Automation use cases

with Red Hat Ansible Automation Platform

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Cloud Solution Architect

Red Hat

Why have an automation strategy?

Do more with less

Reduce human error caused by manual processes and risks **increasing** consistency

Reduce Time spent and Costs and focus people on value add activities

Manage and **Scale** with the same resources

Increase productivity and efficiency

6 common mistakes

Not fully understanding the processes being automated

Deploying a product that isn't holistic

Only automating basic tasks and implementing automation as an afterthought

Creating islands of automation that don't share success or best practices

Not involving services or investing in training

Incomplete planning and prioritizing

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Break down silos

Different teams a single platform

Consistent governance

Cloud

Edge

Datacenter

Line of business

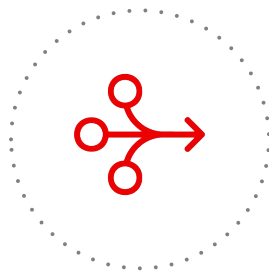Devs/DevOps   IT ops   SecOps   Network ops
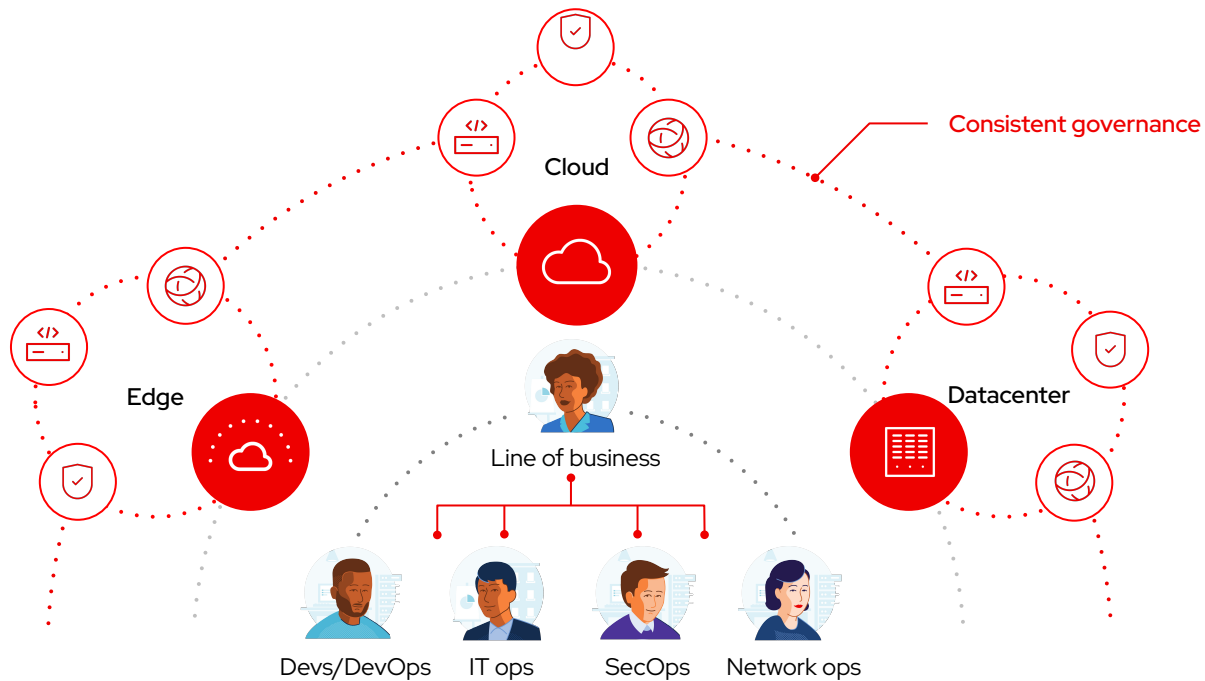
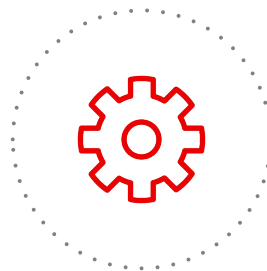Red Hat

Why the Ansible Automation Platform?
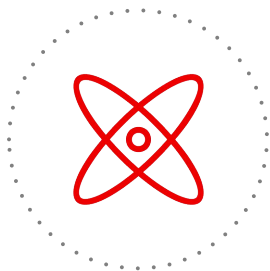
Powerful

Orchestrate complex processes at enterprise scale.

