

5 great use-cases to automate your VMware infrastructure efficiently

Sean Cavanaugh
Technical Marketing Engineer
@IPvSean

What is Ansible Automation Platform for VMware?

A unified platform for hybrid cloud infrastructure



Ansible Automation Platform for VMware

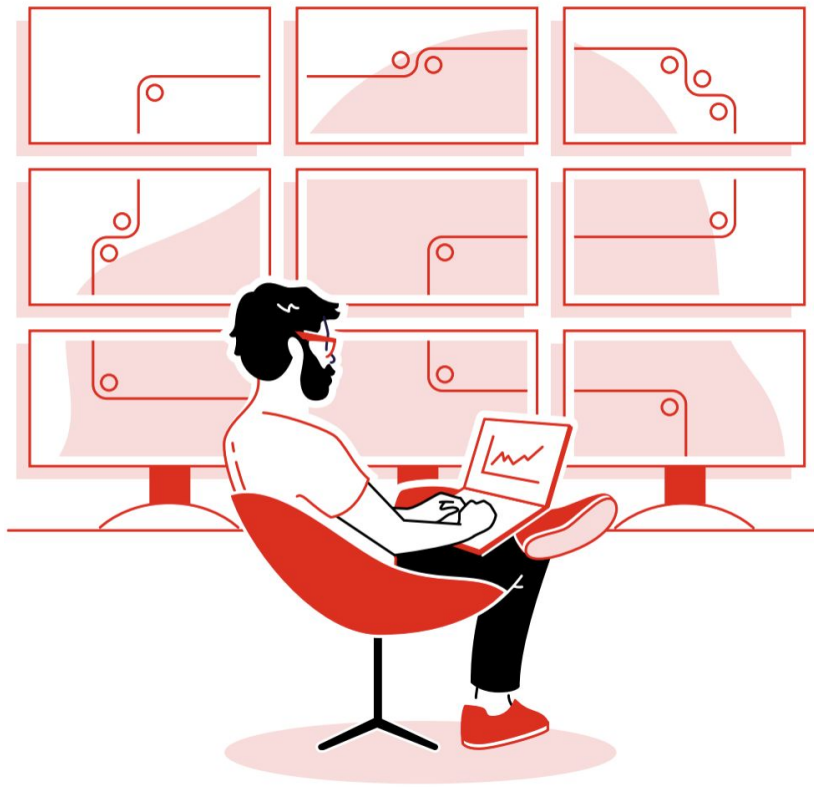


An integration with VMware's self-hosted, on-premise virtualization tools, such as VMware ESXi and vSphere



Supported set of Ansible® Automation Platform content designed to operationalize hybrid cloud management

What is the value of Ansible Automation Platform?



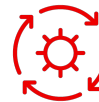
Speed

Reduce the number of manual steps and GUI-clicking, enable the orchestration of multiple tools and accelerate their interaction with each other



