Automation for all

#ANSIBLEFEST2019
Keynotes from Microsoft and JP Morgan Chase

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Announcing the Red Hat Ansible Automation Platform
Red Hat Ansible Automation History

At Red Hat, we’ve worked over time to bring you the automation content, engine, and infrastructure you need for your enterprise.
Red Hat Ansible Automation History

Trusted and verified automation engine for automating across IT operations

An enterprise product for controlling and scaling automation

Out-of-the-box content for Networking and Security (beta)

Certified partner content
Teams are automating...

LINES OF BUSINESS  NETWORK  SECURITY  OPERATIONS  DEVELOPERS  INFRASTRUCTURE
When automation crosses teams, you need an Automation Platform
Introducing the Red Hat Ansible Automation Platform
Red Hat Ansible Automation Platform

- **Accelerate**
  - Content Collections

- **Collaborate**
  - Automation Hub

- **Trust**
  - Certified Content

- **Inform**
  - Automation Analytics

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**Ansible Tower:** Operate & control at scale

**Ansible Engine:** Universal language of automation

**Fueled by an open source community**
What is coming with the Automation Platform?

COLLECTIONS
A new method of building and consuming Ansible content

AUTOMATION HUB
Private content repository for sharing Automation

SCALABLE EXECUTION
Extending Tower to support automation whenever and wherever you need it

AUTOMATION ANALYTICS
Analytical insights into the Automation runtime

DEVELOPER KIT
Creator based tooling to simplify content creation and distribution

CONTENT PACKAGES
Opinionated, focused content, targeting key automation use cases, from Red Hat and certified partners
Red Hat Ansible Automation Platform

Collections

Automation Hub
Scalable Execution
Automation Analytics
Developer Kit
Content Packages
The success and growth of Ansible has been staggering. But as time has gone on, we are reaching the limit of a single content lifecycle and distribution point.

**500+**

*Modules in Ansible 2.0*

For Linux management, cloud provisioning, application deployment, Windows management and more.

**3000+**

*Modules in Ansible 2.8*

For all of the above, and networking, storage, security, and anything else you can imagine.
But why would we change?

FOR THE COMMUNITY
More independence

FOR OUR CUSTOMERS
More control

FOR OUR PARTNERS
More flexibility

FOR ANSIBLE
More innovation
Introducing Collections

A new way to create, package, and distribute Ansible Content

Repository structure and artifact to enable simple delivery of Ansible Content (Roles, Modules, and Plugins)
- A format for consistent project structure while in development
- Enables versioning of external content
- Allows consistent delivery outside of Ansible packages

Allows for immediate use of the content found within the Artifact within a play

Namespacing support built into platform to account for content in a Collection
Example Collection

Layout

```
.  galaxy.yml
  plugins
    action
      ping.py
    module_utils
      pingutils.py
    modules
      ping.py
  roles
    ping_bootstrap
      defaults
      filters
      meta
      tasks
      vars
    ping_deploy
      defaults
      meta
      tasks
```

In a playbook

```
hosts: somehosts
collections:
  - tima.pinger
  - redhat.open_ping
tasks:
  - tima.pinger.ping:
  - ansible.builtin.ping: # use only the ping packaged in core
  - ansible.legacy.ping: # use core or library/etc/ping.py
    when: thing | tima.pinger.filter == 42
  - ping: # searches collections “path” otherwise...
    tasks: # still works, == ansible.legacy.ping:
```
Example galaxy.yml

```yaml
namespace: "namespace_name"
name: "collection_name"
version: "1.0.12"
readme: "README.md"
authors:
  - "Author1"
  - "Author2 (http://author2.example.com)"
  - "Author3 <author3@example.com>"
dependencies:
  "other_namespace.collection1": ">=1.0.0"
  "other_namespace.collection2": ">=2.0.0,<3.0.0"
  "anderson55.my_collection": "*"  # note: "*" selects the highest version available
license:
  - "MIT"
tags:
  - demo
  - collection
repository: "https://www.github.com/my_org/my_collection"
documentation: "http://my-docs.example.com"
homepage: "http://www.example.com"
issues: "https://www.github.com/my_org/my_collection/issues"
```
New ansible-galaxy sub-commands

The `ansible-galaxy collection` command implements (initially) the following sub commands:

- **init:** Create a basic collection skeleton based on the default template included with Ansible.
- **build:** Create a collection artifact that can be uploaded to Galaxy or your own repository.
- **publish:** Publish a built collection artifact to Galaxy.
- **install:** Install one or more collections.
Upload collection in galaxy website
Red Hat Ansible Automation Platform

Collections

Automation Hub

Scalable Execution
Automation Analytics
Developer Kit
Content Packages
Introducing the Automation Hub

Discover, publish, and manage your Ansible Collections

Introducing the Automation Hub, a new service available to Ansible Automation subscribers.

