

Czym jest ansible ?

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About me



- ▶ DevOps Engineer
- ▶ Red Hat and AWS certificated
- ▶ Secutity and DevOps methodology

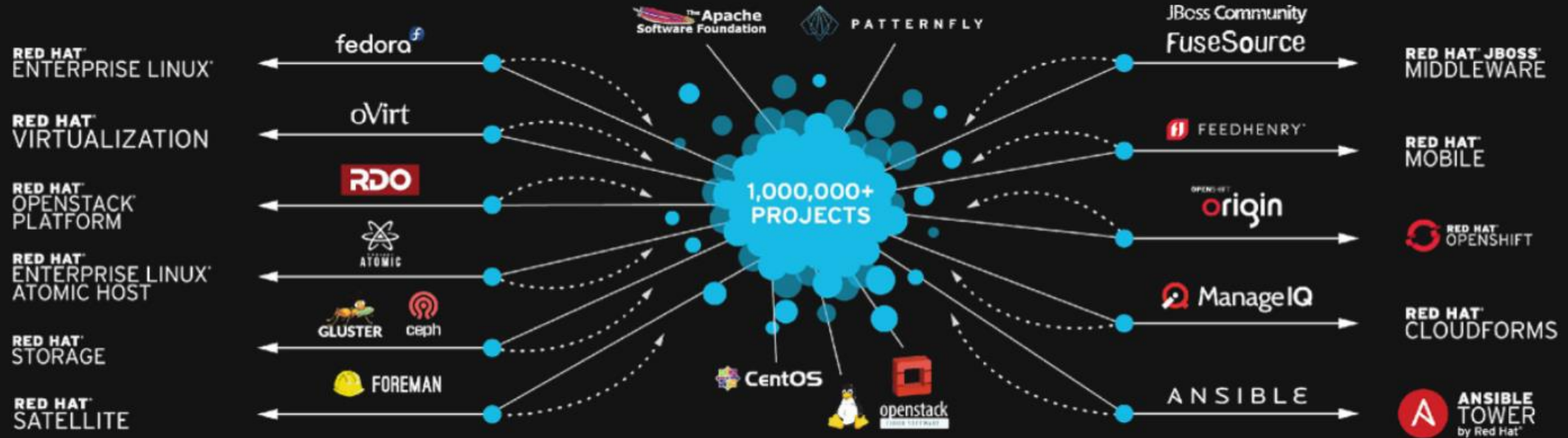
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Ansible

RedHat technology

RED HAT'S UNIQUE APPROACH FROM COMMUNITY TO ENTERPRISE



RH0064-3

What can I do using Ansible?

Automate the deployment and management of your entire IT footprint.

Do this...

Orchestration

Configuration
Management

Application
Deployment

Provisioning

Continuous
Delivery

Security and
Compliance

On these...

