ANSIBLE

Writing Ansible module for fun and profit

Ganesh B. Nalawade
PSE, Ansible Engineering
Github/IRC: ganeshrn

Abhijeet Kasurde
SSE, Ansible Engineering
Github/IRC: akasurde

redhat

Agenda

- Setting up dev environment (workshop)
- Ansible overview
- Deep dive with Ansible module
- Develop hello world module (workshop)
- Develop your module-1 (remote execution with module debugging)
- Develop your module-2 (local execution with connection=local)
- Develop your module-3 (local execution with connection=httpapi)

redhat.

About me - Ganesh

* Principal Software Engineer at Ansible by Red Hat

* Work primarily as upstream developer in Ansible Networking

* Worked extensively on Network management plane developing software for on/box automation and programmability infra.

* Co Organiser for Ansible meetup group in Pune

redhat.

About me - Abhijeet

- Free and Open Source software evangelist

- Senior Software Engineer at Ansible by Red Hat

- Works primarily as maintainer for Ansible VMware and cloud

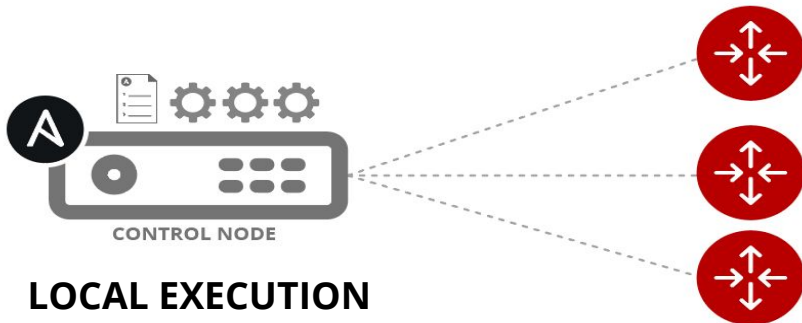 related modules

- Co-host for Ansible Pune meetup group

redhat.

Setting up dev environment

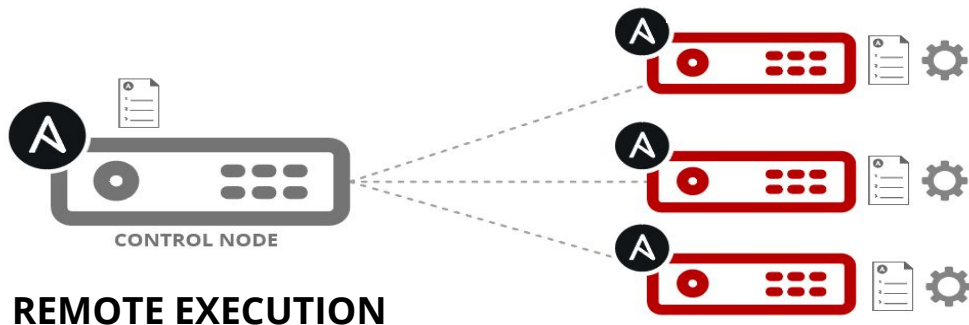https://github.com/ganeshrn/ansible_module_development/tree/master/1.1-setup-dev-env

