

Red Hat and Cisco: Accelerating modernization together in the AI era

CISCO Live !

Sean Cavanaugh
Senior Principal Technical Marketing Manager,
Red Hat



Who am I?

Work History:

Red Hat	2017-Now
Cumulus Networks	2014-2017
Cisco Systems	2010-2014

Personal

Live with my wife, three kids, one border collie and two cats in Chapel Hill, North Carolina

Hobbies

Home automation, electric bikes, soccer, Y-Guides, piano, 5Ks

Agenda

- 01 Intro: Red Hat and Cisco
- 02 AI and Virtualization
- 03 Ansible Automation Platform
- 04 Next steps

Red Hat: The world's leading provider of open source enterprise IT solutions

More than
90%
of the
Fortune
500
use
 **Red Hat**
products and
solutions¹

~19,000
employees

105+
offices

The first
\$3
billion
open
source
company
in the world²

Red Hat is building the Future with our Customers



Red Hat portfolio

Management - Manage | Observe | Scale | Security | Self-Service



Application Modernization and AI - AI Models, AI Platforms



Application Foundation - App Platform, App Services, Virtualization, Containers, Platform Engineering



Operational Foundation - Trusted, Secure OS, Mission-Critical Automation

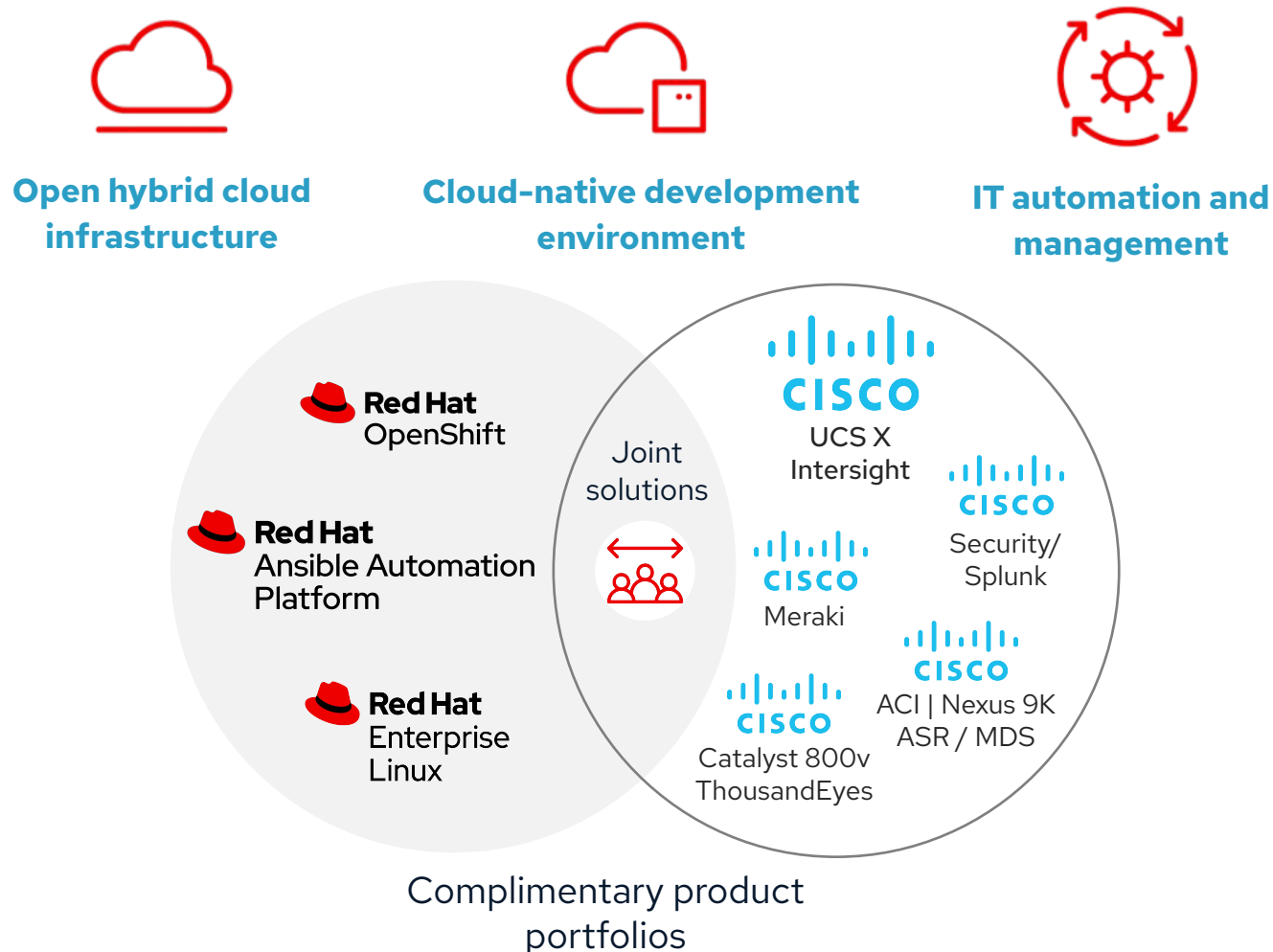


Infrastructure - Bare Metal | Virtual | Private Cloud | Public Cloud | Edge



Cisco and Red Hat better together

Together, we provide the foundation for:



'Ready to Go' solutions

- ✓ Over 20+ CVDs with Red Hat technology
- ✓ Faster TTM with lower risk
- ✓ Strong TCO & faster TTV

Simplified, automated management with a rich collection of [Ansible automation playbook](#)

- ✓ Higher workforce productivity
- ✓ Better network visibility
- ✓ Reduced system downtime

Large partner ecosystems worldwide

- ✓ More options & flexibility
- ✓ Better accessibility to support

Red Hat OpenShift Container Platform and Red Hat Ansible Automation Platform now on Cisco GPL

Red Hat named to Fast Company's annual list of the World's Most Innovative Companies



"Our list of the Most Innovative Companies offers both a comprehensive look at innovation today and a playbook for the future. This year, we recognize **companies that are harnessing AI in deep and meaningful ways**, brands that are turning customers into superfans by overdelivering for them, and challengers that are introducing bold ideas and vital competition to their industries. At a time when the world is rapidly shifting, these companies are charting the way forward."

Brendan Vaughan
Editor-in-Chief, Fast Company

AI and Virtualization

AI is a strategic enabler across industries

Predictive AI runs businesses today, Generative AI brings innovation to the enterprise

Revenue Generation

- ▶ Chatbots
- ▶ Campaign and Content Marketing
- ▶ Developer assistants
- ▶ Guided selling
- ▶ Drive product innovation

Cost Optimization

- ▶ Automated AI support
- ▶ Knowledgebase Search & Summarization
- ▶ Doc summarization
- ▶ AI-optimized logistics
- ▶ Augmented Product R&D

Risk Management

- ▶ Sentiment analysis
- ▶ Predict employee attrition
- ▶ Contract risk assessment
- ▶ Fraud detection
- ▶ AI-assisted Security Operations