Reduce human error

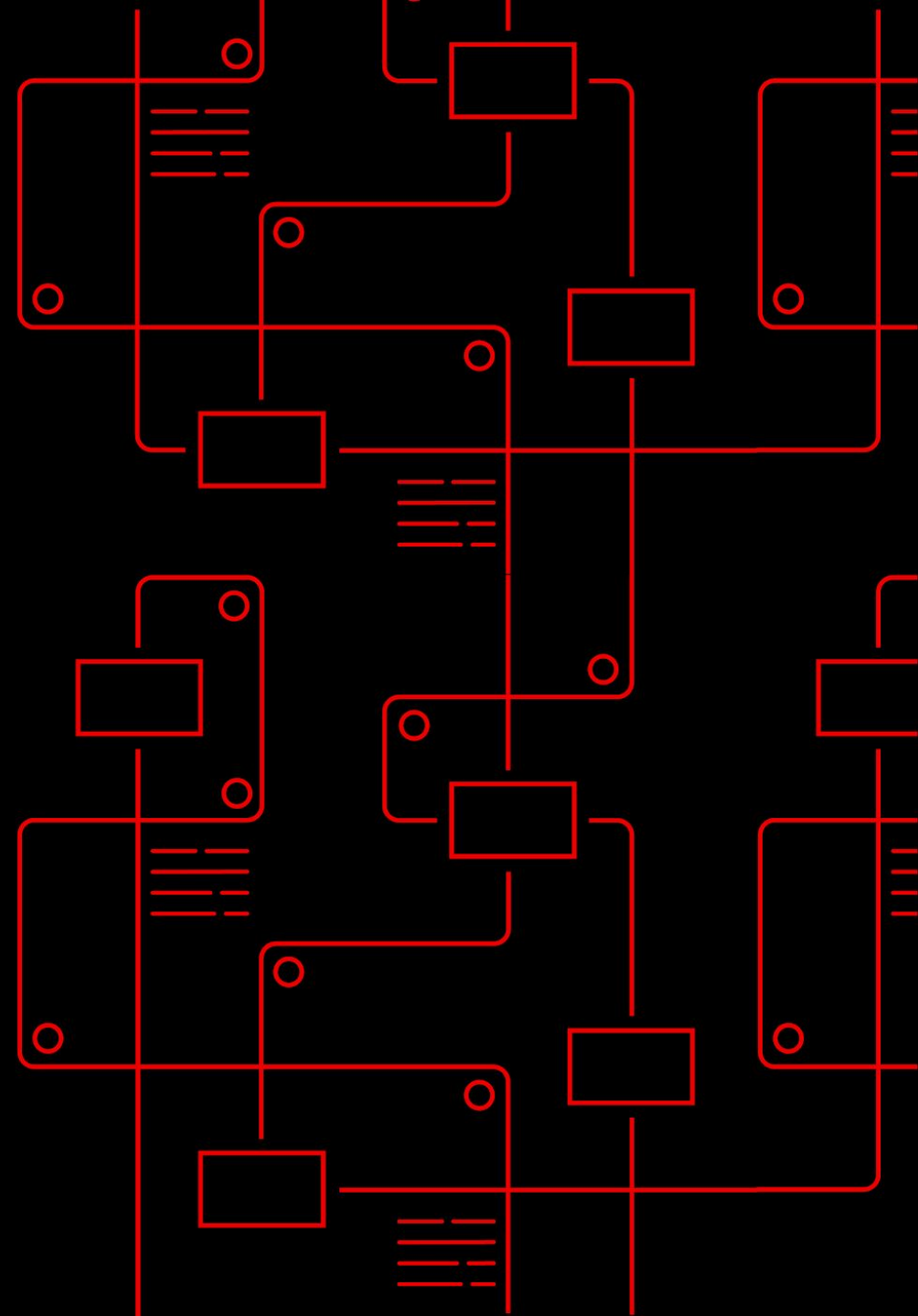
Minimize risks with automated workflows, avoid human operator errors in time-sensitive, stressful situations



Consistency

Enable auditable and verifiable deployment processes by using a single tool and common language

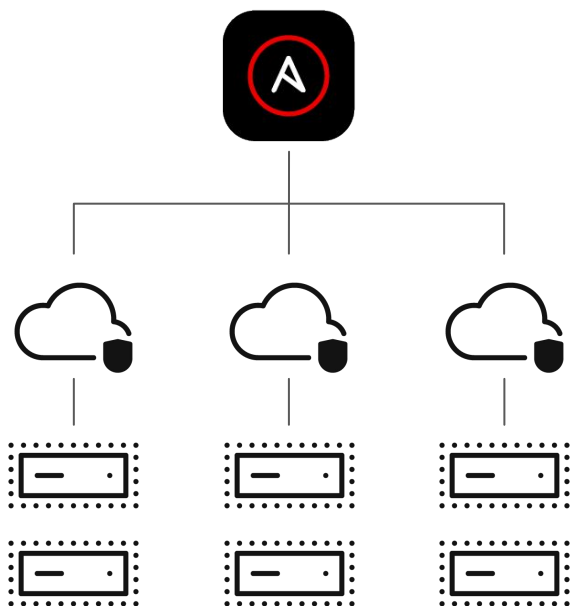
5 great use-cases



1

VM Deployment

Provisioning and cloning virtual machine guests



Why is it important?

