

# Introduction & Demo: Ansible Automation Platform

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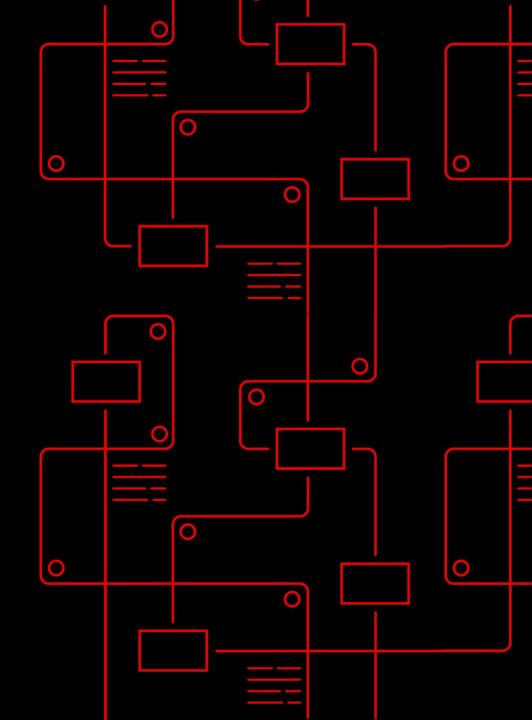


Red Hat Ansible Automation Platform technical deck

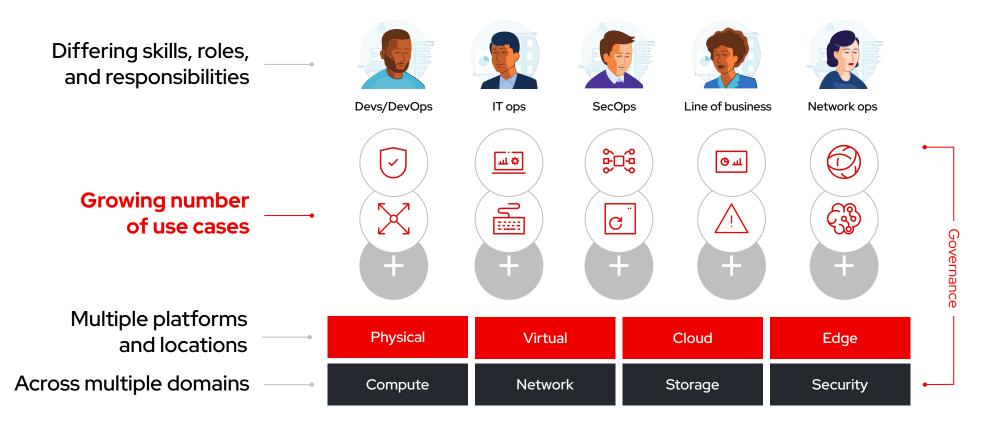
# Why Red Hat<sup>®</sup> Ansible<sup>®</sup> Automation Platform?



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## Many organizations share the same challenge.

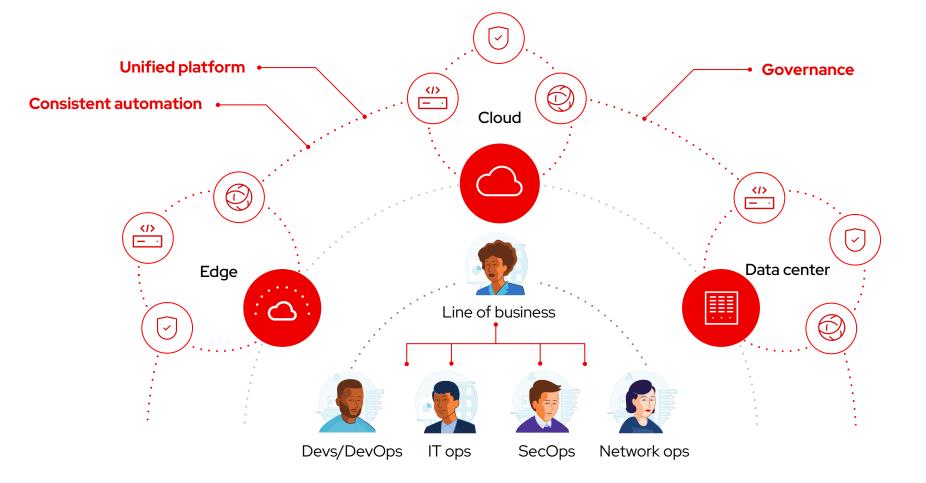




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## The solution? Break down the silos.



