



# Ansible and Ansible Tower by Red Hat

Manage tasks and processes with automation - using Ansible and  
Ansible Tower

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# Ansible by Red Hat



## 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 & secure

# Ansible Brand Architecture



**RED HAT®**  
**ANSIBLE®**  
Automation

This is the Ansible Product Family. It is used to generally refer to Ansible products.



**RED HAT®**  
**ANSIBLE®**  
Engine

Introducing Red Hat Ansible Engine. Simple, powerful, agentless. Includes full support for execution engine, core modules, and the Red Hat Subscription.



**RED HAT®**  
**ANSIBLE®**  
Tower

Control, knowledge, delegation for operationalizing enterprise automation environments for teams.

# Ansible Playbook

```
---  
- name: Update httpd config  
  hosts: webservers  
  vars:  
    http_port: 80  
    max_clients: 200  
  remote_user: devops  
  become: true  
  
  tasks:  
    - name: install httpd  
      yum: name=httpd state=latest  
    - name: write the apache config file  
      template: src=/srv/httpd.j2 dest=/etc/httpd.conf  
      notify:  
        - restart_httpd  
    - name: start httpd  
      service: name=httpd state=running enabled=true  
  
  handlers:  
    - restart_httpd  
      service: name=httpd state=restarted
```

playbook.yml

---

```
- name: play 1  
  hosts, configuration parameters, variables
```

tasks:

- install sw component
- modify config file  
 notify:
  - restart\_a\_service

- ...

handlers:

- restart\_a\_service  
 service:
  - name: a\_service
  - state: restarted

- ...

```
- name: play 2  
  hosts, configuration parameters, variables
```

---

# Ansible Modules

[Docs](#) » [Module Index](#)

## Module Index

- [All Modules](#)
- [Cloud Modules](#)
- [Clustering Modules](#)
- [Commands Modules](#)
- [Database Modules](#)
- [Files Modules](#)
- [Inventory Modules](#)
- [Messaging Modules](#)
- [Monitoring Modules](#)
- [Network Modules](#)
- [Notification Modules](#)
- [Packaging Modules](#)
- [Source Control Modules](#)
- [System Modules](#)
- [Utilities Modules](#)
- [Web Infrastructure Modules](#)
- [Windows Modules](#)

### service - Manage services.

- [Synopsis](#)
- [Options](#)
- [Examples](#)
- [This is a Core Module](#)

### Synopsis

Controls services on remote hosts. Supported init systems include BSD init, OpenRC, SysV, Solaris SMF, systemd, upstart.

### Options

parameter	required	default	choices	comments
arguments	no			Additional arguments provided on the command line  aliases: args
enabled	no		<ul style="list-style-type: none"><li>• yes</li><li>• no</li></ul>	Whether the service should start on boot. <b>At least one of state and enabled are required.</b>
name	yes			Name of the service.
pattern	no			If the service does not respond to the status command, name a substring to look for as would be found in the output of the <code>ps</code> command as a stand-in for a status result. If the string is found, the service will be assumed to be running.
runlevel	no	default		For OpenRC init scripts (ex: Gentoo) only. The runlevel that this service belongs to.
sleep (added in 1.3)	no			If the service is being <code>restarted</code> then sleep this many seconds between the stop and start command. This helps to workaround badly behaving init scripts that exit immediately after signaling a process to stop.
state	no		<ul style="list-style-type: none"><li>• started</li><li>• stopped</li><li>• restarted</li><li>• reloaded</li></ul>	<code>started</code> / <code>stopped</code> are idempotent actions that will not run commands unless necessary. <code>restarted</code> will always bounce the service. <code>reloaded</code> will always reload. <b>At least one of state and enabled are required.</b>

# Ansible Galaxy

[ABOUT](#)[EXPLORE](#)[BROWSE ROLES](#)[BROWSE AUTHORS](#)[MY ROLES](#)[JJSKORZYN](#)[BROWSE ROLES](#)Keyword SORT **mysql**

1530

ansible role for mysql

Type **Ansible**  
Author [bennojoy](#)  
Platforms **Enterprise\_Linux, Fedora, Ubuntu**  
Tags **database, sql**  
Last Commit NA  
Last Import NA

[Watch 21](#) [Star 117](#)**nginx**

1323

ansible role nginx

Type **Ansible**  
Author [bennojoy](#)  
Platforms **Enterprise\_Linux, Fedora, Ubuntu**  
Tags **web**  
Last Commit NA  
Last Import NA

