

How to use this deck

Name:

Ansible Automation Platform - Technical Deck

Purpose:

These additional slides are for crafting technical conversations with a customer after an account executive has established a sales pitch.

It is not recommended to present the complete deck but to select slides based on the audience. The presentation length should be between **45 - 60 minutes**.

These can be focused on individual platform components, persona workflows, or used for deep dives.

Last updated:

12 April 2023 (check history for older versions)

What this deck is for?

Technical level conversation with customers covering Ansible Automation Platform 2.

What this deck is not for?

Business level discussions, or to be sent to customers without a discussion.

Google Slides source link (Red Hat internal):

https://docs.google.com/presentation/d/1sa_O12EIRG-fdChArYJf9HZe6wKDfqnIAiH3_udL39s

Feedback / Suggestions

Please send all feedback and suggestions to ansible-feedback@redhat.com. Use the slide deck name as the reference.

Owner:

Ansible MBU, ansible-pmm-tmm@redhat.com

Ansible Deck Finder:

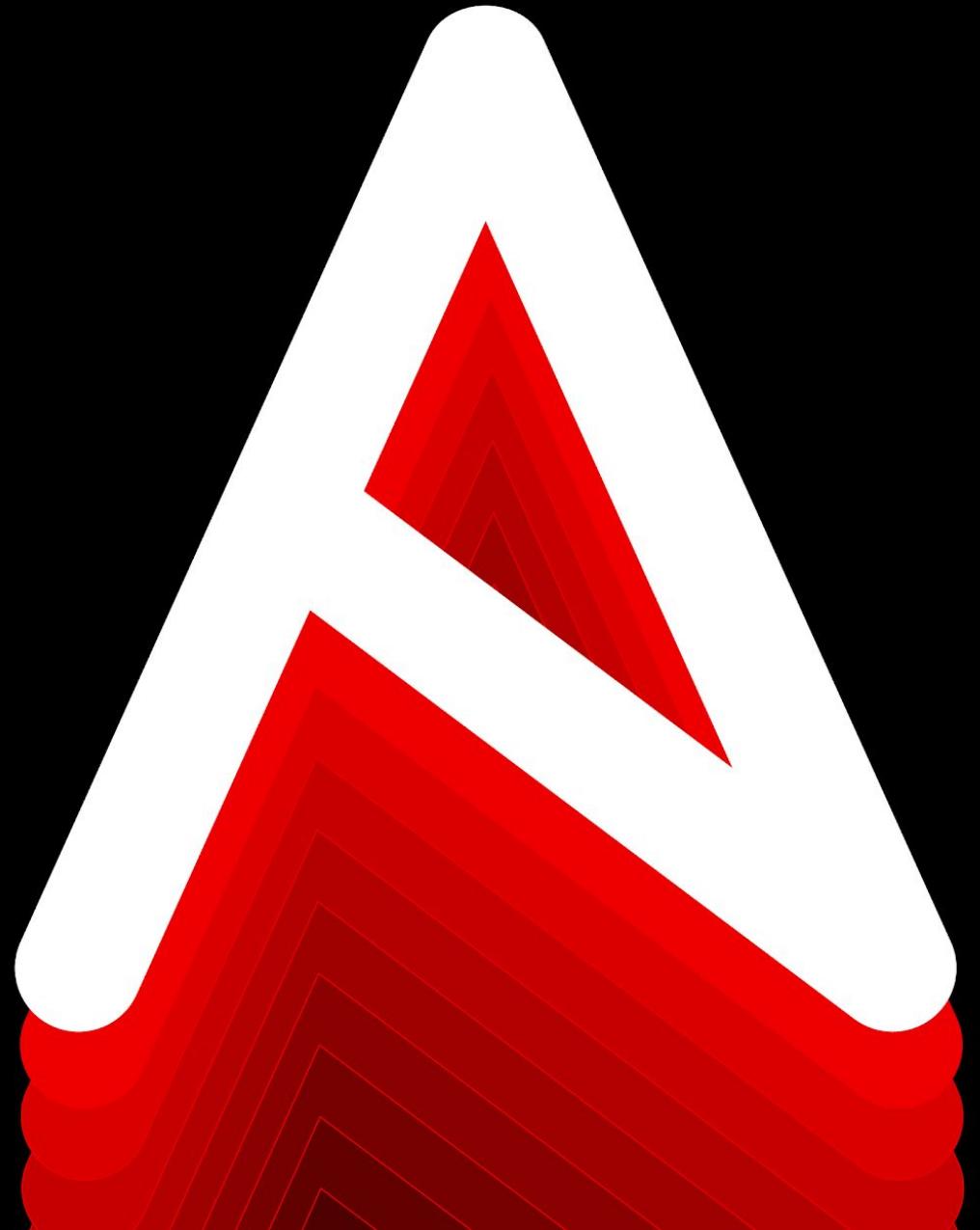
<https://ansible.github.io/slides/>



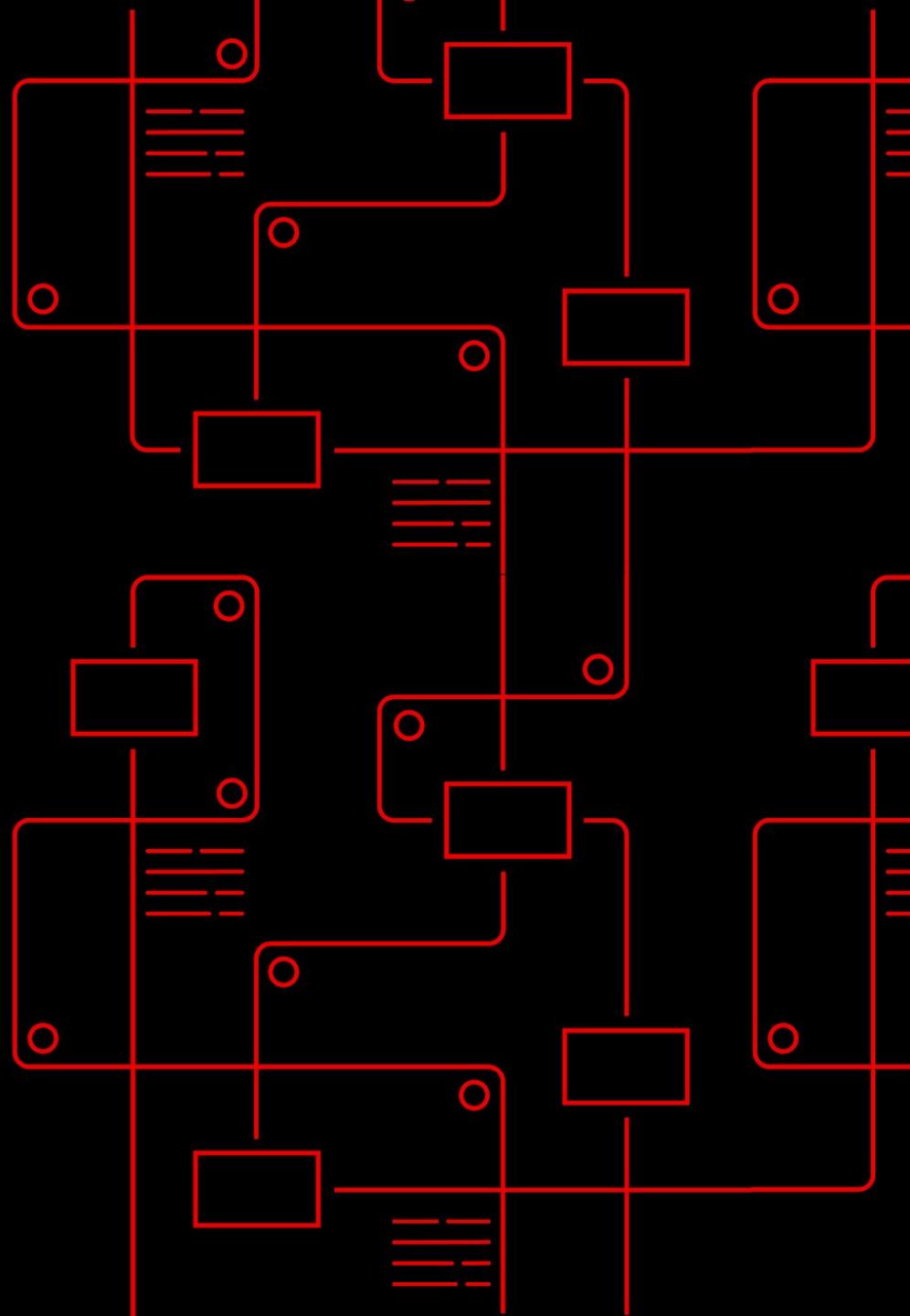
Red Hat Ansible Automation Platform

Partner Workshop

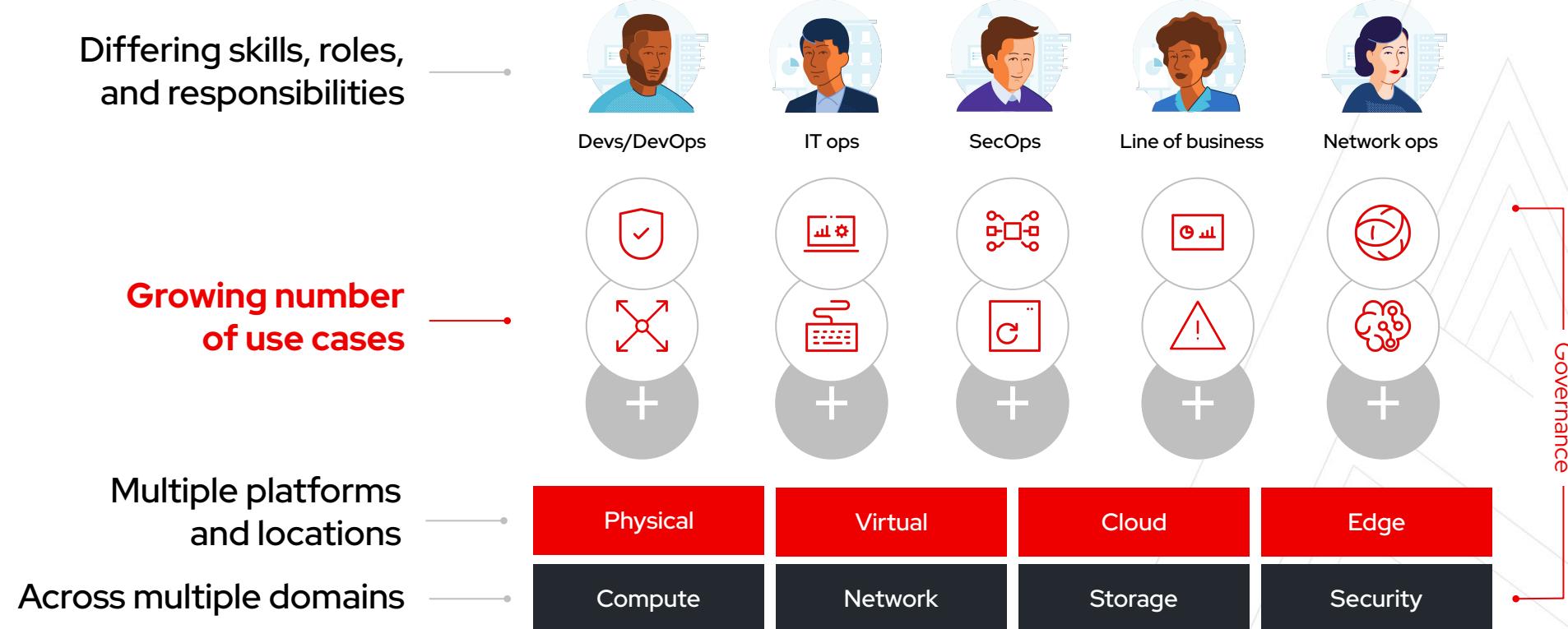
Andreas Stolzenberger
ast@redhat.com



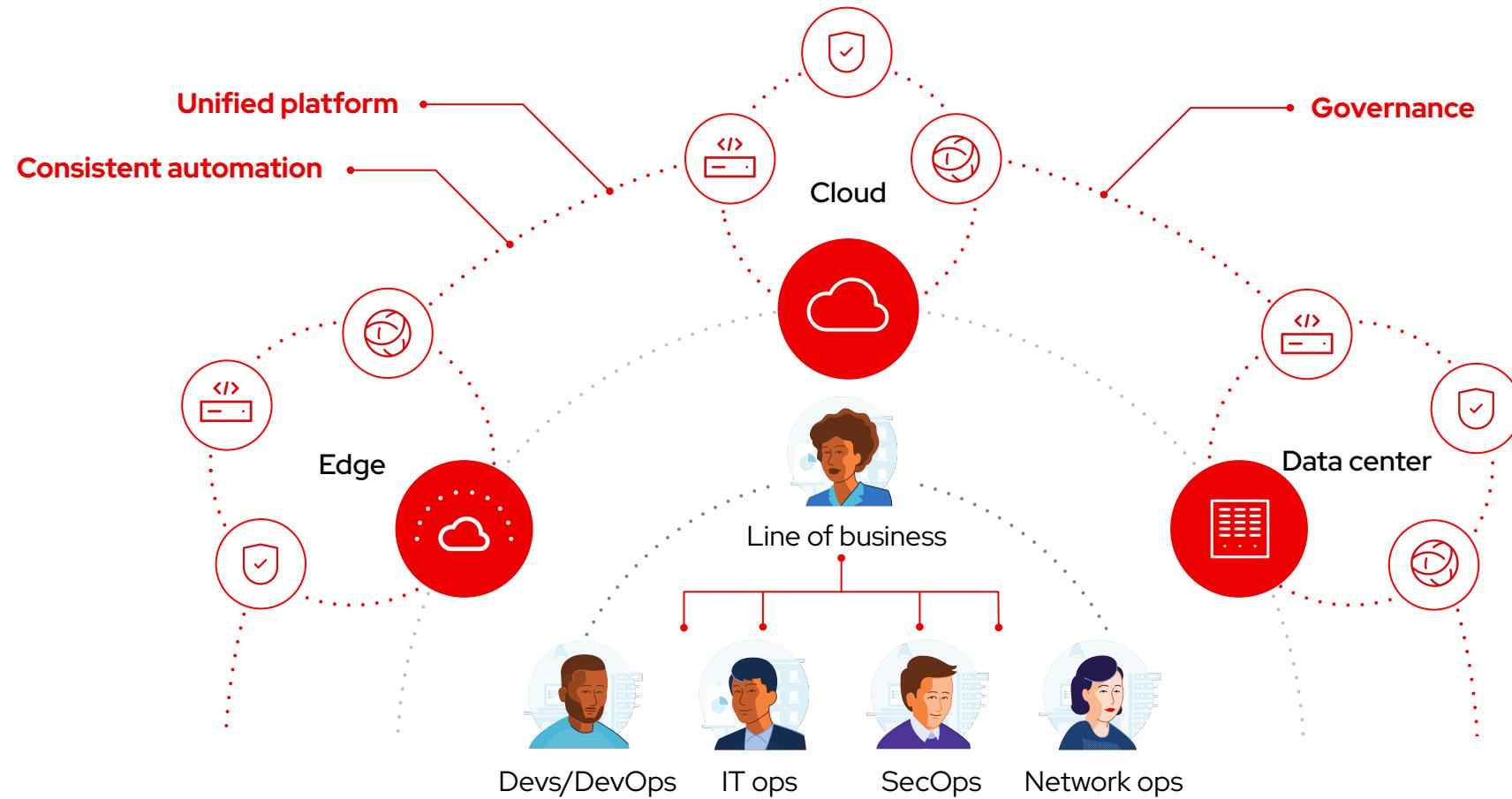
**Anyone can automate...
but an enterprise needs to
coordinate and scale**



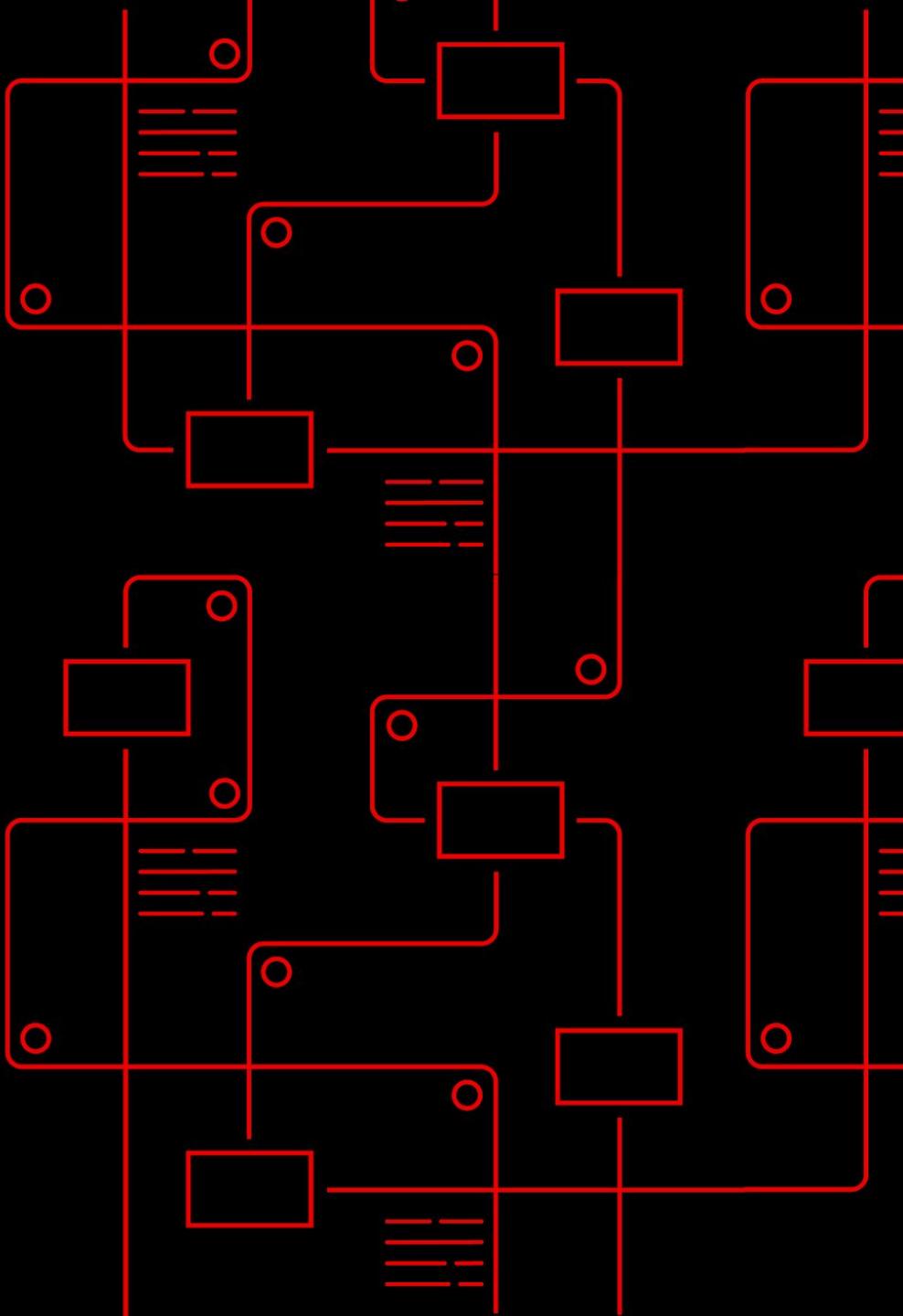
Many organizations share the same challenge



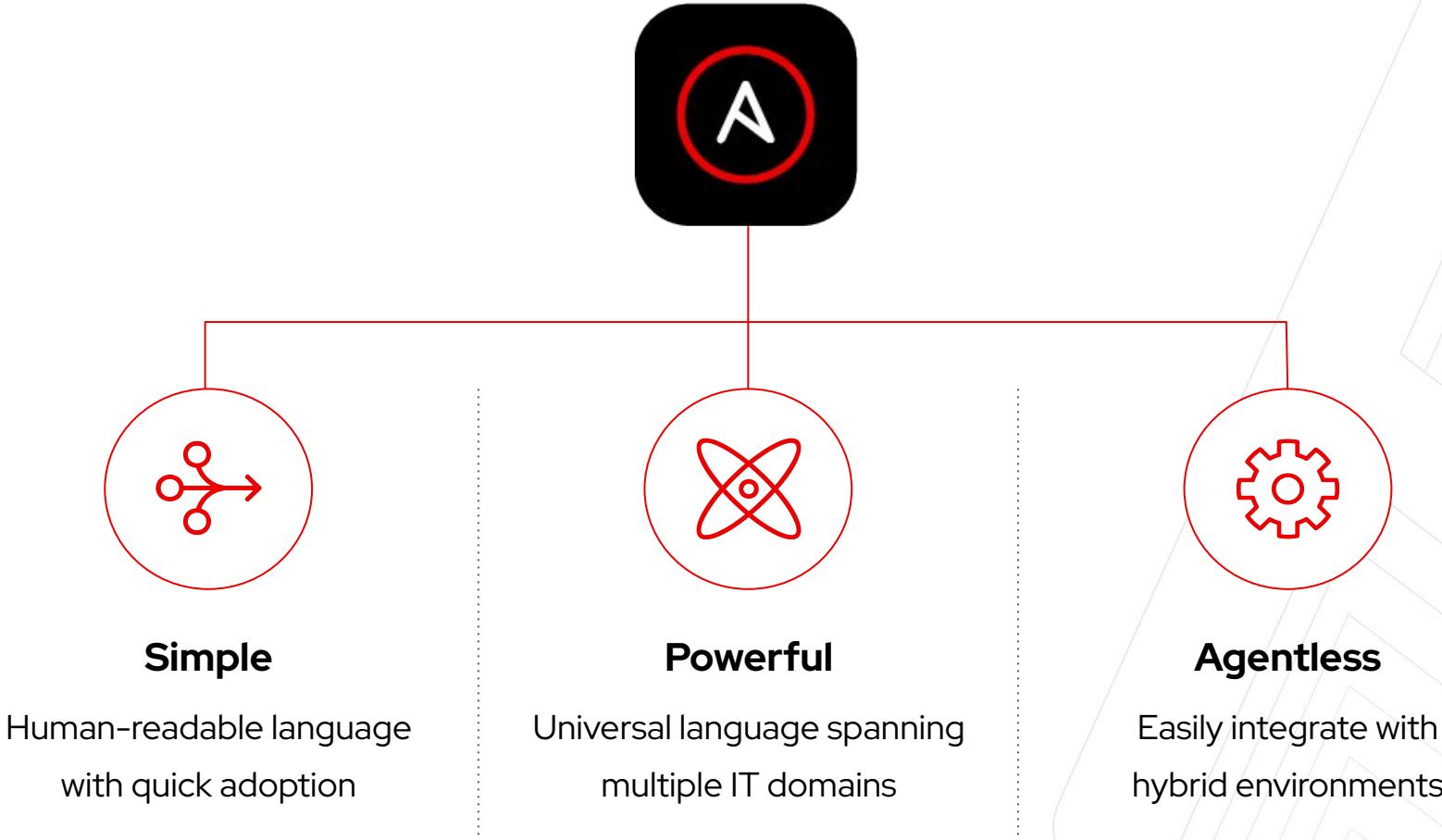
The solution? Break down the silos.



Why Red Hat® Ansible® Automation Platform?



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



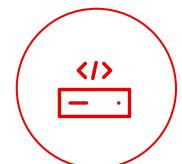
Supported and certified **content** you can trust.

