



ANSIBLE AUTOMATION AT TJX

Ansible Introduction and TJX Use Case Overview

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AGENDA

- Ansible Engine - what is it and how does it work?
- Ansible Tower - what is it and how does it work?
- TJX - infrastructure challenges
- TJX - why Ansible?
- TJX - Ansible Automation use cases

AUTOMATION IS CRITICAL

86%

Automation is either mission critical or very important to their future Cloud strategy

79%

Of IT organizations will need to deploy new management and automation software between now and 2020

EVERYBODY NEEDS AUTOMATION

ENABLE REUSE

Leverage existing people, processes, and (often) technology

INCREASE SAVINGS

Free up time to work on more important things

SPAN SILOS

Empower teams to work efficiently

CREATE REPEATABILITY

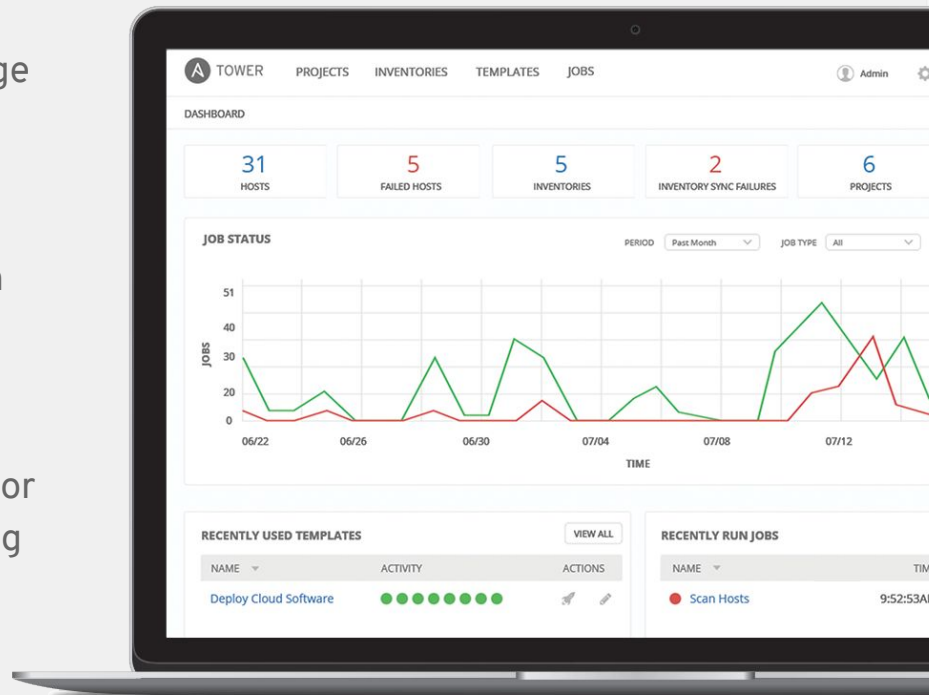
Lather, rinse, repeat

WHAT IS ANSIBLE AUTOMATION?

Ansible Automation provides the glue needed to bridge together all layers of an enterprise architecture. It includes both Ansible Engine and Ansible Tower.

Ansible Engine is a simple, cross-platform automation tool for individual engineers, administrators, and operators.

Ansible Tower is the enterprise automation platform for controlling, managing, integrating, securing and scaling out execution of Ansible Engine.





RED HAT®
ANSIBLE®
Automation

RED HAT ANSIBLE TOWER

Scale + operationalize your automation

CONTROL

KNOWLEDGE

DELEGATION

RED HAT ANSIBLE ENGINE

Support for your Ansible automation

SIMPLE

POWERFUL

AGENTLESS

FUELED BY AN INNOVATIVE **OPEN SOURCE** COMMUNITY



AUTOMATION FOR THE ENGINEER

Ansible Engine technical introduction and overview

ANSIBLE



SIMPLE

- Human readable automation
- No special coding skills needed
- Tasks executed in order
- Usable by every team
- Get productive quickly**



POWERFUL

- App deployment
- Configuration management
- Workflow orchestration
- Network automation
- Orchestrate the app lifecycle**



AGENTLESS

- Agentless architecture
- Uses OpenSSH & WinRM
- No agents to exploit or update
- Get started immediately
- More efficient & more secure**

HOW ANSIBLE WORKS

Playbooks contain lists of tasks, each referencing a small program called a module.
Playbooks describe the desired state of an endpoint.



