Configuration Management Tools

RackHD

Ansible

Puppet

Chef

CFEngine

Vagrant

Saltstack

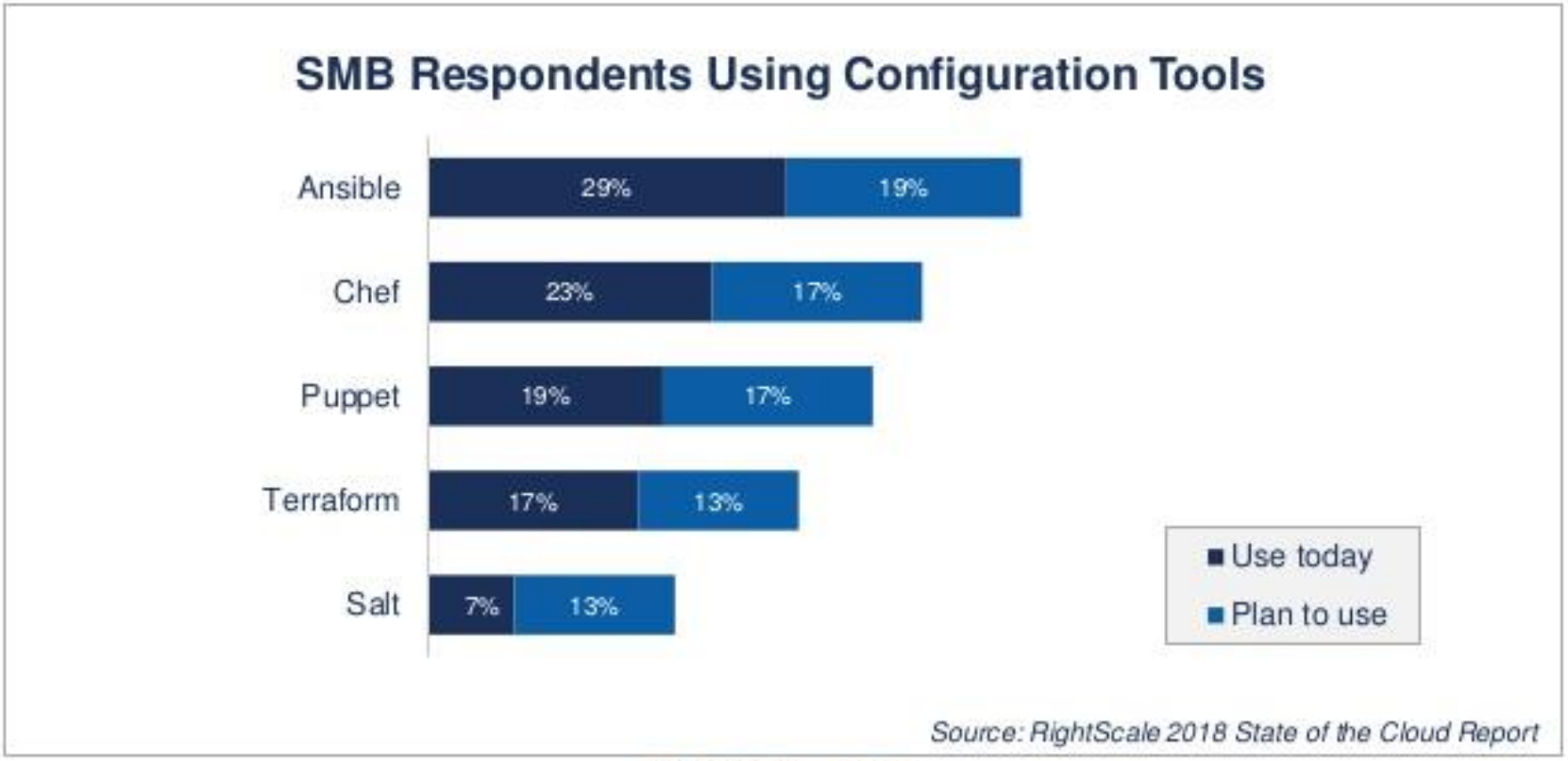
Cobbler

Secured Shell

9 Configuration Management Tools For DevOps

MINDMAJIX

Configuration Tools – SMBs



RIGHTSCALE

ANSIBLE

TOPICS

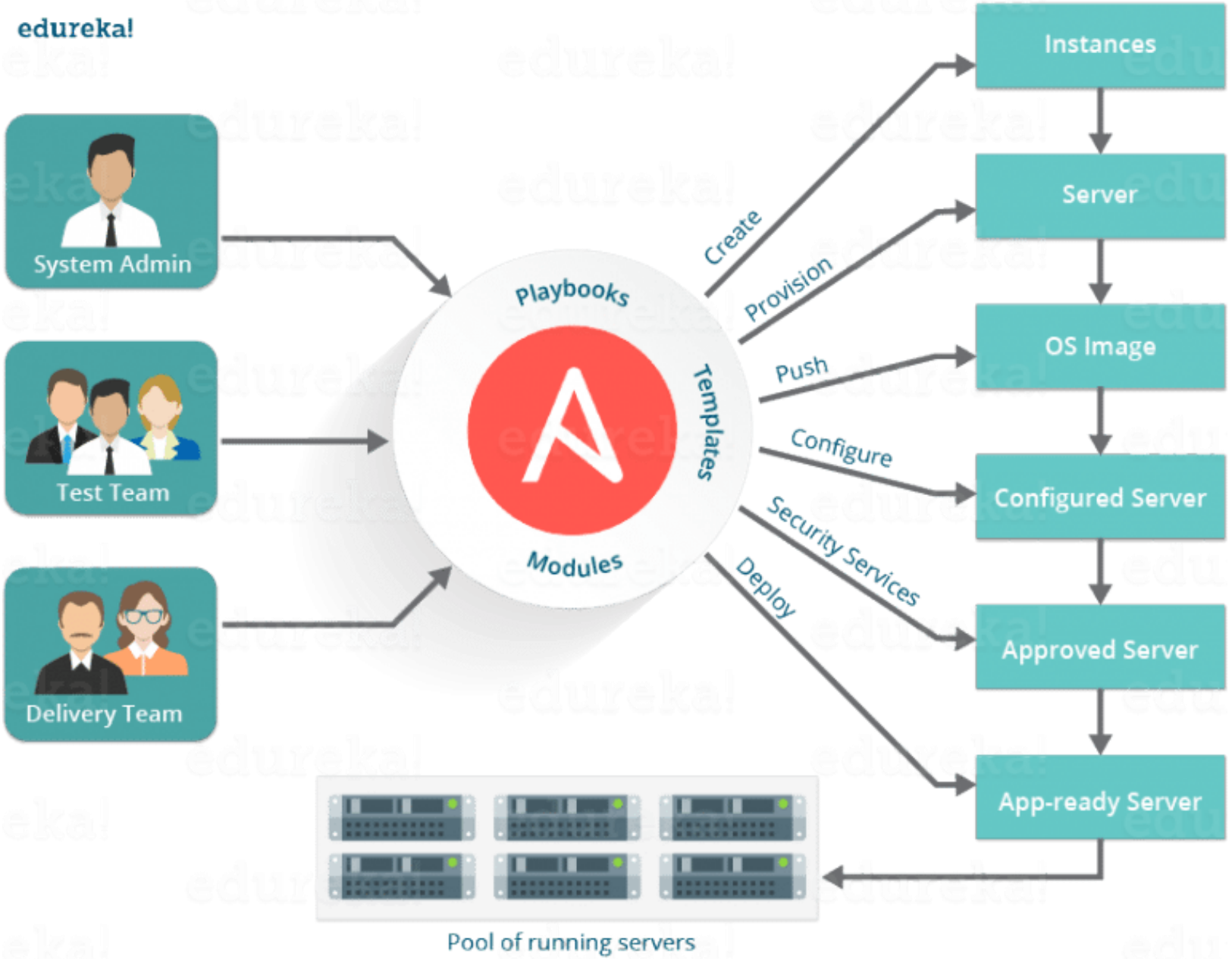
1. What is Ansible
2. What Ansible can do
3. Features of Ansible
4. Ansible Architecture
5. Ansible Flow
6. Installation

WHAT IS ANSIBLE?

It's 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 by Red Hat is an **enterprise framework** for controlling, securing and managing your Ansible automation with a **UI and restful API.**

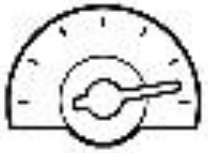

edureka!
System Admin
Test Team
Delivery Team
Playbooks
Templates
Modules
Create
Provision
Push
Configure
Security Services
Deploy
Instances
Server
OS Image
Configured Server
Approved Server
App-ready Server
Pool of running servers