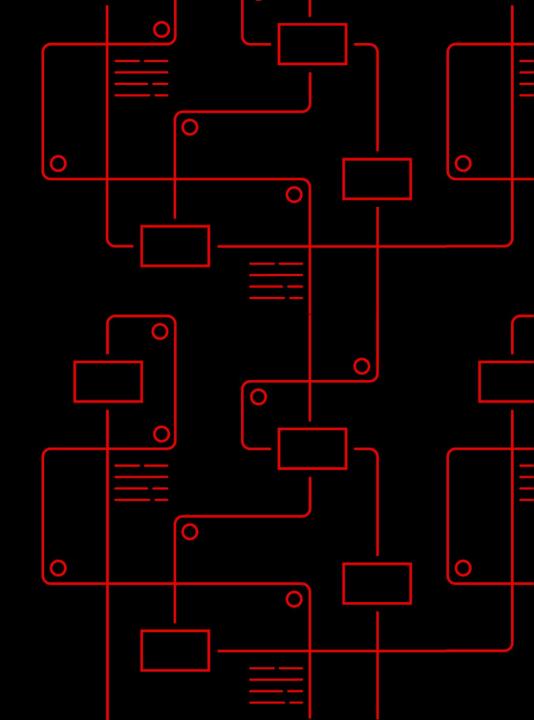


Red Hat Ansible Automation Platform technical deck

# What is Red Hat<sup>®</sup> Ansible<sup>®</sup> Automation Platform?



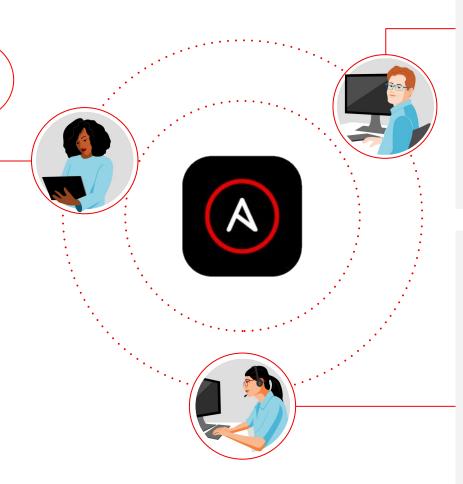
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# A platform for the entire automation team.

### Architecture

- Flexible container-native architecture
- Real-time analytics and reporting
- **Event-Driven Ansible**
- Containerized Installation
- Available on all major cloud providers



### **Content creation**

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Ansible developer tools package

Integrated generative AI

Build automation communities

Large ecosystem of certified automation

## **Operations**

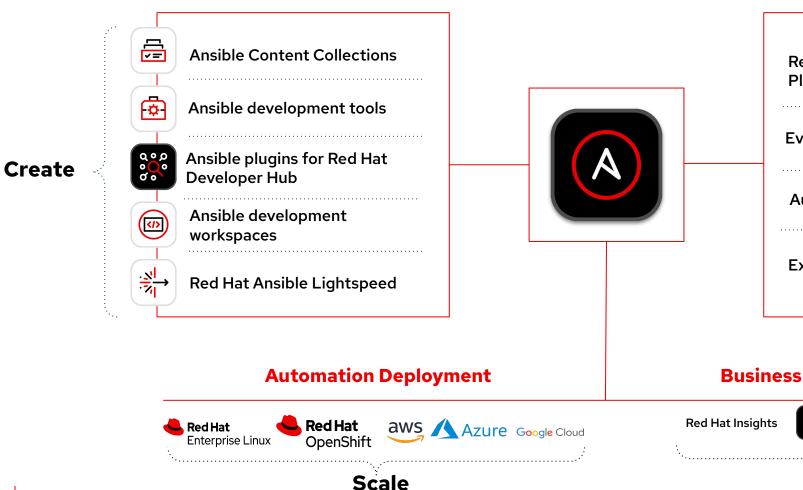
Unified UI provides cohesive platform experience

