```yaml
---
- name: Setup Web Server Based on Linux Distribution
  hosts: all
  become: yes
  tasks:

    - name: Install Apache on Debian/Ubuntu
      apt:
        name: apache2
        state: present
        update_cache: yes
      when: ansible_facts['os_family'] == "Debian"

    - name: Install HTTPD on RedHat/CentOS
      yum:
        name: httpd
        state: present
      when: ansible_facts['os_family'] == "RedHat"

    - name: Validate Apache version (Debian)
      command: apache2 -v
      register: apache2_version
      when: ansible_facts['os_family'] == "Debian"

    - name: Validate HTTPD version (RedHat)
      command: httpd -v
      register: httpd_version
      when: ansible_facts['os_family'] == "RedHat"

    - name: Show Apache version on Debian
      debug:
        var: apache2_version.stdout
      when: apache2_version is defined
```

```yaml
- name: Show HTTPD version on RedHat
  debug:
    var: httpd_version.stdout
  when: httpd_version is defined


- name: Ensure destination web directory exists
  file:
    path: /var/www/html
    state: directory
    mode: '0755'


- name: Copy website content to remote host
  copy:
    src: ./website/
    dest: /var/www/html/
    owner: root
    group: root
    mode: '0644'
  notify: Restart Apache


- name: Start and enable Apache service on Ubuntu
  service:
    name: apache2
    state: started
    enabled: yes
  when: ansible_facts['os_family'] == "Debian"


- name: Start and enable HTTPD service on RedHat
  service:
    name: httpd
    state: started
    enabled: yes
  when: ansible_facts['os_family'] == "RedHat"
```

```yaml
handlers:

  - name: Restart Apache
    service:
      name: "{{ ansible_facts['os_family'] == 'Debian' |
ternary('apache2', 'httpd') }}"
      state: restarted
```

```
akash@master-vm:~/final-ansible/qus-5$ ansible-playbook -i hosts linux.yaml -bK
BECOME password:

PLAY [Setup Web Server Based on Linux Distribution] ****************************************************************************************

TASK [Gathering Facts] ****************************************************************************************
[WARNING]: Platform linux on host 192.168.153.131 is using the discovered Python interpreter at /usr/bin/python3.10, but future installation of another Python interpreter could change
the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [192.168.153.131]
[WARNING]: Platform linux on host 192.168.153.128 is using the discovered Python interpreter at /usr/bin/python3.10, but future installation of another Python interpreter could change
the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [192.168.153.128]
[WARNING]: Platform linux on host 192.168.153.133 is using the discovered Python interpreter at /usr/bin/python3.10, but future installation of another Python interpreter could change
the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [192.168.153.133]
[WARNING]: Platform linux on host 192.168.153.132 is using the discovered Python interpreter at /usr/bin/python3.10, but future installation of another Python interpreter could change
the meaning of that path. See https://docs.ansible.com/ansible-core/2.17/reference_appendices/interpreter_discovery.html for more information.
ok: [192.168.153.132]

TASK [Install Apache on Debian/Ubuntu] ****************************************************************************************
ok: [192.168.153.131]
ok: [192.168.153.128]
ok: [192.168.153.132]
ok: [192.168.153.133]

TASK [Install HTTPD on RedHat/CentOS] ****************************************************************************************
skipping: [192.168.153.128]
skipping: [192.168.153.131]
skipping: [192.168.153.132]
skipping: [192.168.153.133]

TASK [Validate Apache version (Debian)] ****************************************************************************************
changed: [192.168.153.128]
changed: [192.168.153.133]
changed: [192.168.153.132]
changed: [192.168.153.131]

TASK [Validate HTTPD version (RedHat)] ****************************************************************************************
skipping: [192.168.153.128]
skipping: [192.168.153.131]
skipping: [192.168.153.132]
skipping: [192.168.153.133]

TASK [Show Apache version on Debian] ****************************************************************************************
```

```
skipping: [192.168.153.132]
skipping: [192.168.153.133]

TASK [Validate Apache version (Debian)] ****************************************************************************************
changed: [192.168.153.128]
changed: [192.168.153.133]
changed: [192.168.153.132]
changed: [192.168.153.131]

TASK [Validate HTTPD version (RedHat)] ****************************************************************************************
skipping: [192.168.153.128]
skipping: [192.168.153.131]
skipping: [192.168.153.132]
skipping: [192.168.153.133]

TASK [Show Apache version on Debian] ****************************************************************************************
ok: [192.168.153.128] => {
    "apache2_version.stdout": "Server version: Apache/2.4.52 (Ubuntu)\nServer built:   2025-04-03T09:05:48"
}
ok: [192.168.153.131] => {
    "apache2_version.stdout": "Server version: Apache/2.4.52 (Ubuntu)\nServer built:   2025-04-03T09:05:48"
}
ok: [192.168.153.132] => {
    "apache2_version.stdout": "Server version: Apache/2.4.52 (Ubuntu)\nServer built:   2025-04-03T09:05:48"
}
ok: [192.168.153.133] => {
    "apache2_version.stdout": "Server version: Apache/2.4.52 (Ubuntu)\nServer built:   2025-04-03T09:05:48"
}

TASK [Show HTTPD version on RedHat] ****************************************************************************************
ok: [192.168.153.128] => {
    "httpd_version.stdout": "VARIABLE IS NOT DEFINED!"
}
ok: [192.168.153.131] => {
    "httpd_version.stdout": "VARIABLE IS NOT DEFINED!"
}
ok: [192.168.153.132] => {
    "httpd_version.stdout": "VARIABLE IS NOT DEFINED!"
}
ok: [192.168.153.133] => {
    "httpd_version.stdout": "VARIABLE IS NOT DEFINED!"
}

TASK [Ensure destination web directory exists] ****************************************************************************************
```

```
ok: [192.168.153.128] => {
    "httpd_version.stdout": "VARIABLE IS NOT DEFINED!"
}
ok: [192.168.153.131] => {
    "httpd_version.stdout": "VARIABLE IS NOT DEFINED!"
}
ok: [192.168.153.132] => {
    "httpd_version.stdout": "VARIABLE IS NOT DEFINED!"
}
ok: [192.168.153.133] => {
    "httpd_version.stdout": "VARIABLE IS NOT DEFINED!"
}

TASK [Ensure destination web directory exists] ****************************************************************************************
ok: [192.168.153.128]
ok: [192.168.153.132]
ok: [192.168.153.133]
ok: [192.168.153.131]

TASK [Copy website content to remote host] ****************************************************************************************
ok: [192.168.153.128]
ok: [192.168.153.133]
ok: [192.168.153.131]
ok: [192.168.153.132]

TASK [Start and enable Apache service on Ubuntu] ****************************************************************************************
ok: [192.168.153.133]
ok: [192.168.153.128]
ok: [192.168.153.131]
ok: [192.168.153.132]

TASK [Start and enable HTTPD service on RedHat] ****************************************************************************************
skipping: [192.168.153.128]
skipping: [192.168.153.131]
skipping: [192.168.153.132]
skipping: [192.168.153.133]

PLAY RECAP ****************************************************************************************
192.168.153.128            : ok=8    changed=1    unreachable=0    failed=0    skipped=3    rescued=0    ignored=0
192.168.153.131            : ok=8    changed=1    unreachable=0    failed=0    skipped=3    rescued=0    ignored=0
192.168.153.132            : ok=8    changed=1    unreachable=0    failed=0    skipped=3    rescued=0    ignored=0
192.168.153.133            : ok=8    changed=1    unreachable=0    failed=0    skipped=3    rescued=0    ignored=0

akash@master-vm:~/final-ansible/qus-5$
```