# Ansible section 1 Introduction

## What is Ansible?

It is a tool that is **open source**. We use it for **software provisioning, configuration management, and also used for application deployment.** It goes with both Linux systems. And it enables us infrastructure as a code.

It is use to automate on local machine and also on remote machine.

Let's say we have a Linux machine and we have to configure it. But what if we have hundreds of machines?

How will we configure then individually?

This is because of which we use **ansible.**

**We first create ansible server which is also known as ansible control node.**

We will install the ansible software onto that machine.

And then we will login to that machine as any other machine using ssh. And then we will make changes to the configuration file on that control node.

And then we push this change to all the other machines.

Ansible is made in **python** language.

Ansible is used for **provision systems.**

This means that we can build the systems from scratch.

Ansible is also used to **configure the system**.

This means once the operating system is installed all other configurations are done from ansible.

Ansible is also used to **deploy apps.**

If we have to install some application we can deploy them on many system using ansible.

We can also **manage systems and applications.**

This means if we want to push updates that can also be done using ansible.

# Terminologies in ansible:

1. **Control node or ansible server:** this is the server where the ansible application runs. This server provides the control over all the servers.
2. **Modules:** modules are meant to be executed on client side. Most of the modules are already prepared and we can find them on the ansible website.
3. **Tasks:** a task is a section to complete a single procedure. Single task can have multiple modules.
4. **Playbook:** automation file with step by step execution of multiple tasks.
5. **Yaml** this is the language and playbook is written in yaml.
6. **Inventory:** all the remote servers are listed in a file called host. And that host file is our inventory file.
7. **Tag:** a reference or alias of a specific tag.
8. **Variable:** a defined values which can be used respectively.
9. **Role:** this is use for splitting the playbook in a smaller groups. Roles let you automatically load related vars, files, tasks, handlers, and other ansible artifact's based on a known file structure. We can reuse them and share them with other users once we group our content in roles.