Simple

Simplify automation creation and management across multiple domains.

Agentless

Easily integrate with hybrid environments.

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Red Hat
Ansible Automation Platform

One platform for a single strategy

Ansible Content Collections
A new method of building and consuming Ansible content

Automation services catalog
A venue for developers and business users to manage, provision, and retire automation resources

Automation Hub
Private content repository for sharing automation

Content packages
Opinionated, focused content, targeting key automation use cases, from Red Hat and certified partners
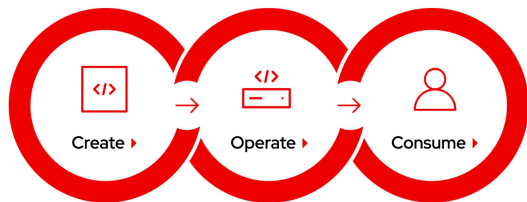
Scalable execution
Extending Red Hat Ansible Controller to support automation whenever and wherever you need it
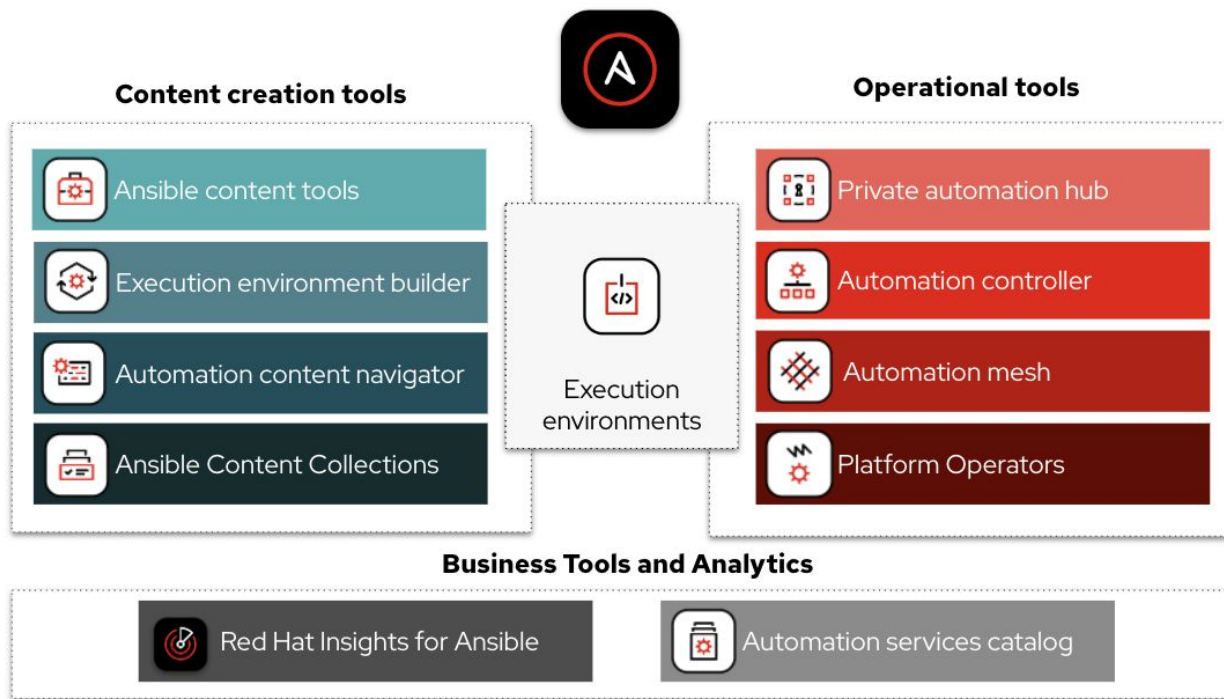
Automation Analytics
Analytical insights into the automation runtime

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Holistic automation for your enterprise

A better automation experience, with new capabilities that help teams:

- ▸ **Create** automation content in a more consistent and efficient way

- ▸ **Operate** on automation processes more effectively across the entire organization

- ▸ **Consume** automations easily and on-demand.

