Red Hat
RED HAT FORUMS
AnsibleFest 2019
Afterparty
Fred van Zwieten
Senior Solution Architect Platform & Cloud

Automation for all

#ANSIBLEFEST2019

#ANSIBLEFEST

#ANSIBLEFEST ATLANTA 2019

80+ sessions
7 workshops

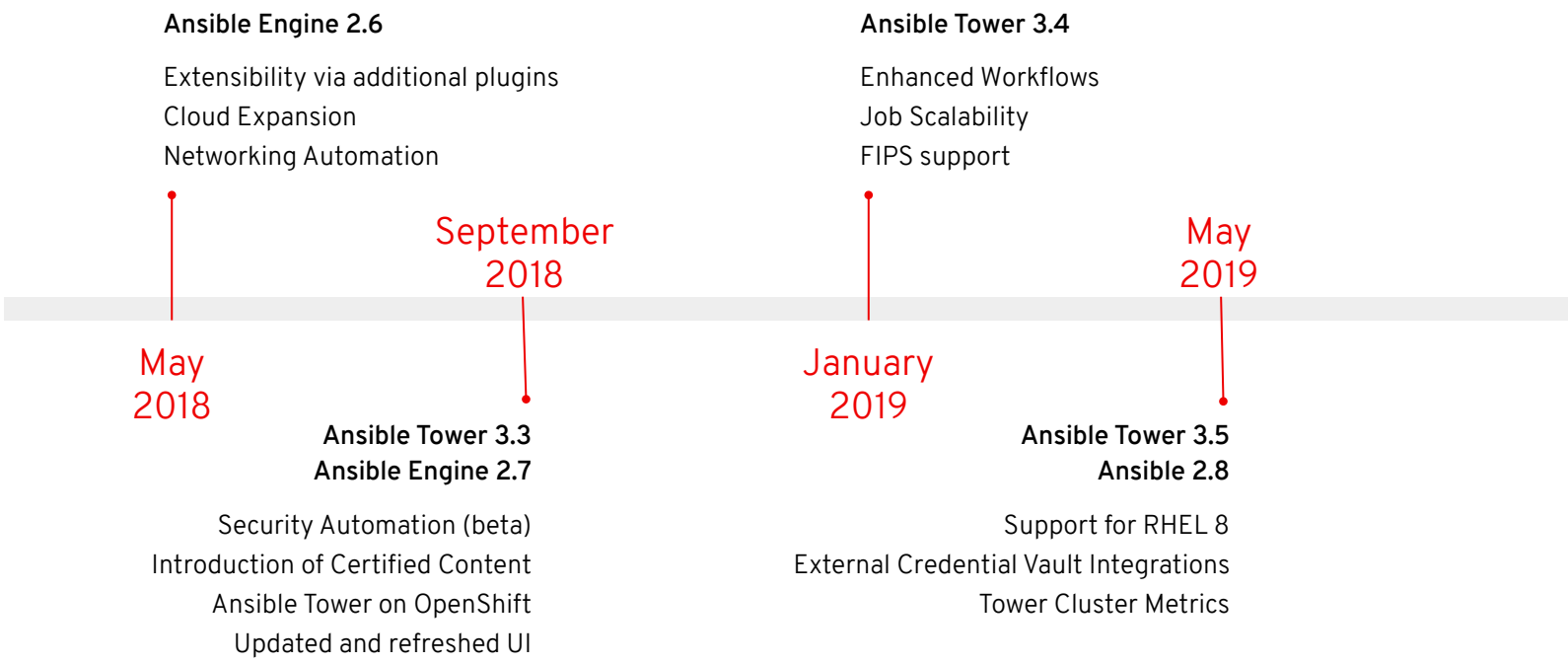
Keynotes from
Microsoft and
JP Morgan Chase