Modules take directives from tasks



Register module output for later use

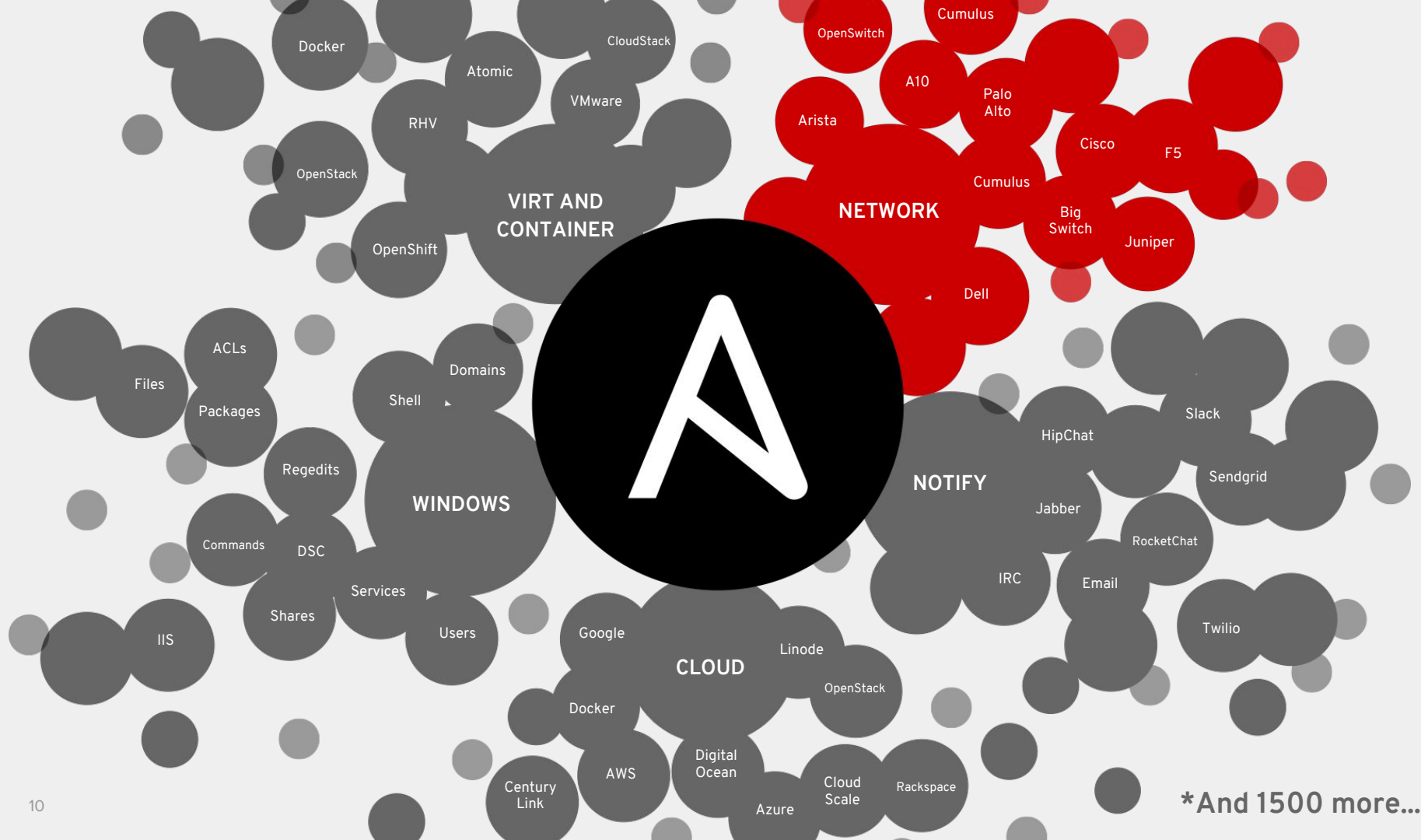
Future tasks act on the results of previous tasks

Desired state builds like a layer cake



Apply changes conditionally

Based on system state and results from earlier tasks



*And 1500 more...