Discover available Red Hat and Certified content.

Manage, audit, and test your organization’s view of available content.

Manage your locally available automation via on-premise linkages.
Enabling Automation for All

Via Ansible Collections and Ansible Certified Content, and Ansible Tower

Manage your organization’s approved content from public, partner, and private sources.

Choose your certified automation from you organization, provide a few parameters and go.

Create complex workflows without ever writing automation code.
Red Hat Ansible Automation Platform

Collections
Automation Hub

Scalable Execution
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Developer Kit
Content Packages
Scalable Execution Capacity

Automate across and beyond the enterprise

Where you need it
Unifying task execution across execution nodes

When you need it
Leverage Kubernetes and OpenShift to spin up execution capacity at runtime

How you need it
Expand execution to be able to pull jobs from a central Ansible Tower infrastructure
Automation Webhooks

Enabling GitOps

Automatically provision, update, configure, and apply based on pushes to your source control.
Centralized Automation Console

Ansible Tower - collecting automation from anywhere

Record Ansible automation, no matter where in your infrastructure it’s running.
- Red Hat Insights
- Ansible Operators in OpenShift
- Red Hat Satellite
- Red Hat CloudForms
- and more

Securely log and audit all automation.
Red Hat Ansible Automation Platform

Collections
Automation Hub
Scalable Execution

Automation Analytics
Developer Kit
Content Packages
Introducing Automation Analytics:
Enabling an Automation Center of Excellence

View real-time information about automation health, usage and performance across your enterprise. Powered by the Red Hat Cloud Platform.

Gain information about automation in your organization:
- Which organizations are using the most automation
- Utilization rates
- Enterprise-wide success and failure rates for automation
- If automation is failing in certain cases, why?
Red Hat Ansible Automation Platform

- Collections
- Automation Hub
- Scalable Execution
- Automation Analytics
- Developer Kit
- Content Packages
Ansible Developer Kit

Persona derived tool sets for the creation, development, and testing of Ansible Collections.

- Develop, test, build, and publish content with ease
- Tools for linting, verifying, and testing roles and modules
- Building on ansible-galaxy, ansible-lint, ansible-test, and other tools
- Integration into IDE's*

* TBD. Subject to change
Red Hat Ansible Automation Platform

Collections
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Content Packages
Ansible Networking
Building resource-based management

Fact modules transform network configuration into structured data.

Resource modules transform structured data into configurations.
Ansible Security Automation

Triage Of Suspicious Activities
Enabling programmatic access to log configurations such as destination, verbosity, etc.

Threat Hunting
Automating alerts, correlation searches and signature manipulation

Incident Response
Creating new security policies to whitelist, blacklist or quarantine a machine
Ansible Operator SDK for Kubernetes Application Management

**Operator SDK**

- **operator-sdk new**
  Use the Operator SDK to create a new skeleton Operator.

- **Add Ansible Roles/Playbooks**
  Use Ansible roles and playbooks to manage lifecycle events for your containerized applications.

- **operator-sdk build**
  Use the Operator SDK to build and deploy your Operator to Kubernetes.
Roadmap Timeline
Red Hat Ansible Automation Futures

As we move forward with the Automation Platform, we will continue to release additional capabilities into the Platform offering.

* all features for 2020 are yet to be confirmed until committed to a published release
Now available
Collections (beta)
Collection support in Ansible Galaxy
Support for RHEL 8
External Credential Vault Integrations
Tower Cluster Metrics

Initial release of the Automation Platform
Automation Analytics
Collections (GA)
Automation Hub launch
- Certified Partner content home
- Delivery of Collections to subscribers
Basic collection support in Tower
Git Webhooks
Scalable execution in OpenShift/Kubernetes (tech preview)
Security Automation (GA)
Network Automation Collections introduced
Spring 2020 and beyond

Collection synchronization and management in Tower
Direct Collection use in Workflows
Ansible content now delivered in Collections
On-premise content management in Automation Hub
On-demand execution scaling outside of OpenShift/Kubernetes
Networking Automation reference architectures
Collections for additional Automation use cases
Developer tools for content testing and publishing
Questions?
EVENT

Ansible Automates Netherlands

March 14, 2018  |  Bussum, Netherlands  |  Spant!

REMEMBER THIS?
EVENT

Ansible Automates Netherlands

11 December 2019

Bussum, Netherlands | Spant!

SAVE THE DATE !!!
RED HAT FORUMS
EXPAND YOUR POSSIBILITIES
THANK YOU and
HAVE A GREAT FORUM!