- ▶ Automate provisioning and deprovisioning of virtual machines
- ▶ Consistent experience for IT operators
- ▶ Enforce compliance and rules sets for deployed machines

Why Red Hat Ansible Automation Platform?

- ▶ Use surveys to create guard rails for users
- ▶ Orchestrate into larger IT processes

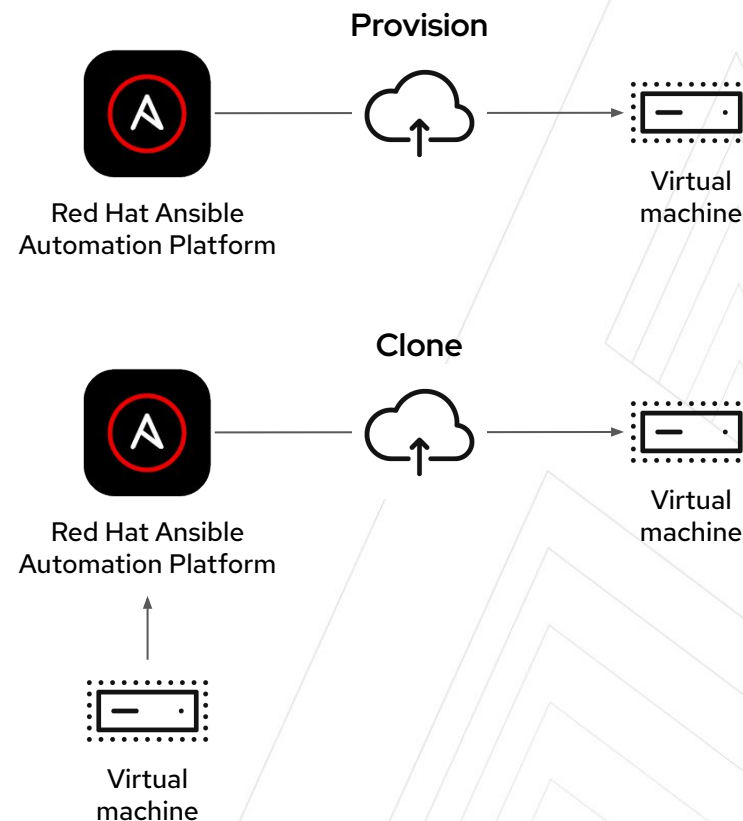
1

Provision virtual machine

Creating a virtual machine on VMware vSphere

```
---
- name: Provision virtual machine
  hosts: localhost
  tasks:

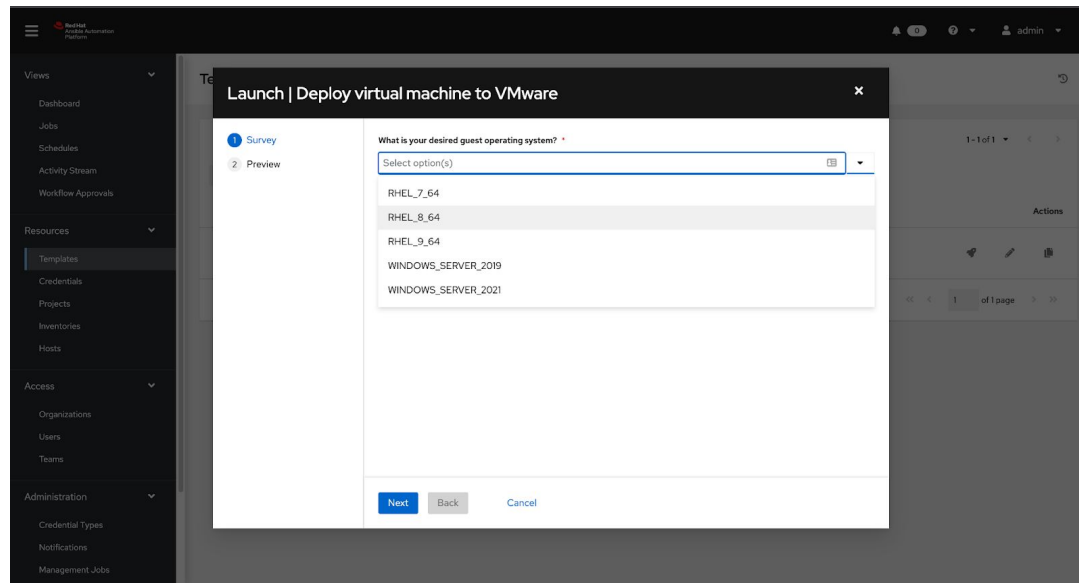
  - name: Use provision_vm role
    ansible.builtin.import_role:
      name: cloud.vmware_ops.provision_vm
  vars:
    provision_vm_cluster: "DC0_C0"
    provision_vm_folder: "/DC0/vm"
    provision_vm_datacenter: "DC0"
    provision_vm_name: "example_rhel_server"
    provision_vm_guest_id: RHEL_8_64
    provision_vm_hardware:
      memory_mb: 512
      num_cpus: 4
    provision_vm_disk:
      - size_gb: 10
        type: thin
      datastore: "LocalDS_0"
```



1

Provision virtual machine

Elevate tasks with survey feature



- ▶ No VMware specific knowledge required to execute complex tasks