Create ▸ → Operate ▸ → Consume ▸

Content creation tools

- Ansible content tools
- Execution environment builder
- Automation content navigator
- Ansible Content Collections

Execution environments

Operational tools

- Private automation hub
- Automation controller
- Automation mesh
- Platform Operators

Business Tools and Analytics

- Red Hat Insights for Ansible
- Automation services catalog

Red Hat

Automate the deployment and management of automation

Your entire IT footprint

Do this...

| Orchestrate | Manage configurations | Deploy applications | Provision / deprovision | Deliver continuously | Secure and comply |

On these...

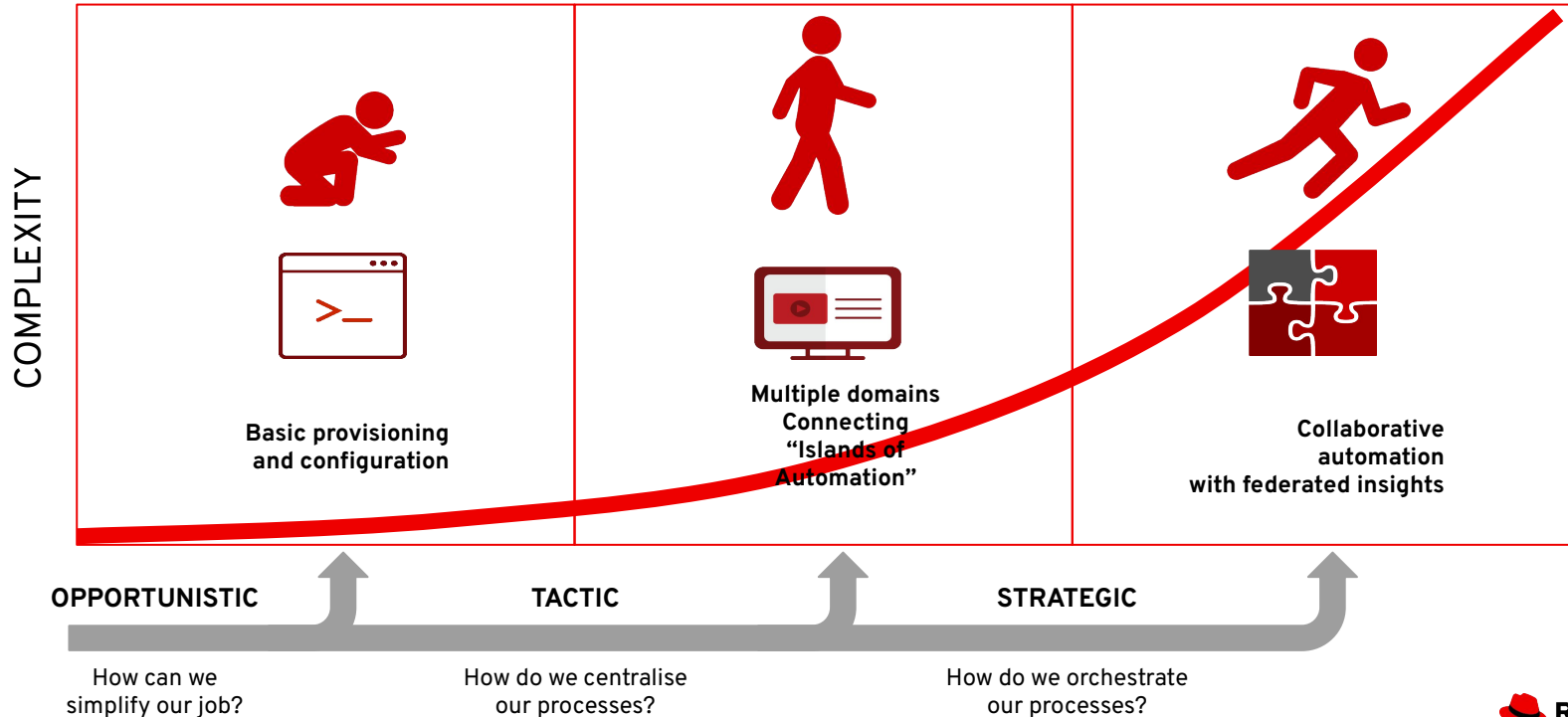| Firewalls | Load balancers | Applications | Containers | Virtualization platforms |
| Servers | Clouds | Storage | Network devices | And more ... |

