Red Hat Summit

Connect

Red Hat Ansible Automation Platform 2

And Execution environments...

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Intro:

Haaike van der Merwe

Senior Solutions Architect - Hybrid Cloud

Let's Connect on LinkedIn!

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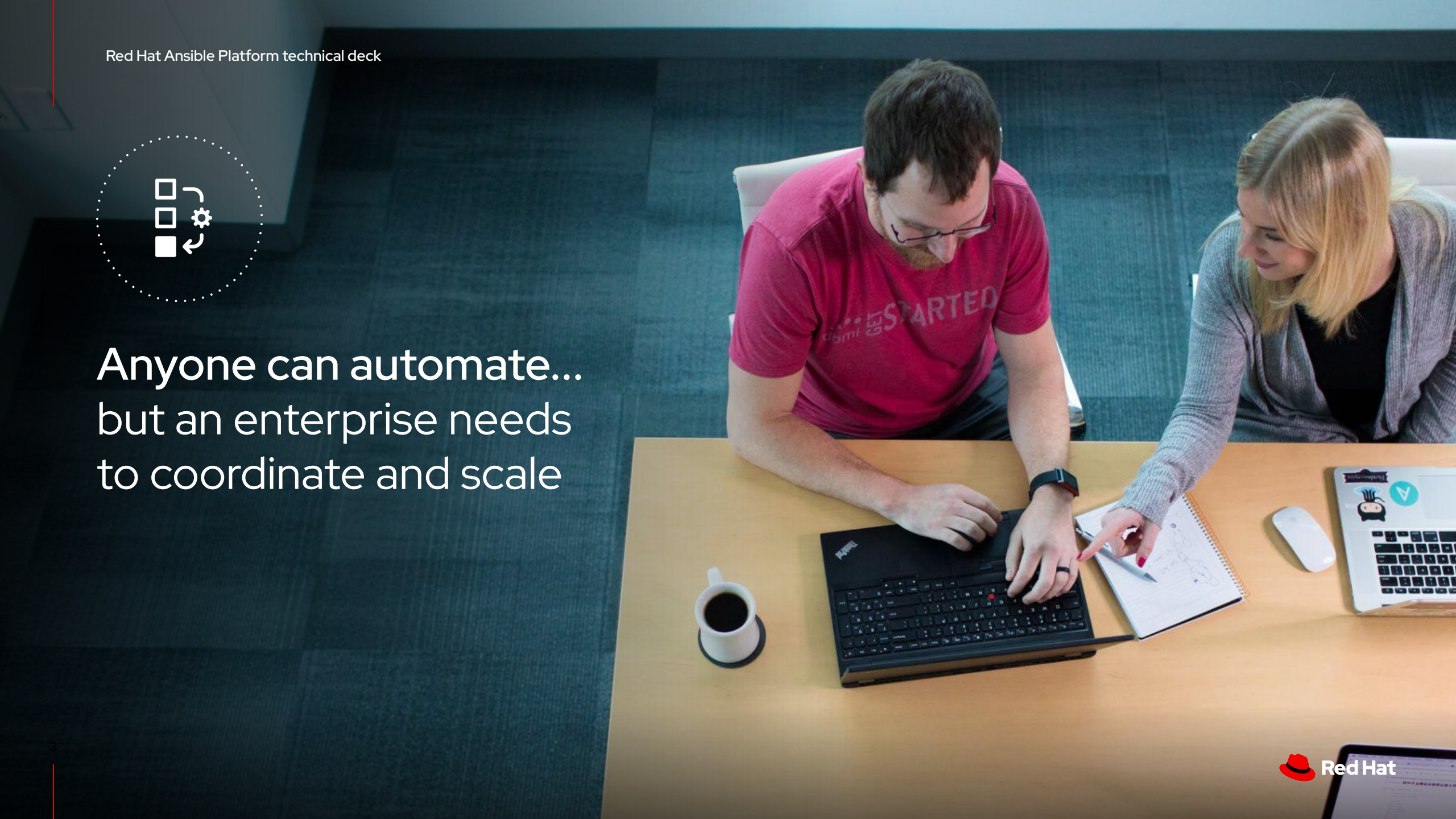

Anyone can automate... but an enterprise needs to coordinate and scale

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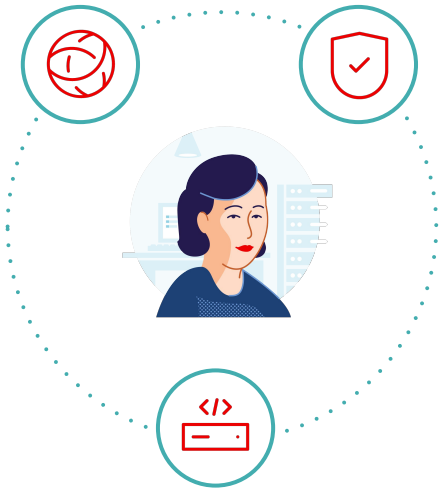
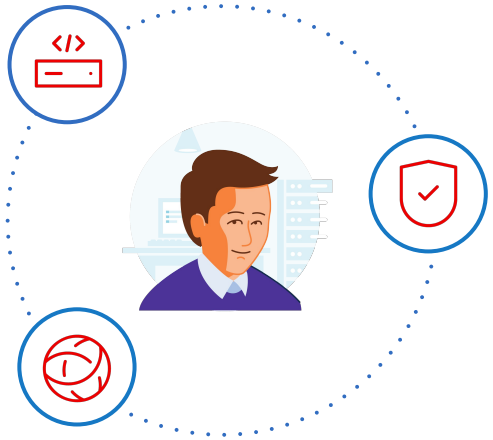
Many organizations share the same challenge

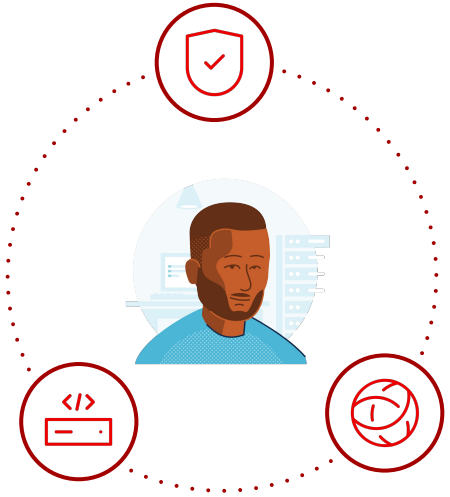
Too many unintegrated, domain-specific tools



