

# Taiwan CIOUCECGE Summit 2020 臺灣雲端大會

# Ansible AWX 圖形化管理 Ansible 環境的利器



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## Agenda

- Infrastructure as Code (IaC)
- Why Ansible
- Ansible Engine vs Tower vs AWX
- Ansible AWX Features
- Use Case Demo



# Infrastructure as Code (IaC)



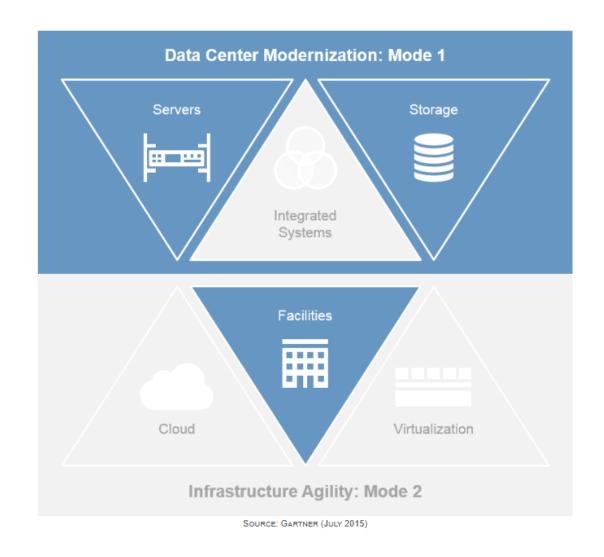
## Bimodal IT – Mode 1 / Mode 2

## Mode 1

- Traditional Infrastructure
  - Reliability / Stability
- Physical Server / Storage / Network

## Mode 2

- Infrastructure Agility
- Software Defined (SDC, SDS, SDN)
- VM / Container / Microservice
  - Agility / DevOps





"DevOps is "DevOps is treating your development It's DevOps! infrastructure and operations as code" collaboration" It's DevOps! "DevOps "DevOps It's DevOps! is feature is using It's DevOps! switches" automation" "DevOps "Kanban is small for Ops?" deployments"

#### **DevOps Toolchain Example Vendors** Define: Code: Apple JetBrains Atlassian Microsoft Codenvy Parasoft

Perforce

Subversion

Microsoft

OpenMake

Software

Travis CI

Red Hat

(Ansible) SaltStack

ThoughtWorks

## Plan:

- AgileCraft Axure iRise
- Blueprint
   Jama
- eDev Micro Focus IBM (Borland)

- Pivotal
- Atlassian Targetprocess
- CA Technologies
   VersionOne CollabNet
- Clarive

## Release, Deploy & Coordination

- Microsoft CollabNet
- Electric Cloud IBM
- Chef Inedo

Atlassian

Automic

CA Technologies

OpenMake

Software

Orca

- MidVision
- Serena Software
- VMware

Octopus Deploy

XebiaLabs

## release create Plan configure Dreprod. verify monitor

#### Continuous Configuration Automation

- CFEngine
- Chef
- Inedo
- Punpet Labs
- Red Hat (Ansible)
- SaitStack

## **Test Automation:**

IBM

GitHub

Atlassian

JetBrains

Configure:

CFEngine

Puppet Labs

Chef

Jenkins

CircleCI

IBM

**Build:** 

IBM

- Micro Focus
- Microsoft
- Sauce Labs
- ThoughtWorks
- Tricentis

## Static Analysis:

- Cast
- Microsoft
- Optimyth Software
- Parasoft
- Semmie
- SonarSource

## Test Lab:

- Delphix
- Microsoft
- Perfecto
- Quali
- Qualsys
- Skytap
- SauceLabs

#### Security:

- Micro Focus
- Trend Micro
- IBM
- Trustwave
- Veracode
- Whitehat Security Inc.

