Red Hat
Ansible Automation
Platform

Red Hat
Satellite

Automate Satellite Workshop

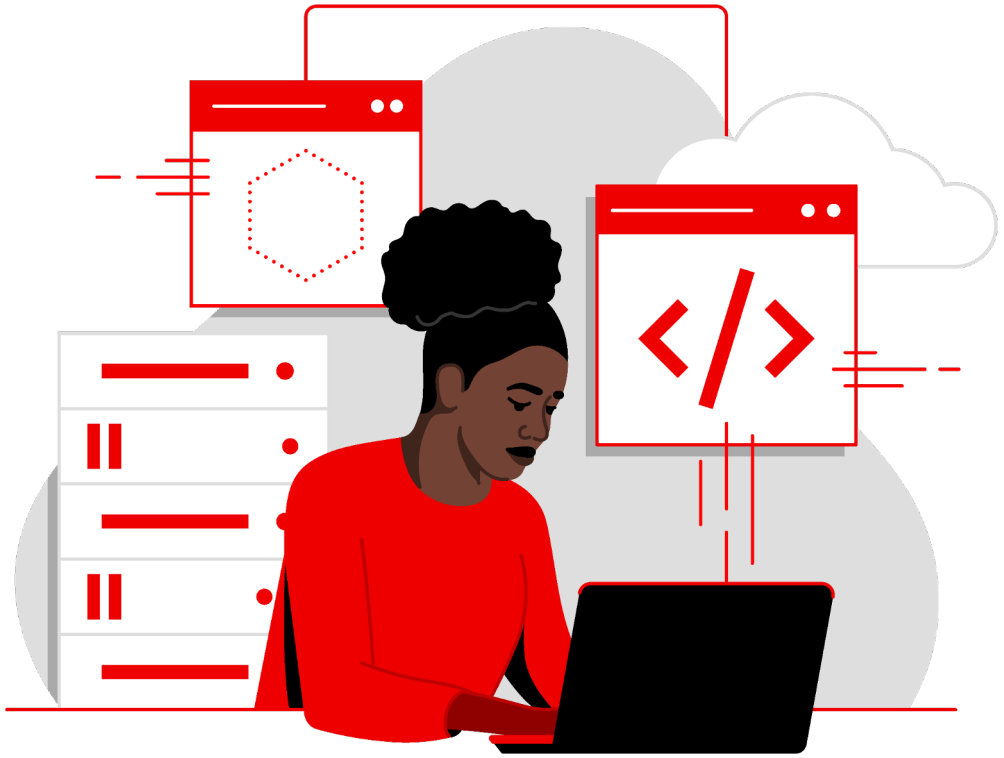
Automate Satellite for System Administrators and Operators

Red Hat

New in Satellite 6.15

- **Security hardening**
  - Can now install & run Satellite on a STIG-hardened RHEL 8 system
- **Performance improvements**
  - Faster web UI operations with new caching backend
  - Inter-Satellite Sync (ISS) now has 3-15x faster imports & exports
- **UI improvements**
  - **End of life banner to notify administrators that Satellite instance is near end of life and provide guidance for next steps.**
  - **New search function in the WebUI to find the feature you need.**
  - **Automatic activation key population.**
- **Webhook improvements**
  - **Improved error handling.**
  - **New capsule sync success and failure events.**

Technology Previews



- **OpenShift Virtualization plugin**
  - You can provision virtual machines using the OpenShift Virtualization compute resource as a Technology Preview.
- **OVAL / CVE Reporting Support**
  - Satellite now includes the ability to scan systems for vulnerabilities using the OVAL standard data feed provided by Red Hat.

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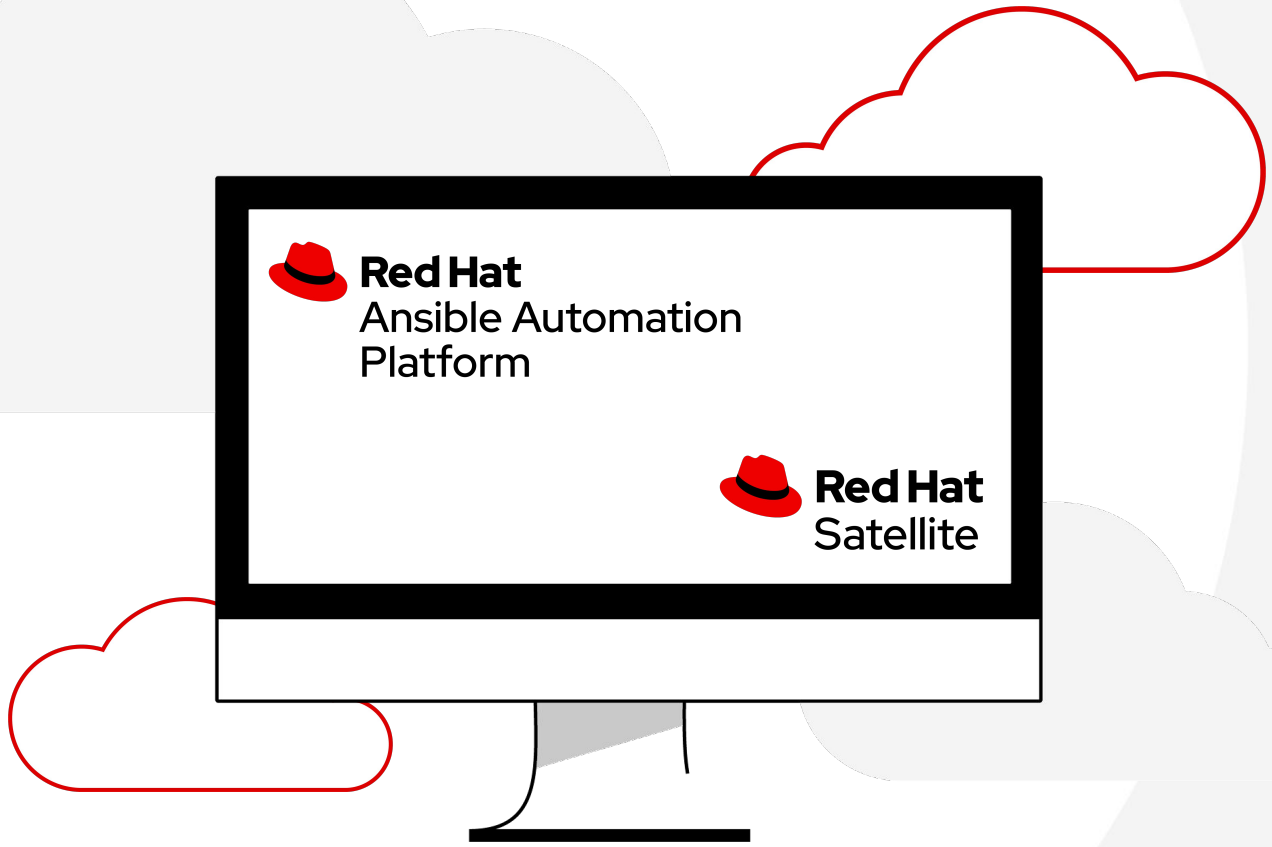