140+

Certified Content
Collections

55+

Certified technology
partners



Infrastructure



Cloud



Network



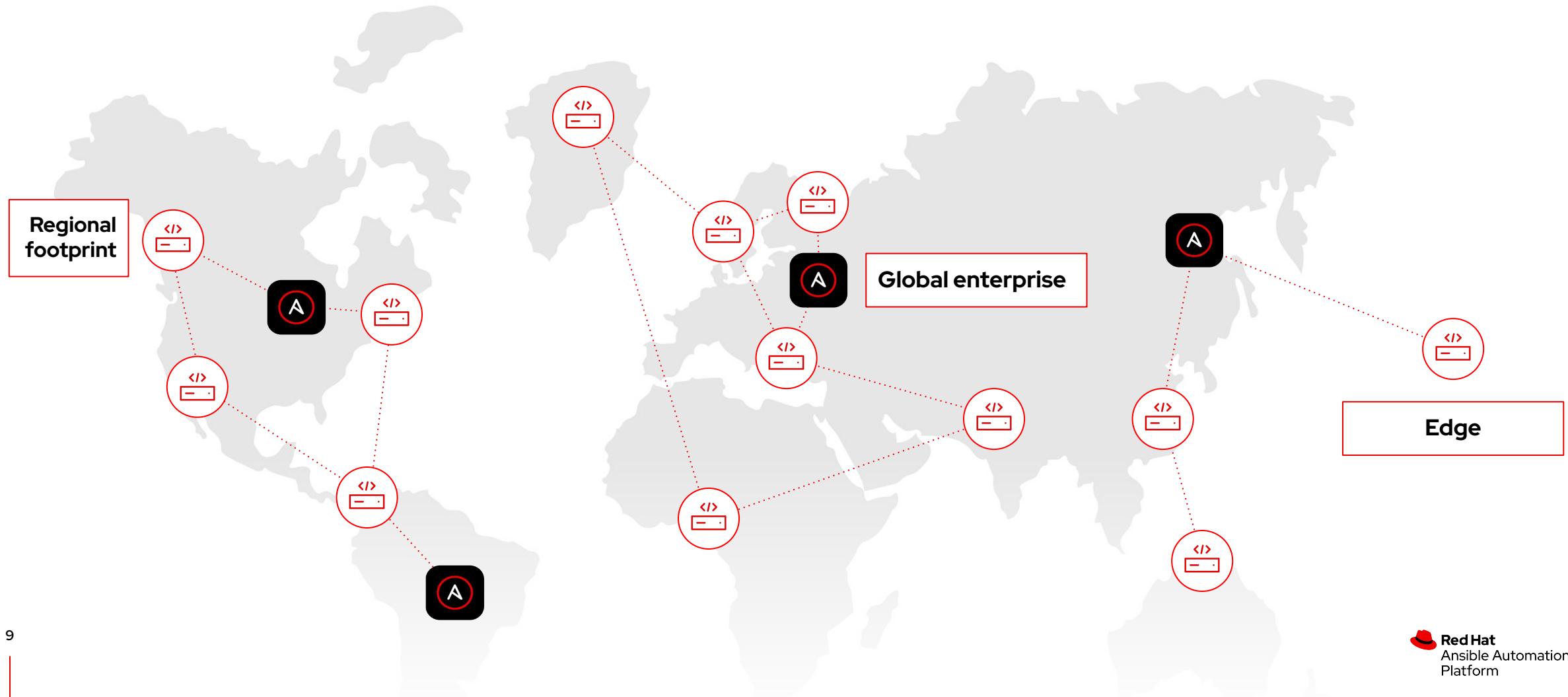
Security



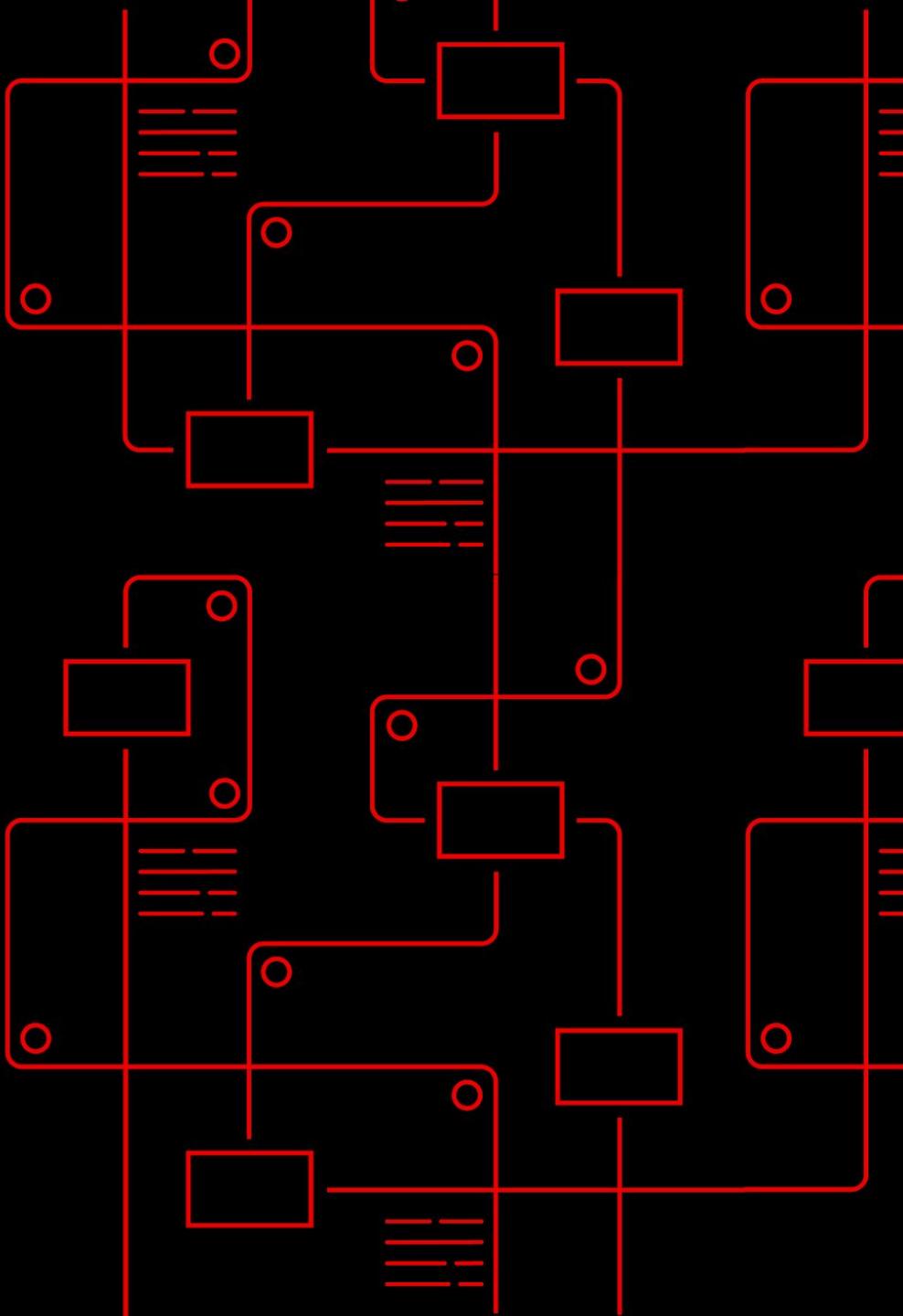
Edge



The flexibility to scale, wherever that may be.



What is Red Hat® Ansible® Automation Platform?



A platform for the **entire automation team**.

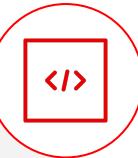


Content creation

Content creation tooling

Portable distribution and reliable execution

Large ecosystem of certified automation



Operations

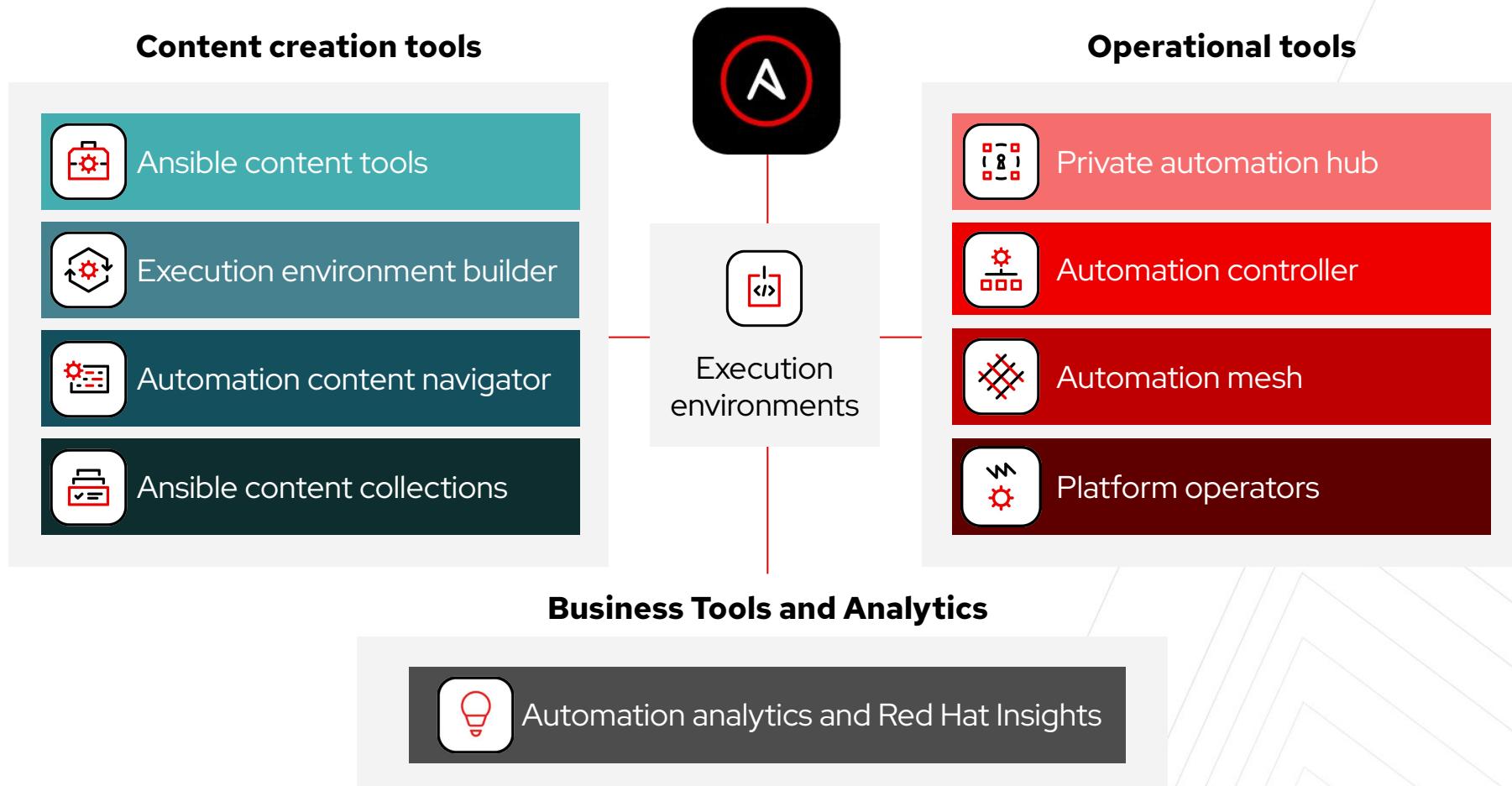
Enterprise features:
WebUI, API, role-based access control (RBAC), auditing and workflows for managing at scale

Hosted and private content management solutions

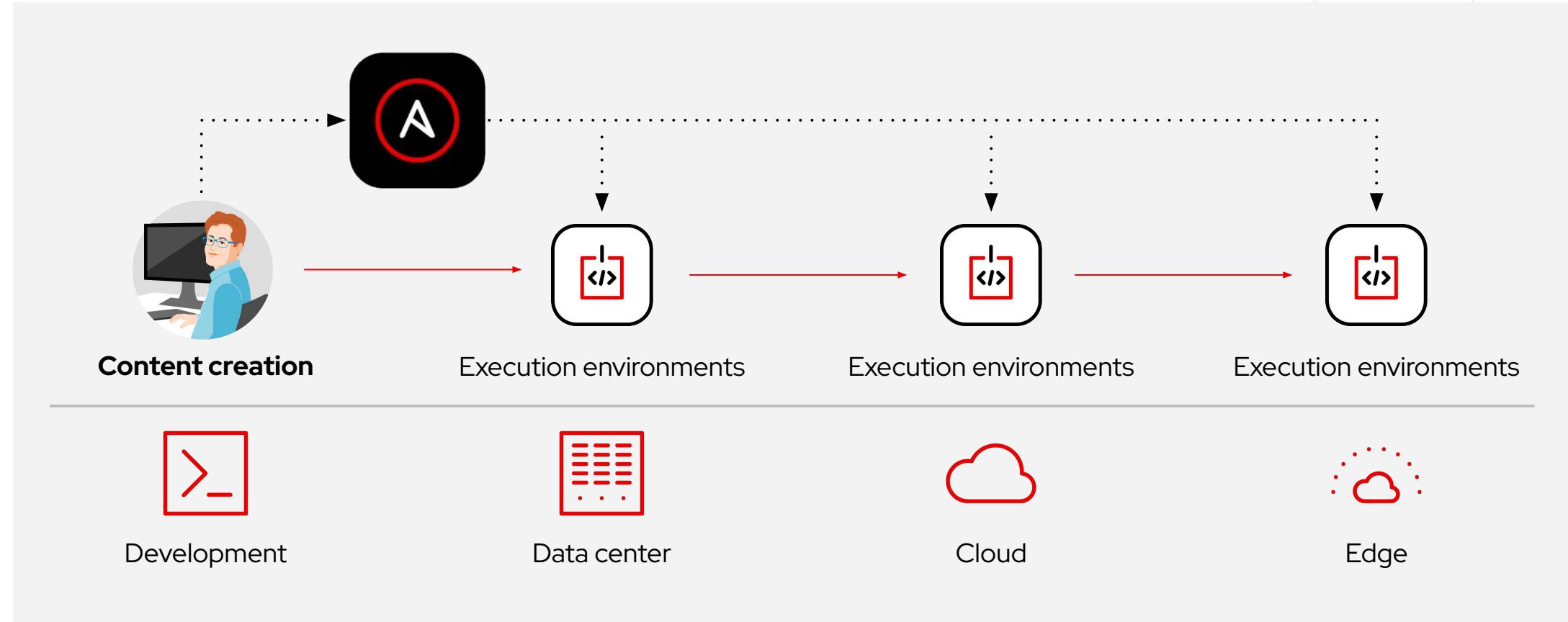
Integrates with your environment



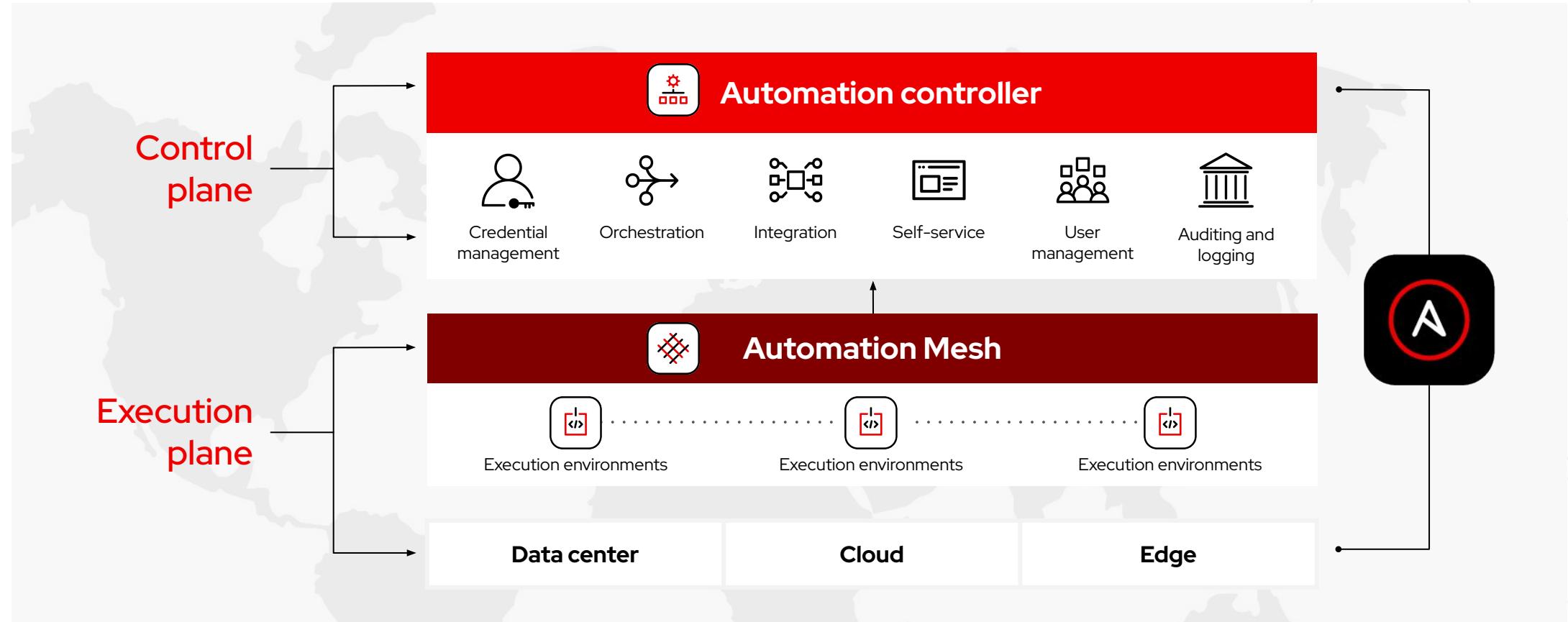
An integrated solution for the enterprise.



Built for consistency. **Portability** is reliability.



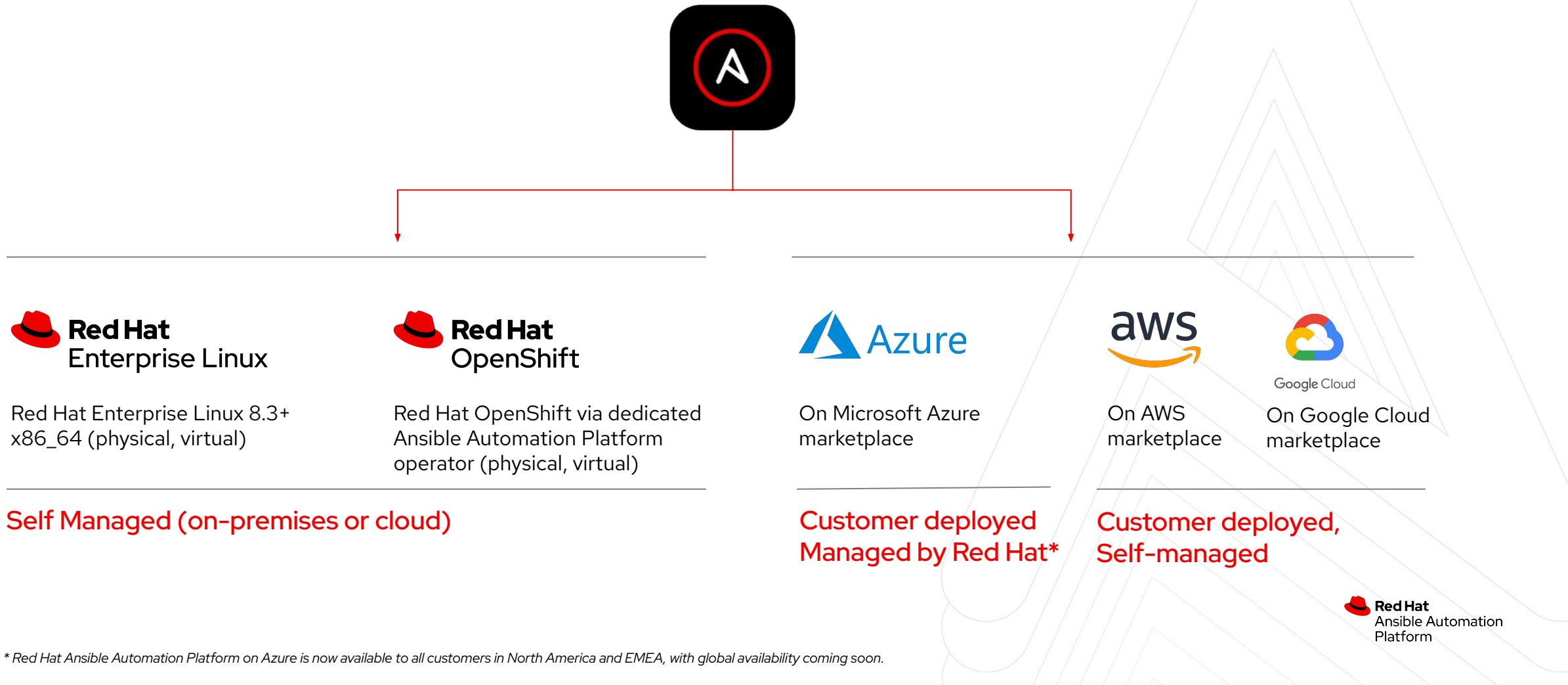
A distributed architecture built for scale.



The capabilities you need across your IT footprint.



Ansible Automation Platform hosting options



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



Create

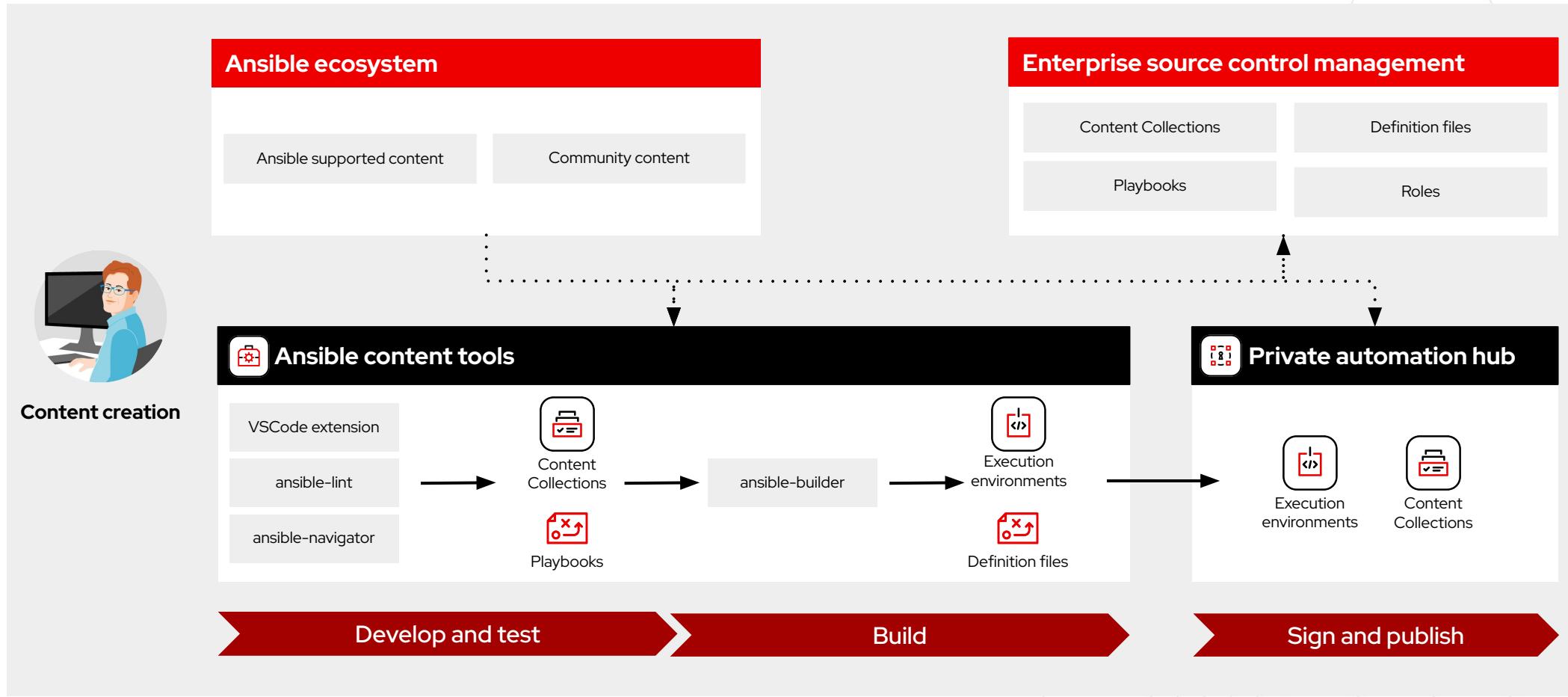
Manage

Scale

Create



The automation content life cycle. **Create.**



Ansible Core (`ansible-core`)



What is it?

- ▶ The main building block for Ansible
- ▶ Simple YAML syntax to develop Ansible Playbooks
- ▶ Provides CLI tools to develop, test and run playbooks
- ▶ Pluggable architecture that allows extensions through Content Collections

```
---  
- name: Shutdown VM guest  
hosts: localhost  
gather_facts: false  
tasks:  
  - name: Turn off specified VM guest  
    vmware.vmware_rest.vcenter_vm_guest_power:  
      state: shutdown  
      vm: 1021343  
      vcenter_hostname: vcenter.demoreddhat.com  
      vcenter_username: admin  
      vcenter_password: tedlasso
```

Ansible playbooks

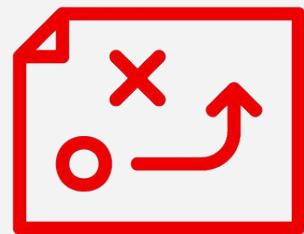
```
---
- name: Install and start apache
  hosts: web
  become: true

  tasks:
    - name: Ensure the httpd package is installed
      ansible.builtin.yum:
        name: httpd
        state: present

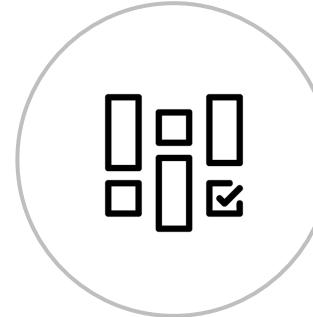
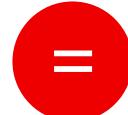
    - name: Create the index.html file
      ansible.builtin.template:
        src: files/index.html
        dest: /var/www/html/

    - name: Start the httpd service if needed
      ansible.builtin.service:
        name: httpd
        state: started
```

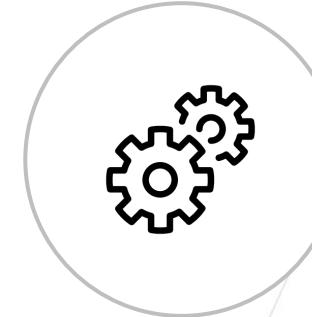
What makes up an Ansible playbook?



