Who Am I ?

- Free and Open Source Software Evangelist

- Ansible Core team member

- Maintainer and Community team lead for Ansible VMware

  workspace

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- A.k.a. Mr. VMware

Agenda

- A brief introduction to Ansible

- Automating VMware infrastructure

- Demo

- Qn'A

Introduction to Ansible

- Ansible is a simple automation language that can perfectly describe an IT application infrastructure in Ansible Playbooks.

- It's an automation engine that runs Ansible Playbooks.

- Ansible Tower is an enterprise framework for controlling, securing, and managing your Ansible automation with a RESTful API and UI.
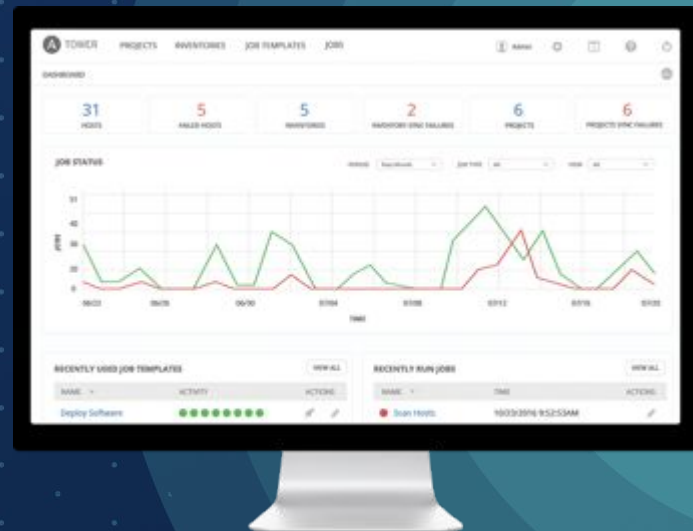
Automate VMware

Current state of VMware Automation

- Modules written on top of official Python SDK - "PyVmomi"
- Currently, 100+ modules are present in the official Ansible repo (September 2019) - https://goo.gl/BP5236
- Modules can manage day 1 as well as day 2 activities related to VMware objects -
  - Datacenter
  - Clusters
  - Virtual Machines
  - Clusters
  - Networking
  - Datastores etc.,

Accelerated Automation

- VMware 6.* onwards introduced REST API interface for VMware product line
- We can now automate VMware using
  - vSphere Automation SDK for Python
  - Ansible URI module

Introducing VMware HTTPAPI plugin

- Introduced in latest Ansible 2.10 devel branch

- Based upon Ansible HTTP API connection plugin architecture and VMware REST APIs

- Uses existing connection to VMware rather than creating new connection for each task, thus faster than existing VMware modules

- Can be used with existing VMware (Pyvmomi and vSphere Automation SDK based) modules

- Takes advantages of all VMware REST API, making module development aligned to VMware REST API strategy

- Works out-of-the-box, no dependency on any 3rd party libraries

Why VMware HTTPAPI plugin

- Ansible provides connection plugins to interact with a remote device's HTTP-based API and execute tasks on the device.
- HTTPAPI Plugin provides persistent connection
  - No need to provide vCenter hostname, username and password for each task
  - No need to authenticate or authorize user for each task
- Will help in
  - Normalizing VMware modules development
  - Standardization of parameter across VMware modules
  - Performance
  - Decrease dependency on vmware_guest module

Demo

- Create a datacenter in vCenter using

    - Pyvmomi

    - vSphere Automation SDK for Python

    - Ansible URI module

    - Ansible VMware HTTPAPI plugin

Future of VMware Space in Ansible

1. Move all VMware modules and plugins in VMware Collection

2. Develop modules based upon REST API and HTTPAPI Plugin

3. Try to incorporate all VMware product lines under HTTPAPI plugin
   architecture which provides REST API

4. Create documentation and scenario guides

5. Develop test environment for stable user interface

6. One Feature One module

Q n' A