# Start small.....Think Big

SCALE/MATURITY

**Basic provisioning
and configuration**

**Multiple domains
Connecting
"Islands of
Automation"**

**Collaborative
automation
with federated insights**

OPPORTUNISTIC

TACTIC

STRATEGIC

How can we
simplify our job?

How do we centralise
our processes?

How do we orchestrate
our processes?

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Leverage on partner ecosystem to automate different technologies
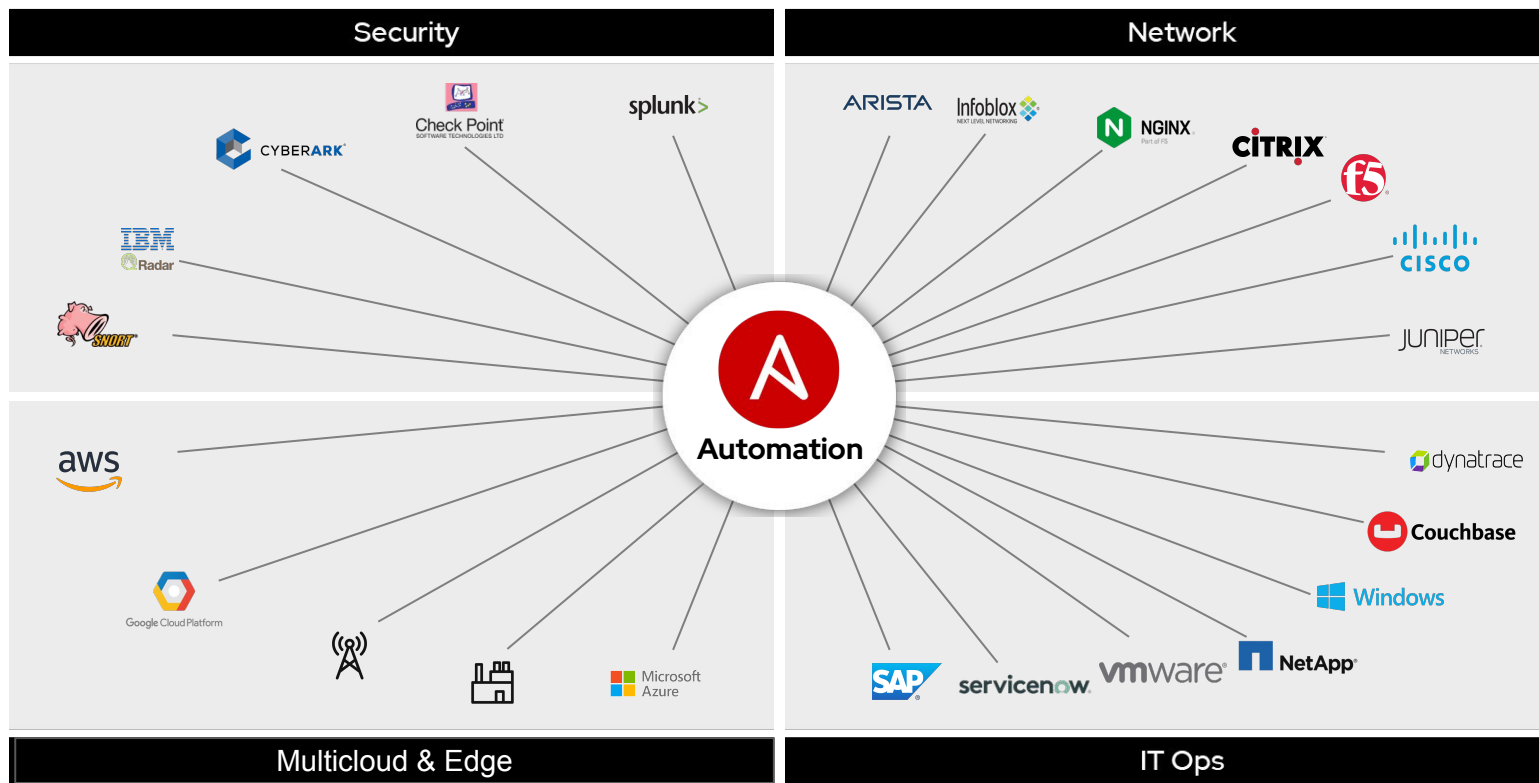
Start Small

