Red Hat Summit

Enterprise Automation? Challenge Accepted!

Pat Harrison

Specialist Solution Architect

Red Hat
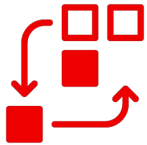
Automation Maturity

Level 1
Aware

- Infrastructure Silos
- Sketchy Inventories
- Heavy Focus on Infra Personas
- Sole Emphasis on Compute
- Long Provisioning Times
- Many Manual Steps
- Reactive Monitoring

Level 2
Standardised

Level 3
Proactive

Level 4
Institutionalised

Level 5
Optimised

- Self Service
- Automation Coordinated Across Silos
- Handles Multiple Personas
- Accurate Dynamic Inventories
- Minimal Provisioning Times
- Applications Provisioning with Infrastructure
- Monitoring With Automated Remediation

Source: Gartner

Red Hat

Enterprise Automation Platform

Connect disparate tools & services

Orchestration

Ease of Use (service catalogue / surveys)

Visibility / Metrics

Enterprise Support

Collaboration

Ease of Adoption
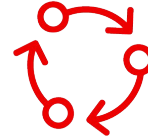
Evolving Features
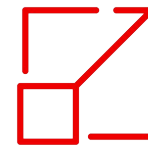
Scalability / Growth

Security & Stability

Red Hat

Enabling your automation team **to consistently...**

Create   **Manage**   **Scale**

Red Hat
Ansible Automation
Platform

An integrated solution for the enterprise.

Content creation tools

| Ansible content tools |
| Execution environment builder |
| Automation content navigator |
| Ansible content collections |

Execution environments

Operational tools

| Private automation hub |
| Automation controller |
| Automation mesh |
| Platform operators |

Business Tools and Analytics

| Red Hat Insights for Ansible |

Red Hat

Create

Red Hat
Ansible Automation
Platform

Supported and certified content you can trust.

Infrastructure   **Cloud**   **Network**   **Security**   **Edge**

140+
Certified Content Collections

55+
Certified technology partners

aws · Hewlett Packard Enterprise · Infoblox NEXT LEVEL NETWORKING · JUNIPER NETWORKS · Check Point SOFTWARE TECHNOLOGIES LTD · DELL EMC

ARISTA · Open Switch · NVIDIA · SAP · splunk> · vmware

NUTANIX · N · IBM · f5 · wti · T/RASA. {open source excellence} · CROWDSTRIKE

Sensu · New Relic · Google · paloalto NETWORKS · VyOS · dynatrace · FRRouting

CYBERARK · Microsoft · HashiCorp Terraform · rubrik · Chocolatey · aruba NETWORKS

COHESITY · CISCO · PURESTORAGE · A10 · NetApp · FORTINET

Red Hat
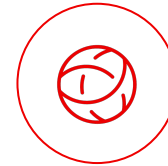
Automation execution environments.
Reuse and scale automation content.

Collections

Libraries

Ansible Core

Red Hat Universal Base Image (UBI)

**Automation
execution environments**
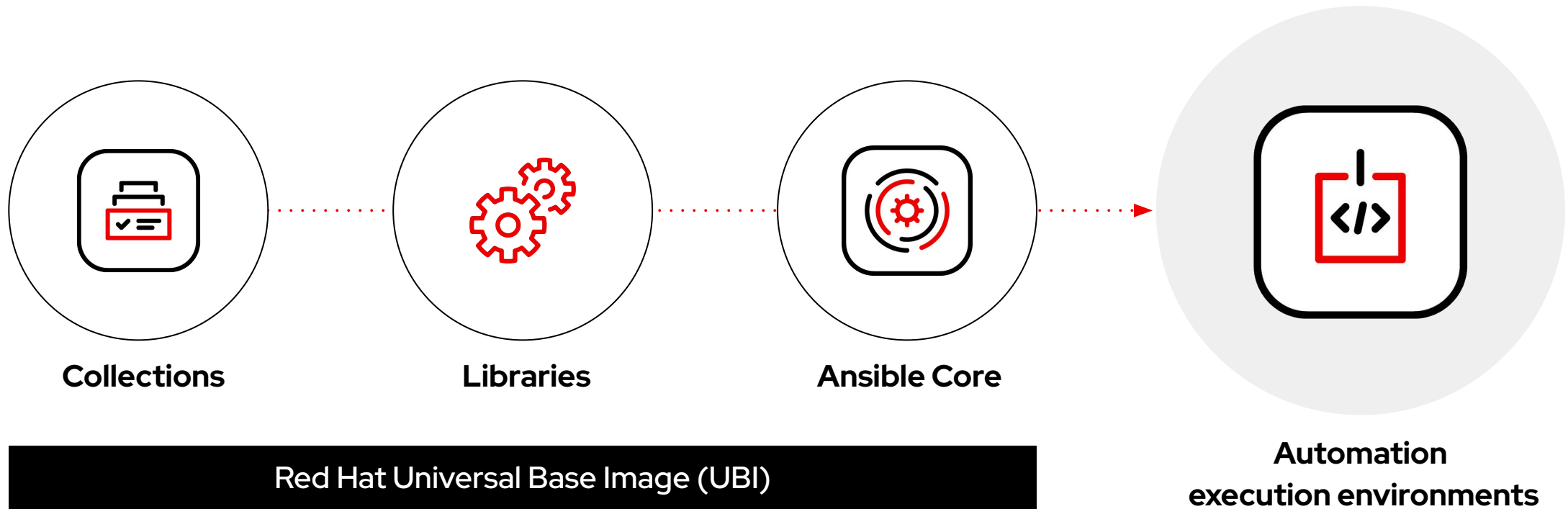
Ansible VS Code extension.
Simplifying content creation.

What is it?

