# Red Hat in the Cloud: **Ansible**

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**Contact details**
For questions or comments,
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## Topics

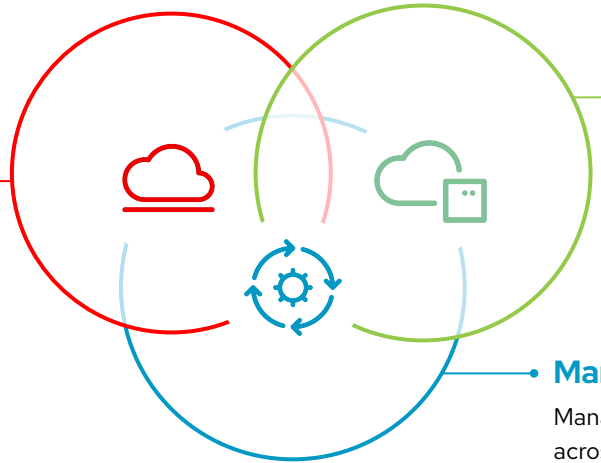
- Multi-cloud implementation of automation with Ansible Automation Platform
- Event-driven automation
- Ansible Lightspeed

Red Hat actively contributes to thousands of Open Source projects, including all key Linux, Ansible, container and Kubernetes projects - including over 30 different standards bodies. The most significant contributions are listed here.

# The three pillars of our business

## Open hybrid cloud

Red Hat's strategy and vision for its portfolio of software, tools, and services built in the open source development model and designed for future architectures that are open, secure, and agile across hybrid, multicloud



### Hybrid cloud infrastructure

Secure, scale, and manage foundations for traditional and cloud workloads across all environments

### Cloud-native development

Develop, deploy, and manage any application, on any environment and give developers what they need to innovate

### Management and automation

Manage Red Hat platforms and automate across hybrid environments with more simplicity


CONSISTENCY
ACROSS ANY ENVIRONMENT
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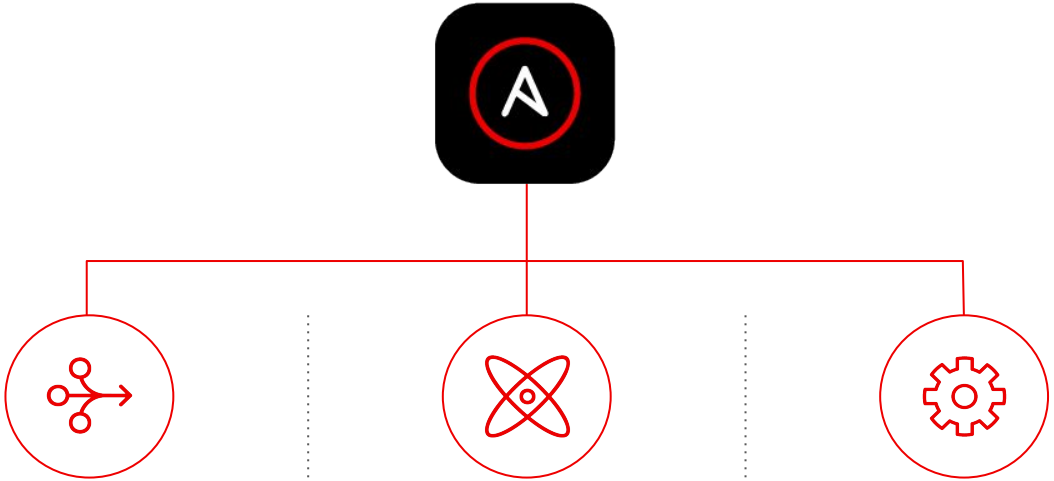
# Ansible is the de facto automation language.



