Ansible What's New, Roadmap

Ansible Anwendertreffen 2020

Roland Wolters

@liquidat

Principal Technical Marketing Manager

Agenda

Past

    aka what happened last 12 months

Present

    aka AnsibleFest 2020

Future

    aka, well, the future

Red Hat

Who am I?

Roland Wolters

@liquidat

> 10 years of experience

Consultant

Project Manager

Solution Architect

Technical Marketing Manager

Red Hat

Past

Red Hat

Red Hat
Ansible Automation Platform

Network | Lines of business | Security | Operations | Infrastructure | Developers

Accelerate	**Collaborate**	**Governance**	**Trust**	**Inform**
Ansible Content Collections	Automation Hub	Automation services catalog	Certified content	Automation Analytics

Red Hat Ansible Tower: Operate and control at scale.

Red Hat Ansible Engine: Universal language of automation

Fueled by an open source community

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Red Hat
Ansible Automation Platform

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Accelerate
Ansible Content Collections

Collaborate
Automation Hub

Governance
Automation services catalog

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Automation Analytics

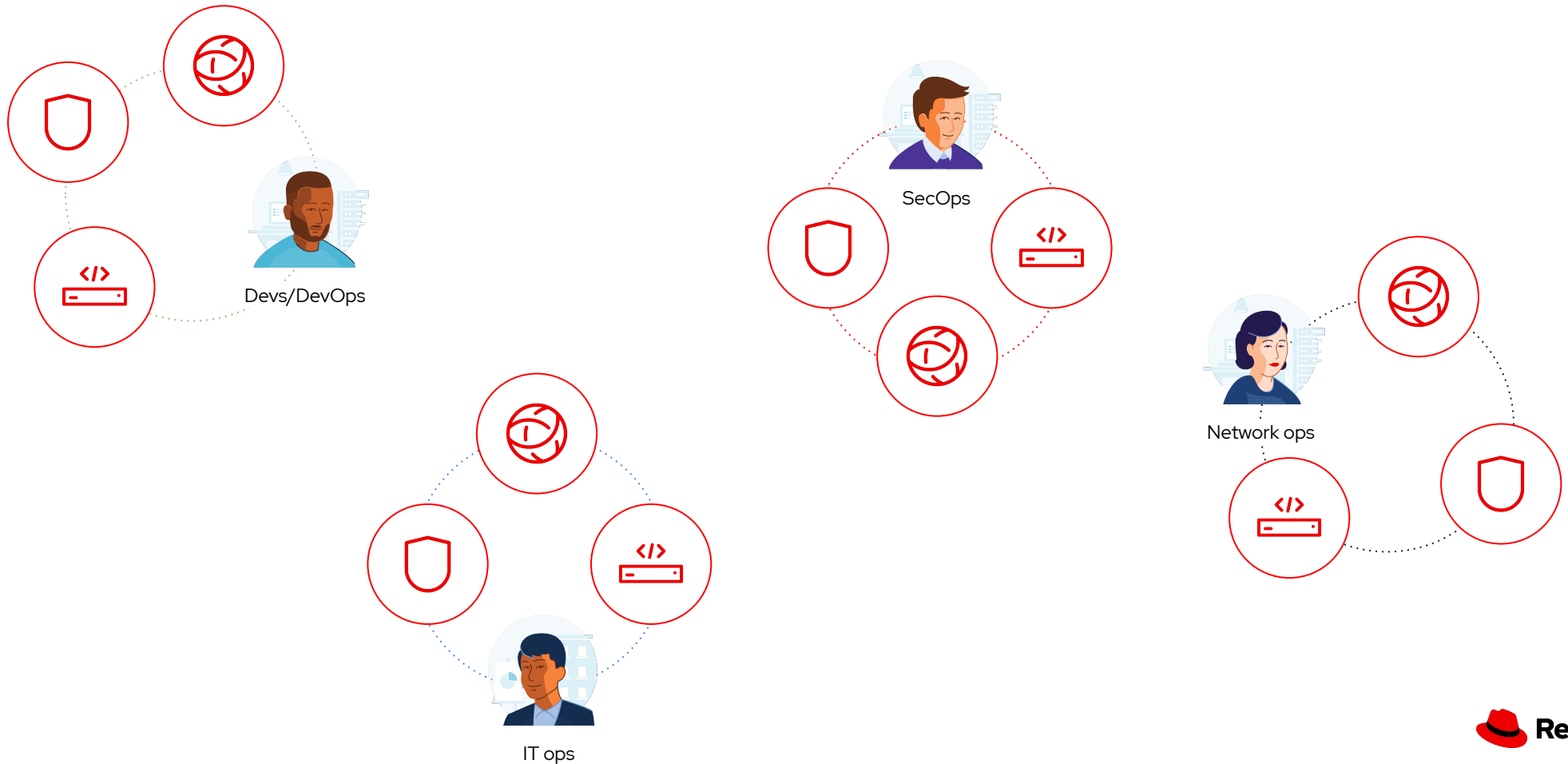Red Hat Ansible Tower: Operate and control at scale.