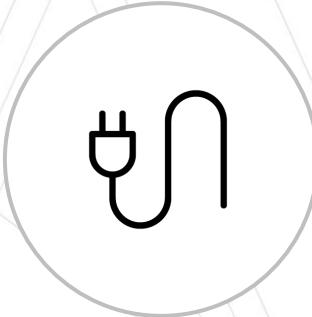
Playbook



Plays



Modules



Plugins

Ansible plays. What am I automating?



What are they?

- ▶ Top level specification for a group of tasks
- ▶ Will tell that play which hosts it will execute on and control behavior such as fact gathering or privilege level

Building blocks for playbooks

- ▶ Multiple plays can exist within an Ansible playbook

```
...  
- name: Ensure the httpd package is installed  
  hosts: web  
  become: true
```



Ansible modules. The “tools in the toolkit”.

What are they?

- ▶ Parametrized components with internal logic, representing a single step to be done
- ▶ The modules “do” things in Ansible

Language

- ▶ Usually created in Python, or Powershell for Windows setups, but can be developed in any language

```
● ● ●  
- name: Create the index.html file  
  ansible.builtin.template:  
    src: files/index.html  
    dest: /var/www/html/log
```

Ansible plugins. The “extra bits”.



What are they?

- ▶ Plugins are pieces of code that augment Ansible's core functionality
- ▶ Ansible uses a plugin architecture to enable a rich, flexible, and expandable feature set

```
● ● ●
```

Example become plugin:

```
---
```

```
- name: Install and start apache
hosts: web
become: true
```

Example filter plugins:

```
{{ some_variable | to_nice_json }}
```

```
{{ some_variable | to_nice_yaml }}
```

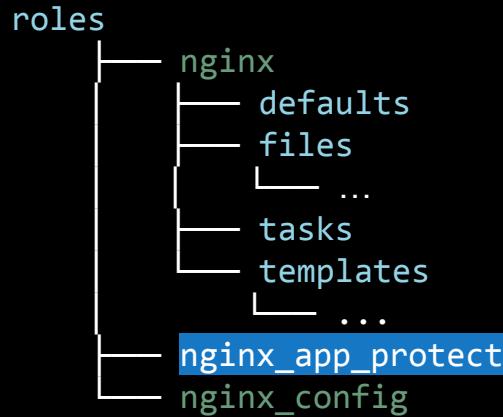
Ansible Roles. Reusable automation actions.



What are they?

- ▶ Group tasks and variables of your automation in a reusable structure
- ▶ Write roles once, and share them with others who have similar challenges in front of them

```
---  
- name: Install and start apache  
hosts: web  
ansible.builtin.roles:  
  - common  
  - webservers
```



deploy-nginx.yml

```
---
```

```
- name: Install NGINX Plus
  hosts: all
  tasks:
```

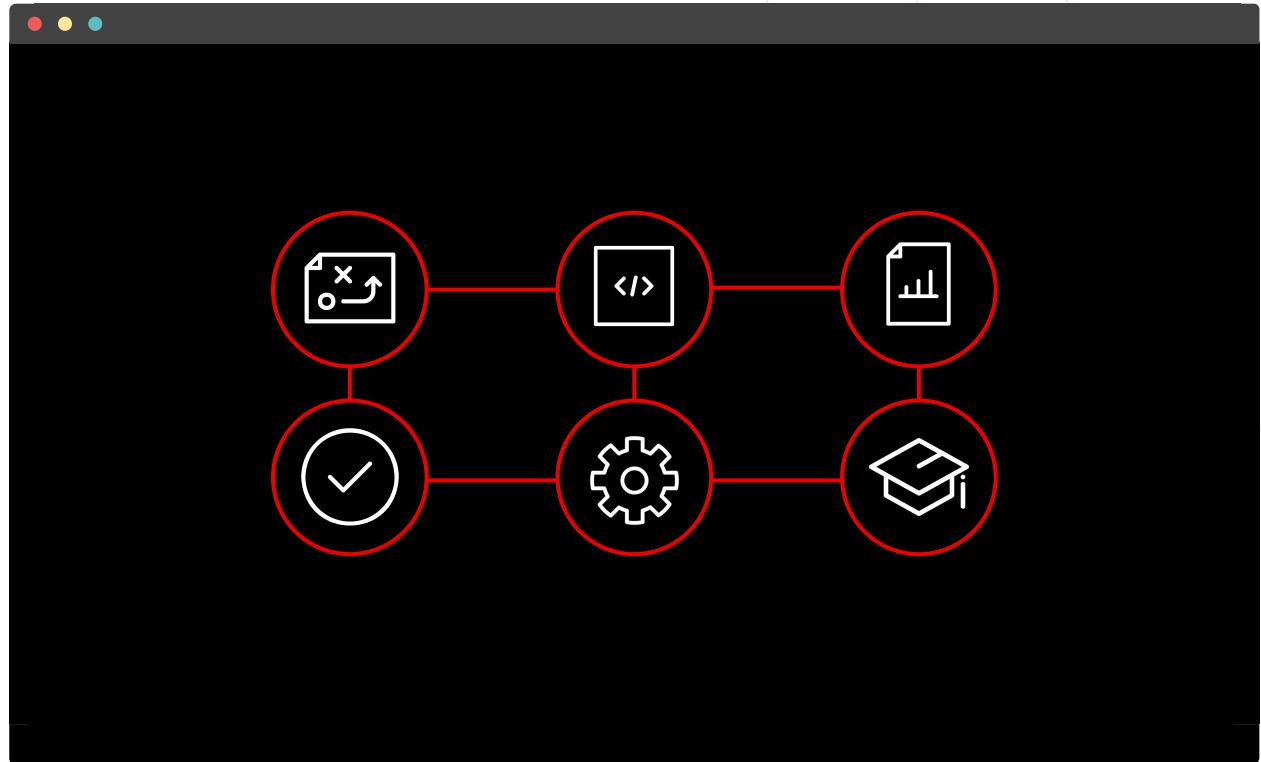
```
  - name: Install NGINX App Protect
    include_role:
      name: nginx_app_protect
  vars:
    nginx_app_protect_setup_license: false
    nginx_app_protect_remove_license: false
    nginx_app_protect_install_signatures: false
```

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





```
nginx_core
├── galaxy.yml
├── meta
└── playbooks
    └── deploy-nginx.yml
    ...
plugins
README.md
roles
└── nginx
    ├── defaults
    ├── files
    │   └── ...
    ├── tasks
    └── templates
        └── ...
nginx_app_protect
nginx_config
```

deploy-nginx.yml

```
---
- name: Install NGINX Plus
  hosts: all
  tasks:
    - name: Install NGINX
      include_role:
        name: nginxinc.nginx
      vars:
        nginx_type: plus

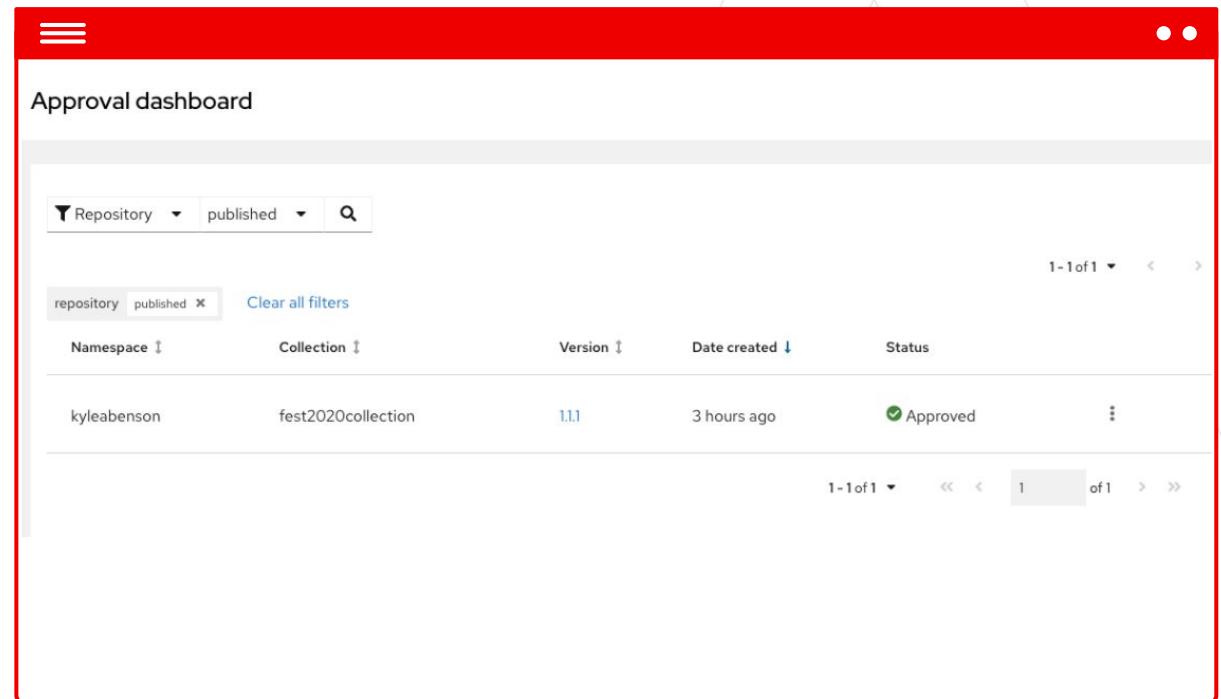
    - name: Install NGINX App Protect
      include_role:
        name: nginxinc.nginx_app_protect
      vars:
        nginx_app_protect_setup_license: false
        nginx_app_protect_remove_license: false
        nginx_app_protect_install_signatures: false
```

Automation hub. Trusted automation content.

console.redhat.com

What is it?

- ▶ Hosted source of trusted Red Hat 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



The screenshot shows the 'Approval dashboard' with a red border. At the top, there's a search bar with dropdowns for 'Repository' and 'published', and a magnifying glass icon. Below the search bar, there are filter buttons for 'repository' and 'published', and a 'Clear all filters' link. The main area is a table with columns: Namespace, Collection, Version, Date created, and Status. A single row is shown: kyleabenson, fest2020collection, 1.1.1, 3 hours ago, Approved. At the bottom of the table, there are navigation links for '1-1 of 1' and a page number '1 of 1'.

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

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

The screenshot shows a portion of an Ansible YAML file with two tasks:

```
- 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

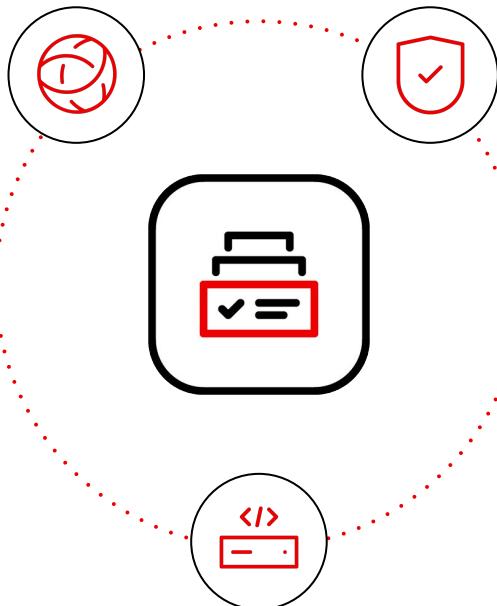
- name: Create a problem from incident
  problem
```

A tooltip is displayed over the word "problem", listing available completions:

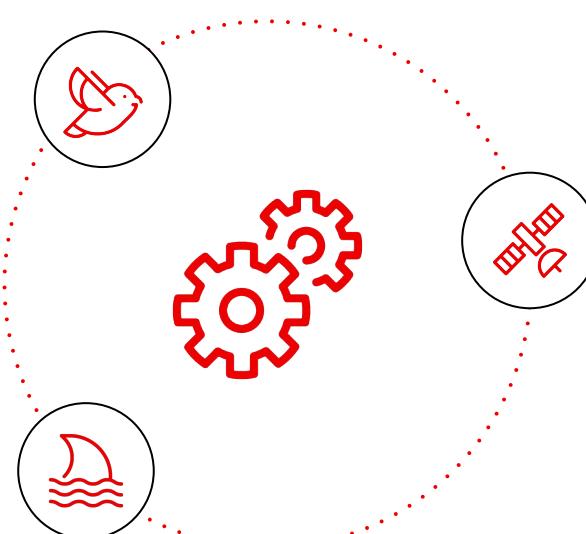
- (servicenow.itsm.problem)
- servicenow.itsm.problem_info
- servicenow.itsm.problem_task
- servicenow.itsm.problem_task_info
- ansible.builtin.proxmox
- ansible.builtin.portage
- ansible.builtin.proxmox_kvm
- ansible.builtin.profitbricks
- ansible.builtin.portinstall
- ansible.builtin.proxysql_backend_servers
- ansible.builtin.profitbricks_nic
- ansible.builtin.proxmox_template

The tooltip also includes a "servicenow.itsm" section with a "Manage ServiceNow problems" link and a "Description" section with links to ServiceNow documentation.

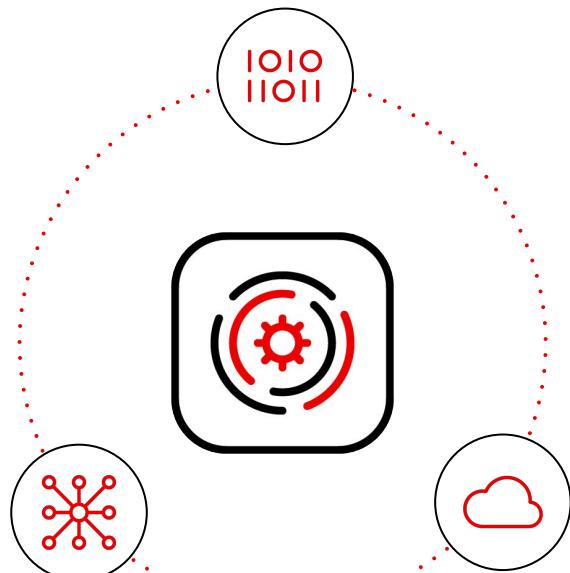
Many technologies, different life cycles. How do I keep it all aligned?



Collections

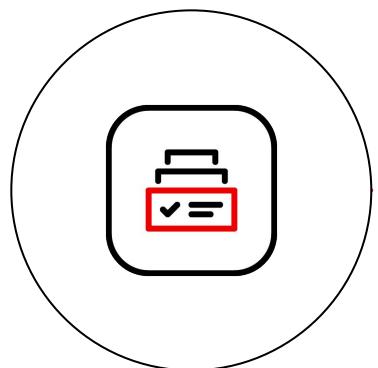


Dependencies

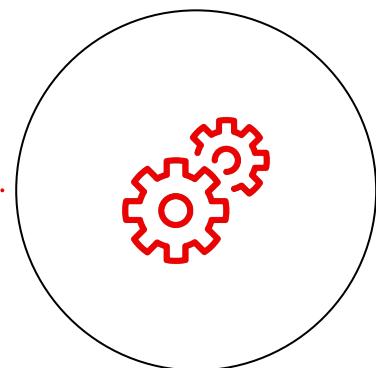


Runtime

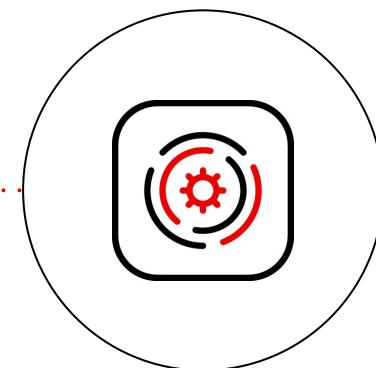
Automation execution environments. Reuse and scale automation content.



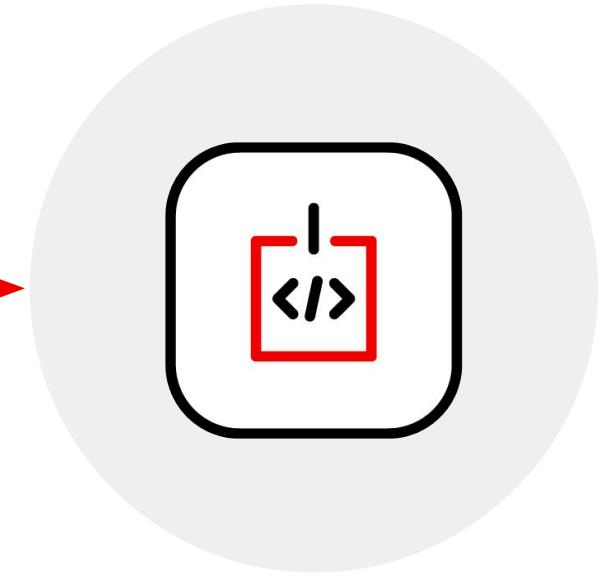
Collections



Dependencies



Ansible Core

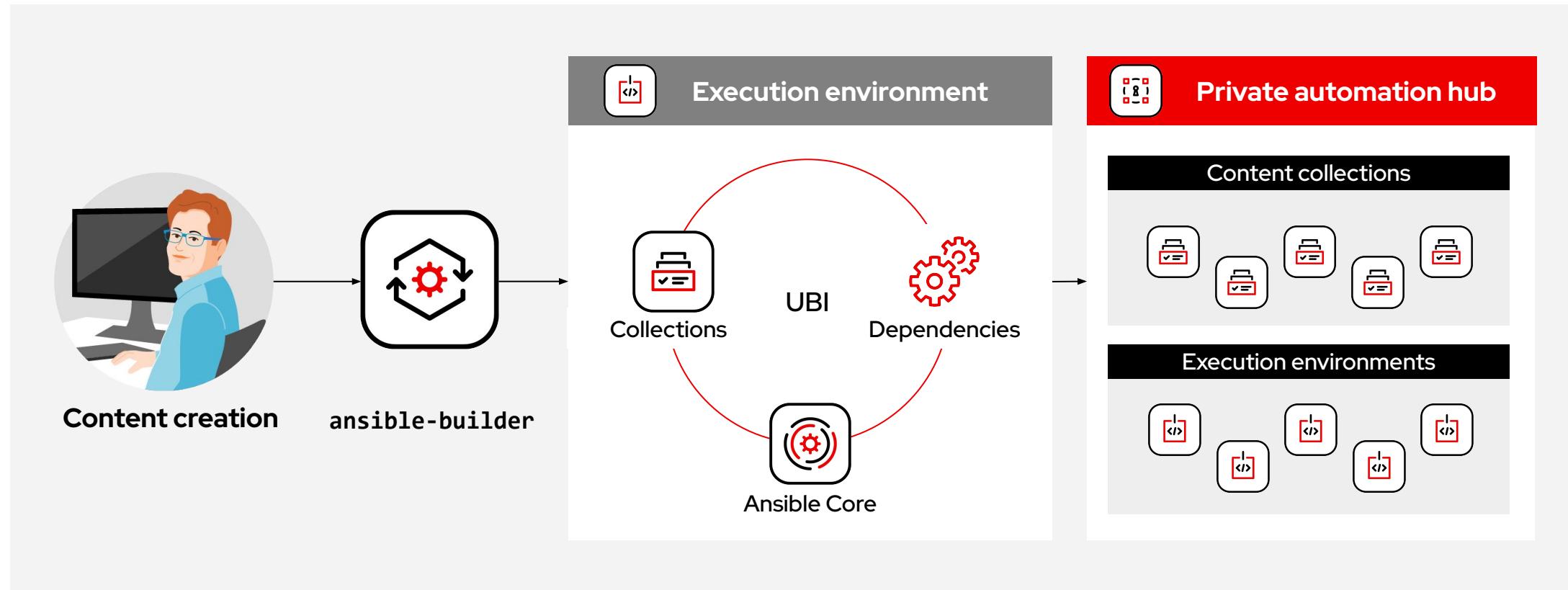


Automation
execution environments

Red Hat Universal Base Image (UBI)

Execution environment development.

Build, collaborate, sign, publish.



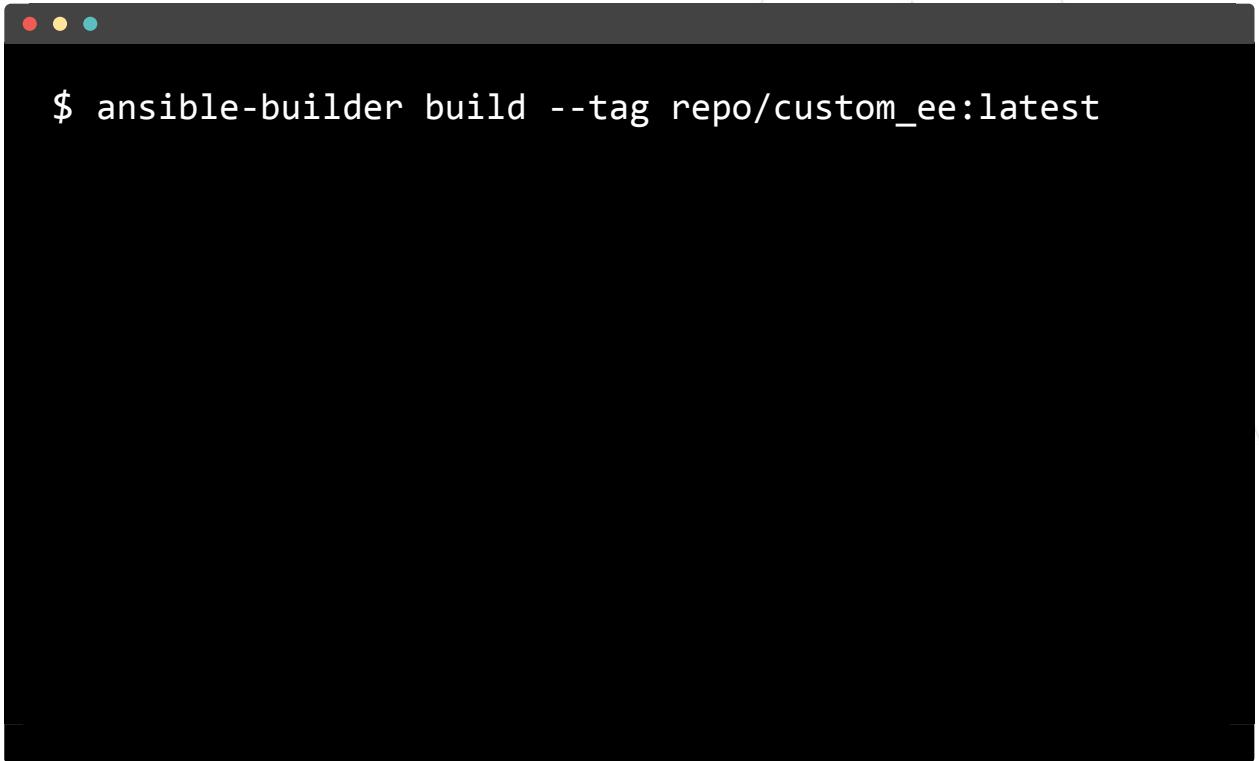


Execution environment builder. Build.

ansible-builder

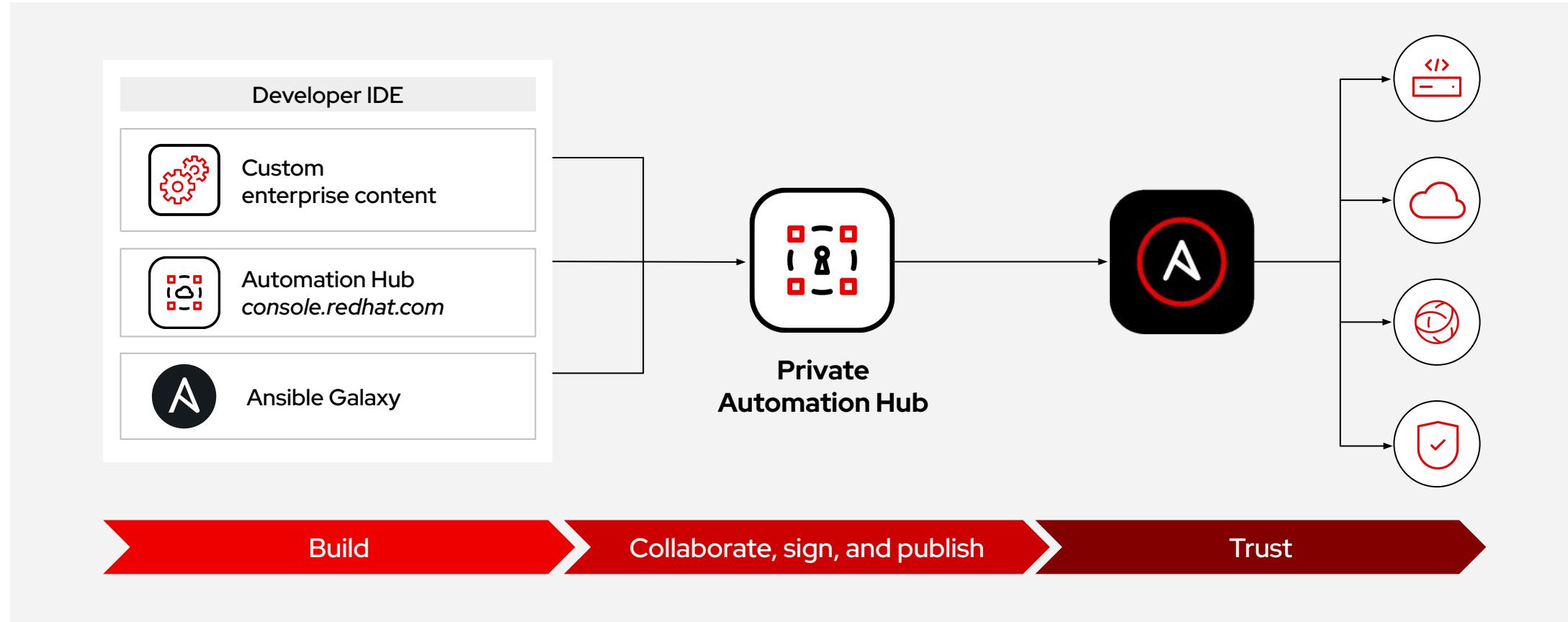
What is it?

