

**CA-2**

# **BUILD AND RELEASE MANAGEMENT**

**B-Tech CSE (DevOps)**

Submitted by:

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**GitHub Link:** <https://github.com/nandanaShaji77/CA-2-BUILD-AND-RELEASE-MANAGEMENT.git>



# PART 1:

## 1.

```
environment.ini
1 [all:vars]
2 ansible_user=ec2-user
3 ansible_private_key_file=C:/Users/jitna/.ssh/ansibleJupiter.pem
4
5 [frontend_servers]
6 44.197.115.175
7
8 [utility_servers]
9 44.197.115.175
10
```

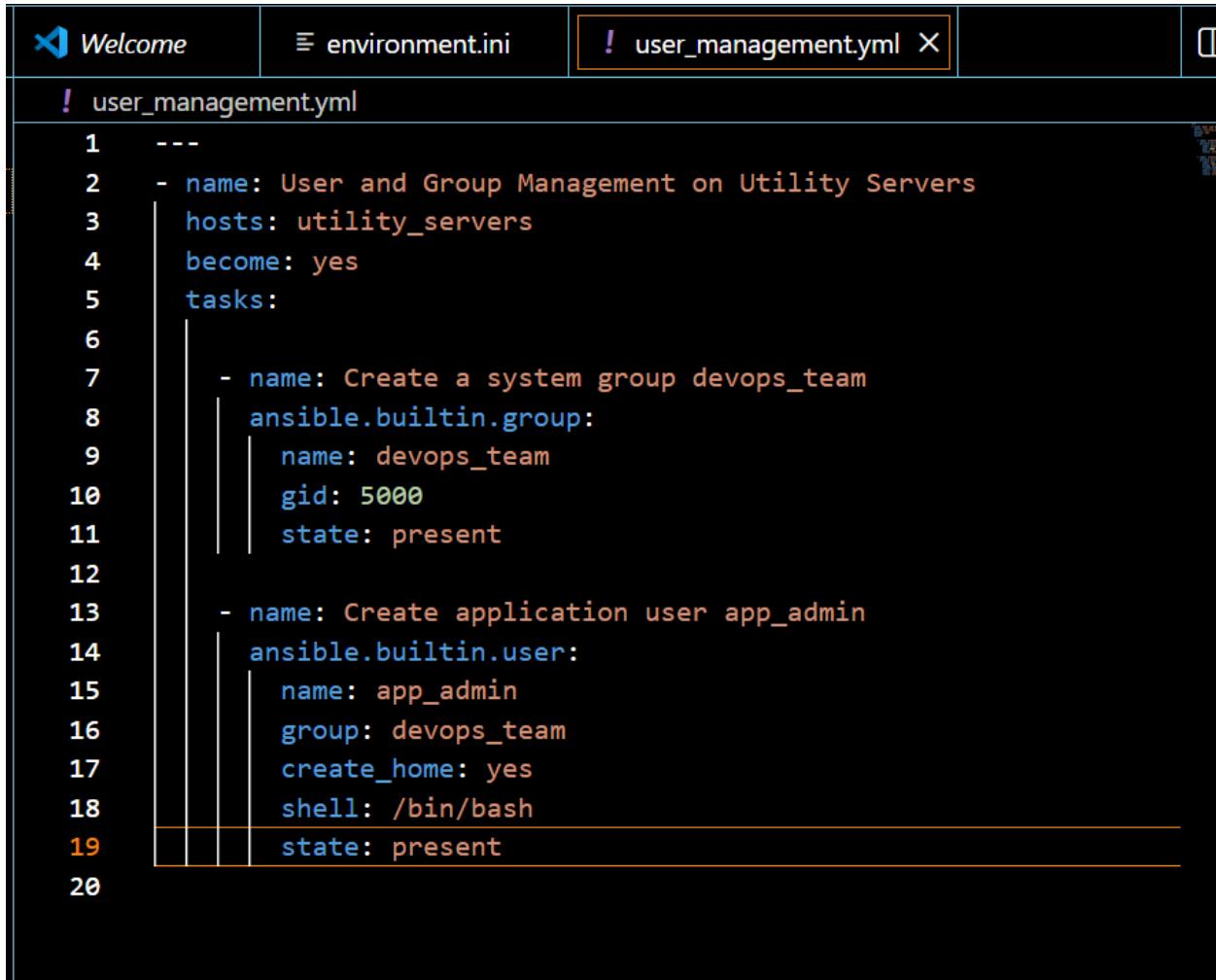
## 2.

```
jupiter@JupiterPC:/mnt/c/Users/jitna/CA2 Ansible$ ansible frontend_servers -i environment.ini -m ping
[WARNING]: Host '44.197.115.175' is using the discovered Python interpreter at '/usr/bin/python3.9', but future installation of another Python interpreter could cause a different interpreter to be discovered. See https://docs.ansible.com/ansible-core/2.19/reference_appendices/interpreter_discovery.html for more information.
44.197.115.175 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3.9"
    },
    "changed": false,
    "ping": "pong"
}
```

```
jupiter@JupiterPC:/mnt/c/Users/jitna/CA2 Ansible$ ansible utility_servers -i environment.ini -m ping
[WARNING]: Host '44.197.115.175' is using the discovered Python interpreter at '/usr/bin/python3.9', but future installation of another Python interpreter could cause a different interpreter to be discovered. See https://docs.ansible.com/ansible-core/2.19/reference_appendices/interpreter_discovery.html for more information.
44.197.115.175 | SUCCESS => {
    "ansible_facts": {
        "discovered_interpreter_python": "/usr/bin/python3.9"
    },
    "changed": false,
    "ping": "pong"
}
```

