Ansible Advanced

Introduction(1)

- Ansible for automating repetitive tasks
- Use cases: setting up infrastructure(public/private)
- only running on linux, but can have windows as targets

Web Application(2)

- no really useful information here

File Separation(3)

- separate inventory in host_vars directory with yaml files
- group variables go in group_vars directory
- Include Statements to separate playbooks

Roles(4)

- recommended way to organize playbooks
- creating a role with ansible-galaxy initiates folder structure etc.
- roles can be shared/downloaded with ansible-galaxy

Asynchronous Actions(5)

- normally ssh connection is alive as long as the command is executed
- asynchronous tasks don't keep ssh alive the full time
  - async: how long to run a task
  - poll: how often to check
    - run tasks in parallel with poll=0
  - register: to register task result to a variables
  - async-status model to check status of a task

Strategy(6)

- defines how playbook is executed
- linear(default): one task after another is executed parallel on servers
- free: all tasks are run independent on all servers
- batch: linear strategy, but you can specify how many servers are processed at a time
  - default is 5 at a time
- custom strategies can be used too

Error Handling(7)

- default: an error exits playbook, but will complete on other servers
- any_errors_fatal: true → exits all when one fails
- ignore_errors: can be set on tasks
- failed_when: fial playbook when error condition is met
  - use regeister to get command output

Templating – Jinja2(8)

- {{ <variable> | filter }} to insert variables with filters
- https://jinja.palletsprojects.com/en/2.11.x/
- https://docs.ansible.com/ansible/latest/user_guide/playbooks_templating.html

Lookups(9)

- file lookup with lookup plugin
- used for storing configurations etc.

Vault(10)

- storing data in encrypted format
- ansible-vault encrypt <inventoryfile>
- use option ask-vault-pass when executing the play with encrypted inventory
  - or pass vault password in with vault-password-file
  - or pass python script in to get password from secure location

Dynamix Inventory(11)

- dynamic inventory is retrieved programmatically when playbook is executed
  - using a python script to retrieve the inventory details

Custom Modules(12)

- create your own modules and use them in playbooks
  - typically python script placed under modules or a library directory
- documentation for module with ansible-doc debug
- https://github.com/mmumshad/ansible-playable to easily create custom modules

Plugins(13)

- you can write own plugins like jinja2 filters too
- callback plugins for ansible task outputs