What is ansible?

1. Ansible is a configuration management, Deployment, Orachestration tool.
2. As well as a tool in developing IaaC.
3. [Ansible](https://www.ansible.com/products/engine) is a complete automation solution for your IT environment. You can use Ansible to automate Linux and Windows server configuration, orchestrate service provisioning, deploy cloud environments, and even configure your network devices.

What is IaaC?

IaaC - Infrastructure as a code.

Benefits of Ansible?

1. Simple
2. Agentless
3. Powerful
4. Efficient
5. Extensible with Modules written in any programming language.
6. Modules can be created in any programming language.
7. maintains consistency
8. maintains configuration management.
9. Ansible is a push-based configuration management tool.
10. Useful in automating infrastructure.

What are the requirements for Ansible?

1. Python
2. Ansible uses the python framework and needs the python framework for its functioning.

----------- Architecture---------------

What are the components of Ansible Architecture?

1. Ansible controller
2. Ansible nodes
3. Ansible config
4. Inventory
5. Modules
6. Playbook

What is an Ansible controller?

* Controller is the location where Ansible is installed. The ansible from the controller machine is used to manage the configuration of nodes.

Can you install Ansible controllers on Windows Machine? Why?

* No.

Why?

* A Python framework is needed for Ansible.

What are nodes?

* Nodes are the servers, which get configured with the help of a controller machine.

What is Ansible Config?

* File where global settings are stored for Ansible.
* Ansible config file is the global file for ansible, where the location of ansible components are configured

What is inventory in Ansible?

* Inventory is the location where we list and group our servers.

What is an Inventory file?

* The Ansible inventory file defines the hosts and groups of hosts upon which commands, modules, and tasks in a playbook operate.
* The file can be in one of many formats depending on your Ansible environment and plugins
* The inventory file can list individual hosts or user-defined groups of hosts

What is the default location of an inventory file?

The default location for the inventory file is /etc/ansible/hosts

### /etc/ansible/hosts

What is the format of hosts file ( /etc/ansible/hosts)

The following INI-formatted

What are modules in Ansible?

1. Modules are the command center of Ansible.
2. Modules only perform tasks on remote machines.
3. Ansible [modules](https://docs.ansible.com/ansible/latest/collections/index.html#list-of-collections) abstract actions on your system so you don't need to worry about implementation details. You simply describe the desired state, and Ansible ensures the target system matches it.

What is the playbook in Ansible?

* Playbooks are YAML file with extension \*.yml
* Playbooks are the code which connect intentory and module

In which language Playbooks are written?

* Playbooks are written in YAML language.

What is YAML?

* Yet Another Markup Language

How does an Ansible Controller communicate with Ansible Nodes?

* SSH (Public Private key sharing)

What sort of methodology Ansible uses?

* Ansible uses Push methodology

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What are the benefits of Playbooks?

1. Playbooks are written in YAML language
2. Can declare configurations
3. Orchestrate manual ordered process
4. Can launch task synchronously or asynchronously

Where can you use ansible?

1. Provisioning
2. Configuration management
3. Application deployment
4. Security & compliance
5. Orchestration

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Explain Ansible Architecture?

1. Inventory
2. Playbooks
   1. Modules
   2. APIs
   3. Plugins