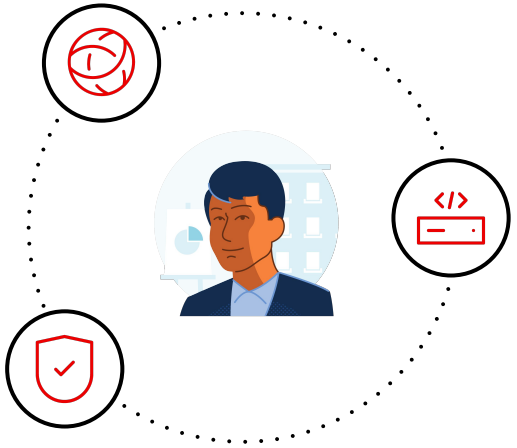
Network ops



Database



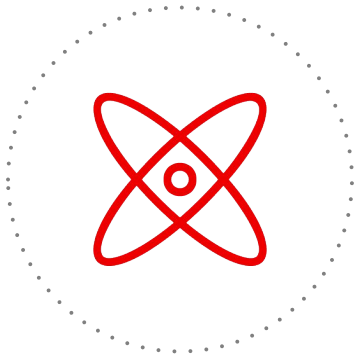
Devs/DevOps



IT ops

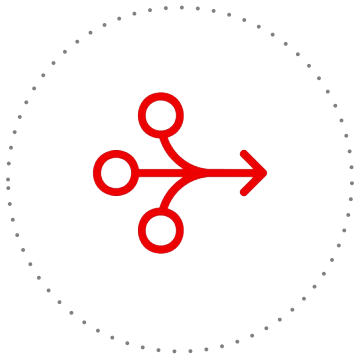
Why the Red Hat® Ansible® Automation Platform?

Why the Ansible Automation Platform?



Powerful

Orchestrate complex processes at enterprise scale.



Simple

Simplify automation creation and management across multiple domains.

Agentless

Easily integrate with hybrid environments.

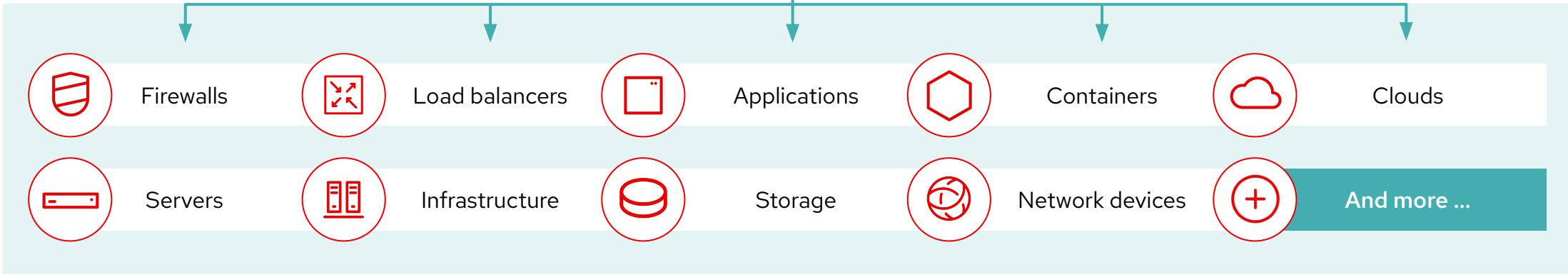
Automate everything you need

Many use cases across multiple domains

Do this...

Orchestrate	Manage configurations	Deploy applications	Provision	Deliver continuously	Secure and comply

On these...



130+

Certified platforms

ATLASSIAN CYBERARK ARISTA aruba splunk> FORTINET resilient an IBM Company

aws Azure IBM Cloud Google Cloud Platform CISCO DATADOG Infoblox CONTROL YOUR NETWORK f5

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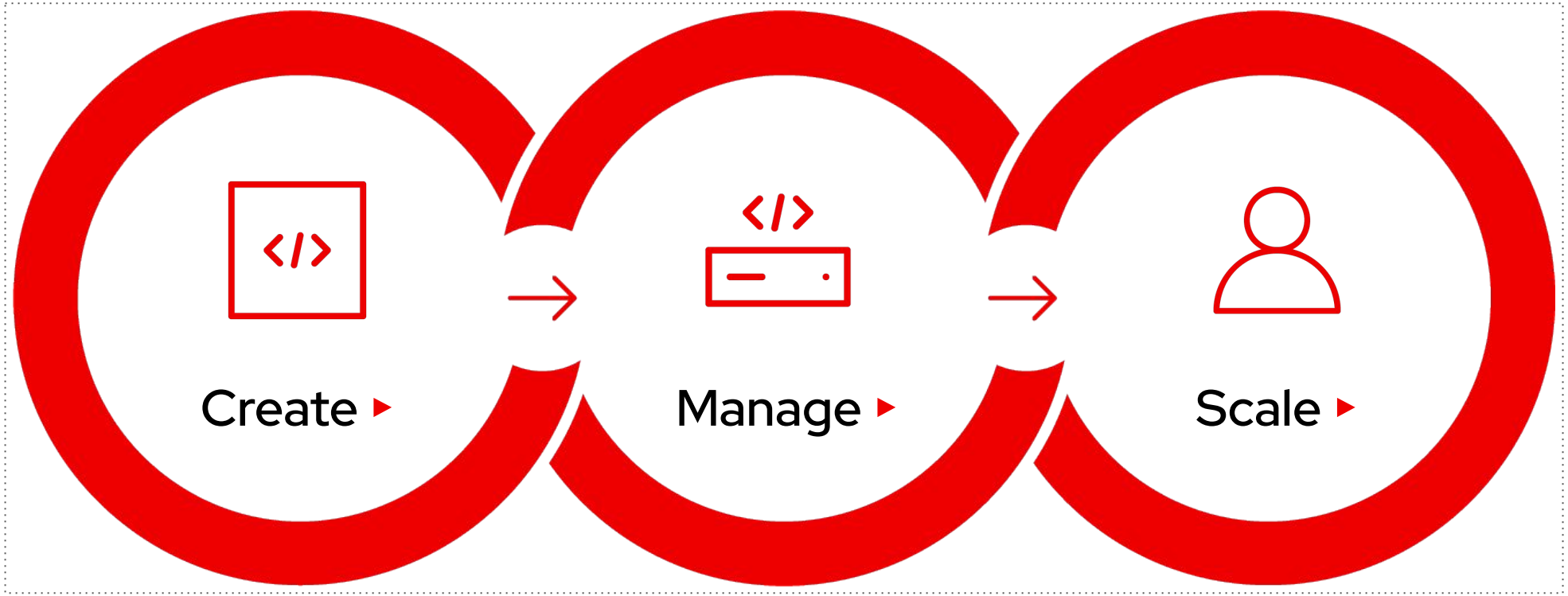
Enabling your automation team to consistently...