Quick automation victories for IT engineers
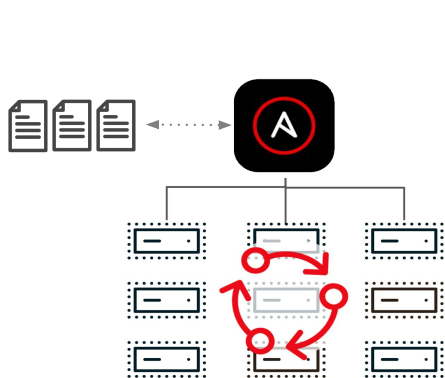
## Patching Orchestration

Standardize your patching process

• Orchestrate the E2E patching process on different technologies vendors

• Reduce effort and timing, manage the risks

• Produce Documentation and reporting
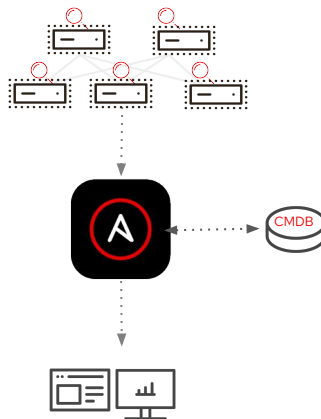
Automation Discovery & Gather

Use Ansible facts to gain information

• Complete view of you environments (configurations, versions, patches)

• Produce Documentation and reporting
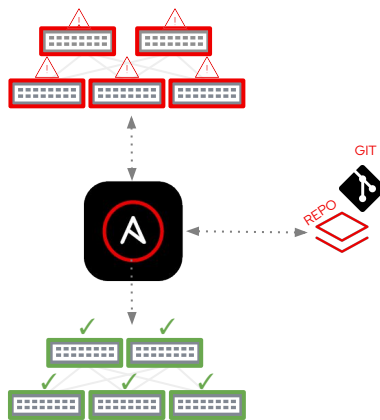
• Enrich and update CMDB infos
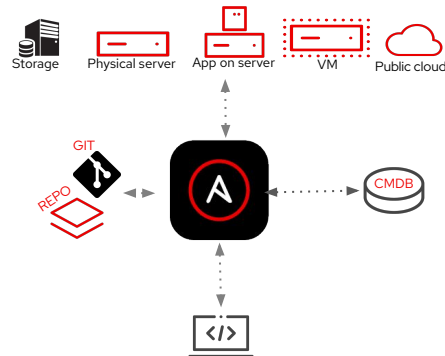
Provisioning

Provisioning from a single point

• Standardize your infrastructure provisioning

• Remove human errors and reduce time
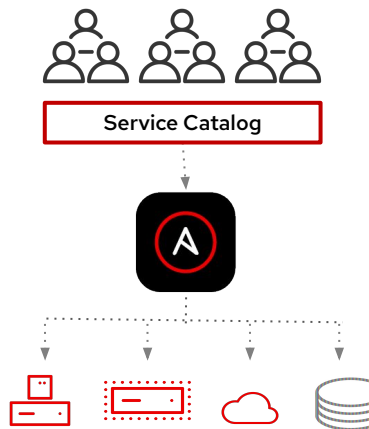
• Integrate with ITSM tools

Think Big

Institutionalizing automation into your organization

DR Sanity Check & Restart

Address Sites Outage quickly

- Drastically reduce RTO
- Ensure correct restart of core services
- Simulate and dry run disaster recovery scenarios automatically