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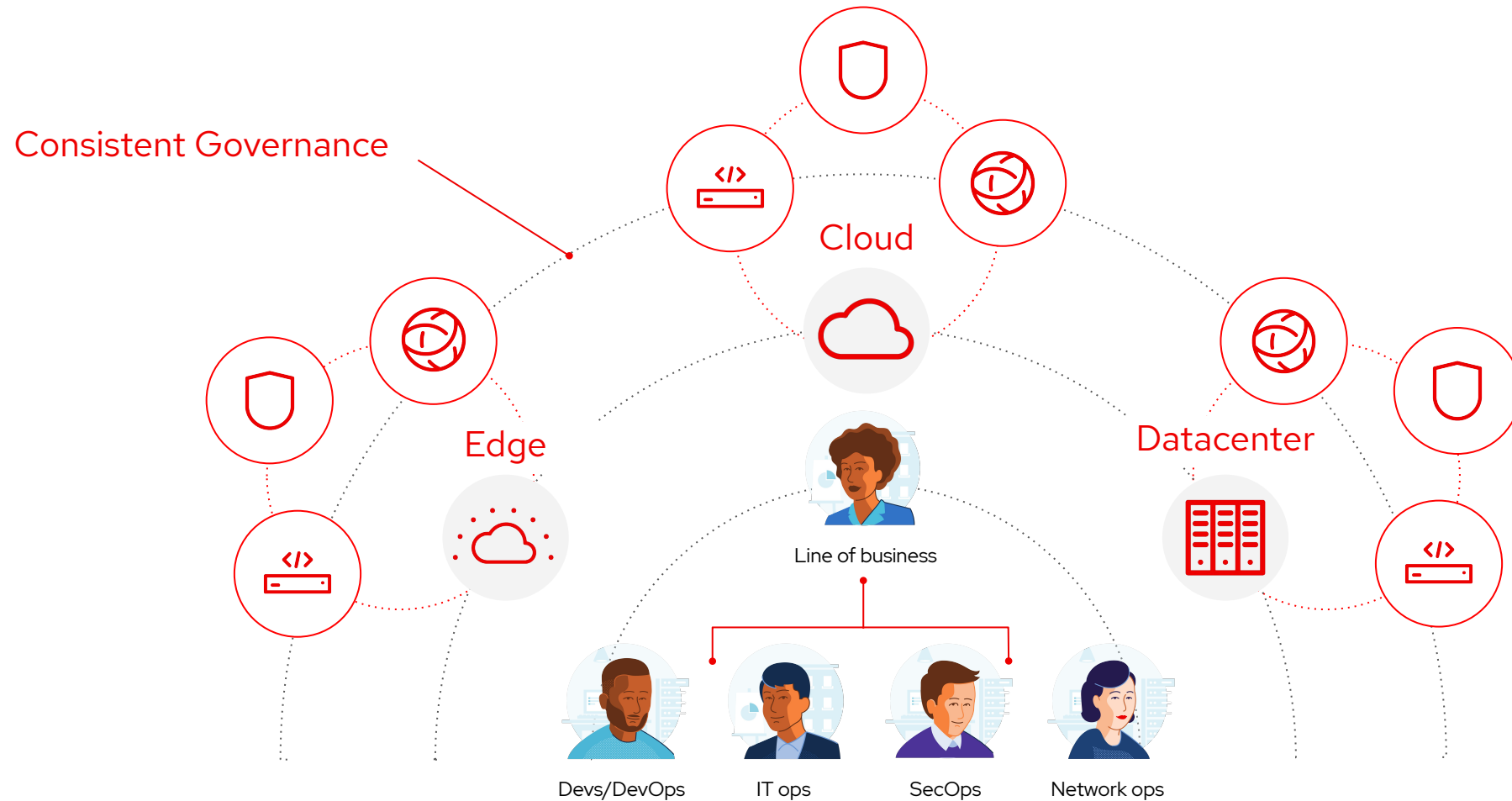
Fueled by an open source community

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Ansible is a platform

Many organizations have a problem

Too many unintegrated, domain-specific tools

Devs/DevOps

SecOps

IT ops

Network ops

Red Hat

Break down silos

Different teams a single platform

Consistent Governance

Cloud

Edge

Datacenter

Line of business

Devs/DevOps

IT ops

SecOps

Network ops

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Automation at Cloud-Scale

Execution scaled whenever and wherever it's needed

Cloud

Edge

Datacenter

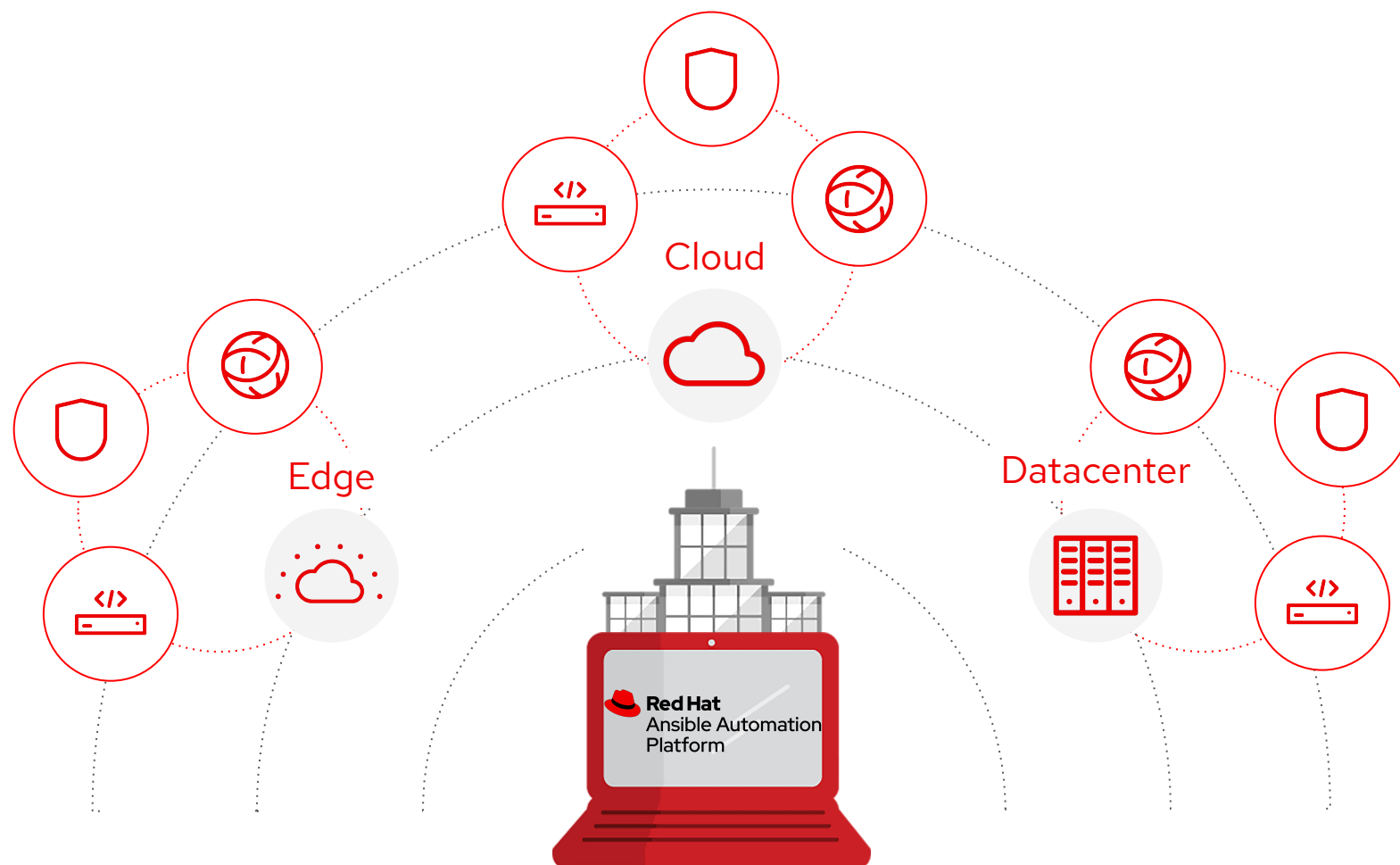**Red Hat**
Ansible Automation
Platform
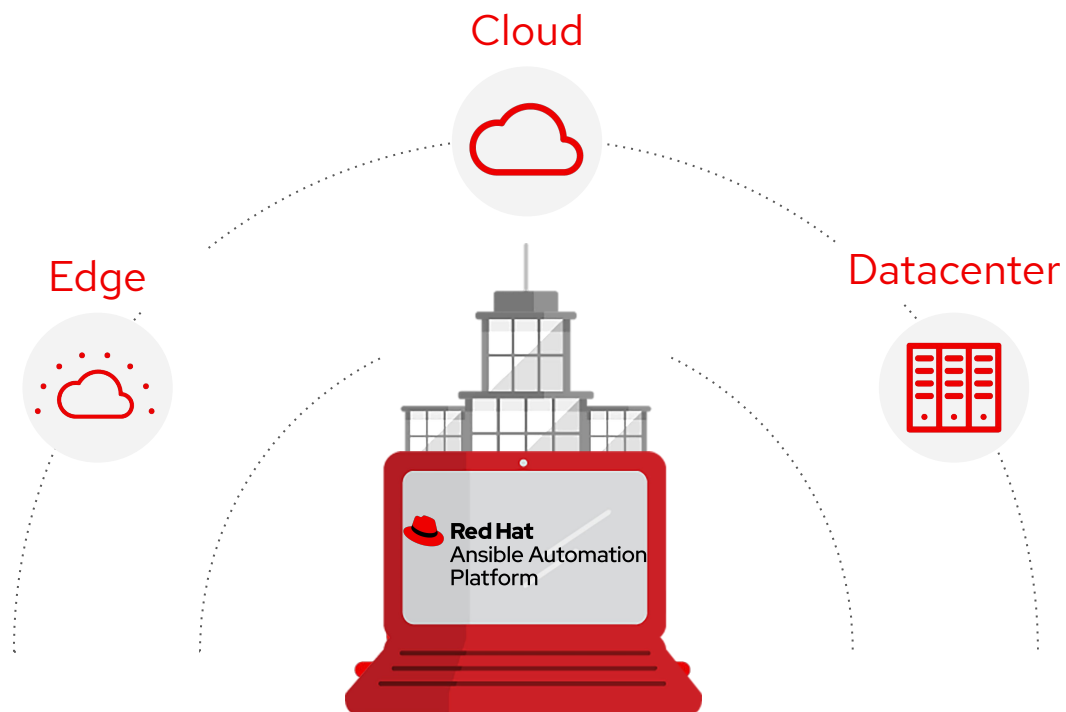
Red Hat