**Simple**

Human-readable language with quick adoption

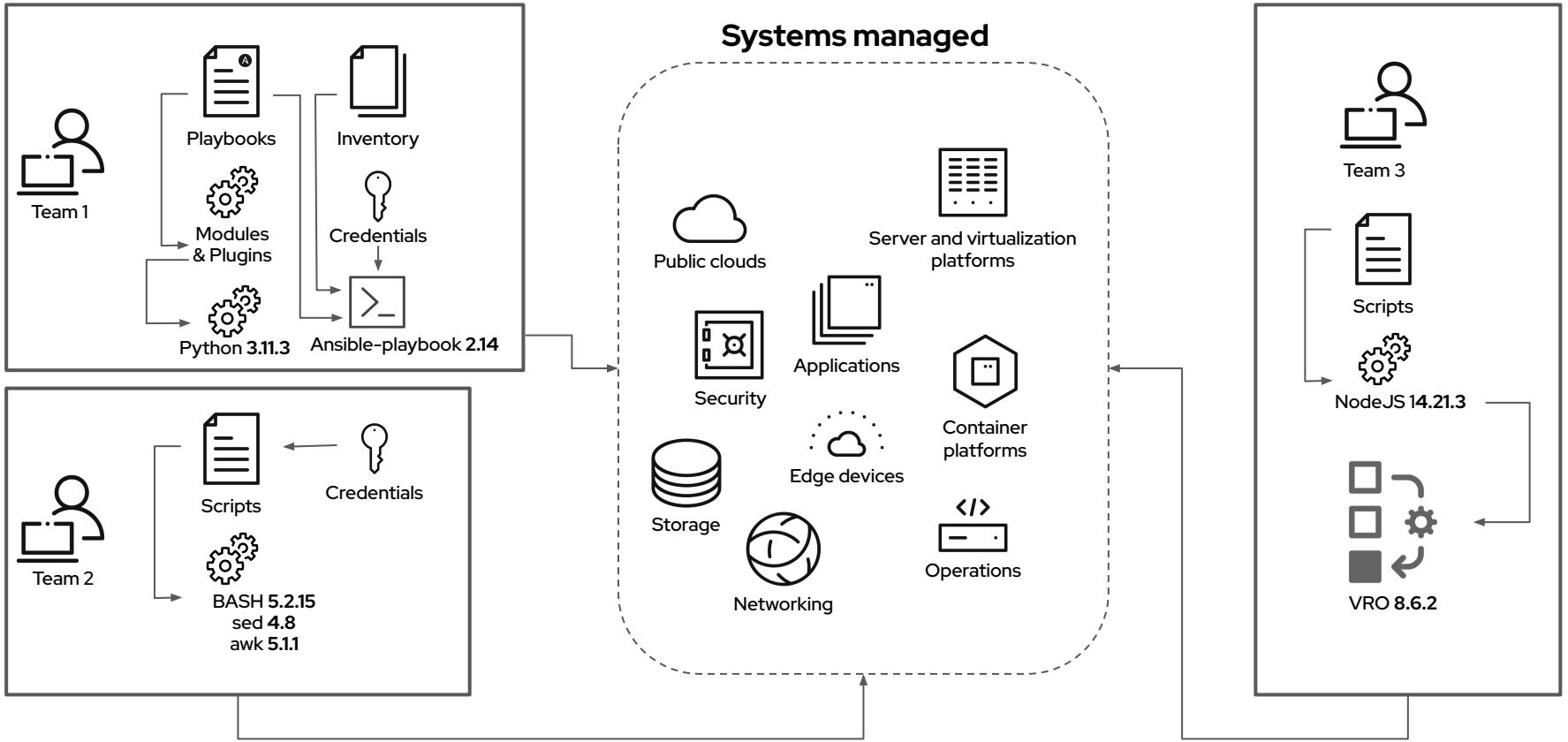
**Powerful**

Universal language spanning multiple IT domains

**Agentless**

Easily integrate with hybrid environments

# **Avoid** islands of automation

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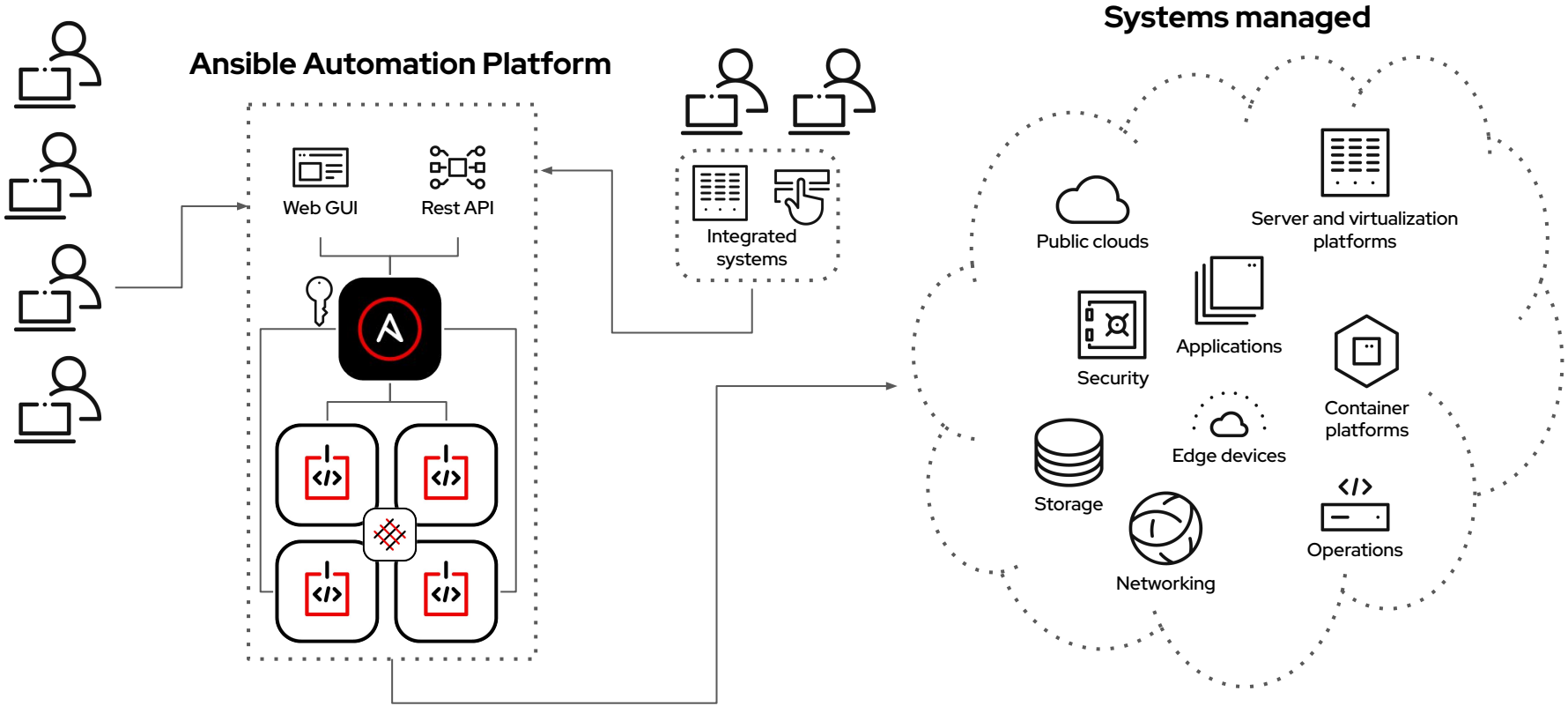
# **Standardize** your automation **and** scale

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# Popularity, by the numbers

**4M**
downloads per month

**2K**
customers

**4K**
modules

**7th**
of 96M projects on GitHub by contributors

**4M+**
systems managed by Red Hat

**130+**
Certified Content Collections

**55+**
Certified technology partners

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# Enterprise IT Automation