20
sponsors

Announcing the Red Hat Ansible Automation Platform

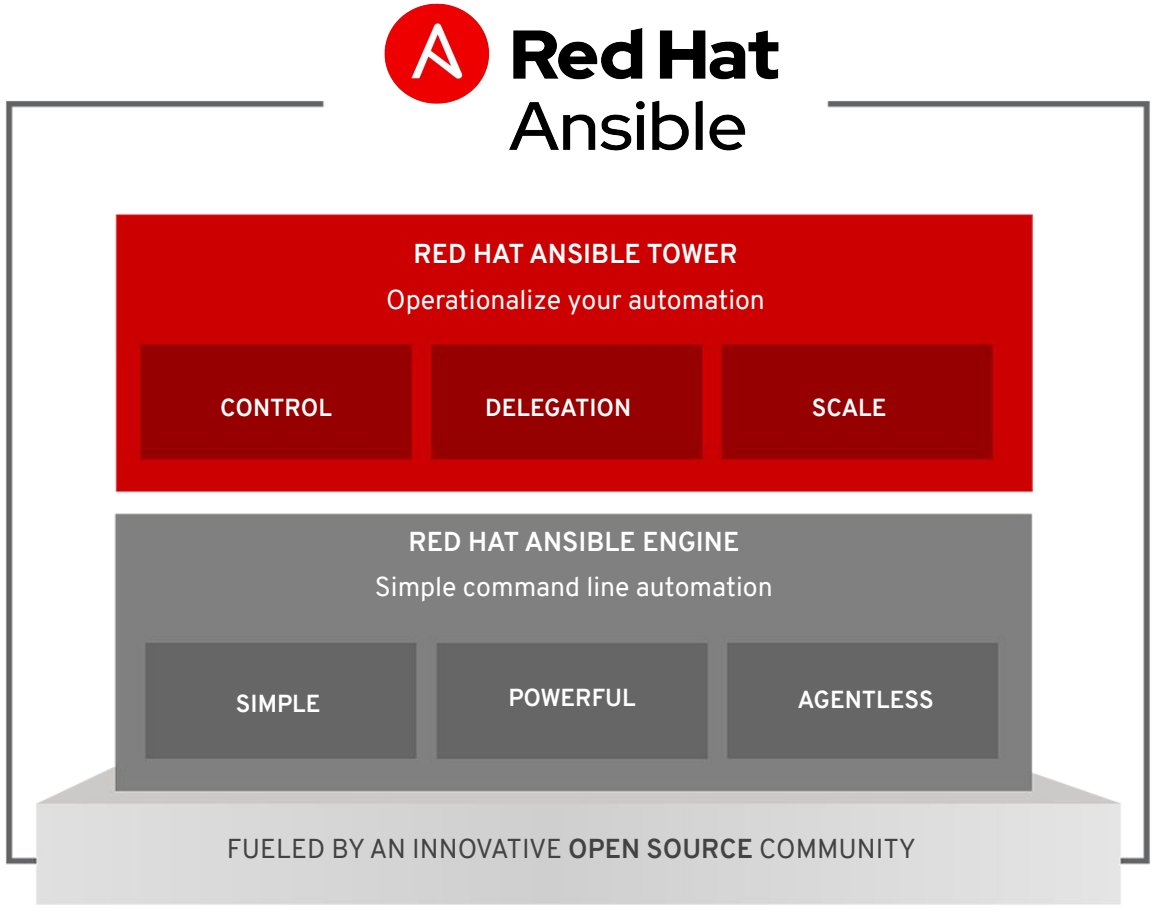
Red Hat Ansible Automation History

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



Red Hat

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

Red Hat

Teams are automating...

LINES OF BUSINESS

NETWORK

SECURITY

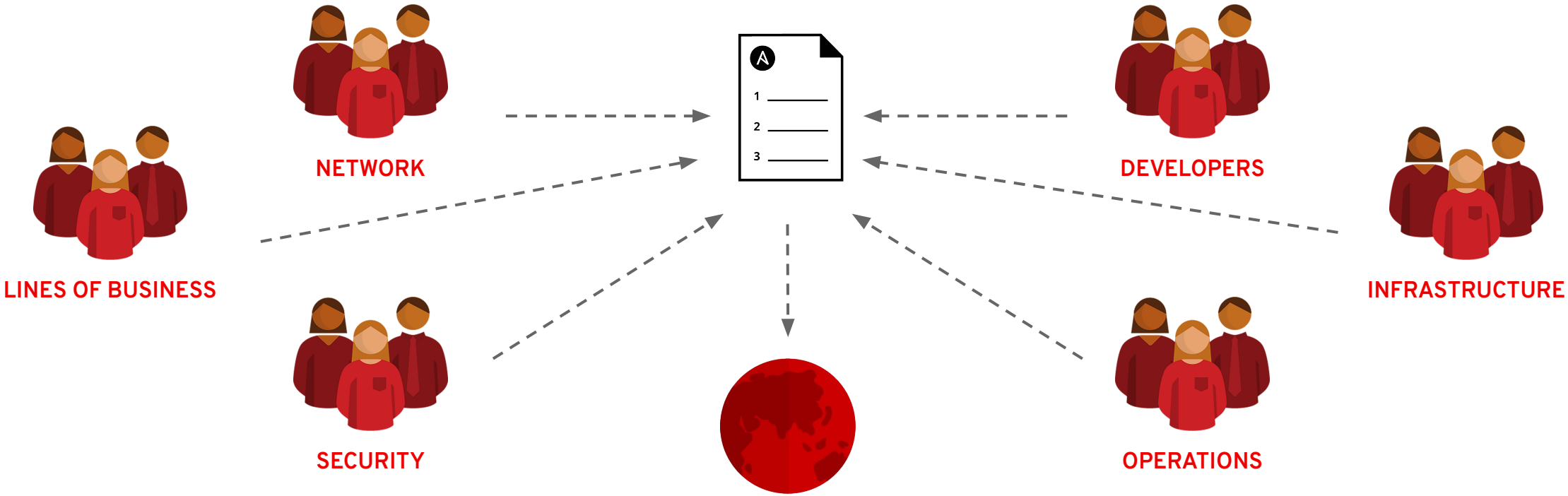
OPERATIONS

DEVELOPERS

INFRASTRUCTURE

Red Hat

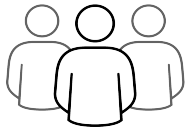
When automation crosses teams, you need an Automation Platform



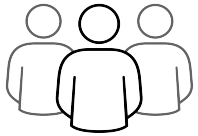
Red Hat

Introducing the Red Hat Ansible Automation Platform

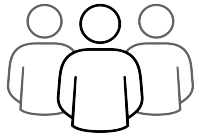
Red Hat



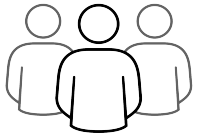
Network



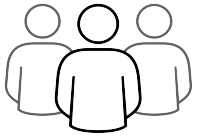
Lines Of Business



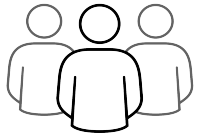
Security



Operations



Infrastructure



Developers

Red Hat Ansible Automation Platform

Accelerate
Content Collections

Collaborate
Automation Hub

Trust
Certified Content

Inform
Automation Analytics

Ansible Tower: Operate & control at scale

Ansible Engine: Universal language of automation

Fueled by an open source community

Red Hat

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

Red Hat Ansible Automation Platform

Collections

Automation Hub

Scalable Execution

Automation Analytics

Developer Kit

Content Packages

Red Hat

Ansible - a story of growth

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.