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

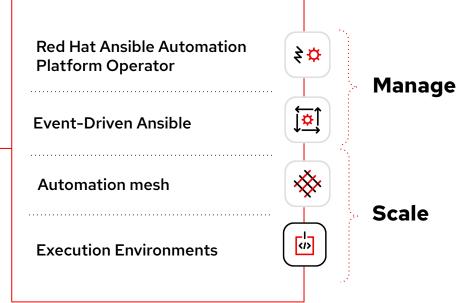


# An integrated solution for the enterprise.

**Automation creation** 



### **Automation administration**



### **Business Tools and Analytics**



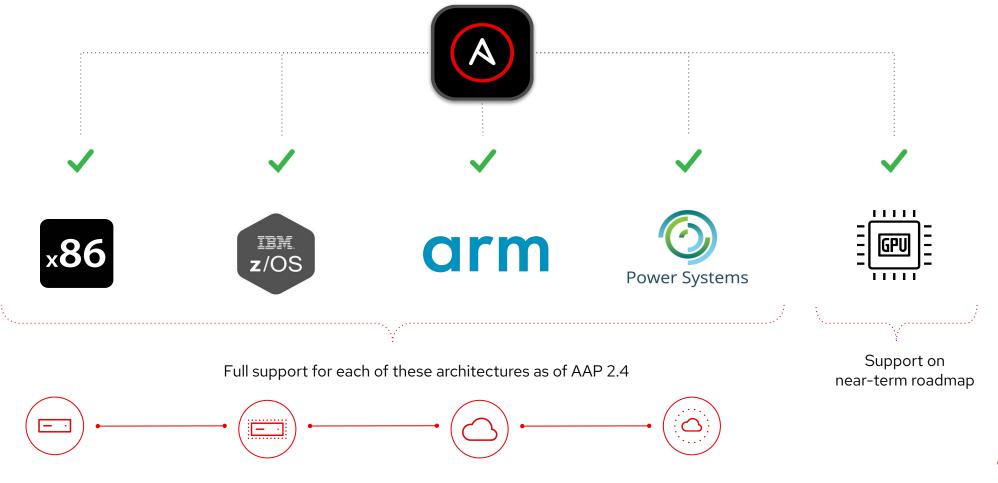
Automation analytics A

Manage



## Ansible Automation Platform across architectures.

Deployable on mission-critical architectures



**Red Hat** 

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## Ansible Automation Platform installation options.



- Suitable for traditional RHEL environments
- Deprecated with AAP 2.5 (removal TBD)

Containerized

- Ideal for flexibility and rapid scaling
- Simplifies dependency management

Openshift Operator

- Seamless integration with Openshift
- Automated lifecycle management
- > 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.



# Enabling your automation team to consistently...





Red Hat Ansible Automation Platform technical deck

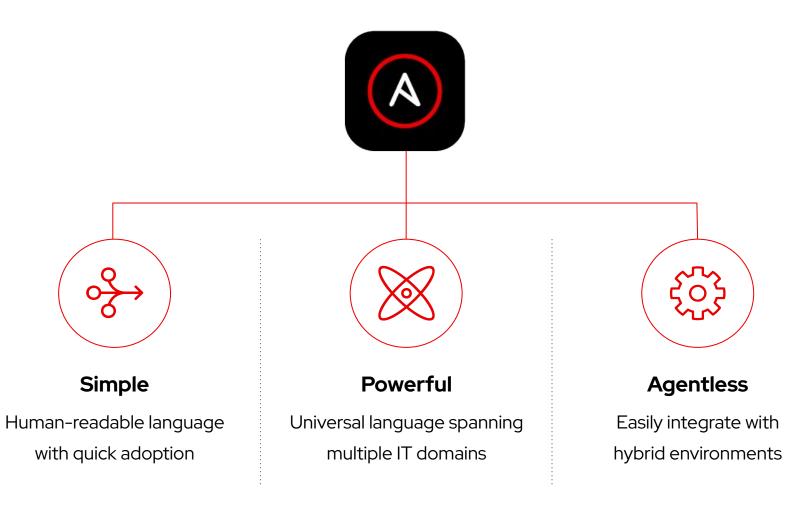
# Create

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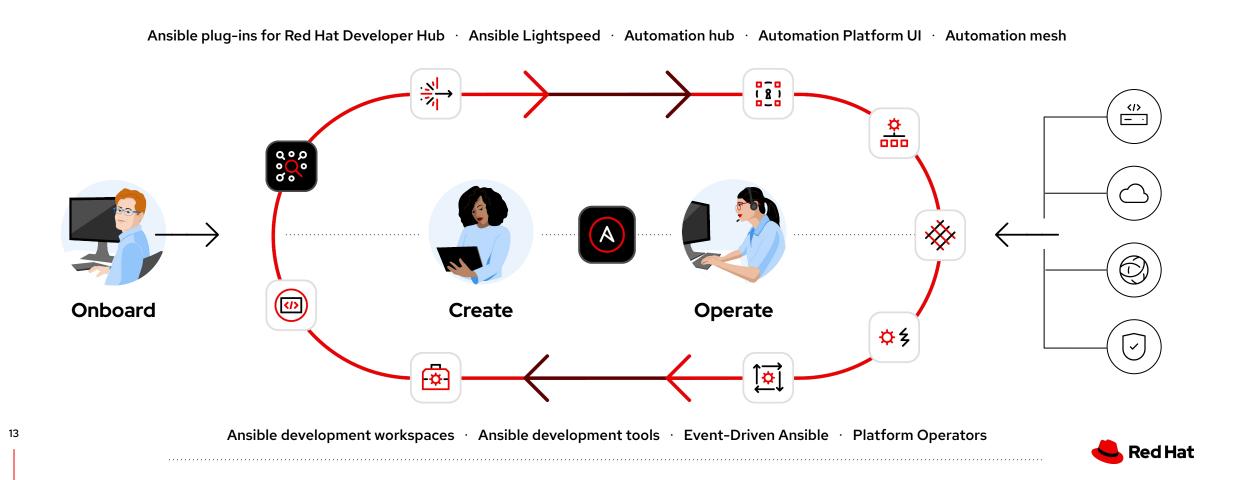