- ▶ Easily build custom execution environments with the exact Ansible content needed
- ▶ Manage, track and version execution environments
- ▶ Share execution environment build artifacts with other teams

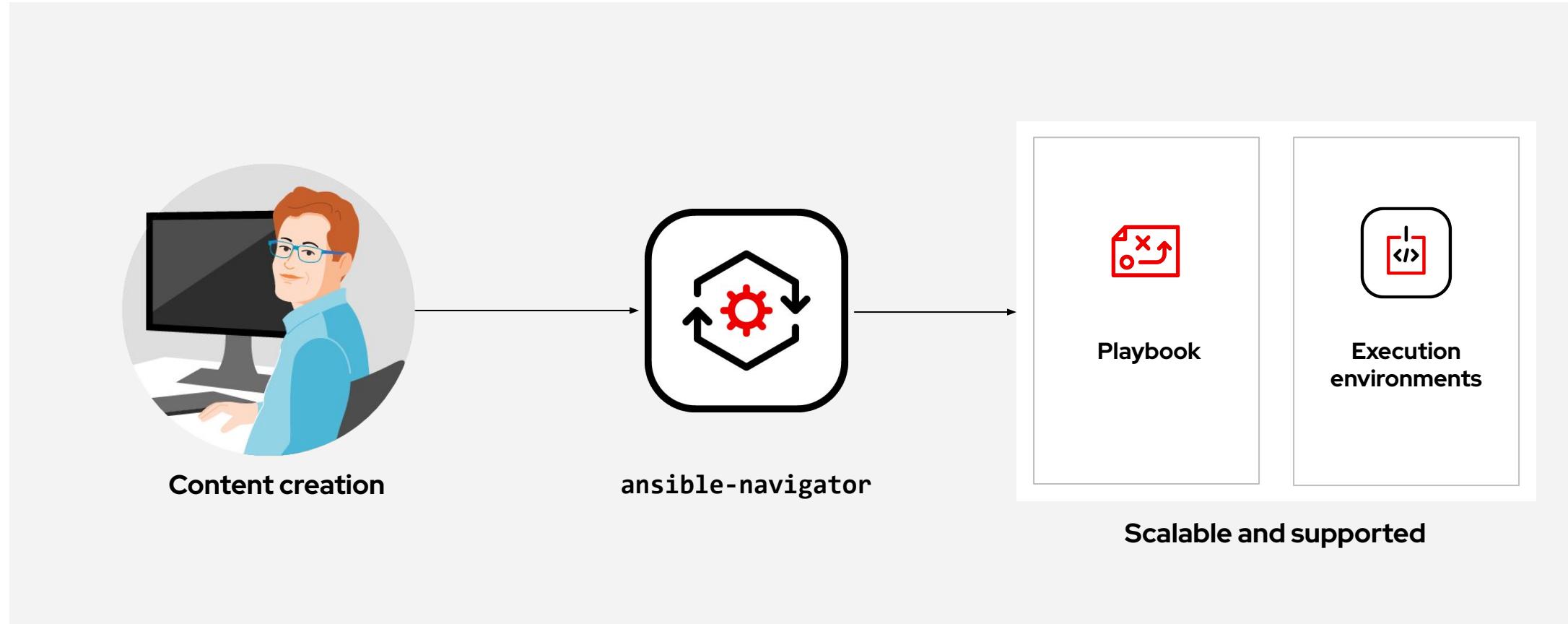


A screenshot of a terminal window with a dark background. At the top, there are three colored window control buttons (red, yellow, blue). Below them, the terminal prompt is visible: '\$ ansible-builder build --tag repo/custom_ee:latest'. The rest of the screen is mostly black, indicating a blank or unprinted area.

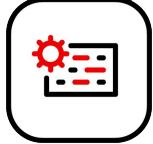
Private automation hub. **Collaborate, sign, and publish.**



Develop, test and run **containerized Ansible content**.



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

A screenshot of a terminal window with a black background and light gray text. The window has three colored window control buttons (red, yellow, blue) at the top. The text inside the terminal shows a single command line:

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

Ansible lint (ansible-lint).

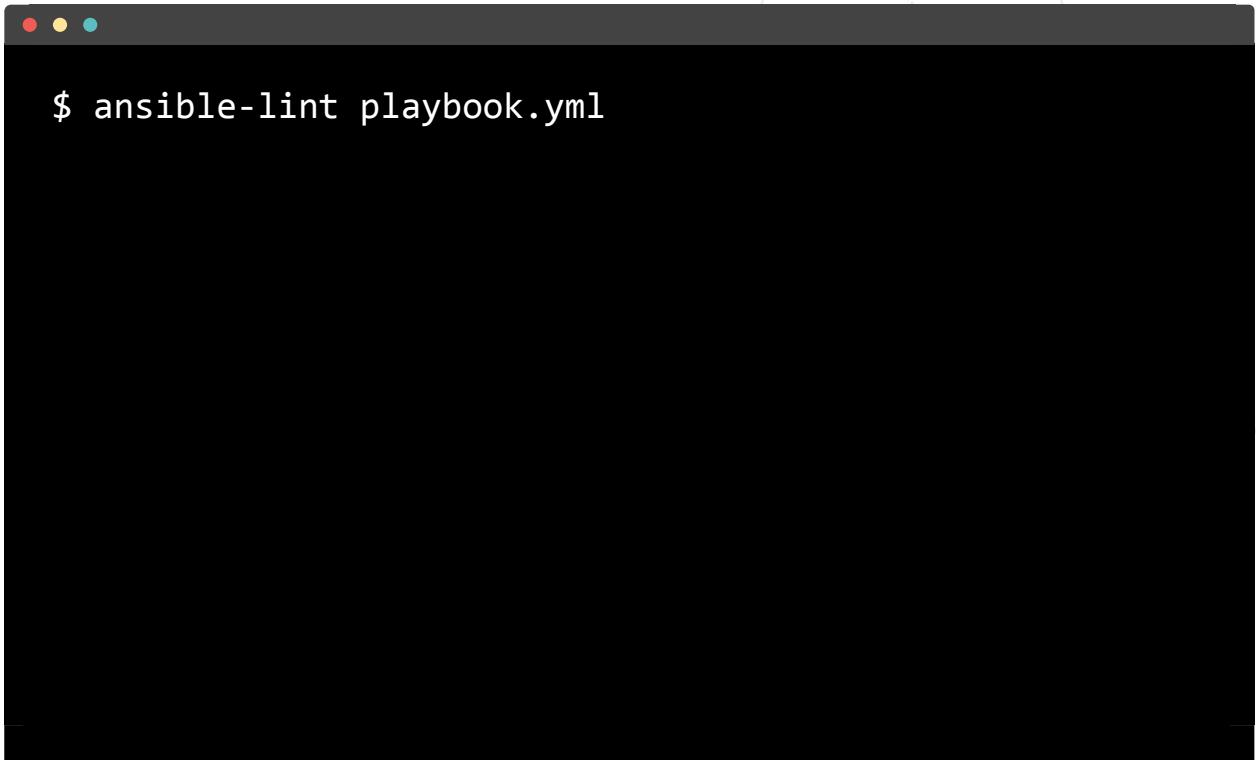
Fully supported (AAP 2.3)



What is it?

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

- ▶ Promote best practices and 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.

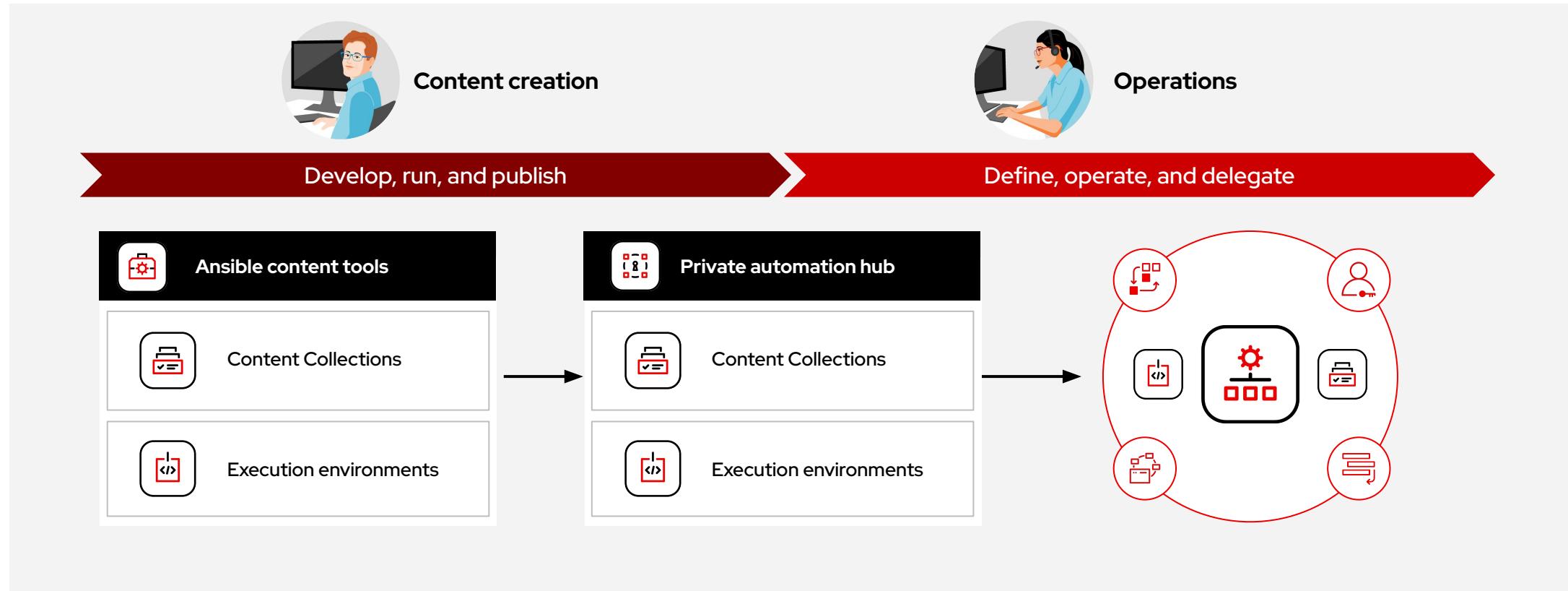


A screenshot of a terminal window on a dark background. The window has three colored window control buttons (red, yellow, blue) at the top. Inside the terminal, the command '\$ ansible-lint playbook.yml' is typed in white text. The terminal window is surrounded by a thin white border.

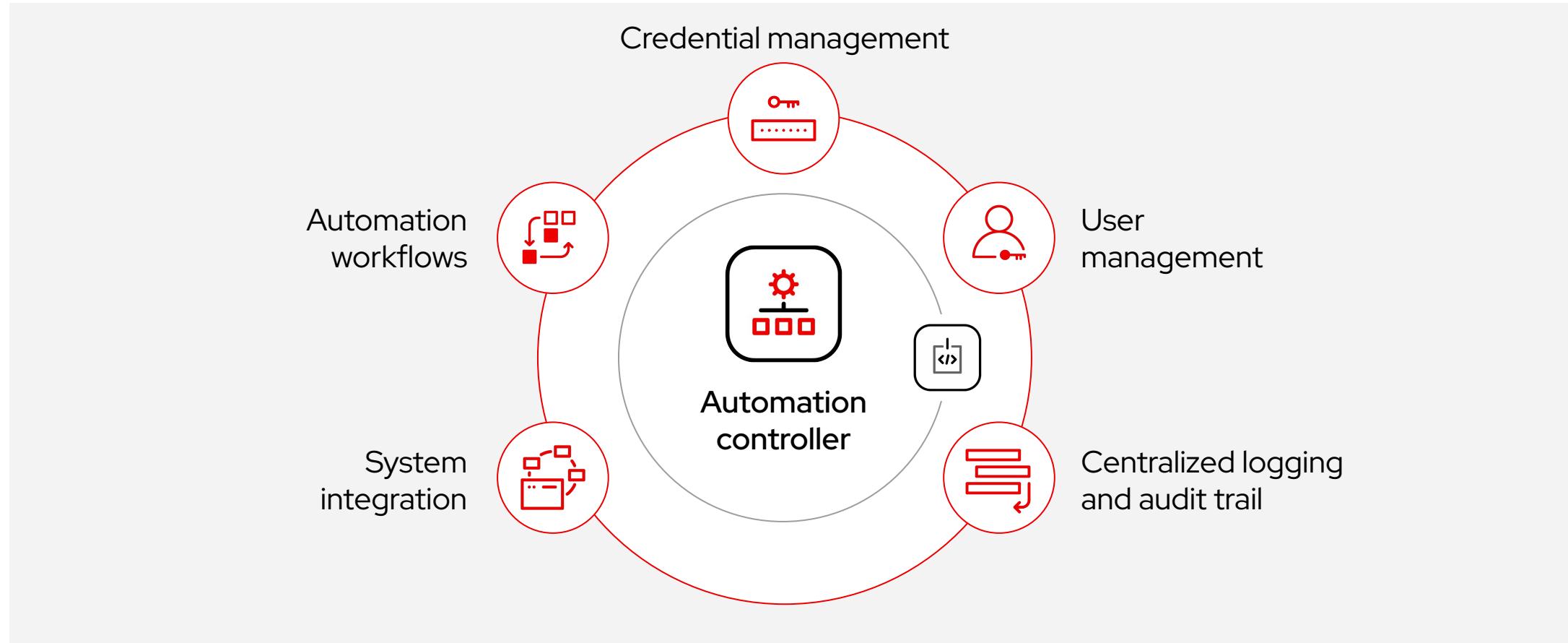
Manage



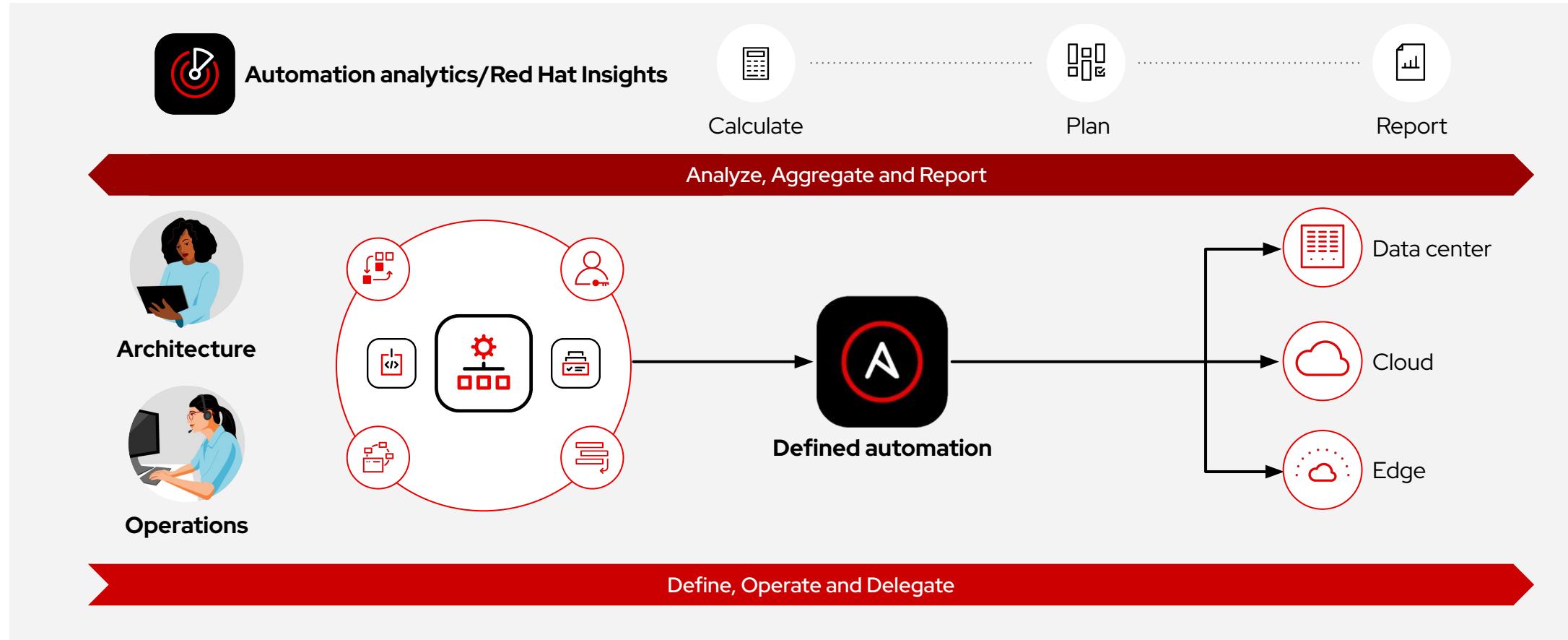
Creation to operations handover. **Consistent and portable.**



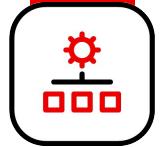
Enterprises need more for their automation.



The automation life cycle. **Manage.**



Automation controller. Define, operate, and delegate.

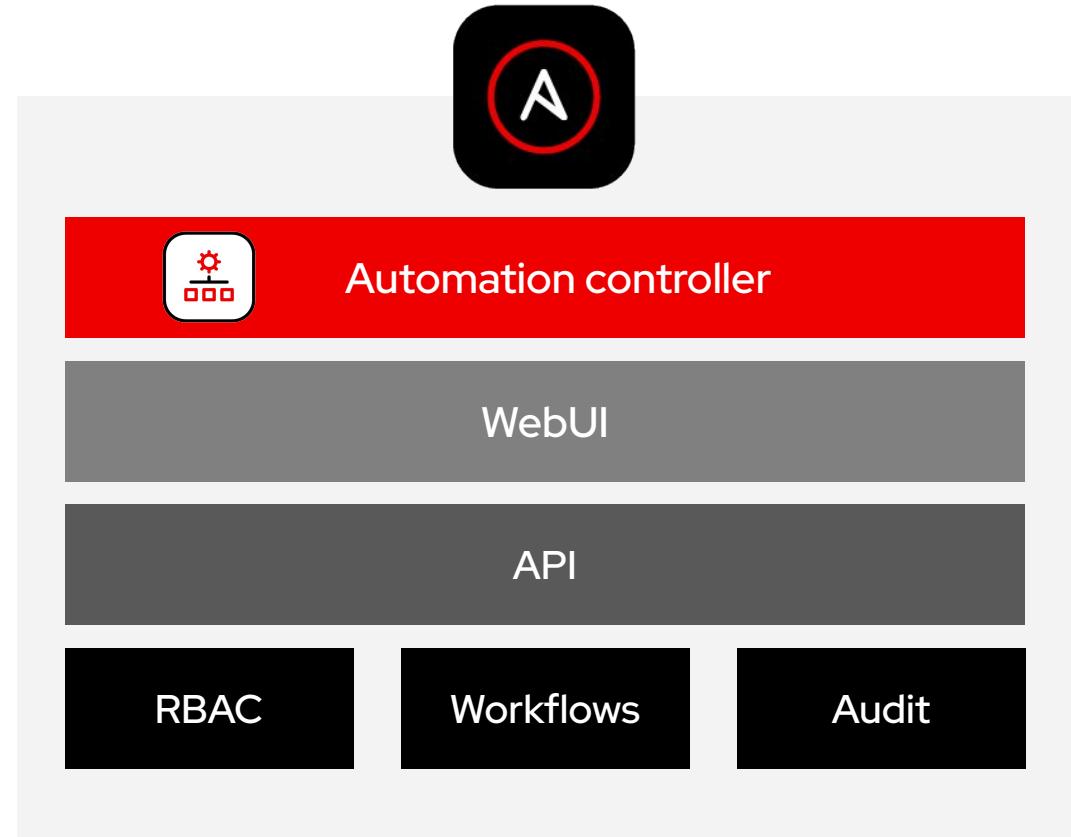


What is it?

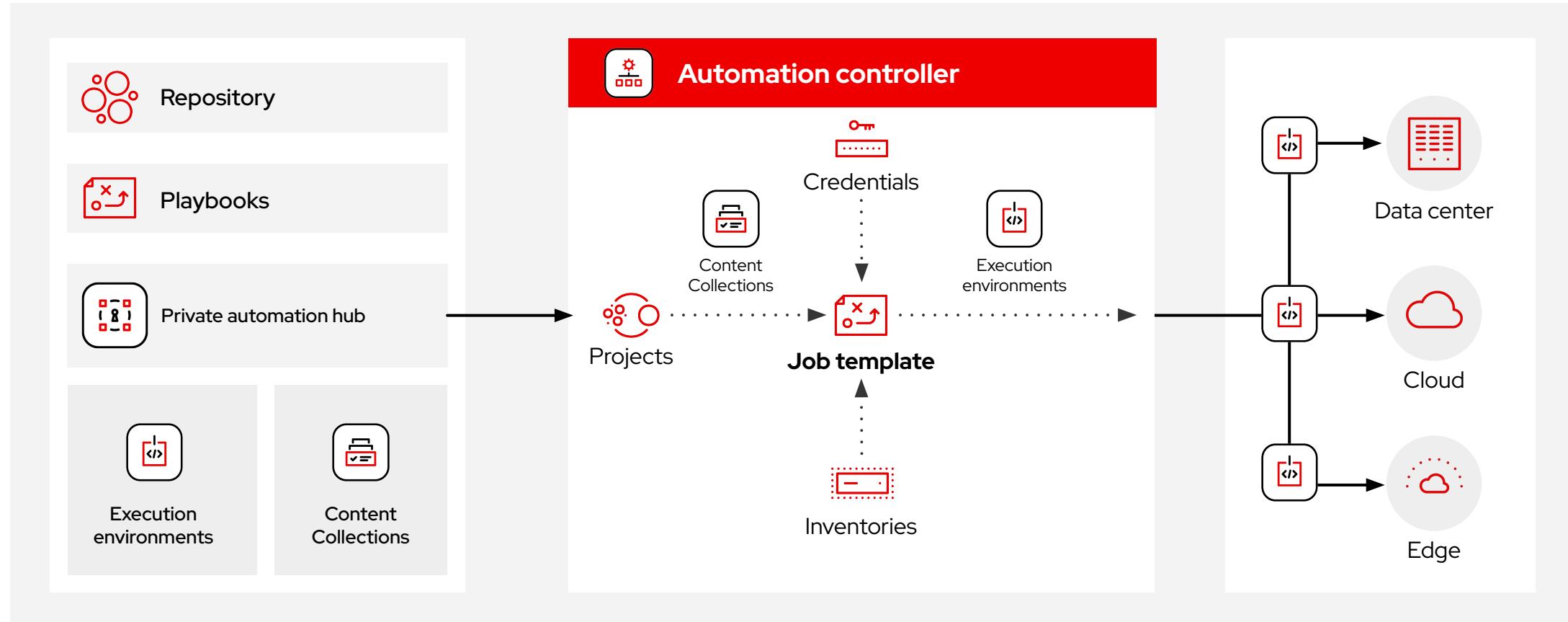
Automation controller is the Ansible Automation Platform control plane which enables users to define, operate, and delegate automation across their enterprise

Automation controller provides:

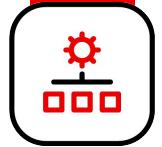
- ▶ WebUI and API
- ▶ Role-based access control
- ▶ Powerful workflows
- ▶ Centralized logging
- ▶ Credential management
- ▶ Push-button automation



Defining how your content runs in **automation controller**.



Using execution environments in automation controller.



How do I add execution environments (EE)?

EEs can be added via the controller WebUI, API or command line

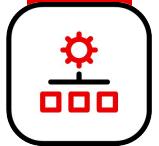
- ▶ Specify the EE image source
- ▶ Pull policy determines when and how EEs are downloaded when running automation
- ▶ Assign registry credentials to pull the EEs

How do I use execution environments?

- ▶ Select the EE you want to use in your automation job
- ▶ The default EE is used if none is specified

The screenshot shows a 'Create new execution environment' dialog box. It has fields for Name (Security EE), Image (quay.io/ansible/security-ee:latest), and a dropdown for Pull policy (Always pull container before running). There are also fields for Description, Organization, and Registry credential, along with a note about leaving the organization field blank to make the EE globally available. At the bottom are Save and Cancel buttons.

Projects. Adding your automation content to controller.



