



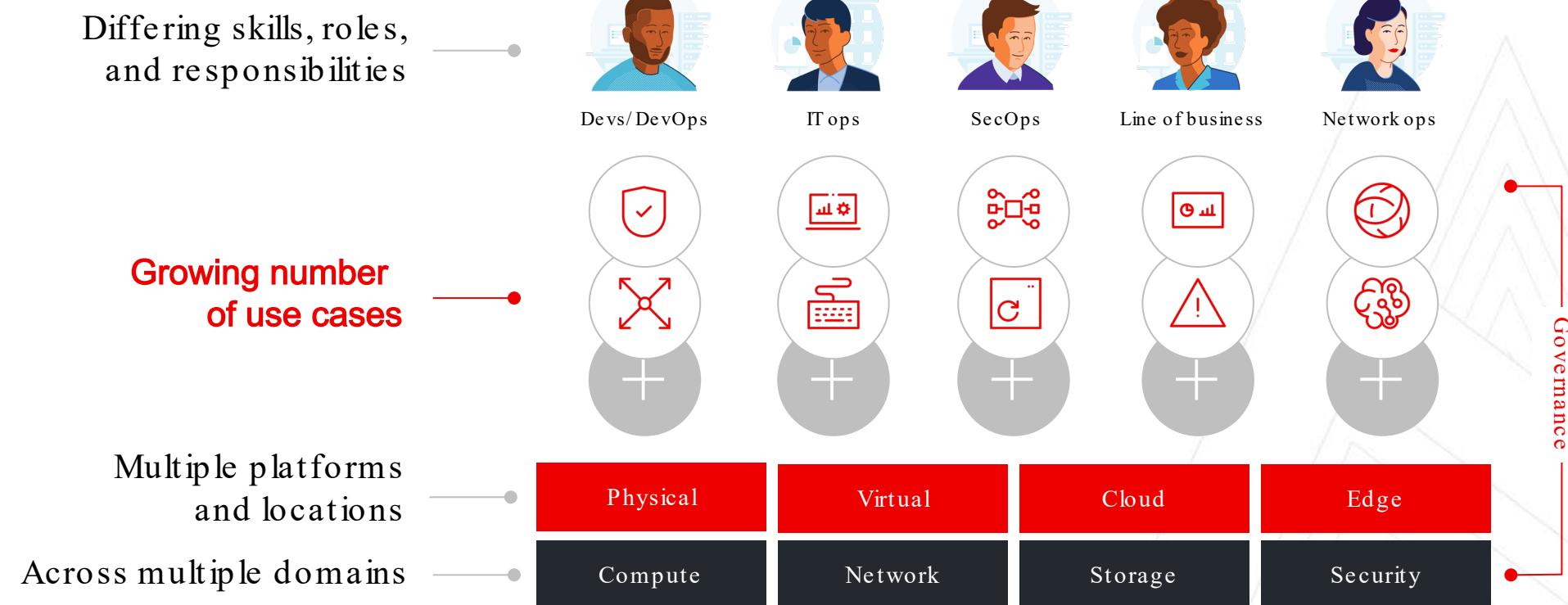
# Moderne IT Automatisierung mit Ansible Automation Platform

Götz Rieger

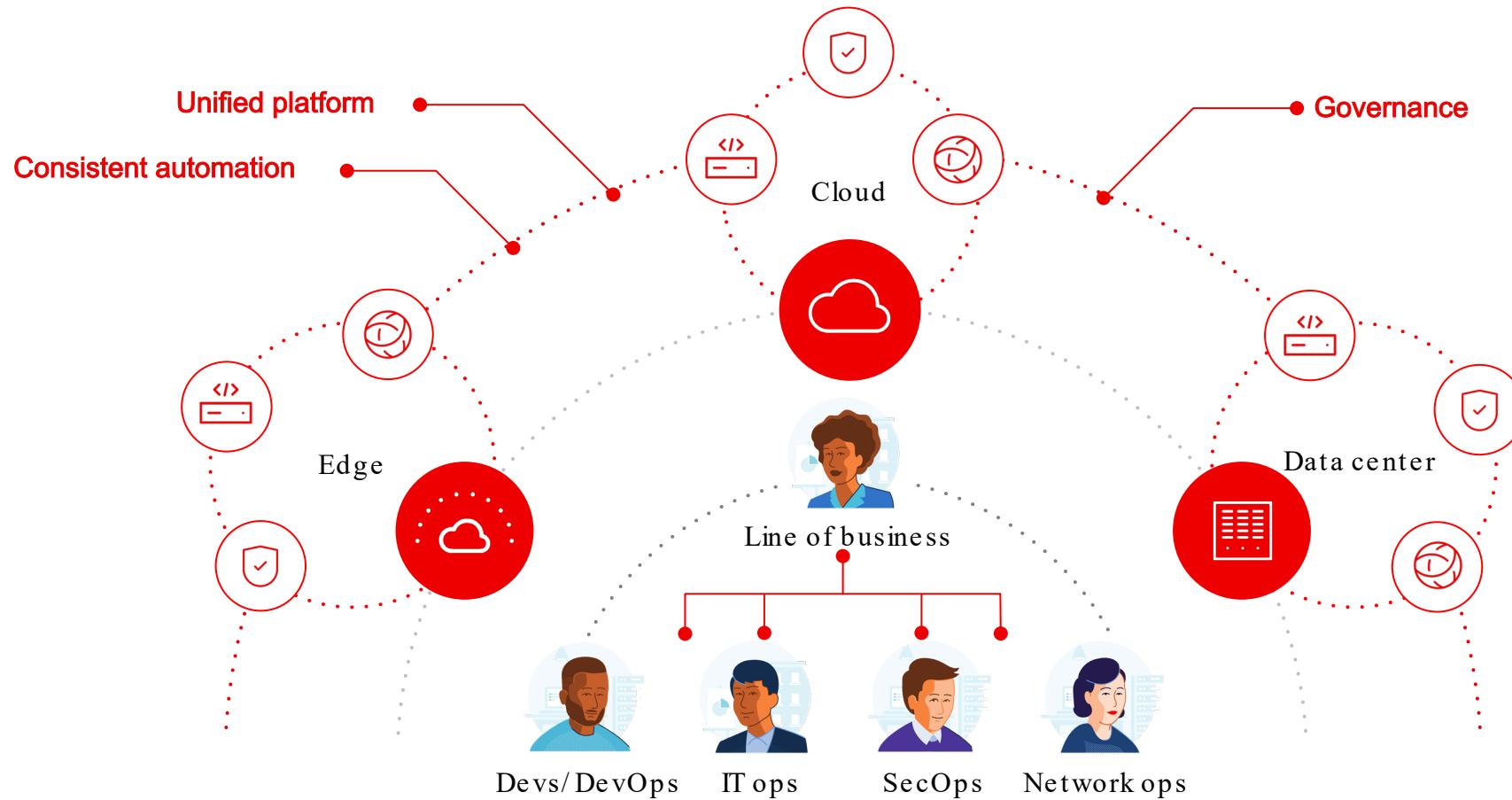
Principal Solution Architect, Red Hat



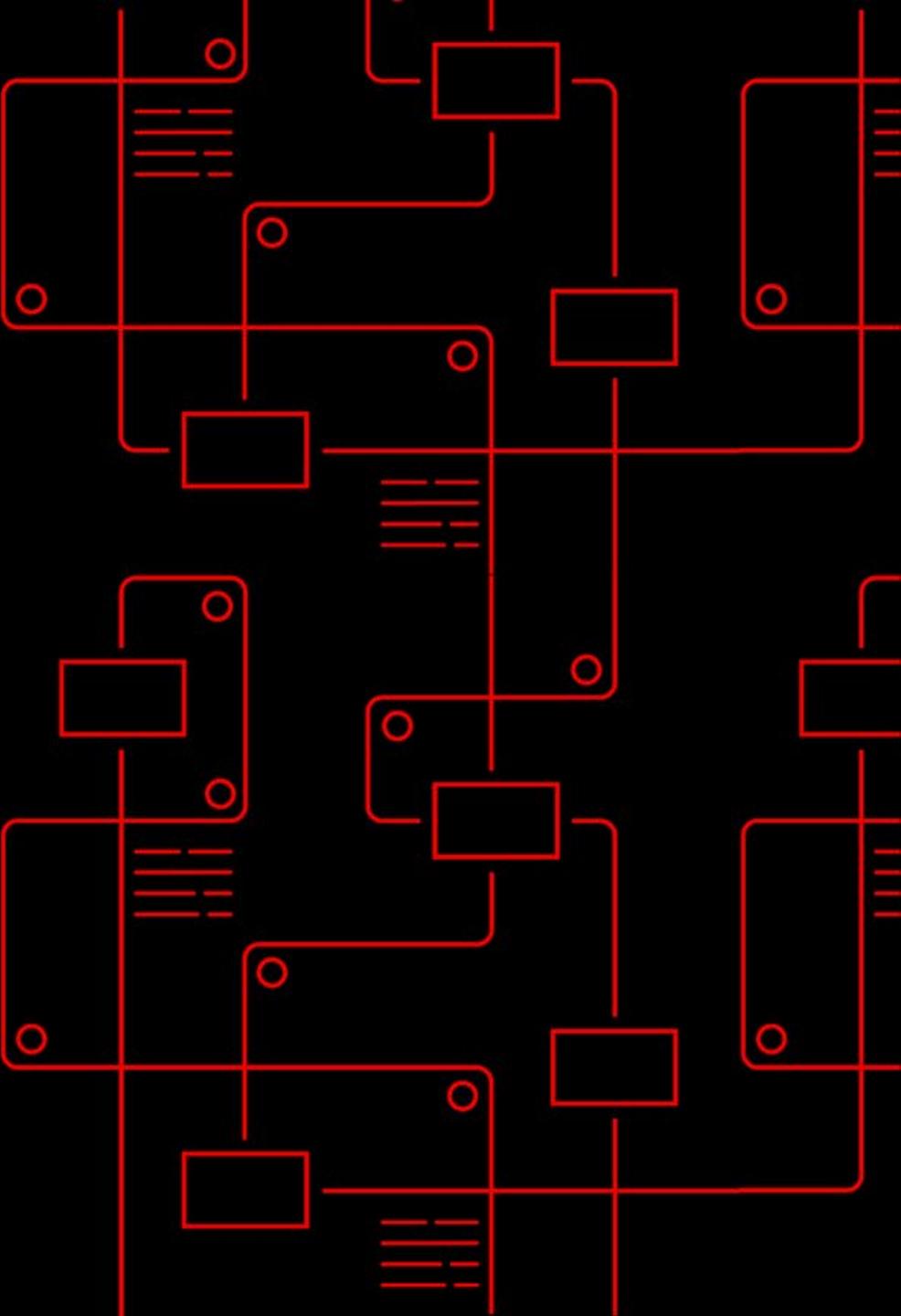
# Many organizations share the same challenge.