## Ansible is the de facto automation language.





## The automation content life cycle. Create.



# Ansible VS Code extension. Simplifying content creation



- 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

<pre>name: query incident number and creation time set_fact:     incident_list: '{{ incident_list + [{"number": item.numbe loop: "{{ incidents.records }}" when: incidents name: Create a problem from incident</pre>	er, "opened_at": item.opened_at}] }}'
proble	
名 servicenow.itsm.problem	servicenow.itsm
<pre>% servicenow.itsm.problem_info</pre>	
<pre>% servicenow.itsm.problem_task</pre>	Manage ServiceNow problems
<pre>% servicenow.itsm.problem_task_info</pre>	
🖺 ansible.builtin.proxmox	Description
<pre>     ansible.builtin.portage     ansible.builtin.proxmox_kvm     ansible.builtin.profitbricks     ansible.builtin.portinstall     ansible.builtin.proxysql_backend_servers     ansible.builtin.profitbricks_nic     ansible.builtin.proxmox_template </pre>	<ul> <li>Create, delete or update a ServiceNow problem.</li> <li>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</li> </ul>



# Ansible VS Code extension. Simplifying content creation



## What is it?

- Supports full playbook generation with Ansible Lightspeed.
- Playbook explanation, content attributions, inline suggestions.
- Integrated with ansible-dev-tools package.
- Scaffold playbook and collection projects with Ansible best-practices

 $\bullet$   $\bullet$ 

## Welcome to Ansible content creator

Create Ansible content with ease

#### $\oslash$ $% \left( All \right)$ All the tools are installed.

Your environment is ready and you can start creating ansible content.

#### Create

 Playbook with Ansible Lightspeed
 Create a lists of tasks that automatically execute for your specified inventory or groups of hosts.

#### III Ansible playbook project

Create a foundational framework and structure for setting your Ansible project with playbooks, roles, variables, templates, and other files.

#### 

Create a structure for your Ansible collection that includes modules, plugins, molecule scenarios and tests.



# 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 <u>Red Hat Developer Hub</u>
- > Optional integration with OpenShift Dev Spaces

Red Hat Developer Hub Search		e Ansible plug-ins for Red H berience accelerates content creation and meets you wher			
Home	Overview My Items (	Create Learn			
Catalog	Q Search	LEARNING PATHS Step-by-step enablement curated by Red Hat Ansible.			
Learning Paths Create Tech Radar Docs Ansible	<ul> <li>✓ Learning Paths</li> <li>✓ Labs</li> <li>Useful links:</li> <li>Ansible learning paths on Red Hat Developer website <sup>2</sup></li> <li>Red Hat Learning Subscription <sup>2</sup></li> <li>Ansible definitions <sup>2</sup></li> </ul>	I.Introduction to Ansible     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.	2.Getting started with the Ansible VS Code extension Thour   Ansible   Beginner   Learning path Do a deap-dive into the features of Ansible VS Code extension, the Red Hat recommended way of creating your Anable projects, which brings synta-highlighting, auto-completion, linting, and generative Al to your automation creation workflows.	30 minutes Learn more a Platform use straightforwa	Essentials for Ansible Ansible   Beginner   Learning path bout VAML and how Ansible Automation sit for content: VAML offers a rul human-readable wy to write Ansible s, tasks, and playbooks.
Clusters Red H Devel Q Seal	ch Overvi	4.Getting started with Ansible playbooks come to the Ansible plug- plu	-		
Gata	log Lear ning Paths Piear tte	TARN ning paths are tutorials that guide you through common An ing paths based on the latest Ansible Automation Platform se visit the User Guide @ to get started with the Ansible plu n more on the Red Hat Developer website. @ tart Learning Path	versions and best practices.	^ speed with	Starred Ansible Items Click the star beside an Ansible entity name to add it to this list!
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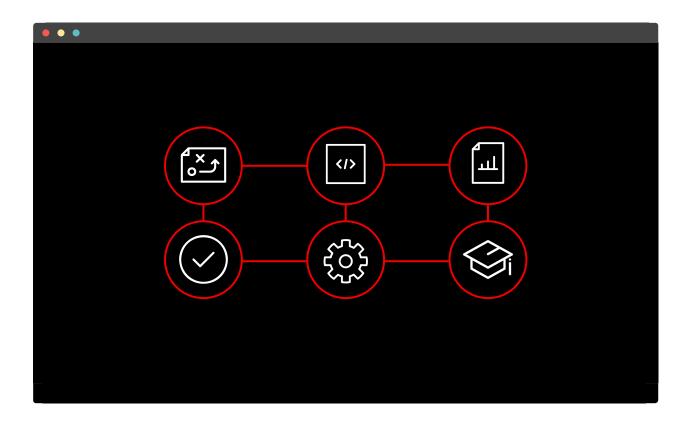
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# Content Collections. Simplified, consistent content delivery.