What you will learn

- Introduction to Automation with Satellite
- Workshop setup & walkthrough
- Compliance & Vulnerability Management
- Patch Management / OS
- CentOS to RHEL Conversion w/ App Stack
- Introduction to Red Hat Insights

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Introduction

Topics Covered:

- Automation and Satellite
  - Red Hat Ansible Automation Platform
  - Red Hat Satellite

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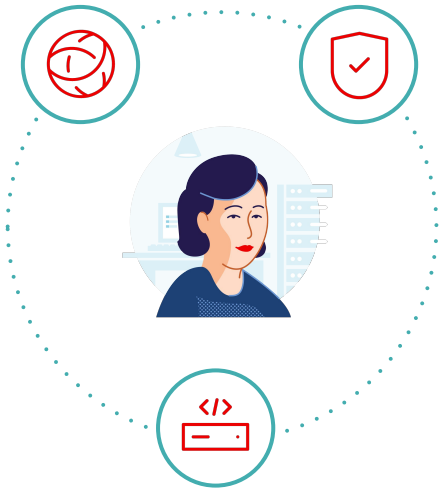
Many organizations share the same challenge

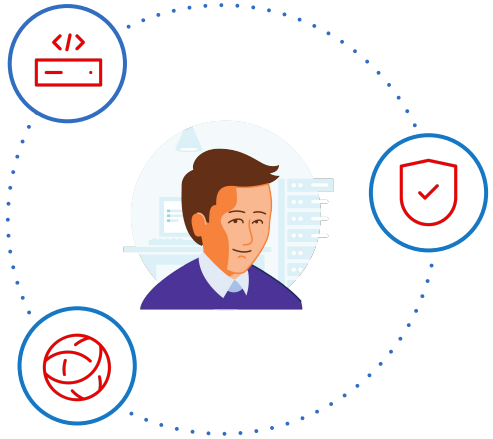
Too many unintegrated, domain-specific tools



Network ops

↓

Proprietary vendor-supplied, automation



SecOps

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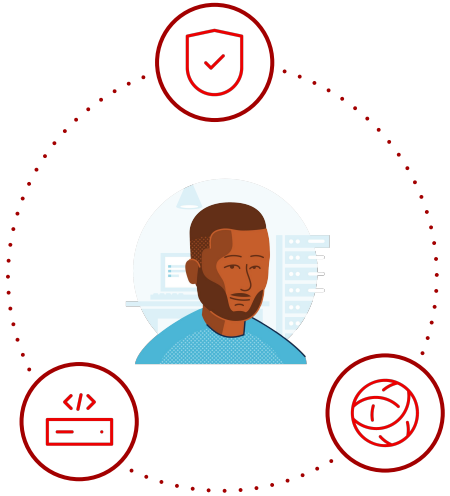
DIY script automation



Devs/DevOps

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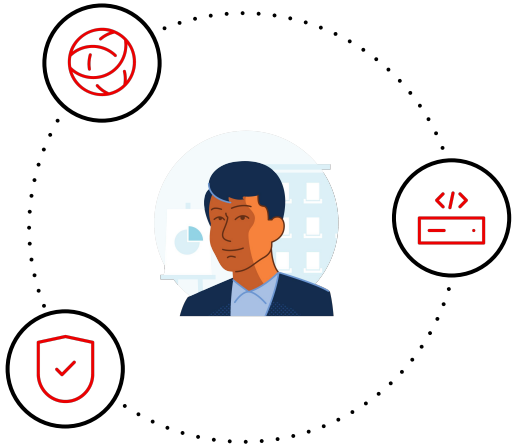
Ansible in local silos



IT ops

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Configuration management tooling

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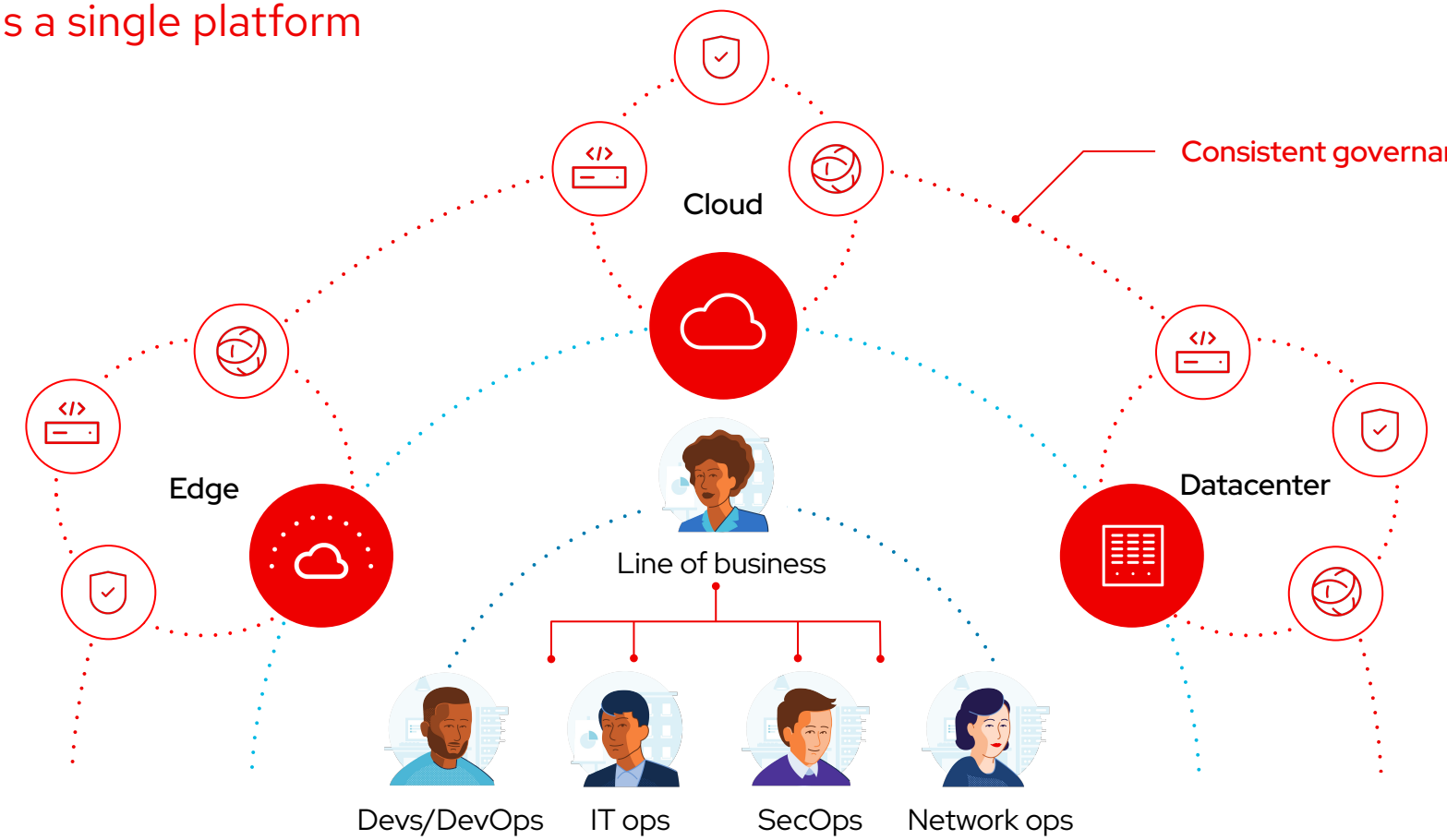
Break down silos