Day 1 Operations | Day 2 Operations

**Automation strategy**

## Red Hat Ansible Automation Platform

Terraform, Pulumi

CloudFormation, Azure ARM

Infrastructure Provisioning
App Deployment

Status Reporting, Systems Reconfiguration, OS/Apps Updates and Patching, User Permissions, Files and Certificates Management, Services Restarting, Network Segmentation, Virtual Networking, Network Access Management, Threat Hunting, Investigation Enrichment, Incident Response, Security Baselines, Troubleshooting

Terraform, Pulumi

CloudFormation, Azure ARM

App Retirement
Infrastructure
De-provisioning

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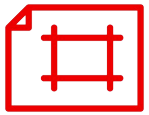
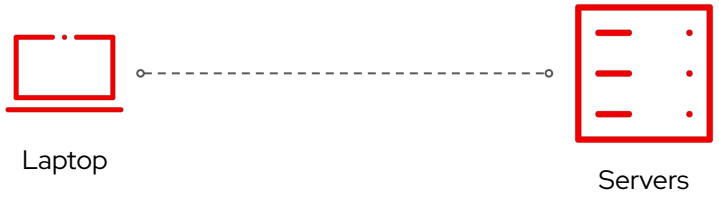
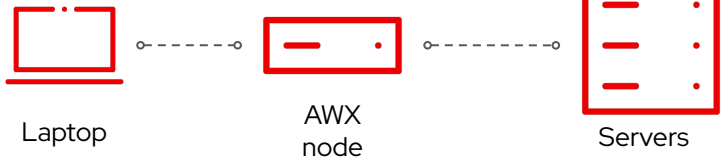
# What is Ansible Automation Platform?