Create

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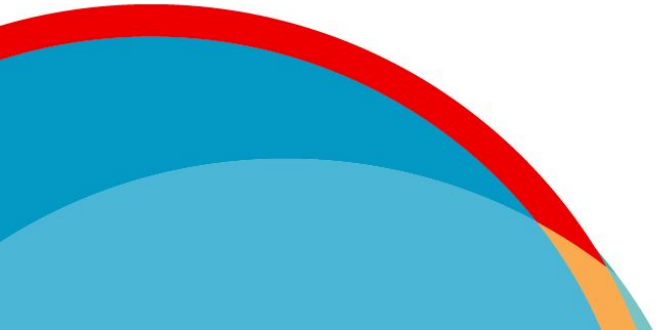
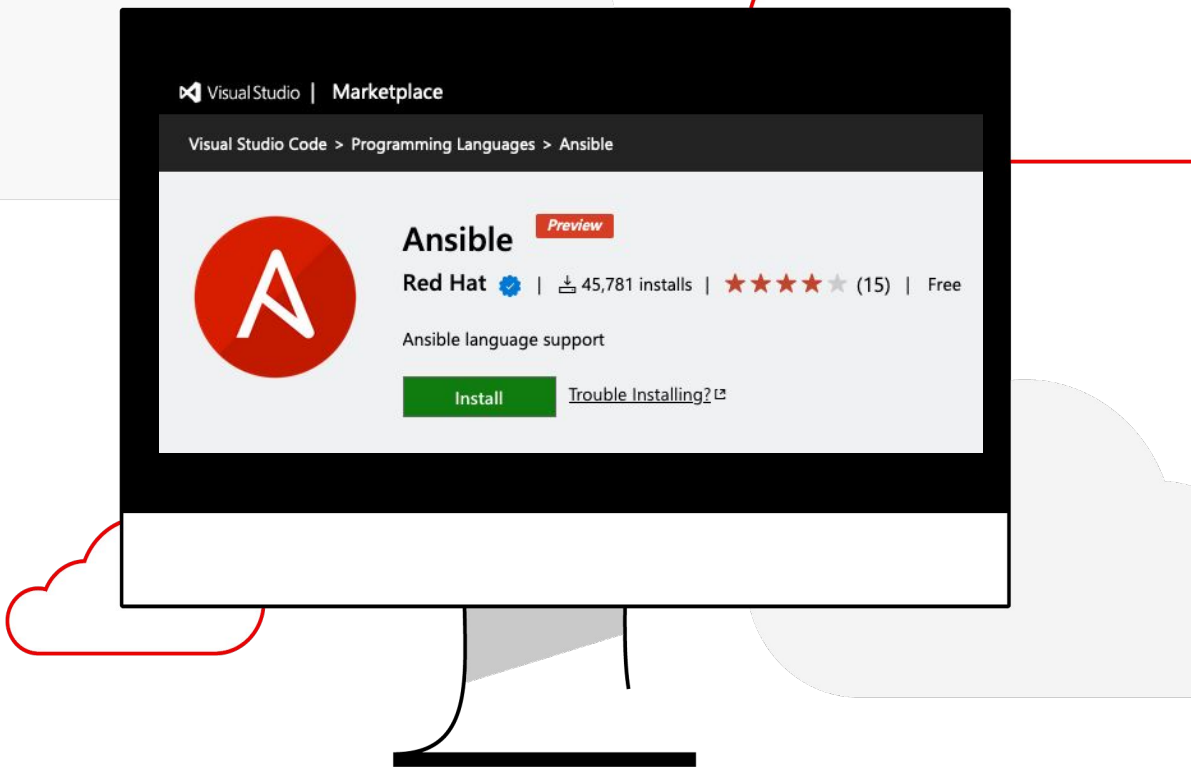
Playbooks



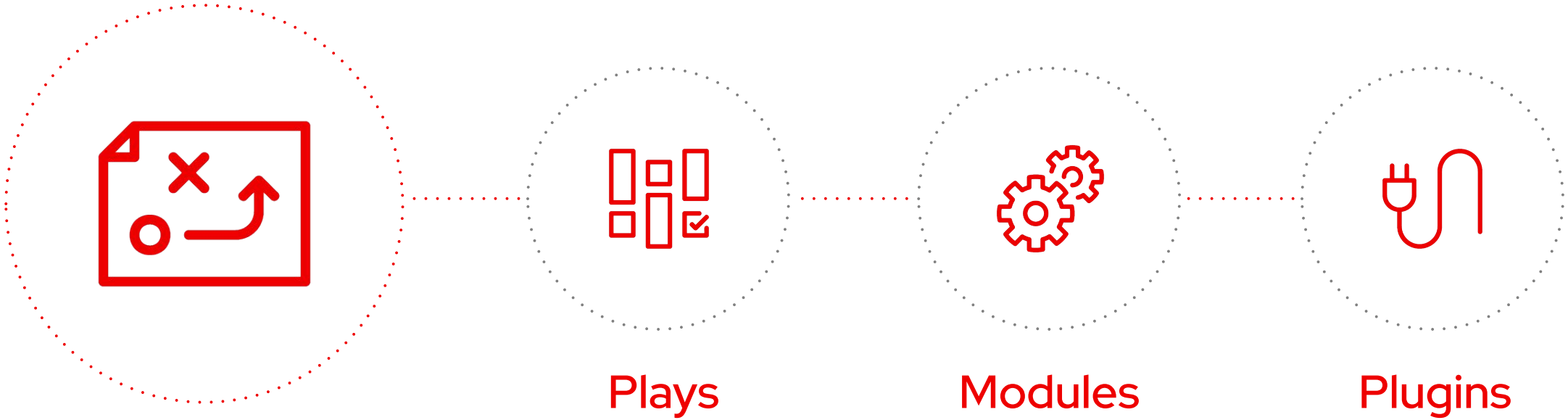
Microsoft VS Code extension. Simplifying content creation

What is it?