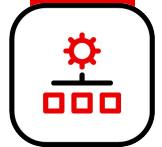
What is it?

Logical collection of your playbooks:

- ▶ Multiple source types supported
- ▶ Source Control Management (SCM) integration and update strategies
- ▶ Red Hat Insights integration
- ▶ Role-based access control (RBAC) and schedules

Name	Status	Type
Demo Project	Successful	Git
Example	Successful	Git

Inventories. What do I want to run my automation on?



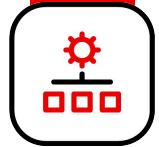
What is it?

Collection of endpoints against which jobs may be launched

- ▶ Multiple inventory sources supported
- ▶ Dynamic endpoint discovery
- ▶ Logically group endpoints by metadata or user-defined filters
- ▶ Granular RBAC permissions

Inventories					
<input type="checkbox"/> Name	▼	<input type="button" value="Search"/>	<input type="button" value="Add"/>	<input type="button" value="Delete"/>	1 - 4 of 4
Name	↑	Status	Type	Organization	Action
<input type="checkbox"/> AWS Inventory		<input type="button" value="Disabled"/>	Inventory	ACME Corp	<input type="button" value="Edit"/> <input type="button" value="Details"/>
<input type="checkbox"/> Azure Inventory		<input type="button" value="Disabled"/>	Inventory	ACME Corp	<input type="button" value="Edit"/> <input type="button" value="Details"/>
<input type="checkbox"/> Data center		<input type="button" value="Disabled"/>	Inventory	ACME Corp	<input type="button" value="Edit"/> <input type="button" value="Details"/>
<input type="checkbox"/> Remote Office A		<input type="button" value="Disabled"/>	Inventory	ACME Corp	<input type="button" value="Edit"/> <input type="button" value="Details"/>

Credentials. Securing resource and endpoint access.

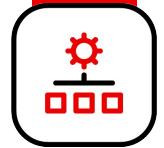


What is it?

- ▶ Securely manage credentials needed for automation resources
- ▶ Multiple credential types supported
- ▶ Integrate external secret management systems
- ▶ Create custom credential types and plugins
- ▶ Use RBAC to govern access
- ▶ Actual credential never exposed

Credentials	
<input type="checkbox"/> Name	<input type="button" value="Add"/>
<input type="checkbox"/> Ansible Galaxy	Type Ansible Galaxy/Automation Hub API Token
<input type="checkbox"/> Automation Controller	Red Hat Ansible Automation Platform
<input type="checkbox"/> AWS Credential	Amazon Web Services
<input type="checkbox"/> Azure Credentials	Microsoft Azure Resource Manager

Job Templates. Bringing it all together.



What is it?

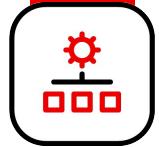
- ▶ Define and standardize running automation
- ▶ Reusable and shareable
- ▶ Leverage agile practices, such as GitOps and event-driven automation

Job template with slicing

DETAILS PERMISSIONS NOTIFICATIONS COMPLETED JOBS SCHEDULES ADD SURVEY

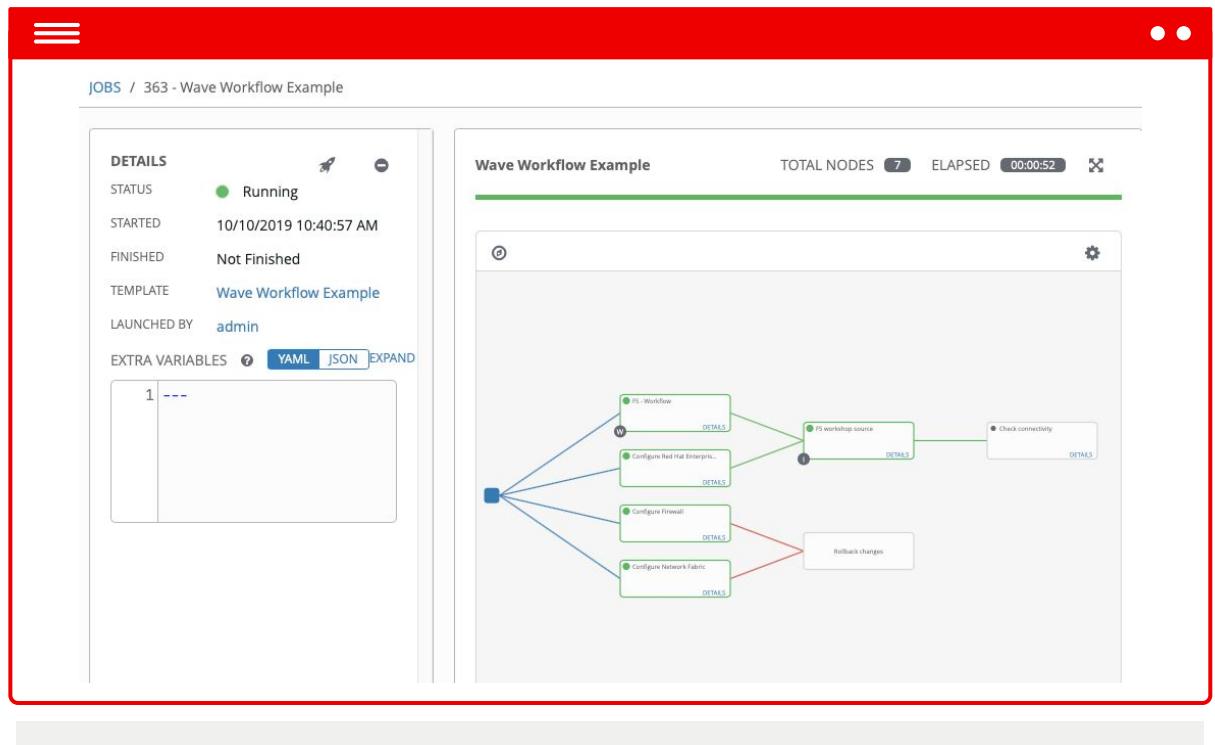
* NAME <input type="text" value="Job template with slicing"/>	DESCRIPTION <input type="text" value=""/>	* JOB TYPE <input type="checkbox"/> PR <input checked="" type="checkbox"/> Run	
* INVENTORY <input type="text" value="King PLC"/>	PROMPT ON LAUNCH <input type="checkbox"/>	* PROJECT <input type="text" value="Project from Git"/>	* PLAYBOOK <input type="text" value="gen_host_status.yml"/>
CREDENTIALS <input type="text" value=""/>	PROMPT ON LAUNCH <input type="checkbox"/>	FORKS <input type="text" value="0"/>	LIMIT <input type="checkbox"/> <input type="text" value=""/>
* VERBOSITY <input type="text" value="0 (Normal)"/>	PROMPT ON LAUNCH <input type="checkbox"/>	JOB TAGS <input type="text" value=""/>	SKIP TAGS <input type="checkbox"/> <input type="text" value=""/>
LABELS <input type="text" value=""/>	INSTANCE GROUPS <input type="text" value=""/>	SHOW CHANGES <input type="checkbox"/>	JOB SLICING <input type="text" value="1"/>
TIMEOUT <input type="text" value="0"/>	PROMPT ON LAUNCH <input type="checkbox"/>	OPTIONS	<input type="checkbox"/> ENABLE PRIVILEGE ESCALATION <input type="checkbox"/> ENABLE PROVISIONING CALLBACKS <input type="checkbox"/> ENABLE WEBHOOK <input checked="" type="checkbox"/> ENABLE CONCURRENT JOBS <input type="checkbox"/> ENABLE FACT CACHE

Workflows. Solve complex problems.

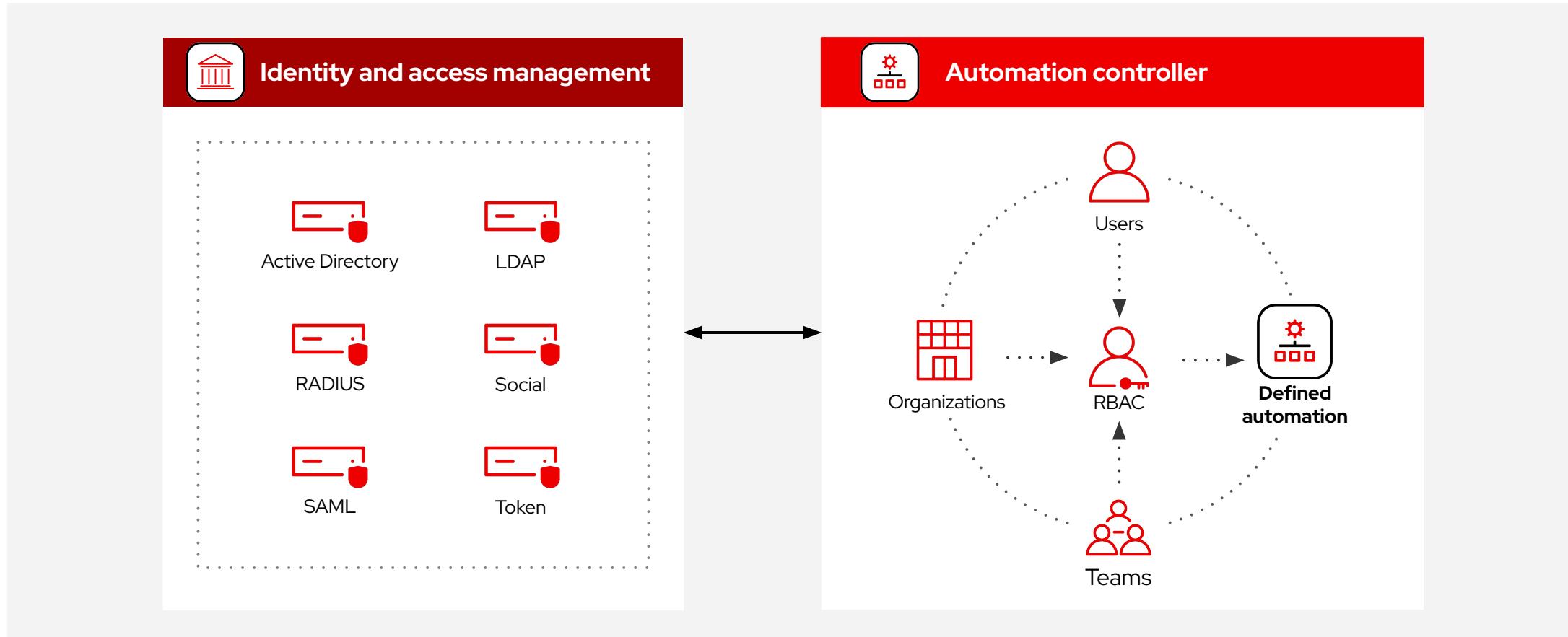


What is it?

- ▶ 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



Securing your content in automation controller. **Delegate.**



Role-Based Access Control. Who can use my automation?



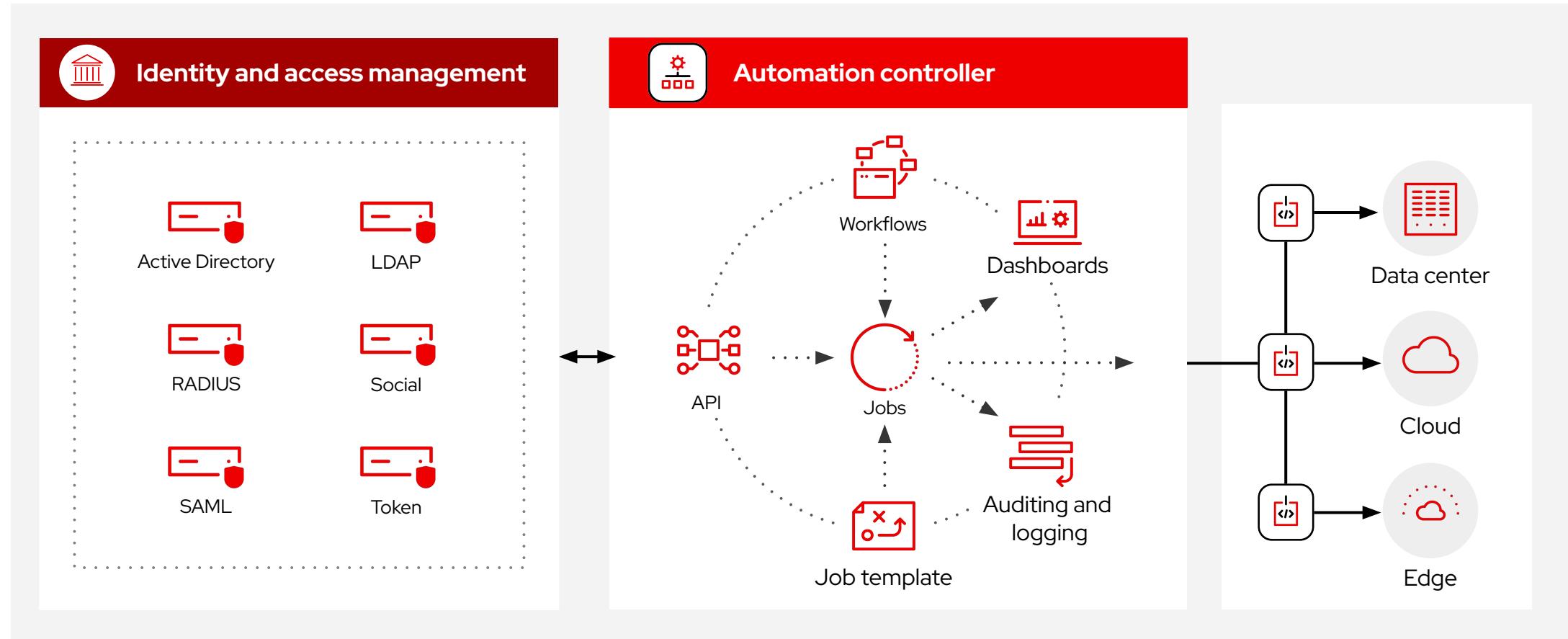
What is it?

Securely govern access to your automation

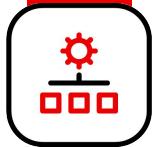
- ▶ Logically group controller objects and grant users and teams read, execute, edit permissions
- ▶ Use predefined roles to grant access
- ▶ Integrates with your existing enterprise authentication systems

Username	First name	Last name	Roles
admin			User Roles System Administrator
austin78	Austin	Austin	User Roles Member System Auditor
jgarcia	Jerry	Jerry	User Roles Member
jdoge	Josie	Josie	User Roles Project Admin

Launching your content from automation controller.



Automation jobs. Executing your defined automation.

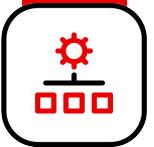


What is it?

- ▶ Controller launching an instance of defined automation
- ▶ Relaunch automation jobs
- ▶ Use Job Details to view job outputs
- ▶ Troubleshoot automation execution using filtered views

The screenshot shows the 'JOBS' page with a red border. At the top, there's a search bar and a 'KEY' button. Below the header, a list of jobs is displayed:

- 110 - Cleanup Activity Stream (Management Job)
- 109 - Project from Git (SCM Update)
- 108 - Cleanup Job Details (Management Job)
- 101 - WF in WF (Workflow Job)
- 102 - Job template with slicing (Playbook Run)
- 100 - New Workflow Job Template (Workflow Job)
- 87 - Demo Job Template (Playbook Run)
- 88 - Demo Project (SCM Update)

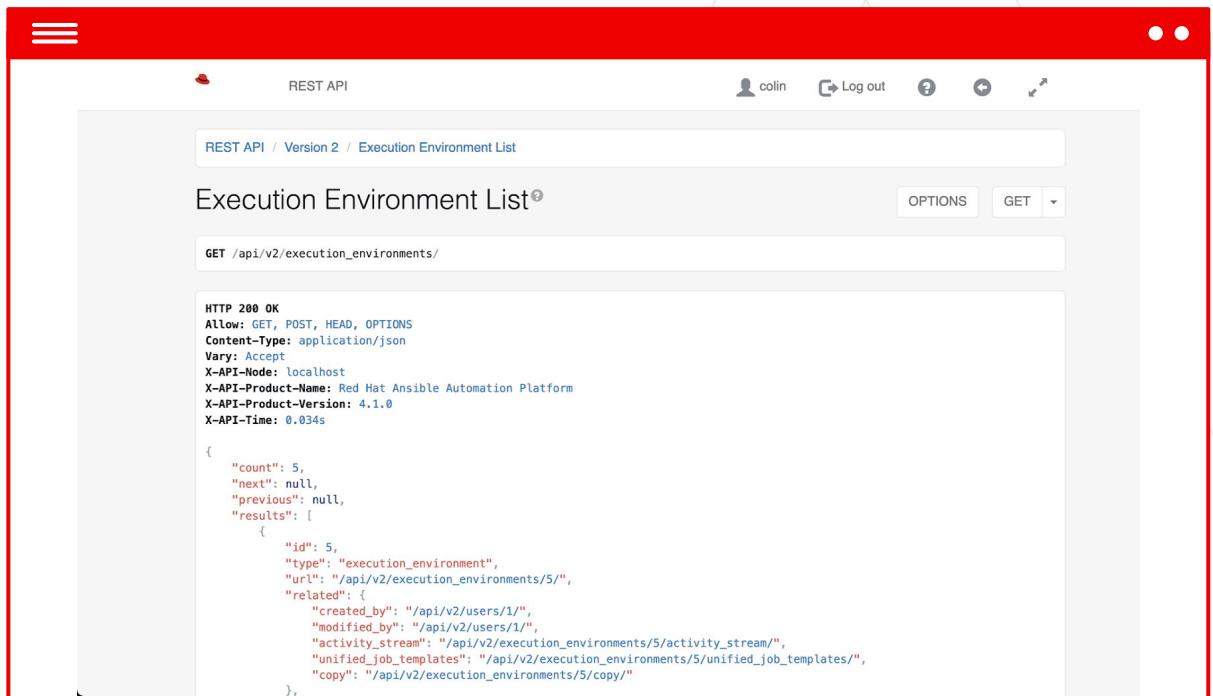


Automation controller API.

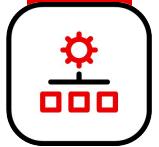
Integrate and elevate your automation.

What is it?

- ▶ The API provides programmatic access to the automation via a defined interface
 - ▶ Underneath it is still powered by the same bits and pieces which are at the core: workflows, inventories, etc
 - ▶ It offers simple integration into other tools like ITSM, SOAR, etc



Automation controller logging aggregation.



What is it?

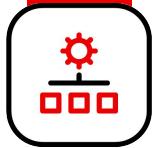
- ▶ Provides the capability to send detailed logs to several kinds of 3rd party external log aggregation services
- ▶ Use Red Hat Enterprise Linux rsyslog to aggregate and redirect logs
- ▶ Native integration exists for multiple 3rd party logging systems
- ▶ Multiple detailed logs are gathered for job events, system facts, users, activity streams, and controller features

The screenshot shows a list of jobs in the 'JOBS' section of the platform. The list includes:

- 110 - Cleanup Activity Stream (Management job)
- 109 - Project from Git (SCM Update)
- 108 - Cleanup Job Details (Management job)
- 101 - WF in WF (Workflow job)
- 102 - Job template with slicing (Playbook Run)
- 100 - New Workflow Job Template (Workflow job)
- 87 - Demo Job Template (Playbook Run)
- 88 - Demo Project (SCM Update)

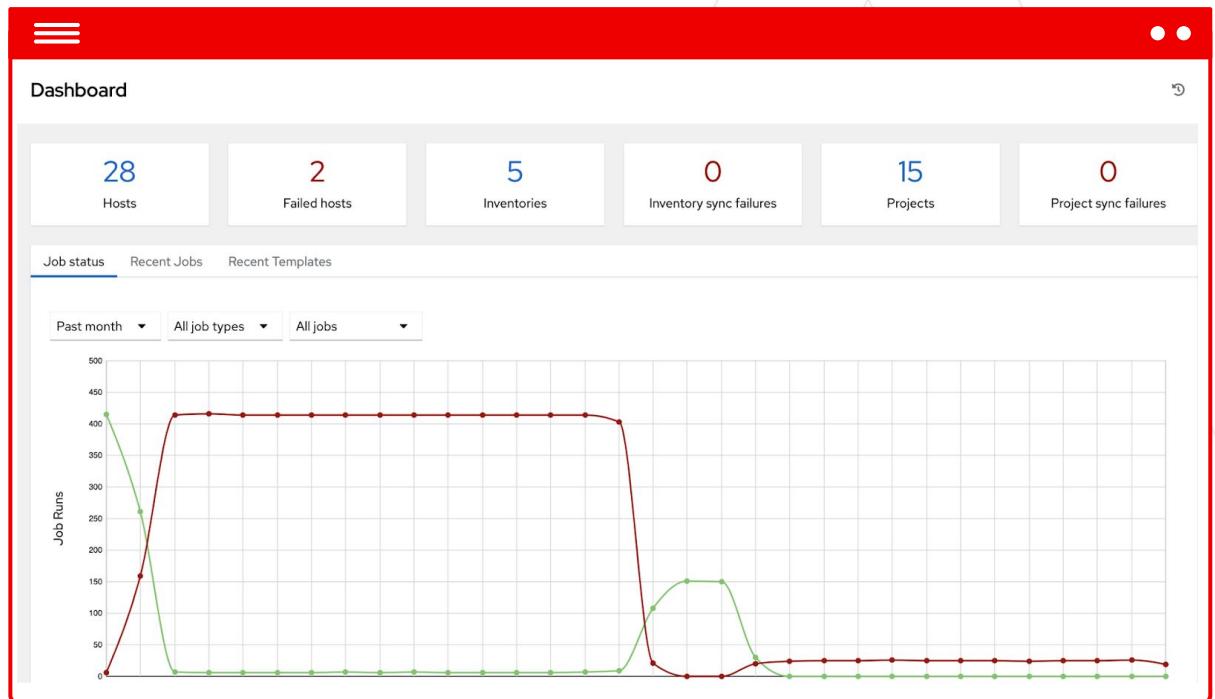
Automation controller dashboard.

View your automation status.



What is it?

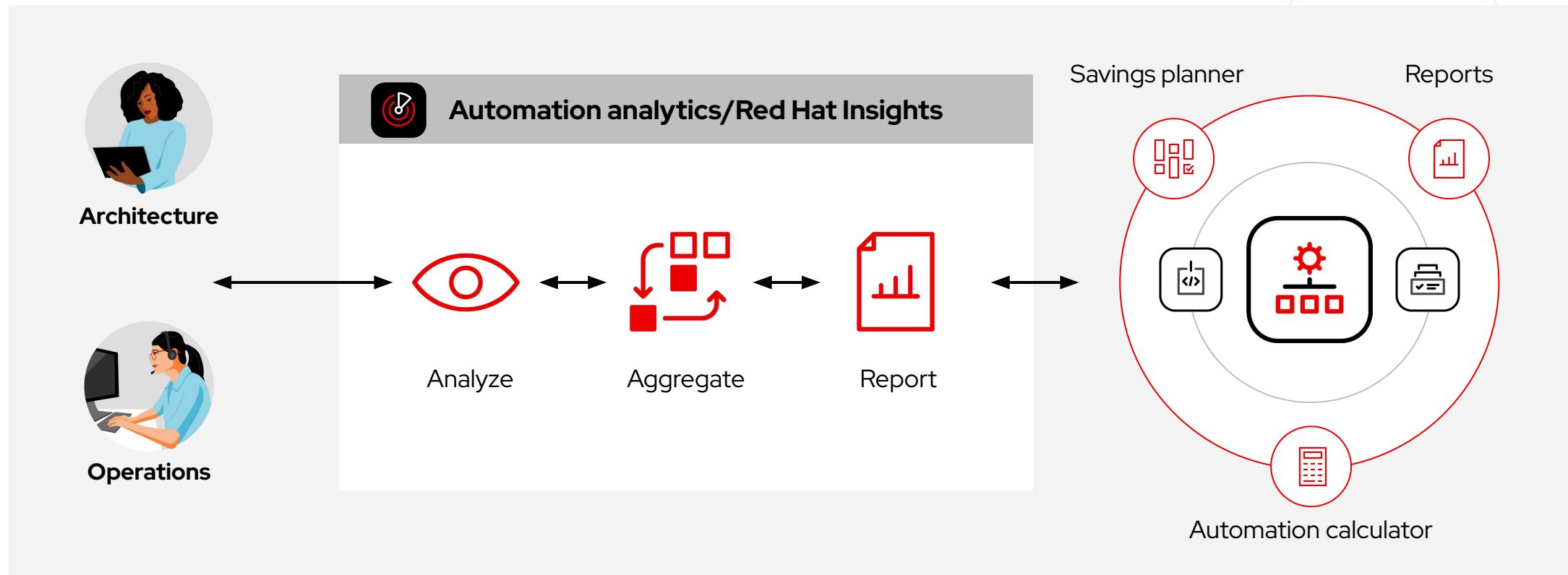
- ▶ Overview of automation controller, the jobs happening, the nodes connected and what worked and failed
- ▶ Provides the ability to quickly spot irregularities and drill into more details



Red Hat Insights for Ansible Automation Platform.