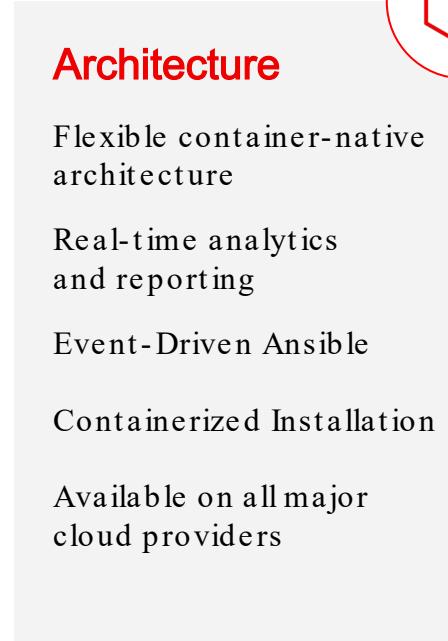
# The solution? Break down the silos.



# What is Red Hat® Ansible®Automation Platform?



# A platform for the entire automation team.



## Content creation

Ansible developer tools package

Integrated generative AI

Build automation communities

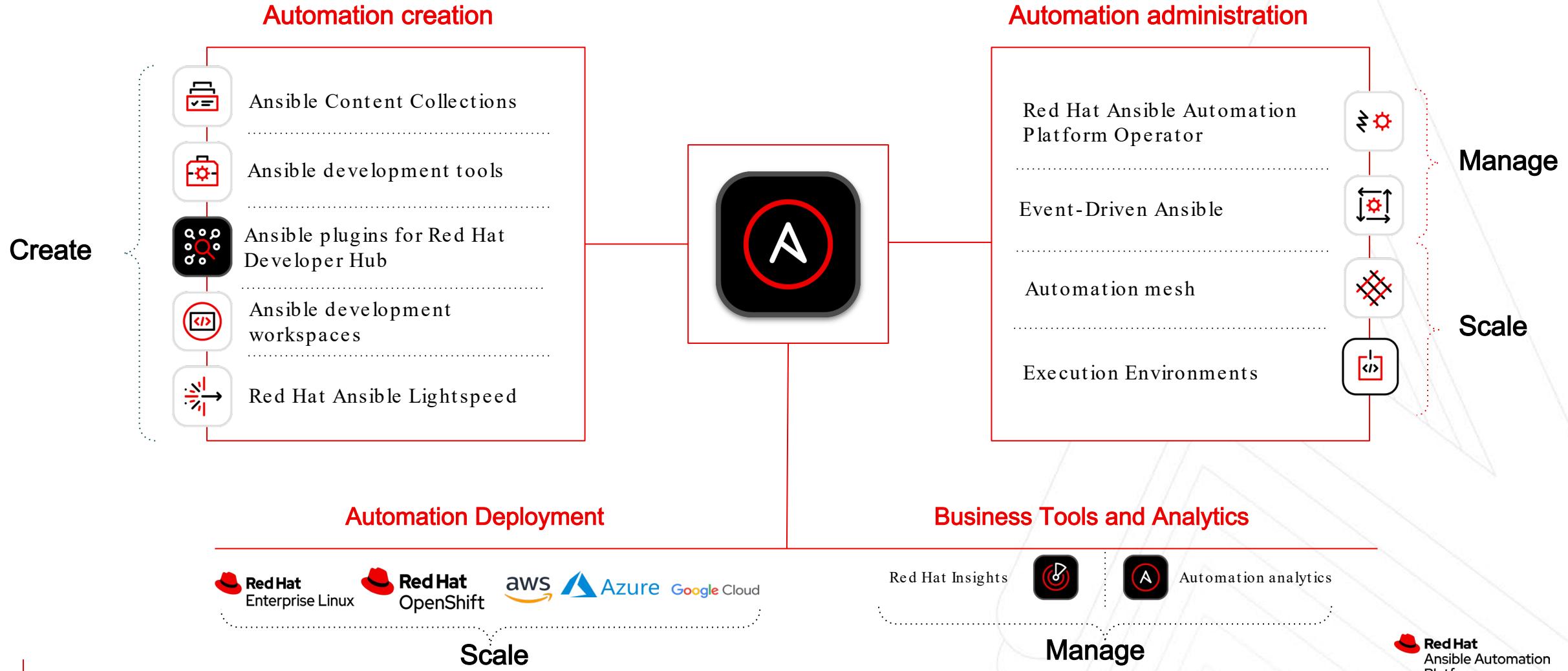
Large ecosystem of certified automation

## Operations

Unified UI provides cohesive platform experience

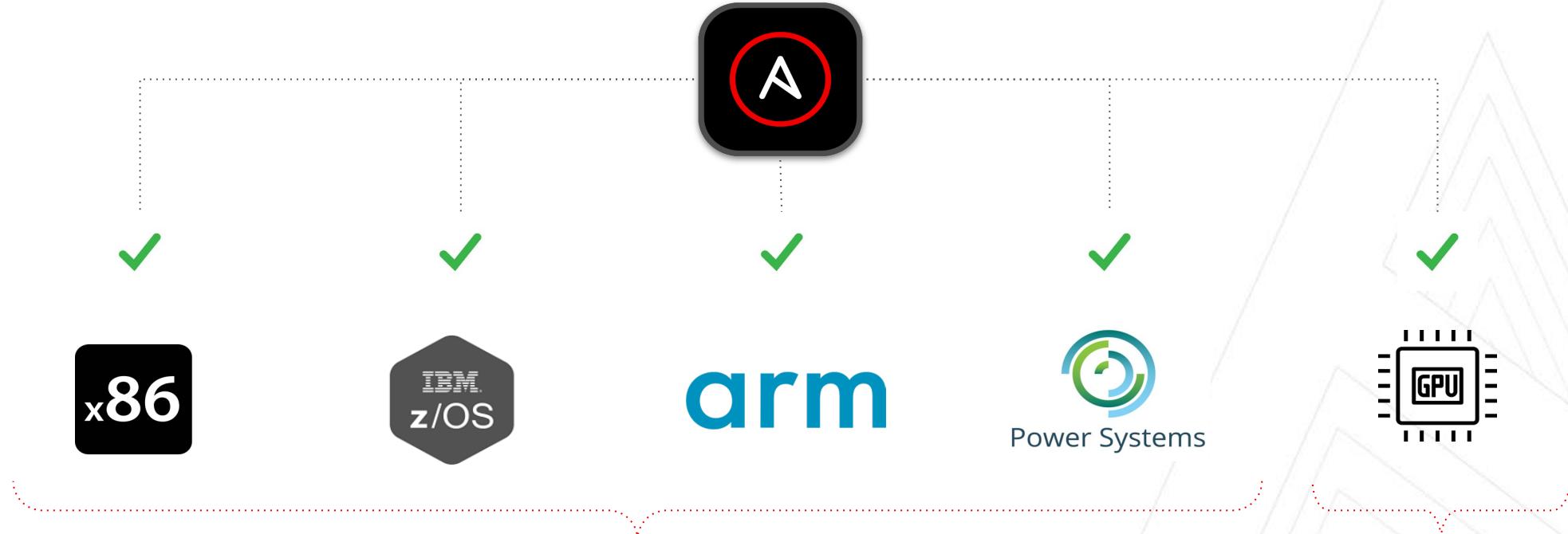
Enterprise features:  
WebUI, API, role-based access control (RBAC), auditing and workflows for managing at scale

# An integrated solution for the enterprise.



# Ansible Automation Platform across architectures.

Deployable on mission-critical architectures



Full support for each of these architectures as of AAP 2.4

Support on  
near-term roadmap



# Ansible Automation Platform installation options.



## RPM

- ▶ Suitable for traditional RHEL environments
  - ▶ Deprecated with AAP 2.5 (removal TBD)
- 
- > RPM and containerized installers are available for customers through [Red Hat Customer portal](#).
  - > AAP Operator is available through OperatorHub in Red Hat OpenShift Container Platform.
  - > For more information on installation, refer the [documentation](#).



