# 🟥 Understanding the when Condition in Your Playbook

The when condition is used to control **whether a task should run or not** based on a certain rule.
In your playbook, the when condition checks the **operating system** of the target machine.

The variable Ansible uses to detect the OS is:

ansible_distribution

This fact is automatically gathered from each host.

---

# 🟥 How the when Condition Works in Your Playbook

Each task has a line like this:

when: ansible_distribution == "Ubuntu"

or

when: ansible_distribution == "CentOS"

This means:

✔ **Run this task only if the server is running that OS.**

✔ **Skip this task if the OS is different.**

---

# 🟦 Detailed Explanation With Your Playbook

Below is a breakdown of each when condition exactly as used in your playbook.

---

## 🟩 1. Ubuntu-Specific Tasks

Example from your playbook:

when: ansible_distribution == "Ubuntu"

### 🔍 Description:

- Before the task runs, Ansible checks:

    - *"Is this server Ubuntu?"*

- If **YES**, task will run.

- If **NO**, task is skipped.

### ✔ These tasks run *only* on Ubuntu servers:

- Install apache2

- Start apache2

- Enable apache2

CentOS will ignore these tasks.

---

## 🟥 2. CentOS-Specific Tasks

Example from your playbook:

when: ansible_distribution == "CentOS"

## 🔍 Description:

- Before executing, Ansible checks:

  - *"Is this server CentOS?"*

- If **YES**, task runs.

- If **NO**, task is skipped.

## ✔ These tasks run *only* on CentOS servers:

- Install httpd

- Start httpd

- Enable httpd

Ubuntu will ignore these tasks.

---

# 🟦 Why the when Condition Is Critical

Without the when condition:

- Ubuntu would try to install **httpd** (does not exist → playbook fails)

- CentOS would try to install **apache2** (does not exist → playbook fails)

- Services would not match the OS

- Tasks would break on the wrong system

when protects each task and ensures:

✔ Correct package for each OS
✔ Correct service for each OS
✔ No errors on incompatible systems

---

# 🟦 In Plain English

The when condition is like saying:

**\*"If this server is Ubuntu, do these tasks.**

If this server is CentOS, do those tasks."\*\***

It acts like an **if-statement** for each task.

---