- ▶ Empower novices to take on more activities with guardrails
- ▶ Automate routine and boring tasks away

2

Day 1 automation

Setup your VMware vSphere infrastructure



Why is it important?

- ▶ Customization of your VMware infrastructure
- ▶ Consistent automation platform across all IT infrastructure
- ▶ Flexibility to modify your VMware vSphere deployments to meet new demands

Why Red Hat Ansible Automation Platform?

- ▶ Push-button deployment for automation lowers barrier to automate
- ▶ Scheduling in automation controller to enforce configuration policy
- ▶ Customizable RBAC to control who can do what to VMware infrastructure

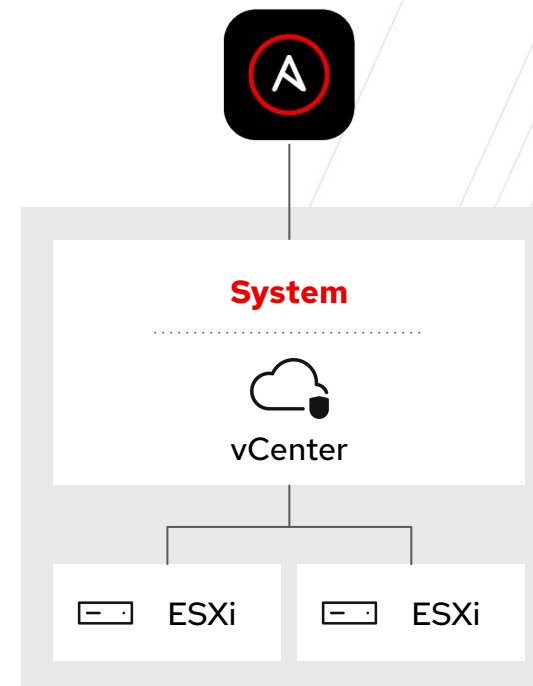
2

System Settings

Adjust VMware vSphere system settings

```
---
- name: Adjust VMware system settings
  hosts: localhost
  tasks:

- name: Use system_settings role
  ansible.builtin.import_role:
    name: cloud.vmware_ops.system_settings
  vars:
    system_settings_dns_mode: is_static
    system_settings_timezone: America/New_York
    system_settings_timesync_mode: "NTP"
    system_settings_ntp_servers:
      - "128.66.10.252"
      - "128.66.10.253"
```