Ansible Overview
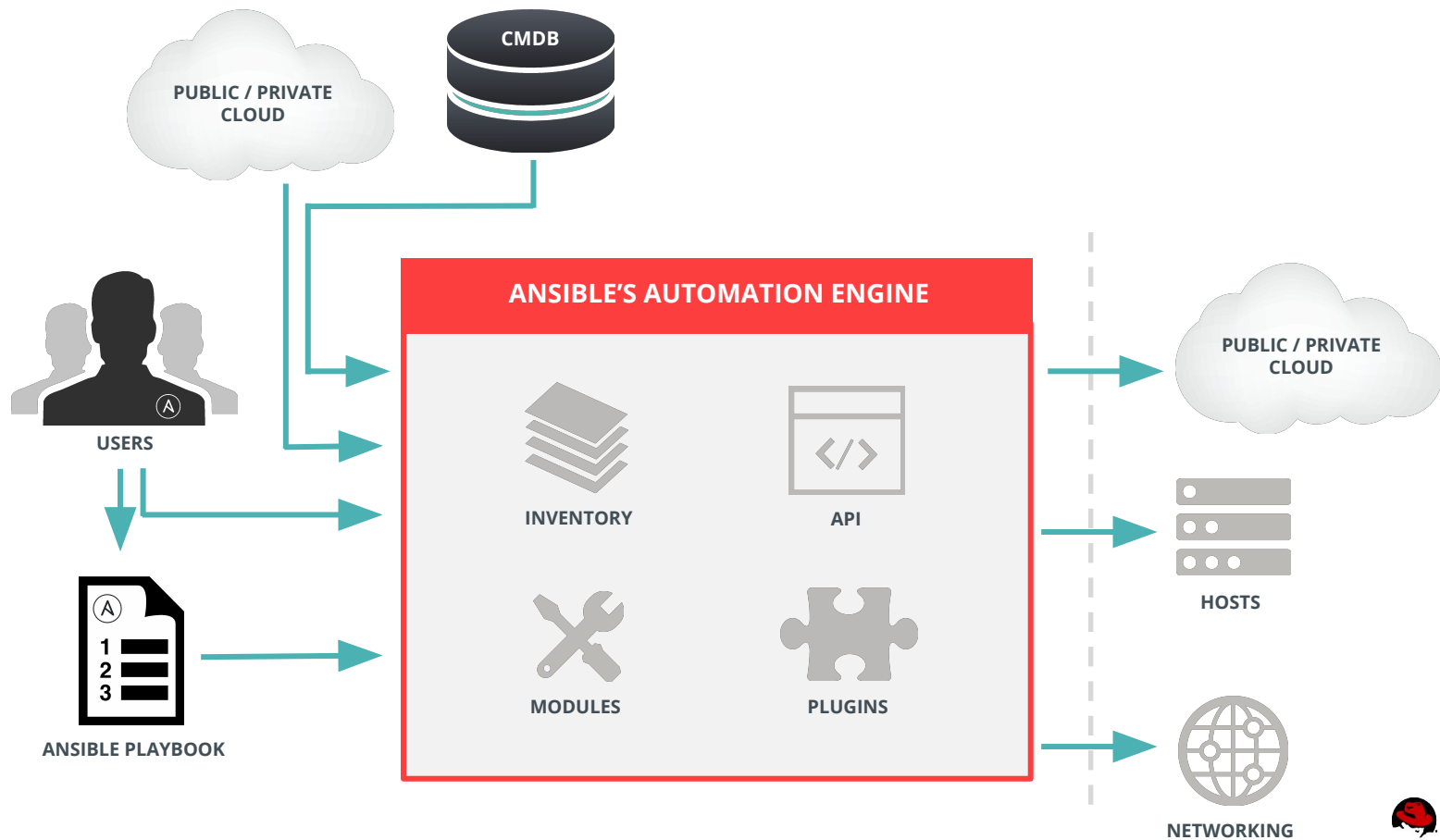
Ansible module execution types
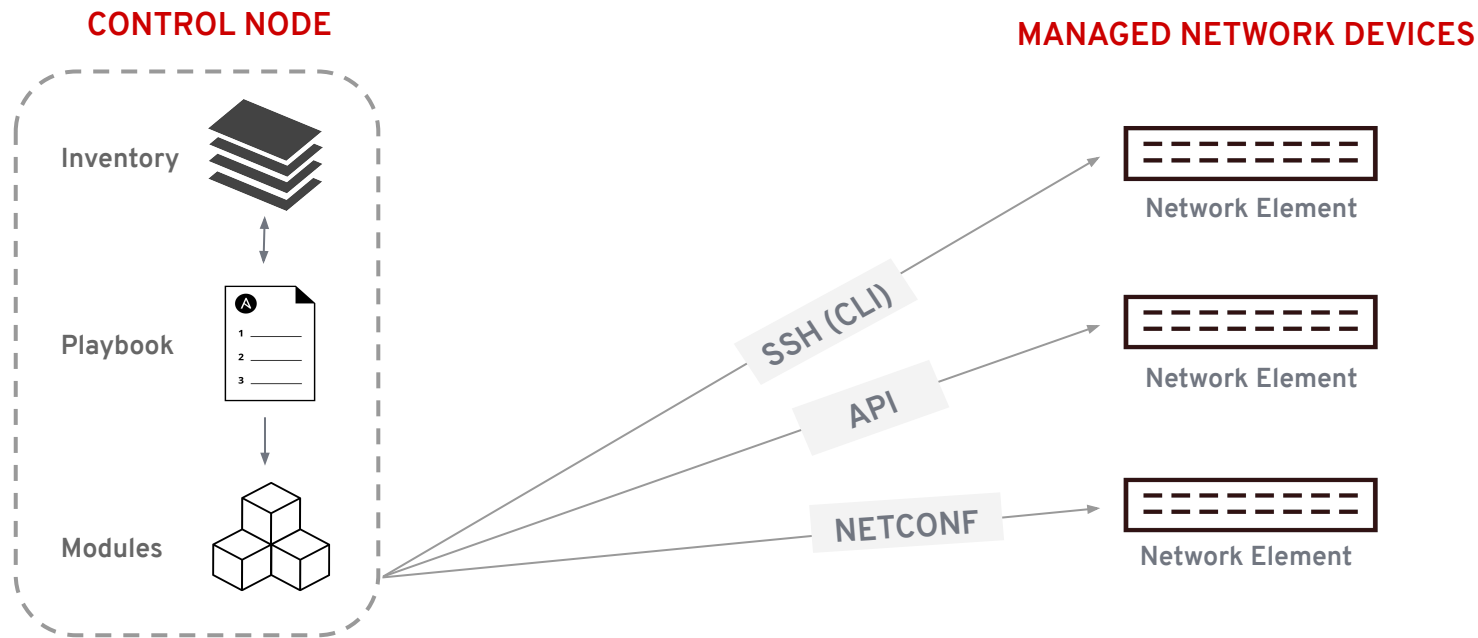

