# Introduction to Ansible

Ansible has been the new generation tool for so called DevOps Engineers and System Administrators. Its Open Source and has a huge community to support. Ansbile is trending in automation activities be it Configuration Management, Provisioning Servers, Monitoring, Application Deployment, etc.

# Use cases of Ansible

**Configuration Management** - You are a Linux Admin of your company and are suppose to manage 1000 servers. Ansible is for you. Sitting at Ansible Server, you can mange the configuration of 1000 beats in no time.

**Installing Packages/softwares** - Want to install vim editors to your thousands of linux machines, use ansible and do it all at once.

**Cloud Operations** - Ansible is cloud ready and can help you automate your daily routines on major cloud providers like AWS, GCP, Ms Azure, etc.

**Provision Server** - Want to provision servers in huge numbers. Use Ansible.

**Shutdown Machines/Services** - Ansible can do it easily. It can even start them. Why not schedule Ansible to run at non-peak hours and save costs and energy.

There are many more use cases where Ansible can come handy and make you look smart among your peers.

# Architecture Overview

Ansible is written in Python Programming and the active community has made it a production grade tool. Ansible works in Client-Server model and below diagram shows the communication -

**Ansible Server/Master** This is a system where ansible is installed. It can also be termed as Ansible node. System Administrator will configure this node and will act sitting on this server.

**Hosts** Hosts are the systems/servers which are to be managed by ansible server. They can be any hosts regardless of Operating systems. Generally they are linux flavoured servers.

**Communication Medium** Ansible uses SSH protocol to communicate wits its hosts. Ansible must be provided with SSH access to the hosts for making the management work.

# How does it work ?

Ansible uses SSH protocol to communicate and manage hosts. List of hosts to be managed are maintained in a plain text file named as inventory file. Ansible picks up the host from the file, do an SSH, executes tasks and return back for next host. So simple !

# Benefits of using Ansible

Central control and view over complete infrastructure

Do not need any software/agent to be installed in the target host. Just give a SSH connection

Huge amount of support from community, with various modules for a variety of tasks.

Build on python which is a in-built package with Linux Easy to understand semantics using YAML language.