## 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

## 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

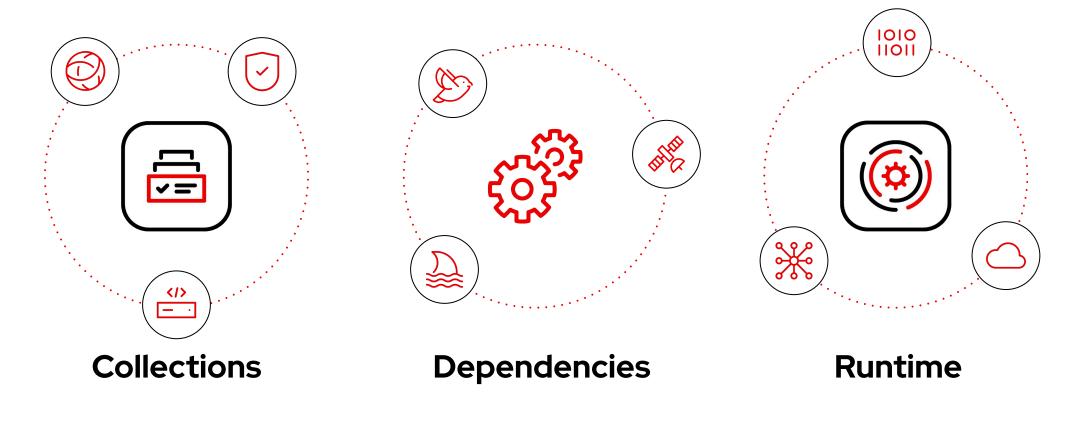
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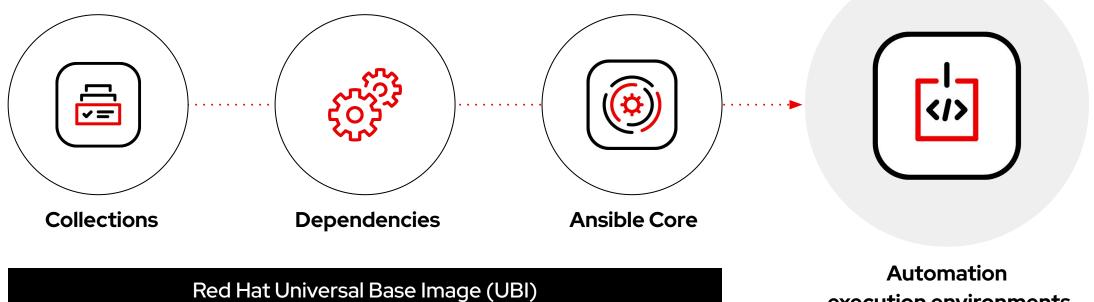
# Many technologies, different life cycles. How do I keep it all aligned?





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# Automation execution environments. **Reuse and scale automation content.**

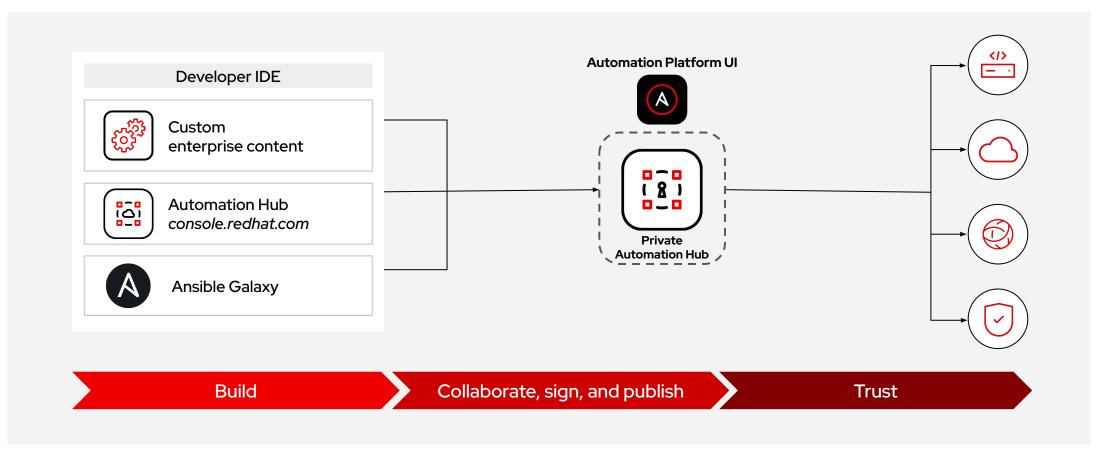


execution environments



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





## Ansible content navigator (ansible-navigator).



## What is it?

It is a command line utility and text-based user interface (TUI) for running, testing and developing Ansible automation content

- Review EEs
- Develop collections
- Develop playbooks
- Troubleshoot problems

#### 

\$ ansible-navigator run playbook.yml -i inventory.ini



# Ansible content creator (ansible-creator)

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## Scaffold projects and content

## What is it?

Command line utility integrated with Ansible VS Code extension for scaffolding Ansible automation projects and contents with leading practices.

- Integrated with Ansible extension to bypass CLI interactions
- Streamlines playbook project init process
- Streamlines collection init process

## Welcome to Ansible content creator

Create Ansible content with ease

#### All the tools are installed.

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#### Section Project Section Project

Create a structure for your Ansible collection that includes modules, plugins, molecule scenarios and tests.





