ANSIBLE

1. **Why Ansible? Whats makes ansible more powerful than tools like Chef & Puppet?**

All the 3 are configuration management tools. They are all used for automating configurations. E.g,lets say you have 15 machines (15 nodes), and you need to install several software in them lets say you need to install java, you need to install maven, you need to install Git, etc in all the 15 machines. Lets also say you need to copy some files in all of them, or install a certain artifact in all of them, Instead of manually logging into each machine and installing your apps in each of them, you can configure an installation and deploy in all the 15 machines at once.

Ansible is more powerful than the other two because:

**-Ansible is not only for configuration management; you can do a whole lot of other things**:

It has modules for all the tasks you need to carry out. The modules include:

* Copy module -Fetch module
* -yum module -Shell Modul
* -Cloud modules for creating cloud resources e.g ,S3 & EC2 instances
* -apt module -Template module
* -user- for creating users -Command module

-**Ansible has a PUSH-based mechanism**; for example, if you have a host that needs to serve 15 nodes. You obtain all the information about the 15 nodes and store then in the host file. Once you write your tasks in the playbook, you can SSH to all the client nodes (push the tasks to the nodes all at once).. For Chef \* Puppet, the node (clients) have to make a pull request to the host, asking for a particular thing they need, then the host supplies it.

- Also, if you need to add a new node in Chef & Puppet, you need to do a lot of configurations in both the nodes and the host. In Ansible, you don’t need to do a lot, you just need to feed the information of the new node in the hosts file then SSH into it.

- **Ansible is written in Python**, so it is faster than Chef & Puppet

2. **What is dynamic inventory in ansible? What is Static inventory?**

Static inventory file is a plain text file containing a list of managed hosts or remote node whose IP addresses remain constant, while in the dynamic host file, the IP addresses keep changing as new nodes are added, and some are killed. For example, if you have an auto scaling group of EC2 instances, whose IP addresses keep changing. In this case, we need to have a python script, which will communicate with the cloud service that keeps changing, get their APIs, and use it to generate the dynamic host file, for the host server to manage the changing Ips of the nodes. This way, ansible can read and execute the dynamic host file.

3.**Lets say I have both ubuntu and centos machines as nodes, and I want to install application tree using the same playbook, how would you approach this scenario**?

To install an application on ubuntu, you use the apt module, while to install on centos, use the yum module. You can use variables to specify what to do and at what point in your playbook.

What is ansible galaxy?

In simple terms, ansible galaxy is like a repository where users can share roles, and command line tools for creating, managing or installing roles

**What are adhoc commands?**

These are simple commands that can be run individually to perform quick functions ( you need immediate execution pf the task and the response i.e, you don’t need to write them in the playbook