- Artifactory
- Atlassian
- Bitbucket
- Clarive
- Electric Cloud
- Inedo
- Sonatype

## Infrastructure, APM & Analytics and Log Mgmt.

- Datadog
- Elastic
- Ganglia
- Nagios Prometheus
- Graphite
- AppDynamics
- BigPanda
- Cacti
- Dynatrace
- Splunk SignalFX

New Relic

CA Technologies

Caliper

Zenoss

Sumo Logic

Wireshark

Zabbix



# CNCF – Cloud Native Landscape

## **Automation & Configuration**

# Provisioning









































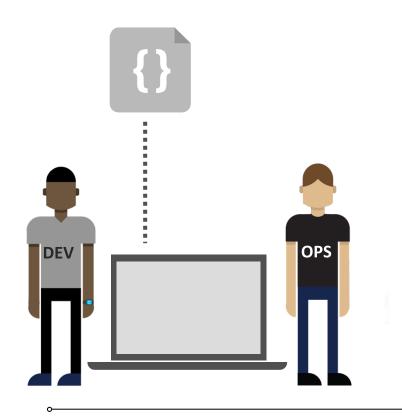


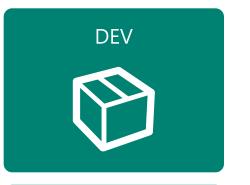






## Infrastructure as Code (IaC)









## Habits

- Production first mindset
- Infrastructure as flexible resource

## Value

- Optimized Resources
- Accelerate Delivery

## Measure

- Deployment Rate
- MTTR (Mean Time to Repair)



# Why Ansible



## Ansible – Language of automation

## **CROSS PLATFORM**

Agentless support for all major OS variants, physical, virtual, cloud and network devices.

## **HUMAN READABLE**

Perfectly describe and document every aspect of your application environment.

# PERFECT DESCRIPTION OF APPLICATION

Every change can be made by Playbooks, ensuring everyone is on the same page.

## **VERSION CONTROLLED**

Playbooks are plain-text. Treat them like code in your existing version control.

## **DYNAMIC INVENTORIES**

Capture all the servers 100% of the time, regardless of infrastructure, location, etc.

# ORCHESTRATION PLAYS WELL WITH OTHERS

Orchestration plays well with others: ServiceNow, Infoblox, AWS, Terraform, Cisco ACI and more

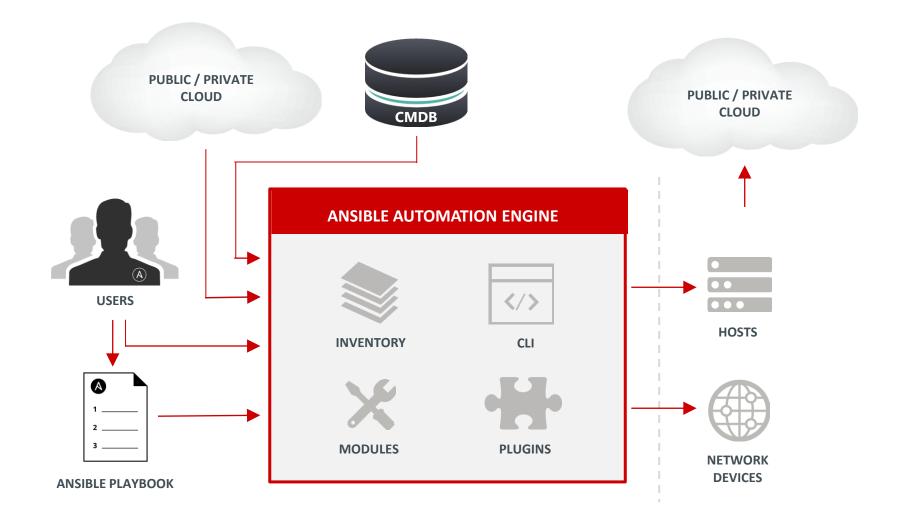


# Ansible Automates Technologies You Use

CLOUD	VIRT & CONTAINER	WINDOWS	NETWORK	DEVOPS	MONITORING
AWS	Docker	ACLs	Arista	liro	Dynatraca
				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
ODED ATIMO	CTODACE	Configs	F5	Slack	PagerDuty
OPERATING	STORAGE	Users	Juniper	Hipchat	Sensu
SYSTEMS	NetApp	Domains	Palo Alto	+more	StackDriver
RHEL and Linux	Red Hat Storage	+more	OpenSwitch		Zabbix
UNIX	Infinidat		+more		+more
Windows	+more		illoic		TITIOLE
+more					



