Ansible Basic

An Ansible Training Course

DevOps Artisan

# 1. Introduction to Ansible

Topics covered

- What is Ansible

- Ansible history

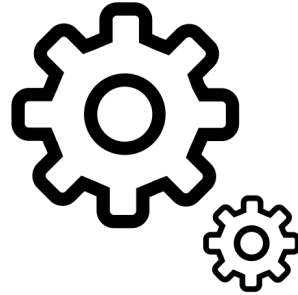- Installing Ansible

What is Ansible?

- Ansible is an automation tool, used for tasks such as configuration management, application deployment and provisioning.

- Ansible allows you to create machines, describe how these machines should be configured and/or what actions should be taken on them.
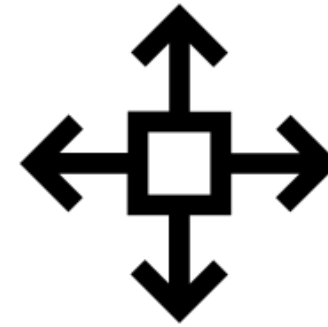
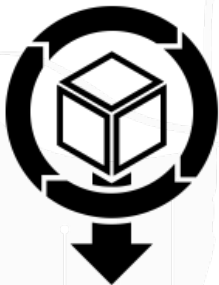DevOps Artisan
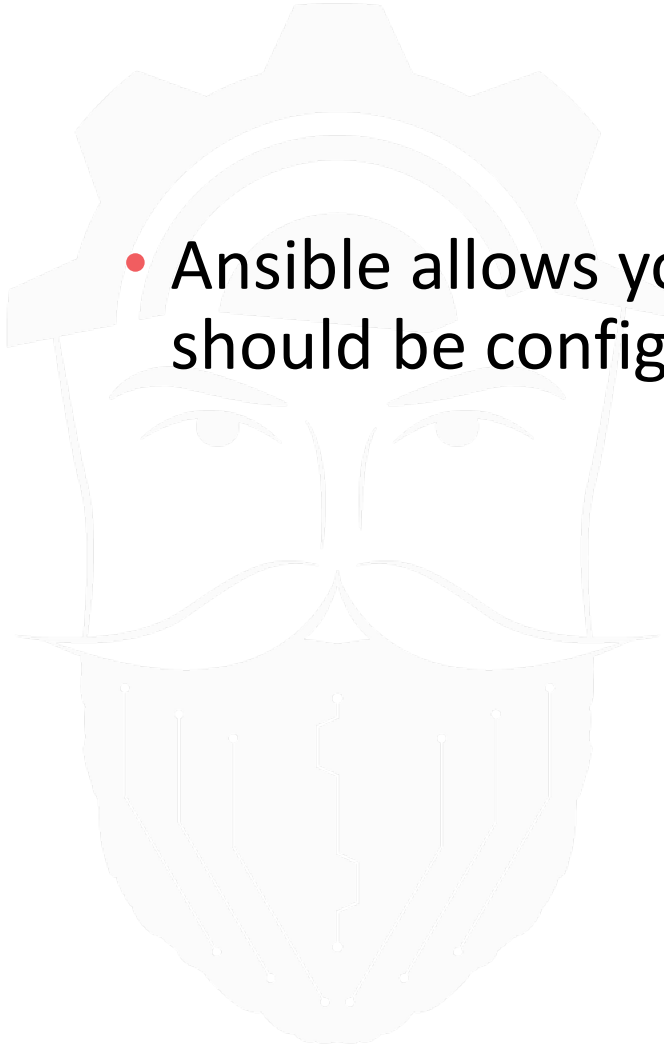
What is Ansible?

Provisioning

Configuration Management

Application Deployment

Continuous Delivery

Security & Compliance
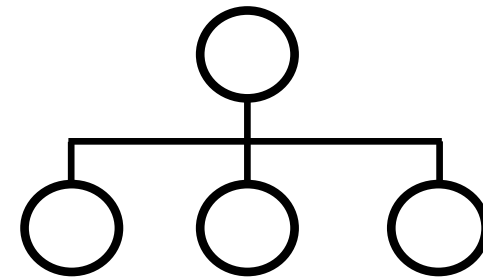
Orchestration

DevOps Artisan

Why Ansible?