▸ Syntax highlighting of keywords such as module names

▸ Live validation of your code while you type

▸ Integration with ansible-lint*

▸ Autocompletion on play, block or task contents etc

▸ Documentation references as you code

* ansible-lint is fully supported in Ansible Automation Platform version 2.3
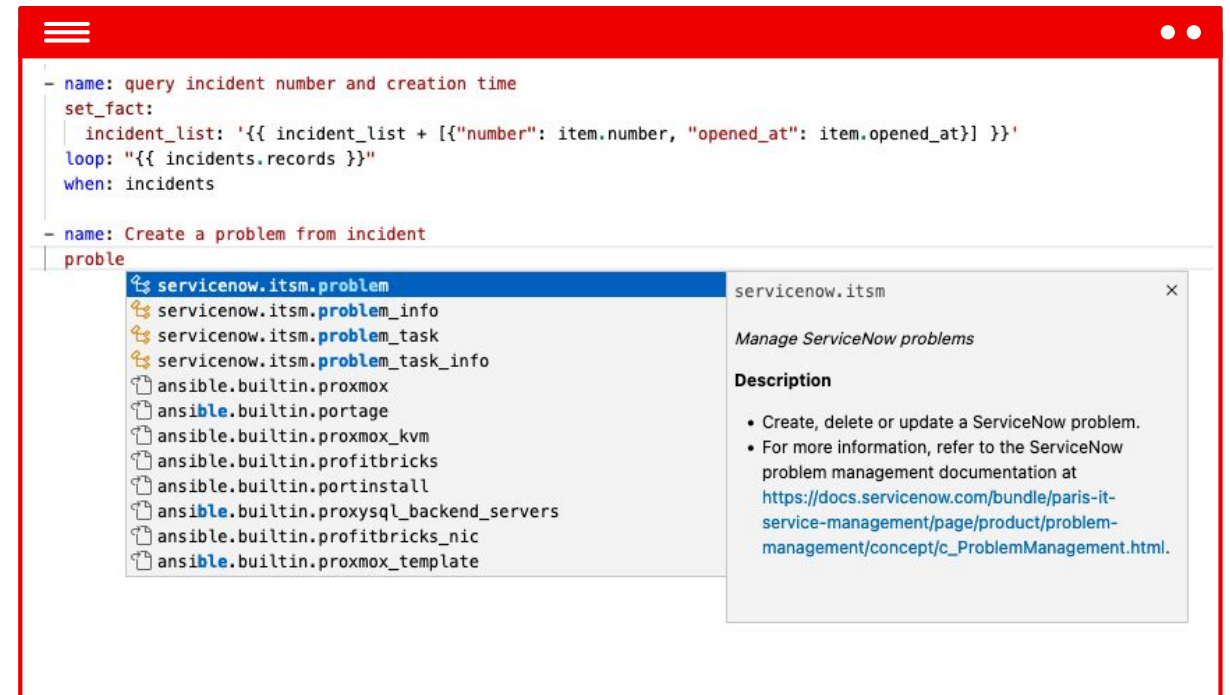
Ansible lint `(ansible-lint).`
Fully supported (AAP 2.3)

What is it?

Command-line tool for linting playbooks, roles and collections aimed towards any Ansible users.

▶ Promote best practices and and patterns.

▶ Develop consistent code across teams and scale using an opinionated strategy.

▶ Integrate into larger development workflows and CI tools.

▶ Helps upgrade playbooks to later Ansible Core versions.

```
$ ansible-lint playbook.yml
```

Red Hat

Red Hat Ansible Certified Content

What do I want to automate?

Established integration with Red Hat and 3rd-party platforms

From Red Hat and trusted industry partners

Tested and supported for security, quality, and reliability

Available through console.redhat.com

Ansible validation content

How should I automate it?

Provides an opinionated path for performing operations on Red Hat and 3rd-party platforms
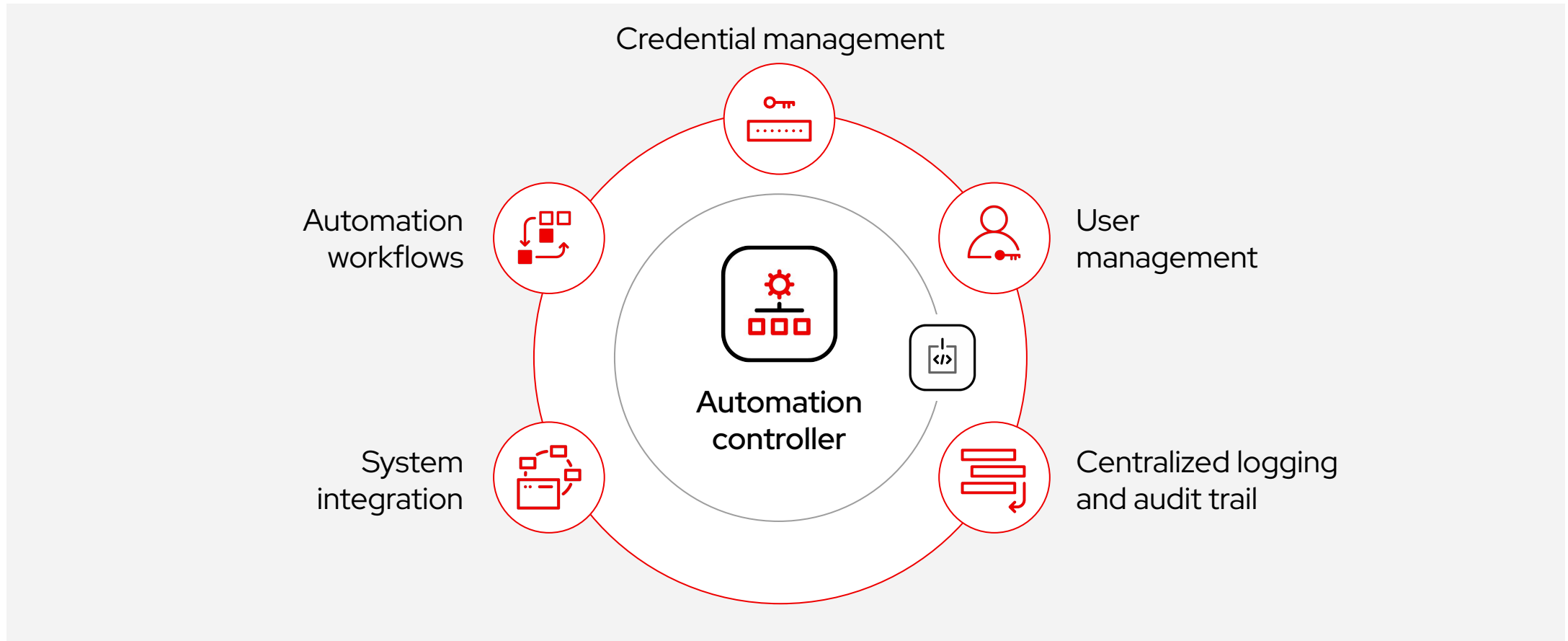
From Red Hat and trusted industry partners

Tested for security, quality, and reliability
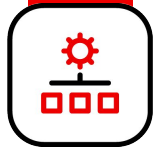
Now preloaded in private automation hub

11

Manage

Red Hat
Ansible Automation
Platform

Enterprises need more for their automation.