## Ansible Architecture





# Ansible Engine vs Tower vs AWX



# Ansible Engine vs Tower vs AWX







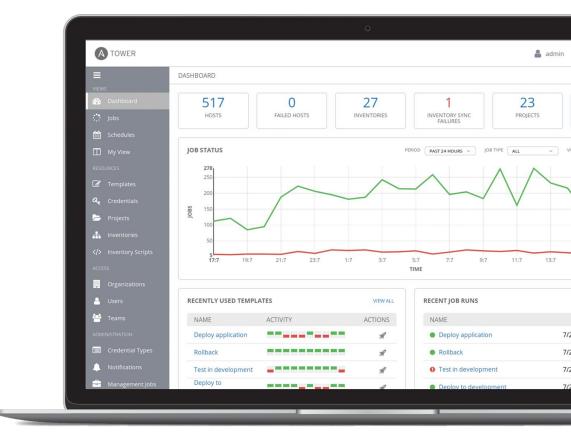
Ansible Engine	Ansible Tower	Ansible AWX	
<ul> <li>CLI Only.</li> <li>Not centralized management.</li> <li>Integration with Red Hat Enterprise Linux.</li> <li>Support for Ansible core modules per product life cycle.</li> <li>Support for the Ansible execution engine.</li> </ul>	<ul> <li>A GUI Dashboard.</li> <li>Red Hat licensed and 24x7 supported.</li> <li>High Availability supported.</li> <li>Role-based access control</li> <li>Job scheduling</li> <li>Graphical inventory management</li> <li>Multi-playbook workflow</li> <li>RESTful API</li> <li>External logging integrations</li> <li>Real-time job status updates</li> </ul>	<ul> <li>The AWX Project is the fast-moving upstream project from which Red Hat Ansible Tower is derived.</li> <li>Opensource of free to use.</li> <li>No node limitations.</li> <li>Frequent updates from the community.</li> <li>Community support.</li> </ul>	



# Why Ansible AWX

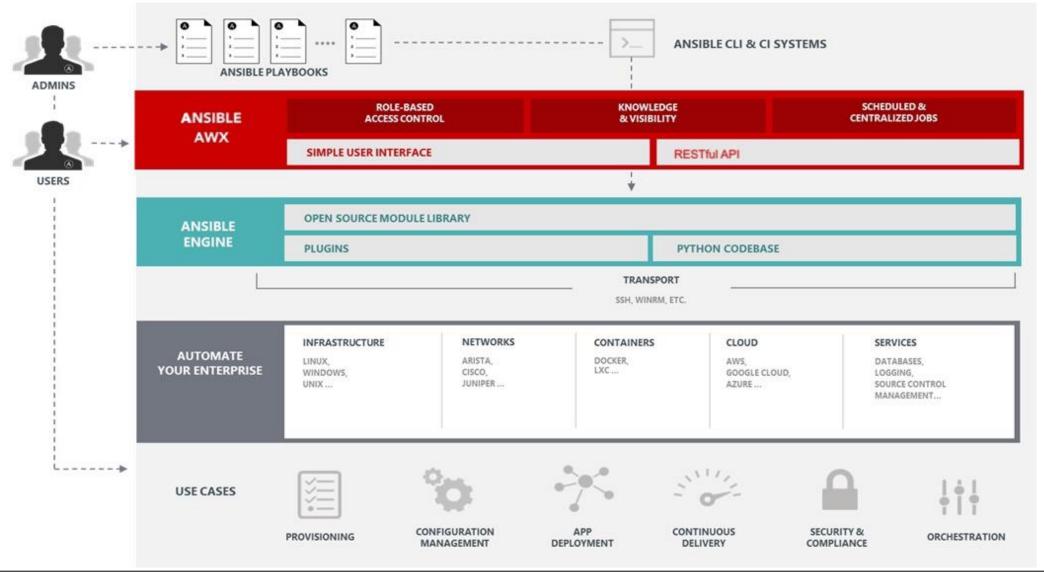
Ansible AWX is a opensource of Ansible Tower, so it's free to use, GUI based, and RESTful API allowing you to scale IT automation, manage complex deployments and speed productivity.