## Containerized

- ▶ Ideal for flexibility and rapid scaling
- ▶ Simplifies dependency management



## Openshift Operator

- ▶ Seamless integration with Openshift
- ▶ Automated lifecycle management

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



Create

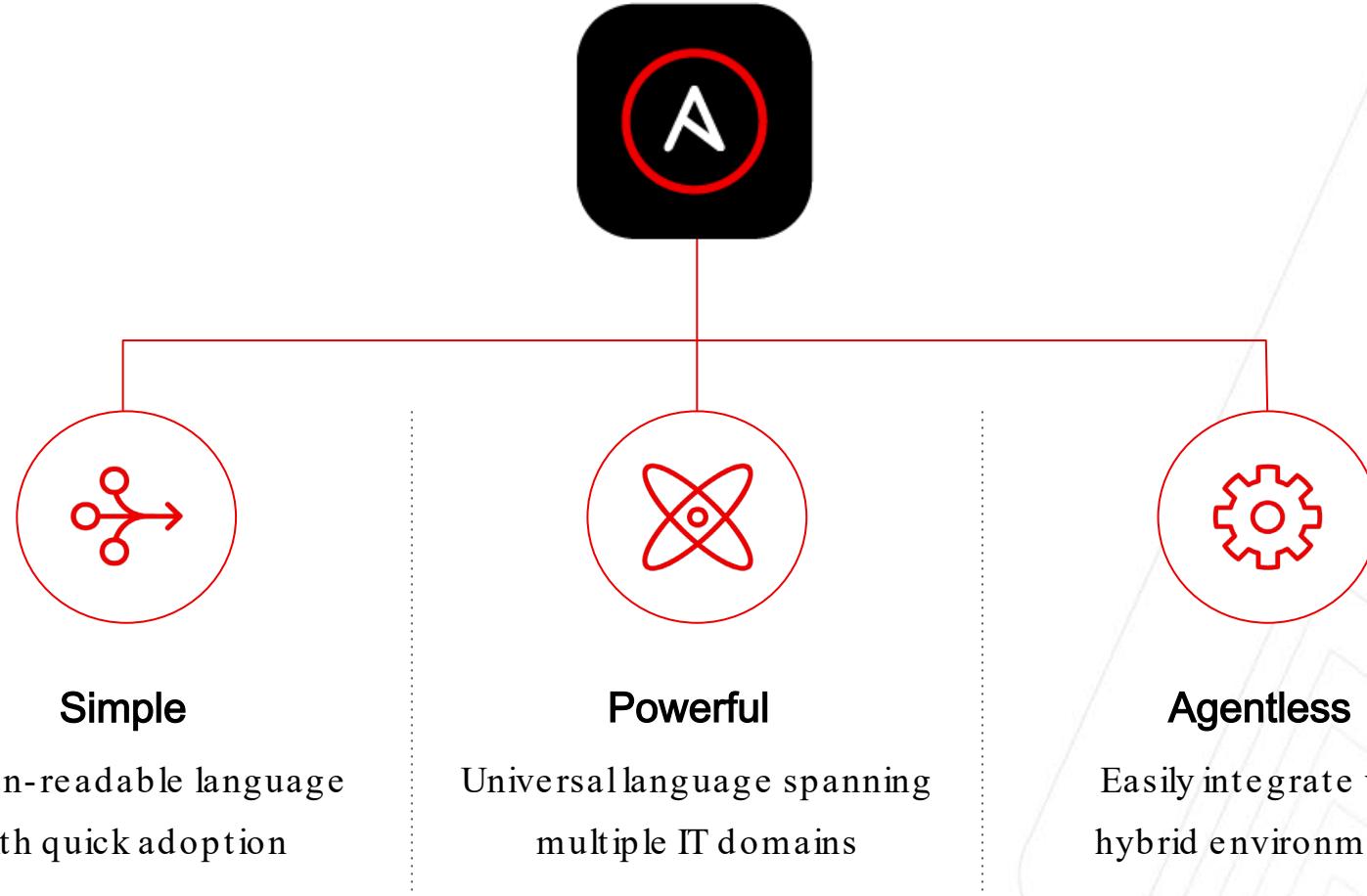
Manage

Scale

# Create



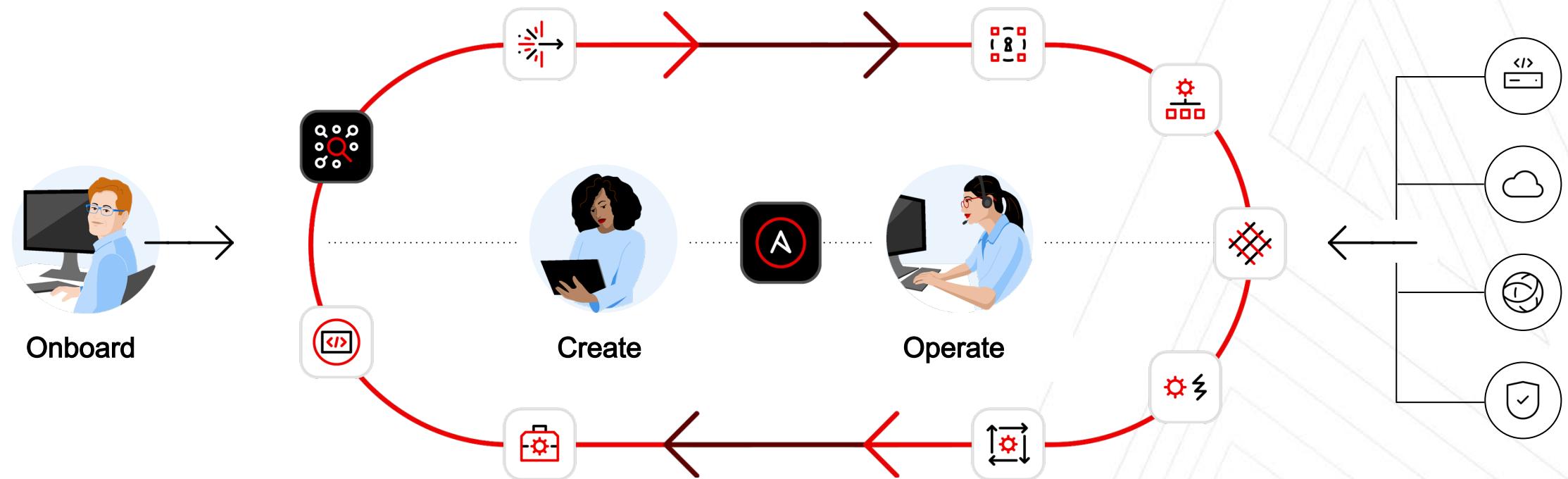
# Ansible is the **de facto** automation language.



# The automation content life cycle.

Create.

Ansible plug-ins for Red Hat Developer Hub · Ansible Lightspeed · Automation hub · Automation Platform UI · Automation mesh



# Ansible VS Code extension. Simplifying content creation



## What is it?

- ▶ Syntax highlighting of keywords
- ▶ Live validation of your code while you type
- ▶ Hover and goto functionality
- ▶ Auto-completion on play, block, or task contents, hosts, etc
- ▶ Supports Ansible content development on Windows and Mac OS workstation

The screenshot shows a code editor window with the following Ansible YAML code:

```
- name: query incident number and creation time
  set_fact:
    incident_list: '{{ incident_list + [{"number": item.number, "opened_at": item.opened_at}] }}'
  loop: "{{ incidents.records }}"
  when: incidents

- name: Create a problem from incident
  problem
```

An auto-completion dropdown is open over the word "problem". It lists several options, with "servicenow.itsm.problem" highlighted. The dropdown also displays a description of the module:

**servicenow.itsm**  
Manage ServiceNow problems  
**Description**

- Create, delete or update a ServiceNow problem.
- For more information, refer to the ServiceNow problem management documentation at [https://docs.servicenow.com/bundle/paris-it-service-management/page/product/problem-management/concept/c\\_ProblemManagement.html](https://docs.servicenow.com/bundle/paris-it-service-management/page/product/problem-management/concept/c_ProblemManagement.html).

# Ansible plugins for Red Hat Developer Hub (Backstage)

Tools for building and maintaining a vibrant automation Community of Practice

- > An Ansible-specific portal experience featuring learning paths, labs, and other user onboarding resources, all designed to help your organization:
  - ✓ Onboard new users faster
  - ✓ Improve developer productivity
  - ✓ Reduce friction, context switching, and frustration
  - ✓ Get faster time-to-value from your automation investment
  - ✓ Establish better governance, consistent control, and more trust
- > Enables push-button Ansible Playbook and collection creation with opinionated best practices
- > RBAC integration with [Red Hat Developer Hub](#)
- > Optional integration with OpenShift Dev Spaces

**Welcome to the Ansible plug-ins for Red Hat Developer Hub**  
This Ansible out-of-the-box experience accelerates content creation and meets you where you are in the development process.