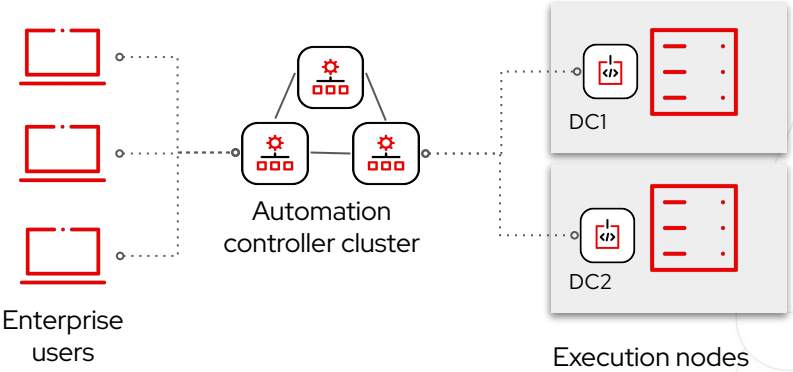
**Community Ansible**




Community Ansible quickly allows someone to replace their bash and python scripts with reusable and human understandable playbooks

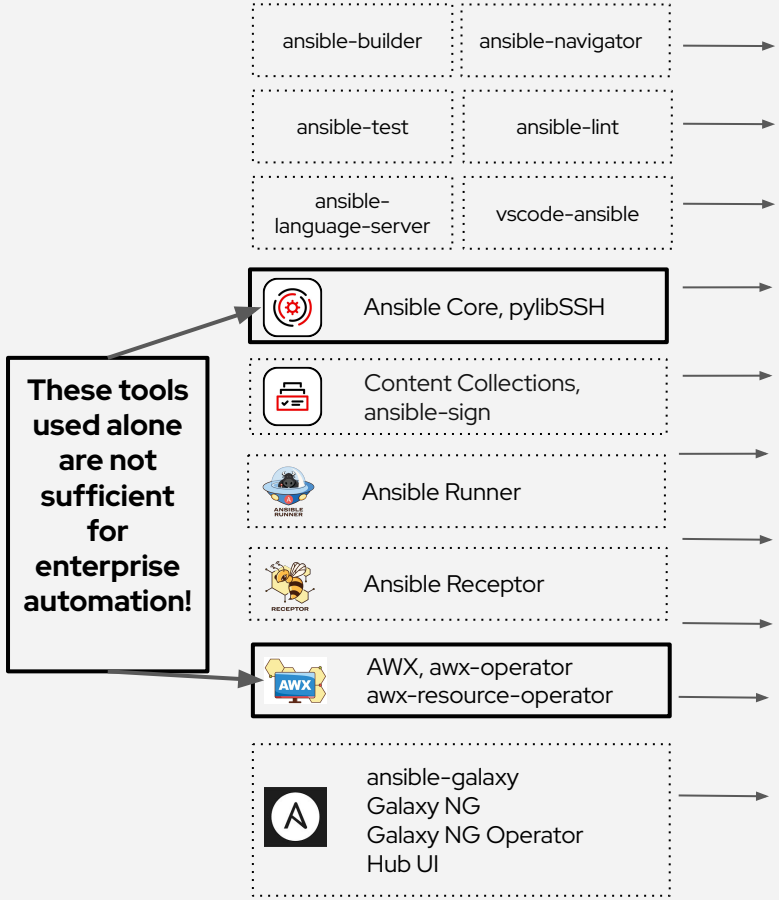

AWX is a tool that helps teams of 2 or more people start to share their automation with limited functionality