Solution for predictive and generative AI



Trusted, Consistent and Comprehensive foundation

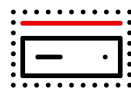


Cisco AI Pods

Include OpenShift



Physical



Virtual



Private
Cloud



Public
Cloud

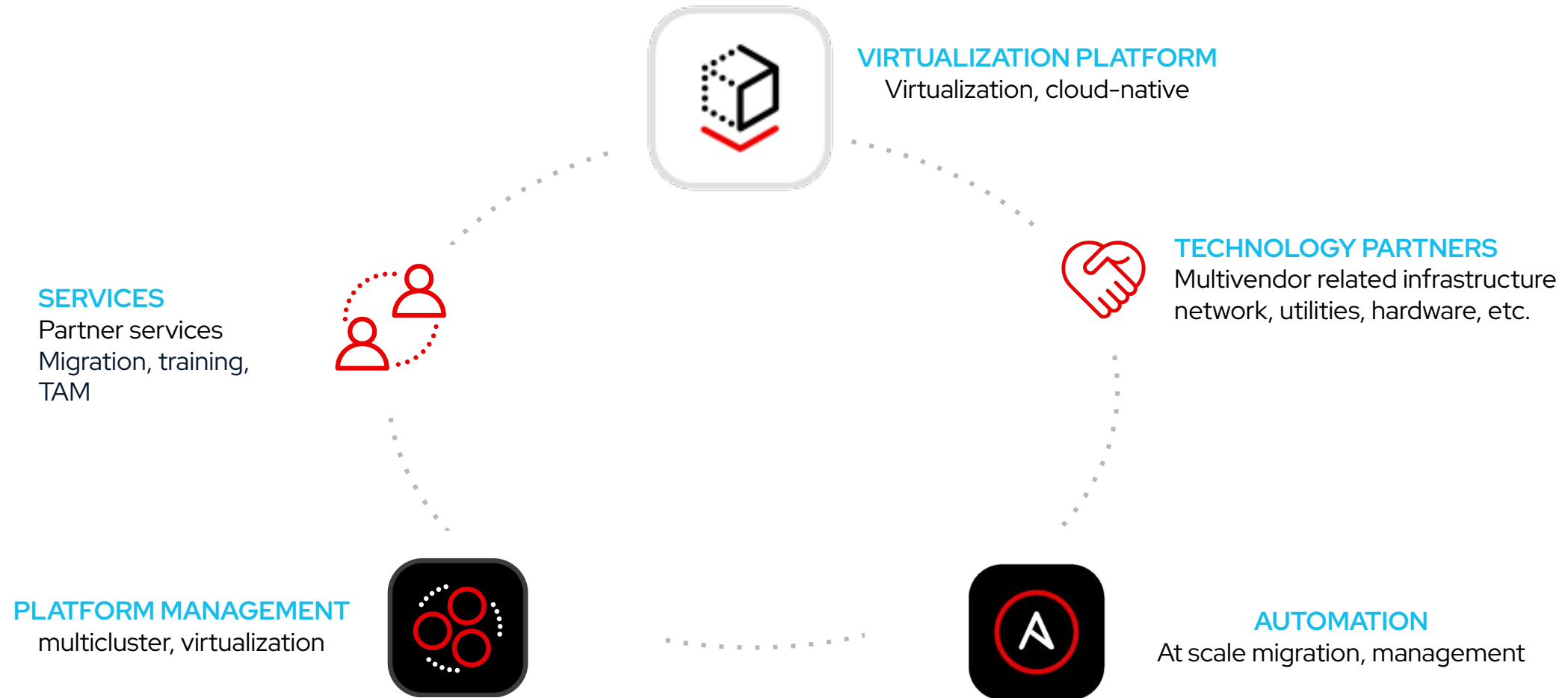


Edge



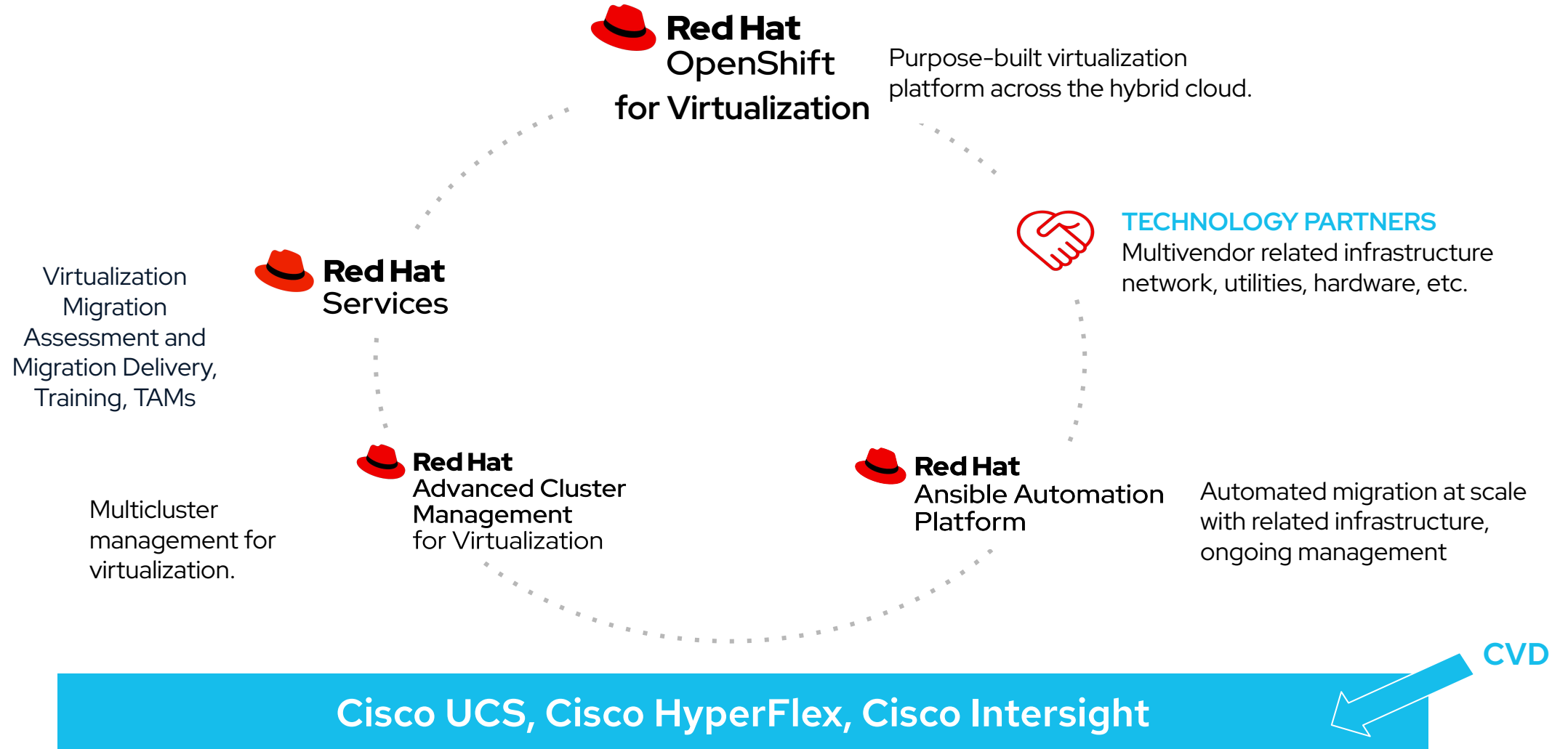
Escalating virtualization costs?

All the right pieces to migrate with ease



Virtualization with Red Hat and Cisco

Virtual infrastructure operations across the hybrid cloud



Ansible Automation Platform



Provision

Streamline the process of provisioning cloud platforms, applications, network devices, and bare-metal servers.

Configure

Centralize configuration file management and deployment with a low learning curve for all teams.