Different teams a single platform



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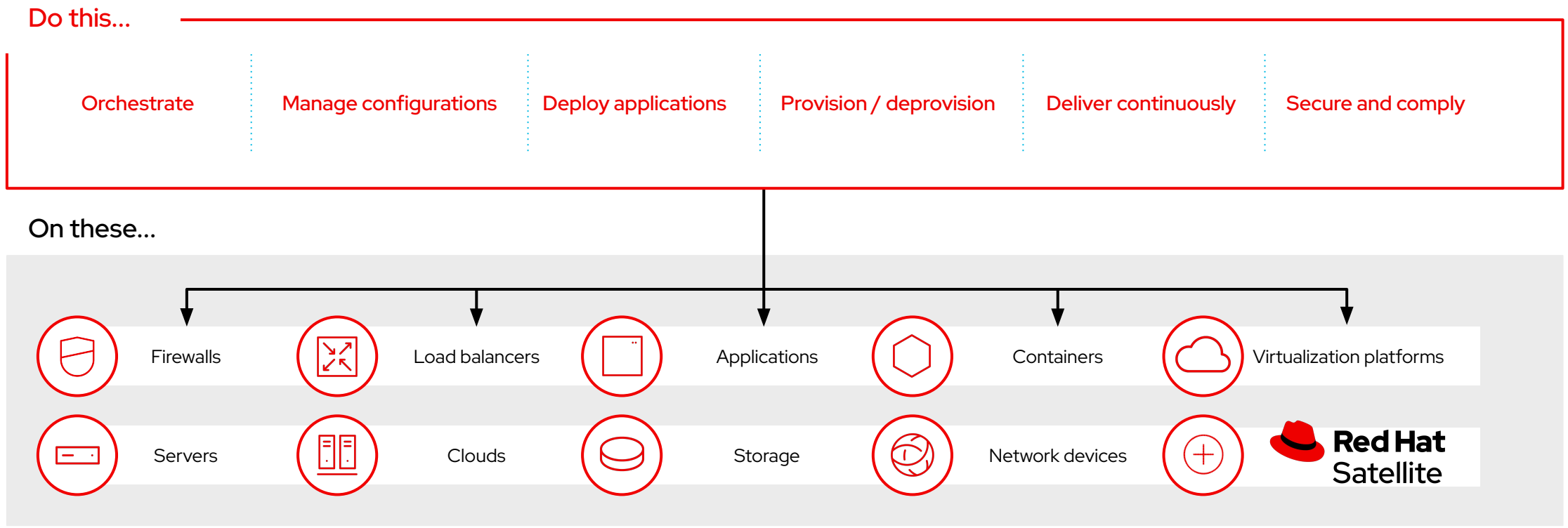
Automate the deployment and management of automation

Your entire IT footprint



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Red Hat Automation and Satellite

Life-cycle Management, Automated Operations, and Predictive Analytics

Red Hat Satellite

Unified life-cycle management

- Content and patch management
- Small- and large-scale operations
- Standardized operating environment (SOE)

Red Hat Ansible Automation Platform

Centralized automation governance

- Centralized control
- Team and user delegation
- Audit trail

Red Hat Insights

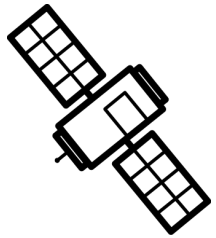
Proactive, automated resolution

- Continuous insight
- Verified knowledge
- Proactive resolution

Red Hat Enterprise Linux

Red Hat

Working together to manage your Red Hat environment

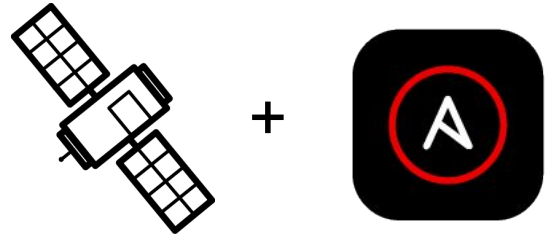


Satellite can ....

- Manage content repositories
- Manage content lifecycles
- Patch RHEL servers
- Provision RHEL servers physical, virtual or cloud

AAP can ....

- Orchestration across platforms
- Automate all the things
- Integrate multiple tools and workflows



Together Satellite and AAP can ...