ANSIBLE USE CASES

PROVISIONING

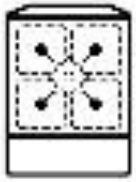
CONFIGURATION MANAGEMENT

APPLICATION DEPLOYMENT



CONTINUOUS DELIVERY

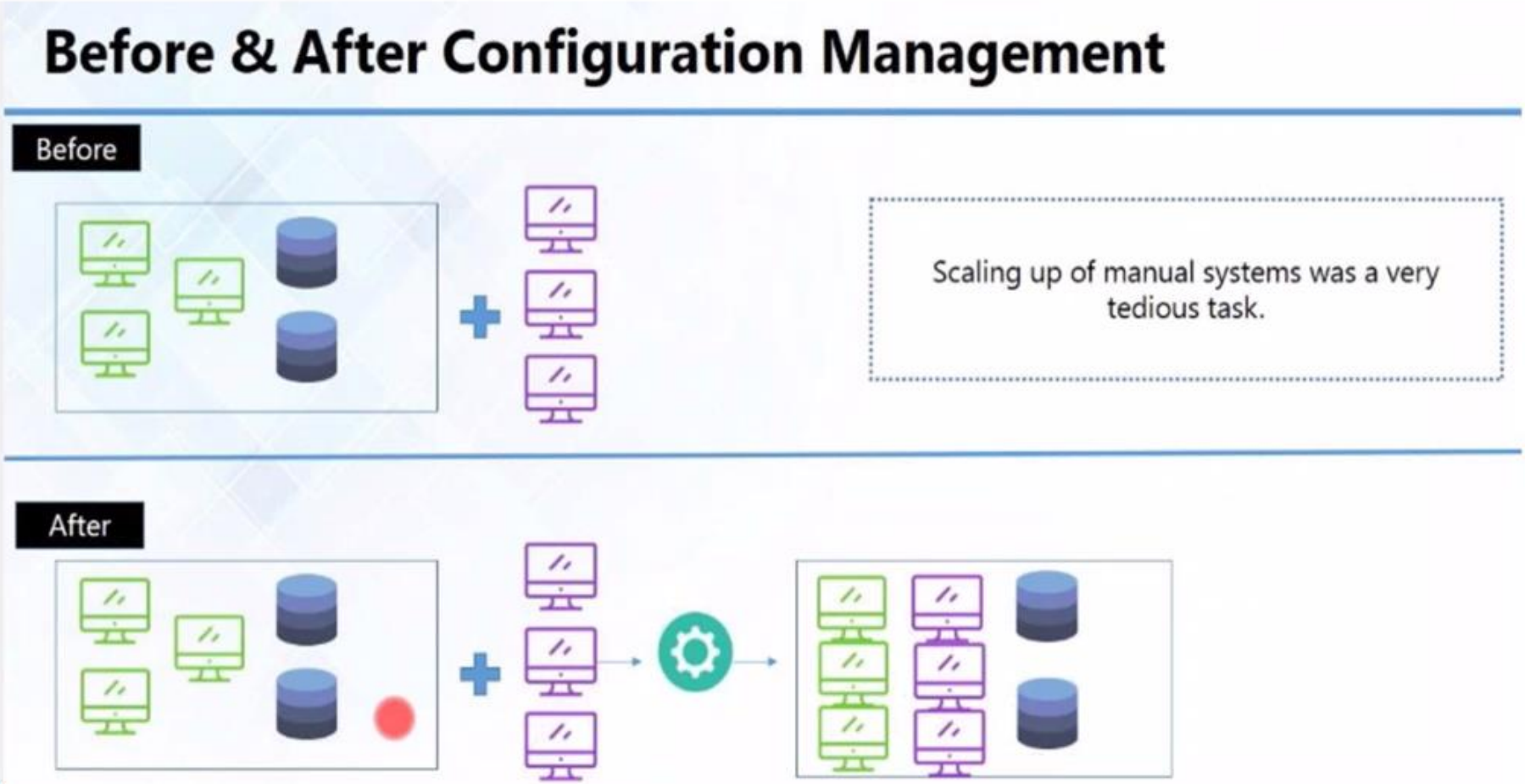
SECURITY & COMPLIANCE



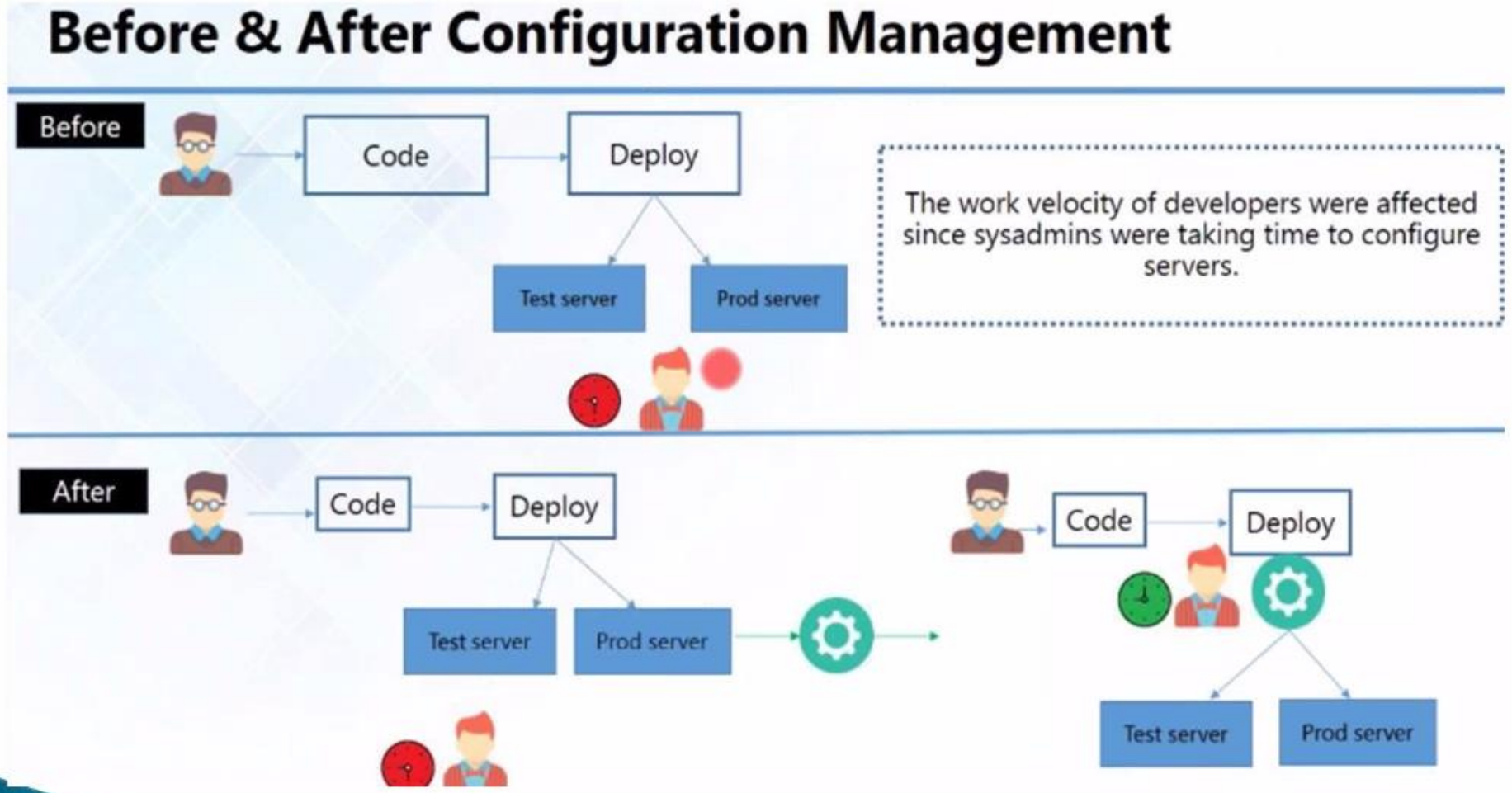
ORCHESTRATION