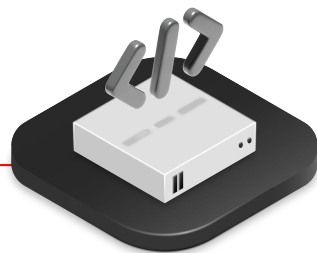
Manage

Organize automation tasks across all kinds of applications, platforms, and providers to achieve results.

End-to-end automation with a single platform



Network



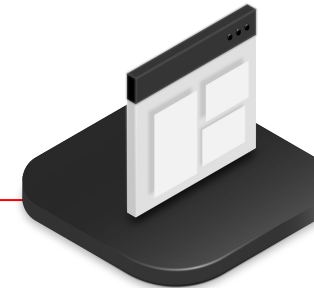
**Operating
systems**



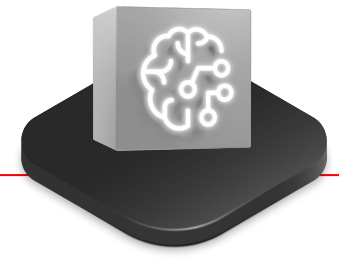
Cloud



Virtualization

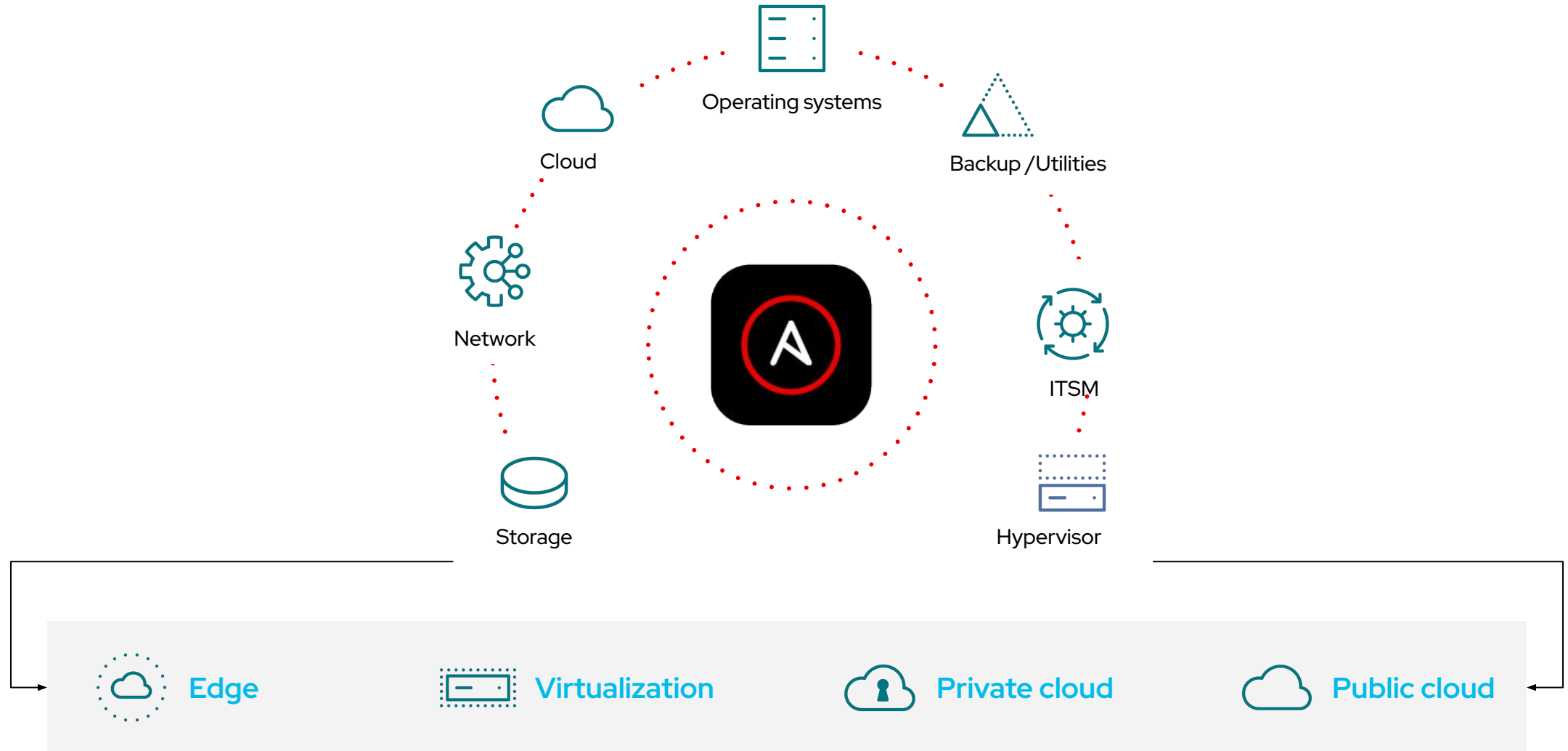


**Application
Delivery**

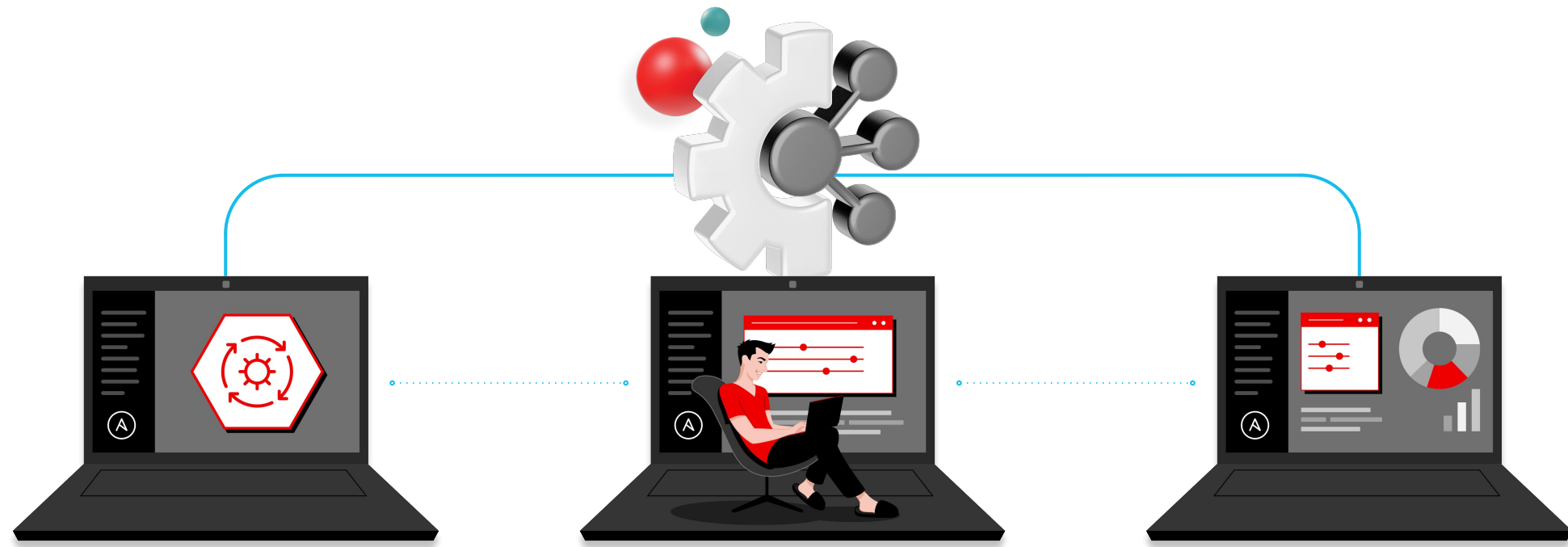


AI

Your infrastructure is interrelated. Design workflows across it.