- Orchestrate provisioning
- Automate patching
- Full cross platform management
  - * next slide

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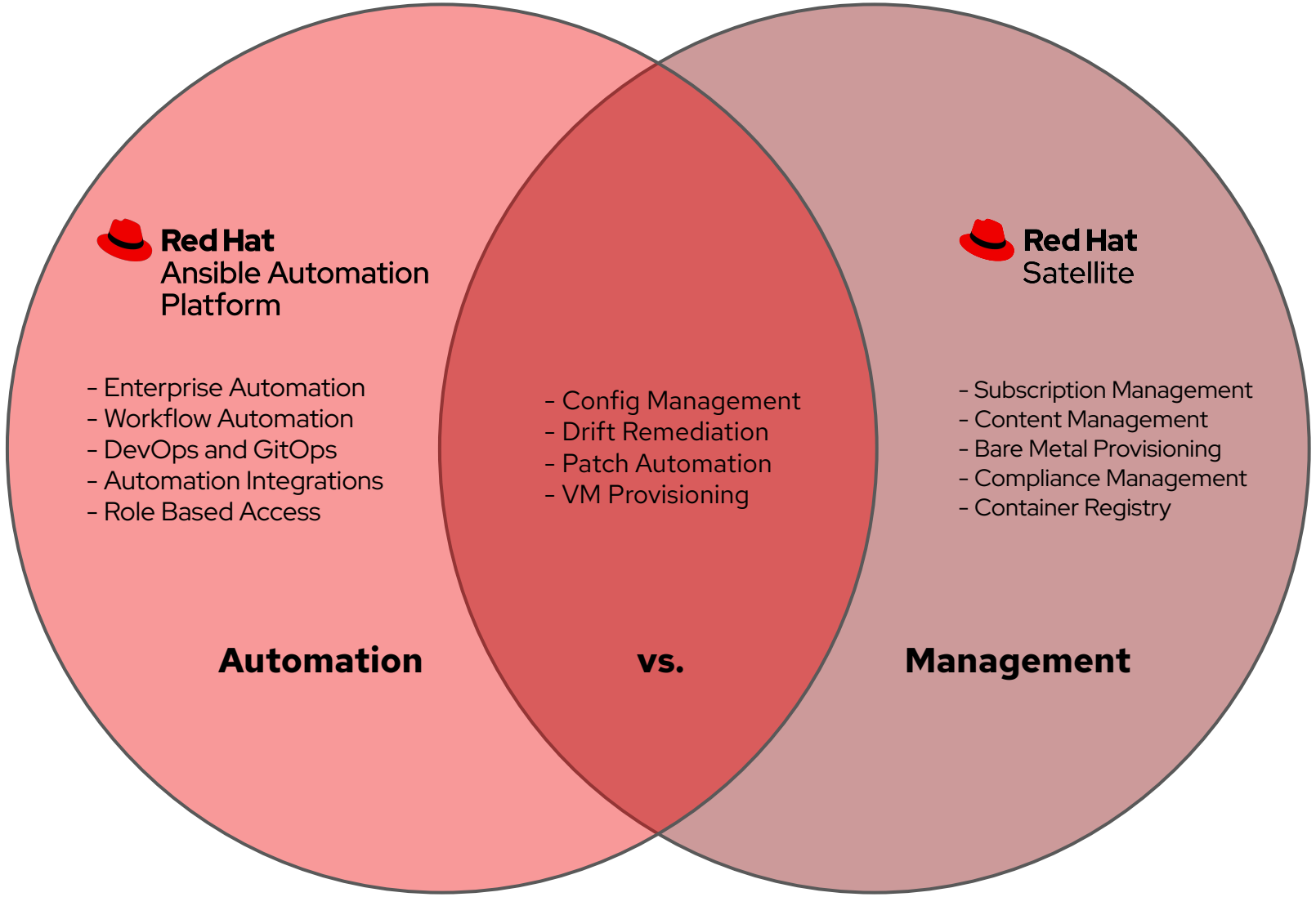
Red Hat
Ansible Automation
Platform
- Enterprise Automation
- Workflow Automation
- DevOps and GitOps
- Automation Integrations
- Role Based Access
Automation
- Config Management
- Drift Remediation
- Patch Automation
- VM Provisioning
vs.
Red Hat
Satellite
- Subscription Management
- Content Management
- Bare Metal Provisioning
- Compliance Management
- Container Registry
Management

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Red Hat
Ansible Automation
Platform

Red Hat
Satellite

Full Cross-Platform Management

- Hybrid Cloud Dynamic Inventory
- Credential Management
- Orchestrated Workflows
- Lifecycle Patch Management
- Production Release Approvals
- Self Service Automation
- Role Based Access Control
- Red Hat Linux Automation
- Red Hat Satellite Automation
- Application startup/shutdown
- Network Services (FW/LB/DNS)
- ITSM Change Management
- Server Reboots
- Kernel Upgrades
- Service Catalog Integration
- HA/Cluster Patching
- Backups/Snapshots
- Multi-OS Patching (Linux\Unix\Windows)

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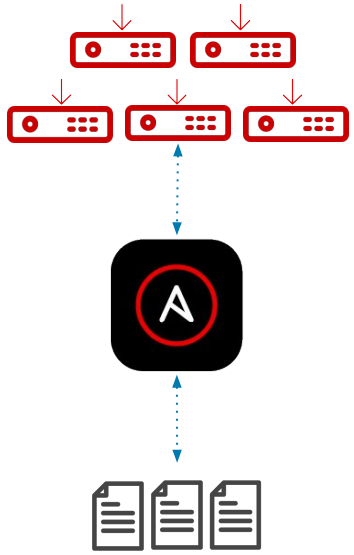
Start Small

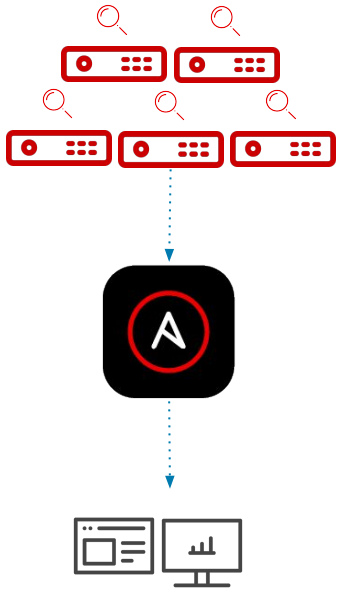
Quick automation victories for systems operators