Credential management

Automation workflows

User management

Automation controller

System integration

Centralized logging and audit trail

Red Hat
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Platform

Automation controller. Define, operate, and delegate.

What is it?

Automation controller is the Ansible Automation Platform control plane which enables users to define, operate, and delegate automation across their enterprise

Automation controller provides:

▸ WebUI and API

▸ Role-based access control

▸ Powerful workflows

▸ Centralized logging

▸ Credential management

▸ Push–button automation

Automation controller

WebUI

API

RBAC

Workflows

Audit

Red Hat
Ansible Automation
Platform
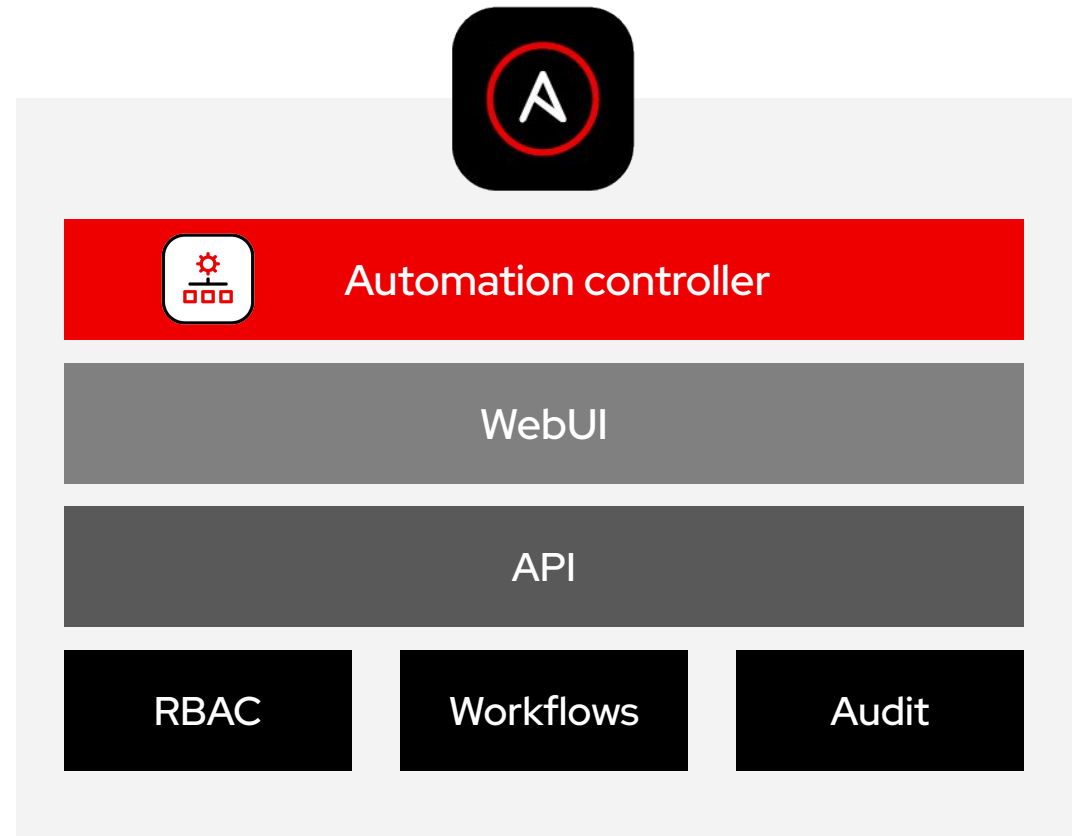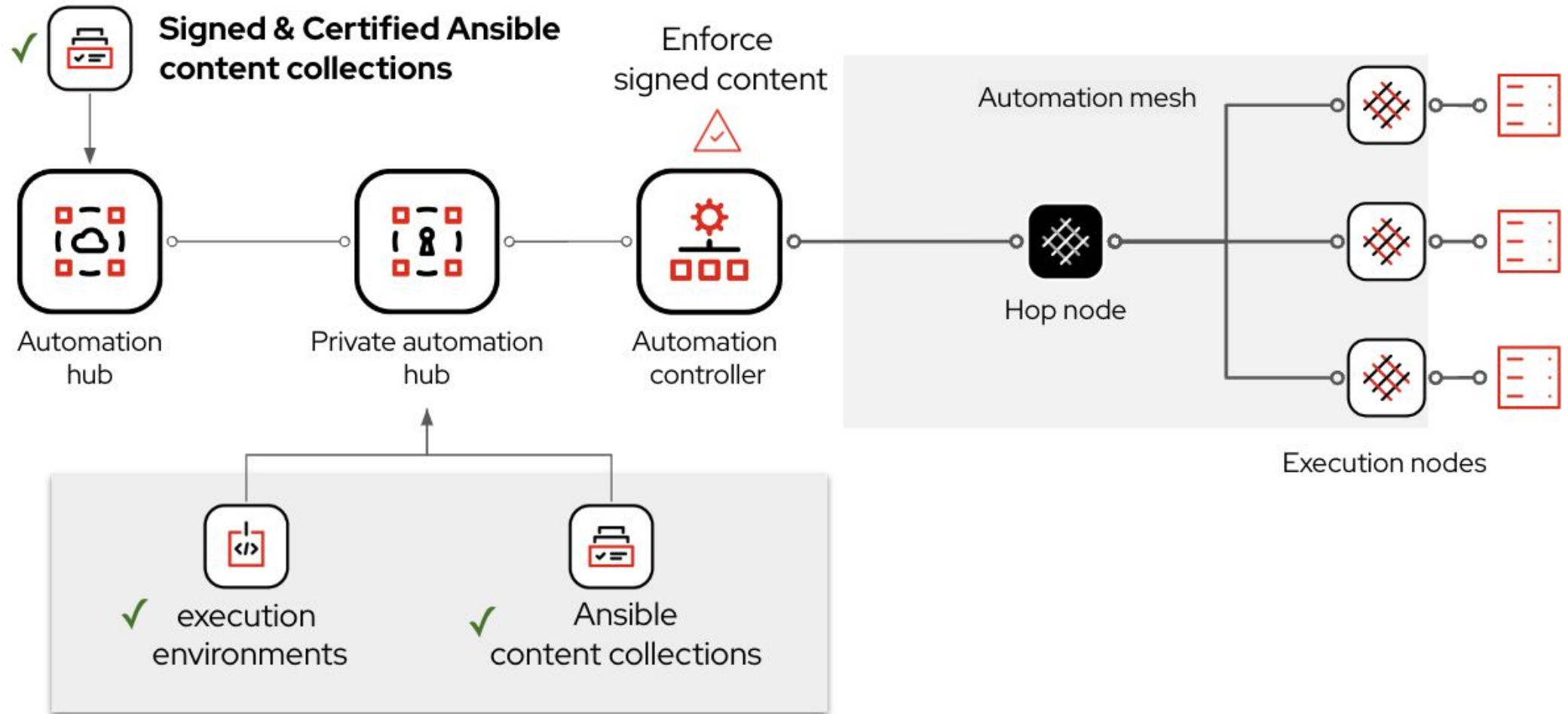
Secure Automation. Integrate with existing tooling.
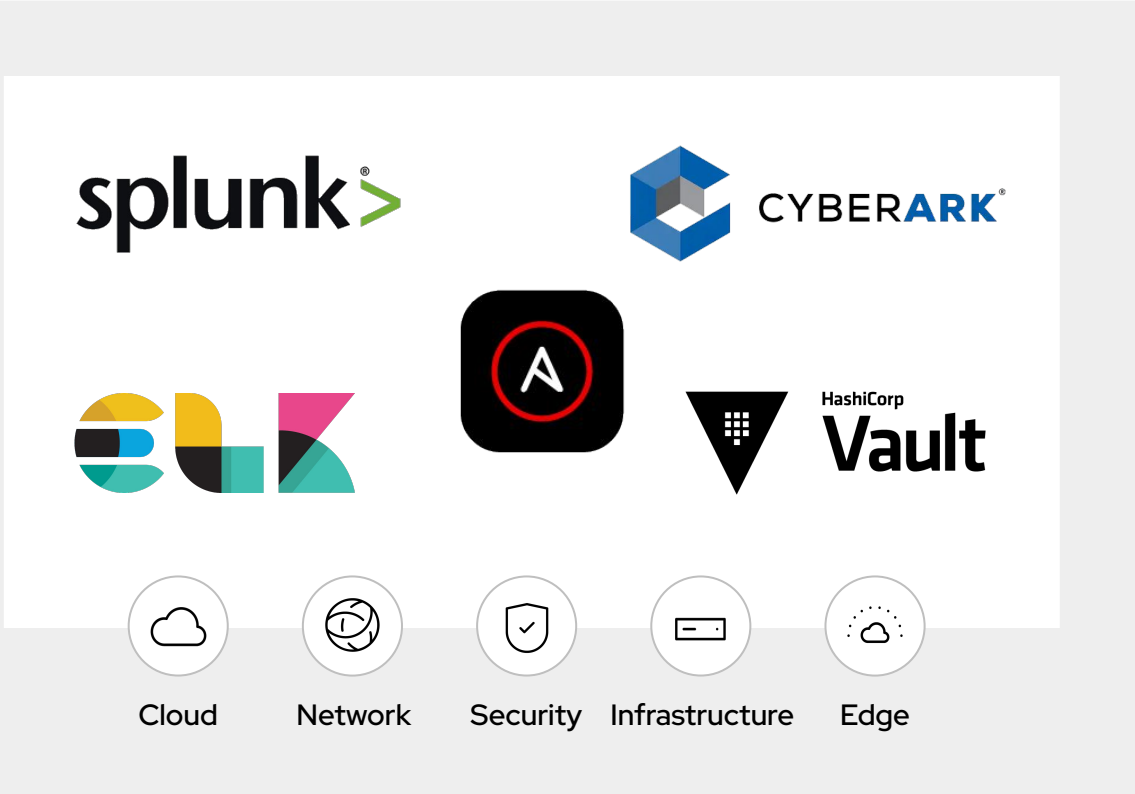
Credential Management