Provisioning & Orchestration

Before & After Configuration Management

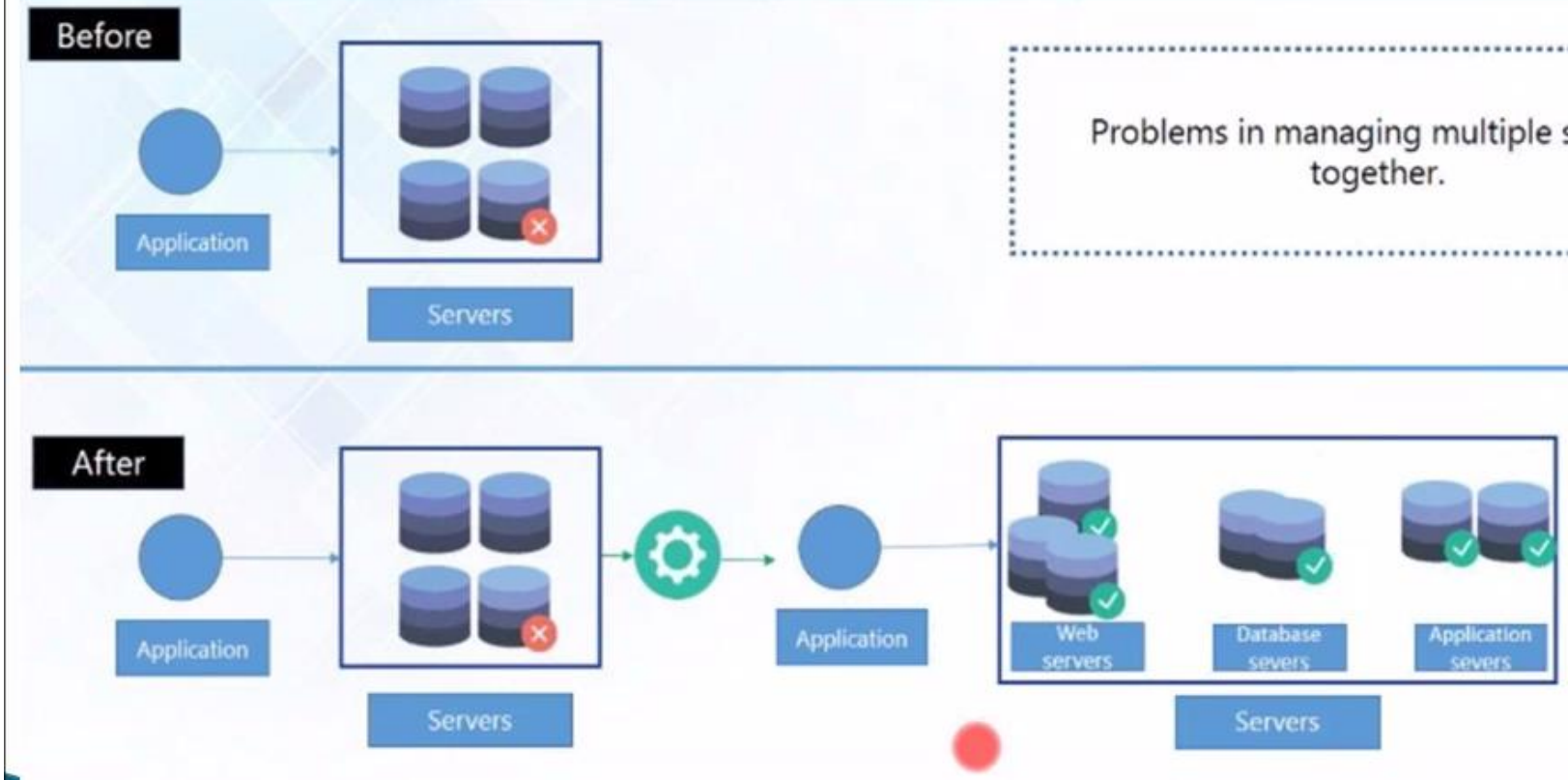


Application Deployment



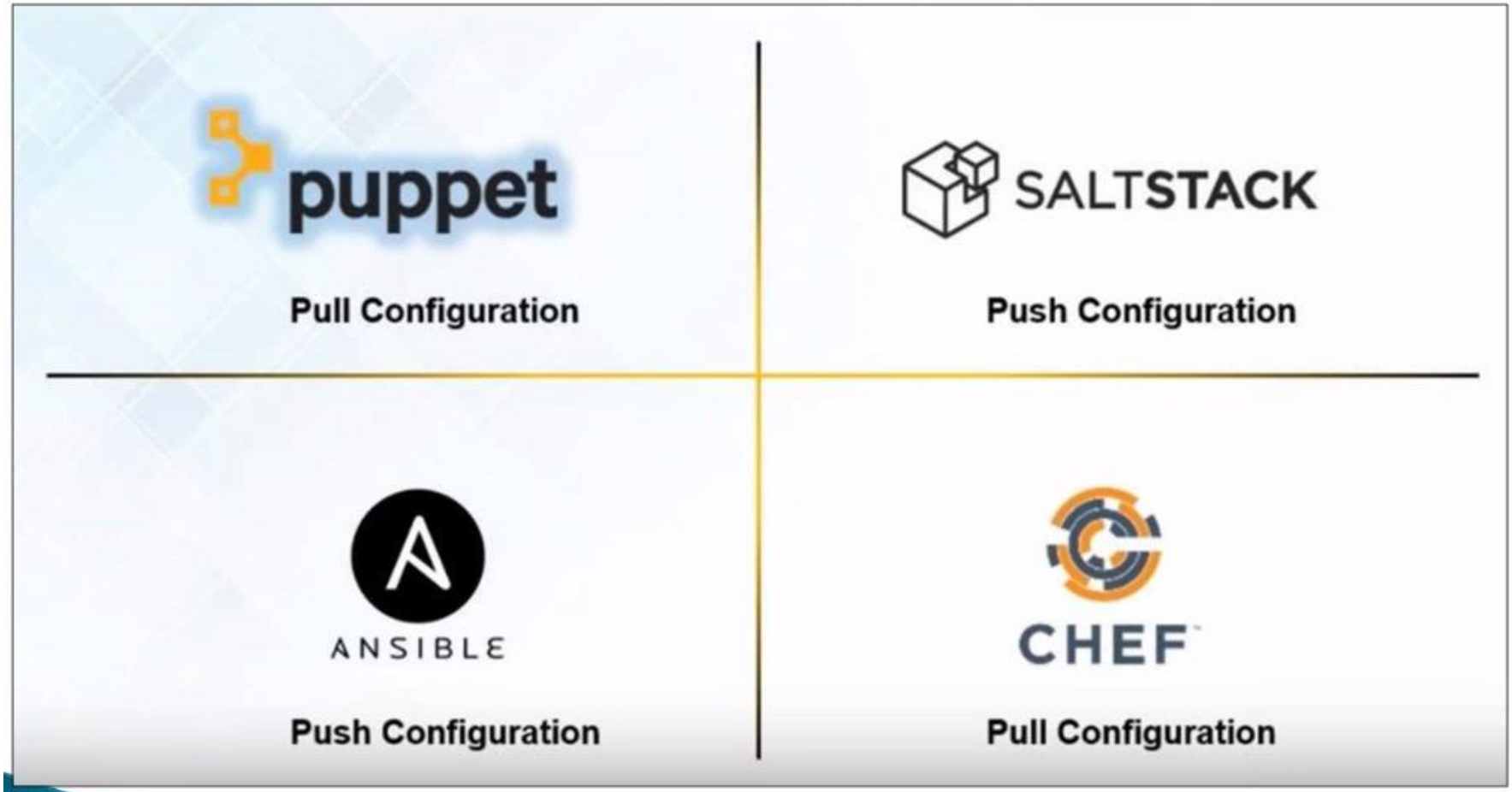
Configuration Management

Before & After Configuration Management

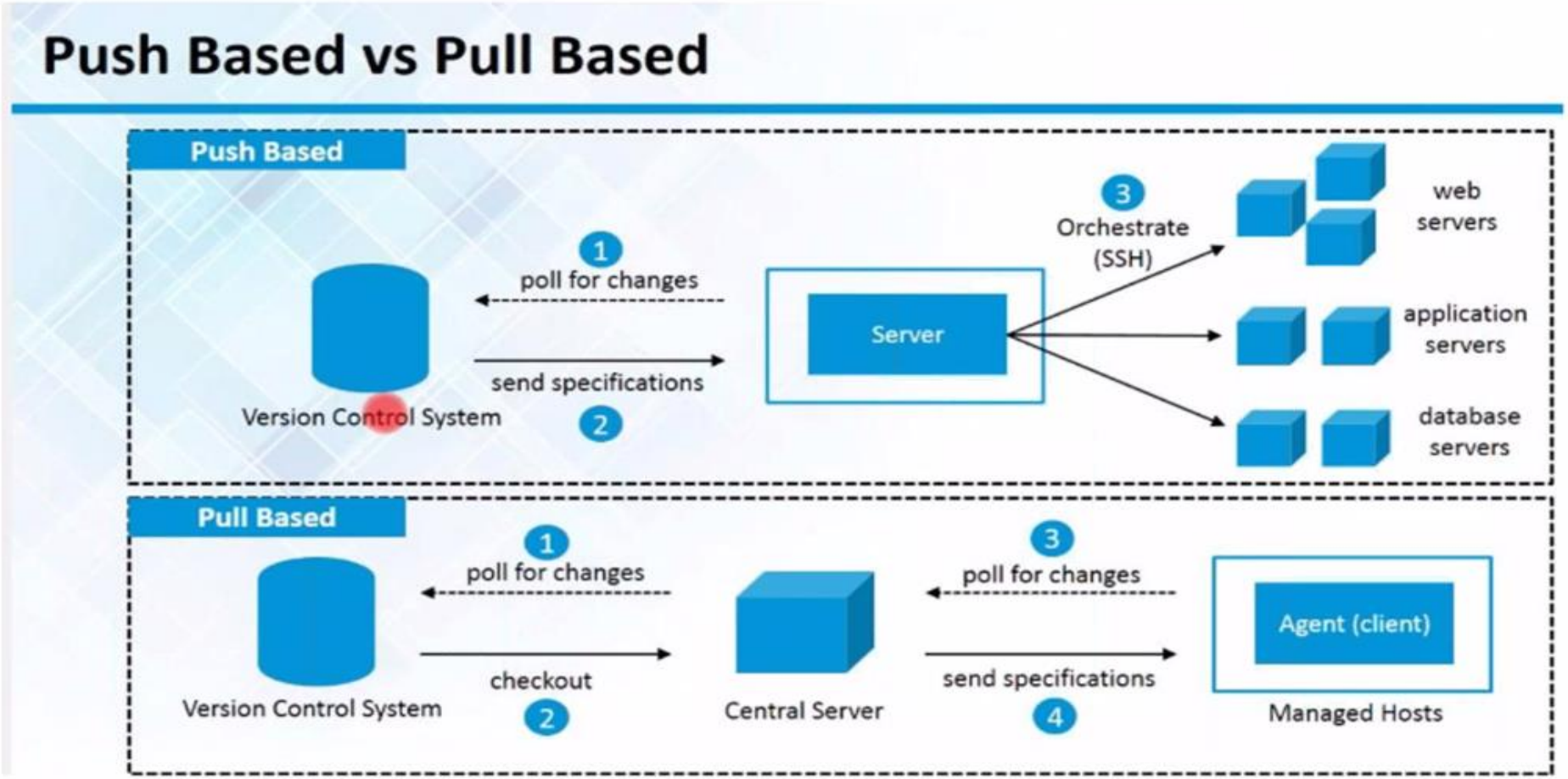