**LEARNING PATHS**  
Step-by-step enablement curated by Red Hat Ansible.

<b>1.Introduction to Ansible</b> 30 minutes   Ansible   Beginner   Learning path	<b>2.Getting started with the Ansible VS Code extension</b> 1 hour   Ansible   Beginner   Learning path	<b>3.YAML Essentials for Ansible</b> 30 minutes   Ansible   Beginner   Learning path
Learn more about the fundamental concepts of Ansible, an open source IT automation solution that automates provisioning, configuration management, application deployment, orchestration, and many other IT processes.		
Do a deep-dive into the features of Ansible VS Code extension, the Red Hat recommended way of creating your Ansible projects, which brings syntax-highlighting, auto-completion, linting, and generative AI to your automation creation workflows.		
Learn more about YAML and how Ansible Automation Platform uses it for content. YAML offers a straightforward, human-readable way to write Ansible configurations, tasks, and playbooks.		

**4.Getting started with Ansible playbooks**

**5.Getting started with Content**

**Welcome to the Ansible plug-ins for Red Hat Developer Hub**  
This Ansible out-of-the-box experience accelerates content creation and meets you where you are in the development process.

**OVERVIEW**

**1.LEARN**

Learning paths are tutorials that guide you through common Ansible tasks. New and experienced users alike can get up-to-speed with learning paths based on the latest Ansible Automation Platform versions and best practices.  
Please visit the [User Guide](#) to get started with the Ansible plug-ins for Red Hat Developer Hub.  
Learn more on the [Red Hat Developer website](#).

**Start Learning Path**

**2.DISCOVER EXISTING COLLECTIONS**

**3.CREATE**

**4.DEVELOP**

**5.OPERATE**

**6.USEFUL LINKS**

**Starred Ansible Items**

Click the star beside an Ansible entity name to add it to this list!

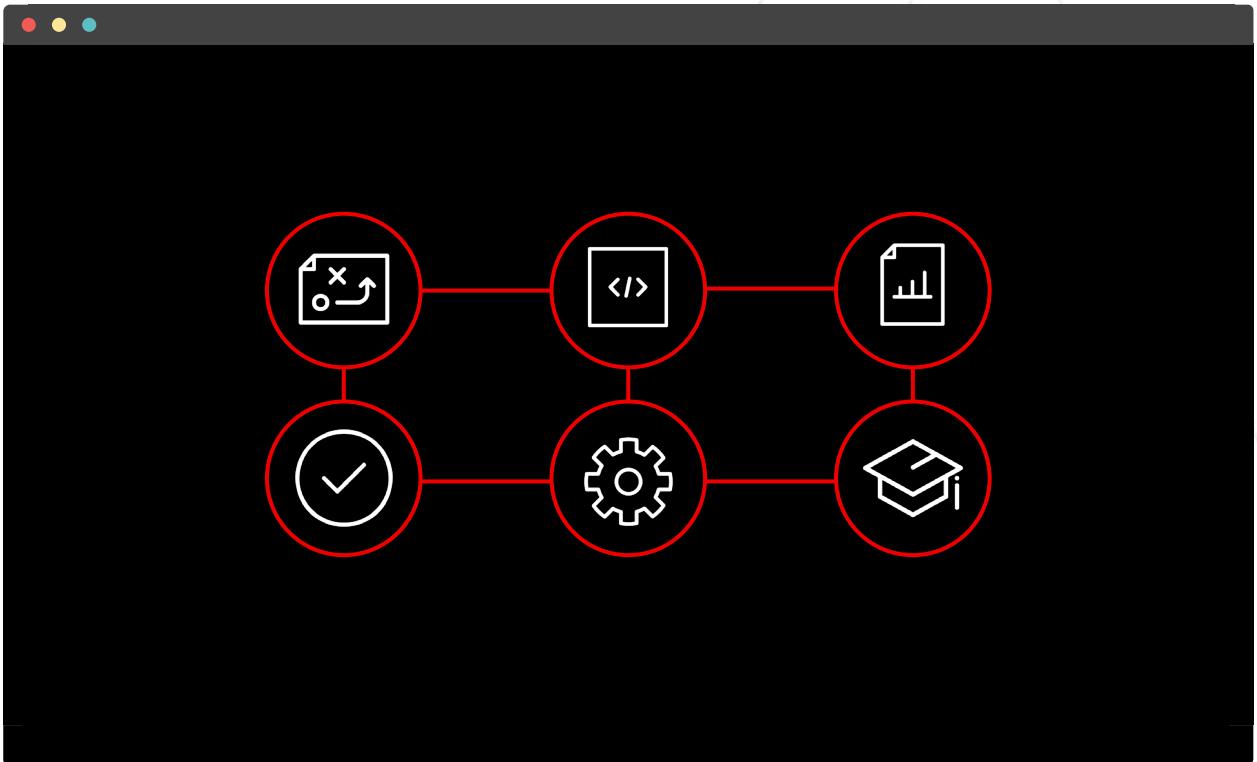
# Content Collections.

## Simplified, consistent content delivery.



### What are they?

- ▶ Contains automation content, including modules, multiple roles ,and playbooks
- ▶ Portable, reusable, and versioned enabling better collaboration



# Automation hub. Trusted automation content.

[console.redhat.com](https://console.redhat.com)

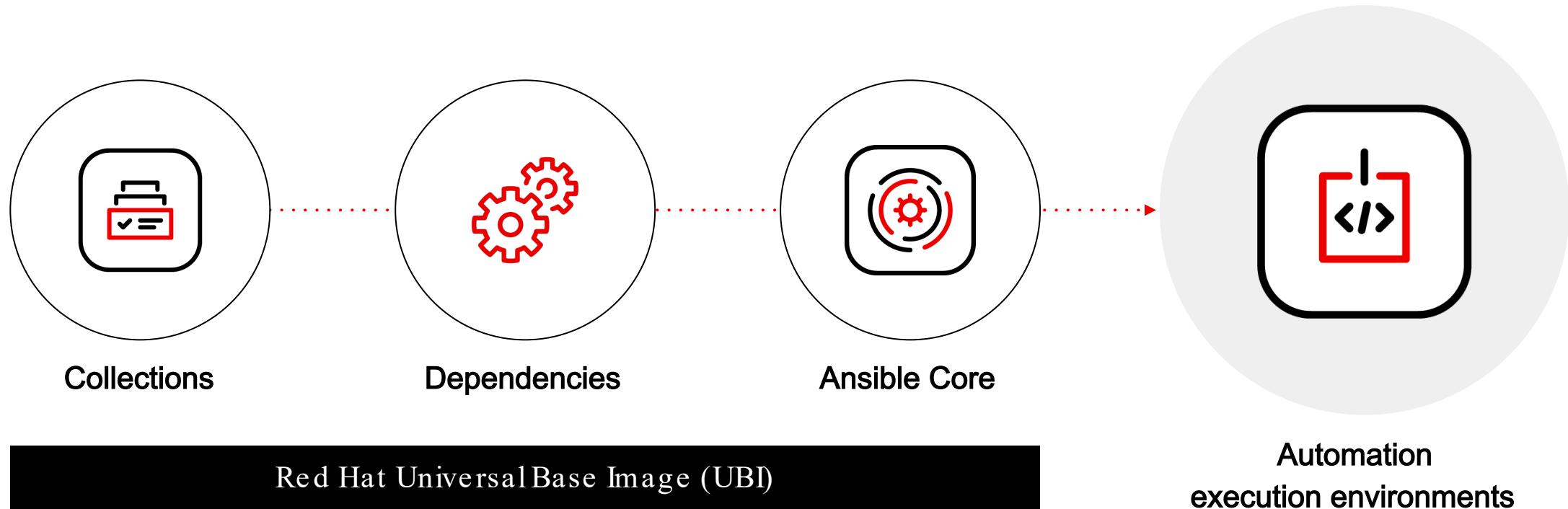
## What is it?