Red Hat

But why would we change?

FOR THE COMMUNITY
More independence

FOR OUR CUSTOMERS
More control

FOR OUR PARTNERS
More flexibility

FOR ANSIBLE
More innovation

Red Hat

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

Red Hat

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

```yaml
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…
          # still works, == ansible.legacy.ping:
```


Red Hat

Example galaxy.yml

```
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"
```


Red Hat

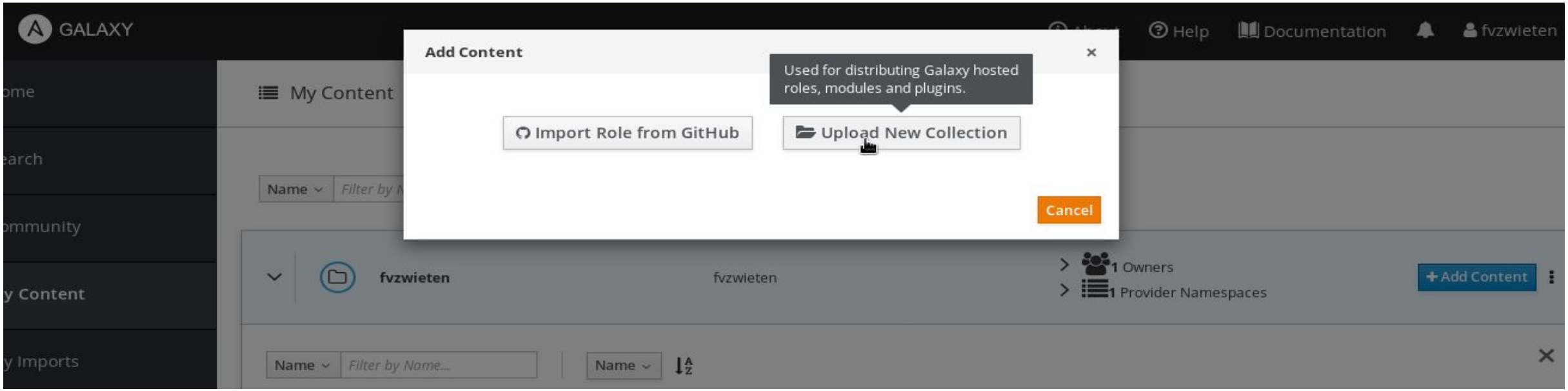
New ansible-galaxy sub-commands

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.

Red Hat

Upload collection in galaxy website



Red Hat

Red Hat Ansible Automation Platform

Collections

Automation Hub

Scalable Execution

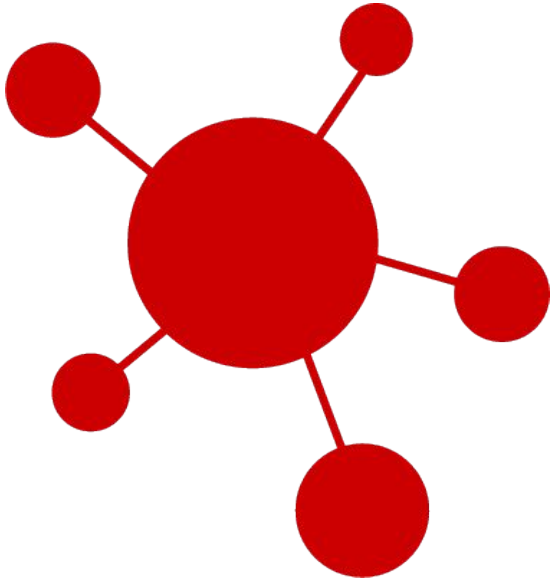
Automation Analytics

Developer Kit

Content Packages

Red Hat

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.