Automation As A Service

Automates tasks for a full E2E delivery

- Automation catalog for internal/external user
- Built-in approval strategies
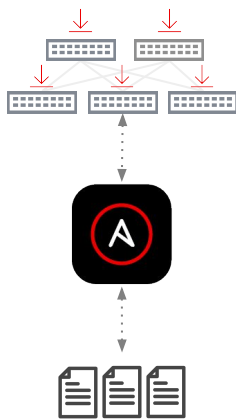- Single panel to control and manage your enterprise automations
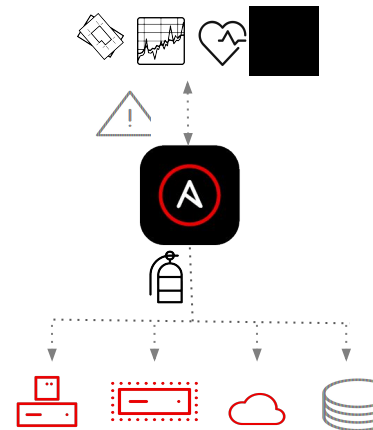
Event Driven Automation

Ansible to automate remediation

- Execute proactive and reactive remediation workflows
- Interact and retrieve information from external systems
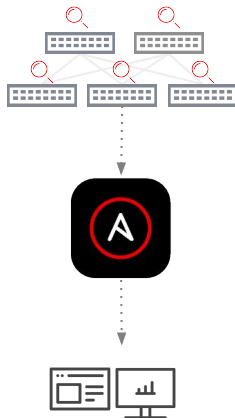- Reduce RTO and operational activities

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Start Small

Quick automation victories for network engineers

Config Backup and Restore

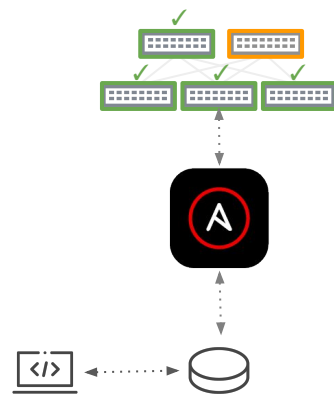**Ubiquitous first touch use case**

• Gain confidence in automation quickly

• First steps towards network as code

• Quickly recover network steady state

Dynamic Documentation

Use Ansible playbooks to gain information and documentation

• Dynamic Documentation and reporting
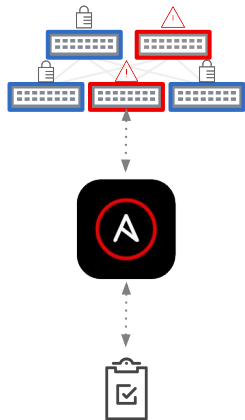
• Understand your network

Config Management

Focus on high yield victories

• Automate VLANs, ACLs and SNMP config

• Introduce source of truth concepts

• Enforce Configuration policy

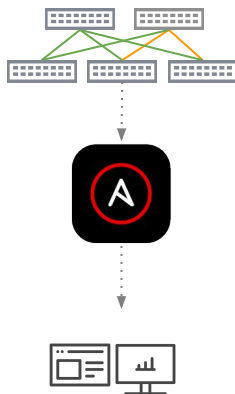Red Hat

Think Big

Institutionalizing automation into your organization

## Network Compliance

Respond quickly and consistently

- Security and config compliance for network
- Remove human error from security responses
- Enforce Configuration policies and hardening

Operational State Validation

Going beyond config management

- Parsing operational state to structured values
- Schema validation and verification
- Enhance operational workflows
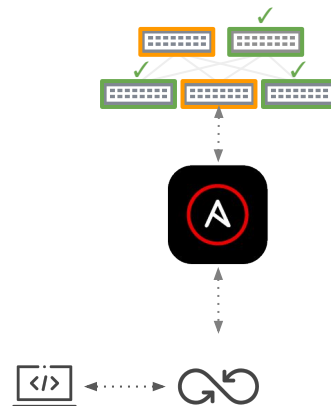
Automated NetOps

Infrastructure as code

- Data centric automation
- Deploy configuration pipelines
- GitOps for Network Automation

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What's Ansible security automation?