Design for Next-gen Infrastructures

Same advantages of agent-base solutions without implementation complexity
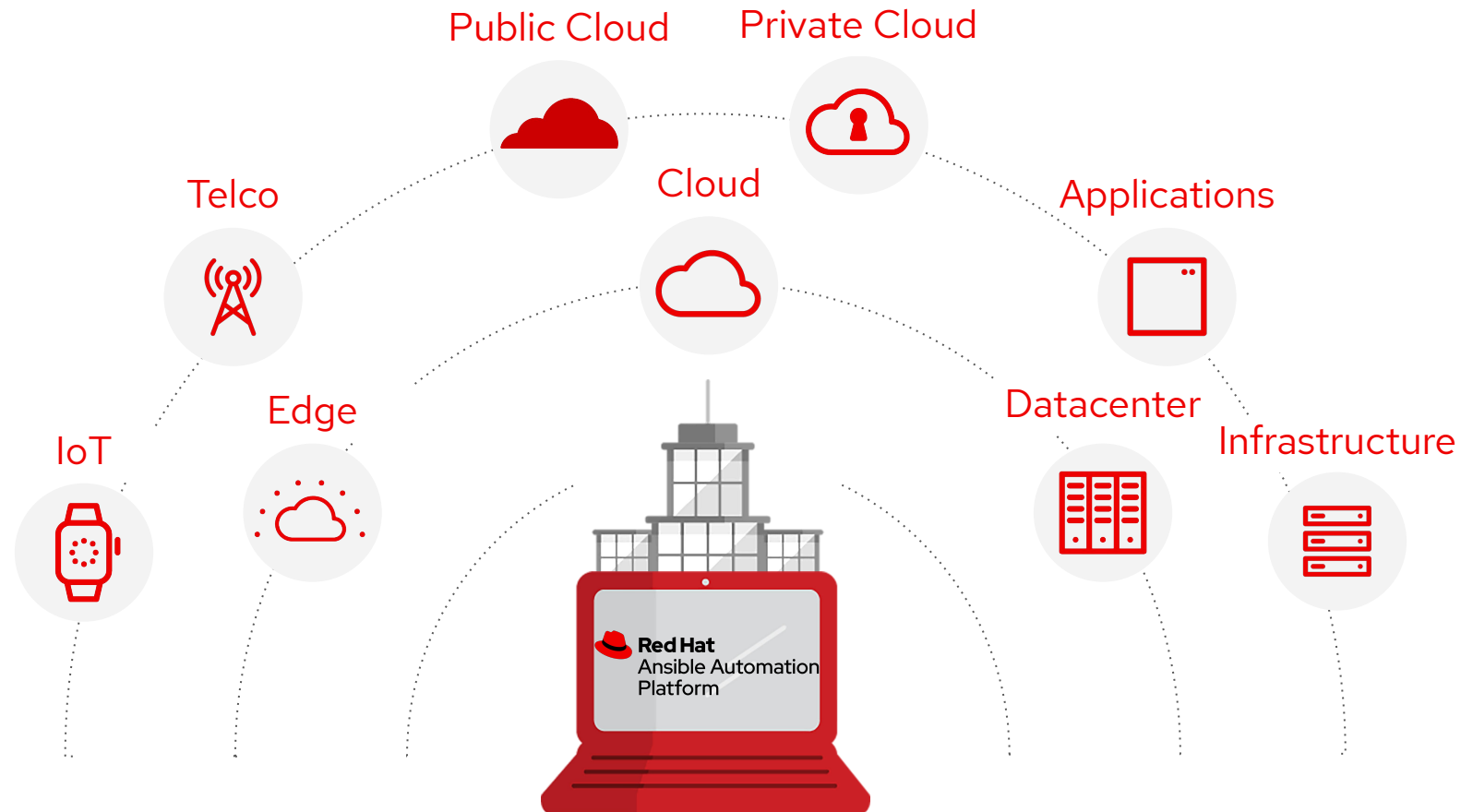
Frictionless User Experience

Management as simple as content creation

Red Hat
Ansible Automation
Platform

Creators

Operators

Consumers

Fueled by an open source community

Red Hat

What the platform is made of

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Ansible Content Collections

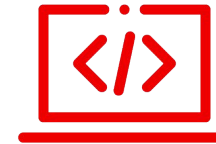A new method of building and consuming Ansible content

Red Hat

# Why? Ansible Project Growth – Side Effects & Challenges

Customers

➔ Support confusion, who does what

➔ Need for longer life cycle for foundation components while...