- ▶ Hosted source of trusted Red Hat, Validated and Certified Partner Content Collections
- ▶ Integrated documentation and examples
- ▶ Configurable as primary content collection source for your automation environment
- ▶ Access to hosted automation hub and content included in subscription

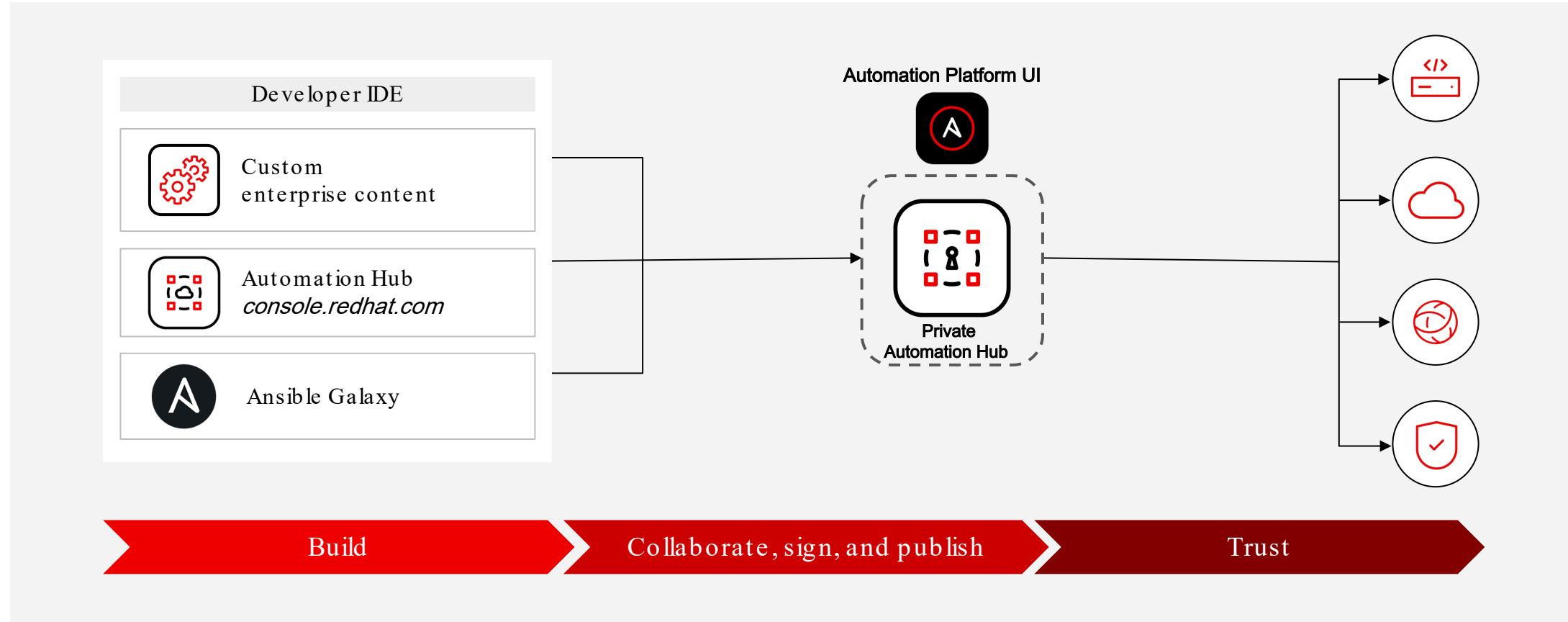
Approval dashboard

Namespace	Collection	Version	Date created	Status
kyleabenson	fest2020collection	1.1.1	3 hours ago	Approved

# Automation execution environments. Reuse and scale automation content.

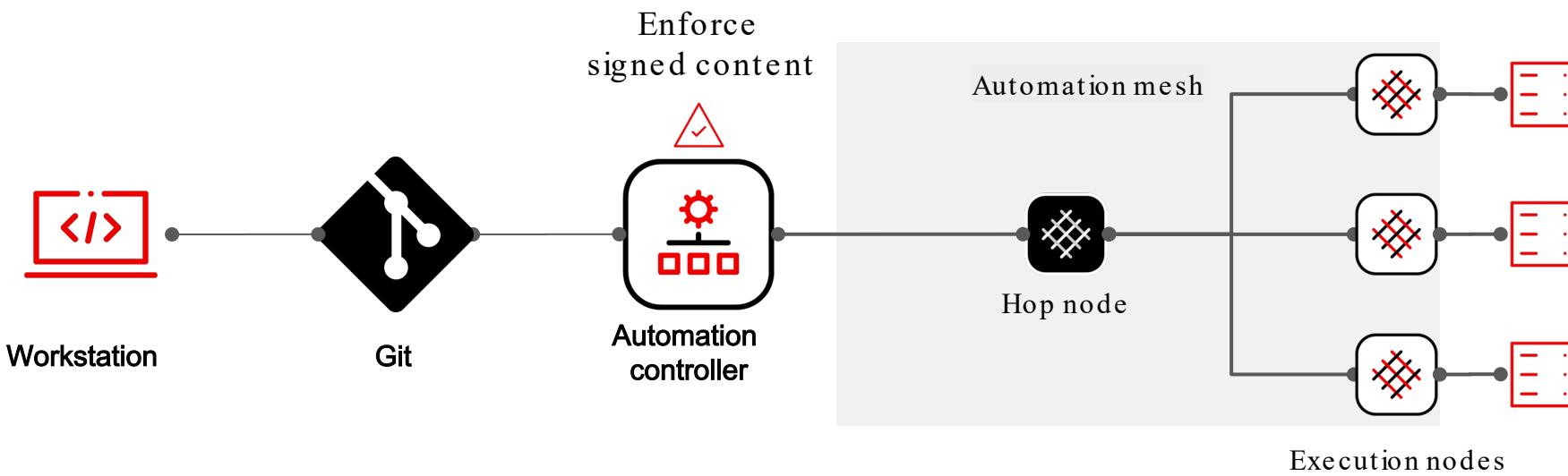


# Private automation hub. **Collaborate, sign, and publish.**



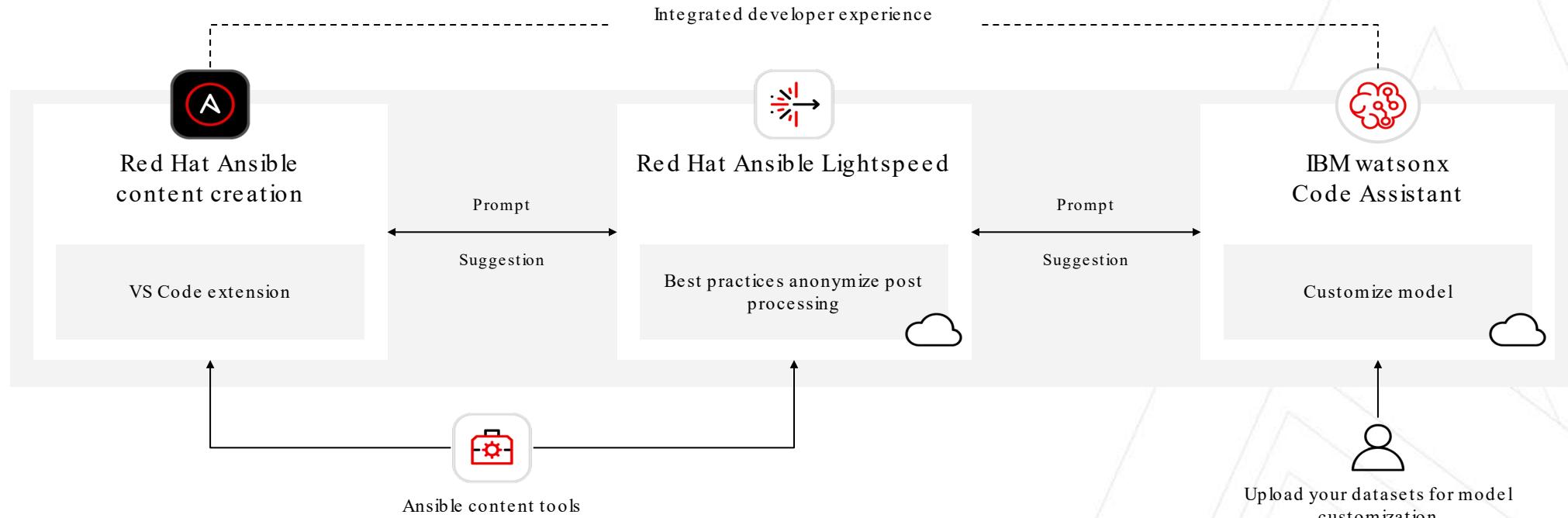


# Project signing in Automation controller



- 1 Create GPG key pair
- 2 Create an ASC file (armored ASCII)
- 3 Create a MANIFEST.in for your Git project
- 4 Use `ansible-sign` utility to create signature for project
- 5 Create a GPG credential in Automation controller
- 6 Sync Project (will be enforced!)