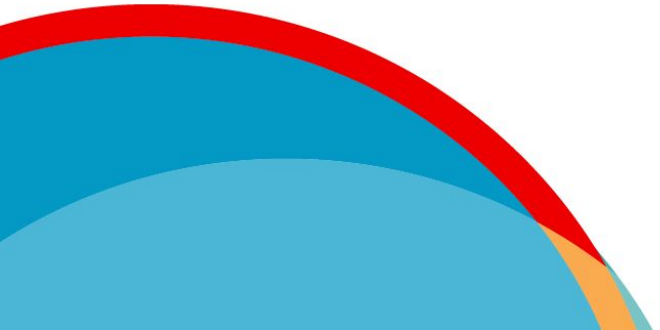
- Syntax highlighting of keywords such as module names.
- Live validation of your code while you type
- Integration with ansible-lint*
- Autocompletion on play, block or task contents etc.
- Documentation references as you code



What makes up an Ansible playbook?



Examples



Example: Windows (IIS)

```
---
- name: start IIS/stop firewall
  hosts: windows-web
  become: yes
  tasks:

  - name: IIS is running
    win_service:
      name: W3Svc
      state: running


  - name: firewall service is stopped/disabled
    win_service:
      name: MpsSvc
      state: stopped
      start_mode: disabled
```

```
---
- name: ensure common OS updates are current
  win_updates:
    category_names: “{{ categories }}”
    blacklist: “{{ blacklist_packages }}”
    whitelist: “{{ whitelist_packages }}”
  register: update_result

- name: if needed, reboot and wait for host
  win_reboot:
  when: update_result.reboot_required
```

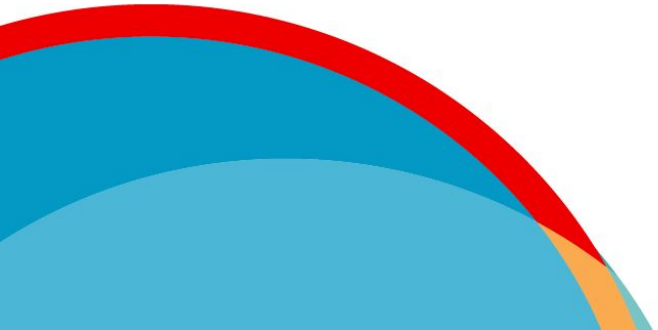
Example: Cisco

```
---
- name: configure ios interface
  hosts: ios01
  tasks:
    - name: collect device running-config
      ios_command:
        commands: show running-config interface GigabitEthernet0/2
        provider: “{{ cli }}”
      register: config

    - name: administratively enable interface
      ios_config:
        lines: no shutdown
        parents: interface GigabitEthernet0/2
        provider: “{{ cli }}”
      when: ‘”shutdown” in config.stdout[0]‘
```

```
- name: verify operational status
      ios_command:
        commands:
          - show interfaces GigabitEthernet0/2
          - show cdp neighbors GigabitEthernet0/2 detail
        waitfor:
          - result[0] contains ‘line protocol is up’
          - result[1] contains ‘iosxr03’
          - result[1] contains ’10.0.0.42’
        provider: “{{ cli }}”
```