Network and edge automation



Provision

Inventory audits and reports
Network compliance and drift
Retirement and migration

Configure

Configuration hygiene
Apply a configuration SoT
Configuration backup and restore

Manage

Network health checks
Network OS upgrades
Automated troubleshooting

- name: **configure VLANs**
hosts: **cisco**
gather_facts: **false**
tasks:
 - name: **VLANs task**
cisco.nxos.vlans:
config:
 - vlan_id: **5**
name: **WEB**
 - vlan_id: **10**

Operational Commands

```
cisco# show version
Cisco IOS XE Software, Version 16.09.02
Cisco IOS Software [Fuji], Virtual XE Software
(X86_64_LINUX_IOSD-UNIVERSALK9-M), Version
16.9.2, RELEASE SOFTWARE (fc4)
Technical Support:
http://www.cisco.com/techsupport
Copyright (c) 1986-2018 by Cisco Systems, Inc.
```

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Cisco IOS output

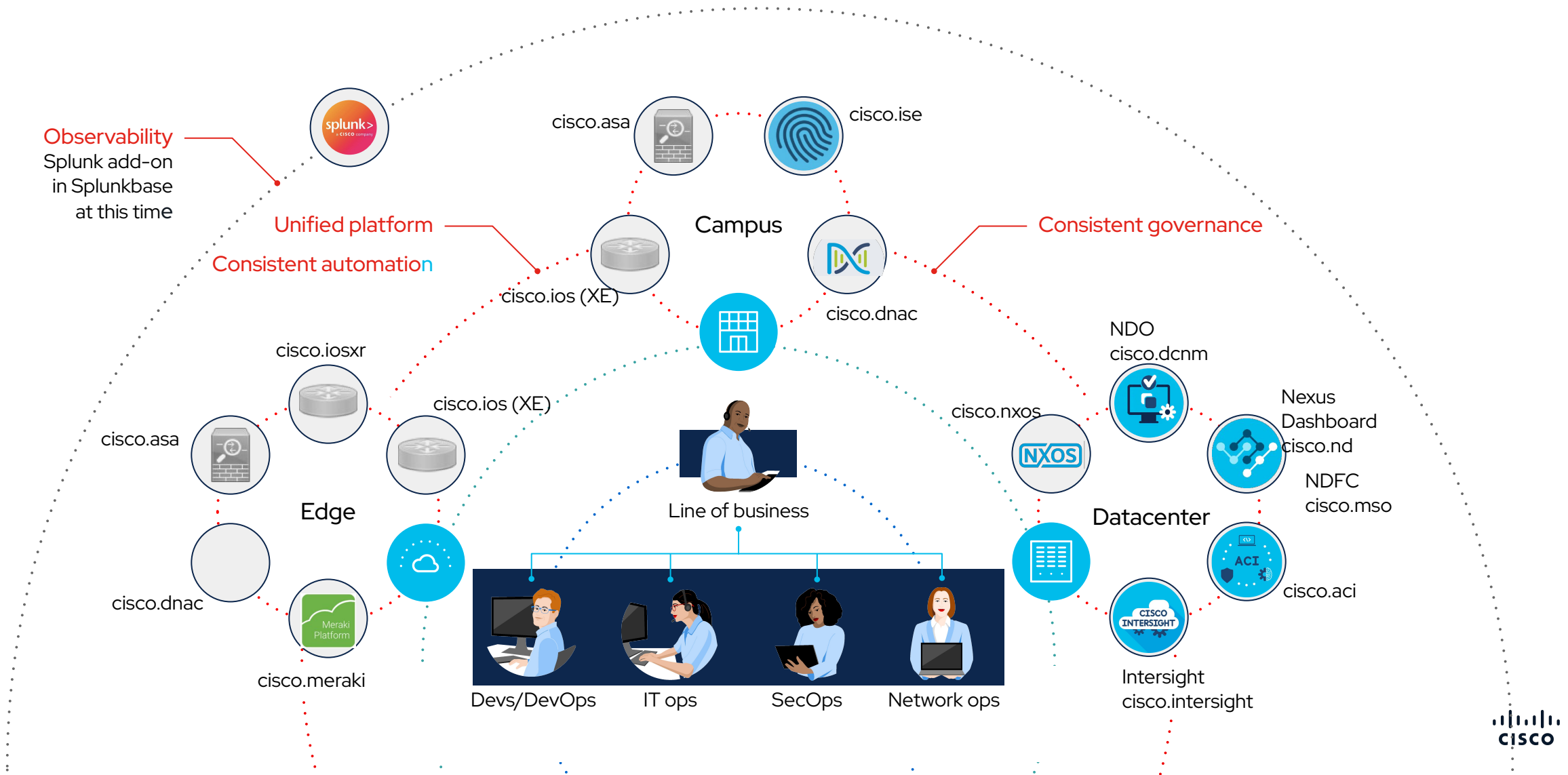
```
cisco# ansible -m ios_facts cisco
cisco | SUCCESS => {
  "ansible_facts": {
    "ansible_net_iostype": "IOS-XE",
    "ansible_net_version": "16.09.02",
    "ansible_net_serialnum": "9L8KQ482JFZ",
    "ansible_net_model": "CSR1000V",
```

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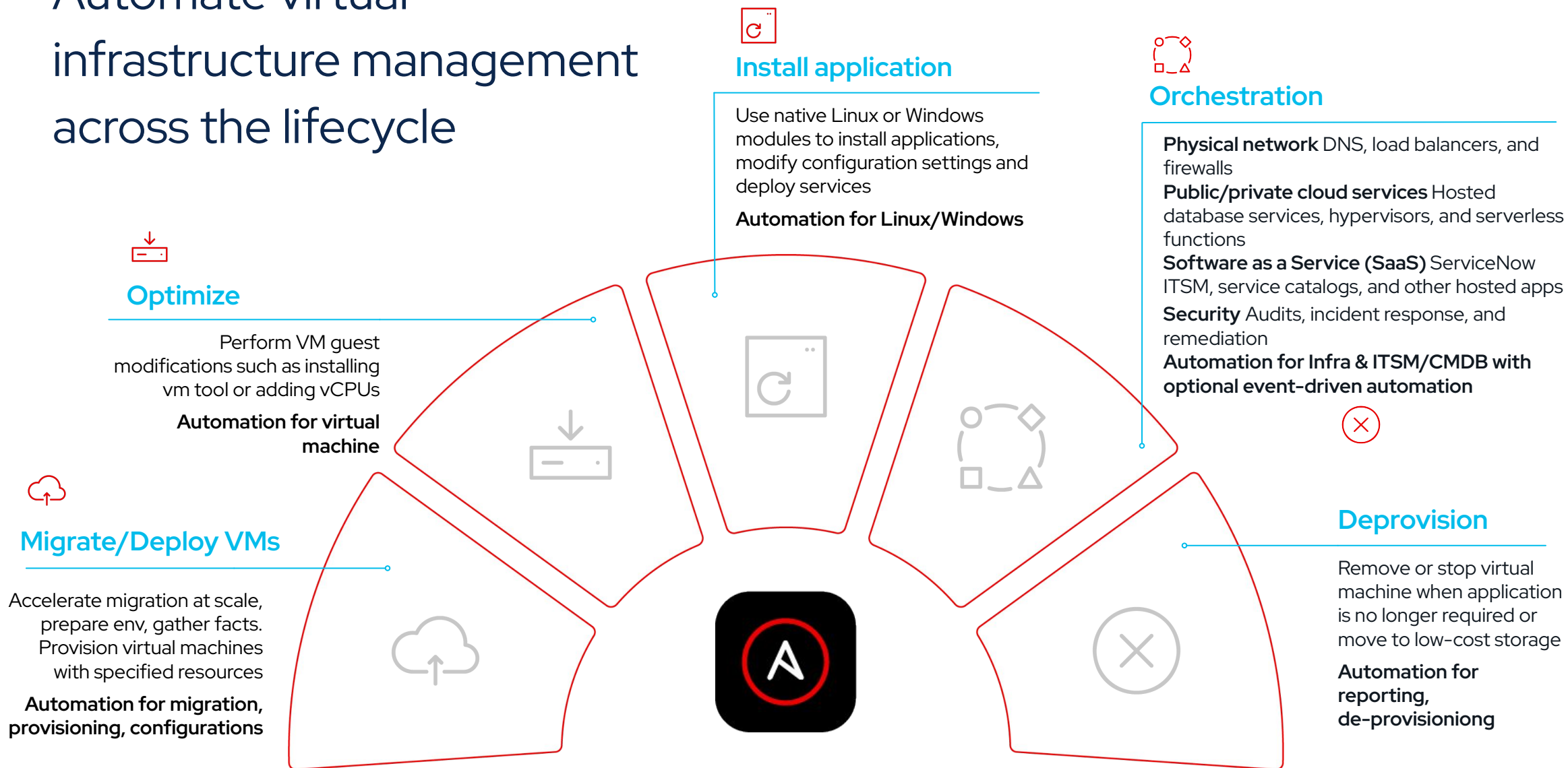
Ansible output