Red Hat

Enabling Automation for All

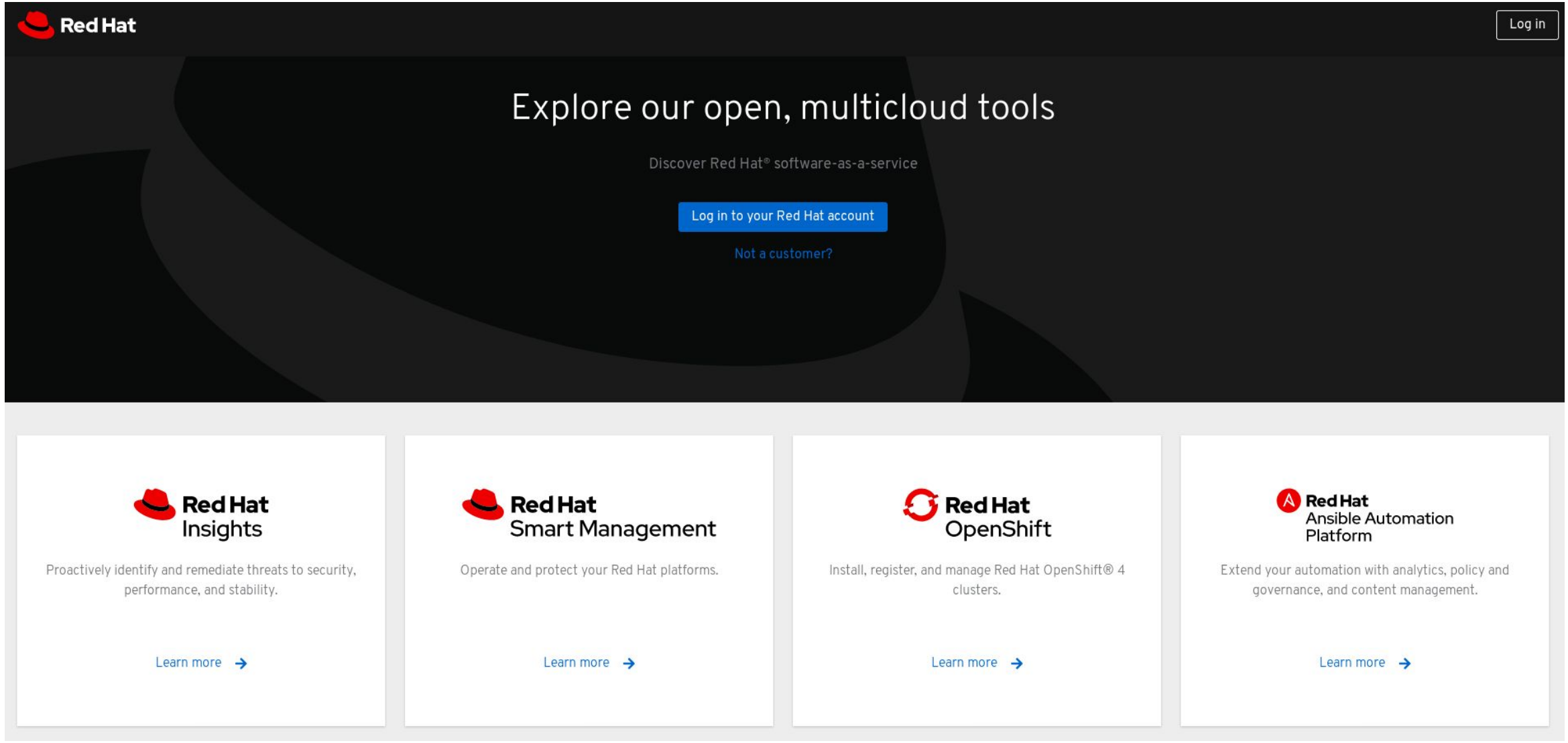
Via Ansible Collections and Ansible Certified Content, and Ansible Tower