▸ **Builtin** – automation controller provides centralised credential management.

▸ **If you need more, integrate** – automation controller integrates with existing 3rd party vaults.

- CyberArk
- Hashicorp Vault
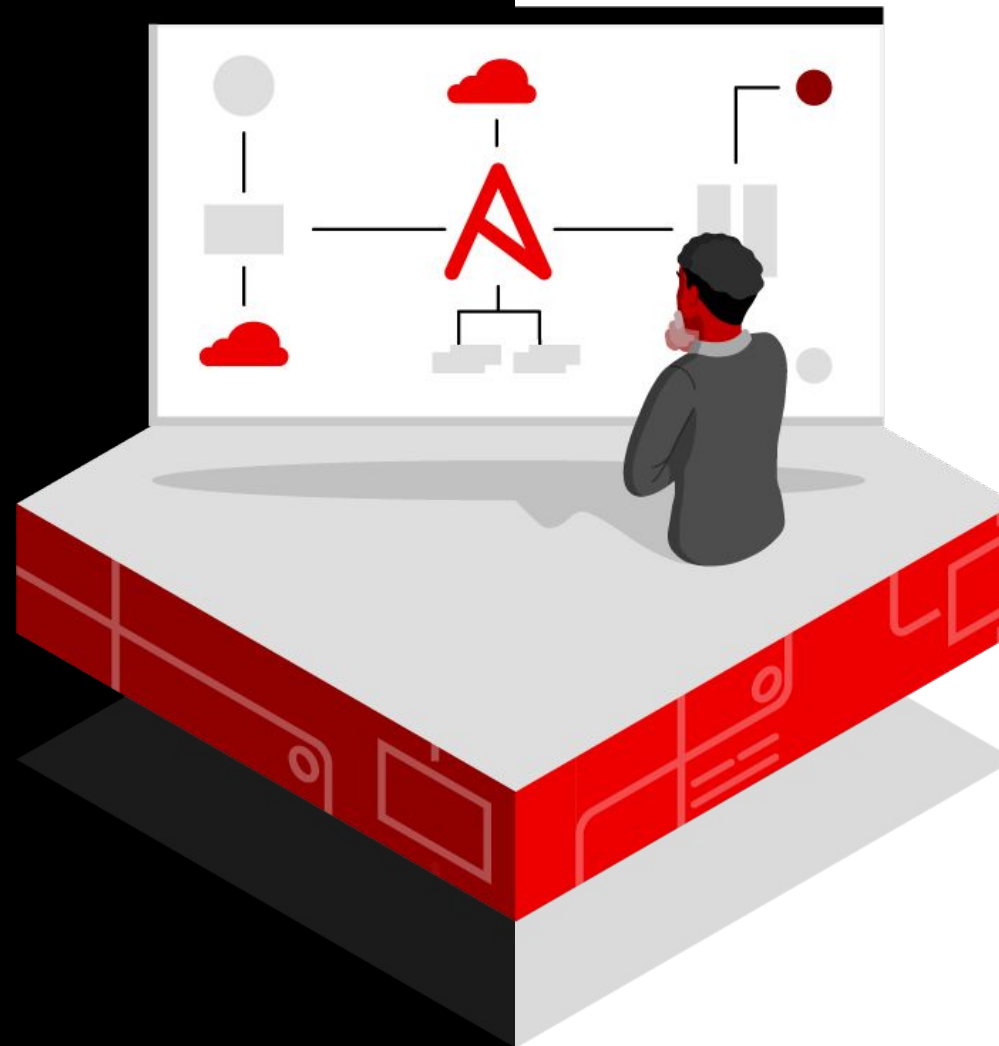- Microsoft Azure Key Vault
- Centrify Vault

Log Aggregation

▸ **Stream logs** to existing monitoring systems
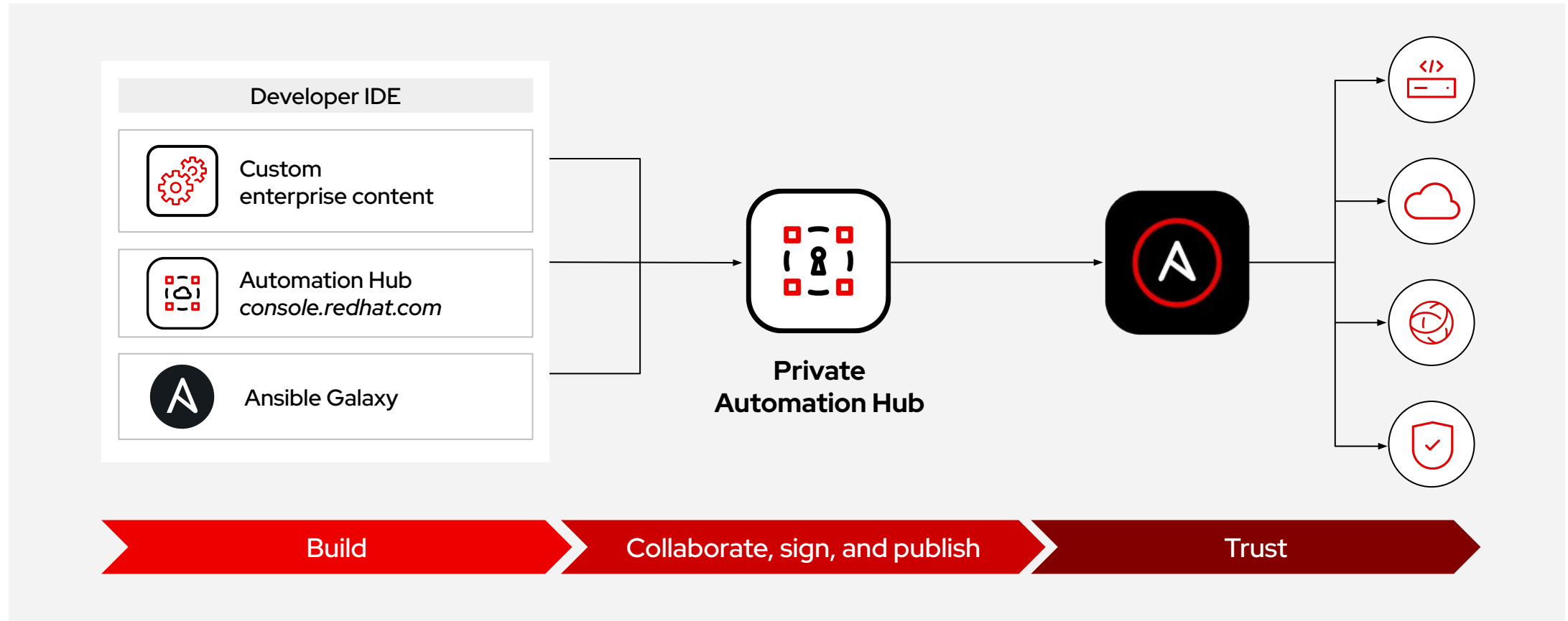
- Splunk
- ELK
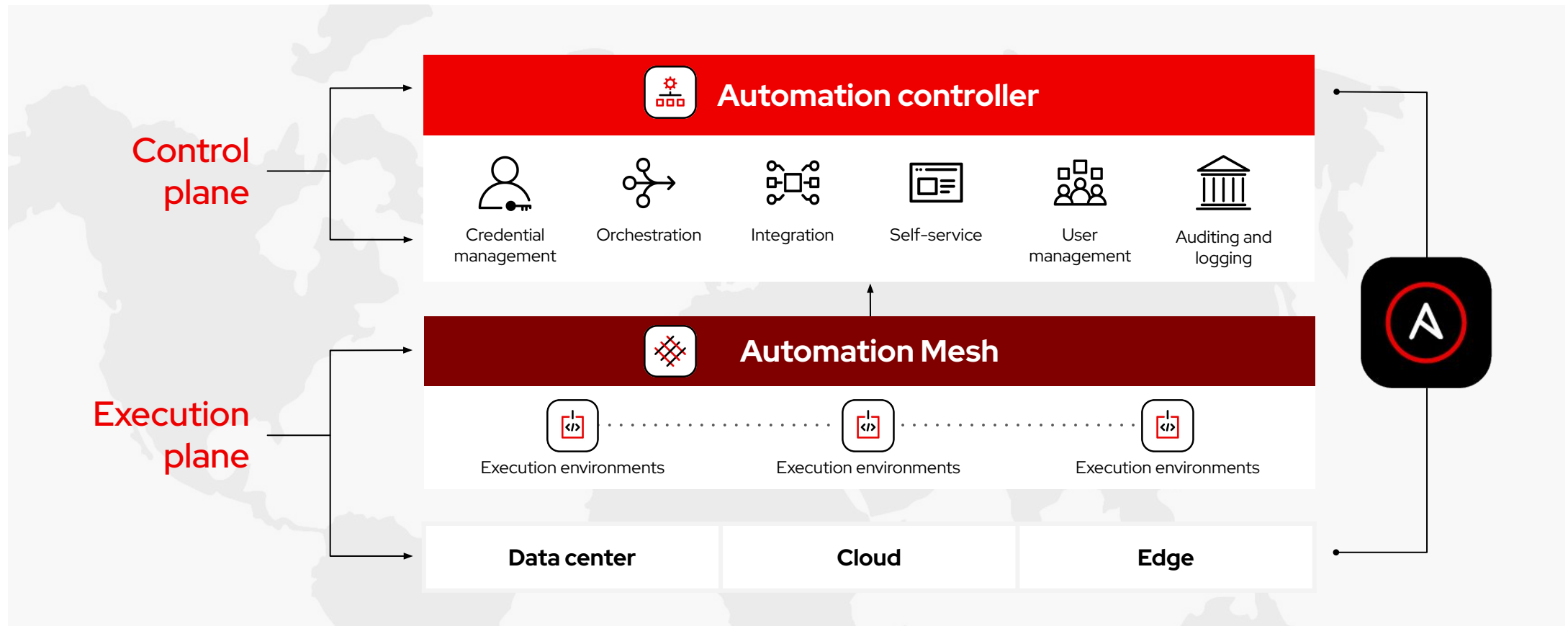- Logstash