Ansible Certified Content Collections for Cisco

Included in your Ansible Automation Platform subscription



Automate virtual infrastructure management across the lifecycle



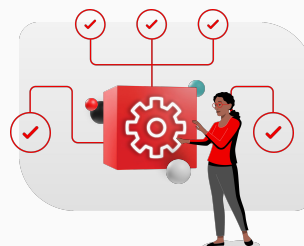
Establish a reliable AI foundation. Enable ongoing AI innovation.

Standardize AI infrastructure operations



- Simplify AI infrastructure deployment, usage, and scaling.
- Provide lifecycle management for consistency and repeatability.
- Accelerate time to value for developers consuming the AI platform.

Enable AIOps



- Identify and address potential issues proactively.
- Resolve common issues and alerts via actionable advice from generative AI.
- Provide automated remediation, reducing MTTR.

Enforce policy



- Implement safeguards around your AI solutions for better outcomes and control.
- Ensure AI is aligned to key internal and compliance policies.

Foundation of
automation

Self-healing
infrastructure

Policy
checks

Next Steps: Do Great Things with Red Hat and Cisco



Come see us at Booth #2534 for presentations, swag, and more...



Visit the Red Hat booth

Booth #2534



Try a Self-Paced In-Browser Demo

red.ht/ansible_labs



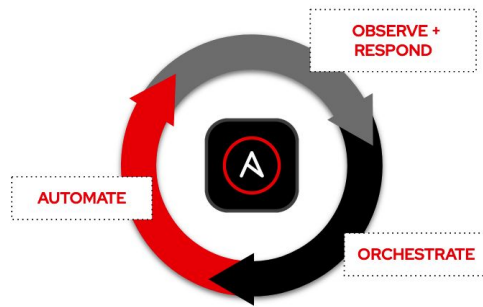
Get a free ebook

Automate your network with Red Hat
red.ht/ansible_network

backup

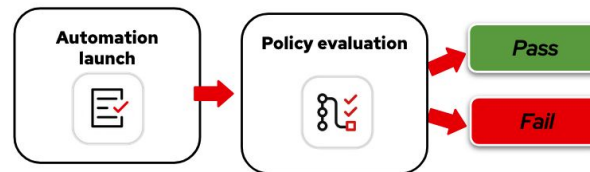
Red Hat Ansible Automation Platform

Advanced and new features overview



Event-Driven Ansible

- > Automated response to changing conditions and alerts, including AIOps scenarios



Policy enforcement

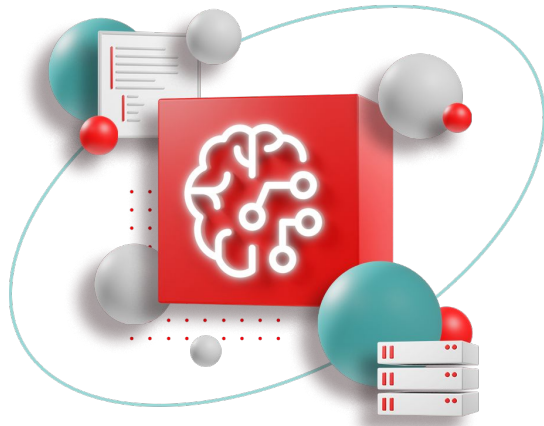
- > Enforce policies in automation at runtime with pass for automation to run



Ansible Lightspeed intelligent assistant (Tech Preview)

- > Intuitive virtual assistant with contextual support for faster troubleshooting, onboarding, and management

Red Hat AI accelerates the development and delivery of AI solutions across hybrid-cloud environments.