## PART 2:

### 1., 2.



```
! user_management.yml
1  ---
2  - name: User and Group Management on Utility Servers
3    hosts: utility_servers
4    become: yes
5    tasks:
6
7      - name: Create a system group devops_team
8        ansible.builtin.group:
9          name: devops_team
10         gid: 5000
11         state: present
12
13      - name: Create application user app_admin
14        ansible.builtin.user:
15          name: app_admin
16          group: devops_team
17          create_home: yes
18          shell: /bin/bash
19          state: present
20
```

```
jupiter@JupiterPC:/mnt/c/Users/jitna/CA2 Ansible$ ansible-playbook -i environment.ini user_management.yml
PLAY [User and Group Management on Utility Servers] ****
TASK [Gathering Facts] ****
[ERROR]: Task failed: Failed to connect to the host via ssh: no such identity: C:/Users/jitna/.ssh/jupiternandana-key: No such file or directory
ec2-user@34.204.194.33: Permission denied (publickey,gssapi-keyex,gssapi-with-mic).

fatal: [34.204.194.33]: UNREACHABLE! => {"changed": false, "msg": "Task failed: Failed to connect to the host via ssh: no such identity: C:/Users/jitna/.ssh/jupiternandana-key: No such file or directory\r\nec2-user@34.204.194.33: Permission denied (publickey,gssapi-keyex,gssapi-with-mic).", "unreachable": true}

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

### 3.

```
jupiter@JupiterPC:/mnt/c/Users/jitna/CA2 Ansible$ cat custom_vhost.conf
Listen 8080
<VirtualHost *:8080>
    DocumentRoot /var/www/html
    <Directory /var/www/html>
        AllowOverride All
        Require all granted
    </Directory>
</VirtualHost>
jupiter@JupiterPC:/mnt/c/Users/jitna/CA2 Ansible$ |
```

```
jupiter@JupiterPC:/mnt/c/Users/jitna/CA2 Ansible$ ansible-playbook -i environment.ini user_management.yml
PLAY [User and Group Management on Utility Servers] ****
TASK [Gathering Facts] ****
[WARNING]: Host '44.197.115.175' is using the discovered Python interpreter at '/usr/bin/python3.9', but future installation of another Python interpreter could cause a different interpreter to be discovered. See https://docs.ansible.com/ansible-core/2.19/reference_appendices/interpreter_discovery.html for more information.
ok: [44.197.115.175]

TASK [Create a system group devops_team] ****
changed: [44.197.115.175]

TASK [Create application user app_admin] ****
changed: [44.197.115.175]

PLAY RECAP ****
44.197.115.175 : ok=3    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0
jupiter@JupiterPC:/mnt/c/Users/jitna/CA2 Ansible$ |
```

## PART 3:

```
! Welcome    environment.ini    ! web_deployment.yml X    customv_host.conf    user_management.yml
! web_deployment.yml
1  ---
2  - name: Web Deployment on Frontend Servers
3  hosts: frontend_servers
4  become: yes
5
6  vars:
7      apache_pkg: apache2      # For Ubuntu
8      apache_service: apache2 # For Ubuntu
9      config_src: custom_vhost.conf
10     config_dest: /etc/apache2/conf-available/custom.conf
11
12 tasks:
13
14     - name: Install Apache web server
15       ansible.builtin.apt:
16           name: "{{ apache_pkg }}"
17           state: present
18           update_cache: yes
19
20     - name: Deploy custom Apache configuration
21       ansible.builtin.copy:
22           src: "{{ config_src }}"
23           dest: "{{ config_dest }}"
24           owner: root
25           group: root
26           mode: '0644'
27           notify: Restart Apache
28
29     - name: Ensure Apache service is started and enabled
30       ansible.builtin.service:
31           name: "{{ apache_service }}"
32           state: started
33           enabled: yes
34
35 handlers:
36     - name: Restart Apache
37       ansible.builtin.service:
38           name: "{{ apache_service }}"
39           state: restarted
40
```

```
customv_host.conf
1 Listen 8080
2 <VirtualHost *:8080>
3   DocumentRoot /var/www/html
4   <Directory /var/www/html>
5     AllowOverride All
6     Require all granted
7   </Directory>
8 </VirtualHost>
9 
```

```
jupiter@JupiterPC:/mnt/c/Users/jitna/CA2 Ansible$ ansible-playbook -i environment.ini web_deployment.yml
PLAY [Web Deployment on Frontend Servers] ****
TASK [Gathering Facts] ****
[WARNING]: Host '44.197.115.175' is using the discovered Python interpreter at '/usr/bin/python3.9', but future installation of another Python interpreter could cause a different interpreter to be discovered. See https://docs.ansible.com/ansible-core/2.19/reference_appendices/interpreter_discovery.html for more information.
ok: [44.197.115.175]

TASK [Install Apache web server] ****
[WARNING]: Updating cache and auto-installing missing dependency: python3-apt
[ERROR]: Task failed: Module failed: Error executing command: [Errno 2] No such file or directory: b'update'
Origin: /mnt/c/Users/jitna/CA2 Ansible/web_deployment.yml:14:7

12 tasks:
13
14   - name: Install Apache web server
     ^ column 7

fatal: [44.197.115.175]: FAILED! => {"changed": false, "cmd": "update", "msg": "Error executing command.", "rc": 2, "stderr": "", "stderr_lines": [], "stdout": "", "stdout_lines": []}

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