Config Backup and Restore

Ubiquitous first touch use case

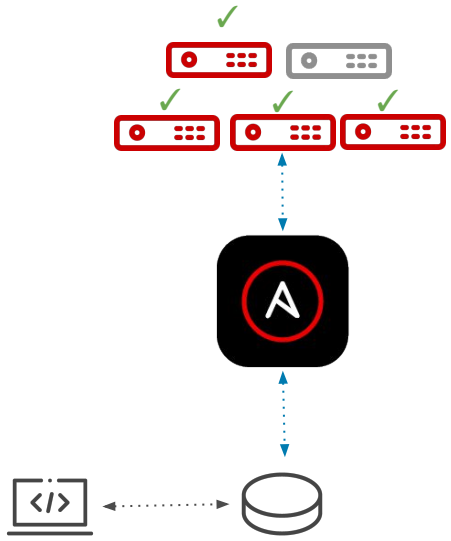
- Gain confidence in automation quickly
- First steps towards infra as code
- Quickly recover system state



Dynamic Documentation

Use Ansible facts to gain information

- Read-only, no production config change
- Dynamic Documentation and reporting
- Understand state of systems



Scoped Config Management

Focus on high yield victories

- Automate package management and config
- Introduce source of truth concepts
- Enforce Configuration policy

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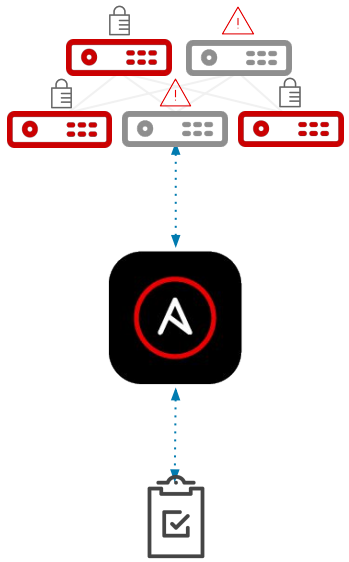
Think Big

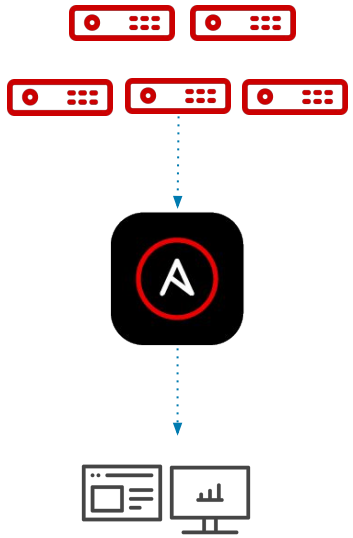
Institutionalizing automation into your organization



System Compliance

Respond quickly and consistently

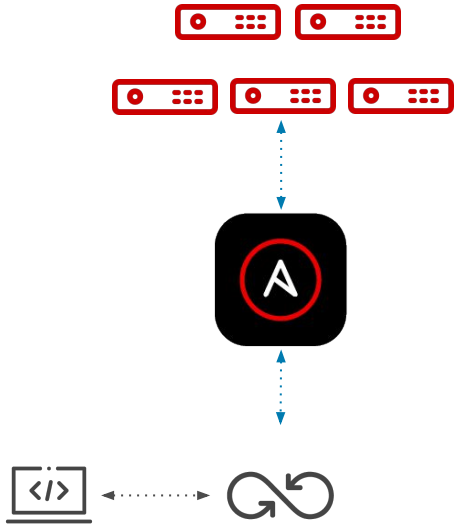
- Security and config compliance for systems
- Remove human error from security responses
- Enforce Configuration policies and hardening



Operational State Validation

Going beyond config management

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



Automated SysOps

Infrastructure as code

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

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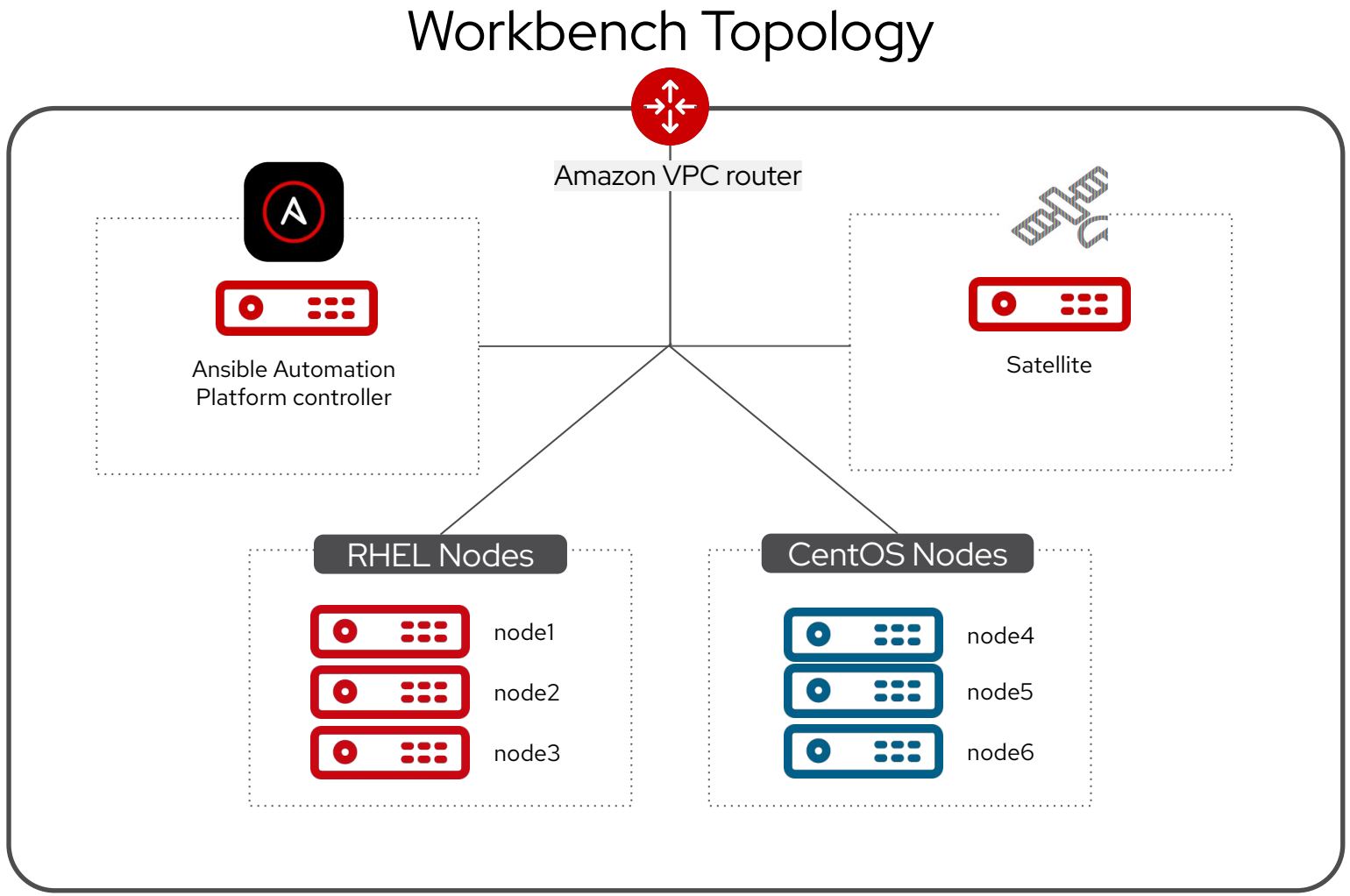
The lab environment today