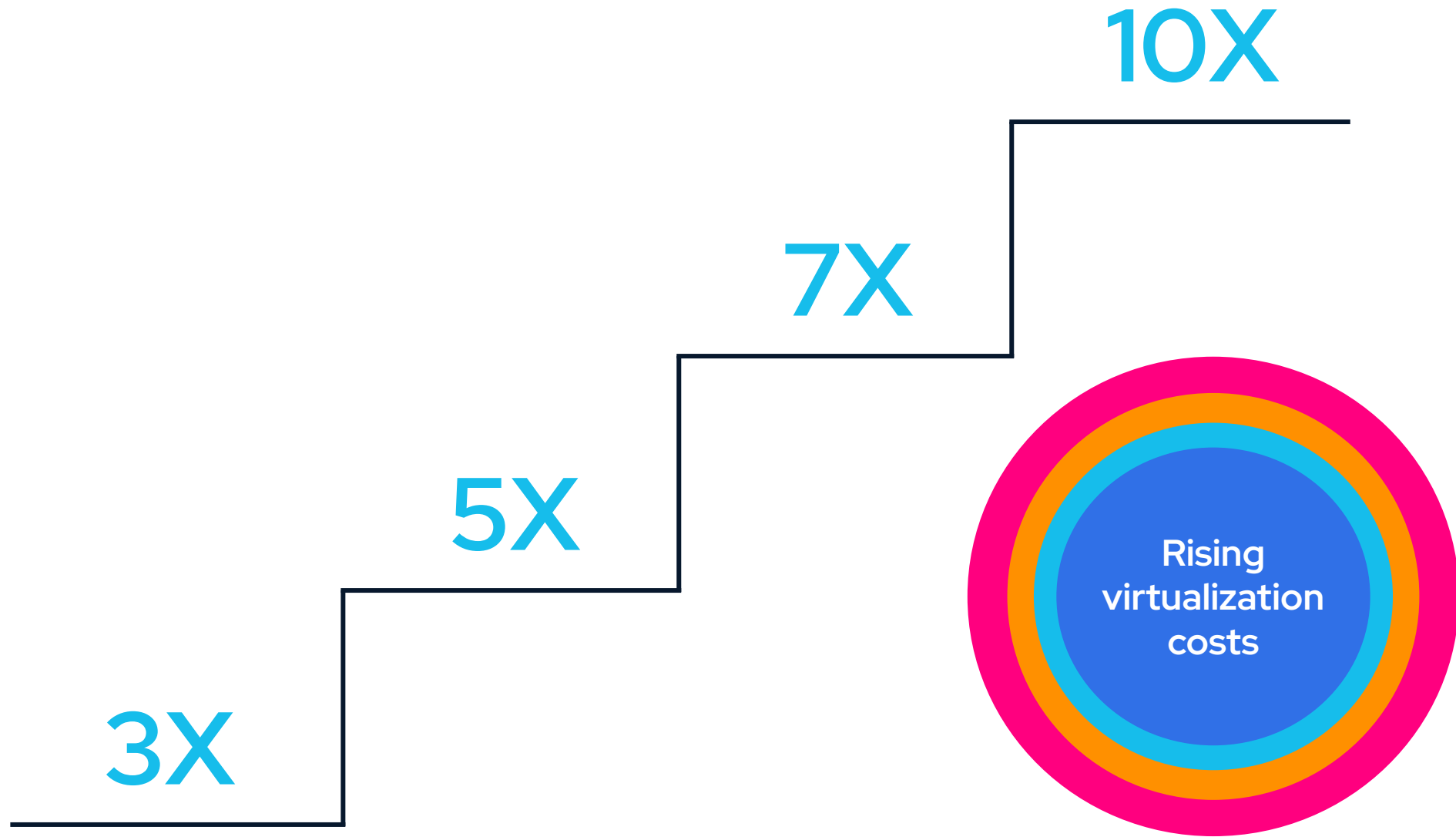


Tune small, purpose-built models efficiently with enterprise-relevant data

Deploy with flexibility and consistency wherever your data resides

Manage and monitor the lifecycle of predictive and generative AI models at scale

Maximize your technology investments with operational guidance & advisory services





100%

of U.S. airlines in the
Fortune 500
rely on Red Hat



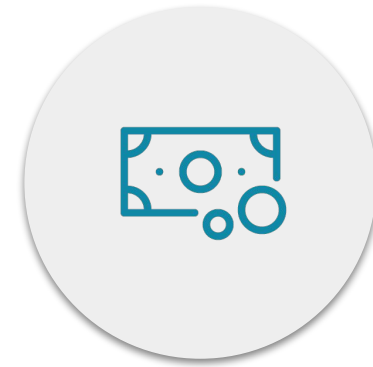
100%

of U.S. Executive
Departments
rely on Red Hat



100%

of U.S. telecommunications
companies in the Fortune
500 rely on Red Hat

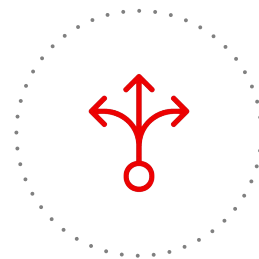


100%

of U.S. commercial banks
in the Fortune 500
rely on Red Hat

Increasing flexibility and choice with an open source approach

Red Hat prioritizes investments on open source AI and building a certified AI partner ecosystem



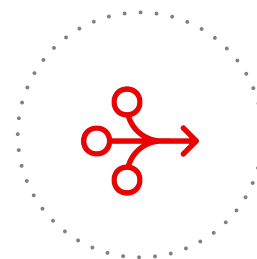
Flexibility

Access to cutting-edge open source innovations to keep up with a fast moving market.



Choice

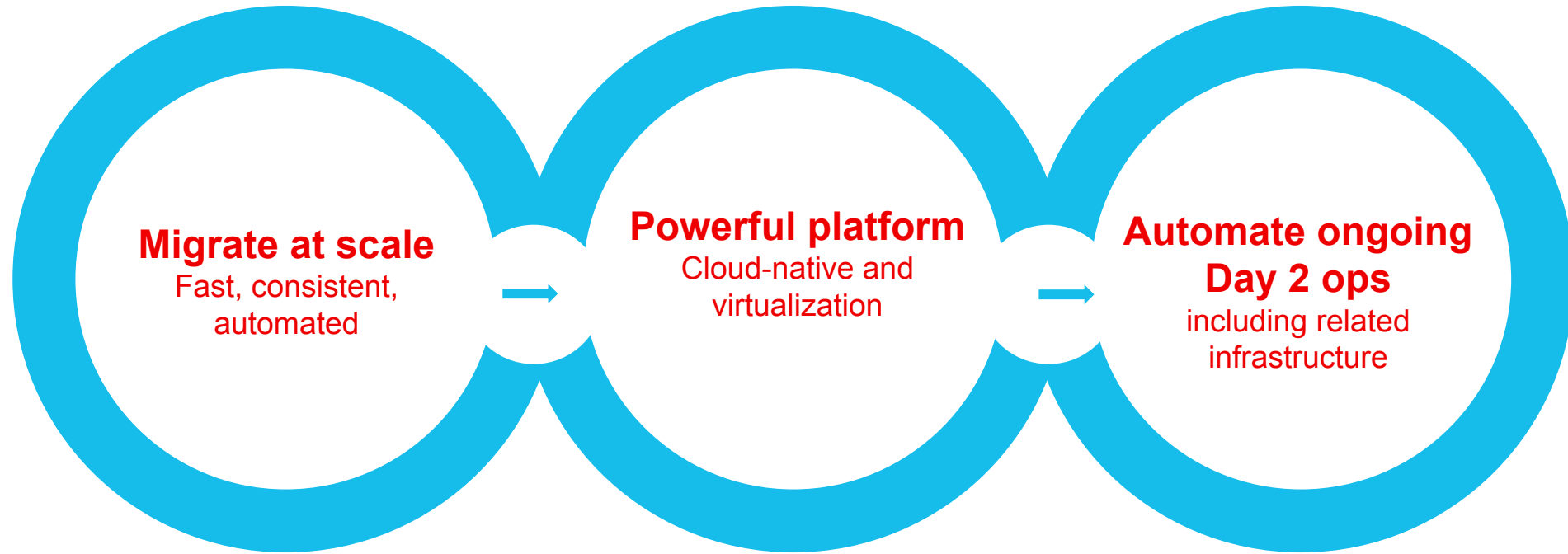
Access to an open ecosystem of communities, technology providers, ISVs and customers.