# Ansible sign (ansible-sign)

## What is it?

A command-line utility designed to cryptographically sign and verify Ansible content such as playbooks and collections.

- Ensures the authenticity and integrity of automation content.
- Integrated with Ansible Automation Platform to help secure the distribution of trusted content.
- Verifies content signatures to prevent unauthorized modifications.
- Streamlines the process of signing Ansible collections and playbooks to meet compliance and security requirements.

#### •••

### \$ ansible-sign



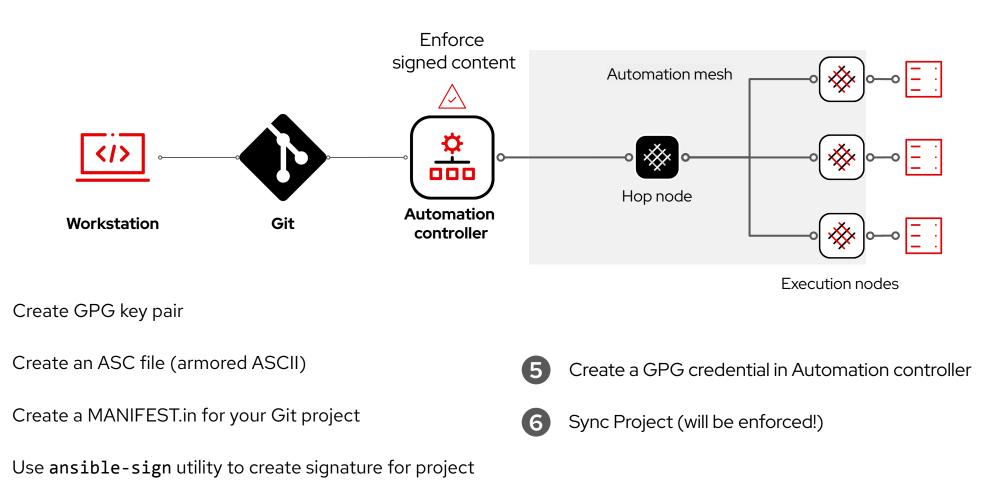
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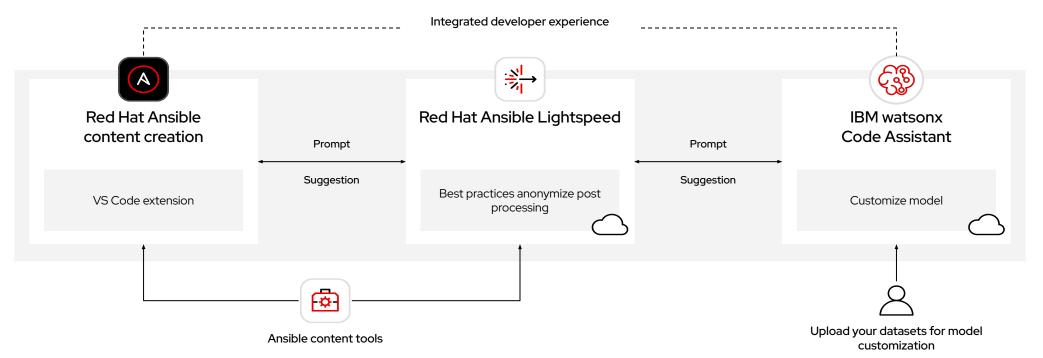
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# Project signing in Automation controller





## 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



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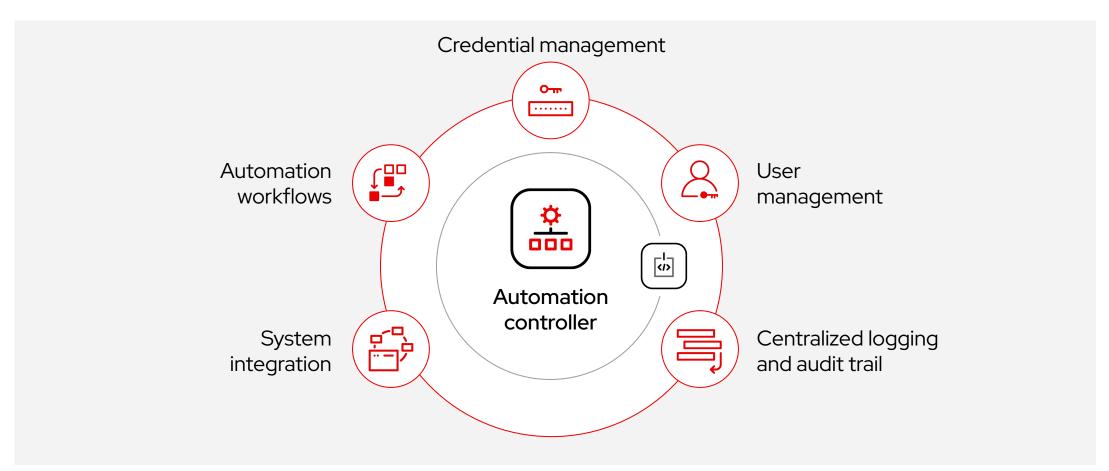
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# Manage