Ansible uses an extraordinarily **simple** syntax written in YAML.

Ansible has **powerful** features that can enable you to model even the most complex IT workflows (infrastructure, networks, OS and services)

Why Ansible?

It is completely **agentless**, there are **no agents/software** or additional firewall ports that you need to install on the client systems

No extra software on your servers means more resources for your applications.

DevOps Artisan

Ansible in DevOps

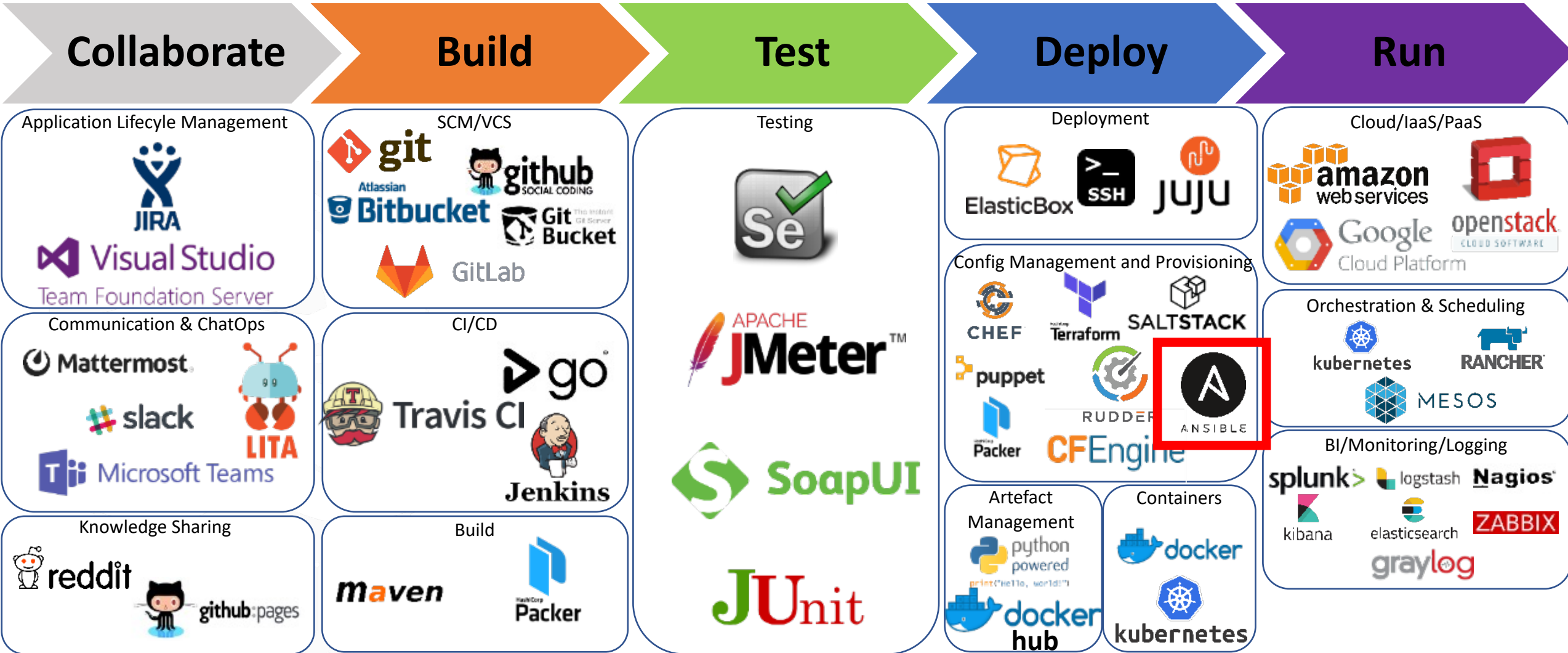| Collaborate	Build	Test	Deploy	Run

Collaborate

Application Lifecyle Management

JIRA
Visual Studio
Team Foundation Server

Communication & ChatOps
Mattermost
slack
LITA
Microsoft Teams

Knowledge Sharing
reddit
github:pages

Build

SCM/VCS
git
Atlassian Bitbucket
github SOCIAL CODING
GitBucket
GitLab

CI/CD
go
Travis CI
Jenkins

Build
maven
HashiCorp Packer

Test

Testing
Se
APACHE JMeter™
SoapUI
JUnit

Deploy

Deployment
ElasticBox
SSH
JUJU

Config Management and Provisioning
CHEF
Terraform
SALTSTACK
puppet
RUDDER
ANSIBLE
Packer
CFEngine