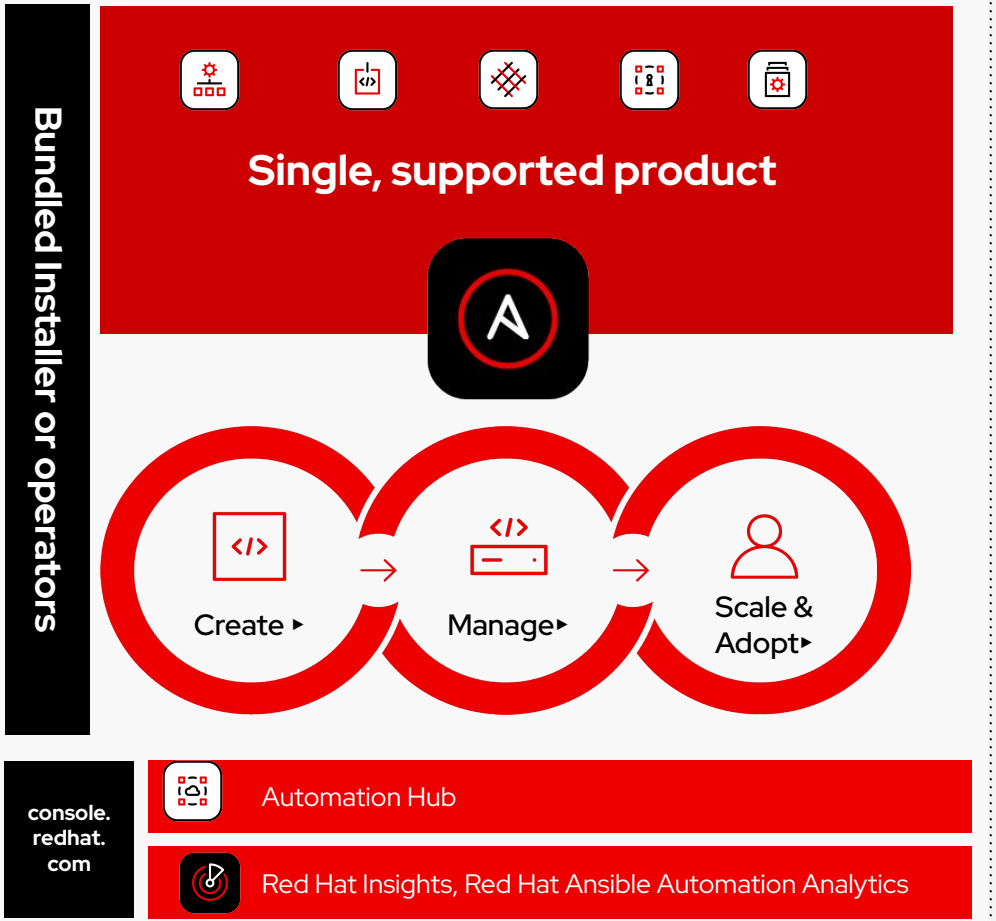

Ansible Automation platform is a fully supported software product from Red Hat

Red Hat
Ansible Automation
Platform

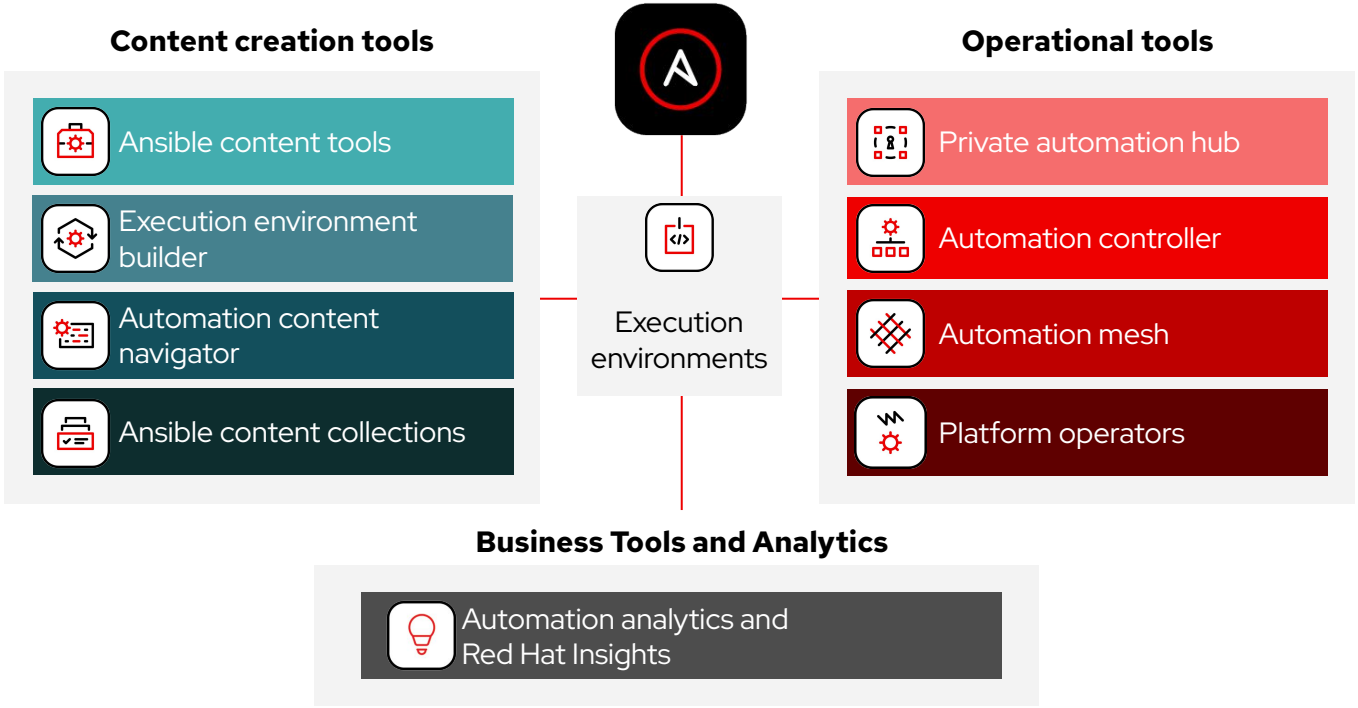
## 20+ discrete community upstream projects: Unsupported