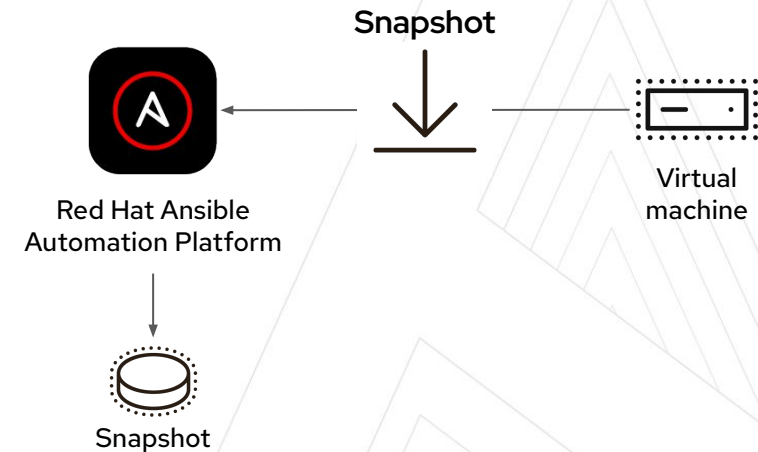
3

Snapshot

Create a snapshot of specified VM(s)

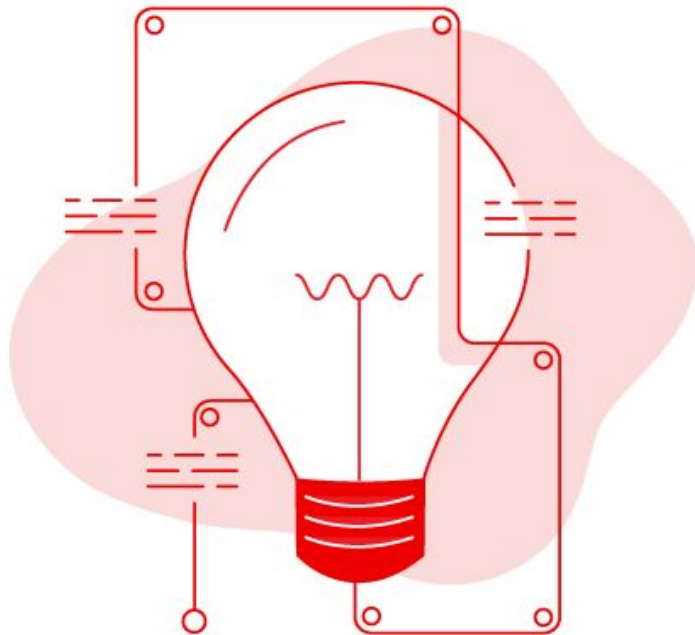
```
---
- name: Create a VM snapshot
  hosts: localhost
  tasks:

- name: Use snapshot_management role
  ansible.builtin.import_role:
    name: cloud.vmware_ops.snapshot_management
  vars:
    snapshot_management_folder: "/DC0/vm"
    snapshot_management_datacenter: "DC0"
    snapshot_management_name: "vm-test"
    snapshot_management_snapshot_name: "snap1"
```



Day 2 use cases for automation

Three logical categories for day 2 use cases



Power management

Automation controlling soft booting, shutdown, standby (suspend), soft reboot, hard reboot, hard reset, or hard suspend of virtual machines



Operational awareness

Information gathering modules (`_info`) that return structured data around device status (e.g. `appliance_health_system_info`, `appliance_networking_firewall_inbound_info`)