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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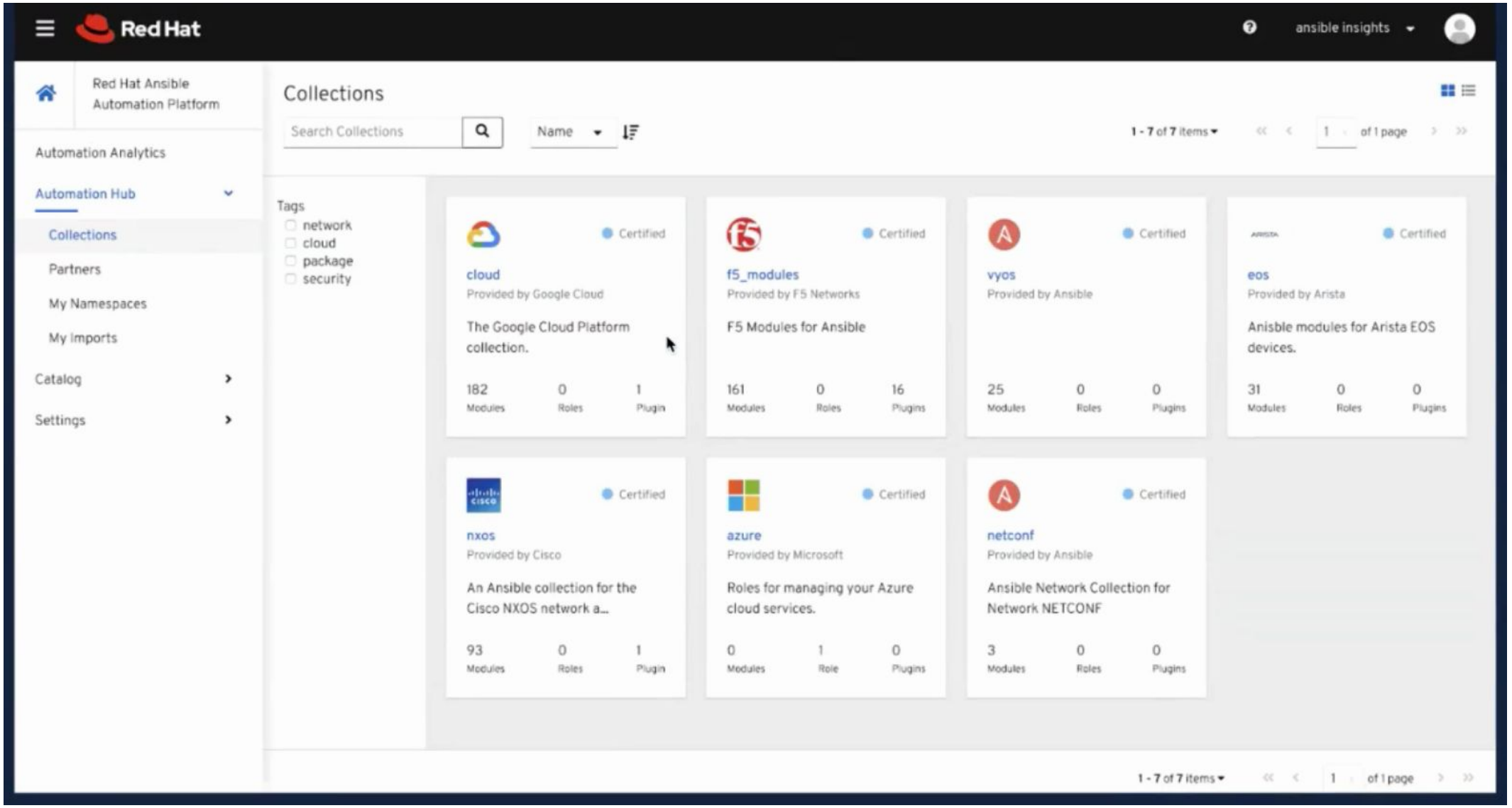
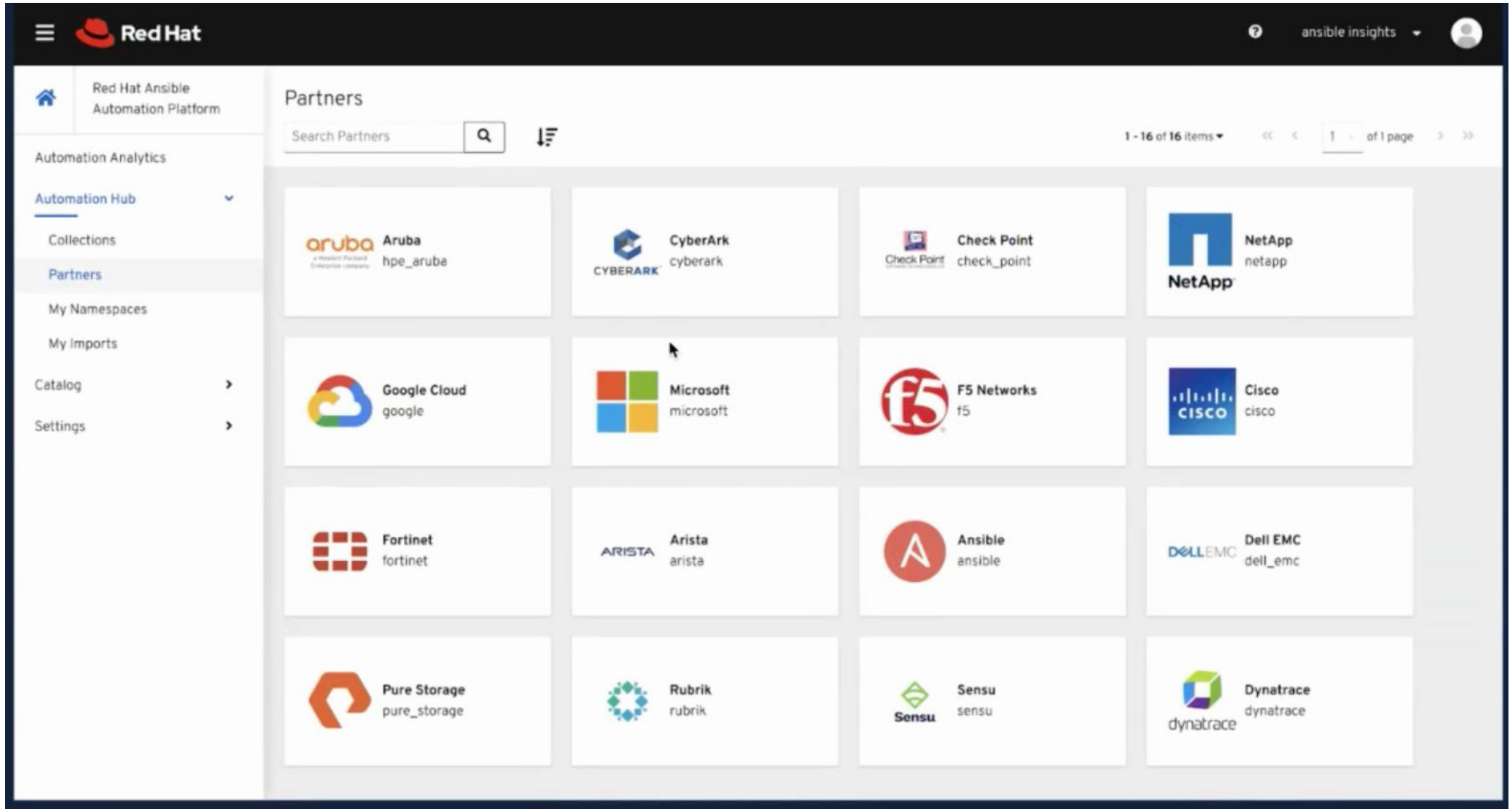
Log in
Explore our open, multicloud tools
Discover Red Hat® software-as-a-service
Log in to your Red Hat account
Not a customer?
Red Hat Insights
Proactively identify and remediate threats to security, performance, and stability.
Learn more
Red Hat Smart Management
Operate and protect your Red Hat platforms.
Learn more
Red Hat OpenShift
Install, register, and manage Red Hat OpenShift® 4 clusters.
Learn more
Red Hat Ansible Automation Platform
Extend your automation with analytics, policy and governance, and content management.
Learn more