Artefact Management
python powered
docker hub

Containers
docker
kubernetes

Run

Cloud/IaaS/PaaS
amazon web services
openstack CLOUD SOFTWARE
Google Cloud Platform

Orchestration & Scheduling
kubernetes
RANCHER™
MESOS

BI/Monitoring/Logging
splunk>
logstash
Nagios
kibana
elasticsearch
ZABBIX
graylog

DevOps Artisan

What Ansible Automates

CLOUD
AWS
Azure
Digital
Ocean
Google
OpenStack
Rackspace
+more

OPERATING SYSTEMS
RHEL and
Linux
UNIX
Windows
+more

VIRT & CONTAINER
Docker
VMware
RHV
OpenStack
OpenShift
+more

STORAGE
NetApp
Red Hat
Storage
Infinidat
+more

WINDOWS
ACLs
Files
Packages
IIS
Regedits
Shares
Services
Configs
Users
Domains
+more

NETWORK
Arista
A10
Cumulus
Bigswitch
Cisco
Cumulus
Dell
F5
Juniper
Palo Alto
OpenSwitch
+more

DEVOPS
Jira
GitHub
Vagrant
Jenkins
Bamboo
Atlassian
Subversion
Slack
Hipchat
+more

MONITORING
Dynatrace
Airbrake
BigPanda
Datadog
LogicMonitor
Nagios
New Relic
PagerDuty
Sensu
StackDriver
Zabbix
+more

DevOps Artisan

Ansible History

- The term "**ansible**" was coined by **Ursula K. Le Guin** in her 1966 novel *Rocannon's World*, and refers to fictional instantaneous communication system.

- The Ansible tool **was developed** by **Michael DeHaan**, the author of the provisioning server application Cobbler.

DevOps Artisan

Ansible History

- Ansible, Inc. (originally AnsibleWorks, Inc.) was the company set up to commercially support and sponsor Ansible.

- Red Hat acquired Ansible in October 2015.

- Ansible is included as part of the **Fedora** distribution of Linux, owned by Red Hat.

- Is also **available** for **Red Hat Enterprise Linux**, **CentOS**, **Debian**, **Scientific Linux**, **Oracle Linux** via Extra Packages for Enterprise Linux (**EPEL**) and Ubuntu as well as for other operating systems.

Installing Ansible

1. ## Installing prerequisites

```
student:~$ sudo apt update
student:~$ sudo apt -y install software-properties-common
```

2. ## Add Ansible official repository

```
student:~$ sudo apt-add-repository ppa:ansible/ansible
[...]

http://ansible.com/
 More info: https://launchpad.net/~ansible/+archive/ubuntu/ansible
Press [ENTER] to continue or Ctrl-c to cancel adding it.
[...]
Fetched 17.0 kB in 1s (17.6 kB/s)
Reading package lists... Done
```

Installing Ansible

3. Install Ansible

```
student:~$ sudo apt install ansible -y
```

4. Check Ansible version

```
student:~$ ansible --version
ansible 2.9.1
  config file = /etc/ansible/ansible.cfg
  configured module search path = [u'/home/student/.ansible/plugins/modules',
u'/usr/share/ansible/plugins/modules']
  ansible python module location = /usr/lib/python2.7/dist-packages/ansible
  executable location = /usr/bin/ansible
  python version = 2.7.15+ (default, Jan  1 2040, 17:39:04) [GCC 7.4.0]
```

Lab 1: *Installing Ansible*

Start **Lab**

DevOps Artisan

More practice, less theory

askformore@devopsartisan.com

DevOps Artisan