Content Signing. Trusted automation supply chain.

Signed & Certified Ansible content collections

Enforce signed content

Automation mesh

Automation hub

Private automation hub

Automation controller

Hop node

Execution nodes

✓ execution environments

✓ Ansible content collections

Red Hat
Ansible Automation Platform

Scale

Red Hat
Ansible Automation
Platform

Private automation hub. Collaborate, sign, and publish.

Developer IDE

Custom enterprise content

Automation Hub
console.redhat.com

Ansible Galaxy

Private Automation Hub

Build | Collaborate, sign, and publish | Trust

Red Hat
Ansible Automation
Platform

A distributed architecture built for scale.

Control plane

Execution plane

Automation controller

| Credential management | Orchestration | Integration | Self-service | User management | Auditing and logging |

Automation Mesh

Execution environments · · · · · Execution environments · · · · · Execution environments

| **Data center** | **Cloud** | **Edge** |

Red Hat

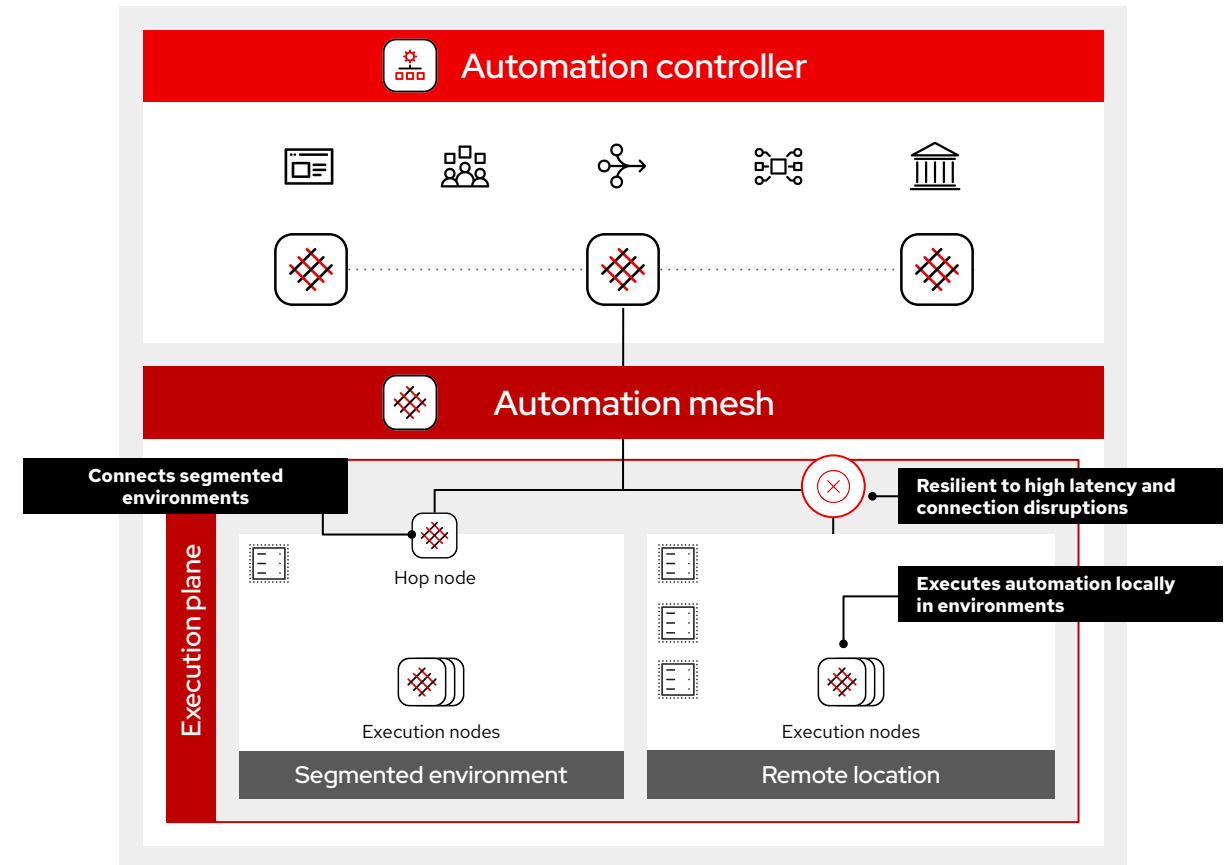# Automation mesh node types. The execution plane.
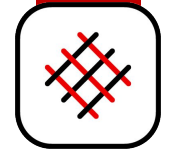
What is it?