- ✓ RBAC (Role-Based Access Control)
- ✓ Push Button Easy to execute playbook
- ✓ RESTful API
- ✓ Workflow
- ✓ Enterprise Integrations
- ✓ Centralized Logging
- ✓ Ansible AWX is FREE





## Ansible AWX Architecture

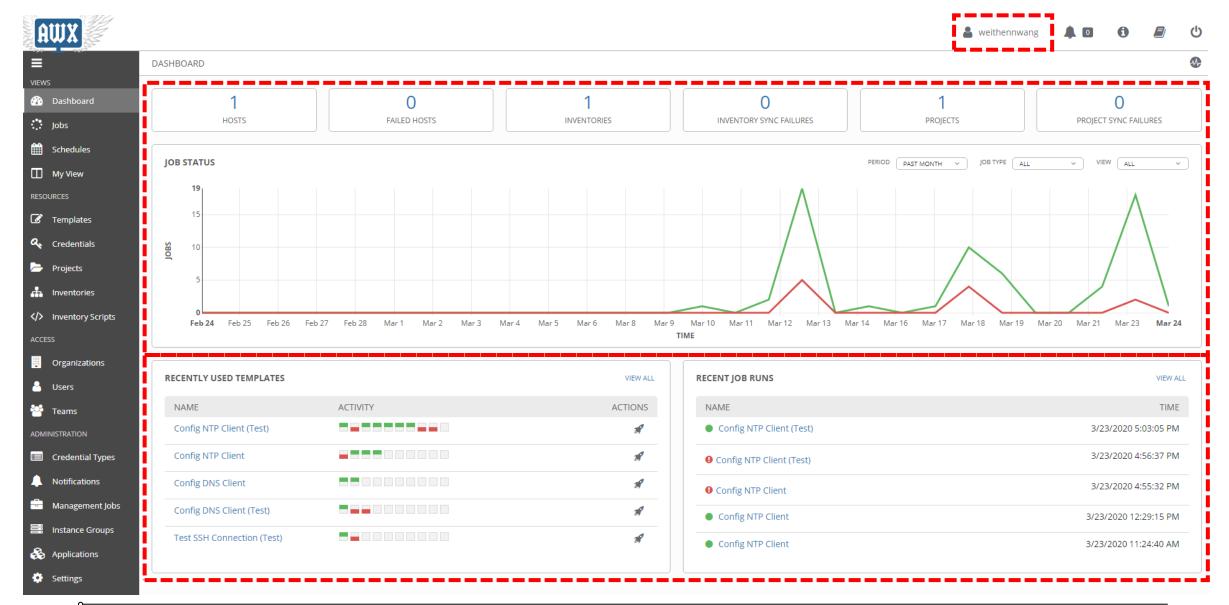