Red Hat


Red Hat
ansible insights
Red Hat Ansible Automation Platform
Automation Analytics
Automation Hub
Collections
Partners
My Namespaces
My Imports
Catalog
Settings
Collections
Search Collections
Name
1 - 7 of 7 items
1 of 1 page
Tags
network
cloud
package
security
Certified
cloud
Provided by Google Cloud
The Google Cloud Platform collection.
182 Modules 0 Roles 1 Plugin
f5_modules
Provided by F5 Networks
F5 Modules for Ansible
161 Modules 0 Roles 16 Plugins
vyos
Provided by Ansible
25 Modules 0 Roles 0 Plugins
eos
Provided by Arista
Anisble modules for Arista EOS devices.
31 Modules 0 Roles 0 Plugins
nxos
Provided by Cisco
An Ansible collection for the Cisco NXOS network a...
93 Modules 0 Roles 1 Plugin
azure
Provided by Microsoft
Roles for managing your Azure cloud services.
0 Modules 1 Role 0 Plugins
netconf
Provided by Ansible
Ansible Network Collection for Network NETCONF
3 Modules 0 Roles 0 Plugins
1 - 7 of 7 items
1 of 1 page

Red Hat


Red Hat
ansible insights
Red Hat Ansible Automation Platform
Automation Analytics
Automation Hub
Collections
Partners
My Namespaces
My Imports
Catalog
Settings
Partners
Search Partners
1 - 16 of 16 items
1 of 1 page
Aruba
hpe_aruba
CyberArk
cyberark
Check Point
check_point
NetApp
netapp
Google Cloud
google
Microsoft
microsoft
F5 Networks
f5
Cisco
cisco
Fortinet
fortinet
Arista
arista
Ansible
ansible
Dell EMC
dell_emc
Pure Storage
pure_storage
Rubrik
rubrik
Sensu
sensu
Dynatrace
dynatrace

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Collections

Automation Hub

Scalable Execution

Automation Analytics

Developer Kit

Content Packages

Red Hat

Scalable Execution Capacity

Automate across and beyond the enterprise

Where you need it

Unifying task execution across execution nodes

When you need it

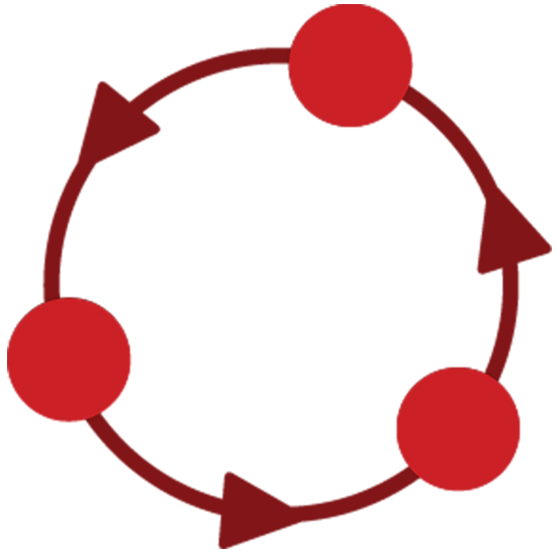
Leverage Kubernetes and OpenShift to spin up execution capacity at runtime

How you need it

Expand execution to be able to pull jobs from a central Ansible Tower infrastructure

Red Hat

Automation Webhooks



Enabling GitOps

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

Red Hat

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.

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Red Hat Ansible Automation Platform

Collections

Automation Hub

Scalable Execution

Automation Analytics

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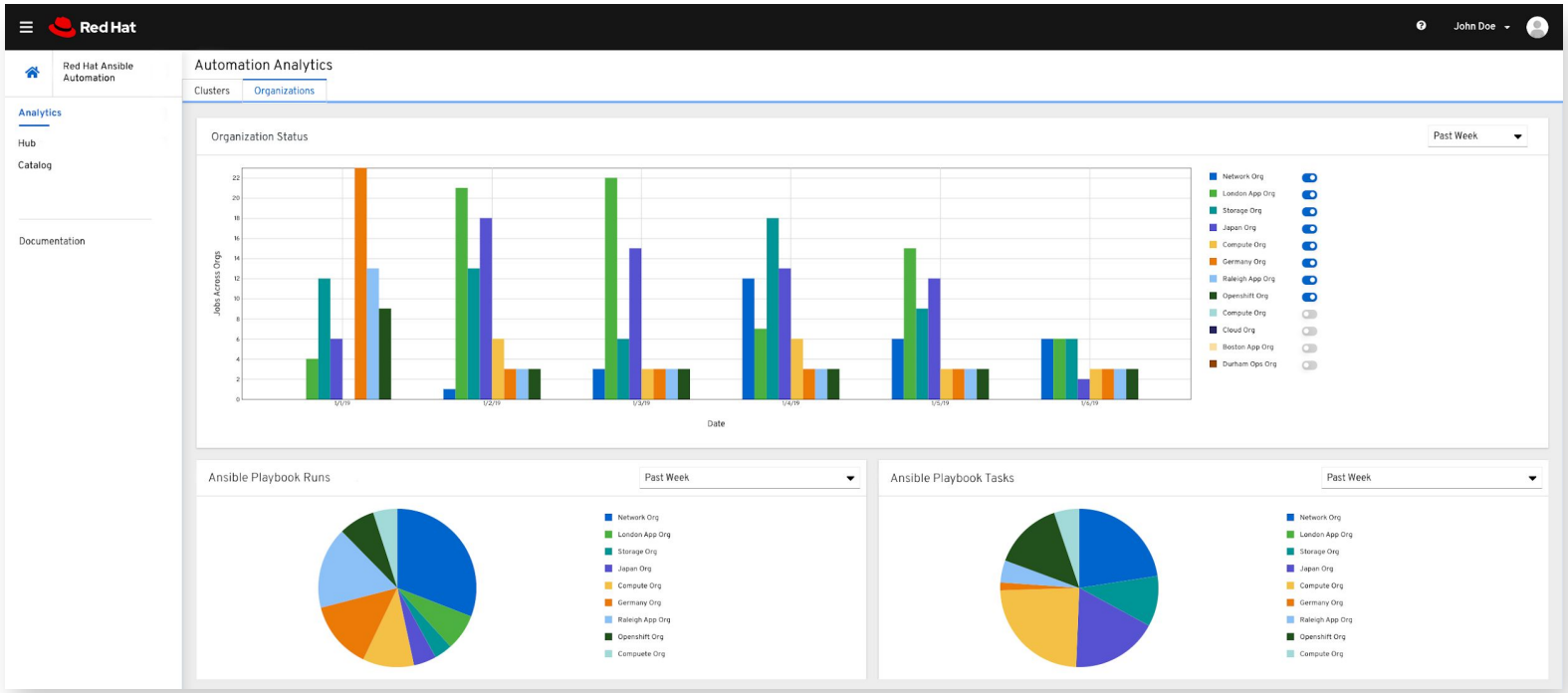
Introducing Automation Analytics:

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

Red Hat Ansible Automation Platform

Collections

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Scalable Execution

Automation Analytics

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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

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Red Hat Ansible Automation Platform

Collections

Automation Hub

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Automation Analytics

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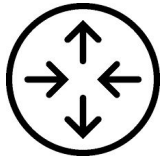
Ansible Networking

Building resource-based management

Fact modules transform network configuration into structured data.

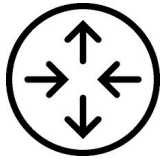


NETWORK NATIVE CONFIGURATION (ON BOX)


```
snmp:
    communities:        <list>
    -   community:      <string>
        group:          <string>
        ipv4acl:        <string>
        ipv6acl:        <string>
    contact:            <string>
    location:           <string>
    users:              <list>
    -   algorithm:      <md5|sha>
        group:          <string>
        localized_key:  <bool>
        password:       <string>
        username:       <string>
```

Resource modules transform structured data into configurations.

```
snmp:
    communities:        <list>
    -   community:      <string>
        group:          <string>
        ipv4acl:        <string>
        ipv6acl:        <string>
    contact:            <string>
    location:           <string>
    users:              <list>
    -   algorithm:      <md5|sha>
        group:          <string>
        localized_key:  <bool>
        password:       <string>
        username:       <string>
```

NETWORK NATIVE CONFIGURATION (ON BOX)

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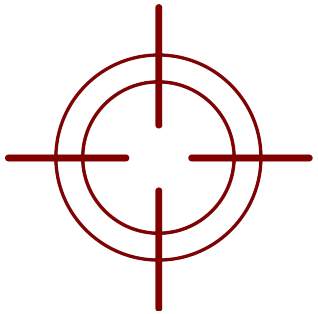
Ansible Security Automation

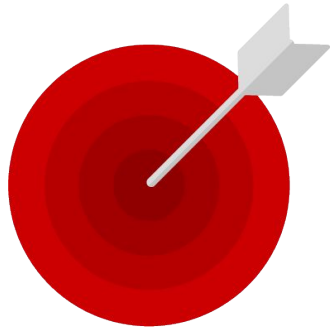
Triage Of Suspicious Activities

Enabling programmatic access to log configurations such as destination, verbosity, etc.