- **Practice what we preach**
  https://github.com/ansible/workshops
- **Learn with the real thing**
  - **Red Hat Ansible Automation Platform**
  - **Red Hat Satellite**
- **Red Hat Enterprise Linux**
- **CentOS Linux**



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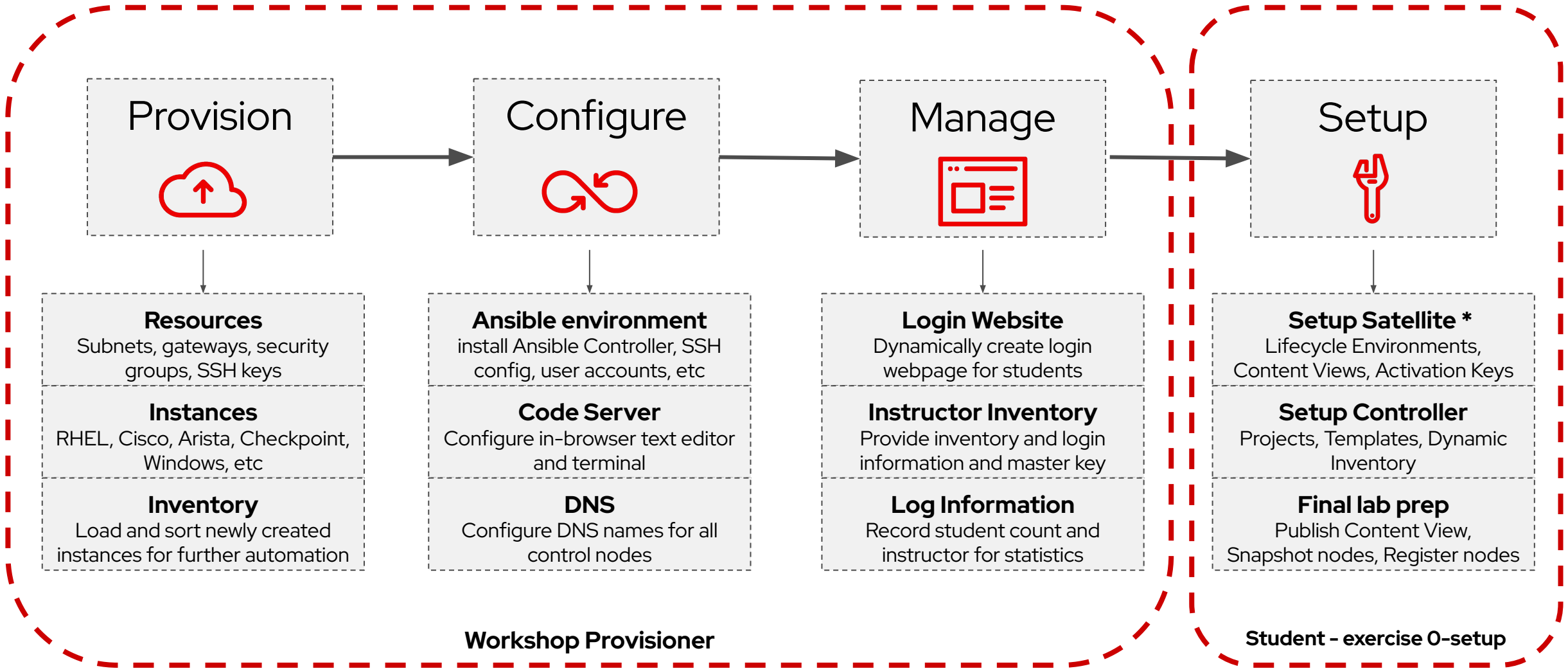
How does it work?



* Completed during workshop deployment

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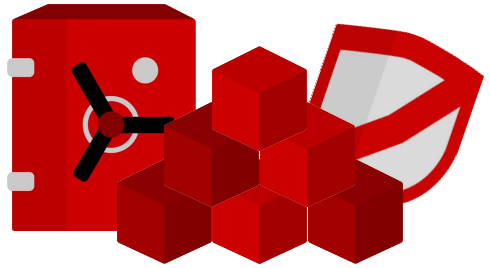
Compliance management adds complexity



Regulatory and industry standards

- National Institute of Standards and Technology (NIST)
- National Cybersecurity Agency of France (ANSSI)
- Health Insurance Portability and Accountability Act (HIPAA)
- Federal Risk and Authorization Management Program (FedRAMP) and more

Compliance and security artifacts creation

- System security plans
- Security compliance audit documentation
- Gap analysis reports
- Audit and remediation baselines

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Security automation with OpenSCAP

Red Hat's security scanner is included with Red Hat Enterprise Linux and Red Hat Satellite

Validated and certified tool
National Institute of Standards and Technology (NIST) certified Security Content Automation Protocol (SCAP) scanner with National Checklist content

System and container scanning
Known vulnerability and security policy compliance scanning

Automation support
Red Hat® Ansible® Automation remediation Playbooks provided and supported by Red Hat

Customizable content
Content customization through SCAP Workbench graphical interface

