INFRASTRUCTURE AUTOMATION USING ANSIBLE

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OUTLINE

- Explain what is infrastructure automation within Devops
- What is Ansible and why we use it in automation.
- Present the steps required to automate infrastruction using Ansible.

INFRASTRUCTURE AUTOMATION

- Infrastructure automation is the use of technology that performs tasks with reduced human assistance in order to control the hardware, software, networking components, operating system (OS), and data storage components used to deliver information technology services and solutions

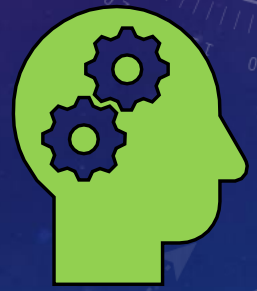
WHY INFRASTRUCTURE AUTOMATION

Lower Costs

Faster Updates

Efficient Workflows

Improved Collaboration



Better Reliability

INFRASTRUCTURE AS CODE

- Infrastructure as code (IaC) is the process of managing and provisioning computer data centers through machine-readable definition files, rather than physical hardware configuration or interactive configuration tools

WHAT IS ANSIBLE

Automatically deploy applications on various environment

Manage configuration

Automate IT professtional tasks

WHY ANSIBLE?

01

No Agent

As long as the box can be ssh'd into and it has python, it can be configured with Ansible.

02

Idempotent

You only do things if they are needed and that things are repeatable without side effects.

03

Tiny Learning Curve

Ansible is quite easy to learn. It doesn't require any extra knowledge.

KEY ANSIBLE COMPONENTS

Ansible Module – are the scripts used to connect to the nodes through SSH.

Ansible tasks – Executeable Ansible task

Ansible inventory – contains list of hosts to execute Ansible tasks

Ansible play – conatins mapping between groups of hosts and tasks to perform

Ansible playbook – File containing executable Ansible plays over the inventory

EXAMPLE OF ANSIBLE INVENTORY FILE

```
---
[webservers]
www1.example.com
www2.example.com

[dbservers]
db0.example.com
db1.example.com
```

PLAYBOOK EXAMPLE

```
---
- hosts: webservers
  serial: 5 # update 5 machines at a time
  roles:
  - common
  - webapp

- hosts: content_servers
  roles:
  - common
  - content
```

THANKS FOR ATTENTION!

QUESTIONS