Guest modification

Modify virtual machine properties such as `vm_tools` installation for guest operating systems, changing hardware (e.g. `cdrom` and `sata`) or even starting programs

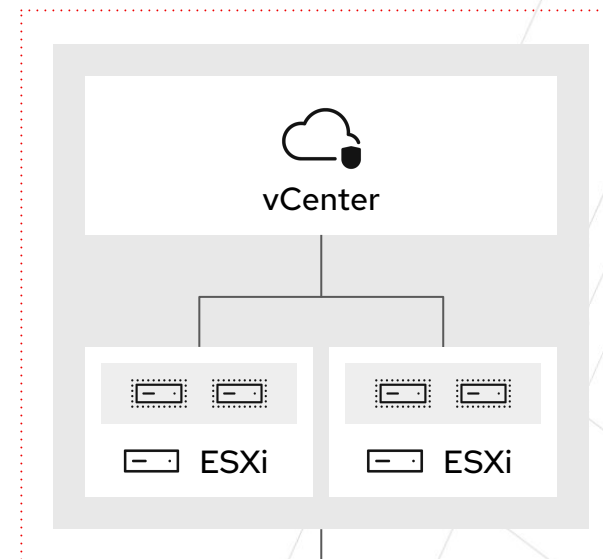
4

Infrastructure Visibility

Retrieve information from vSphere for Dynamic Documentation

```
---
- name: VMware Visibility
  hosts: localhost
  tasks:

  - name: Use info role
    ansible.builtin.import_role:
      name: cloud.vmware_ops.info
  vars:
    info_license: true
    info_storage: true
    info_appliance: true
    info_guest: true
```