➔ Need for shorter life cycle for new modules / platform updates

Developers

➔ Thousands of open issues and pull requests

➔ "One size fits all" doesn't work for all content sets

➔ Some things go in quickly, some things don't

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From "Batteries included" to Modular Content

Ansible Content

Ansible Project 2.9

Ansible Base 2.10

Ansible Project 2.10

Red Hat
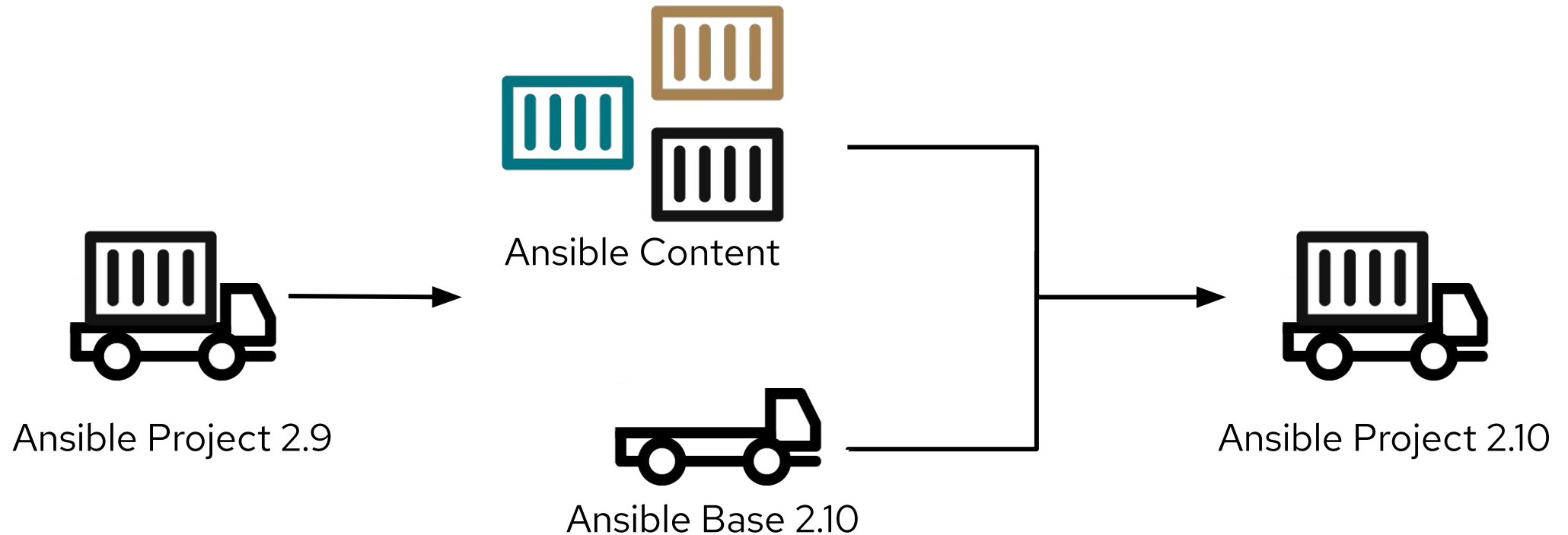
Ansible Content Collections

Simplified and consistent content delivery

Provides quick benefit by lowering barriers to automation

Streamlines tech partners providing direct-to-user automation in a structured fashion

Content can be updated continuously, in their own release cadence

Provides versioning, packaging, tagging

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Red Hat
Ansible Automation Platform

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Automation Hub

Private content repository

for sharing automation content

Red Hat

Distribute Ansible Content – Collections!

Ansible Galaxy
galaxy.ansible.com

➔ Community supported

➔ Extended to leverage
   Collections framework

➔ Latest and greatest

Ansible Automation Hub
cloud.redhat.com

➔ Certified, jointly supported by Red
   Hat and Partner

➔ Access to advanced analytics

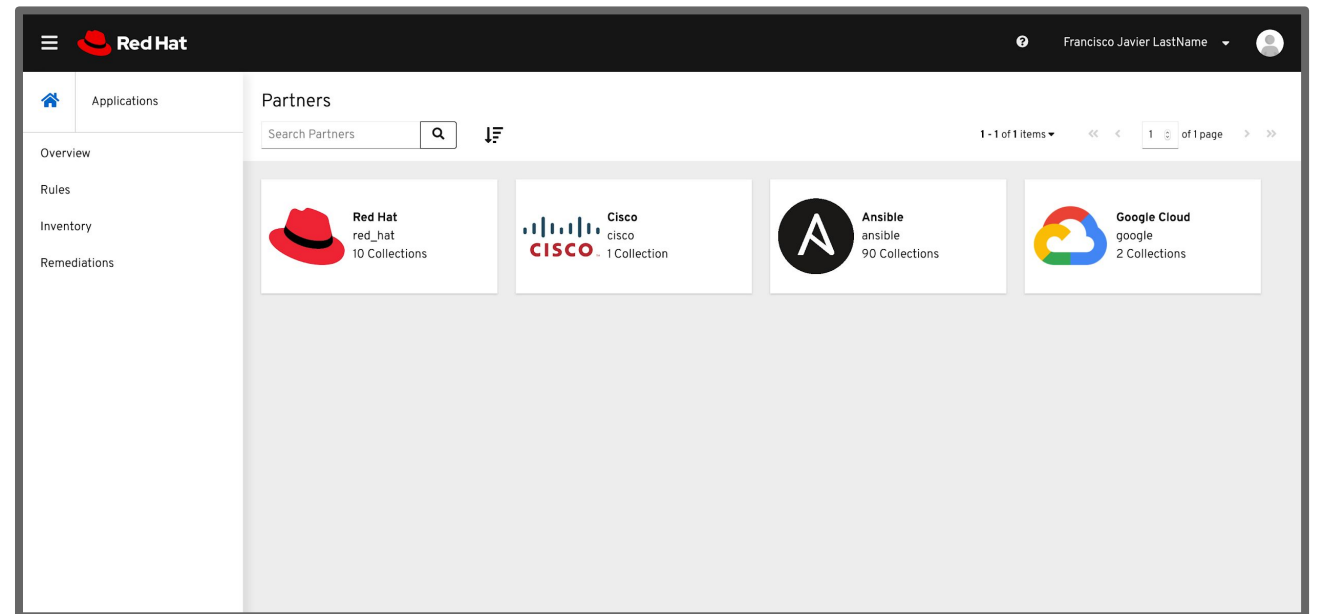➔ Stable and supported

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Automation Hub

Discover, publish, and manage Collections

Quickly discover available Red Hat and certified content through Collections.