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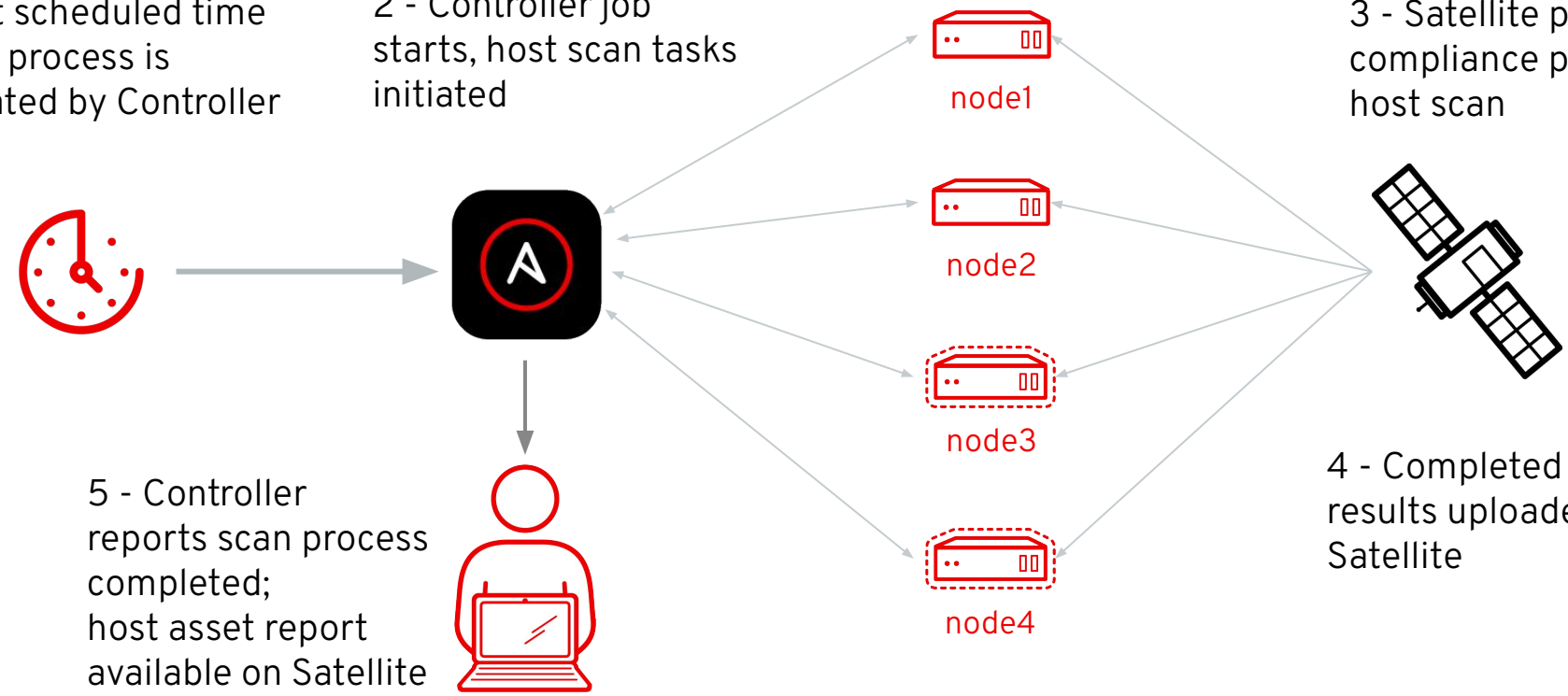
OpenSCAP Workflow

Using Ansible Automation Platform to automate OpenSCAP in your environment

1 - At scheduled time scan process is initiated by Controller

2 - Controller job starts, host scan tasks initiated



3 - Satellite provides compliance policy for host scan

4 - Completed scan results uploaded to Satellite

5 - Controller reports scan process completed;
host asset report available on Satellite

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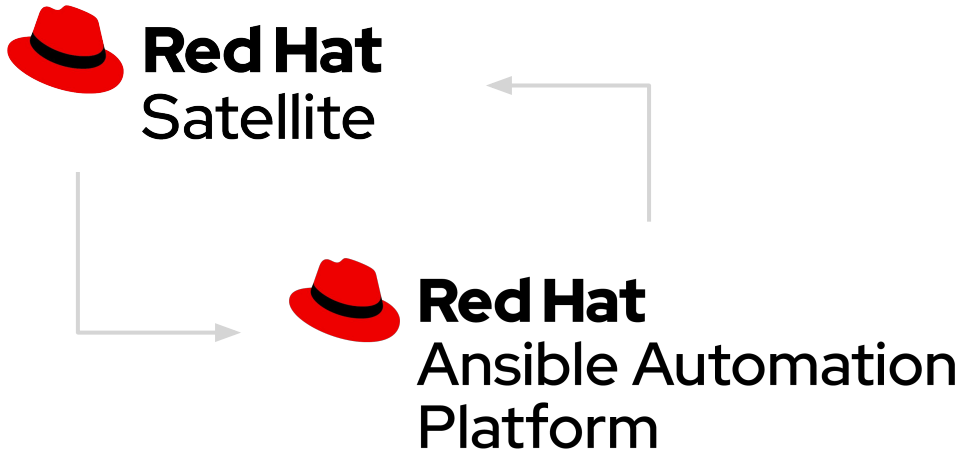
Satellite and Ansible Controller Integration

Documented best practices to help optimize use of both products



Dynamic Inventory
Allows Ansible Controller to use Satellite as a dynamic inventory source

Satellite Content Collection
Ansible modules and roles for automating administrative tasks in Red Hat Satellite