# Ansible AWX Features

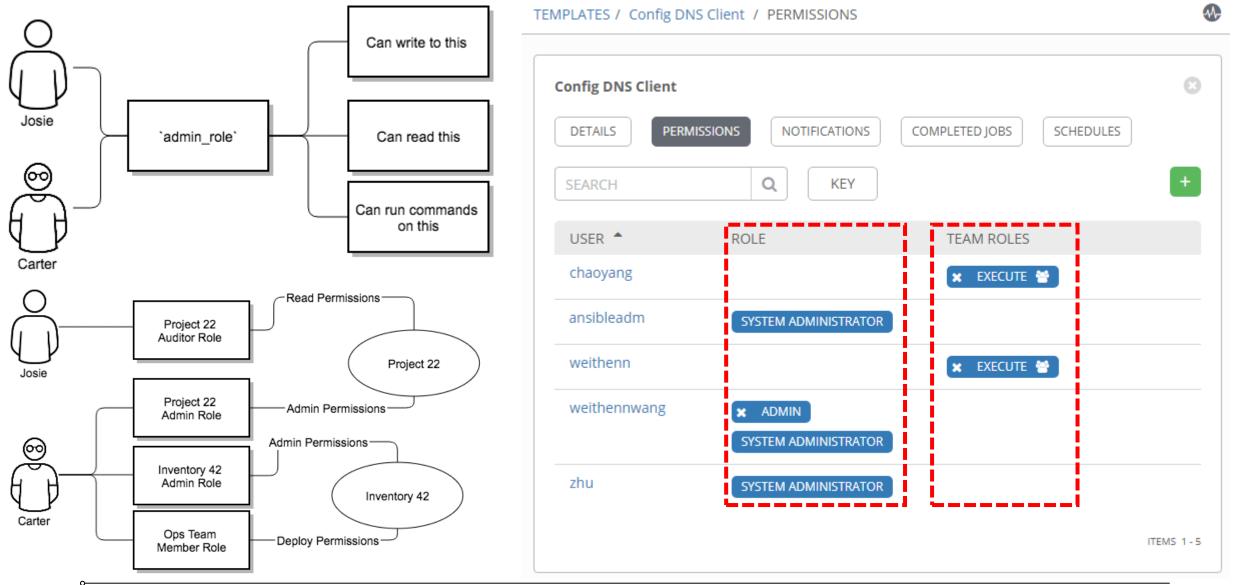


## Dashboard



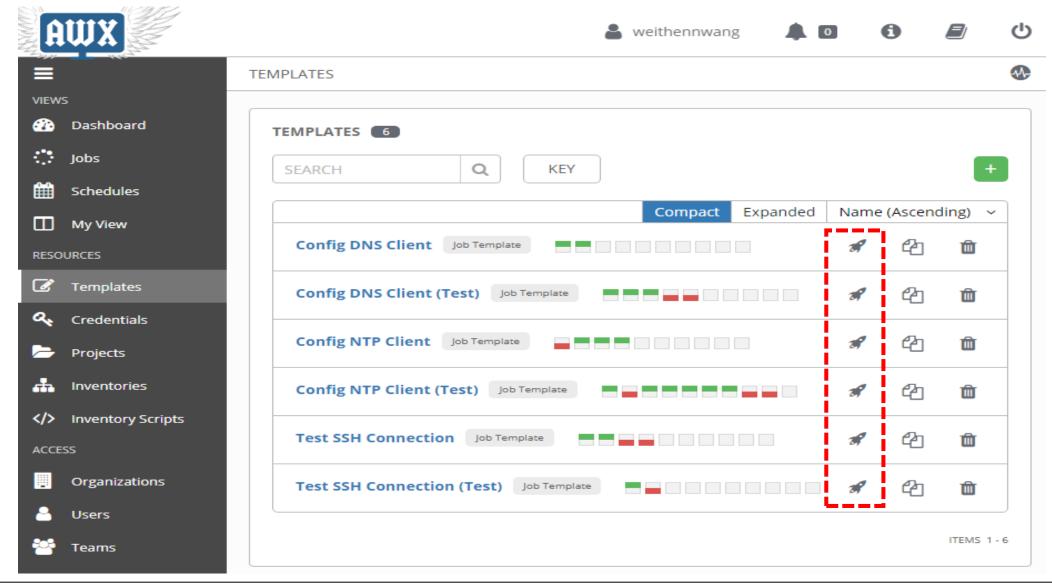


# RBAC (Role-Based Access Control)



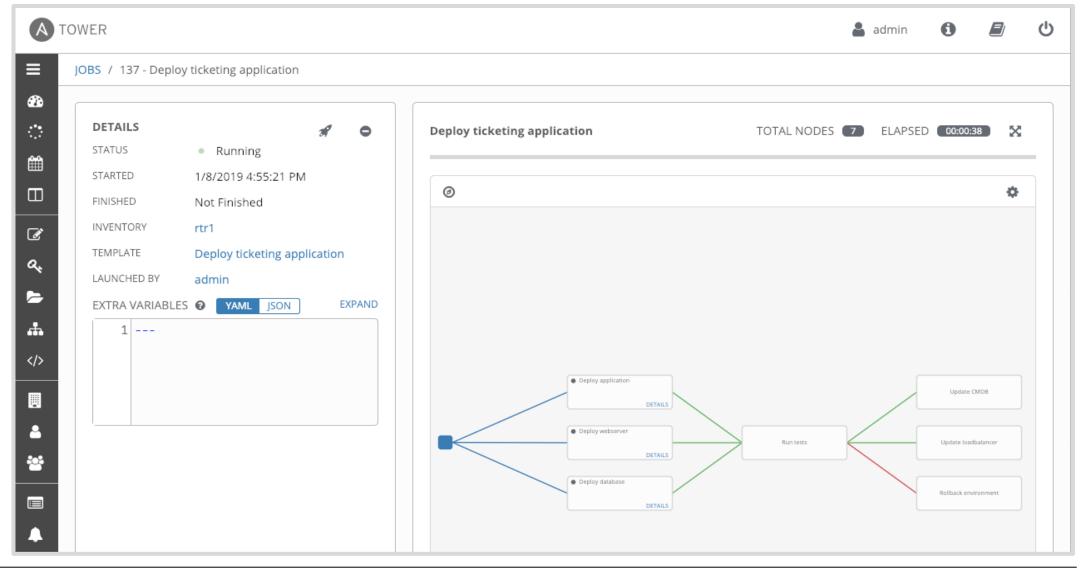


## **Easy to Execute Playbook**





## **Automation Workflow**







# Thank you