DESIGNED TO ORCHESTRATE THREAT RESPONSE ACROSS SECURITY DOMAINS

- Expansion of Ansible as the Enterprise automation platform

- Integrates & orchestrates multiple classes of security solutions

- Provides modules, roles and playbooks to support security use cases across those solutions

- **NOT** a security solution
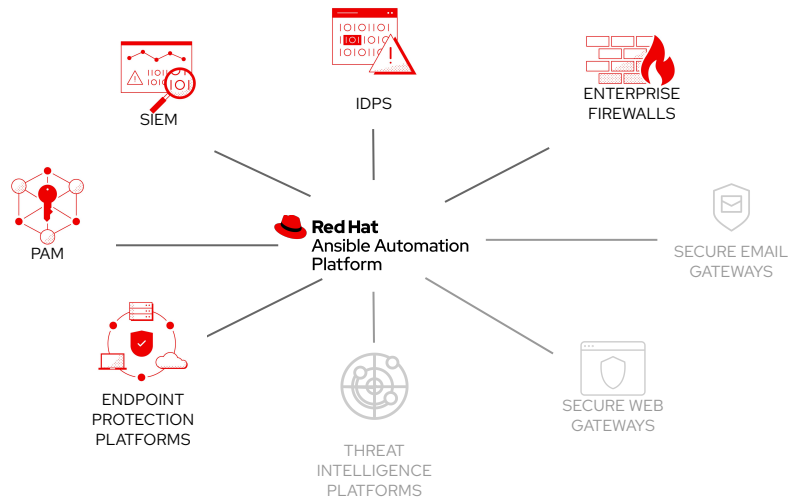
Security use cases

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

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Extend the Automation Everywhere

Automate at a global scale

Simple, flexible and reliable way to scale automation of large inventories across diverse network topologies and platforms.
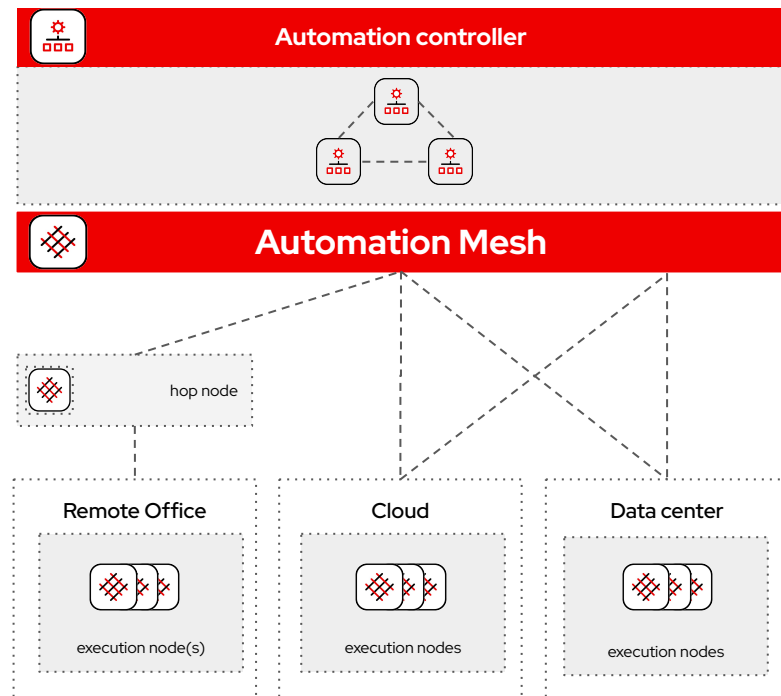
Distributed overlay network

Overlay network which eases distributing automation execution

Establishes peer-to-peer connections between execution nodes across existing networks

Flexible architecture

Flexible architecture offers more design choices compared to isolated nodes

Execution node health

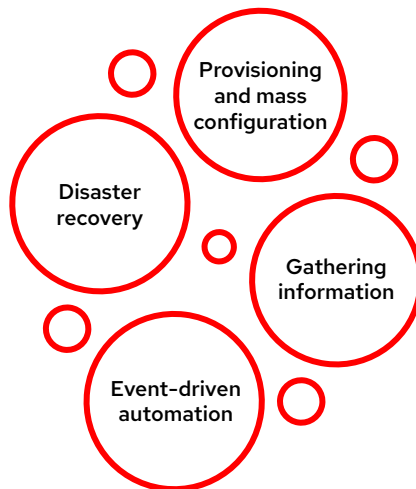Health checks performed on execution nodes