Analyze, aggregate and report.

console.redhat.com



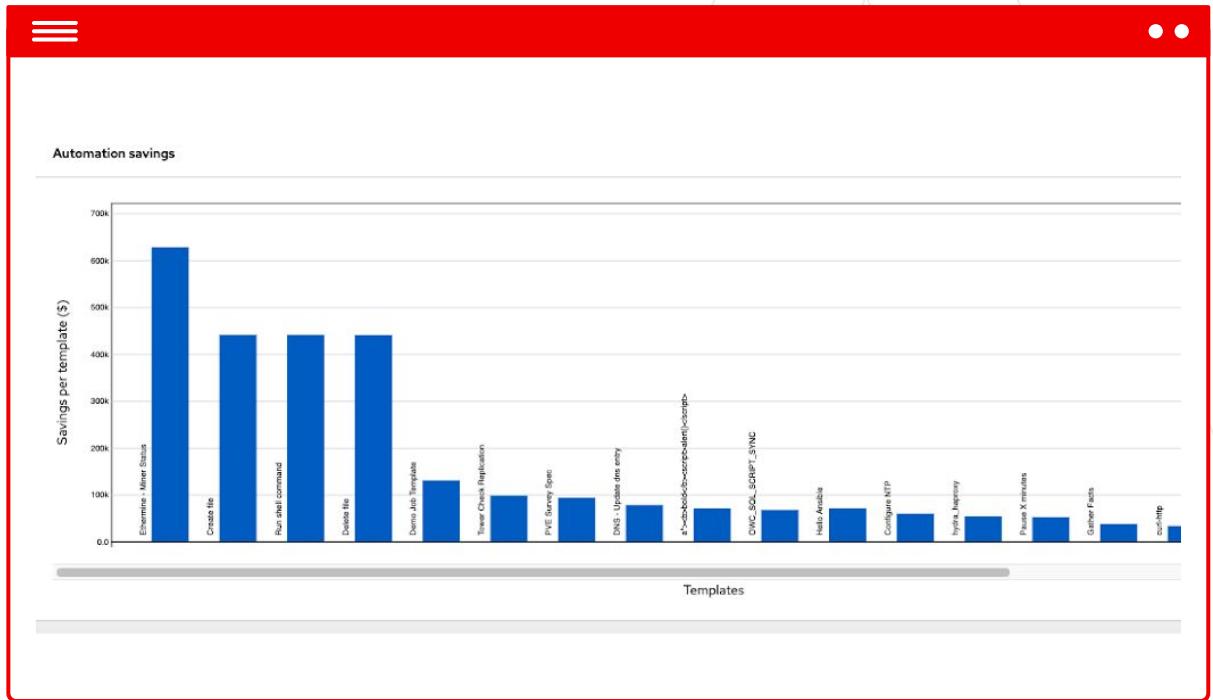
Automation calculator. Analyze and aggregate.



What is it?

Track and measure the total value of automation efforts by time and cost savings

- ▶ Automation calculator looks at the total ROI of your automation
- ▶ Calculations are based on automation data across your organization
- ▶ Job template savings are compared to costs of performing the tasks manually
- ▶ Measure the ROI of your automation investment and identify automation that contributes the most savings



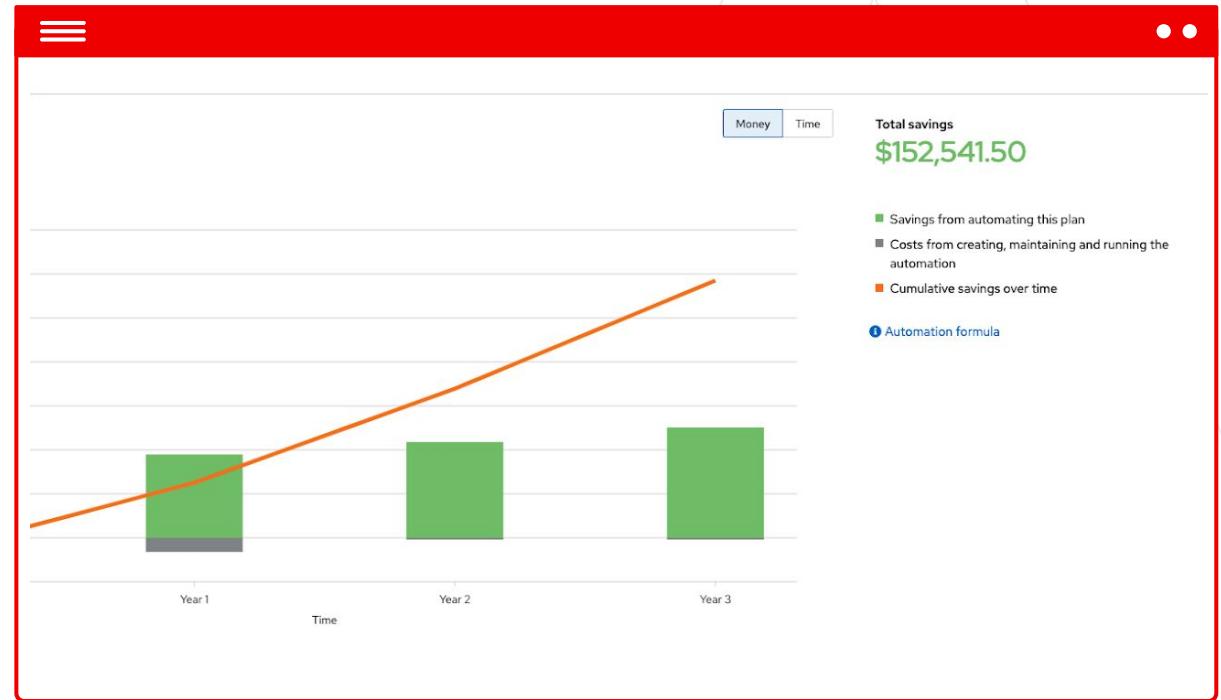
Automation Savings Planner. Analyze and aggregate.



What is it?

Prioritize automation by projecting the 1- to 3-year savings by time and money for each automation task

- ▶ Predict ROI and time savings based on a given automation task
- ▶ Use your automation data from your organization to prioritize tasks and projects based on business value



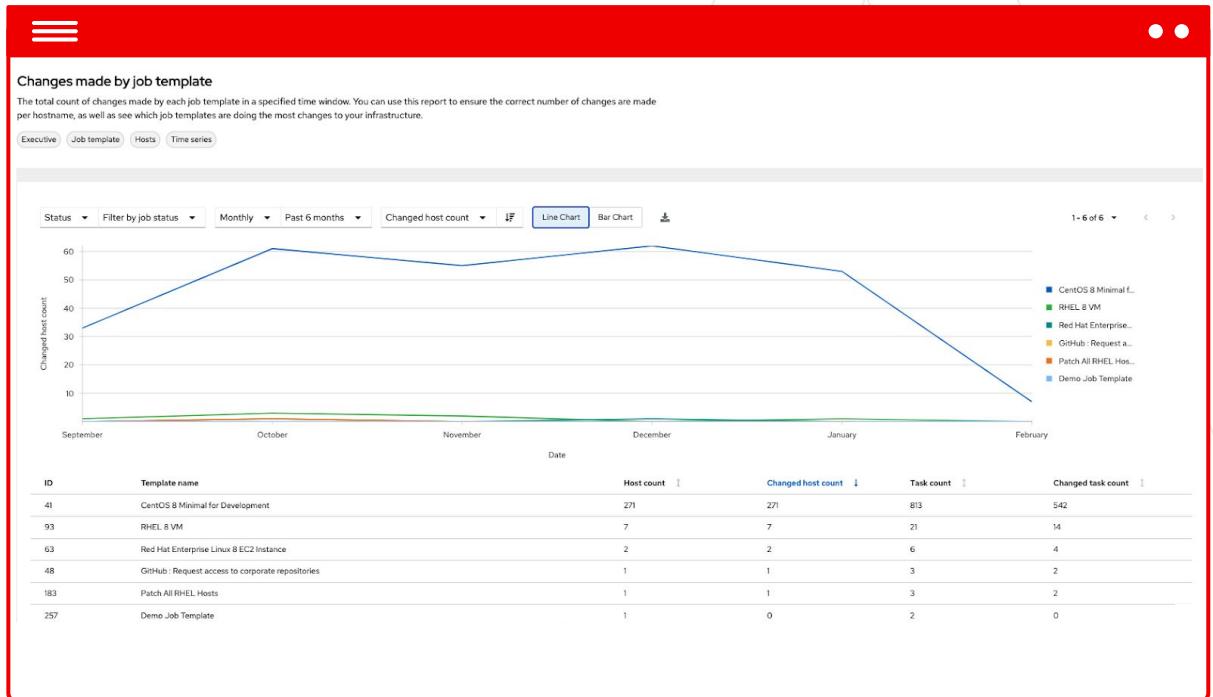
Reports. The holistic view of your automation platform.



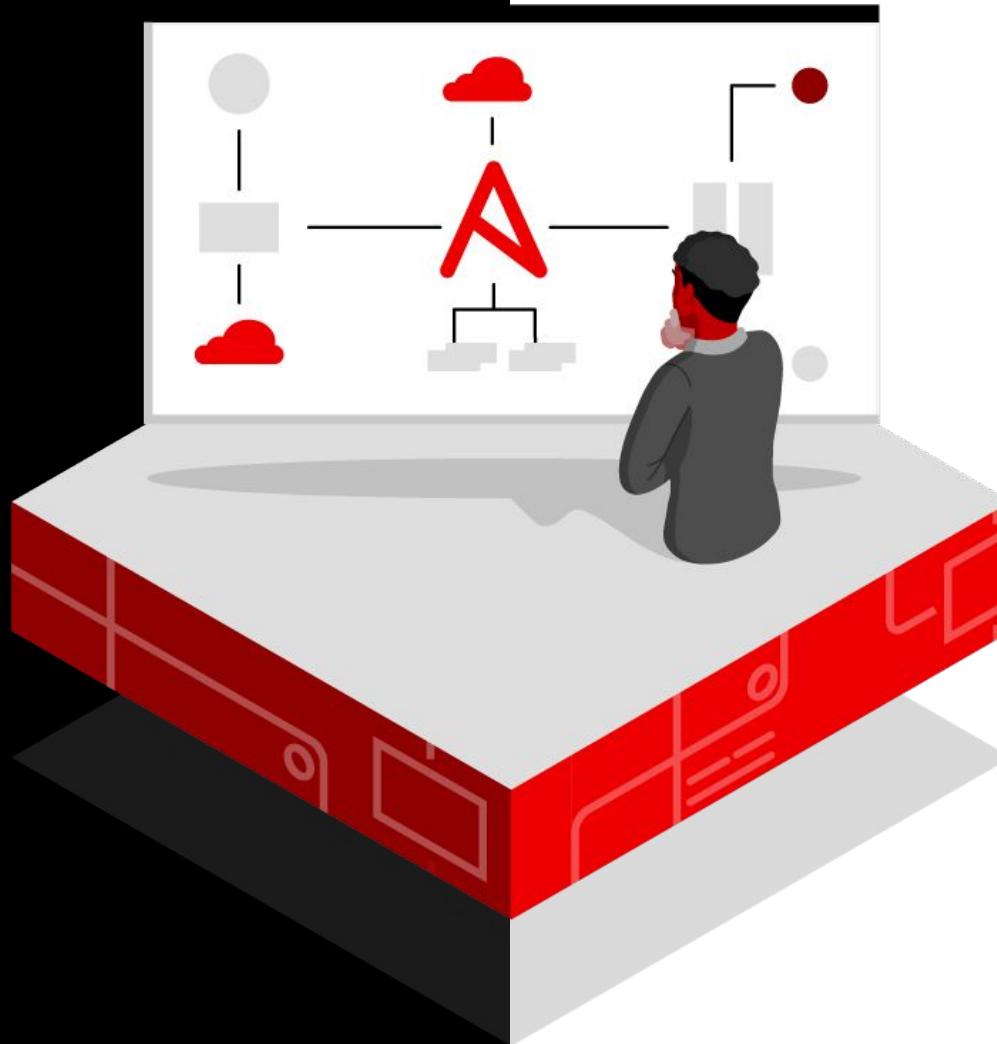
What is it?

Unified, visual dashboards of Ansible Automation Platform key metrics across clusters

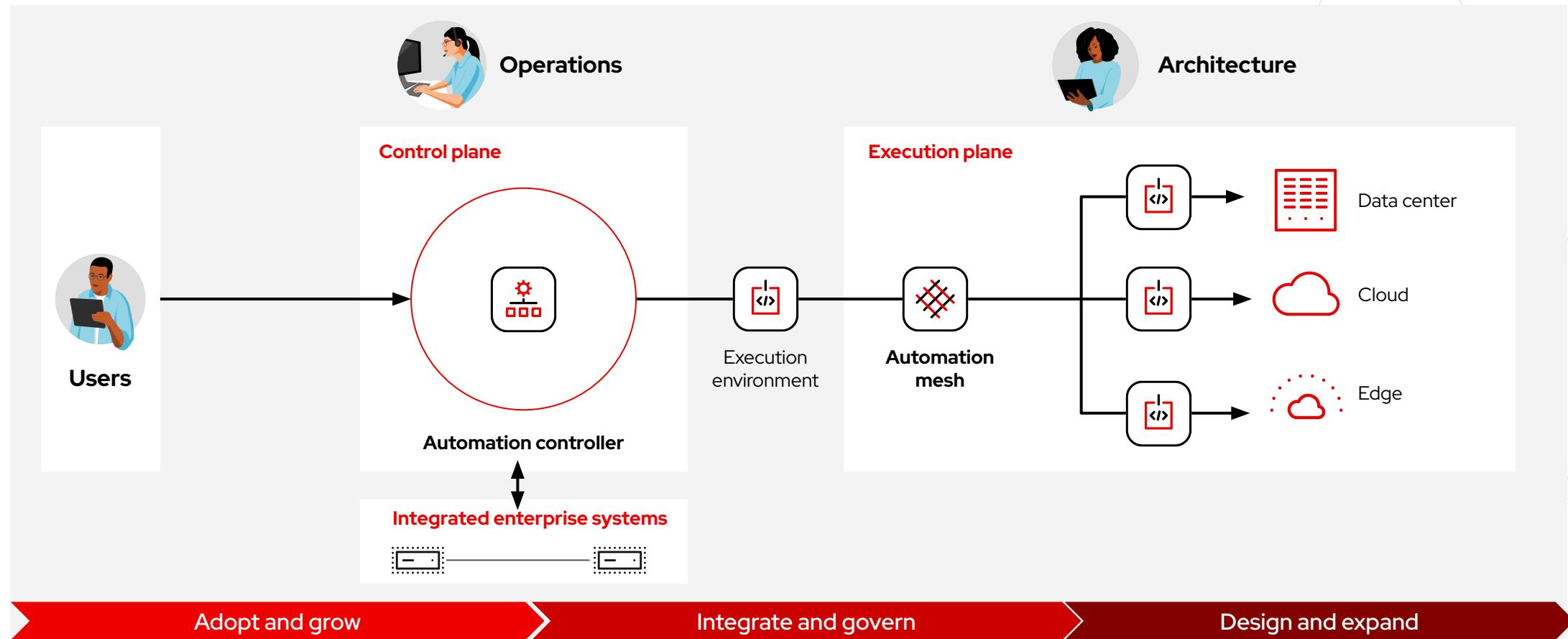
- ▶ Reveal most used Ansible Playbooks, modules, and deployment pass/fail rates
- ▶ Filter information based on automation controller clusters in real-time
- ▶ Use historical data to predict and improve the automation practice
- ▶ Measure the value of your Ansible Automation Platform subscription
- ▶ Export reports and share with your organization



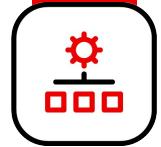
Scale



The automation content life cycle. **Scale.**



Automation controller approvals. Integrate and govern.



What is it?

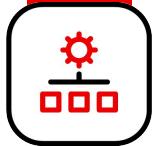
- ▶ Adds human interaction to the automation for administration and governance
- ▶ Available at the operational level on the Automation controller UI

The screenshot shows a web-based interface for workflow approvals. At the top, a navigation bar includes 'Workflow Approvals' and a back arrow. Below it, a title bar says 'Deploy to Prod?' with a 'Details' tab selected. The main content area displays the following details:

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
		Approve	Deny

IT service management integration (ITSM).

Integrate and govern.

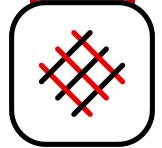


Incorporate automation into your ITSM

- ▶ 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

The screenshot shows a modal dialog titled "Edit order process". The dialog has a red header bar with a close button. The main area contains fields for "Order process name" (with "ServiceNow!" entered) and "Description" (with "Create and close out IT service ticket"). Below these are sections for "Before order" (set to "Remediación bajo demanda") and "After order" (set to "Remediación con aprobación"). At the bottom are "Save" and "Cancel" buttons.

Automation mesh. Design and expand.

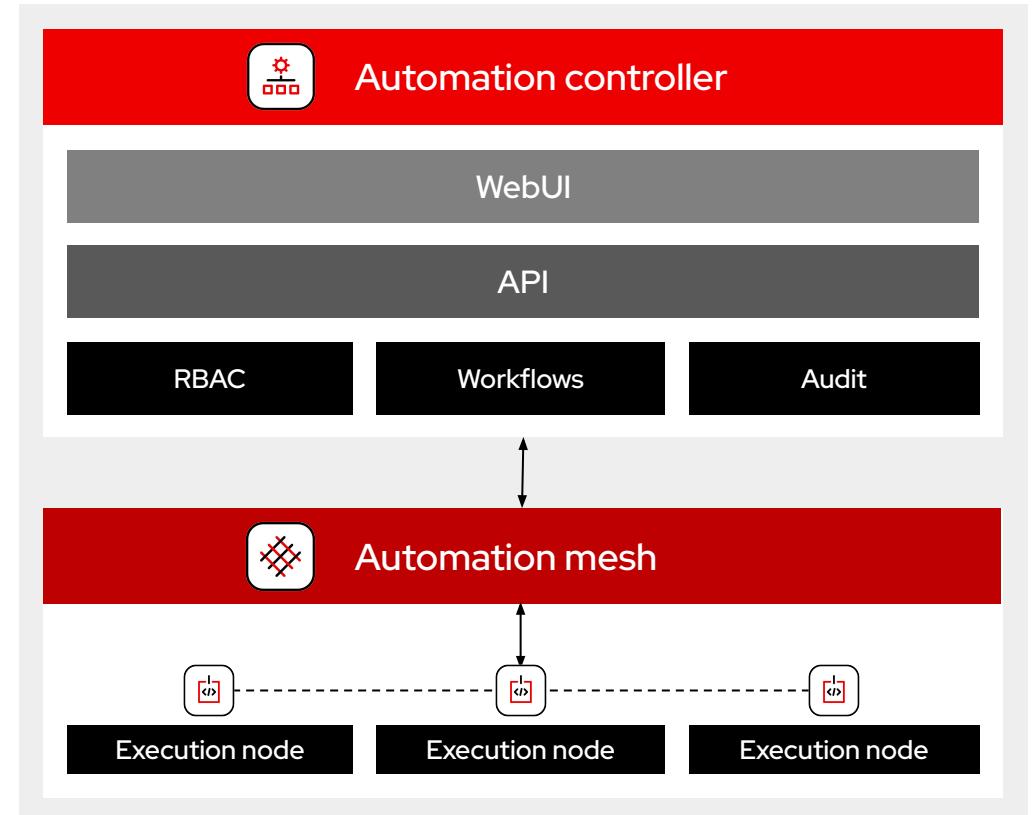


What is it?

- ▶ 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



Automation mesh node types. The execution plane.



What is it?

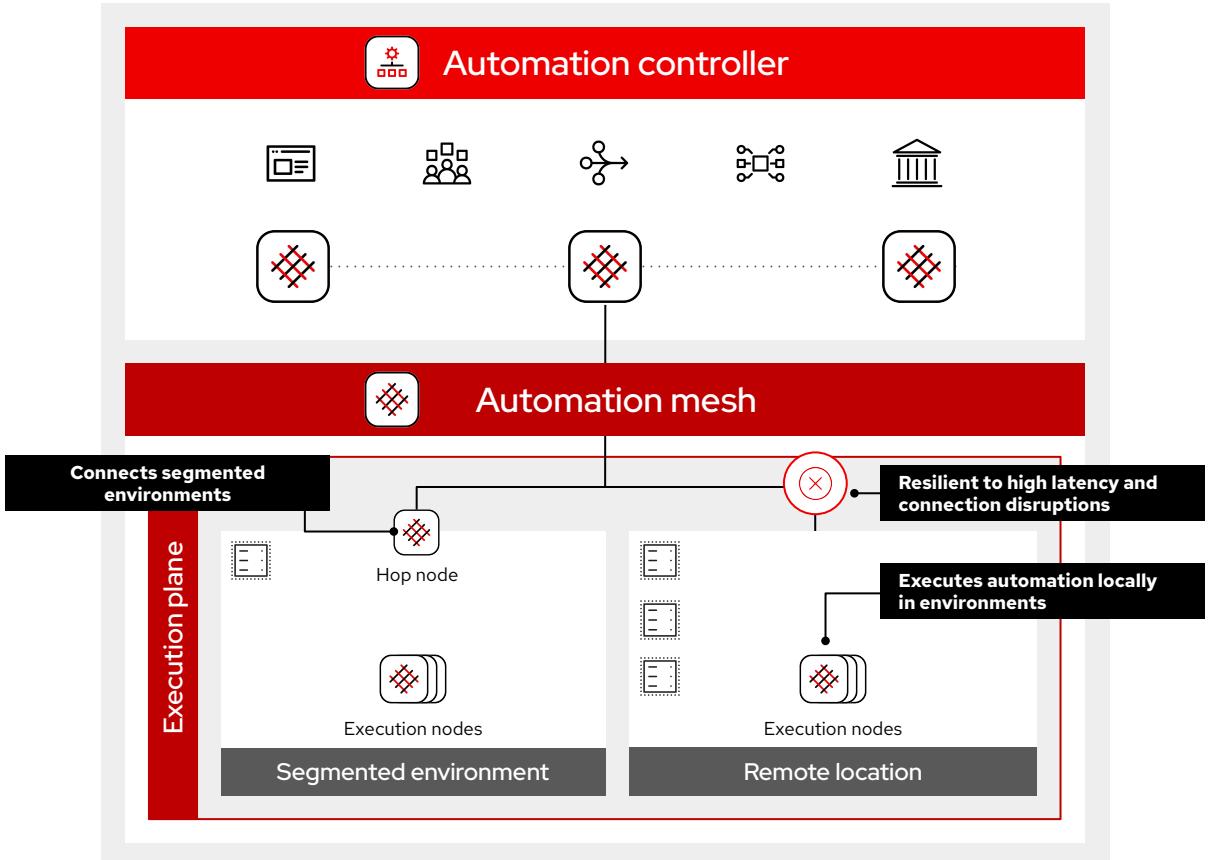
- ▶ Dedicated capacity to running playbooks
- ▶ Flexible designs possible across geographies and networks
- ▶ Resilient to high latency and connection disruptions
- ▶ Run automation without direct connection to controller

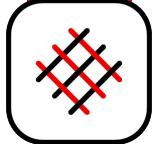
Execution node

- ▶ 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 mesh node types. The control plane.

What is it?

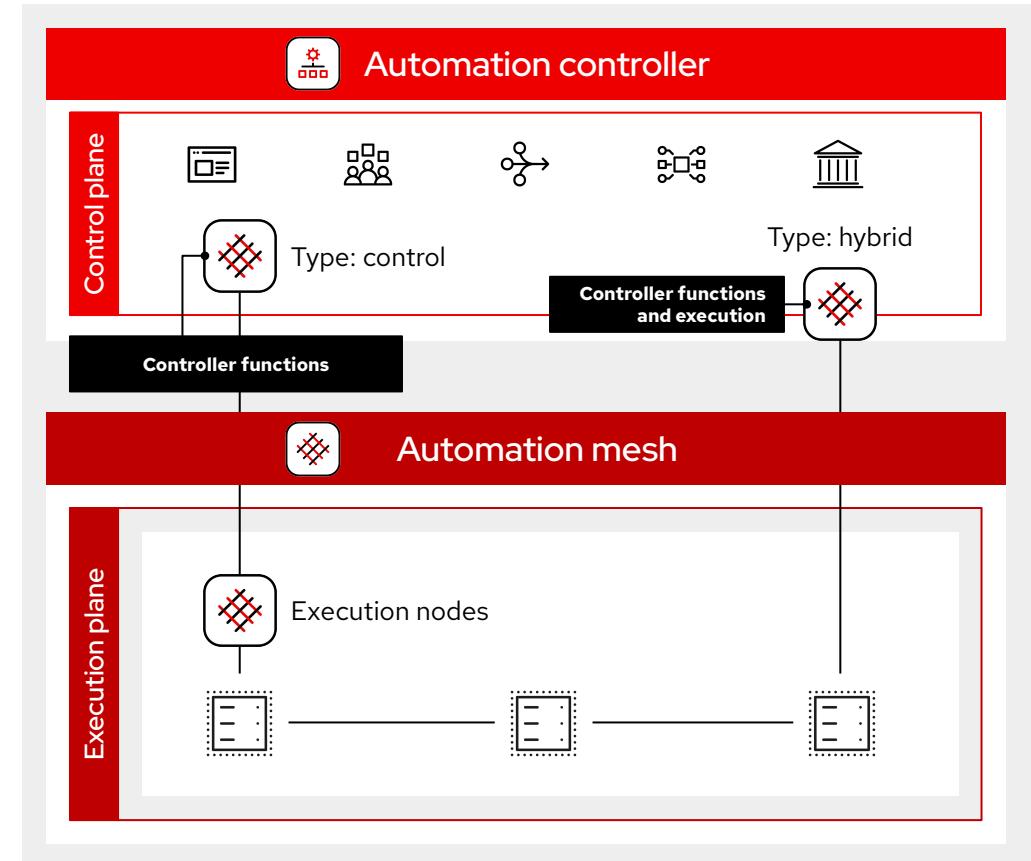
- ▶ Dedicated capacity for automation controller runtime functions
- ▶ Scale with little or no downtime
- ▶ Reduced operational overhead

Hybrid nodes

- ▶ Default node type for controller nodes
- ▶ Perform controller functions and execute automation

Control nodes

- ▶ Capacity is dedicated to controller functions
- ▶ Automation execution capability is disabled



Automation mesh. Management and visibility.