# Ansible Lightspeed. Generative AI the Ansible way.



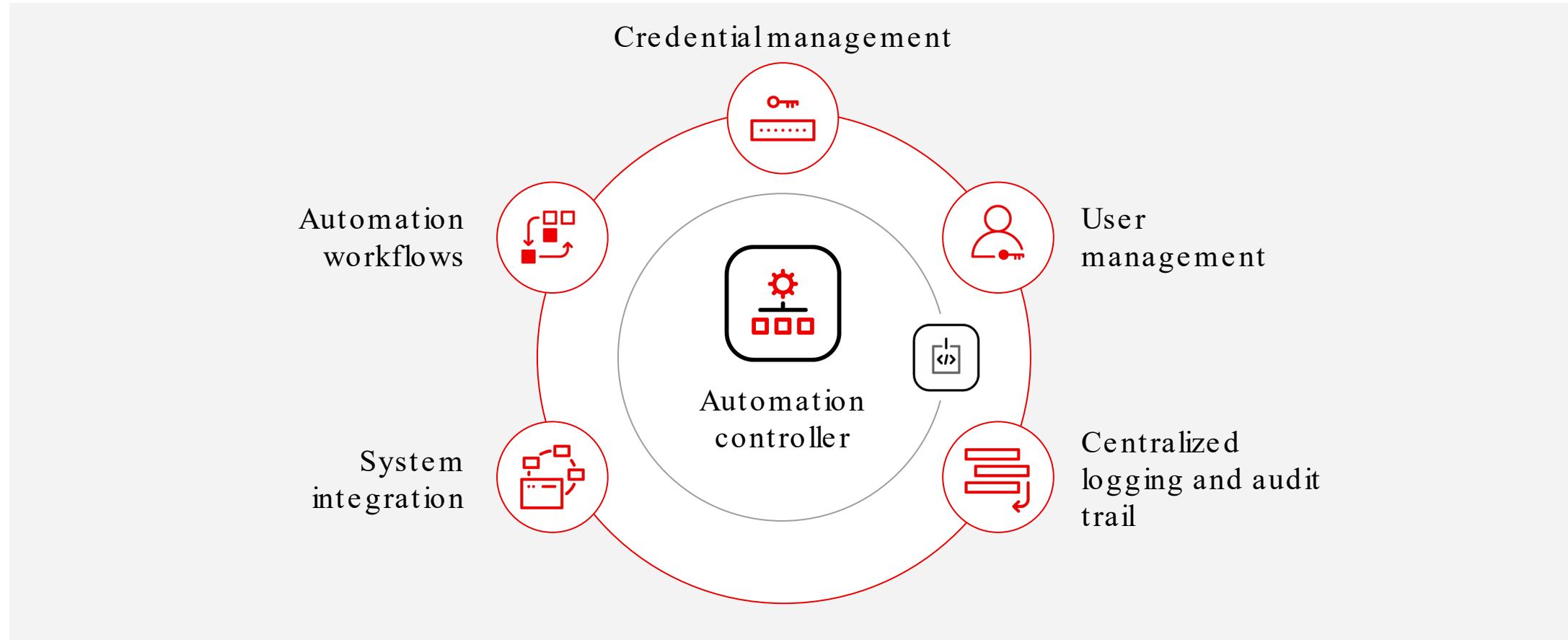
## Data security

- + Prompt/Suggestion data is encrypted in transit and at rest and is ephemeral
- + Customer metadata and customized models are stored in customer-owned IBM cloud object storage and are not shared with IBM, Red Hat, or any other customers

# Manage



# Enterprises need more for their automation.



# Automation controller.

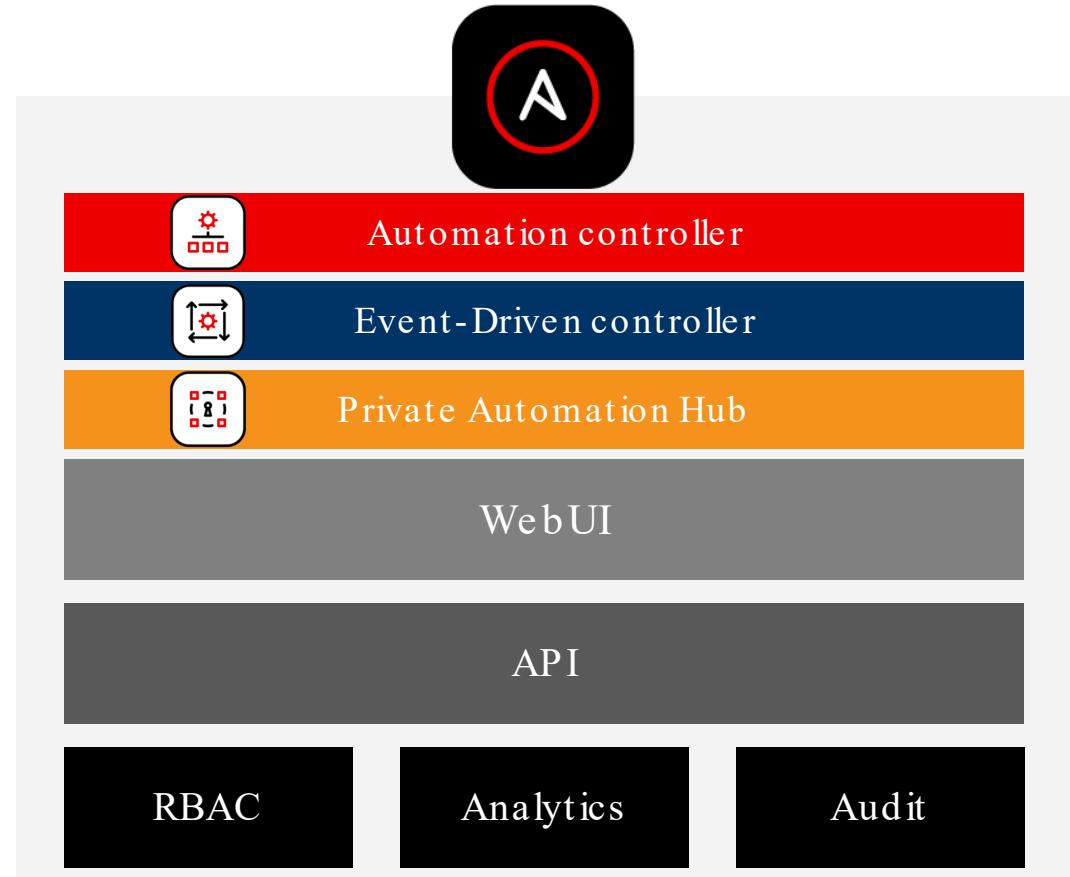
# Define, operate, and delegate.

## What is it?

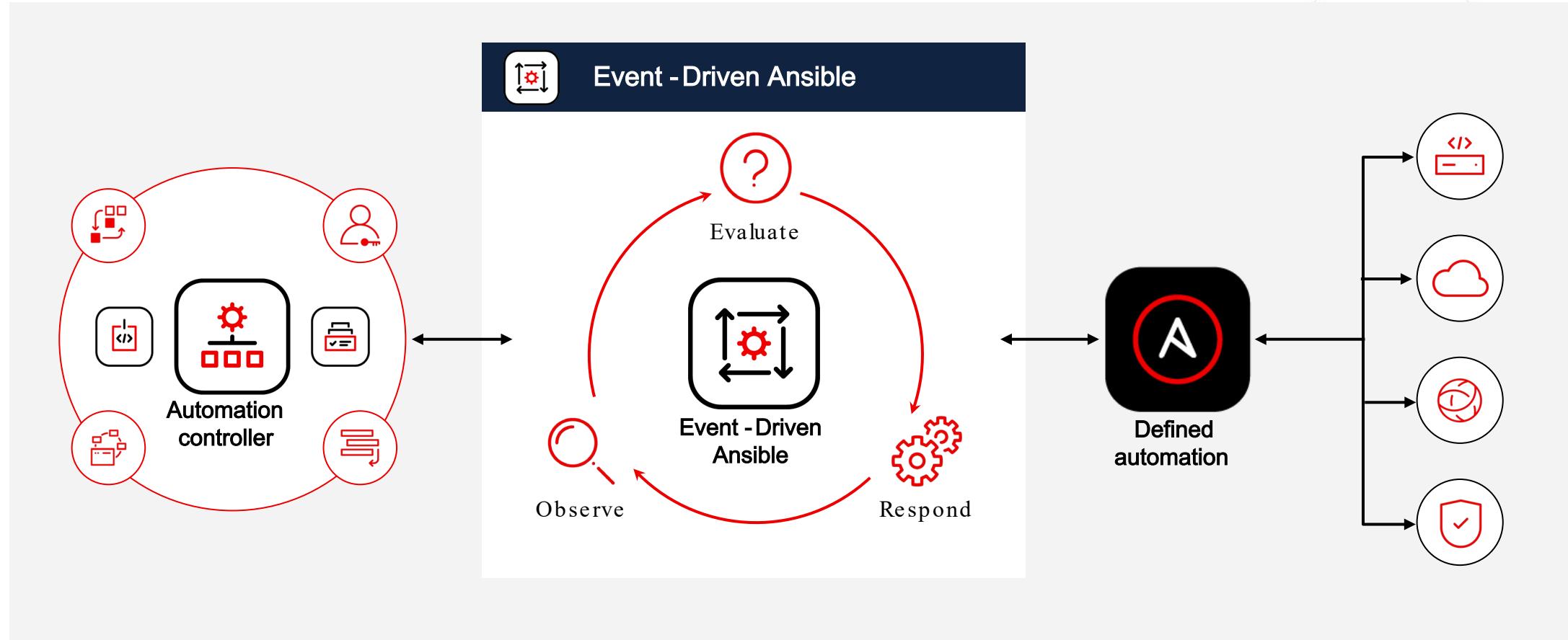
Automation controller is the Ansible Automation Platform control plane which enables users to define, operate, and delegate automation across their enterprise

## Unified UI provides:

- ▶ Centralized control
- ▶ WebUI and API
- ▶ Role-based access control
- ▶ Centralized logging
- ▶ Credential management
- ▶ Ansible analytics integration

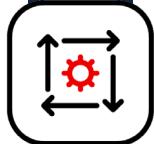


# Event - Driven Ansible. Observe, evaluate, respond.



# Event - Driven Ansible controller.

Define and manage.

