What is Ansible?

Ansible is an IT automation tool. It can configure systems, deploy software, and orchestrate more advanced IT tasks such as continuous deployments or zero downtime rolling updates.

Ansible’s main goals are simplicity and ease-of-use. It also has a strong focus on security and reliability, featuring a minimum of moving parts, usage of OpenSSH for transport (with other transports and pull modes as alternatives), and a language that is designed around auditability by humans–even those not familiar with the program.

[Installing Ansible on Ubuntu](https://docs.ansible.com/ansible/latest/installation_guide/intro_installation.html#id14):

To configure the PPA on your machine and install Ansible run these commands:

$ sudo apt update

$ sudo apt install software-properties-common

$ sudo apt-add-repository --yes --update ppa:ansible/ansible

$ sudo apt install ansible

Ansible Concepts:

**Control node:** the host on which you use Ansible to execute tasks on the managed nodes

**Managed node:** a host that is configured by the control node

**Host inventory:** a list of managed nodes

**Ad-hoc command:**a simple one-off task

**Playbook:** a set of repeatable tasks for more complex configurations

**Module:**code that performs a particular common task such as adding a user, installing a package, etc.

**Idempotency:** an operation is idempotent if the result of performing it once is exactly the same as the result of performing it repeatedly without any intervening actions

### 🡪Configuration file:

As we have just discovered, the default configuration file is /etc/ansible/ansible.cfg

You can modify this global configuration file or make a copy specific to a particular directory. The order in which a configuration file is located is as follows:

* ANSIBLE\_CONFIG (environment variable)
* ansible.cfg (per directory)
* ~/.ansible.cfg (home directory)
* /etc/ansible/ansible.cfg (global)

### Host inventory:

The default host inventory file is /etc/ansible/hosts but can be changed via the configuration file (as shown above) or by using the -i option on the ansible command. We will be using a simple static inventory file.