Module code is executed locally on the control node

LOCAL EXECUTION

NETWORKING DEVICES

Module code is copied to the managed node, executed, then removed

REMOTE EXECUTION

LINUX/WINDOWS HOSTS

Ansible module execution types (contd.)

CONTROL NODE

MANAGED NETWORK DEVICES

Inventory

Playbook

Modules

SSH (CLI)

API

NETCONF

Network Element

Network Element

Network Element

Managed Nodes (Inventory):
A collection of endpoints being managed via SSH or API.

Control Node:
Any client system (server, laptop, VM) running Linux or Mac OSX

Modules:
Handles execution of remote system commands

Module internals

AnsibleModule

- Parses and validates module arguments including complex parameter requirements.
- Define helper methods, which greatly simplifies module writing so that author can focus on the module functionality.
- These helper method include methods for
  - File operations permissions
  - Running commands
  - Failing/exiting gracefully for modules

redhat.

Develop hello world module

https://github.com/ganeshrn/ansible_module_development/tree/master/2.2-Hello-world-module

redhat.

Develop your module-1 (remote execution)

https://github.com/ganeshrn/ansible_module_development/tree/master/2.2-Hello-world-module

Develop your module-2 (local execution with connection=local)

https://github.com/ganeshrn/ansible_module_development/tree/master/2.4-Sample-flask-server-module-with-local-connection

Develop your module-3 (local execution with connection=httpapi)

https://github.com/ganeshrn/ansible_module_development/tree/master/2.5-Sample-flask-server-with-httpapi-connection

redhat.

Contributing to Ansible

- Community groups

- IRC channels

- Google Groups:
  https://groups.google.com/forum/#!forum/ansible-project
  https://groups.google.com/forum/#!forum/ansible-devel

- Ansible galaxy

Thank You

GitHub / IRC: @ganeshrn
GitHub / IRC: @akasurde