nodes
3. Update the host file with the host IP address
4. Establish connectivity between specified hosts and the Ansible server
5. Gather System Information Using Ad-Hoc Commands

### Step 1: Establish connectivity between specified hosts and the Ansible server

- 4.1 Run the following command to verify connectivity to all servers listed under the **webservers** group in your Ansible hosts file:

**ansible -m ping spcm**

```
[ec2-user@ip-172-31-3-184 ~]$ ansible -m ping spcm
[WARNING]: Platform linux on host localhost 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.
localhost | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python"
  },
  "changed": false,
  "ping": "pong"
}
[WARNING]: Platform linux on host 172.31.2.18 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.
172.31.2.18 | SUCCESS => {
  "ansible_facts": {
    "discovered_interpreter_python": "/usr/bin/python"
  },
  "changed": false,
  "ping": "pong"
}
[ec2-user@ip-172-31-3-184 ~]$
```

i-01aece664b34b6423 (ANSIBLE-SERVER)

PublicIPs: 15.203.86.113 PrivateIPs: 172.31.3.184

- 4.2 Use the following command to check the number of hosts in the host file:

**ansible all --list-hosts**

```
ping : pong
}
[ec2-user@ip-172-31-3-184 ~]$ ansible all --list-hosts
hosts (2):
  172.31.2.18
  localhost
[ec2-user@ip-172-31-3-184 ~]$
```

## Step 2: Gather System Information Using Ad Hoc Commands

- 5.1 Run the following command to obtain the uptime from all managed hosts using an ad hoc command:

**ansible all -m shell -a uptime**

```
[ec2-user@ip-172-31-3-184 ~]$ ansible all -m shell -a uptime
[WARNING]: Platform linux on host localhost 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.
localhost | CHANGED | rc=0 >>
19:56:06 up 58 min, 1 user, load average: 0.00, 0.00, 0.00
[WARNING]: Platform linux on host 172.31.2.18 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.
172.31.2.18 | CHANGED | rc=0 >>
19:56:06 up 58 min, 2 users, load average: 0.08, 0.02, 0.01
[ec2-user@ip-172-31-3-184 ~]$
```

- 5.2 Similarly, execute the below command to obtain detailed information about memory usage on all hosts:

**ansible all -m shell -a "free -m"**

```
[ec2-user@ip-172-31-3-184 ~]$ ansible all -m shell -a "free -m"
[WARNING]: Platform linux on host localhost 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.
localhost | CHANGED | rc=0 >>
      total        used        free      shared  buff/cache   available
Mem:      952         172         518           0         261         631
Swap:      0           0           0
[WARNING]: Platform linux on host 172.31.2.18 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.
172.31.2.18 | CHANGED | rc=0 >>
      total        used        free      shared  buff/cache   available
Mem:      952         92         622           0         237         718
Swap:      0           0           0
[ec2-user@ip-172-31-3-184 ~]$
```

You will see that Ansible logs in to each machine in turn and runs the uptime command, returning the current uptime output.

By following these steps, you have successfully demonstrated how to use ad hoc commands for quickly executing tasks on remote servers without the need for full playbooks.