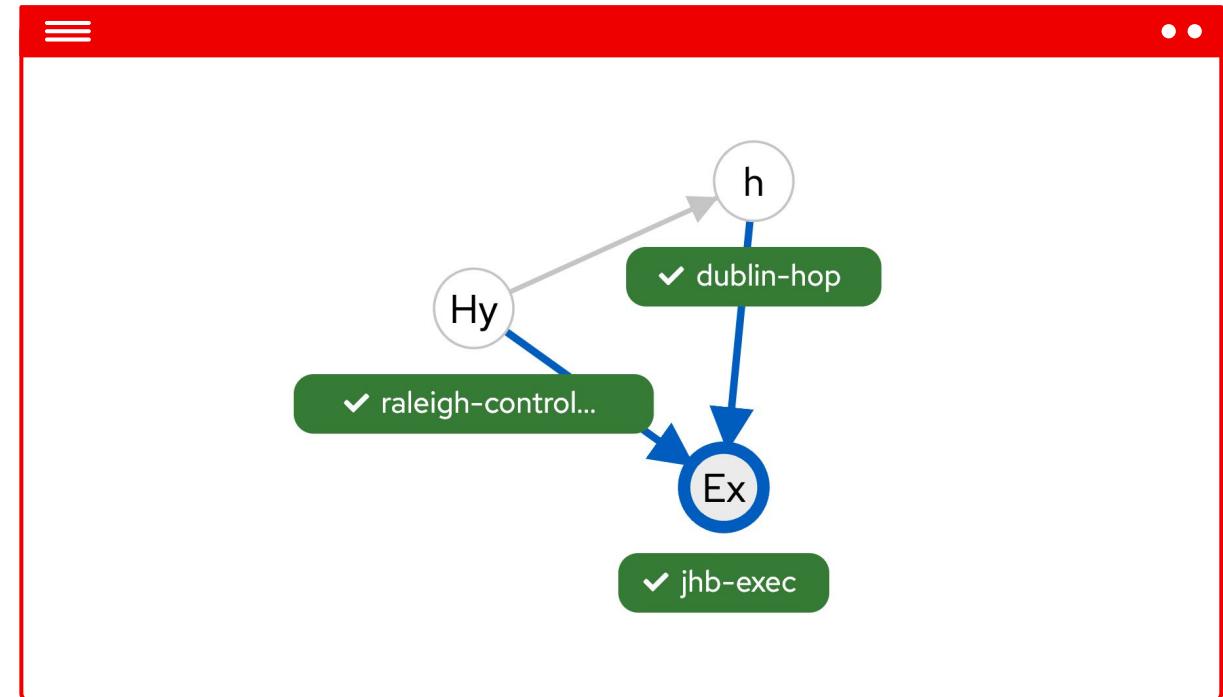


Instance groups

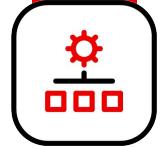
- ▶ Logically group and assign mesh execution capacity
- ▶ Predefined controlplane and default instance groups
- ▶ Configure instance groups via API, WebUI or installer

Topology Viewer

- ▶ View existing mesh topologies across environments



Automation controller surveys. Adopt and grow.

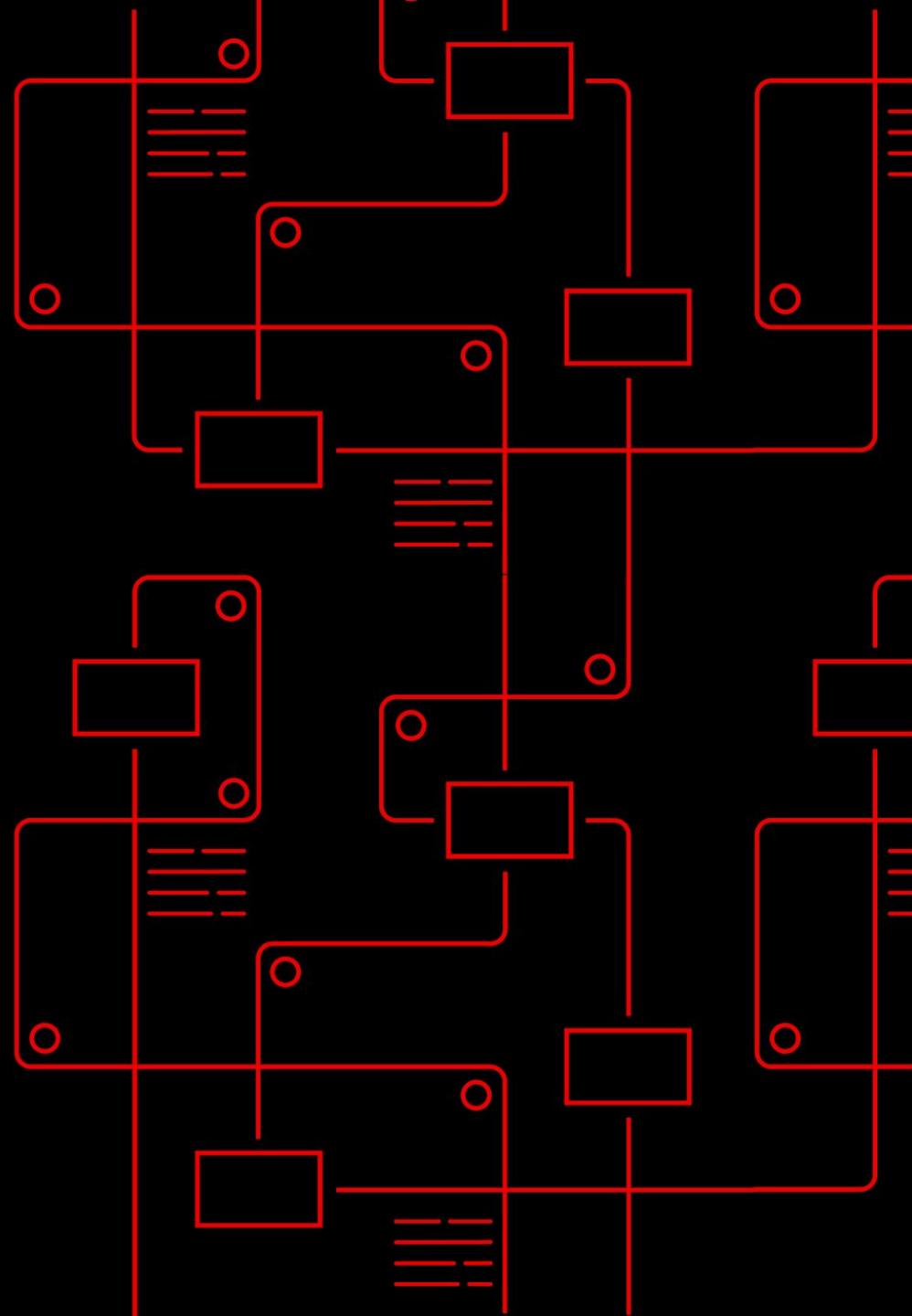


What is it?

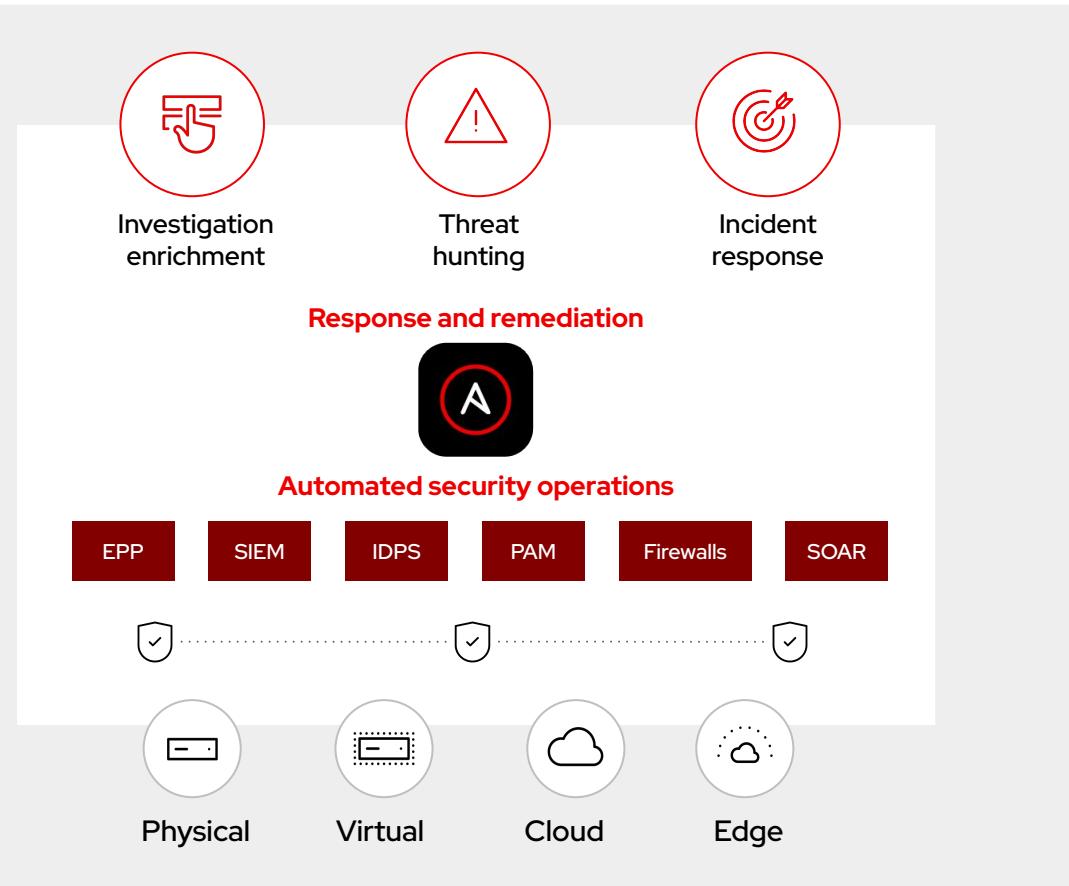
- ▶ User-friendly, self-service interface in automation controller
- ▶ Abstracts complexity using question and answer format
- ▶ Best suited for teams directly accessing automation and close to the automation practice
- ▶ Access and execution governed using controller features

The screenshot shows a modal window titled "LAUNCH JOB | HELLO WORLD". At the top right is a close button (X). Below the title are two tabs: "OTHER PROMPTS" (unselected) and "SURVEY" (selected, indicated by a grey background). A required field prompt "＊WHICH GROUP(S) SHOULD INCLUDE THIS USER?" is followed by the instruction "Enter groups, one per line." and a text input field. At the bottom left are "INVENTORY" and "CREDENTIAL" sections, each with a "Demo Inventory" and "Demo Credential" link. On the far right are "CANCEL" and "LAUNCH" buttons. The entire modal is highlighted with a thick red border.

Use cases



Ansible security automation. Response and remediation.



Investigation enrichment

Enabling programmatic access to log configurations such as destination, verbosity, etc

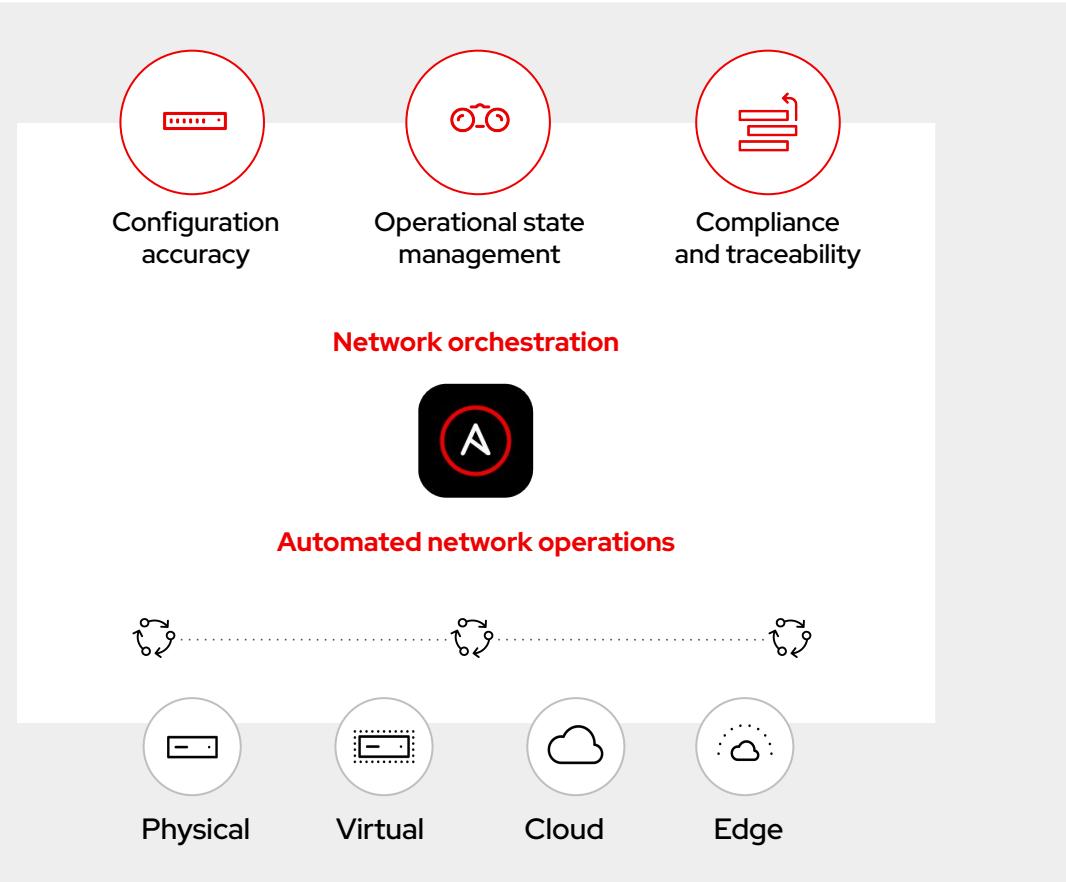
Threat hunting

Automating alerts, correlation searches, and signature manipulation

Incident response

Creating new security policies to whitelist, blacklist, or quarantine a machine

Ansible network automation. Next-gen network operations.



Configuration accuracy

- ▶ Config backup and restore
- ▶ Scoped configuration management

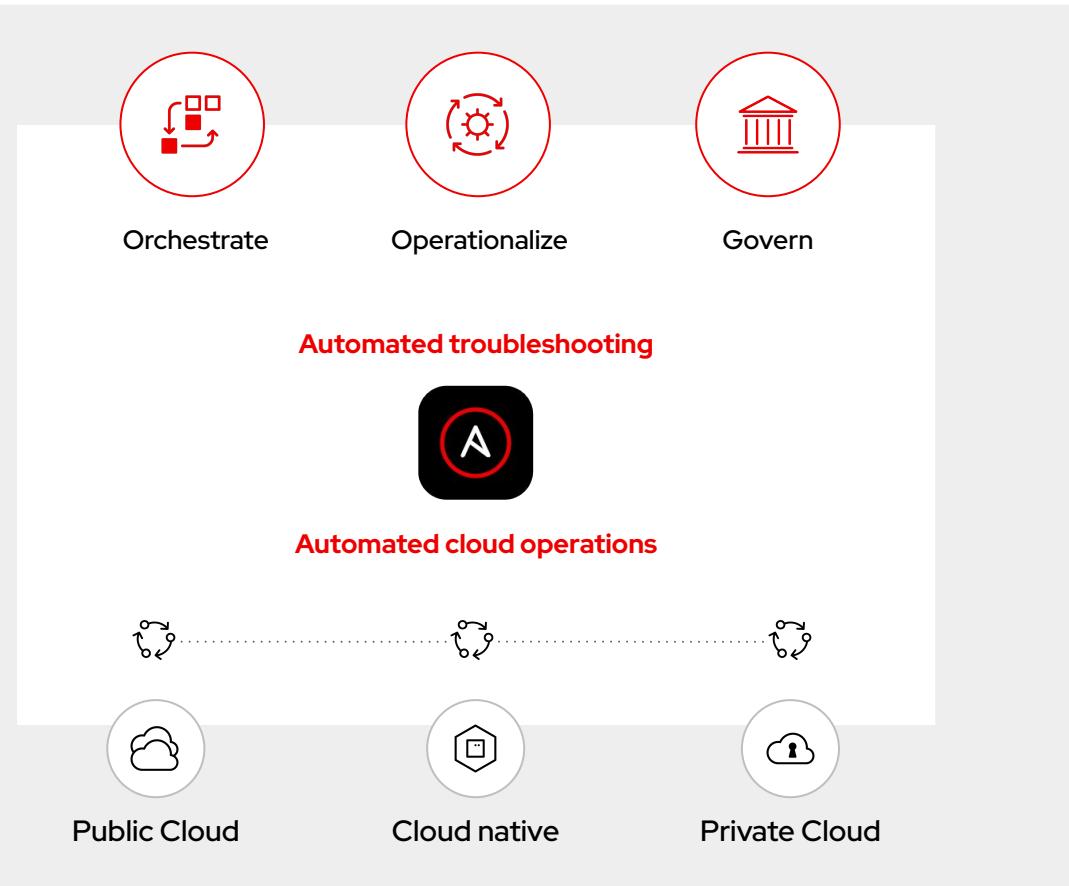
Operational state management

- ▶ Dynamic documentation
- ▶ Automated NetOps

Compliance and traceability

- ▶ Operational state validation
- ▶ Network compliance

Ansible hybrid cloud automation. Tame your clouds.



Orchestrate

- ▶ Deployment and retirement
- ▶ Infrastructure coordination
- ▶ Cloud migration

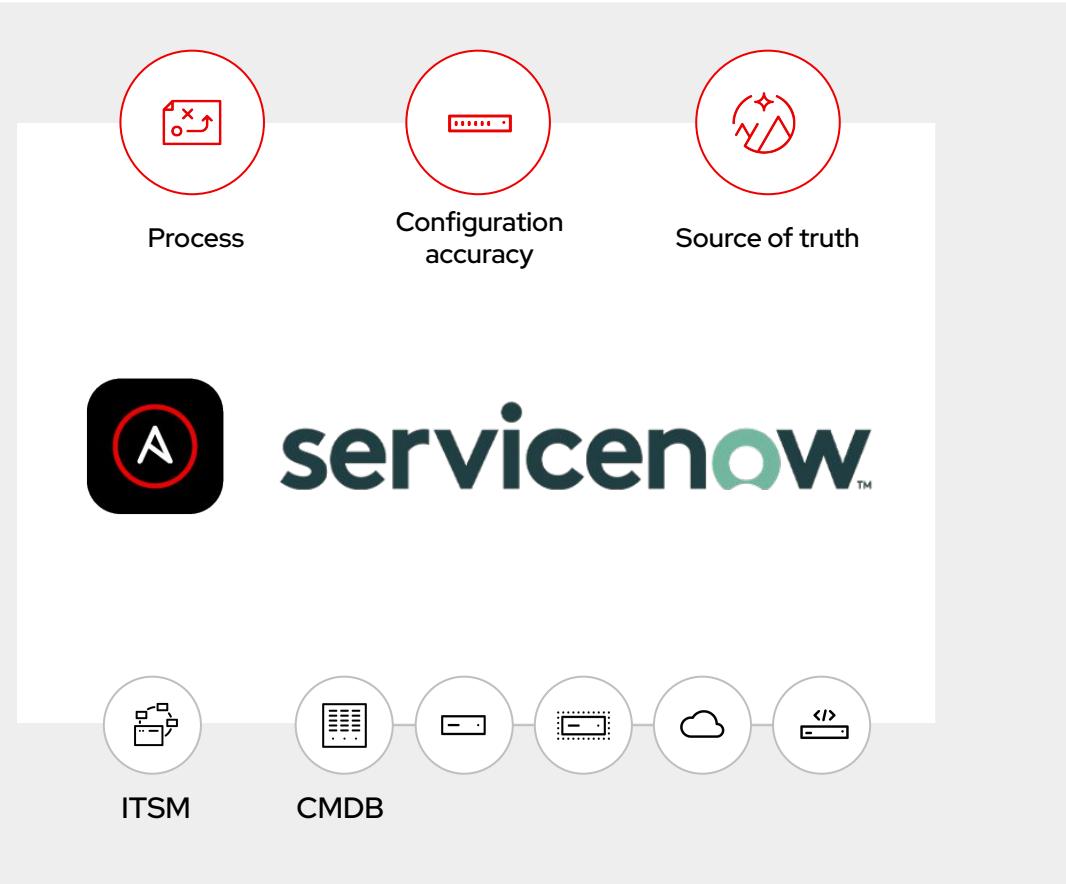
Operationalize

- ▶ Infrastructure visibility
- ▶ Cloud operations
- ▶ Automated troubleshooting

Govern

- ▶ Business continuity
- ▶ Cost management
- ▶ compliance

Ansible Automation Platform for ServiceNow solution.



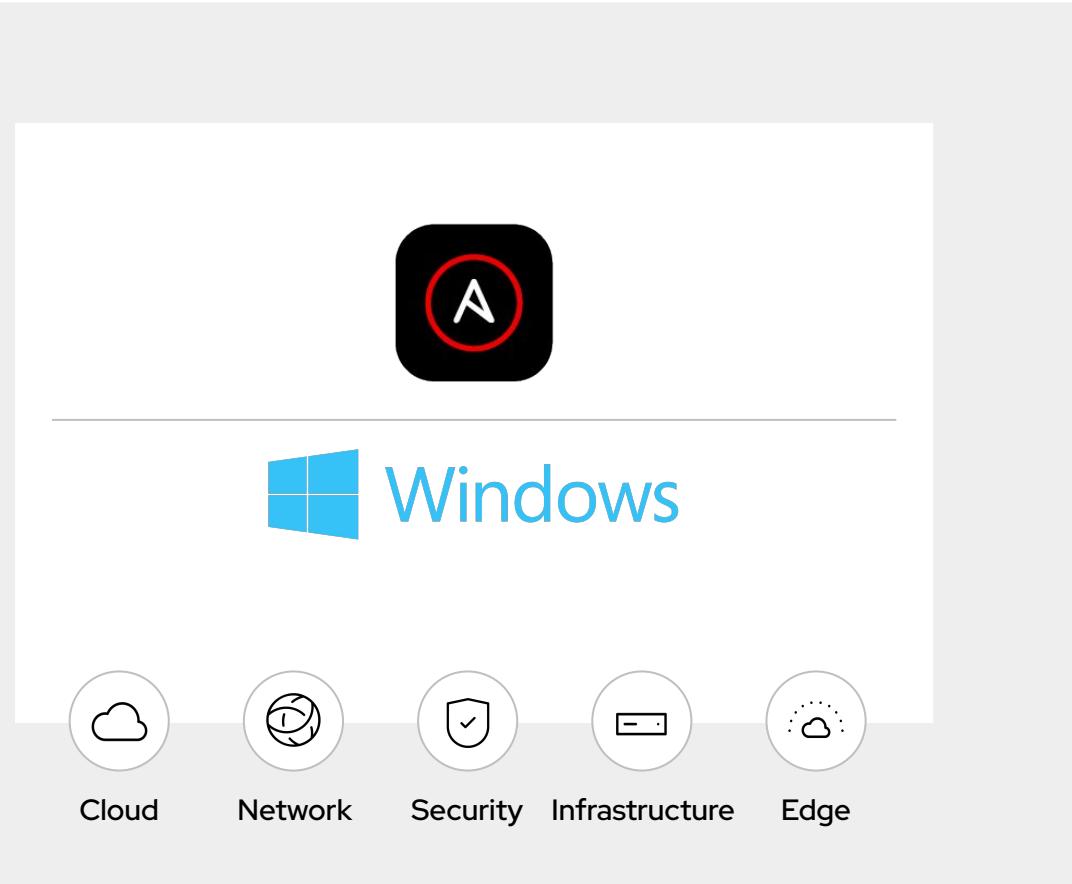
IT Service Management (ITSM)

- ▶ 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

Ansible Automation Platform for Windows.