Get newest and past versions published of all

Deep dive into documentation and content

Red Hat
Ansible Automation
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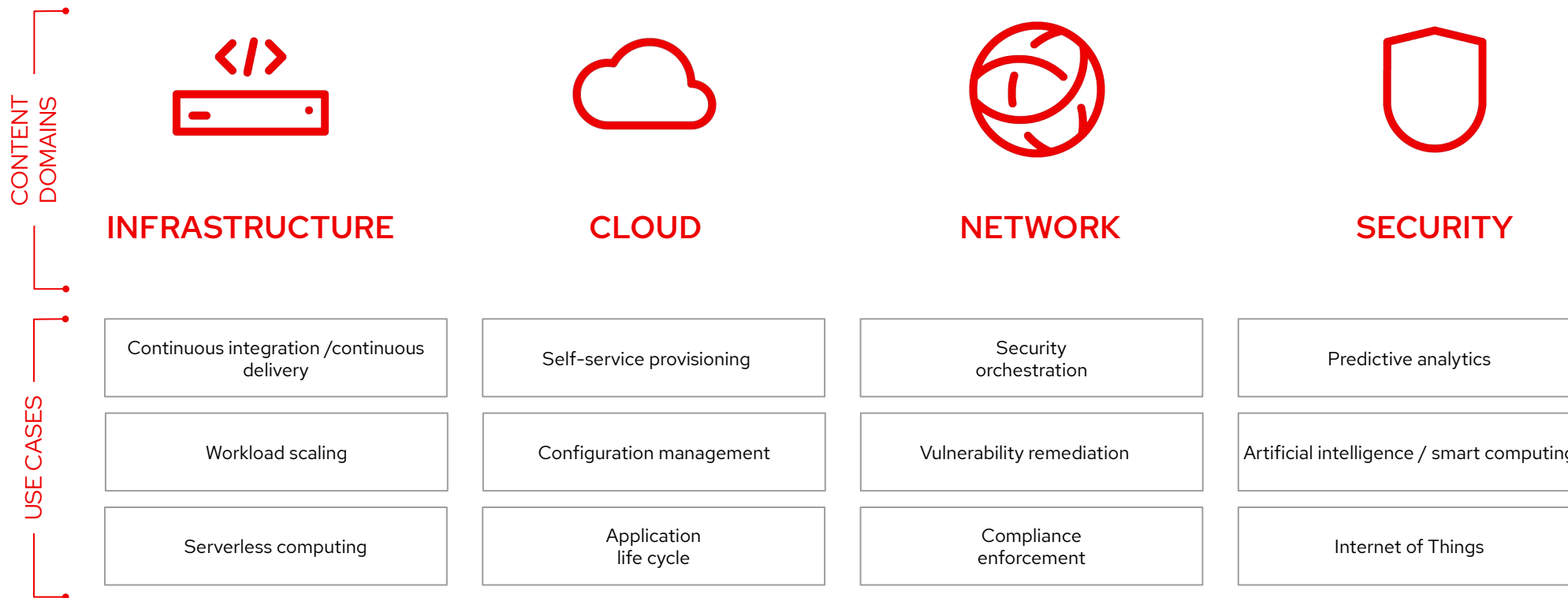
Fueled by an open source community

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Content packages

Opinionated, focused content, targeting key automation use cases, from Red Hat and certified partners

Red Hat

Automate Everything, Certified

Many use cases across multiple domains

INFRASTRUCTURE   **CLOUD**   **NETWORK**   **SECURITY**

INFRASTRUCTURE	CLOUD	NETWORK	SECURITY
Continuous integration /continuous delivery	Self-service provisioning	Security orchestration	Predictive analytics
Workload scaling	Configuration management	Vulnerability remediation	Artificial intelligence / smart computing
Serverless computing	Application life cycle	Compliance enforcement	Internet of Things

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Automation services catalog

A venue for developers and business users to manage, provision, and retire automation resources

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Automation Services Catalog

Manage, provision, and retire automation resources

Deliver customers' pre built automation to the
developer and the business user.

Deliver governance of automation services for the
enterprise user.

Supply the necessary controls required by the business
to track how this automation is being used.

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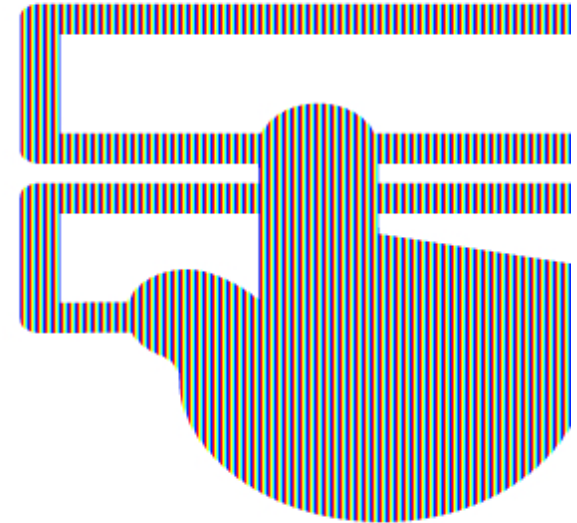
Interaction with the services catalog

Platforms

Ansible Tower is a Platform to the Catalog, it presents Job Templates and Workflows and executes them as jobs. Business governance can be applied to Platforms.

Portfolios

Allows for an Administrator to group service offerings as products into logical collections. Portfolios can be shared to groups of users as well as support Business Governance.

Products

Users order Products are high level abstracts of the service offerings. An Administrator can override the detail of a Product as well as govern the individual product with Business Logic.

Organizations

An Organization is a collection of Platforms, Portfolios, Products, Users, Groups and Approval policies. An entire organization can be governed for Business Logic.

**Red Hat
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Automation Analytics

Analytical insights into the automation runtime

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Automation Analytics: What is it?

Enables an Automation Center of Excellence

- View information about automation health, usage and performance across your enterprise.