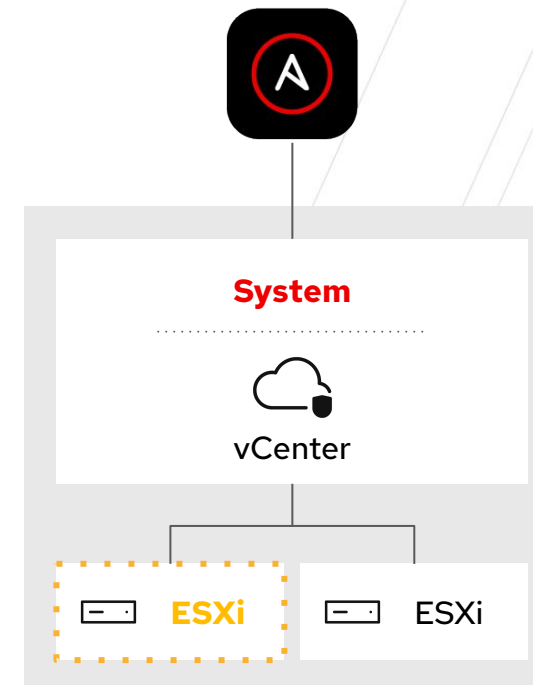


5

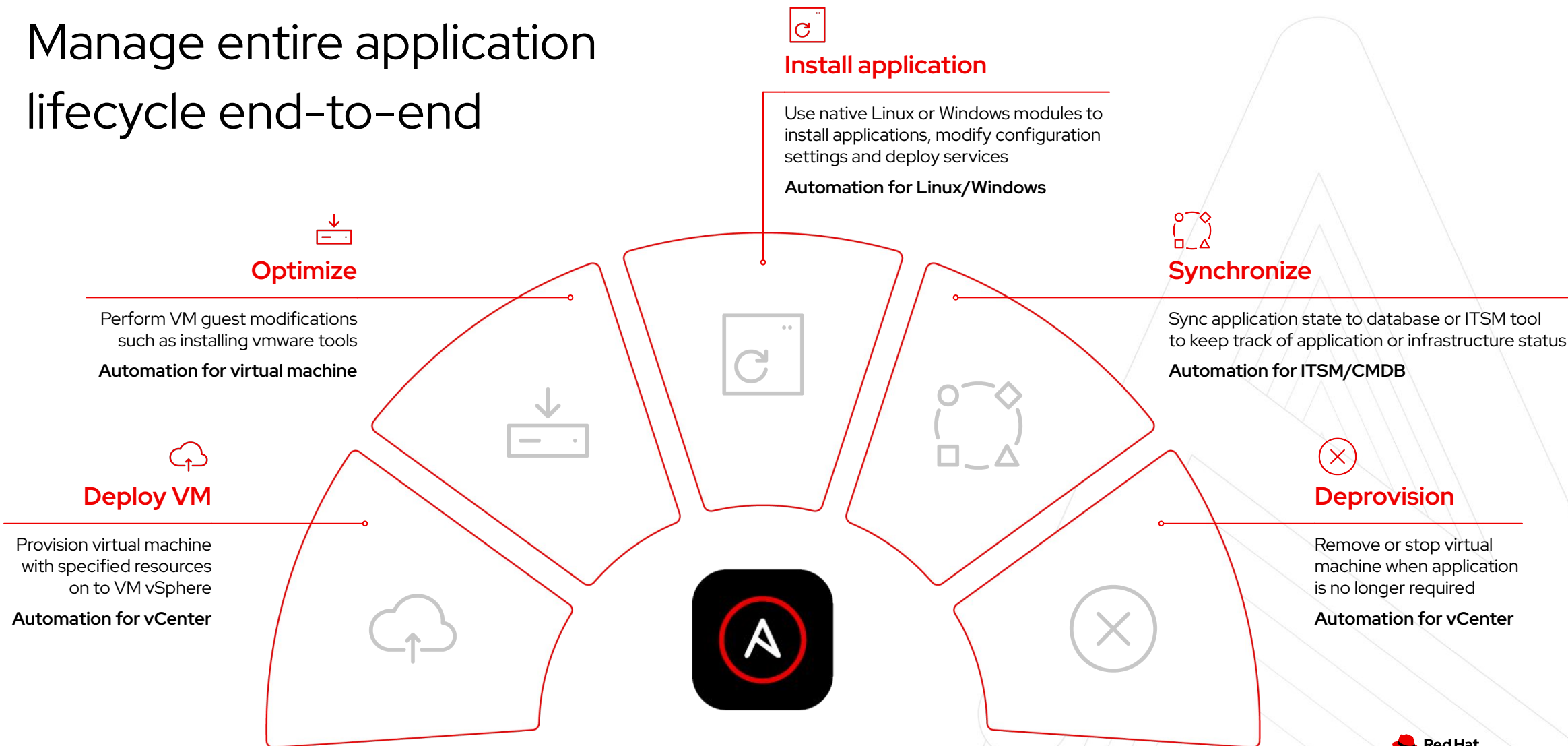
Maintenance Mode

Put an ESXi host in / out of maintenance mode

```
---  
- name: Put ESXi host into maintenance mode  
  hosts: localhost  
  tasks:  
  
  - name: Use esxi_maintenance_mode role  
    ansible.builtin.import_role:  
      name: cloud.vmware_ops.esxi_maintenance_mode  
    vars:  
      esxi_maintenance_mode_enable: True
```



Manage entire application lifecycle end-to-end



Learning resources

Continue your automation journey with Red Hat Ansible Automation Platform



Start your free trial at
red.ht/ansible_trial

- ▶ Ansible Automation Labs
red.ht/ansible_labs
- ▶ E-book:
An IT executive's guide to automation
red.ht/automate_guide
- ▶ Ansible Basics:
Automation Technical Overview
red.ht/automation_basics

Thank you

Red Hat is the world's leading provider of enterprise open source software solutions. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500.



linkedin.com/company/red-hat



youtube.com/c/AnsibleAutomation



facebook.com/redhatinc



twitter.com/ansible