## **Enterprises need more for their automation.**





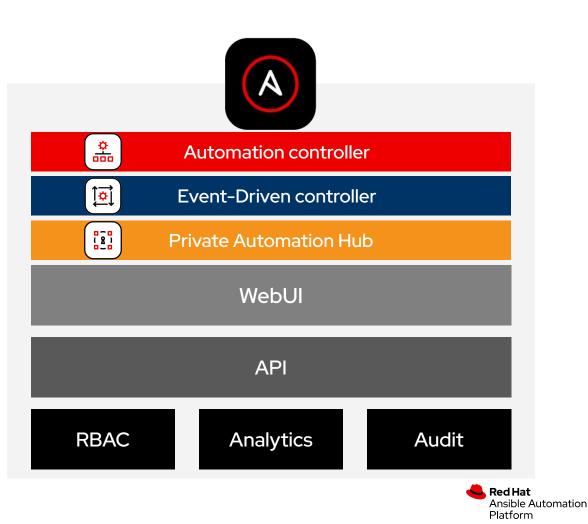
# Automation controller. Define, operate, and delegate.

## What is it?

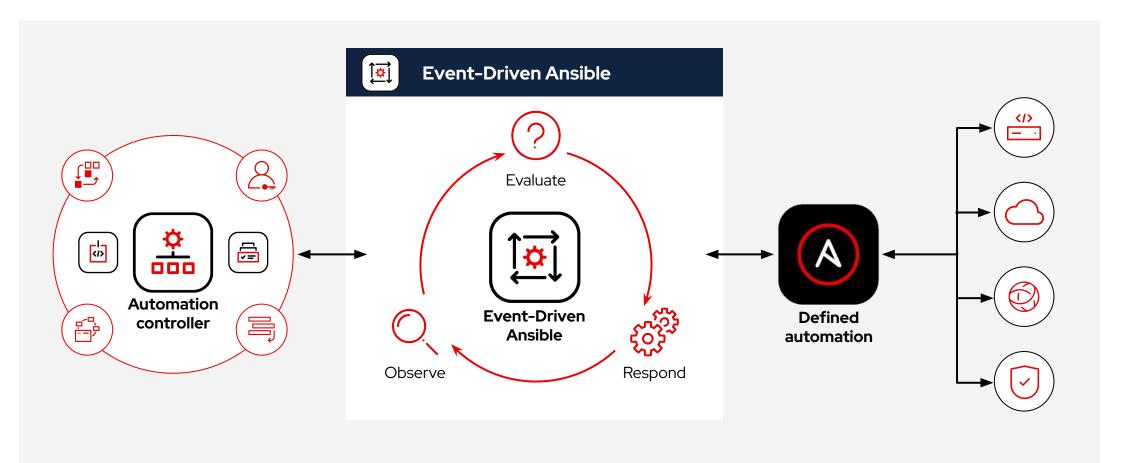
Automation controller is the Ansible Automation Platform control plane which enables users to define, operate, and delegate automation across their enterprise

## **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.





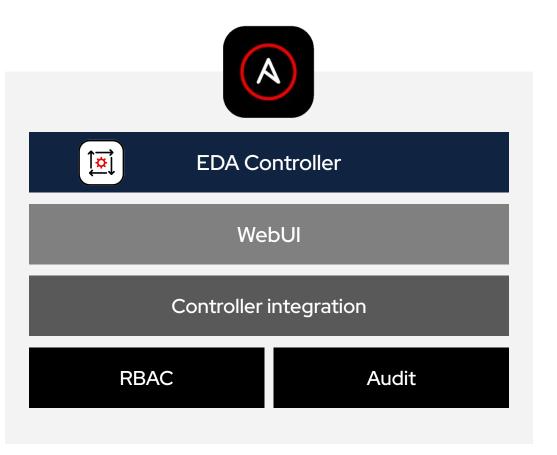
# Event-Driven Ansible controller. Define and manage.

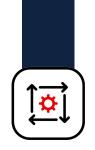
## What is it?