THE LANGUAGE OF ENTERPRISE IT

ANSIBLE PLAYBOOK



From development...

...to production.



DEV/TEST



Q/A



OPERATIONS



MANAGEMENT



OUTSOURCERS

COMMUNICATION IS THE KEY TO DEVOPS.

Ansible is the first automation language that can be read and written across IT.

Ansible is the only automation engine that can automate the entire application lifecycle and continuous delivery pipeline.



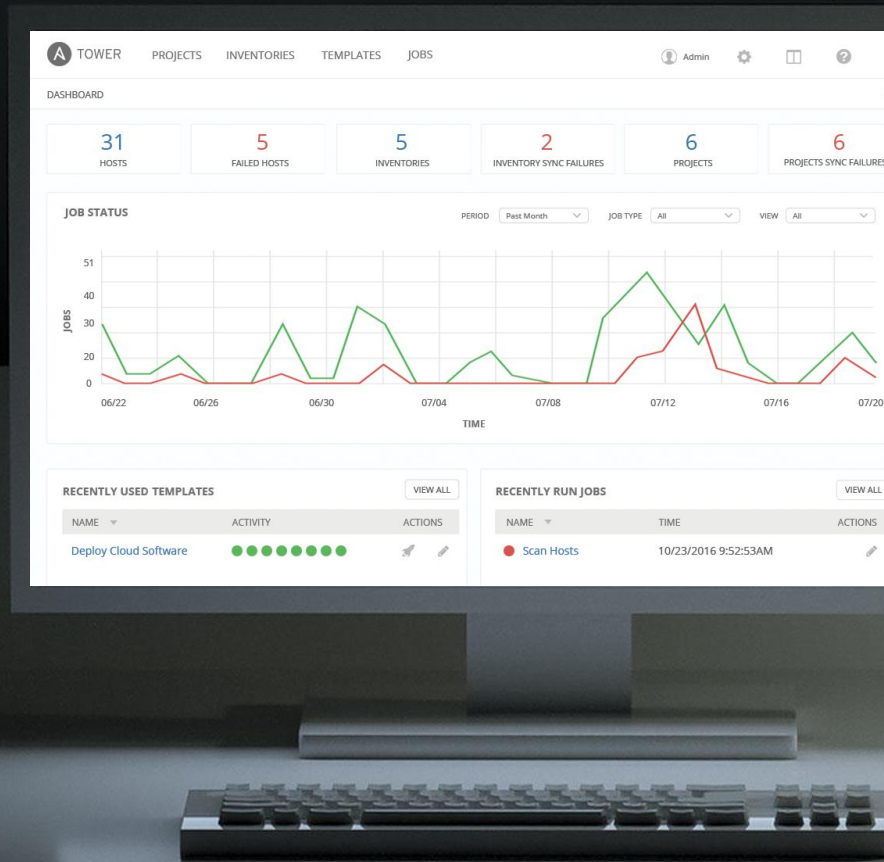
AUTOMATION FOR TEAMS

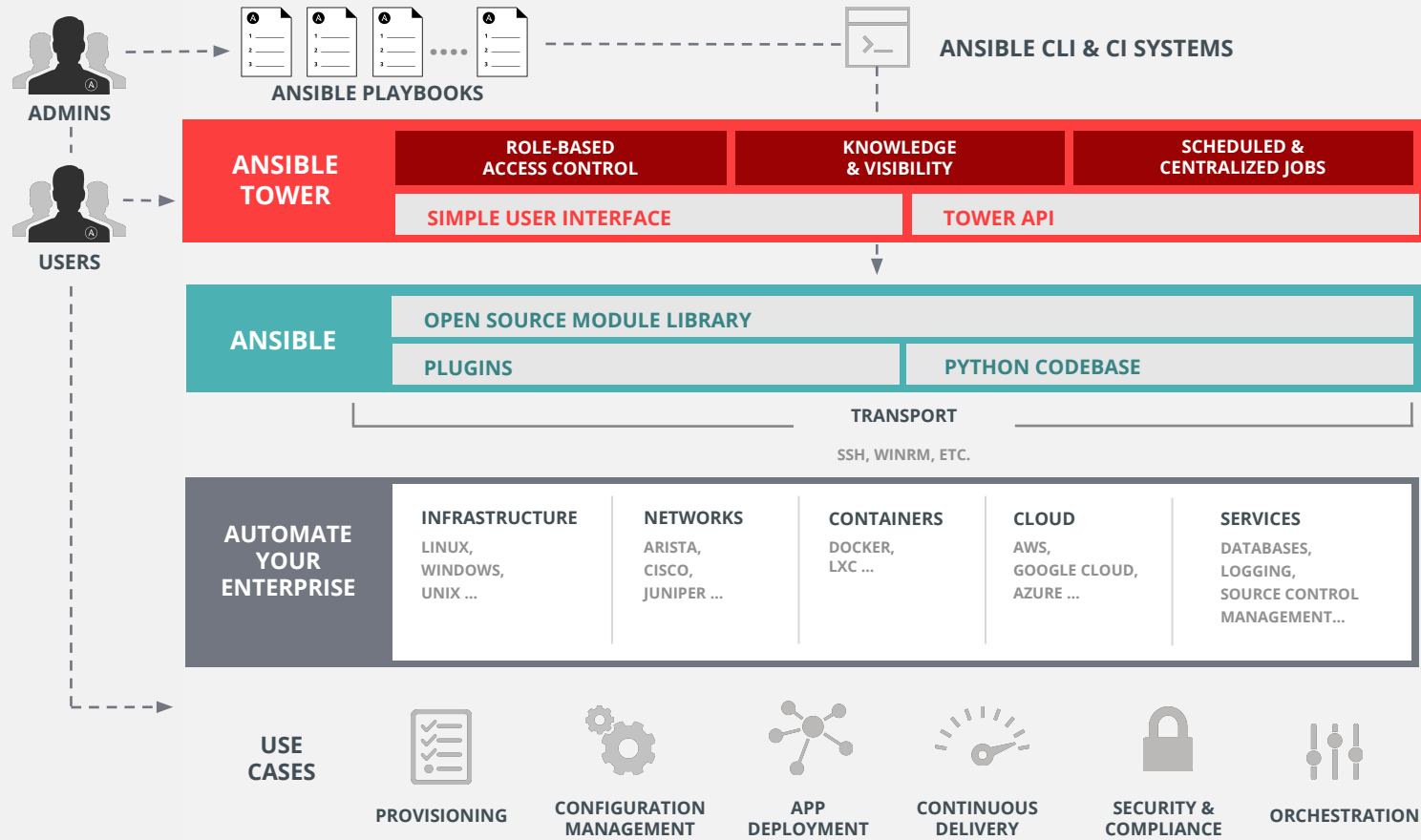
Ansible Tower technical introduction and overview

WHAT IS ANSIBLE TOWER?

Ansible Tower is an **enterprise framework** for controlling, securing and managing your Ansible automation – with a **UI** and **RESTful API**.

- **Secure credential storage**
- **Role-based access control**
- **Launch Playbooks with the click of a button**
- **Create workflows** composed of multiple Playbooks
- All automations are **centrally logged**







SUCCESS STORY

Ansible Automation at TJX



- A Global Off-price retailer of apparel and home fashions in the U.S. and worldwide
- Ranking No. 87 in the 2017 Fortune 500 listings
- 3800+ stores span 9 countries on 3 continents
- 7 Retail chains, including 3 e-commerce sites