Ansible Content



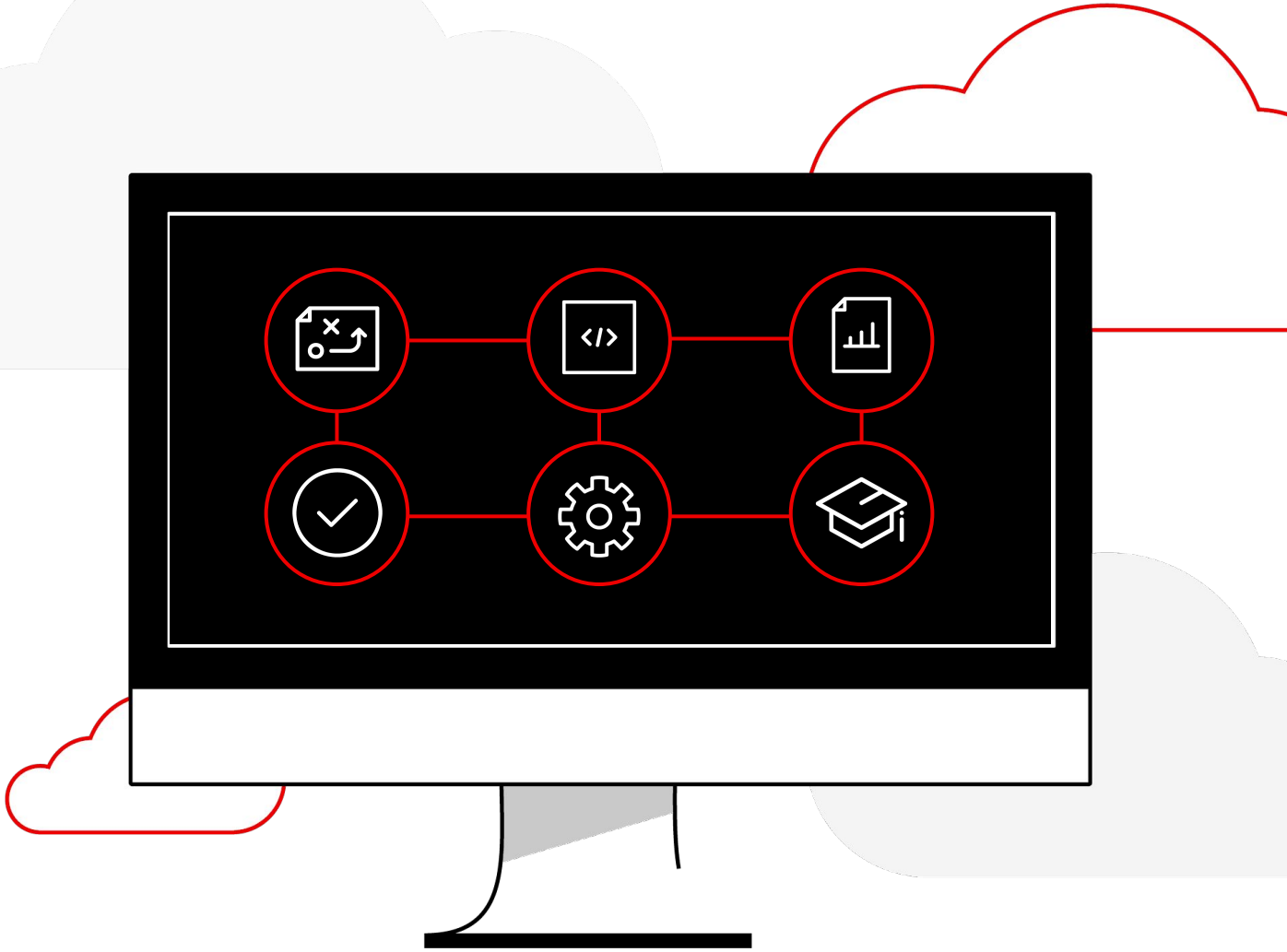
Collections

Simplified and consistent content delivery

What are they?

Collections are a data structure containing automation content:

- Modules
- Playbooks
- Roles
- Plugins
- Docs
- Tests



130+

certified platforms

Infrastructure

Cloud

Network

Security

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aws

ARISTA

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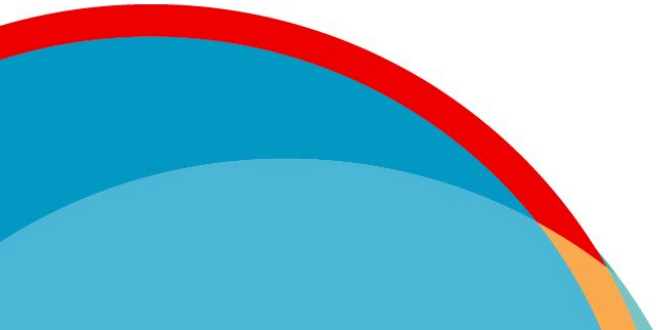
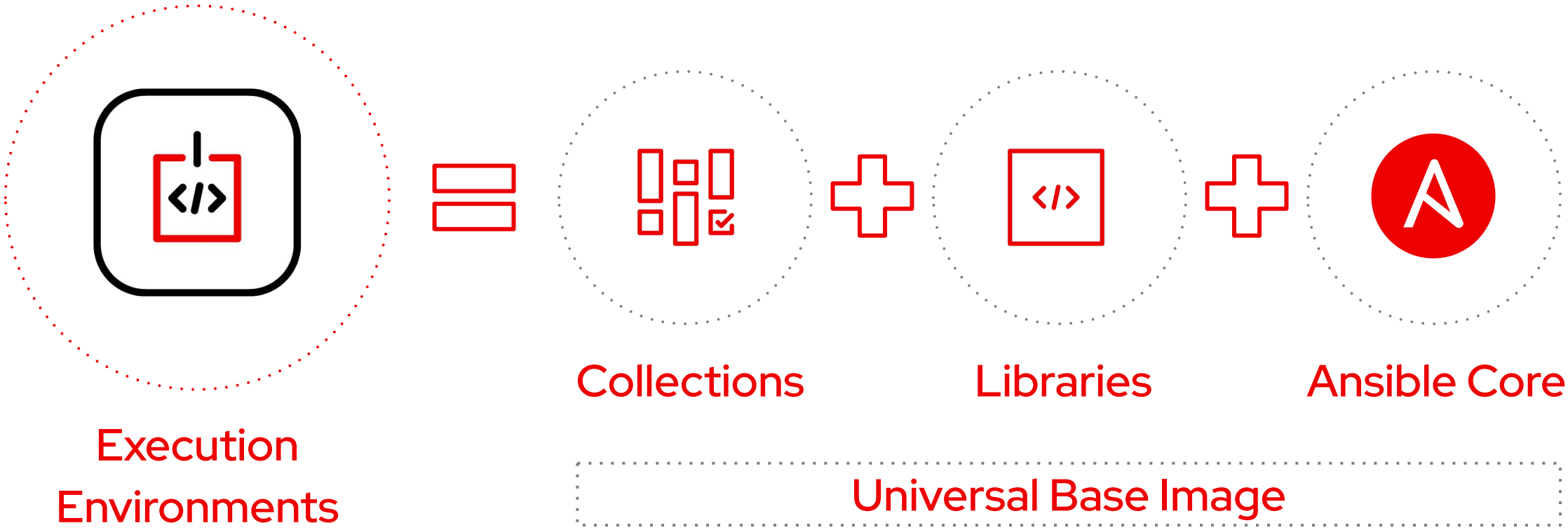
Ansible Execution Environments



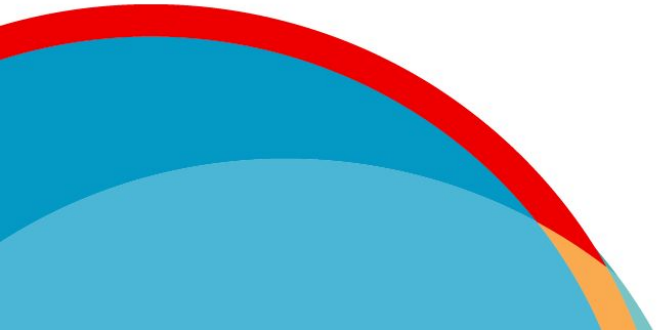
Automation Execution Environments

Components needed for automation, packaged in a cloud-native way



Demo:

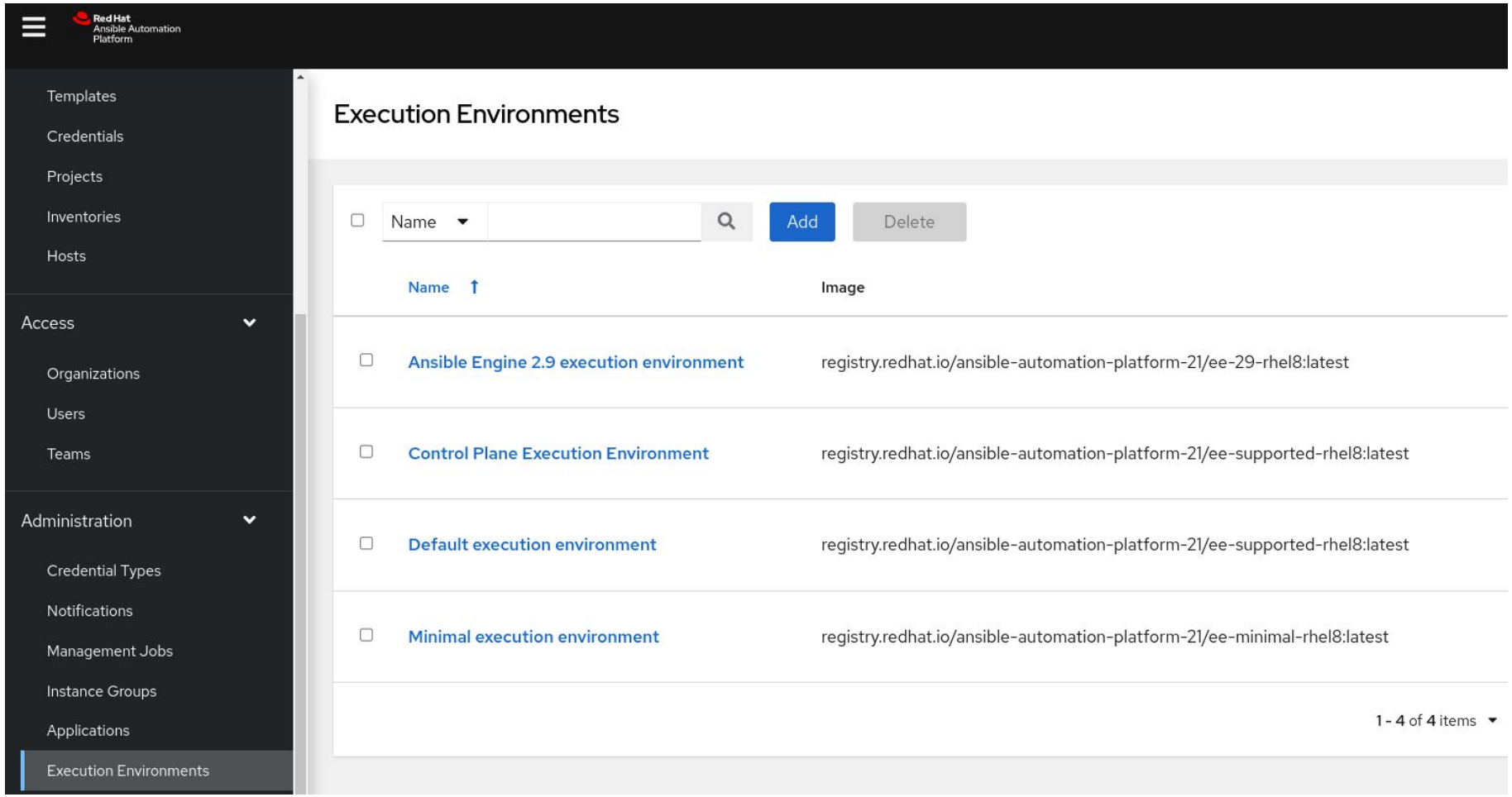
Building Ansible Execution Environments Using Ansible-Builder



Ansible-Builder Demo Next Steps...

- Display Execution Environment Location in AAP
- Install Ansible-Builder Prerequisites
- Create Ansible Builder Working Environment (Directory and Files)
- Build Execution Environment
- Import Execution Environment into AAP

Execution Environments in AAP



Demo Resources

- GitHub: https://github.com/HaaikeV/demo_ansible_create_ee
- Youtube: https://youtu.be/A9J5km9rlAM

Manage

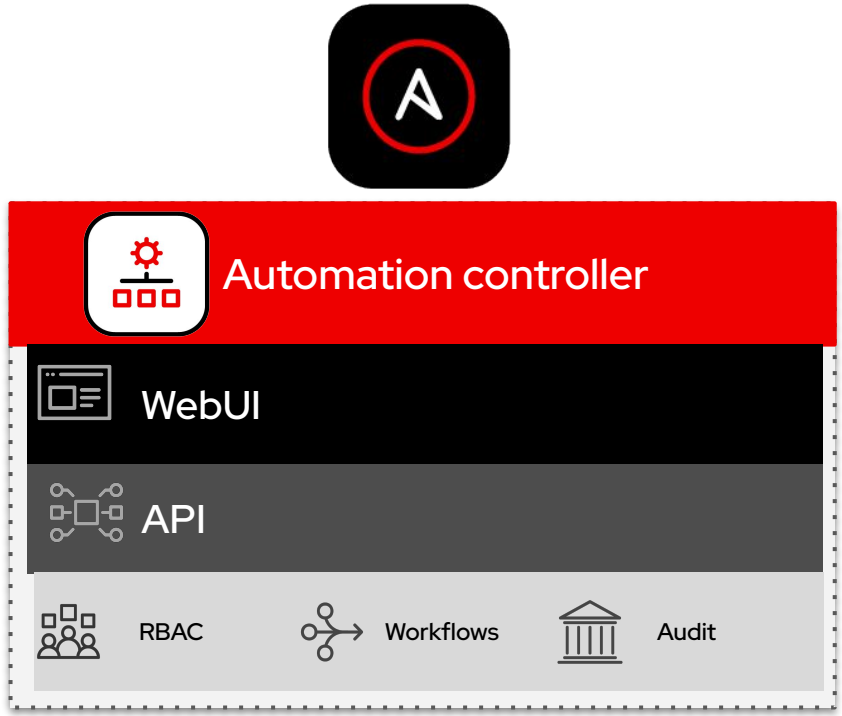
Automation controller. Define, operate and delegate

