⭐ A Game-Changer in Automation ⭐

ANSIBLE

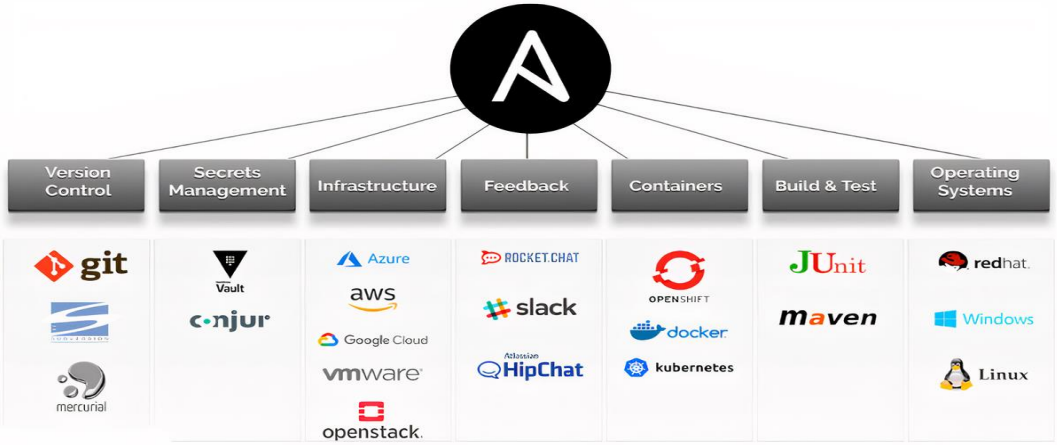
Ansible is an open-source automation toolset that provides simple yet powerful capabilities for automation IT infrastructure, application deployment, & various other tasks.

Agentless architecture:

One of the defining features of Ansible is its agentless architecture. This means that it doesn't require any additional software to be installed on the managed nodes.

Idempotent execution:

Ansible ensures idempotent execution, meaning that running the same playbook multiple times produces the same result.



🌟 Solving Industry challenges with Ansible 🌟

1.Healthcare Industry:

Ansible keeps patient information safe by automatically setting up security measures and checking for any issues, ensuring that hospitals and healthcare providers comply with privacy laws.

2.Manufacturing sector:

Ansible makes factories smarter by handling tasks like managing machines and scheduling maintenance, which means less downtime and better quality products.

3.Retail Industry:

Automating the process of checking stock levels in inventory and placing orders, ensuring that shelves stay stocked with the items customers want.

4.Education sector:

Automating tasks such as internet connection setup & security maintenance, ensuring seamless access to online resources for students and teachers.

5.Transportation management:

Ansible helps transportation companies keep their vehicles running smoothly by automatically checking for any problems and scheduling maintenance, reducing breakdowns and keeping things moving

6.Hotels:

Ansible makes it easier for hotels to provide a great experience for their guests by automating tasks like check-in and room service requests, ensuring that guests feel welcomed and taken care of.

7.Entertainment Industries:

Ansible makes it easier for media companies to create and distribute content by automating tasks like editing and publishing videos, ensuring that viewers get the content they want when they want it.

8.Citizen services:

Ansible helps government agencies serve their citizens better by automating tasks like processing permits and renewing licenses, making it easier for people to interact with their government.

Automating Infrastucture:

Ansible automates setting up and configuring infrastructure quickly and consistently, reducing errors.

Application deployment & CI /CD :

Ansible automates deploying applications, making it faster and more reliable.

Configuration management:

Ansible helps keep system configurations consistent and compliant with regulations.

Scaling & Hybrid Cloud Management:

Ansible simplifies managing both on-premises and cloud infrastructure, scaling resources as needed.

Benefits:

Ansible automates content delivery workflows, speeding up production and reducing costs.

💥 Many companies across various industries use Ansible 💥

NetFlix:

Netflix uses Ansible for configuration management and application deployment. Ansible helps them manage their vast infrastructure efficiently and roll out updates seamlessly across their systems.

RedHat:

Being the company behind Ansible, Red Hat extensively uses Ansible for various purposes, including managing their own IT infrastructure, automating software deployments, and facilitating DevOps practices.

Atlassian:

Atlassian, the company behind popular tools like Jira and Confluence, uses Ansible for automating infrastructure provisioning, configuration management, and deployment processes, enabling them to scale their services.

NASA:

Ansible helps them ensure consistency, reliability, and security in their operations.

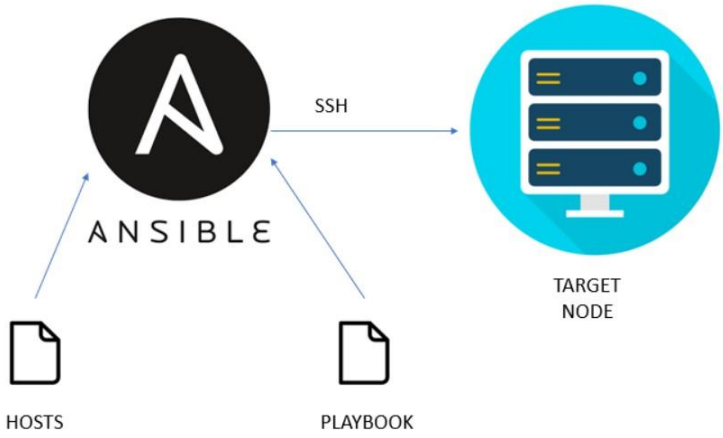
Coca-Cola:

Ansible helps them streamline their operations and maintain consistency across their systems.

Pinterest:

Ansible enables them to deploy updates quickly and maintain a reliable platform for their users.

❄️ Working structure of Ansible ❄️



Control Node:

The control node is where Ansible is installed and from where automation tasks are initiated, playbooks, manage inventory, and execute tasks are done in control node.

Inventory:

The inventory file lists all the managed nodes that Ansible will interact with.

Playbook:

Playbooks are YAML files that describe a set of tasks to be executed on the managed nodes. Playbook consists Tasks which performed on managed nodes.

Modules:

Ansible comes with a vast collection of built-in modules for performing various tasks.

Tasks:

Tasks are the individual actions performed by Ansible on the managed nodes. Tasks are idempotent, meaning they can be run multiple times without changing the system's state if the desired state is already achieved.

Handlers:

Handlers are special tasks triggered by other tasks in a playbook. They are used to perform actions like restarting a service or reloading configuration files only when necessary, based on changes made by other tasks.

Facts:

Ansible gathers information about managed nodes, such as IP addresses, operating system details, and installed software, through facts. Gathering facts auto run while run playbook.

💫 Overview of Ansible Versions and Components:

1. Ansible-core.
2. Ansible Tower.
3. Ansible Galaxy.