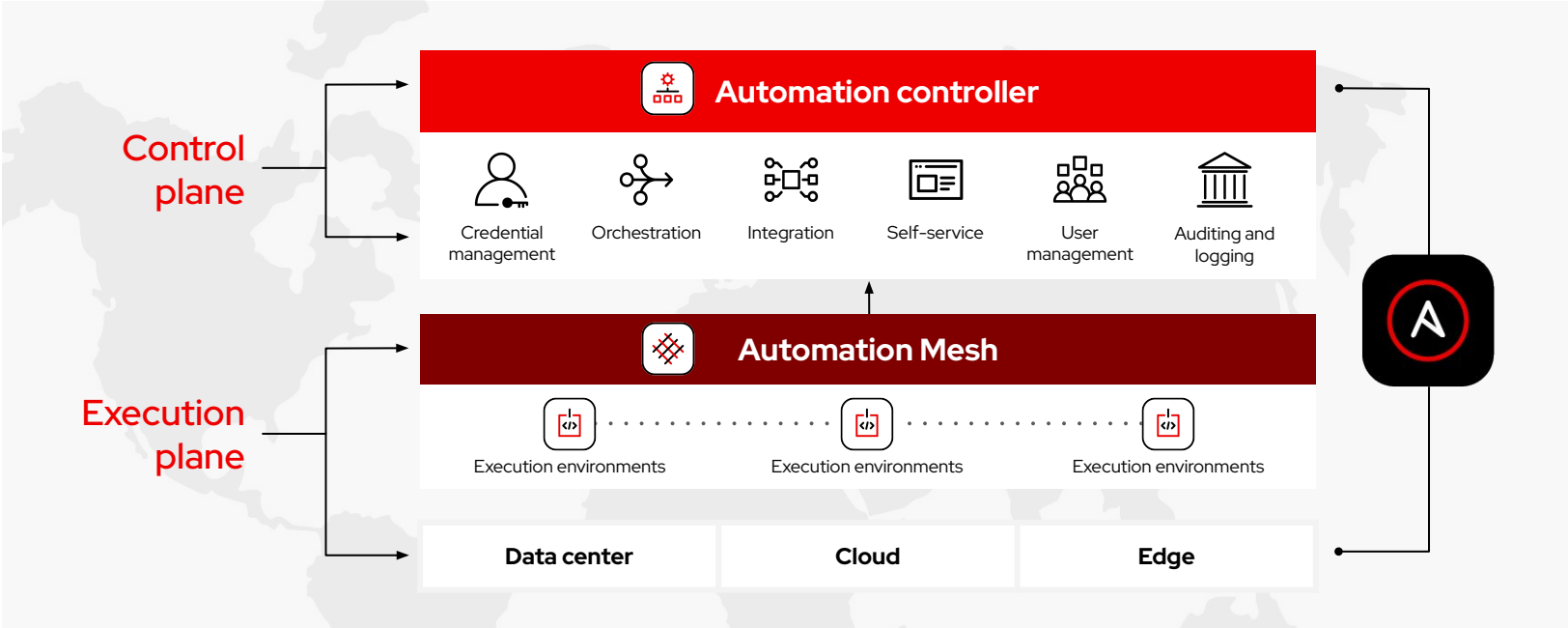

## Ansible Automation Platform 2.x: Integrated and fully supported



# An integrated solution for the enterprise.



# A distributed architecture built for scale.



# Ansible Automation Platform hosting options

Red Hat Enterprise Linux

Red Hat Enterprise Linux 8.3+ x86_64 (physical, virtual)