Firewalls

Load Balancers

Applications

Containers

Clouds

Servers

Infrastructure

Storage

Network Devices

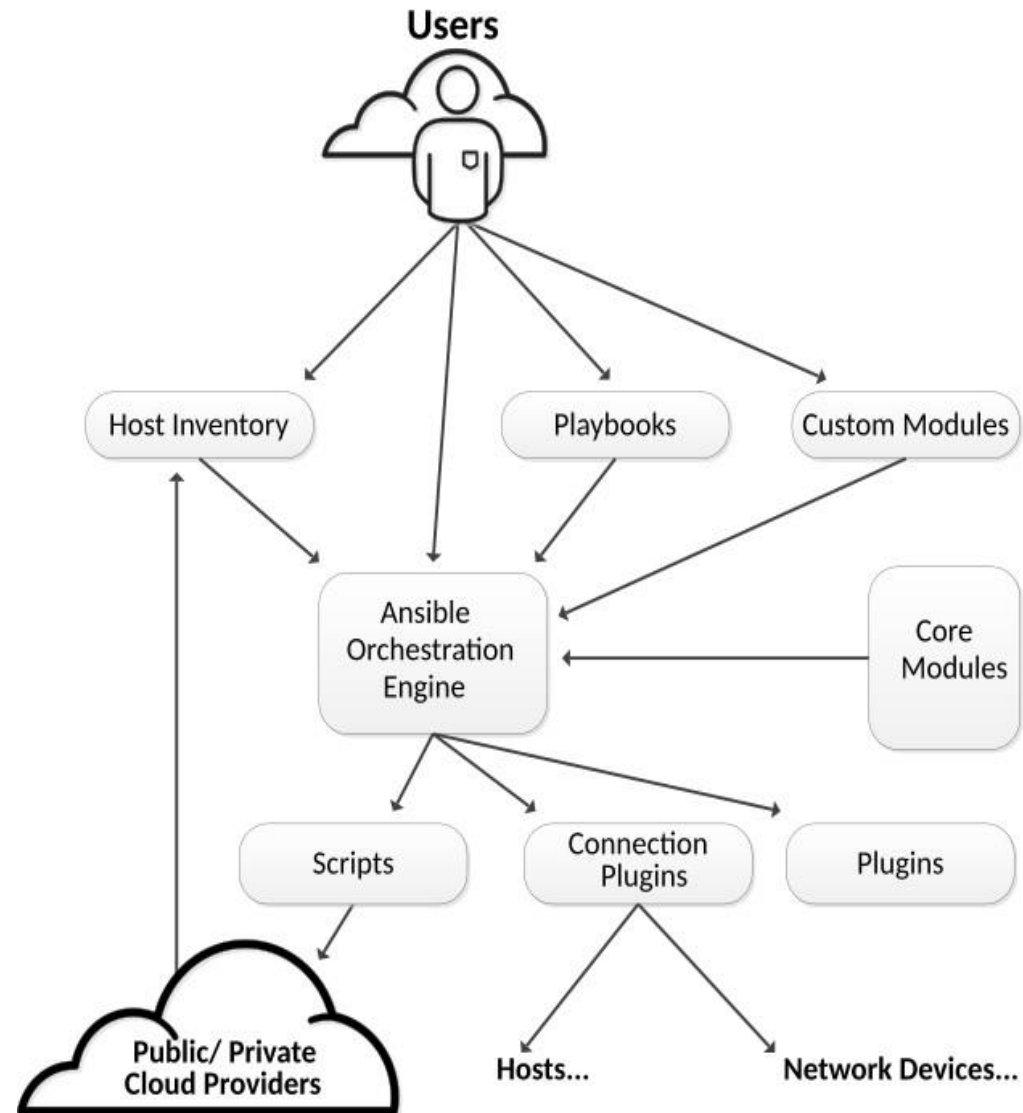
And more...

Ansible automates technologies you use

Time to automate is measured in minutes

Cloud	Virt & Container	Windows	Network	Devops	Monitoring
AWS	Docker	ACLs	Arista	Jira	Dynatrace
Azure	VMware	Files	A10	GitHub	Airbrake
Digital Ocean	RHV	Packages	Cumulus	Vagrant	BigPanda
Google	OpenStack	IIS	Bigswitch	Jenkins	Datadog
OpenStack	OpenShift	Regedits	Cisco	Bamboo	LogicMonitor
Rackspace	+more	Shares	Cumulus	Atlassian	Nagios
+more		Services	Dell	Subversion	New Relic
Operating Systems	Storage	Configs	F5	Slack	PagerDuty
Rhel And Linux	Netapp	Users	Juniper	Hipchat	Sensu
Unix	Red Hat Storage	Domains	Palo Alto	+more	StackDriver
Windows	Infinidat	+more	OpenSwitch		Zabbix
+more	+more		+more		+more

Ansible



Ansible configuration file

1. `ANSIBLE_CONFIG`
2. `./ansible.cfg` local file
3. `~/.ansible.cfg` hidden file in home directory
4. `/etc/ansible/ansible.cfg` – main config file