- Gain information about automation in your enterprise:
    - Which organizations are using the most automation?
    - Utilization rates
    - Enterprise-wide success and failure rates for automation
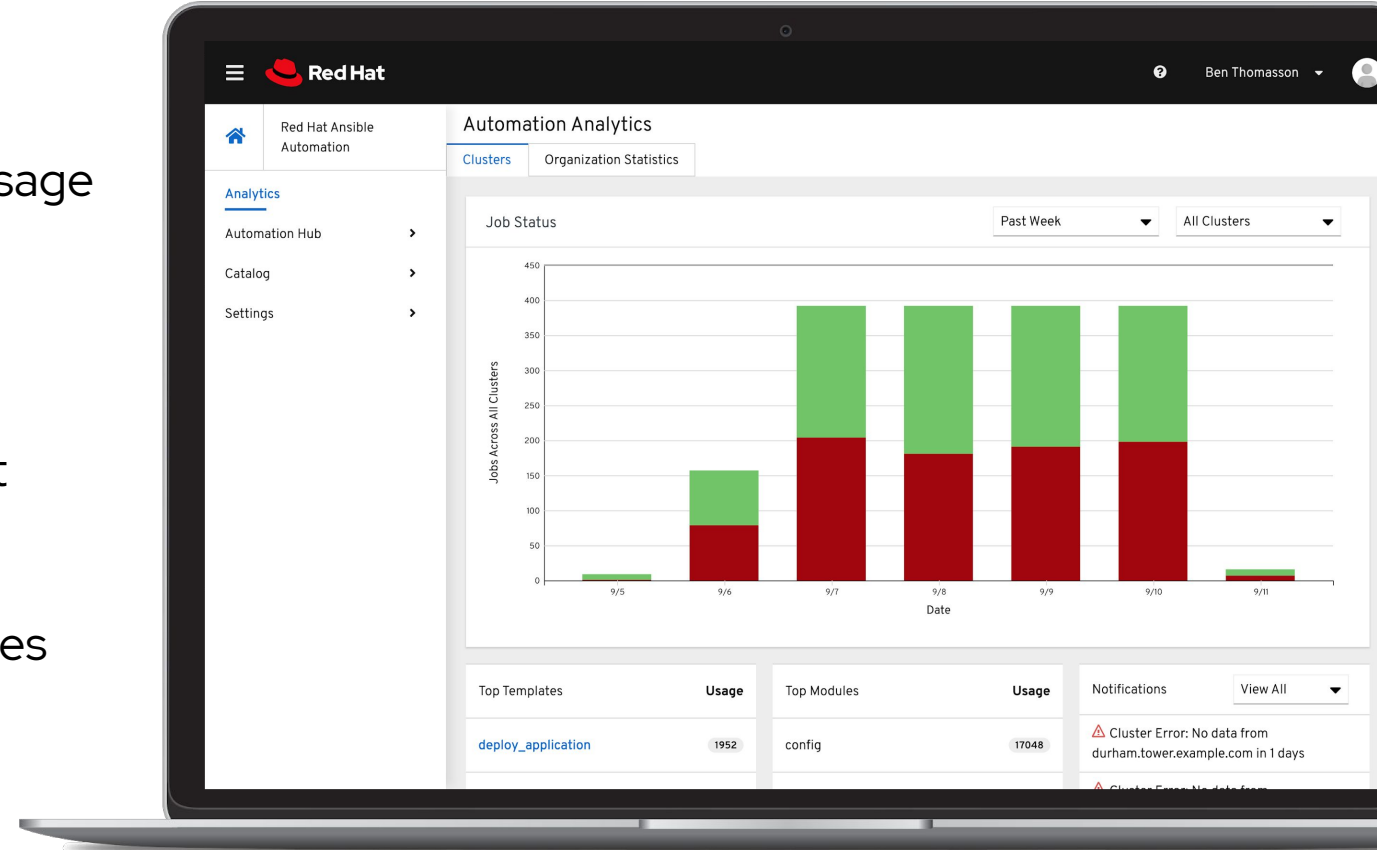
Industry analysts

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Red Hat named a Leader in The Forrester Wave™

THE FORRESTER WAVE™
Infrastructure Automation Platforms
Q3 2020

Source:
https://reprints2.forrester.com/#/assets/2/431/RES157471/report

Kubernetes, anyone?

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Red Hat Advanced Cluster Management for Kubernetes

Multicluster Lifecycle Management - Create, update and destroy Kubernetes clusters reliably, consistently and at scale

Policy Driven Governance Risk and Compliance Leverage policies to automatically configure and maintain consistency of security controls by industry corporate standards.
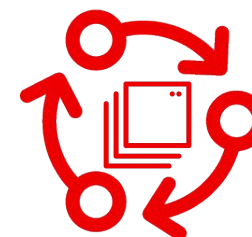
Advanced Application Lifecycle Management Use open standards and deploy applications using placement policies that are integrated into existing CI/CD pipelines and governance controls

Present

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Private Hub

Red Hat

Private Automation Hub

Delivering a customer deployable Automation Hub as a component of the Platform

Customer Controlled

Deploying either on-prem or to a cloud, customers can run their own private instances of Automation Hub integrated into Ansible Automation Platform

Private Content

Manage the lifecycle and internal distribution of in-house Ansible content within

Customizable Content Catalog

Via synch from Community (Galaxy) and Supported (Automation Hub) sources, customers can supply internal users with approved content in one controlled location
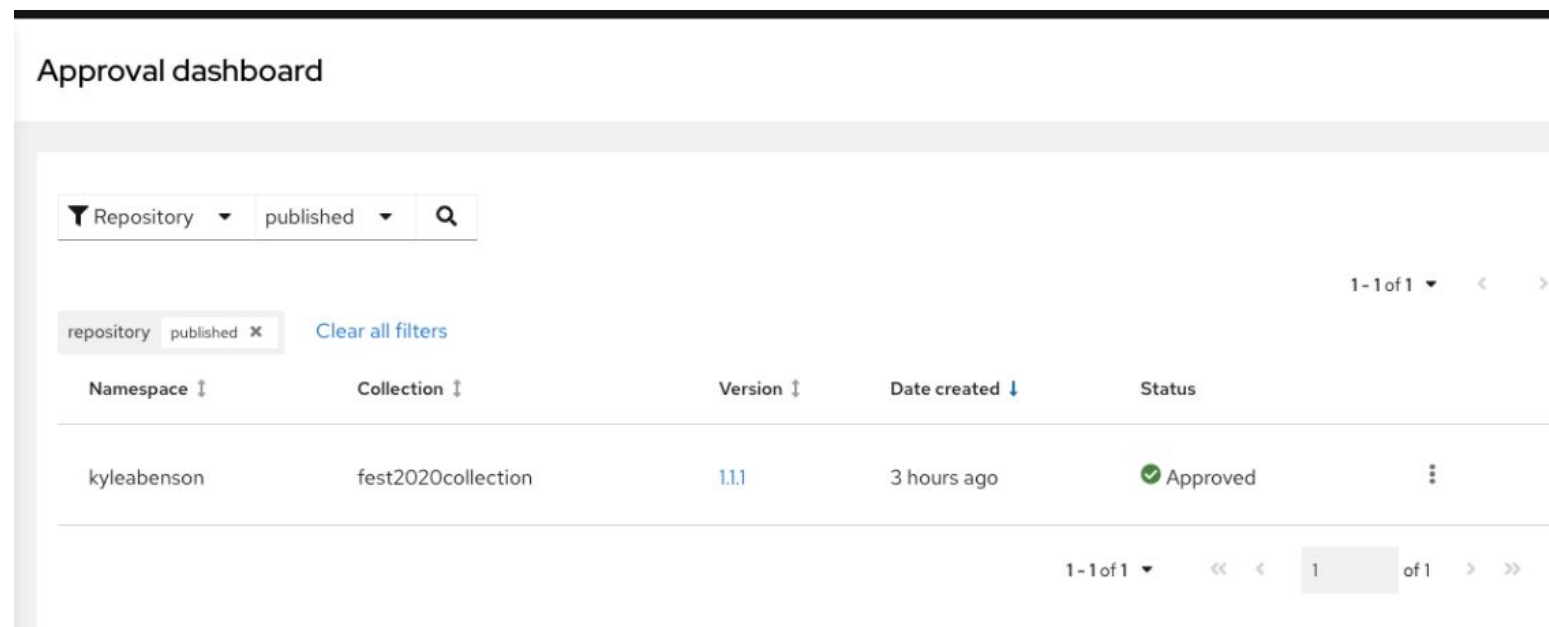
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Sample from Ansiblefest Demo