INFRASTRUCTURE SERVICE DELIVERY TASKS

Server Builds

App/DB Deployment

OS Upgrades

Security Patches

Provision Service ID
Users/Groups

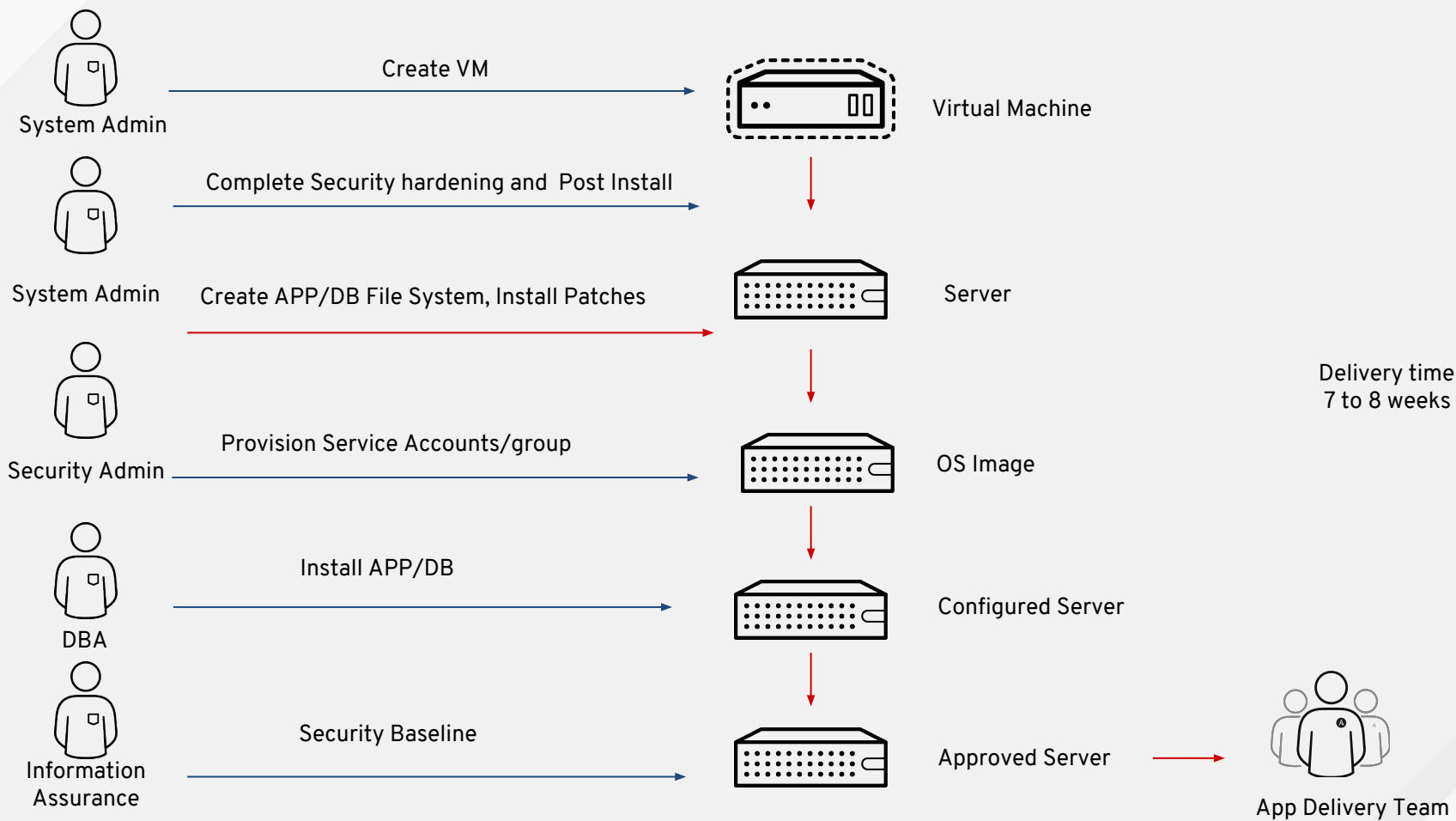
Configure Clusters

App/DB Upgrades

App / DB Changes



TRADITIONAL IT



ISSUES WITH TRADITIONAL INFRASTRUCTURE DELIVERY MODEL

Manual and inconsistent builds

Complex scripting

Room for human error

Low efficiency and high cost

Lack of drift detection management

Poor time to value ratio

Demands highly technical people

WHY DID WE CHOOSE ANSIBLE AND ANSIBLE TOWER?

AGENTLESS

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

LOW LEARNING CURVE

Ansible is incredibly easy to learn and doesn't require any programming skills.

DEVOPS READY

The agentless design paired with its large set of out-of-box modules makes Ansible perfect for DevOps.