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

Use cases

Provisioning and mass configuration

Disaster recovery

Gathering information

Event-driven automation

Example industries

Transportation and logistics
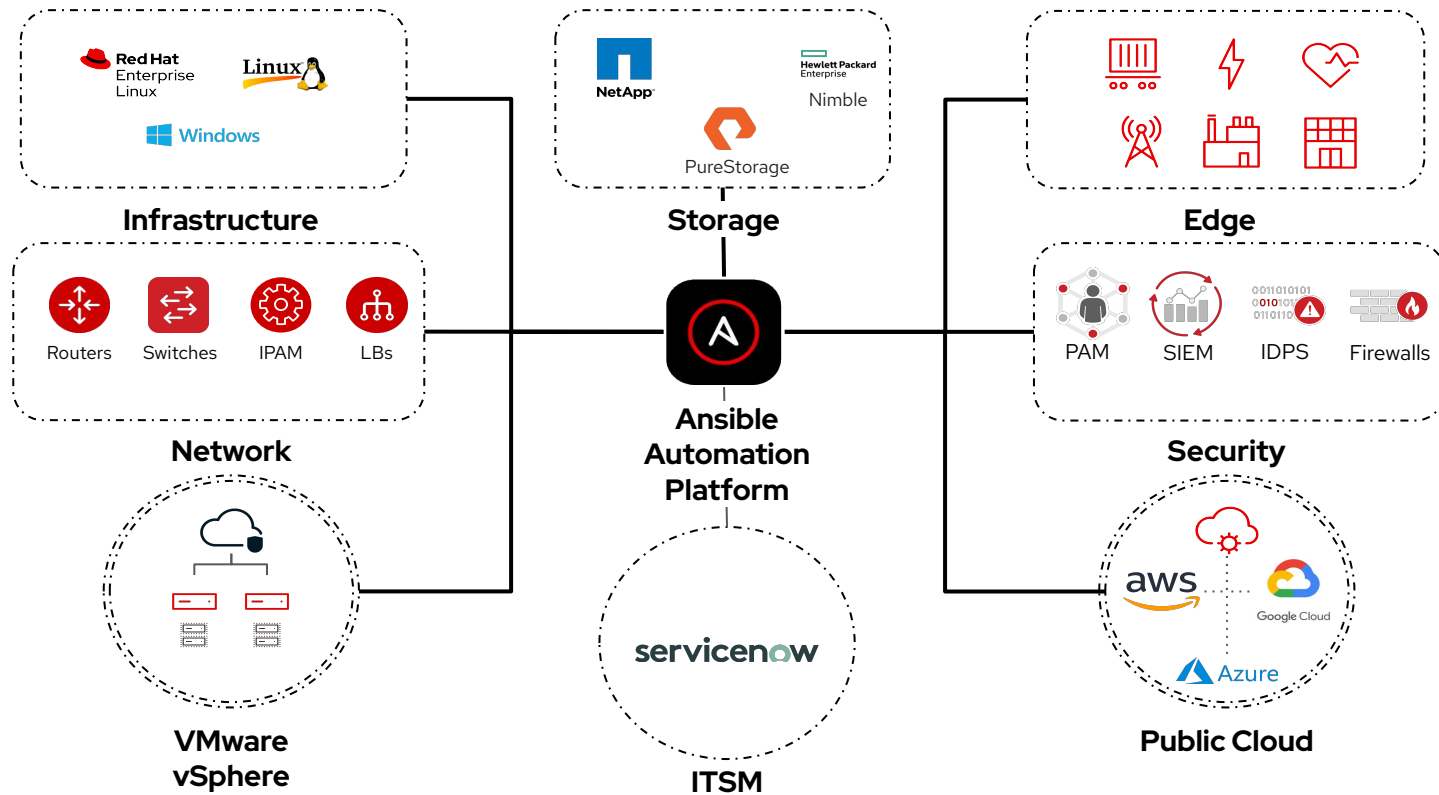
Energy

Healthcare

Telco

Manufacturing

Remote office

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One single platform to build your automation strategy

Thank you

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