Published, Certified and Community content

Yes, Kubernetes

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Better Together

OpenShift, Ansible, and Advanced Cluster Management

OpenShift + RHACM + Ansible

Platform
A Kubernetes platform on your own infrastructure designed with security in mind. Build, deploy, and manage your container-based applications consistently across cloud and on-premises infrastructure.

Management
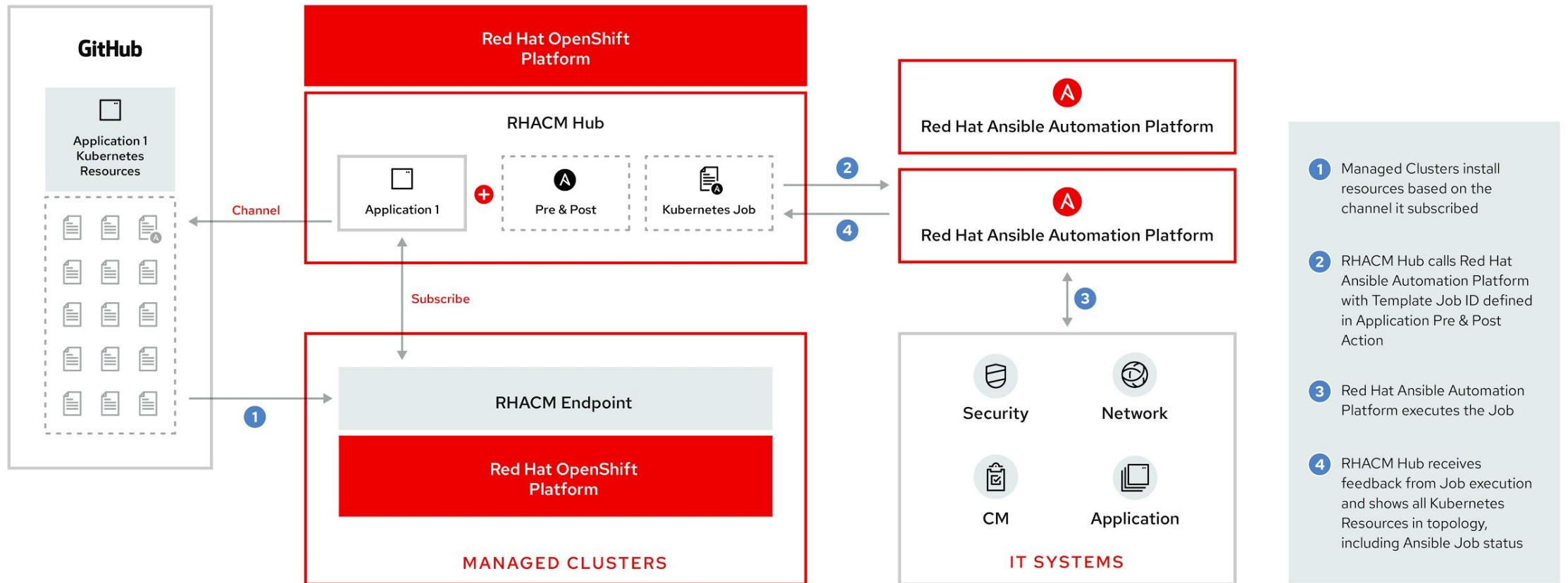Control clusters and applications from a single console, with built-in security policies. Extend the value of OCP by deploying apps, managing multiple clusters, and enforcing policies across multiple clusters at scale.

Automation
The foundation for building and operating automation across an organization. The platform includes all the tools needed to implement enterprise-wide automation.

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Integration Architecture Overview

for Application Lifecycle

GitHub

Application 1 Kubernetes Resources

Channel

Subscribe

Red Hat OpenShift Platform

RHACM Hub

Application 1 ➕ Pre & Post | Kubernetes Job

RHACM Endpoint

Red Hat OpenShift Platform

MANAGED CLUSTERS

Red Hat Ansible Automation Platform

Red Hat Ansible Automation Platform

Security | Network

CM | Application

IT SYSTEMS

1️⃣ Managed Clusters install resources based on the channel it subscribed

2️⃣ RHACM Hub calls Red Hat Ansible Automation Platform with Template Job ID defined in Application Pre & Post Action

3️⃣ Red Hat Ansible Automation Platform executes the Job

4️⃣ RHACM Hub receives feedback from Job execution and shows all Kubernetes Resources in topology, including Ansible Job status

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Better Together

OpenShift, Ansible, and Advanced Cluster Management

- Connecting OpenShift environments to: storage, networking, cloud, systems of record, CMDB and change records

- application deployments, load balancing and security checking.

- A single workflow to manage complex hybrid cloud environments

- HOW: Resource Operator for Red Hat Advanced Cluster Management

Better Together : Validation

Customer and Industry Analyst validation of Ansible and OpenShift

Automation is all about content
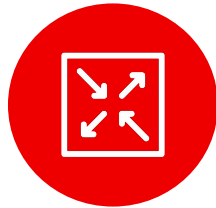
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Certified Content

Ansible Certified Collections
56 collections certified in first year of the program
Network, cloud, security content, IBM, Red Hat products
New focus areas: Kubernetes/OpenShift, VMware, Windows

Ansible Network Automation
26 additional resource modules
3 additional states (gathered, rendered, parsed)

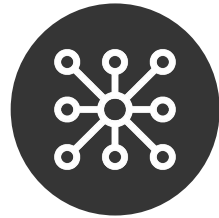All existing resource modules backported the new states

Ansible Security Automation
Cisco ASA, Syncope, CyberArk Conjur and PAS platform support
20 additional Check Point Modules, and Check Point Gaia support
7 additional modules for IBM QRadar, endpoint protection use cases

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New Content: Highlights

Kubernetes and OpenShift supported Collections
Fully supported K8s and OCP Ansible Content Collections
Fully supported integration between Ansible Automation Platform
and RHACM
Backed by customer and industry analyst validation