Features of Ansible

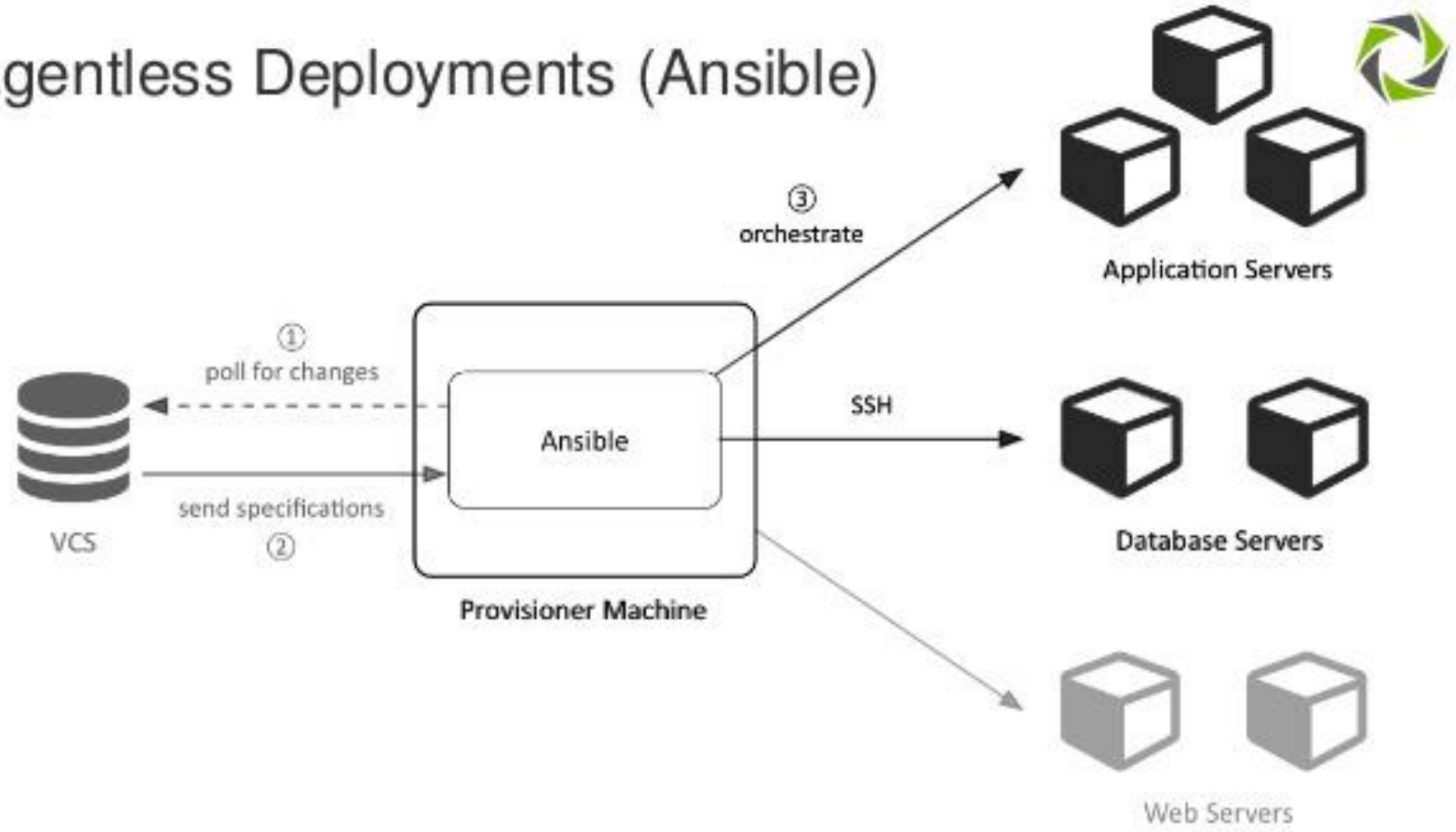
Push vs Pull Configuration



Push vs Pull Configuration



Agentless Deployments (Ansible)



ANSIB

SIMPLE

Human readable automation

No special coding skills needed

Tasks executed in order

Get productive quickly

POWERFUL

App deployment

Configuration management

Workflow orchestration

Orchestrate the app lifecycle

AGENTLESS

Agentless architecture

Uses OpenSSH & WinRM

No agents to exploit or update

More efficient & more secure

Execution of Ansible:

- **Ansible Adhoc Mode**
  - ansible web -i <inventory> -m ping
- **Ansible –Playbook**

  tasks:

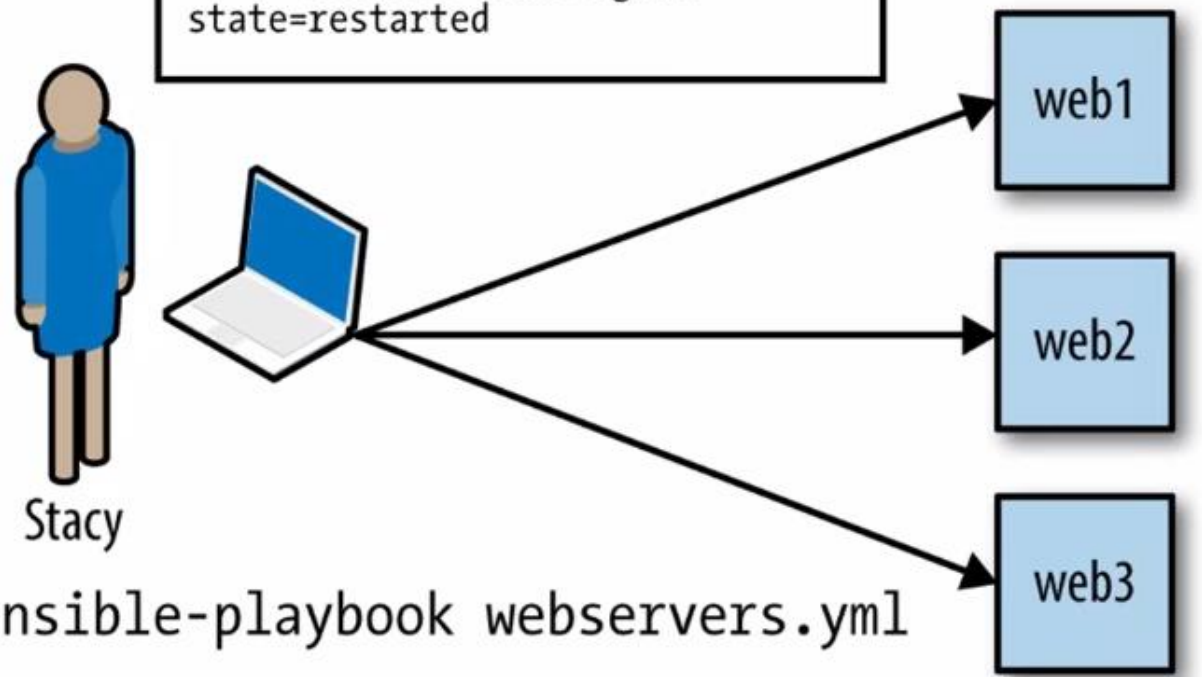
  name: install apache

  yum: name=httpd state=latest
- **Ansible-Roles with Galaxy**
  - breaking a playbook into multiple files

How Ansible Works

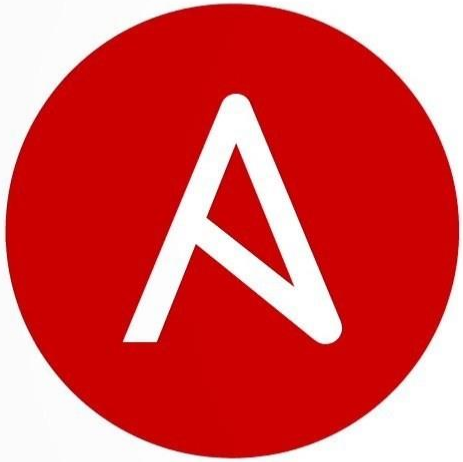
webservers.yml

```
---
- name: Configure webservers
  hosts: webservers
  tasks:
    - name: Install nginx
      apt: name=nginx
    - name: install config file
      template: src=nginx.conf.j2
dest=/etc/nginx/ngingx.onf
       notify: restart nginx
   handlers:
     - name: notify nginx
       service: name=nginx
state=restarted
```




```
$ ansible-playbook webservers.yml
```

ansible.cfg
hosts
roles
mongodb
defaults
main.yml
files
handlers
main.yml
meta
main.yml
README.md
tasks
main.yml
templates
tests
inventory
test.yml
vars
main.yml