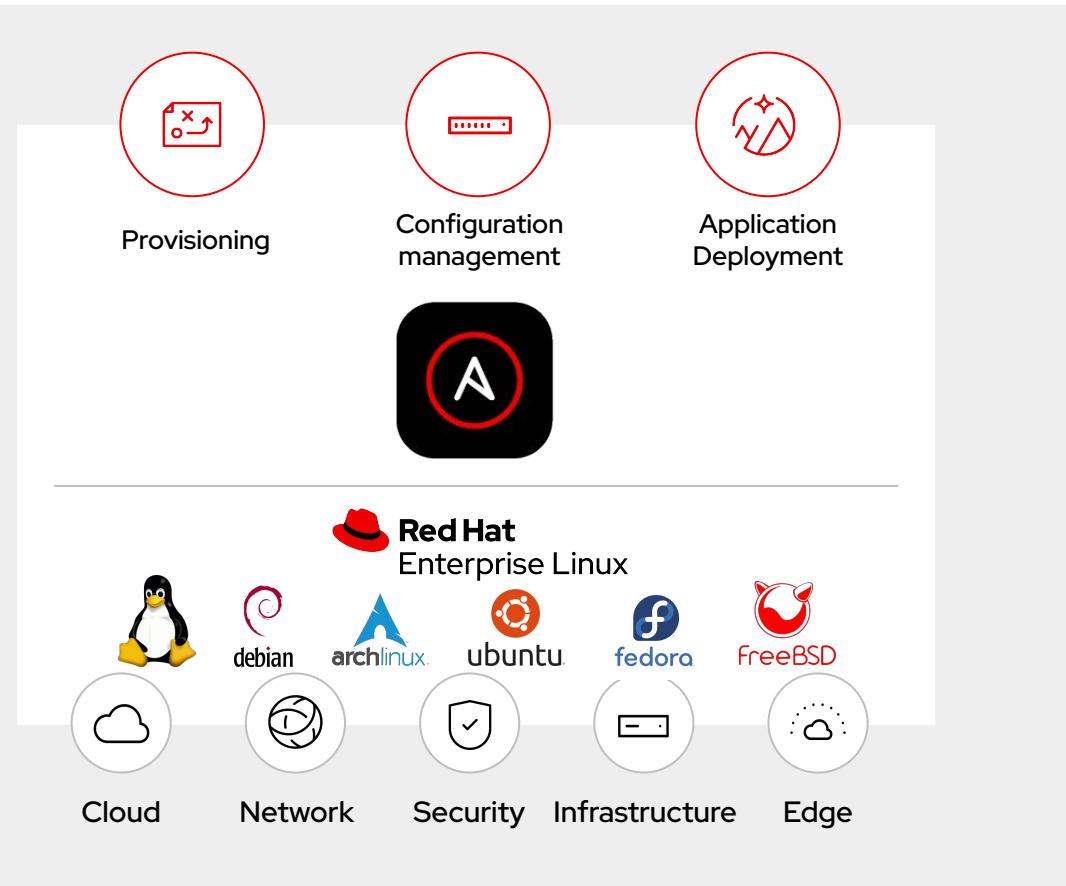
Day 1 configuration

- ▶ Install and uninstall MSIs, .exes
- ▶ Chocolatey package manager integration
- ▶ Start, stop, and manage Windows services
- ▶ Template and apply registry updates
- ▶ Flexible authentication support

Day 2 operations

- ▶ Manage and install Windows updates across reboots
- ▶ Create and manage local users
- ▶ Create and manage domain controller/member server state
- ▶ Manage certificates
- ▶ Fetch files from remote hosts
- ▶ Push and execute Powershell scripts
- ▶ Leverage Powershell DSC resources

Ansible Automation Platform for Linux.



Provisioning

- ▶ Work seamlessly with bare metal, virtualized and cloud infrastructure
- ▶ Easily patch, upgrade and maintain Linux servers
- ▶ Automation can handle reboots and ad-hoc changes

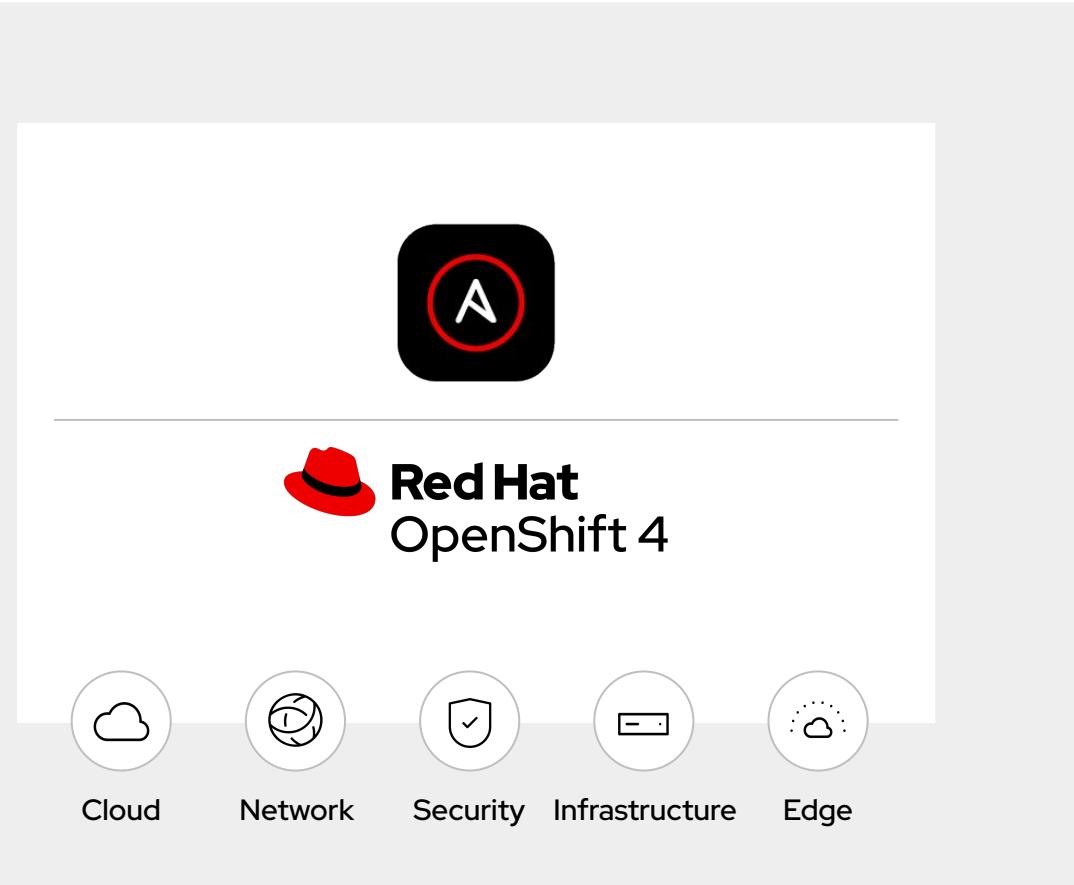
Configuration Management

- ▶ Built-in support for Linux file and user management
- ▶ Full integration of Jinja2 templating library
- ▶ Support for Idempotence across numerous Linux modules

Application Deployment

- ▶ Full support of dnf, yum and apt packaging tools
- ▶ Start, stop, and manage Linux services
- ▶ Check operational state and verify application deployments

Ansible Automation Platform for Red Hat OpenShift.



Infrastructure coordination

- ▶ Coordination of existing off-cluster IT infrastructure and services with cloud-native systems

Lifecycle management

- ▶ Automation of Red Hat OpenShift infrastructure and applications lifecycle management

Day 2 configuration

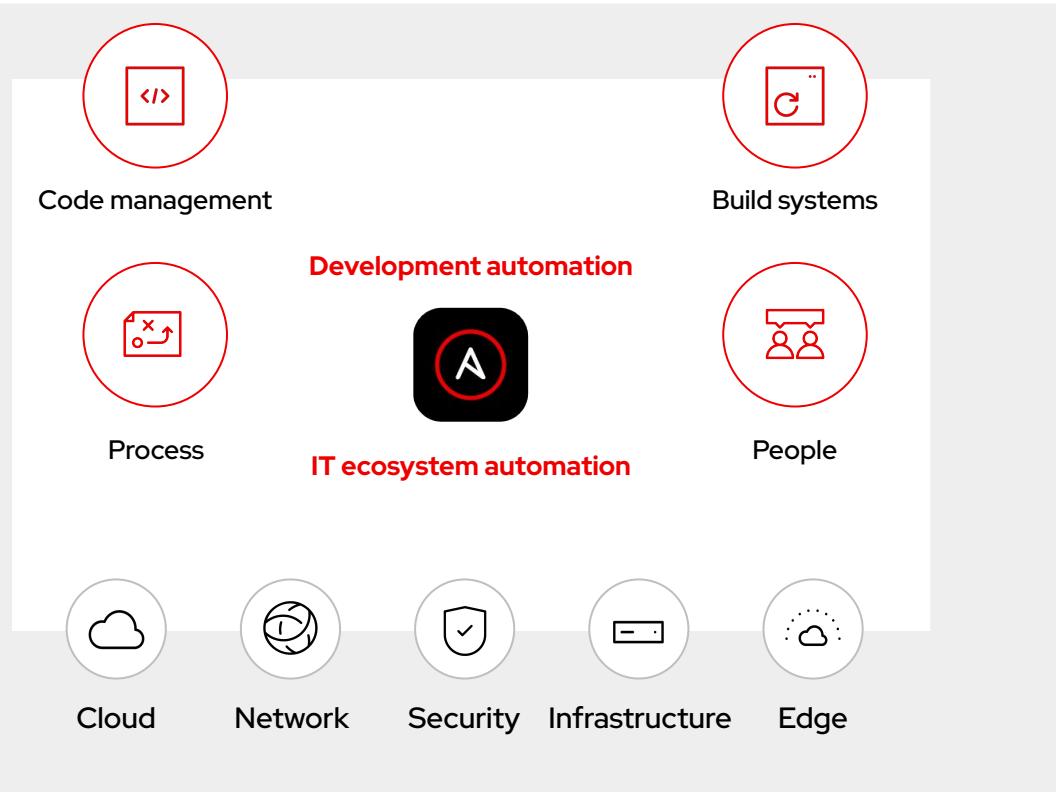
- ▶ Repeatable “last mile” automation for Red Hat OpenShift cluster configuration and management

Business continuity

- ▶ End-to-end business continuity and disaster recovery (DR) automation of Red Hat OpenShift clusters

Ansible Automation Platform and DevOps.

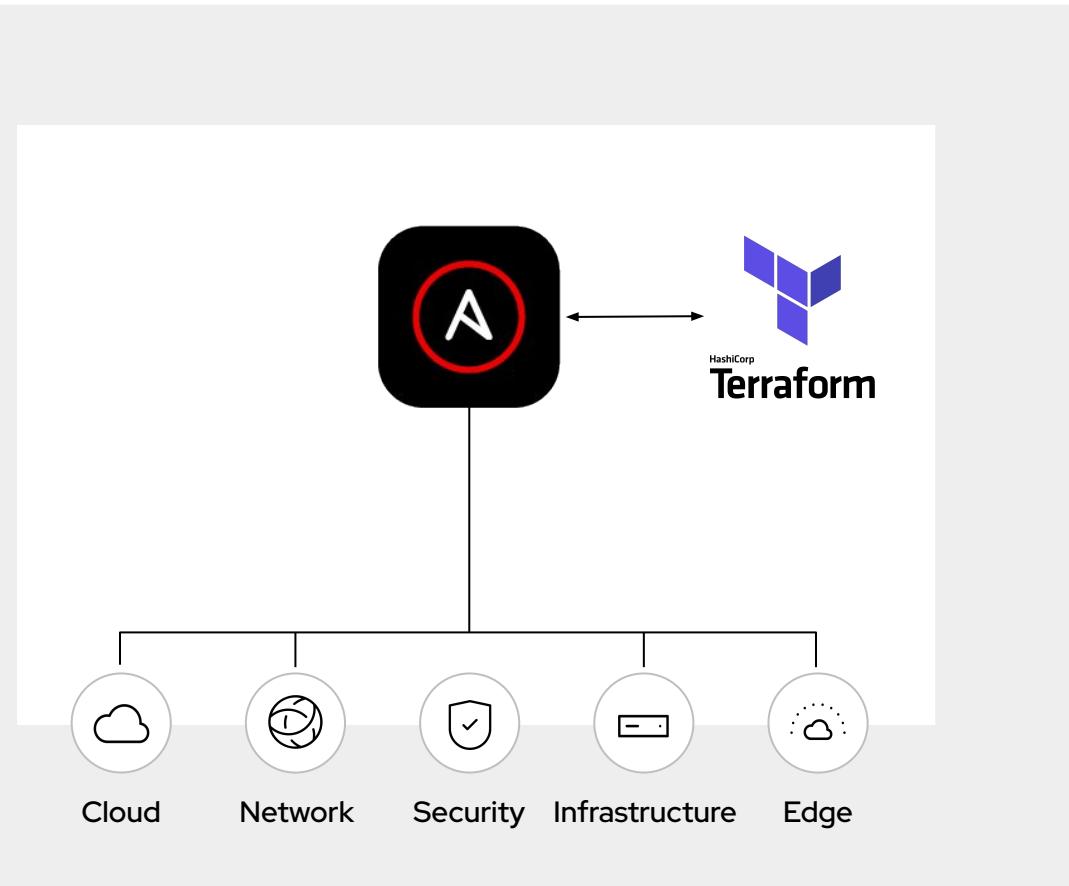
Deliver consistently, reliably, and rapidly.



Accelerate DevOps throughout your IT ecosystem

- ▶ **Align to business goals** with outcome-based IT process automation.
- ▶ **Orchestrate and integrate** using the API and webhooks
- ▶ **Simple, pervasive automation language** used across the IT ecosystem.
- ▶ **Extend capabilities** using Ansible Content Collections.
- ▶ **Improve CI/CD security and governance** with approvals, auditing, and RBAC
- ▶ **Speed up development cycles** with consistent dev, test, and prod environments

Everything as code. Everything is possible.

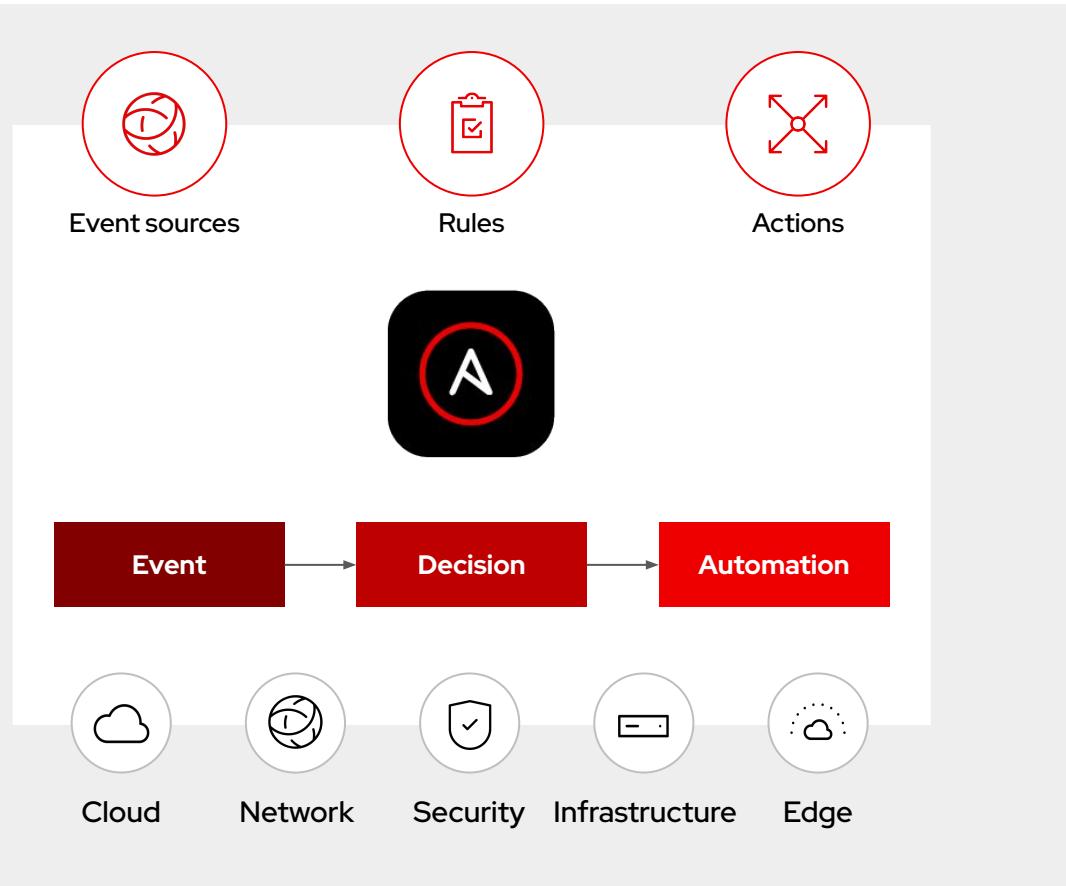


Infrastructure and configuration as code

- ▶ **Ansible creates** infrastructure manifests and triggers the provisioning and deprovisioning of infrastructure.
- ▶ **Dynamic inventory** management provides access to newly provisioned infrastructure without manual intervention.
- ▶ **Combine tool chains** to deliver infrastructure as code and configuration as code. Allowing for complete management of infrastructure life cycles with post-provisioning tasks.

Event-Driven Ansible. Observe Evaluate Act

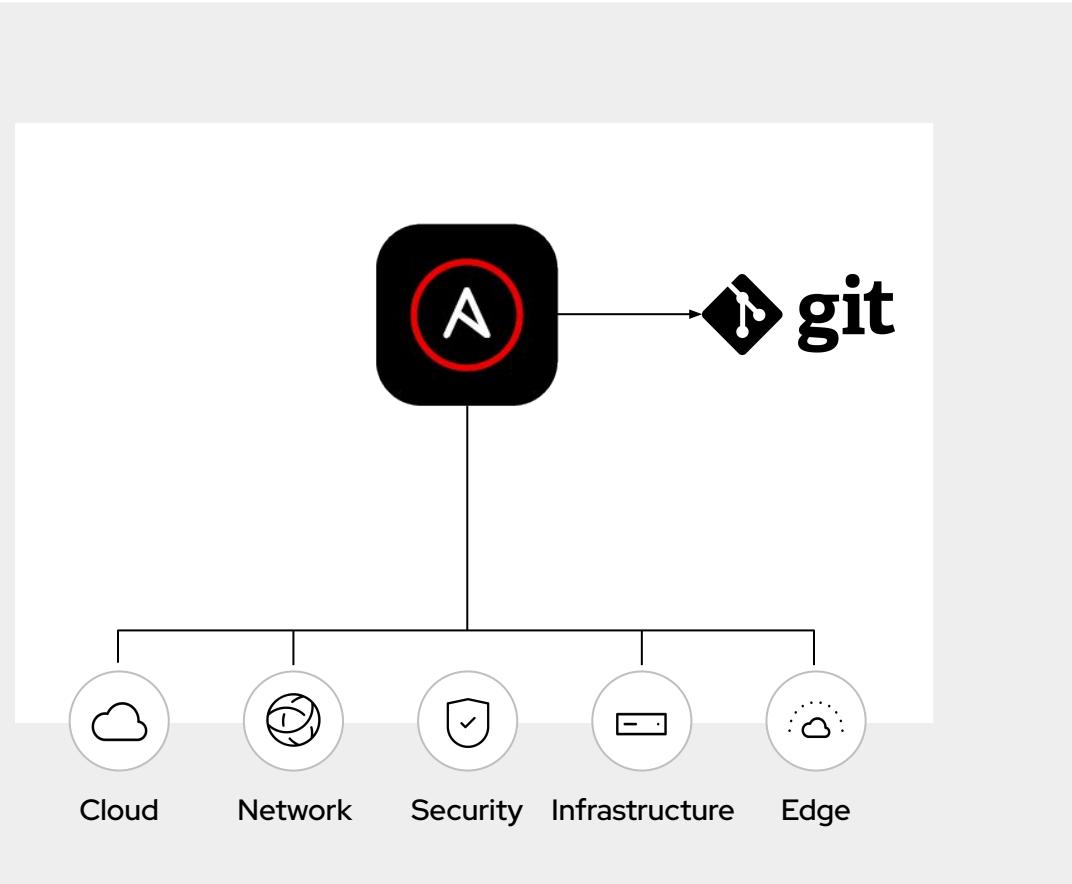
Developer Preview



Remediation and Observation from events

- ▶ **Source** plugins provide Event-Driven Ansible the ability to listen for events which can be processed through rulebooks.
- ▶ **Rules** in the form of Rulebooks allow us to create event conditions which once met will trigger an action.
- ▶ **Actions** give us the ability to trigger playbooks, modules, notifications and further event triggers based on the conditions that have been met by a specific event.

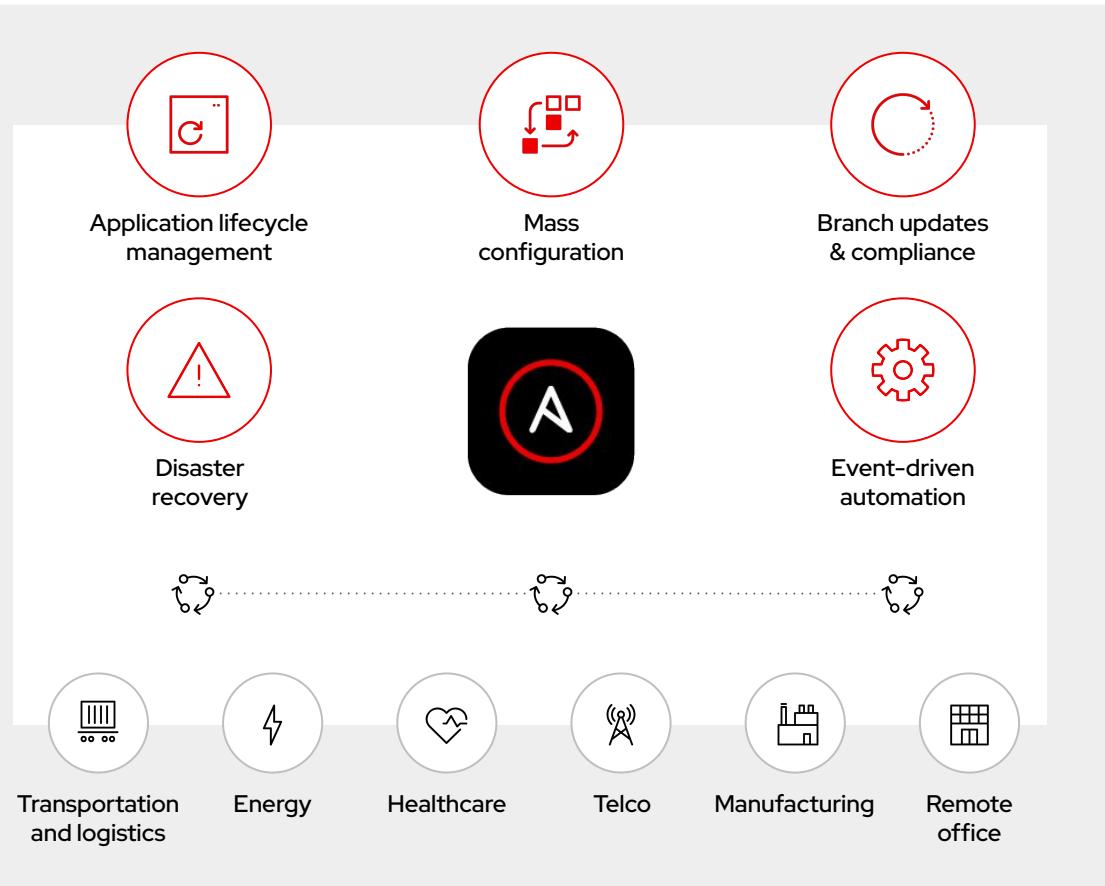
GitOps. IaC, merge requests, and CI/CD.



Ansible Automation Platform and GitOps

- ▶ **GitOps** is a framework that uses Git repositories as a single source of truth (SoT) to deliver infrastructure as code.
- ▶ **Infrastructure as Code (IaC)** is stored within a Git repository as the SoT.
- ▶ **Merge Requests (MRs)** is the change mechanism for any updates to the infrastructure.
- ▶ **Continuous Integration/Continuous Delivery (CI/CD)** automates the infrastructure updates.
- ▶ **Ansible triggers and automates** the IaC updates via Ansible workflows while acting as a CI/CD tool and providing complete management of the entire lifecycle day-2 operations.

Automating edge enterprise **use cases**.



Why Ansible for Automation at the Edge?

- ▶ **Automate scale and complexity** with a consistent platform from the datacenter to the edge across heterogeneous estates
- ▶ **Facilitates IT/OT convergence**
- ▶ **Provides predictability and repeatability** to automate anything with programmatic API or Linux OS



Where to go next



Learn more

- ▶ Workshops
- ▶ Documents
- ▶ Youtube
- ▶ Twitter



Get started

- ▶ Self-paced labs
- ▶ Evals
- ▶ console.redhat.com



Get serious

- ▶ Red Hat Automation Adoption Journey
- ▶ Red Hat Training
- ▶ Red Hat Consulting

Thank you

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