Threat Hunting

Automating alerts, correlation searches and signature manipulation

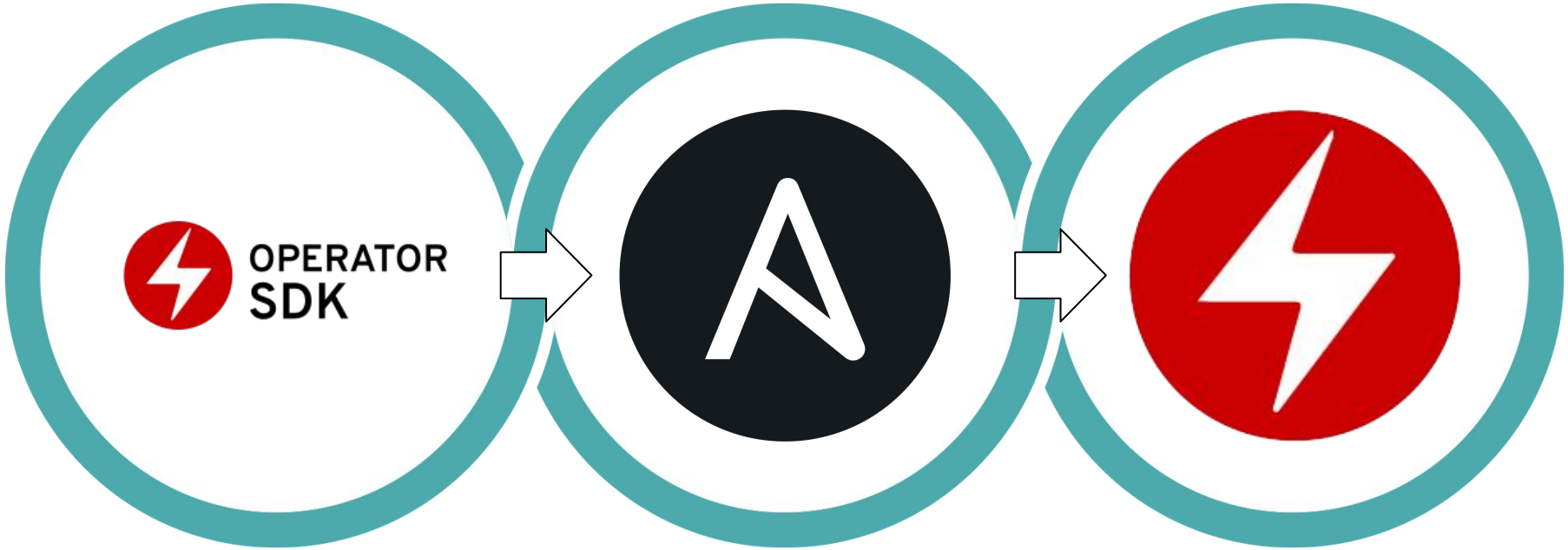


Incident Response

Creating new security policies to whitelist, blacklist or quarantine a machine

Red Hat

Ansible Operator SDK for Kubernetes Application Management



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.

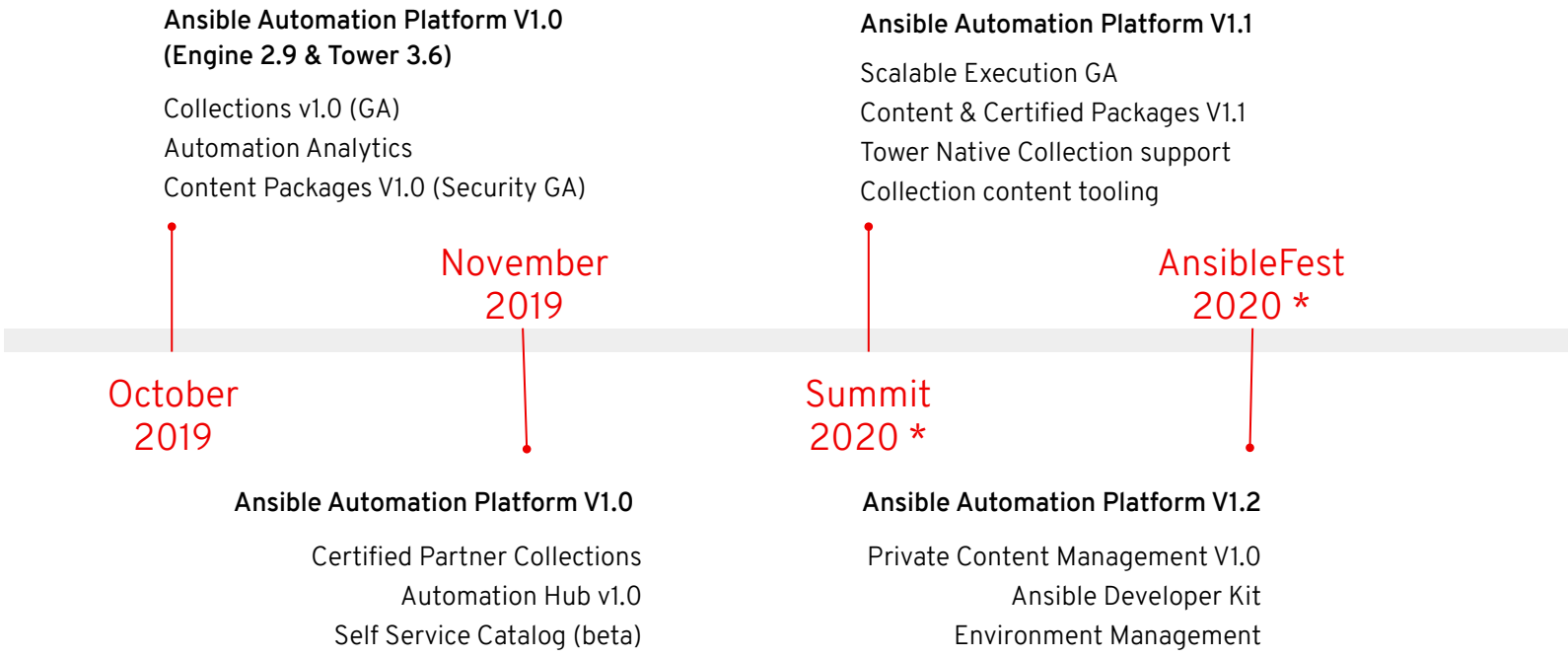
Red Hat

Roadmap Timeline

Red Hat

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

Red Hat

May
2019

Now available

Collections (beta)
Collection support in Ansible Galaxy
Support for RHEL 8
External Credential Vault Integrations
Tower Cluster Metrics

Fall
2019

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

Red Hat

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

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Questions?

EVENT
Ansible Automates Netherlands
March 14, 2018 | Bussum, Netherlands | Spant!
REMEMBER THIS ?

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EVENT
Ansible Automates Netherlands
11 December 2019
Bussum, Netherlands | Spant!
SAVE THE DATE !!!

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EXPAND YOUR POSSIBILITIES
THANK YOU
and
HAVE A GREAT FORUM!