[Watch 17](#) [Star 89](#)**network\_interface**

618

role for system network configuration

Type **Ansible**  
Author [bennojoy](#)  
Platforms **Enterprise\_Linux, Fedora, Ubuntu**  
Tags **development, networking, system**  
Last Commit NA  
Last Import NA

[Watch 12](#) [Star 55](#)**ntp**

9880

ansible role ntp

Type **Ansible**  
Author [bennojoy](#)  
Platforms **Enterprise\_Linux, Fedora, Ubuntu**  
Tags **development**  
Last Commit NA  
Last Import NA

[Watch 8](#) [Star 23](#)**memcached**

601

ansible role memcached

Type **Ansible**  
Author [bennojoy](#)  
Platforms **Enterprise\_Linux, Fedora, Ubuntu**  
Tags **web**  
Last Commit NA  
Last Import NA

[Watch 5](#) [Star 10](#)**redis**

177

ansible role for configuring redis

Type **Ansible**  
Author [bennojoy](#)  
Platforms **Enterprise\_Linux, Ubuntu**  
Tags **web**  
Last Commit NA  
Last Import NA

[Watch 0](#) [Star 0](#)

POPULAR TAGS

system	4139
development	2158
web	1838
monitoring	846
networking	746
database	717
cloud	630
packaging	610
ubuntu	341
docker	309





**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

# Ansible Tower

**ACCESS CONTROL**  
Role-based access control & LDAP integration

**DELEGATION OF CREDENTIALS**  
Delegate credentials without giving away secrets

**INVENTORY MANAGEMENT**  
Graphically manage your internal & cloud resources

**API & CLI**  
Documented RESTful API and Tower CLI to integrate Tower into your tools

**AUDITING**  
See a full Ansible job history with drill-in details

**PUSH-BUTTON LAUNCH**  
Launch automation jobs with a button

**SCHEDULING**  
Schedule automation jobs (great for periodic remediation)





# Ansible Tower Workflows

**EDIT WORKFLOW**

KEY: — On Success — On Fail — Always P Project Sync I Inventory Sync TOTAL TEMPLATES 6 ⚙

```
graph LR; START[START] -- Always --> DemoProject[Demo Project]; DemoProject -- Project Sync --> DemoJob1[Demo Job Template...]; DemoProject -- On Fail --> DemoJob2[Demo Job Template...]; DemoJob1 -- Always --> DemoJob3[Demo Job Template...]; DemoJob1 -- Always --> DemoJob4[Demo Job Template...]; DemoJob3 -- On Success --> DemoJob5[Demo Job Template...];
```

**DEMO JOB TEMPLATE**

JOBS PROJECT SYNC INVENTORY SYNC

SEARCH 🔍 KEY

NAME ▲

Demo Job Template INFO

ITEMS 1 - 1 OF 1

\*TYPE

On Success

On Failure

CANCEL SELECT

CLOSE SAVE

# Ansible Tower

## ENTERPRISE LOG INTEGRATION

- Log all Tower activity to central enterprise logging
- Cross-reference automation with events and application logs
- Use Tower's API to perform remediation if needed
- Support for:
  - Elastic
  - Splunk
  - Sumologic
  - Loggly
  - Custom (Via WebHook/RESTful API)

# Ansible Tower Clusters

## ADD TOWER CAPACITY AND REDUNDANCY WITH EASE

- Add new Tower nodes to scale out Tower job capacity
- Tower node fails? No problem
- Individual Tower jobs will run on any node with available capacity
- Cluster stays in sync with in-Tower configuration

# An Automated Ecosystem

**RED HAT®**  
SATELLITE

**RED HAT®**  
CLOUDFORMS

**RED HAT®**  
INSIGHTS

+



**RED HAT®**  
**ANSIBLE®**  
Automation

POWERS

**RED HAT®**  
ENTERPRISE  
LINUX®

**RED HAT® JBOSS®**  
MIDDLEWARE



**RED HAT®**  
OPENSIFT

**RED HAT®**  
STORAGE

**RED HAT®**  
VIRTUALIZATION

**RED HAT®**  
OPENSTACK®  
PLATFORM

# Trainings and Materials

## **Ansible Courses:**

- DO407 - Automation with Ansible
- EX407 - Red Hat Certificate of Expertise in Ansible Automation

## **Materials:**

- Tower Trial - [ansible.com/tower-trial](https://ansible.com/tower-trial)
- Getting started - [ansible.com/getting-started](https://ansible.com/getting-started)
- More? - [ansible.com/whitepapers](https://ansible.com/whitepapers)

# Dziękuję

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