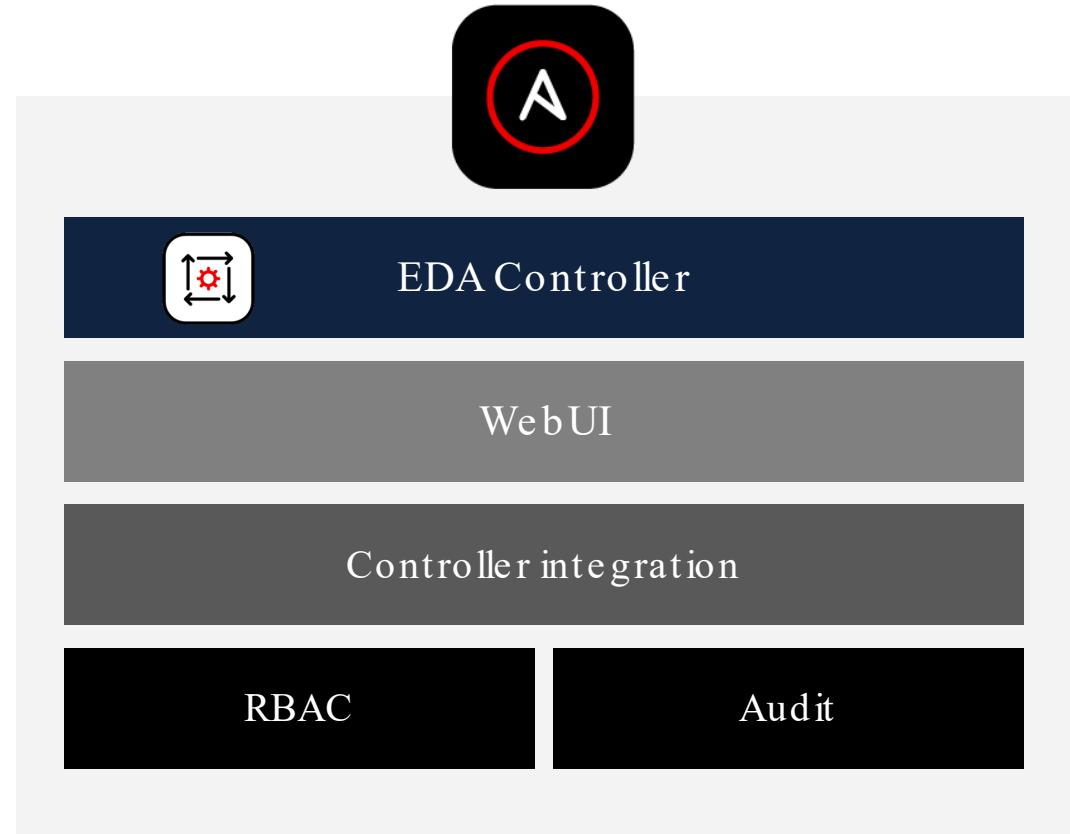


## What is it?

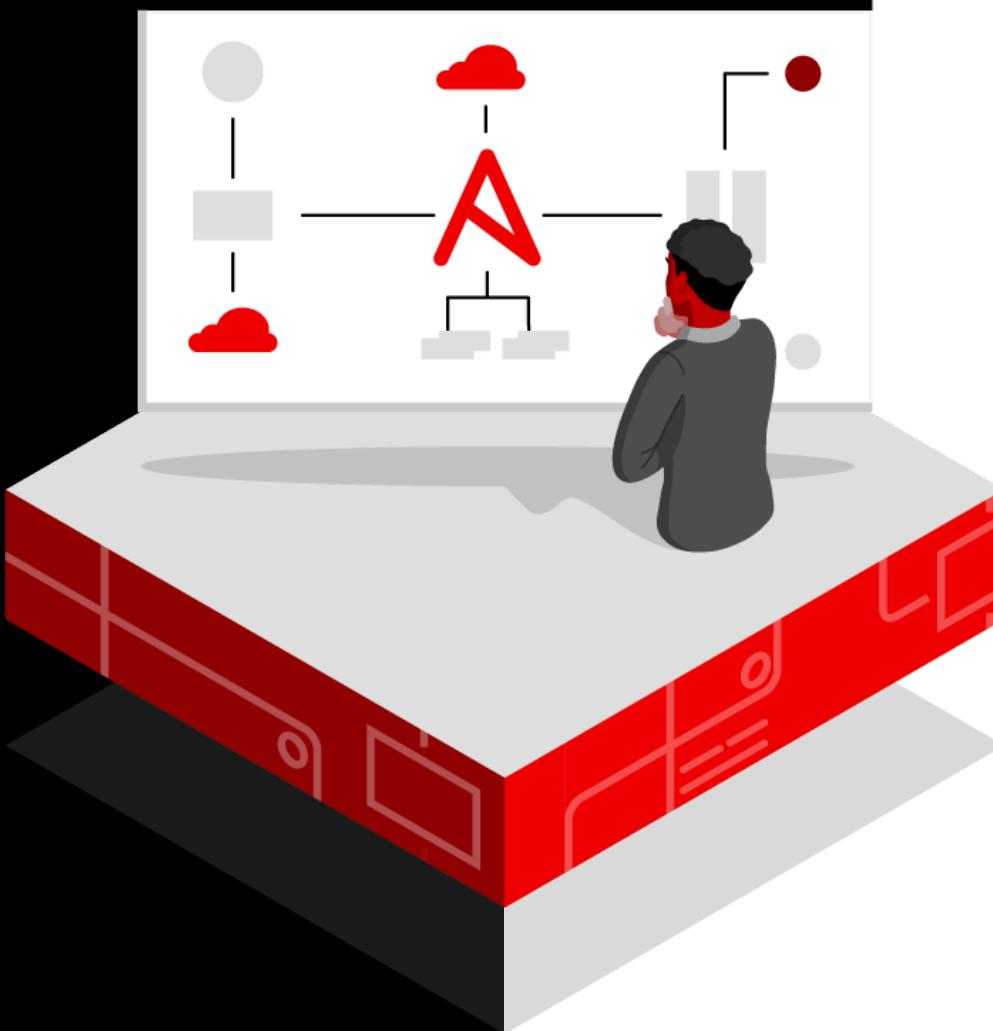
- ▶ EDA Controller enables users to centrally manage Event-Driven Ansible across the enterprise.

## EDA controller provides:

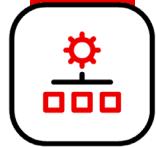
- ▶ Web UI
- ▶ Rulebook activation.
- ▶ Event streams
- ▶ Role-based access control (part of Unified UI).
- ▶ Auditing trail.



# Scale

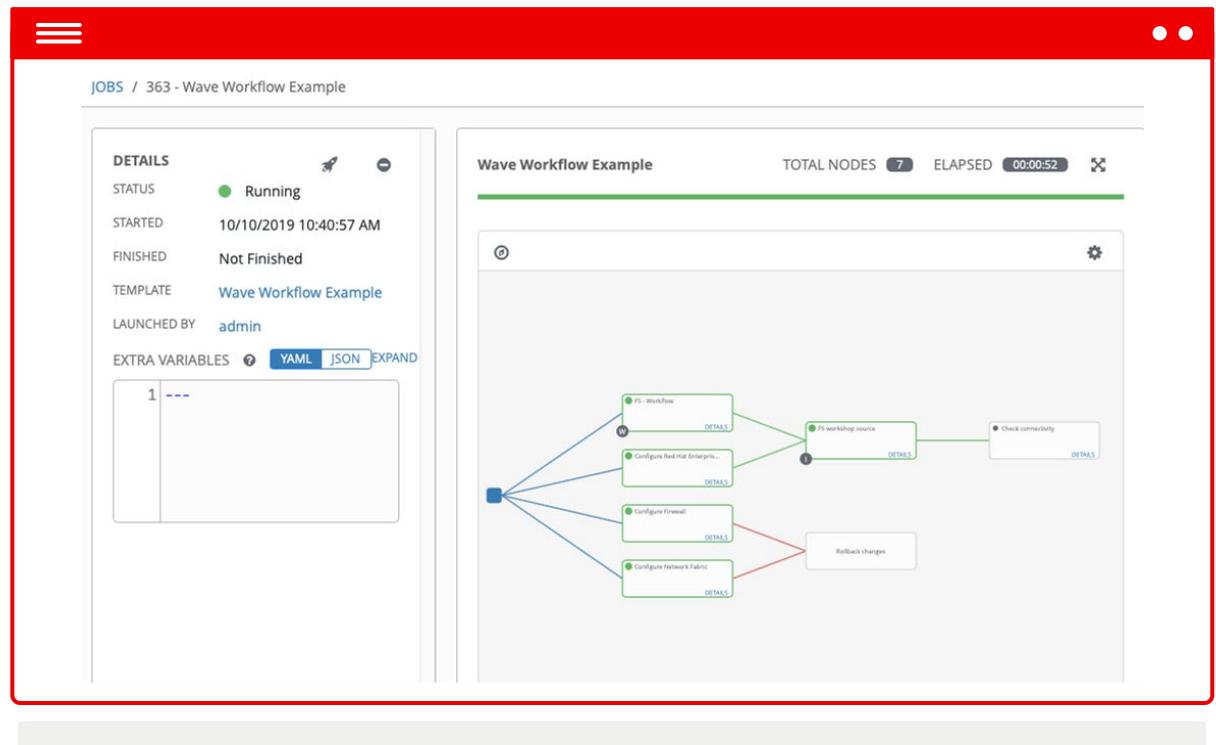


# Workflows. Solve complex problems.



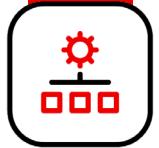
## What is it?