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

## **EDA controller provides:**

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

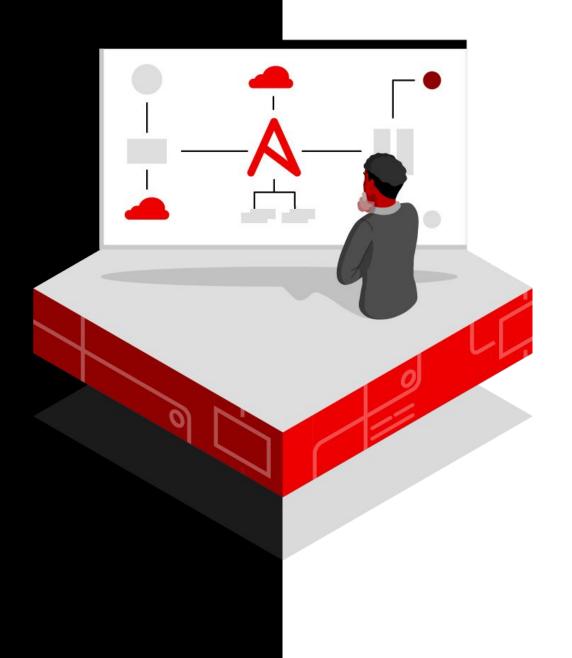




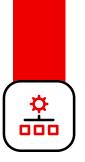


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# Scale



# Workflows. Solve complex problems.



- 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

DETAILS STATUS • Run	ning	Wave Workflow Example	TOTAL NODES 7 ELAPSED	00:00:52
STARTED 10/10/20 FINISHED Not Finis	019 10:40:57 AM shed	0		0
LAUNCHED BY admin EXTRA VARIABLES <b>@</b>	YAML JSON EXPAND	Configure Hed Hat Enterpris		ck connectativ OFTALS



# Automation controller surveys. Adopt and grow.

- 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

1 Inventory	Instance Name *	
2 Credentials		
3 Other prompts	Instance Flavor *	
4 Survey	Standard_DS2_v2	0 -
5 Preview	Provider Type *	
	ec2	0 -

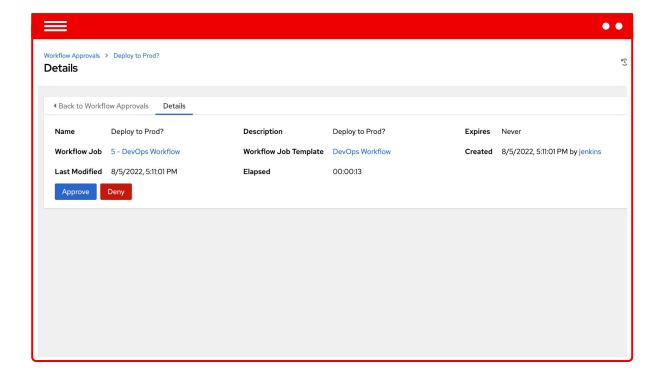




# Automation controller approvals. Integrate and govern.



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





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

Edit order process	×
Order process name *	
ServiceNow!	
Description	
Create and close out IT service ticket	<u></u>
Before order	
Remediación bajo demanda	◎ -
After order	
Remediación con aprobación	© -

#### **Red Hat** Ansible Automation Platform

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### 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

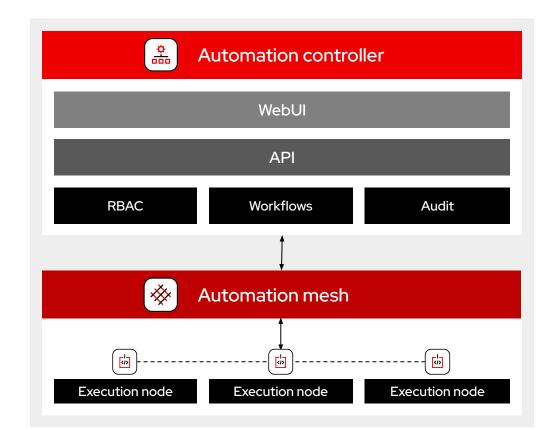
# Automation mesh. Design and expand.



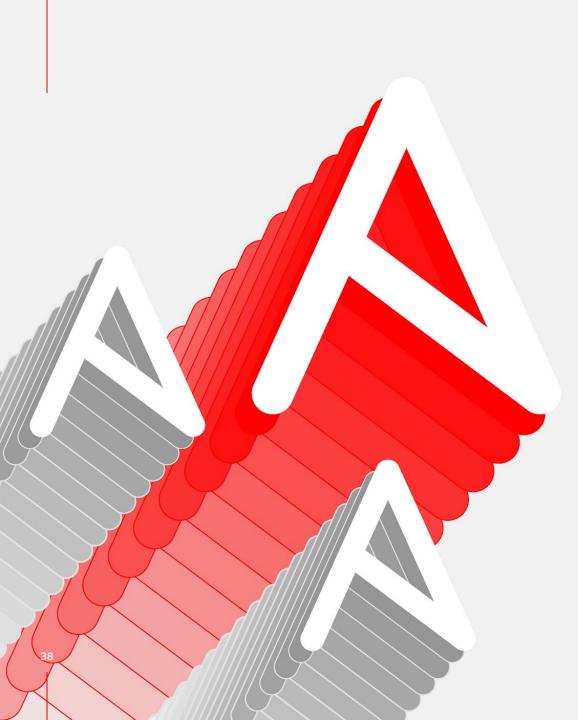
- Simple, reliable framework to scale automation independently with little or no downtime
- Distributed and localized execution across worker nodes
- Scale across segmented and remote networks with native resiliency
- Flexible design choices to deliver automation across networks and design redundant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

## Improved communication and security

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







# **Demo Time!**



# Thank you

Red Hat is the world's leading provider of enterprise open source software solutions. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500.







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