PLATFORM AGNOSTIC

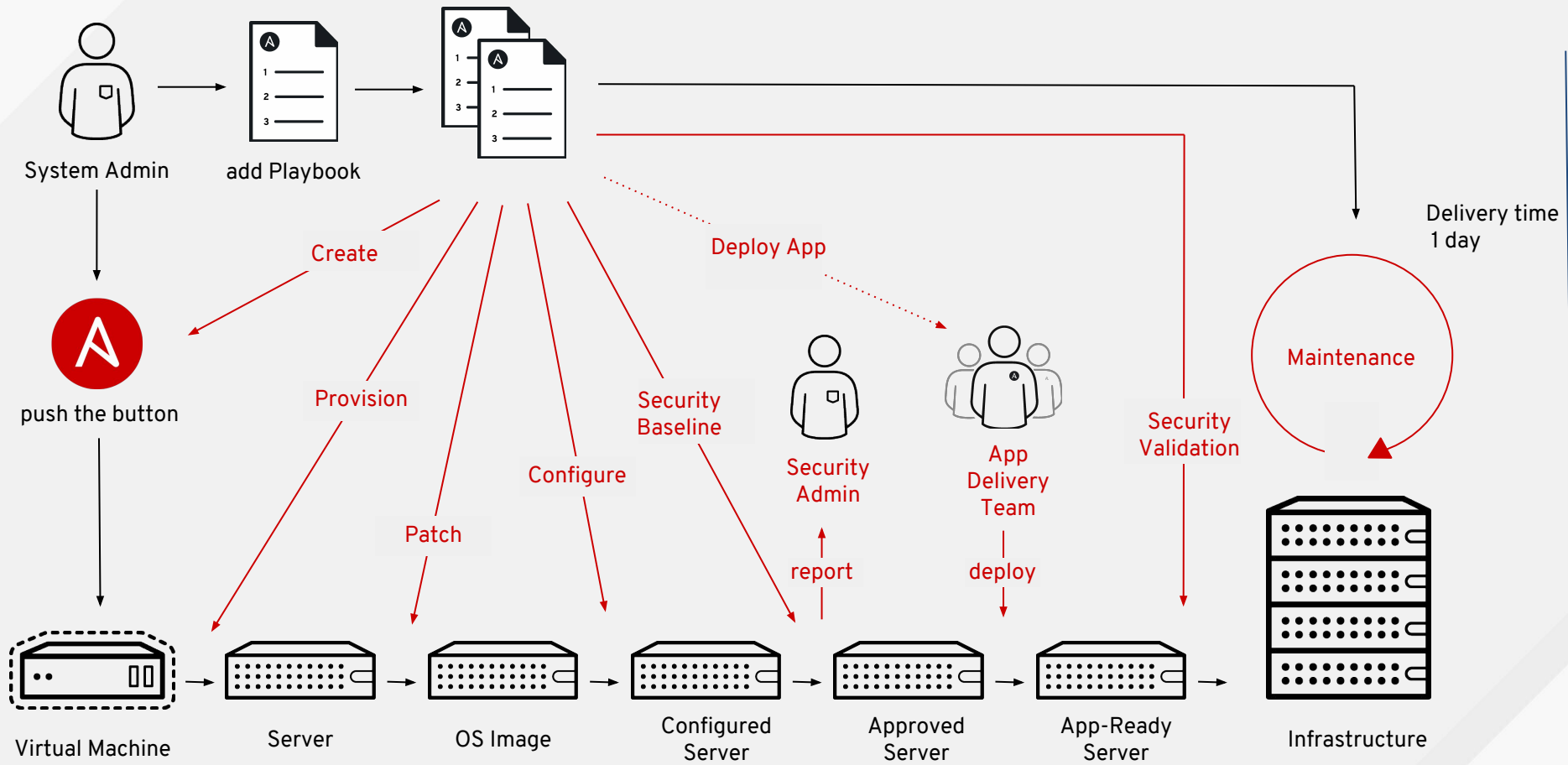
Ansible modules combined with the agentless design result in cross platform automation capabilities.

API ENABLED

Ansible can automate interaction with APIs and Ansible Tower has its own powerful API.

AUDIT AND RBAC

Ansible Tower provides a way to control who can take different actions and view what actions they have taken in the past.



WHAT DID WE AUTOMATE?