- ▶ Workflows enable the creation of powerful holistic automation, chaining together multiple pieces of automation and events
- ▶ Simple logic inside these workflows can trigger automation depending on the success or failure of previous steps
- ▶ Add approvals to your workflows to enhance governance
- ▶ Integrate other systems, such as ITSM to fit with your existing controls and processes



# Automation controller surveys.

Adopt and grow.



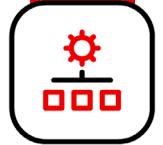
## What is it?

- ▶ User-friendly, self-service interface in automation controller
- ▶ Abstracts complexity using question and answer format
- ▶ Best suited for teams directly accessing automation and close to the automation practice
- ▶ Access and execution governed using controller features

The screenshot shows a modal window titled "Launch | Instance - Deploy new Instance". On the left, a vertical sidebar lists five steps: 1 Inventory, 2 Credentials, 3 Other prompts, 4 Survey (which is highlighted in blue), and 5 Preview. The main area contains fields for "Instance Name" (with a placeholder "Instance Name \*"), "Instance Flavor" (set to "Standard\_DS2\_v2"), and "Provider Type" (set to "ec2").

# Automation controller approvals.

Integrate and govern.



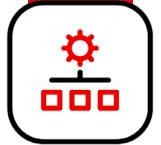
## What is it?

- ▶ Adds human interaction to the automation for administration and governance
- ▶ Available at the operational level on the Automation Platform UI

The screenshot shows a web-based interface for workflow approvals. At the top, a navigation bar includes 'Workflow Approvals' and 'Deploy to Prod?'. Below this is a 'Details' section with tabs for 'Back to Workflow Approvals' and 'Details'. The 'Details' tab is active, displaying the following information:

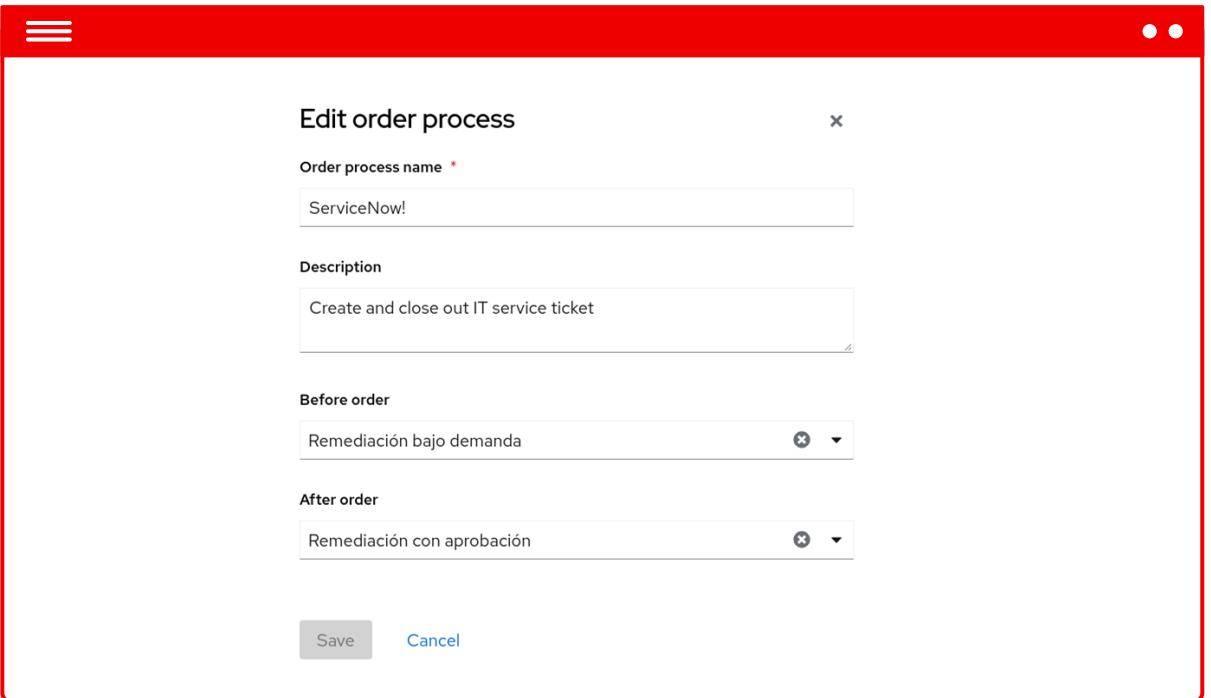
Name	Deploy to Prod?	Description	Expires
Workflow Job	5 - DevOps Workflow	Workflow Job Template	DevOps Workflow
Last Modified	8/5/2022, 5:11:01 PM	Elapsed	00:00:13
<button>Approve</button> <button>Deny</button>			

# IT service management integration (ITSM). Integrate and govern.



## Incorporate automation into your ITSM

- ▶ Integrate high level workflows in existing ITSM toolsets with the automation platform.
- ▶ Apply organization governance and integrate your automation to larger business processes
- ▶ Have the automation platform reach out to the ITSM system whenever things are changing, including data transmission between the tools



Edit order process

Order process name \*

ServiceNow!

Description

Create and close out IT service ticket

Before order

Remediación bajo demanda

After order

Remediación con aprobación

Save Cancel

# Automation mesh. Design and expand.

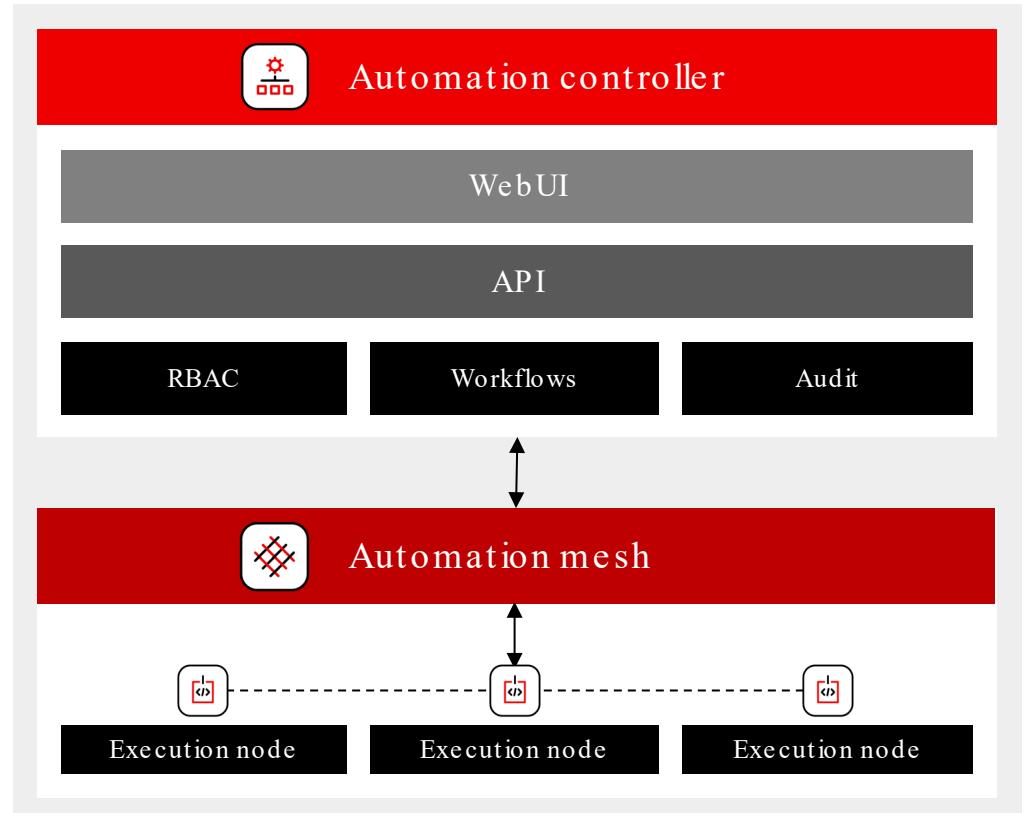


## What is it?

- ▶ Simple, reliable framework to scale automation independently with little or no downtime
- ▶ Distributed and localized execution across worker nodes
- ▶ Scale across segmented and remote networks with native resiliency
- ▶ Flexible design choices to deliver automation across networks and design redundant topologies

## Improved communication and security

- ▶ Worker node health checks
- ▶ Bi-directional, secured (TLS) communication between nodes
- ▶ Centralized, secured management with automation controller



# Thank you!