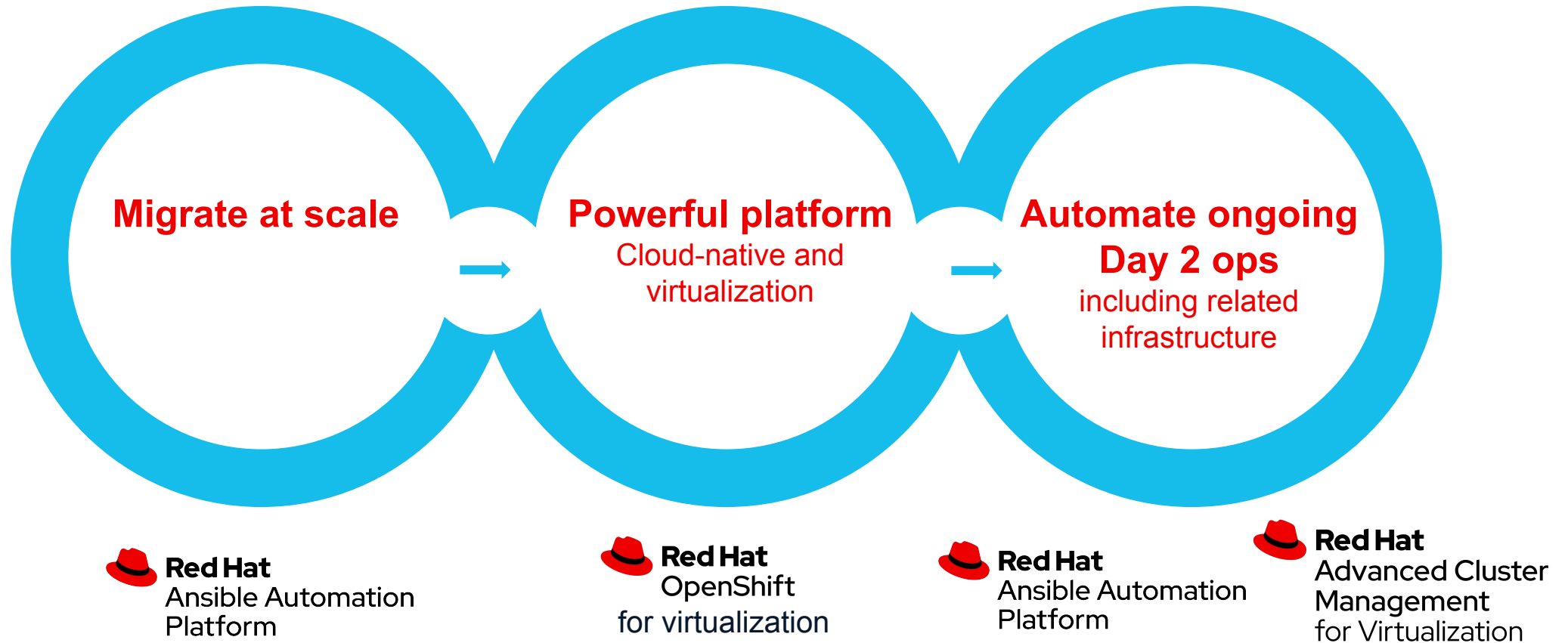
Abstract the complexity

Reduce the complexity of switching and adapting to new technologies.

Virtualization with Red Hat



Virtualization with Red Hat



Red Hat - Cisco Partnership

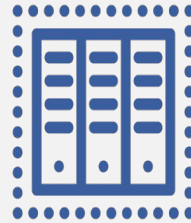
Where do we collaborate?

- > Cisco IT



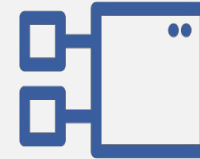
Sell-to

-> Cisco BU ->
Service Provider



Sell-through & Sell-with

-> Cisco BU's ->
Enterprise



Sell-through & Sell-with

Escalating costs?

Virtualization with Red Hat

Provides an **open, secure and scalable** platform for seamless migration

Proven
virtualization
technology

Strategic
migration to a
future-proof
platform

Enables **strategic, automated migration** to a flexible, cloud-native platform

Partners with leading **ISVs and GSIs** for **comprehensive solutions** tailored to needs with expert guidance

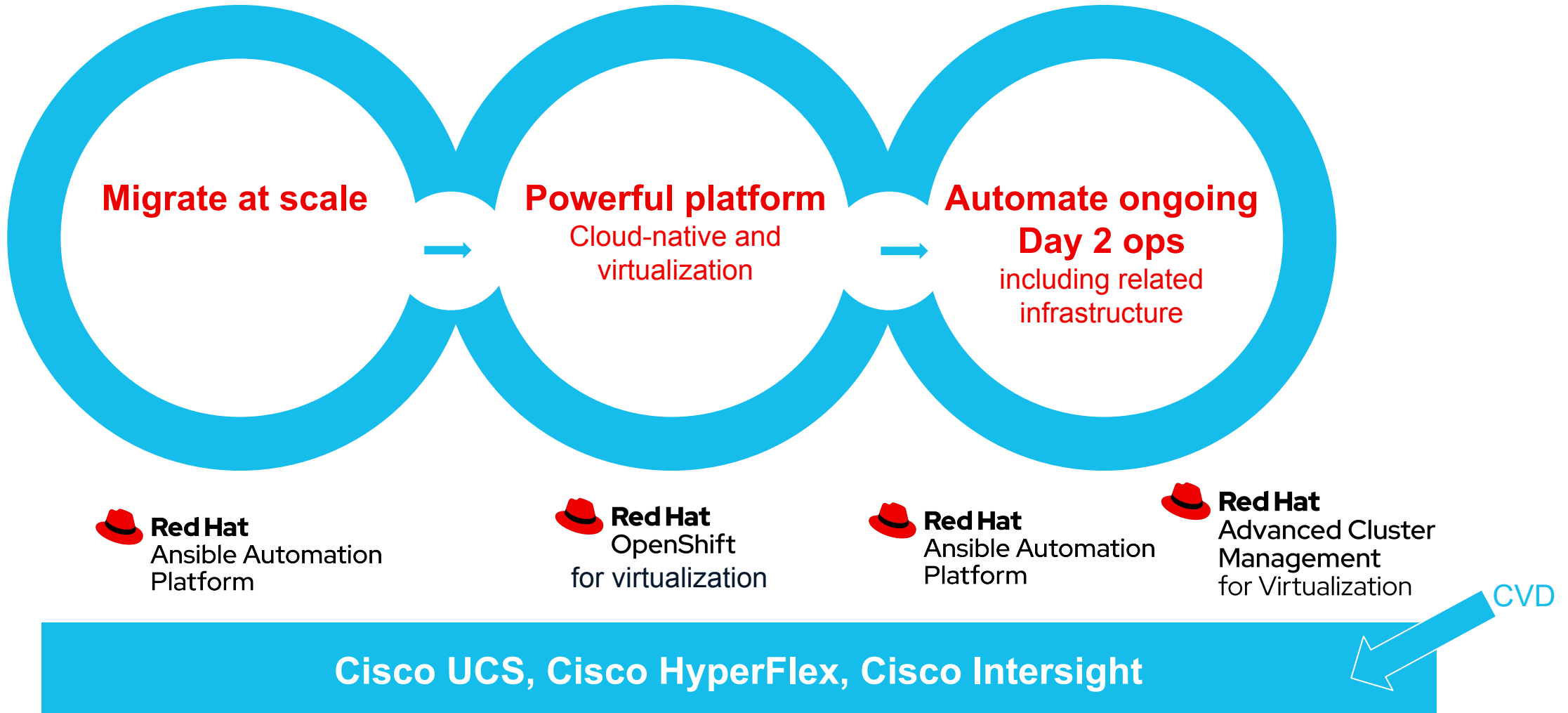
Partnering
for success

Customers

Global customer base that trusts OpenShift to deliver **performance, efficiency, and support** for business-critical environments