ANSIBLE TOWER

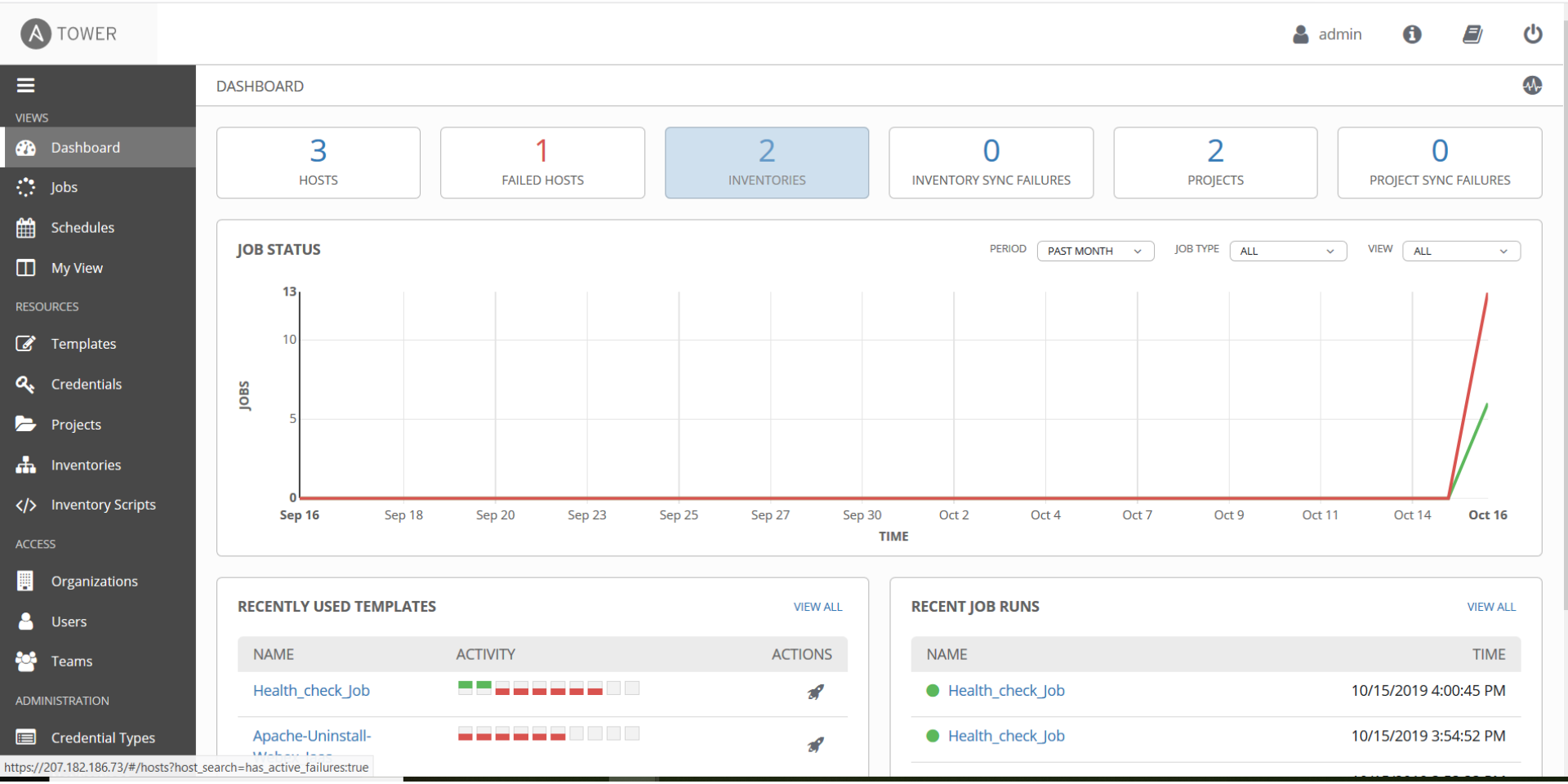
by Red Hat®

Standard For Enterprise IT Operations	Premium For Mission Critical DevOps
8x5 support Maintenance & Upgrades	**24x7 support** Maintenance & Upgrades
Up to 100 nodes $10,000/year	**Up to 100 nodes** $14,000/year

Free Tier:

- Free tier is available up to 10 Nodes.
- Free tier available for Life long.
- Apply for free tier license in below link.
- You can upgrade a license when you want.

https://www.ansible.com/license


TOWER
admin
DASHBOARD
VIEWS
Dashboard
Jobs
Schedules
My View
RESOURCES
Templates
Credentials
Projects
Inventories
Inventory Scripts
ACCESS
Organizations
Users
Teams
ADMINISTRATION
Credential Types
3
HOSTS
1
FAILED HOSTS
2
INVENTORIES
0
INVENTORY SYNC FAILURES
2
PROJECTS
0
PROJECT SYNC FAILURES
JOB STATUS
PERIOD
PAST MONTH
JOB TYPE
ALL
VIEW
ALL
13
10
5
0
JOBS
Sep 16
Sep 18
Sep 20
Sep 23
Sep 25
Sep 27
Sep 30
Oct 2
Oct 4
Oct 7
Oct 9
Oct 11
Oct 14
Oct 16
TIME
RECENTLY USED TEMPLATES
VIEW ALL
NAME
ACTIVITY
ACTIONS
Health_check_Job
Apache-Uninstall-
RECENT JOB RUNS
VIEW ALL
NAME
TIME
Health_check_Job
10/15/2019 4:00:45 PM
Health_check_Job
10/15/2019 3:54:52 PM
https://207.182.186.73/#/hosts?host_search=has_active_failures:true

ANSIBLE TOWER by Red Hat®

TOWER EXPANDS AUTOMATION TO YOUR ENTERPRISE.

CONTROL

Scheduled and centralized jobs

KNOWLEDGE

Visibility and compliance

DELEGATION

Role-based access and self-service

SIMPLE

Everyone speaks the same language

POWERFUL

Designed for multi-tier deployments

AGENTLESS

Predictable, reliable, and secure

AT ANSIBLE'S CORE IS AN **OPEN SOURCE** AUTOMATION ENGINE.

Advantages:

- Gives you control to schedule and centralize jobs
- Allows delegation with role-based access and self-service
- Increase knowledge with visibility and compliance
- Ansible integrates with Satellite, Insights, CloudForms, JBOSS, RHEL, OpenShift, OpenStack, RHV, and Ceph
- Speed up your team
    - Simple to learn and get started quickly
    - Easy to deploy, agentless
    - Once one person automates something in Ansible, your whole team can do the same.

Thank You