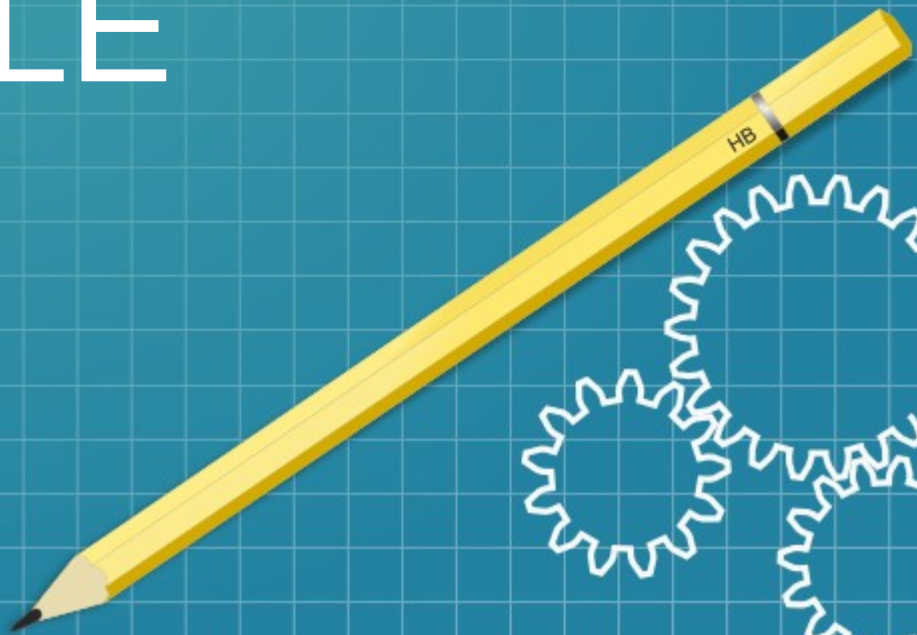
CONFIGURATION MANAGEMENT USING ANSIBLE



What is configuration management tool ?

- Configuration management tool is something which helps the user to perform any configurations like installing packages, software dependencies, deploying new application versions either be in local system or in remote servers.
- We can either have shell/python/JS/golang scripts written to do configurations as well.

Types Of Configuration Management Tools

- Push Based Configuration Management Tools
  - Main server pushes the configuration to the servers, best tool to use if all your systems are online and you need to push changes to all the servers
  - Examples: Ansible, Saltstack, etc...
- Pull Based Configuration Management Tools
  - An agent installed on the servers runs periodically to pull the latest definitions from a central repository and apply them to the server, helpful when we have offline systems that rarely connect to internet or network
  - Examples: Chef, puppet, etc...

Comparision between configuration management tools.

METRICS	PUPPET	CHEF	ANSIBLE	SALT
LANGUAGE	PUPPET DSL	RUBY	PYTHON	PYTHON
SCALABILITY	HIGHLY SCALABLE	HIGHLY SCALABLE	HIGHLY SCALABLE	HIGHLY SCALABLE
CLOUD SUPPORT	ALL	ALL	ALL	ALL
LICENSE	APACHE LICENSE V2	APACHE LICENSE V2	GNU PUBLIC LICENSE	APACHE LICENSE V2
MANAGEMENT	HARD	HARD	EASY	HARD
ARCHITECTURE	CLIENT/SERVER	CLIENT/SERVER	CLIENT	CLIENT/SERVER
PUSH/PULL MECHANISM	PULL	PULL	PUSH	PUSH

Why Choose Ansible as Configuration management tool?

- It is agentless.
- It used python2.7 which is default in any operating system.
- No need to maintain any intermediate server for pushing confgurations.
- Simple yaml syntax.
- Open Source tool.

Problems with traditional approah

- Configuring ten thousand servers for hackathon with custom software and dependencies on fresh servers, how many IT staff is required.
- System/Server OS patching for security and performance.
- Deploying and scaling the applications on need.
- Manual mistakes by humans in software installations.

How using Ansible Solves major configuration and operations problems ?

- Problem 1: Configuring ten thousand servers for hackathon with custom software and dependencies on fresh servers, how many IT staff is required.
  - Detail down the steps to install the custom software and dependencies and have an ansible playbook created via jenkins or centralized server.
  - IT Staff required = 1 or no IT staff required.

How using Ansible Solves major configuration and operations problems ?

- Problem 2: System/Server OS patching for security and performance.
  - Take the patch information, create a script and have criteria for applying patch
  - Create an ansible role and apply the patch via jenkins or centralized server.
  - IT Staff required = 1 or no IT staff required.

How using Ansible Solves major configuration and operations problems ?

- Problem 3: Deploying and scaling the applications on need.
  - Analize the load, predict the usage and have webhooks triggered which will run th playbooks and scale/deploy your applications.
  - Write ansible playbooks/roles and let it do the job for you.
  - IT Staff required = 1 or no IT staff required.

How using Ansible Solves major configuration and operations problems ?

- Problem 4: Manual mistakes by humans in software installations.
  - Since it is the same scripts which is going to run all the time, if it works one time, it’ll work all the time and we won’t miss out on anything possible.
  - IT Staff required = 1 or no IT staff required.

Configuration Management - Anisble

LIVE DEMO

- Install Basic Packages and dependencies for Linux servers.
- Configure Apache Web browser and deploy website in ubuntu server.

About Me

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