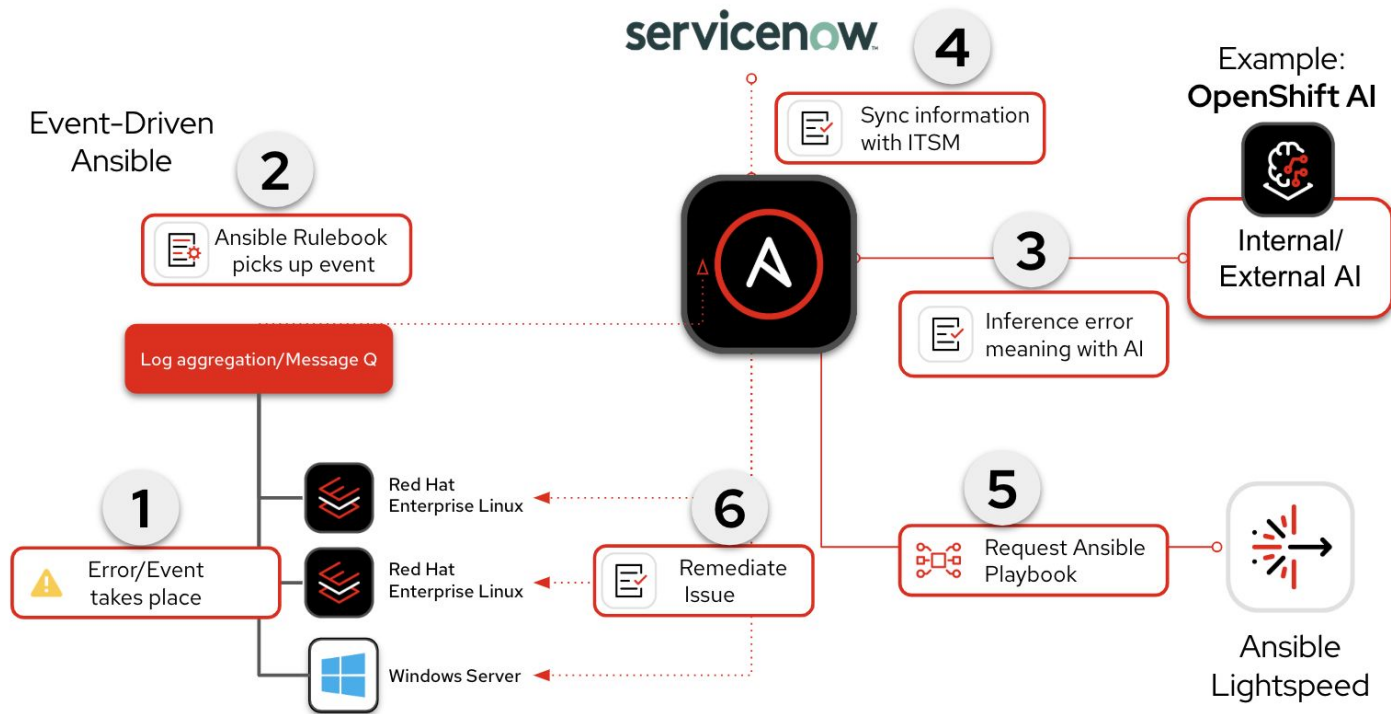
Virtualization with Red Hat Ansible and Cisco

Better together



Enable AIOps

Closed-loop AI automation: Windows and Linux



Why is it important?

- ▶ Even with automation, IT teams spend too much time diagnosing, manually responding to, and remediating automated error reports.
- ▶ Customers desire to shift from a reactive to proactive model for addressing manual operations, errors and performance issues.

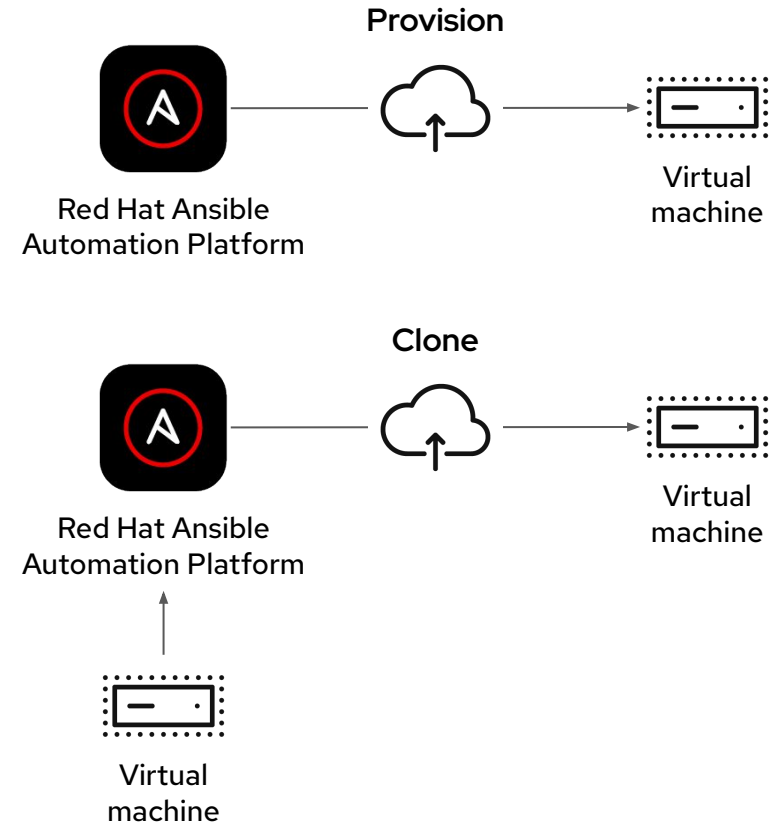
Why Red Hat Ansible Automation Platform?

- ▶ Event-driven Ansible enables AI-powered solutions by integrating seamlessly with monitoring and alerting tools to trigger automation tasks to reduce downtime, improve system security, and reduce labor costs.
- ▶ Intelligent infrastructure operations: Use Red Hat AI solutions to turn AI insights into action with Ansible + ecosystem of technologies.
- ▶ With the creation of this turnkey use case, customers can get everything they need to resolve common, repetitive tasks with generate AI in a responsible, consistent way. Follow the KBASE link, download and leverage in your environment.

Provision virtual machine

Creating a virtual machine

```
name: Provision virtual machine
hosts: localhost
tasks:
  - name: Use provision_vm role
    ansible.builtin.import_role:
      name: cloud.vmware_ops.provision_vm
vars:
  provision_vm_cluster: "DC0_C0"
  provision_vm_folder: "/DC0/vm"
  provision_vm_datacenter: "DC0"
  provision_vm_name: "example_rhel_server"
  provision_vm_guest_id: RHEL_8_64
  provision_vm_hardware:
    memory_mb: 512
    num_cpus: 4
  provision_vm_disk:
    - size_gb: 10
      type: thin
    datastore: "LocalDS_0"
```



Virtual infrastructure automation



Migrate / Provision

Migrate and deploy VMs
Provision and orchestrate
related resources

Configure

Manage security
Deploy apps
Optimize

Manage

Ongoing management and
patching
Automated response
and remediation
Deprovisioning

Ansible Automation Platform unlocks AIOps

AAP is key to successful AI adoption

Event-driven Ansible enables AI powered solutions to trigger automation tasks to reduce downtime, improve system security or reduce labor costs allowing innovation investment in higher value business outcomes



Intelligent Infrastructure Operations

Use Red Hat AI solutions (RAG with function calling) to turn AI insights into action with Ansible against our ecosystem of technologies



Self-healing infrastructure

Use Red Hat AI solutions with Event-driven Ansible (integrates seamlessly with monitoring and alerting tools) to identify and address potential issues proactively.



Cost and resource optimization

Red Hat Insights identifies optimizations around nodes, clusters and projects attached to AI persona needs, with the option to execute optimizations in automated workflows to abstract the user from AI infrastructure
Ecosystem integrations



Accelerate automation creation

Use Red Hat Ansible Lightspeed with IBM watsonx Code Assistant (lowers barrier to creating automation) and other industry-leading gen AI solutions to quickly create automation with the guardrails and security standards built into AAP.