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:

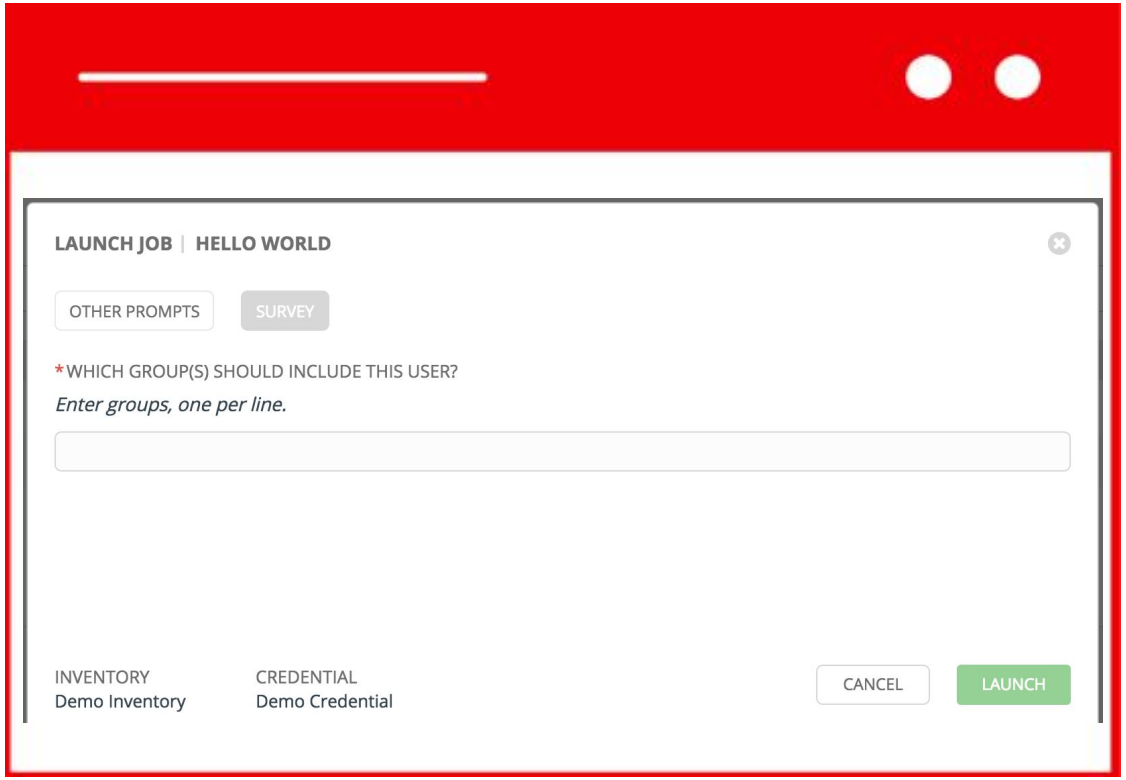
- WebUI and API
- Role-based access control
- Powerful workflows
- Centralized logging
- Credential management
- Push-button automation



Automation controller surveys. Delegate

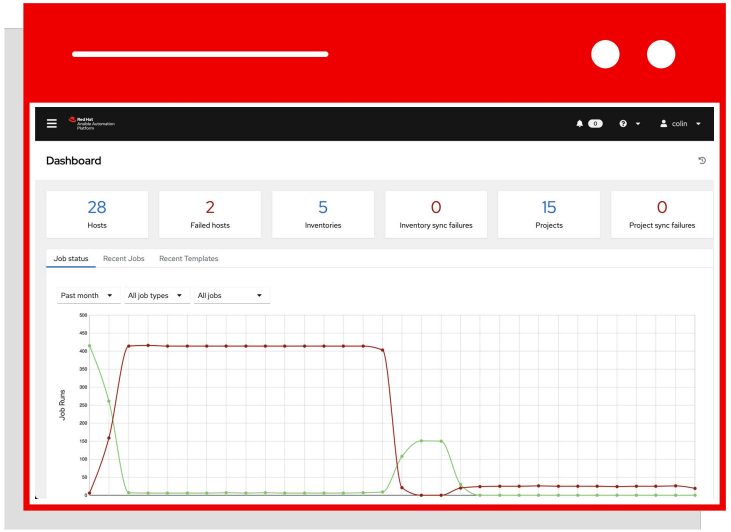
What is it?

- 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

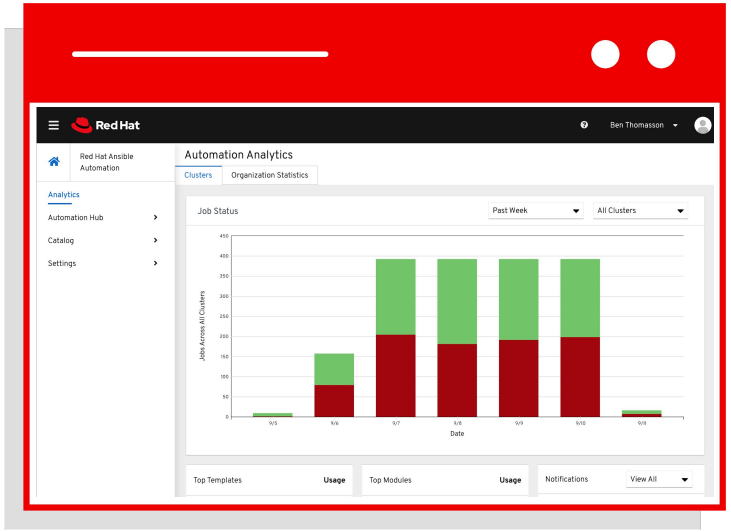


Insights

Understand what is going on



Overview of the actual cluster, the jobs happening, the nodes connected, what works and fails right at this moment.



Overview across clusters, better insight into use cases of automation; insight into adoption of automation per organization.