Red Hat OpenShift

Red Hat OpenShift via dedicated Ansible Automation Platform operator (physical, virtual)

Azure

On Microsoft Azure marketplace

Google Cloud

On Google Cloud marketplace

aws

On AWS marketplace

Self Managed (on-premise or cloud)

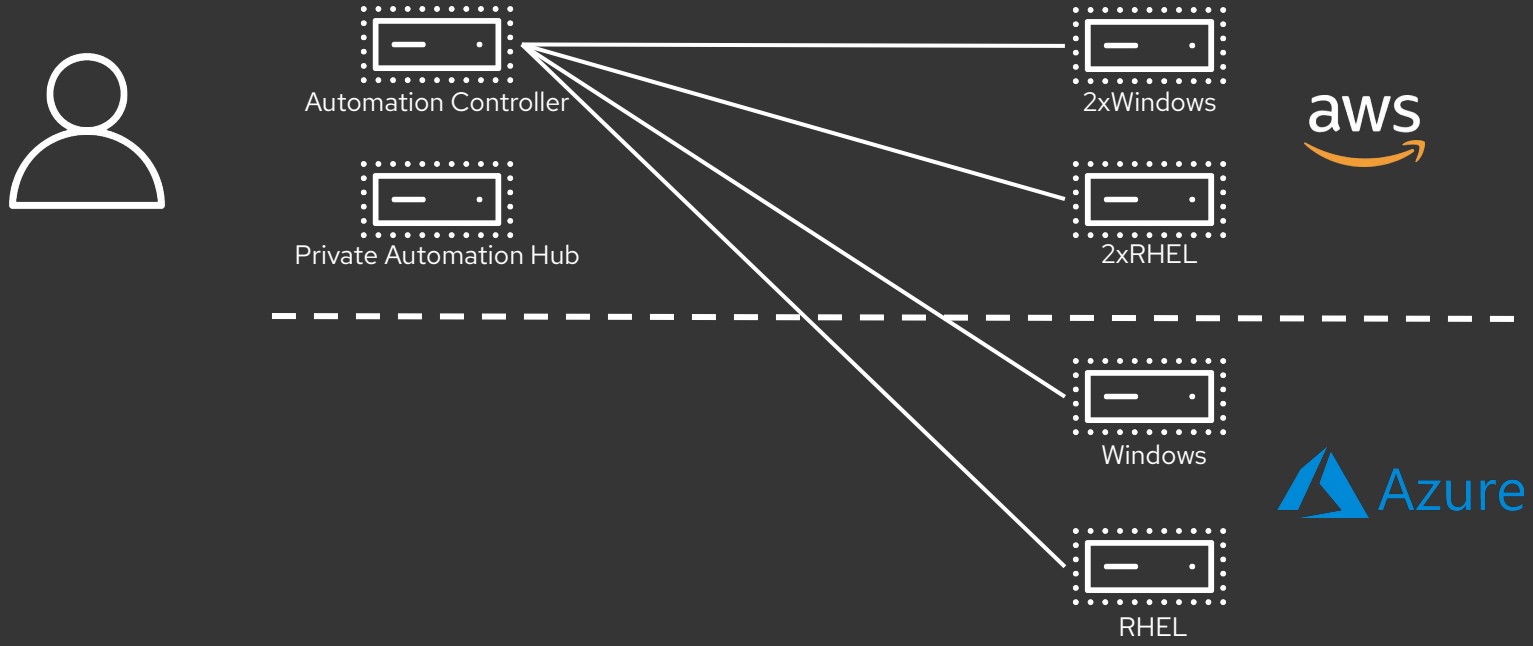
Customer deployed Managed by Red Hat

Customer deployed Self-managed

# CONSISTENCY

- Install Ansible Automation Platform anywhere you like as long as it runs RHEL
- Central source control for all your automations
- Central Automation Hub for all content used by automation
- Consisent automation runtimes with Execution Environments

# Demo


Automation Controller
Private Automation Hub
2xWindows
2xRHEL
aws
Windows
RHEL
Azure