▸ Dedicated capacity to running playbooks

▸ Flexible designs possible across geographies and networks

▸ Resilient to high latency and connection disruptions

▸ Run automation without direct connection to controller
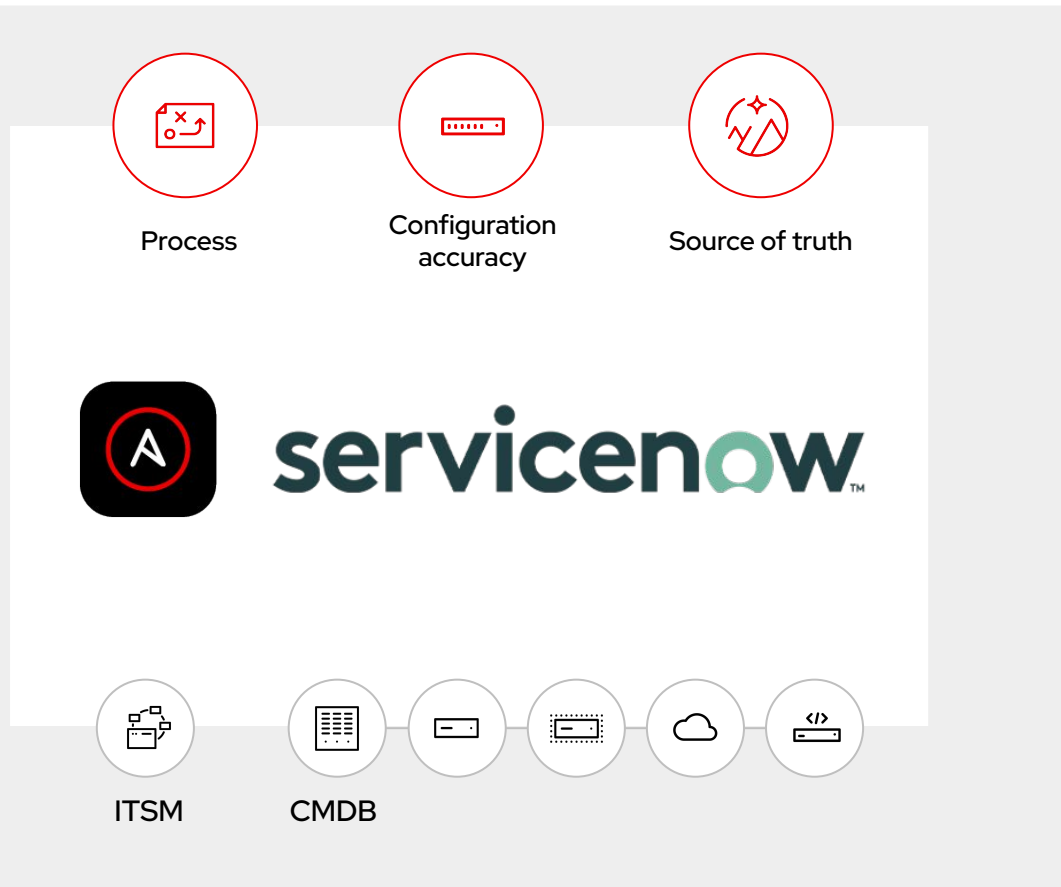
Execution node

▸ Dedicated capacity to run automation and no controller runtime functions executed

Hop node

▸ Dedicated to route traffic across execution nodes not directly connected to controller and cannot run automation

Automation controller

Automation mesh

Execution plane

Connects segmented environments

Resilient to high latency and connection disruptions

Executes automation locally in environments

Hop node

Execution nodes

Execution nodes

Segmented environment

Remote location

Red Hat Ansible Automation Platform

Ansible Automation Platform **for ServiceNow solution.**

Process

Configuration accuracy

Source of truth

ITSM

CMDB

**IT Service Management (ITSM)**

▸ Create and update records

  • Incident, problem, problem task, change request

▸ Assign items to user accounts

▸ Attach files to records

▸ Advanced queries of record types

▸ Support for custom mappings (modified choice lists)

Configuration Management Database (CMDB)

▸ Advanced queries of configuration items

▸ Update configuration items after automated changes

▸ CMDB as inventory source for automation

▸ Batch modifications of configuration items

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Automate your way – Single platform.