IaaS

Linux server builds
Post install configuration
Security hardening

PaaS

Middleware stack deployment
(WAS, MQ, IIB)
SQL, Oracle, DB2 DB
deployment

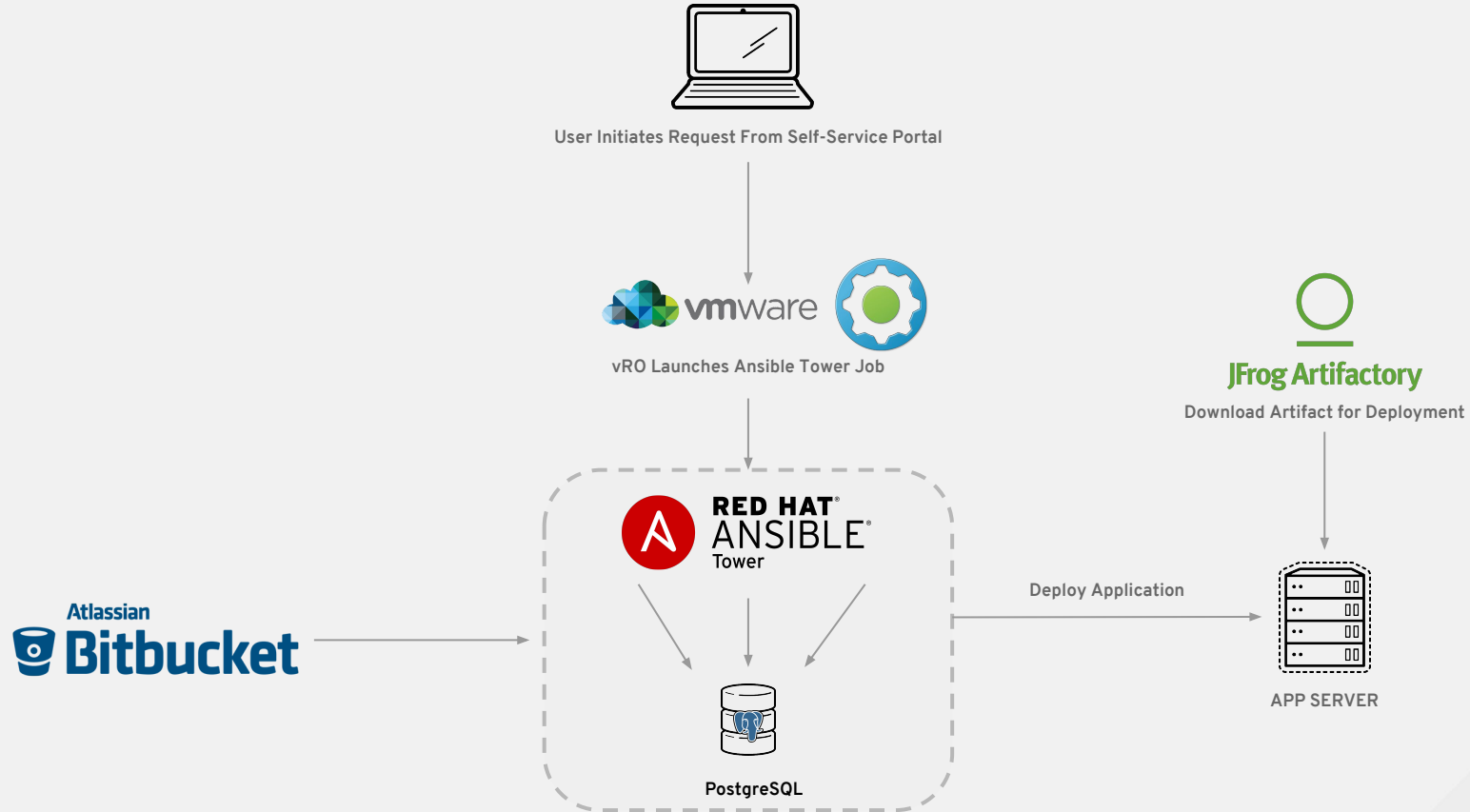
Full Stack Deployment

Install Java
Install web server
Configure web server
Deploy application

Operational Tasks

Patching and updates
Service account provisioning
Agent deployments

SELF-SERVICE APP DEPLOYMENT FLOW



RECOMMENDATIONS FROM THE EXPERIENCE

- Use Roles
- Externalize configuration parameters
- Use Tower for RBAC, auditing, UI and ease of management
- Use Tower API for integrations
- Get started now!



AUTOMATION & MANAGEMENT

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Automation



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What’s New’**
*New products under
development*

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