# Event-Driven Ansible technical overview

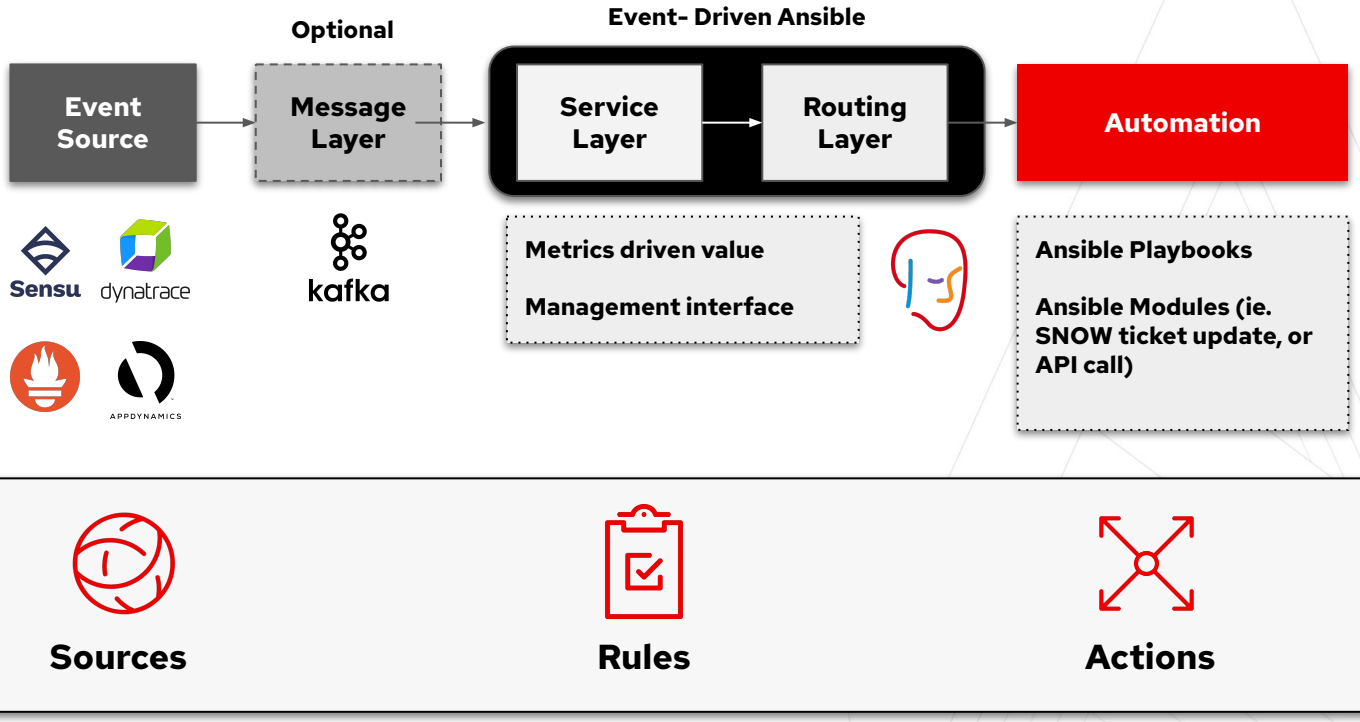
# Ansible Rulebooks

## Simple declarative decisions through rules

- **Events are processed by a rules engine**
  - Rules trigger based on conditions and actions can be carried out by the rules engine
  - Rules are organized into Ansible Rulebooks
  - Ansible rules can apply to events occurring on specific  hosts or groups
- **Conditional management of actions to events**
  - Simple YAML structure for logical conditions
  - Events can trigger different types of actions:
    - Run Ansible Playbooks
    - Run Modules
    - Post new events to the event handler
- **YAML-like format familiarity**
  - Current Ansible users quickly learn and use Rulebook writing

```
- name: Automatic Remediation of a web server
  hosts: all
  sources:
    - name: listen for alerts
      ansible.eda.alertmanager:
        host: 0.0.0.0
        port: 8000
  rules:
    - name: restart web server
      condition: event.alert.labels.job == "fastapi" and
event.alert.status == "firing"
      action:
        run_playbook:
            name: ansible.eda.start_app
```

# Execution layers of Event Driven Automation



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# Ansible Lightspeed Preview Demo

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# Automation Maturity Curve

Effort per change

Speed Scale
Reliability

Standard onboarding
Reliable release process

Team autonomy
Testing framework(s)
Expanded external integrations
Governance driven RBAC

Cross team workflows
End-to-end automation provisioning
Automation first across silos

Federated Self-Service automation
Event driven automation
Self-healing infrastructure


| Level 1 | Level 2 | Level 3 | Level 4 | Level 5 |
|---|---|---|---|---|
| Aware | Standardized | Proactive | Institutionalized | Optimized |



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# Thank you!

## Ansible Automates,
## October 19, Scandic Haymarket