Red Hat
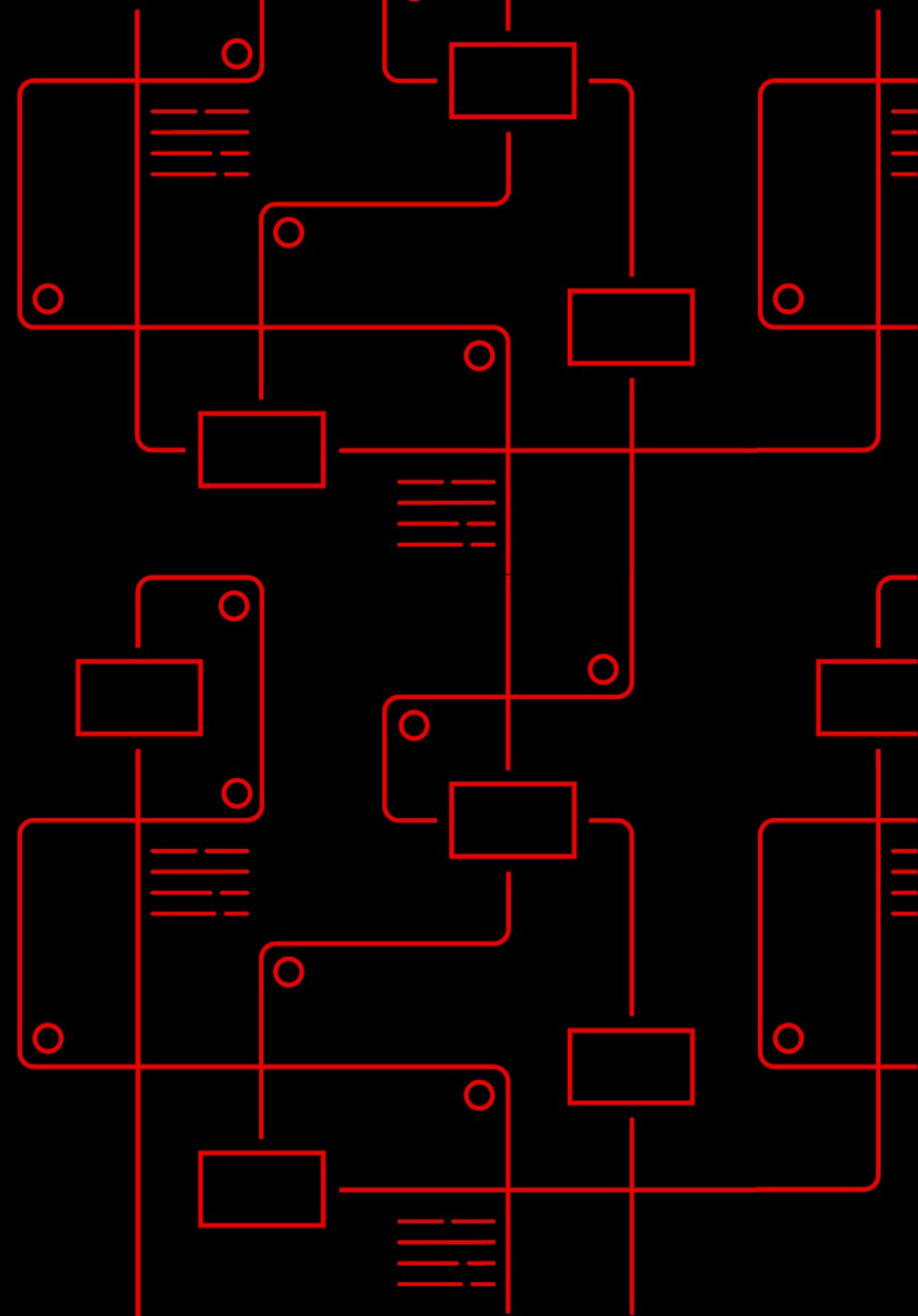Ansible Automation
Platform
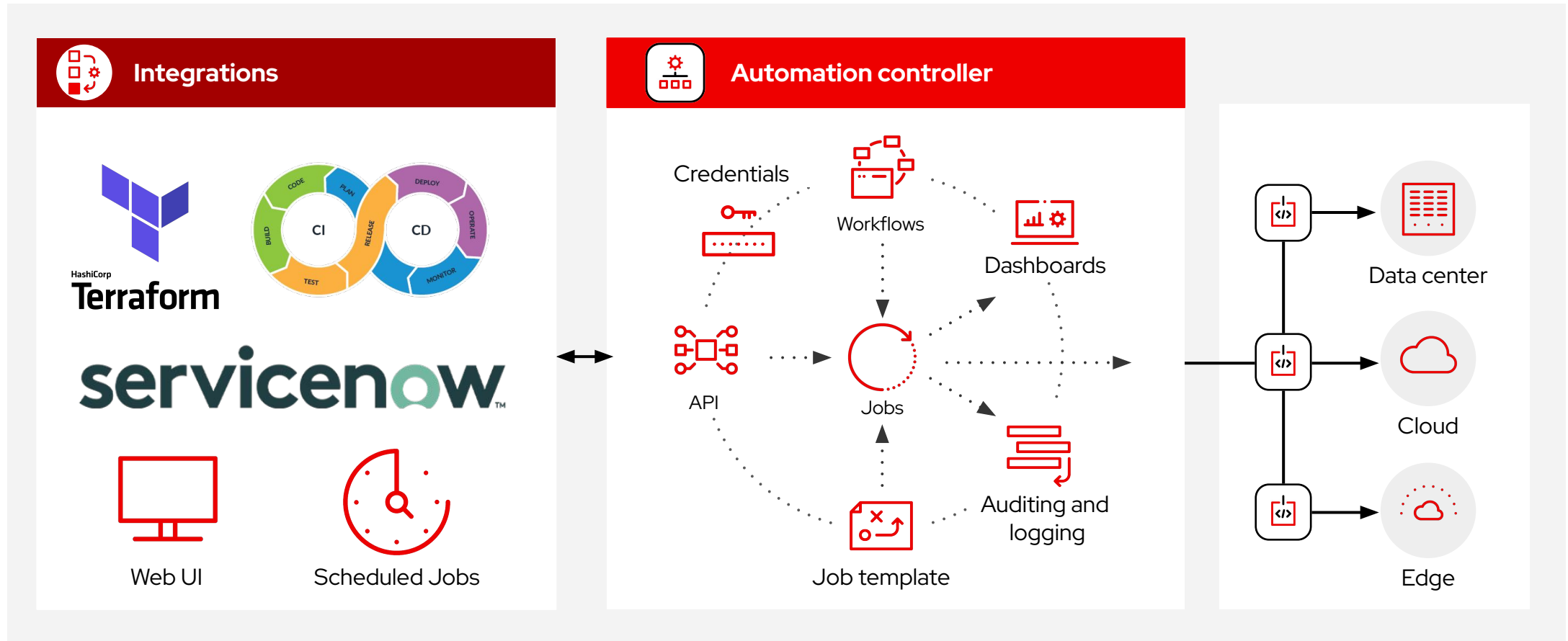
1:00 p.m. – 1:30 p.m.

Stranger Things – Automation beyond servers

2:00 p.m. – 2:30 p.m.

Computacenter – The journey into network automation

3:30 p.m. – 4:00 p.m.

How automation supports your journey to the cloud

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