12/2/2020

Use-Case of Ansible in Amazon AWS

Akshay Anil

AKSHAYANIL1080.GITHUB.IO/MYWEBSITE/

Why Ansible?

Over the past decades before the discovery of ansible, automation was used extensively in the industry.
 so, what was the urge of getting a new automation software?
Earlier, automation was based on the imperative approach, which holds on the concept of determining "WHAT TO DO" and " HOW TO DO"
Ansible, in the contrast, follows a declarative approach, where the programmer only needs to specify "WHAT TO DO" and how to do is automatically figured by the ansible.
 it maintains the inventory of all hosts IP, which belongs to the TARGET/MANAGED node. And the system which configures all the hosts is called the CONTROL node.
It gathers all the information about the target node while executing the GATHERING TASKS process while running a playbook. All the information is stored under a variable "ansible_facts".

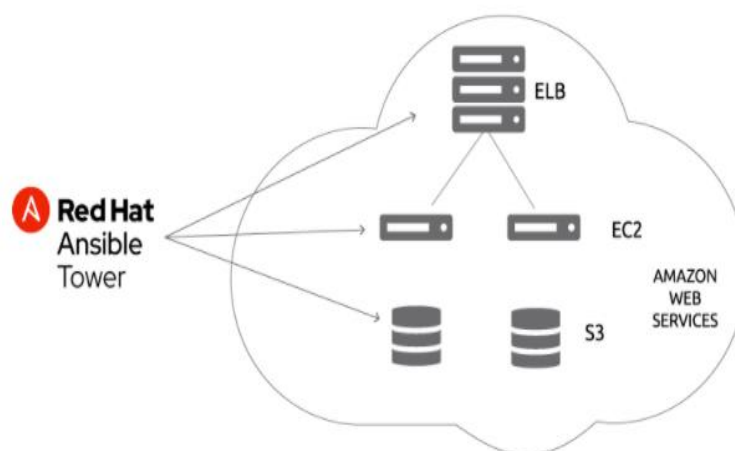## Ansible automation has two ways:

Adhoc: it is the manual way of using ansible by typing the command for every step
Playbook: automation way of using ansible, where we write some code and the set of code is a playbook and is stored in .yml

USE CASE OF ANSIBLE IN AMAZON:

One of the most used services for cloud computing along the globe is AWS.

How AWS is using the ansible?

Ansible clarity and the power of AWS

Using Ansible to automate your applications in AWS greatly influences the possibilities of making a cloud service the most successful one.

It clearly provides effective solutions for the following problems and scenarios.

1. How can we control cloud deployments?

2. How does devops work in the cloud?

3. Will my deployments be secure?

4. How can we migrate existing apps to the cloud?

All the answer of these questions lies within the reach of Ansible.

MANAGING CLOUD WITH ANSIBLE.

Deploying an application (WebApp) is much more than a collection of servers in someone else's data center.We now have the access to various types of services to increase its efficiency the most. Ansible also has over 1,300+ additional modules to help you manage every aspect of your Linux, Windows, UNIX, network infrastructure, and applications - regardless of where they're deployed. Ansible automation can help you manage your AWS environment like a fleet of services instead of a collection of servers.

Some of the commonly used services where ansible support AWS capabilities are:

AMI Management
Autoscaling Groups
CloudFormation
CloudTrail
CloudWatch
DynamoDB
ElastiCache
Elastic Block Store (EBS)
Elastic Cloud Compute (EC2)
Elastic IPs (EIP)
Elastic Load Balancers (ELB)
Identity Access Manager (IAM)
Kinesis
Lambda
Relational Database Service
Route53
Security Groups
Security Token Service

Simple Storage Service (S3)
Virtual Private Cloud (VPC)

Besides, it grants some benefit like:

1. Cloud control with dynamic Inventory:

With Red Hat® Ansible® Tower's cloud inventory synchronization, you can know exactly what AWS instances you have no matter how they were launched. Simply enter your AWS credentials and your entire AWS infrastructure can be made available as resources to use in your Ansible automation jobs.

2. Migration made easy

With Ansible, you can use the same simple playbook language to manage your infrastructure and deploy your application. Use Ansible to define your application locally.

3. Securely and Safely Automation with no latency.

Ansible Tower delivers with its extensive set of role-based access controls that ensures users will only have access to the AWS resources (networks, systems, security groups, etc.) that they require for their job. Plus, Ansible Tower encrypts credentials such as AWS and SSH keys so that you can delegate simple automation jobs to junior employees without giving out the keys.