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Reports. Holistic view of your automation performance

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

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Zero to automation in minutes

Runs in your Azure cloud

Fully installed and integrated

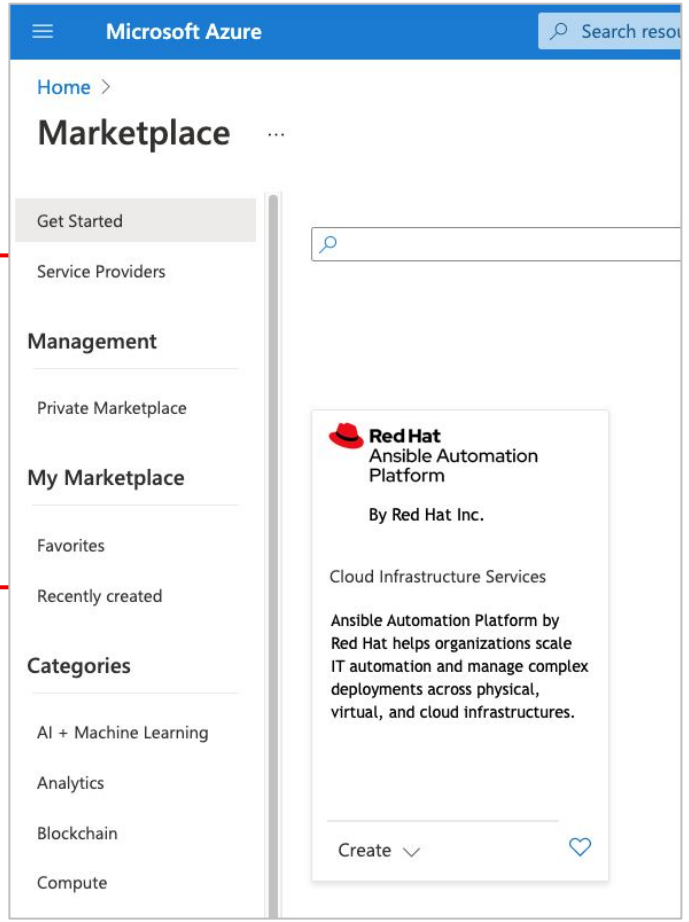
Fully supported by Red Hat

Integrated to Microsoft Azure billing

Counts toward spend agreements

Deploy straight from the Azure Marketplace portal

Start managing your Azure resources quickly



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Azure Scenarios / Consumption Models

Deploy Ansible Automation Platform Anywhere

Scenario #1

Azure Only

- Deploy in your Azure Cloud, supported by Red Hat
- Manage automation across all Azure resources

Scenario #2

Hybrid Automation

- Deploy in your Azure Cloud, supported by Red Hat
- Manage automation across all Azure resources,

  AND
- Extend to on-premises, other public clouds, and into Edge use cases

On Microsoft Azure

Dedicated Red Hat support

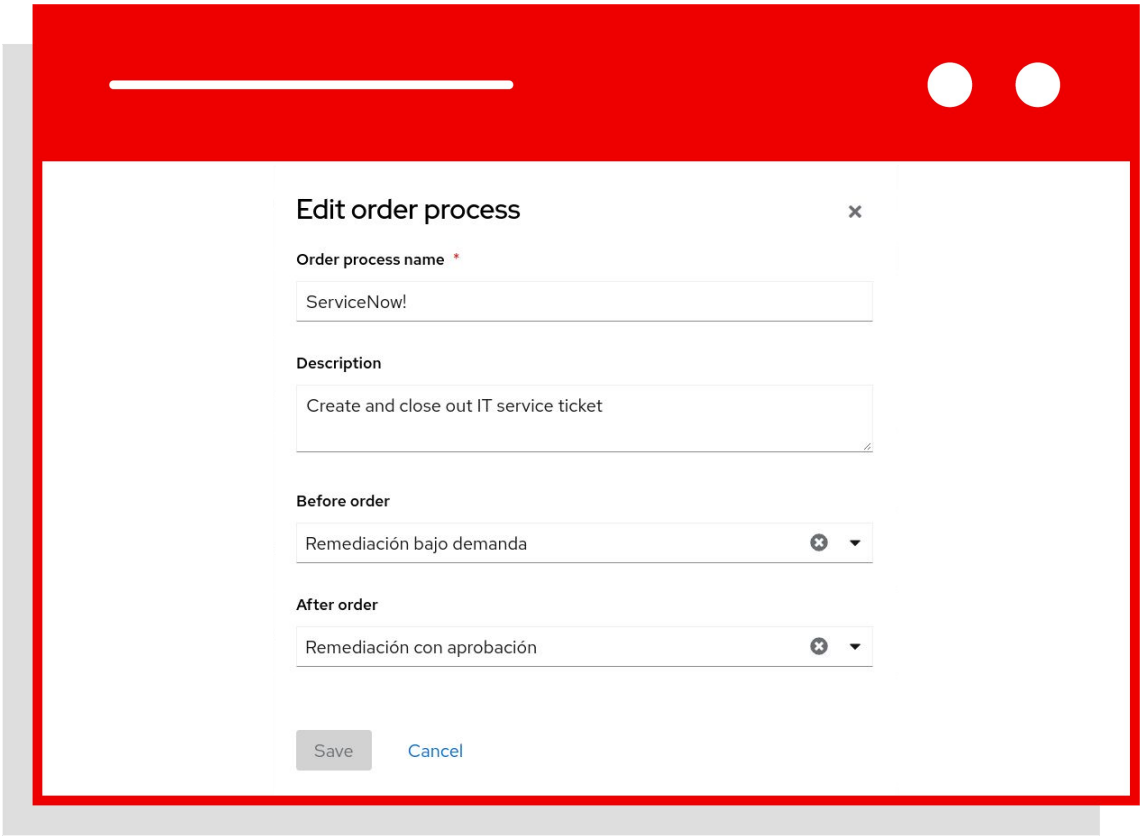
Scale

Red Hat

IT service management integration (ITSM)

Incorporate automation into your ITSM

- Integrate high level workflows in existing ITSM toolsets with the automation platform.
- Have the automation platform reach out to the ITSM system whenever things are changing, including data transmission between the tools.



Automation happens when one person meets a problem they never want to solve again

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