Example `ansible.cfg`

```
[defaults]
```

```
Inventory=inventory/hosts
```


Static Inventory

[test]

w1 ansible_ssh_user=ansiblesrv

[prod]

w2 ansible_ssh_user=ansiblesrv

w3 ansible_ssh_user=ansiblesrv

Dynamic Inventory

Simple script in python/bash/c/java

```
echo „{  
  „prod”: {  
    "hosts": [„w2”, „w3”],  
    "vars": {  
      "var1": true  
    },  
    "children": []  
  },  
  „test”: {  
    "hosts": [„w1”],  
    "vars": {  
      "var1": false  
    },  
    "children": []  
  }  
}”
```

Playbooks

- hosts: webservers

vars:

http_port: 80

tasks:

- name: ensure apache is at the latest version

yum:

name: httpd

state: latest

- name: write the apache config file

template:

src: /srv/httpd.j2

dest: /etc/httpd.conf

notify:

- restart apache

- name: ensure apache is running

service:

name: httpd

state: started

Ansible facts

ansible w1 -m setup

```
w1 / SUCCESS => {  
  "ansible_facts": {  
    "ansible_all_ipv4_addresses": [  
      "192.168.57.51",  
      "10.0.2.15"  
    ],  
    "ansible_all_ipv6_addresses": [  
      "fe80::a00:27ff:fee8:595e",  
      "fe80::5054:ff:fe8a:fee6"  
    ],  
    "ansible_apparmor": {  
      "status": "disabled"  
    },  
    "ansible_architecture": "x86_64",  
    "ansible_bios_date": "12/01/2006",  
    "ansible_bios_version": "VirtualBox",  
    "ansible_cmdline": {  
      "BOOT_IMAGE": "/boot/vmlinuz-3.10.0-957.27.2.el7.x86_64",  
      "LANG": "en_US.UTF-8",  
      "biosdevname": "0",  
      [...]
  ]
}
```

Ansible loops

- name: count our fruit

debug:

msg: "{{ item }}" with index "{{ my_idx }}"

loop:

- apple
- banana
- pear

loop_control:

index_var: my_idx

- name: check website

uri:

url: http://localhost

return_content: yes

register: result

until: result.content.find("Coming Soon!") != -1

retries: 10

delay: 5

Ansible template

- name: Template a file to /etc/files.conf

template:

src: /mytemplates/foo.j2

dest: /etc/file.conf

owner: bin

group: wheel

mode: '0644'

/mytemplates/foo.j2:

```
{{ My_secret_config }}
```

Ansible vault

```
ansible-vault create foo.yml
```

```
$ANSIBLE_VAULT;1.1;AES256
```

```
61346435343361663263393266376634663863333234306562653365356239363965393539316130  
6436623837653734343565306533393535393536623836310a306365363935666165333833336138  
34386438383132656630646336623036313537333961633433383432656630393435393561393933  
3161303966353563320a303866333136663662356238623235653235373461636634613535346332  
33616133666366376435393035353161376633643263383261313465396534323065
```

```
ansible-playbook [...] --ask-vault-pass
```

Ansible handlers

- name: template configuration file

template:

src: template.j2

dest: /etc/foo.conf

notify:

- restart memcached
- restart apache

handlers:

- name: restart memcached

service:

name: memcached

state: restarted

- name: restart apache

service:

name: apache

state: restarted

Ansible roles

```
site.yml
webservers.yml
fooservers.yml
roles/
  common/
    tasks/
    handlers/
    files/
    templates/
    vars/
    defaults/
    meta/
  webservers/
    tasks/
    defaults/
    meta/
```



Ansible galaxy

ansible-galaxy init my_role
- my_role was created successfully

my_role/:
defaults
files
handlers
meta
README.md
tasks
templates
tests
vars

my_role/defaults:
main.yml
my_role/files:
my_role/handlers:
main.yml
my_role/meta:
main.yml
my_role/tasks:
main.yml
my_role/templates:
my_role/tests:
inventory
test.yml
my_role/vars:
main.yml

Q & A