VMware supported Collection
170+ Ansible Modules and Plugins using newly VMware REST API
Fully supported
Created and curated by Red Hat engineering

Analytics

Red Hat

Automation Analytics: Job explorer

Insight into each Job

Fully connected to related Tower cluster

Id/Name ↗	Status	Cluster	Organization	Type
⌄ 54276 - Terminate long-runn...	✓ Successful	tower.ansible.eng.rdu2.redha...	Ansible	Playbook run
Created: 10/28/2020 2:00:17pm	Started: 10/28/2020 2:00:53pm	Finished: 10/28/2020 2:01:41pm		
› 54274 - Terminate long-runn...	✓ Successful	tower.ansible.eng.rdu2.redha...	Ansible	Playbook run
› 54272 - Terminate long-runn...	✓ Successful	tower.ansible.eng.rdu2.redha...	Ansible	Playbook run
› 54270 - Terminate long-runn...	✓ Successful	tower.ansible.eng.rdu2.redha...	Ansible	Playbook run
› 54268 - Create bugscrub qu...	✓ Successful	tower.ansible.eng.rdu2.redha...	Ansible	Playbook run

1 – 5 of 3129 ▾   « ‹   1   of 626   › »

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Automation Services Catalog

Available Soon: Automation Services Catalog Updates

Automation Services Catalog Updates

ITSM integration available to link automation services catalog to ServiceNow and BMC Remedy
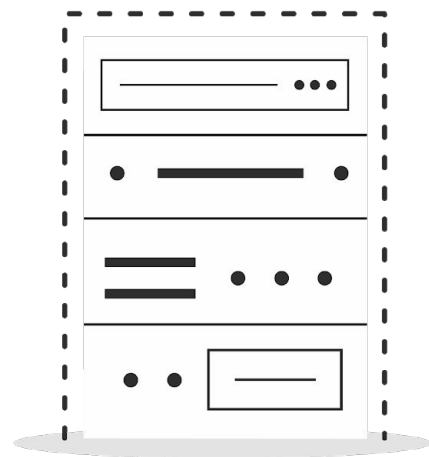
Integrations across common ITSM areas, including: ticketing systems, CMDB, and built-in business approval.

Technology preview : disconnected environments ability to consume automation services catalog
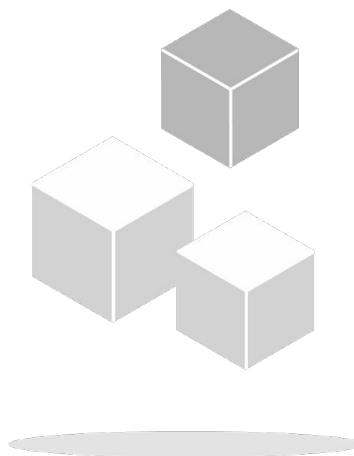
Future

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Execution Environments

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Portable execution environments

Virtual environments

VS

Execution environments

Comparison

Virtual Environments

Not portable

Difficult to manage dependencies
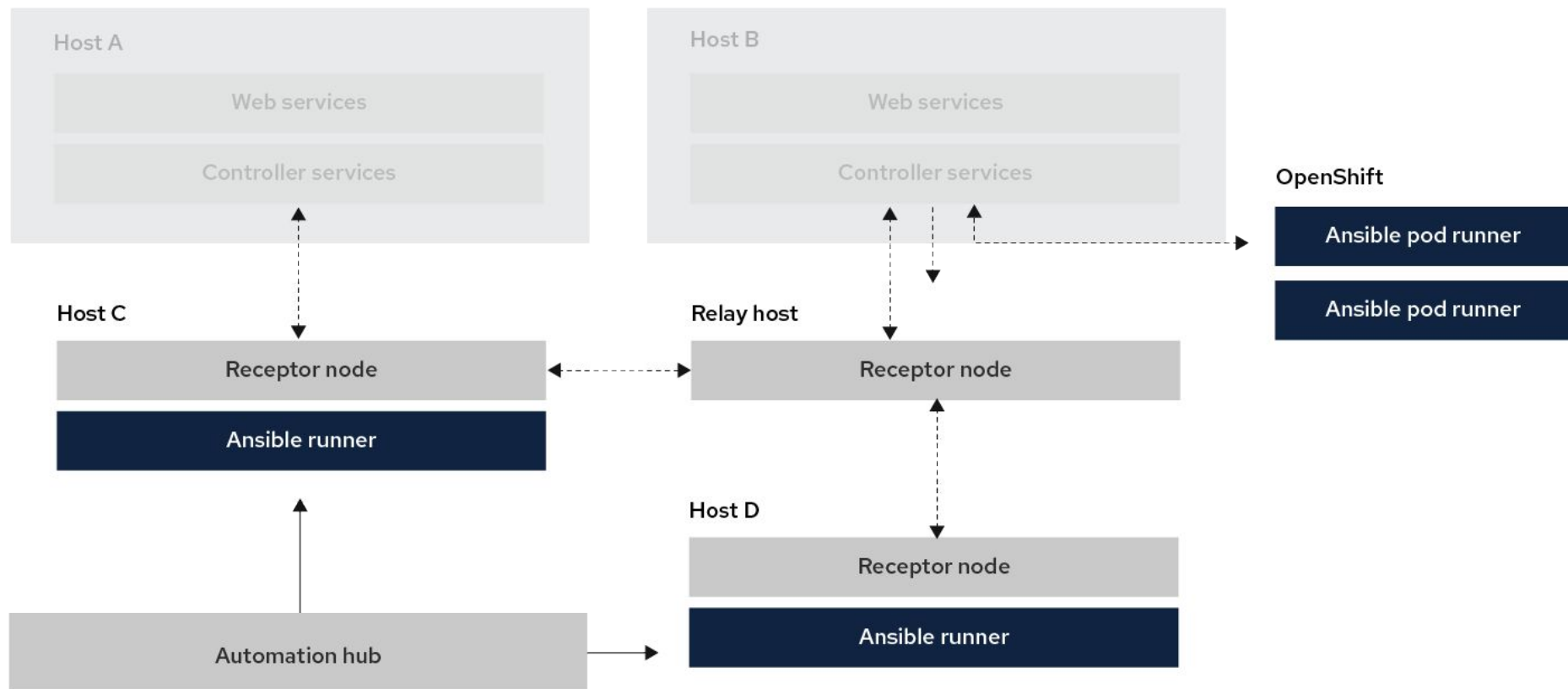
Execution Environments

Container based

Portable

Tools

ansible-builder

Registry

Developers -> ci -> prod

Pre-builts

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Scalable Deployments

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Thank You

in linkedin.com/company/red-hat

▶ youtube.com/user/RedHatVideos

f facebook.com/redhatinc

🐦 twitter.com/RedHat

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