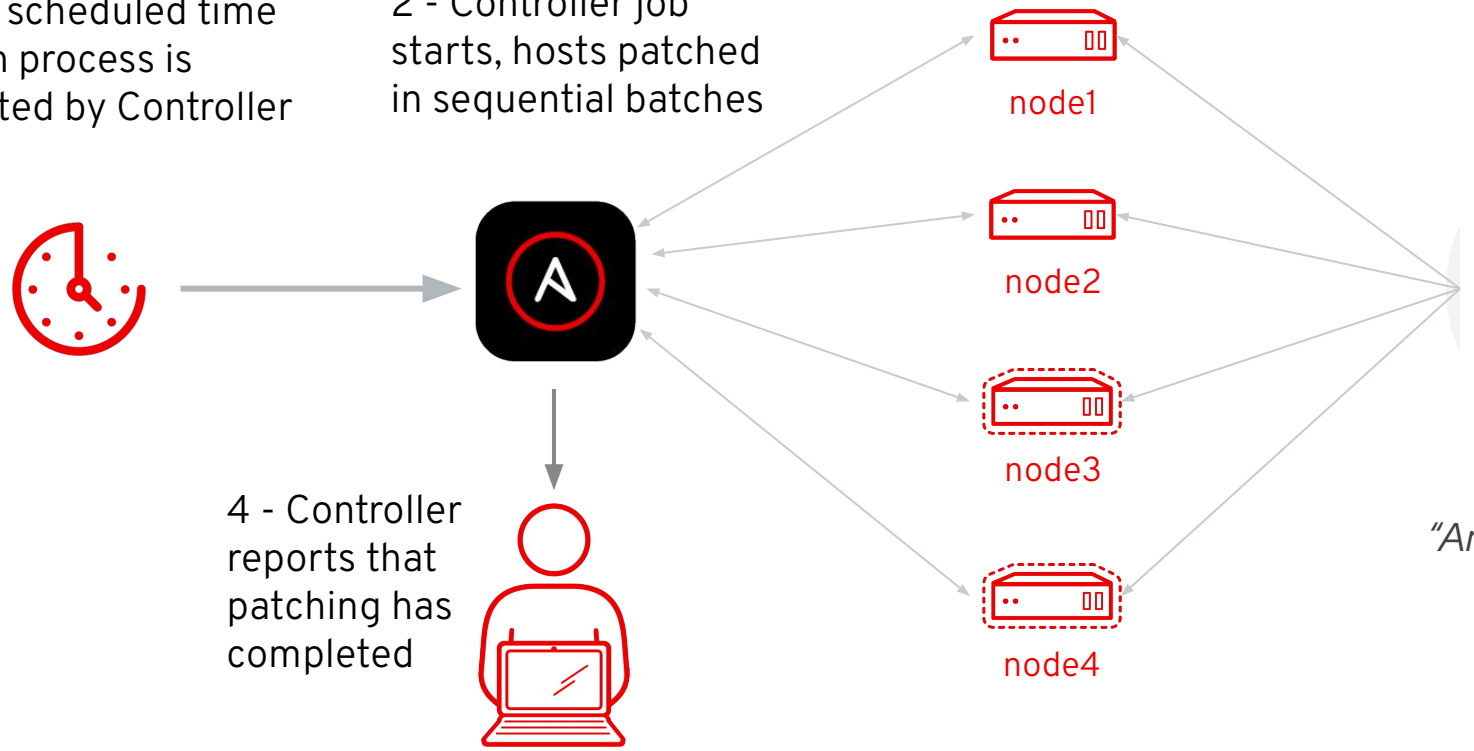
Post-Provision
Provides systems provisioned via Satellite a means to “callback” to Ansible Controller for post-provisioning playbook runs

Automated Patching Solution

Using Ansible Automation Platform to automate patches through your environment

1 - At scheduled time patch process is initiated by Controller

2 - Controller job starts, hosts patched in sequential batches



3 - Satellite provides content specific to host

4 - Controller reports that patching has completed

"Ansible reduced the time required for regular patching by 75%"

– Global Infrastructure Provider

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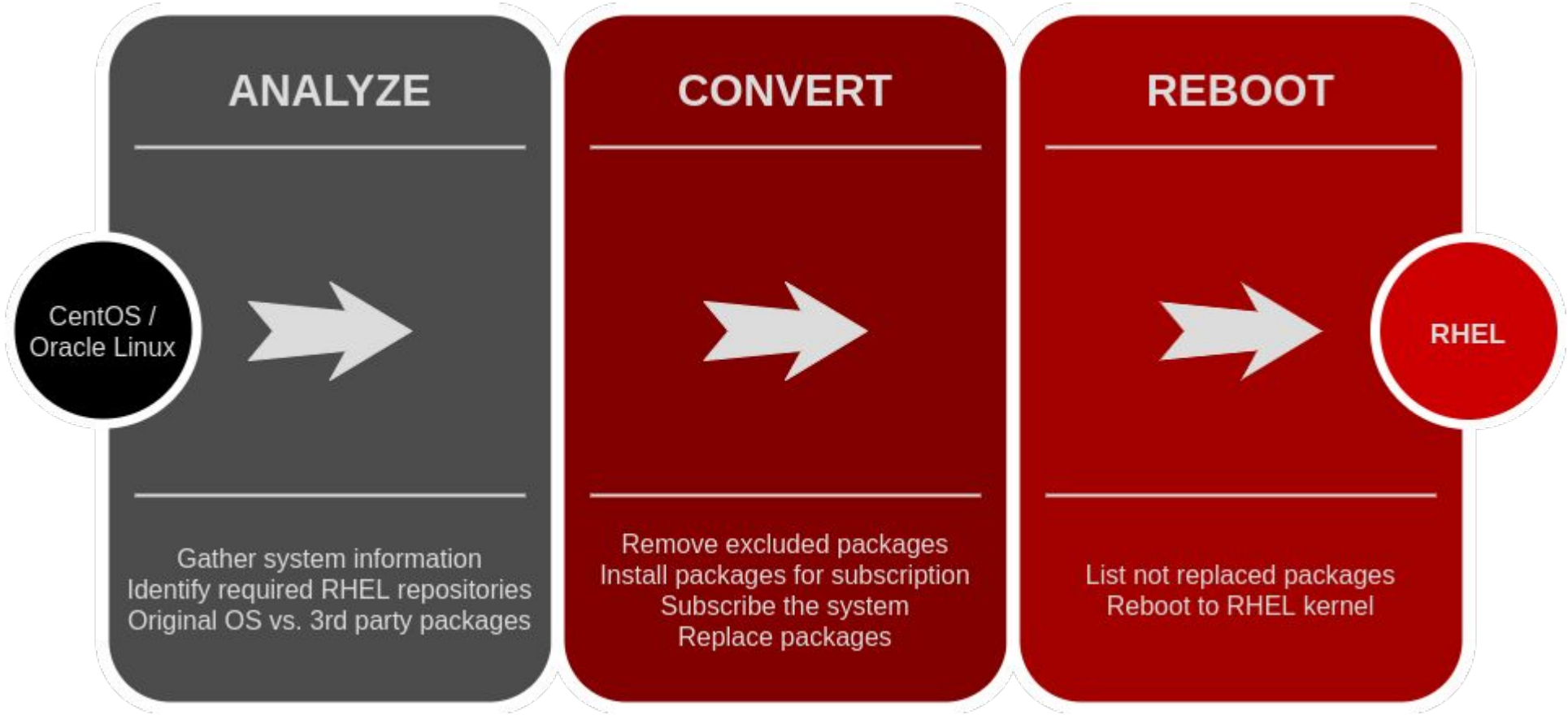
Steps of the migration



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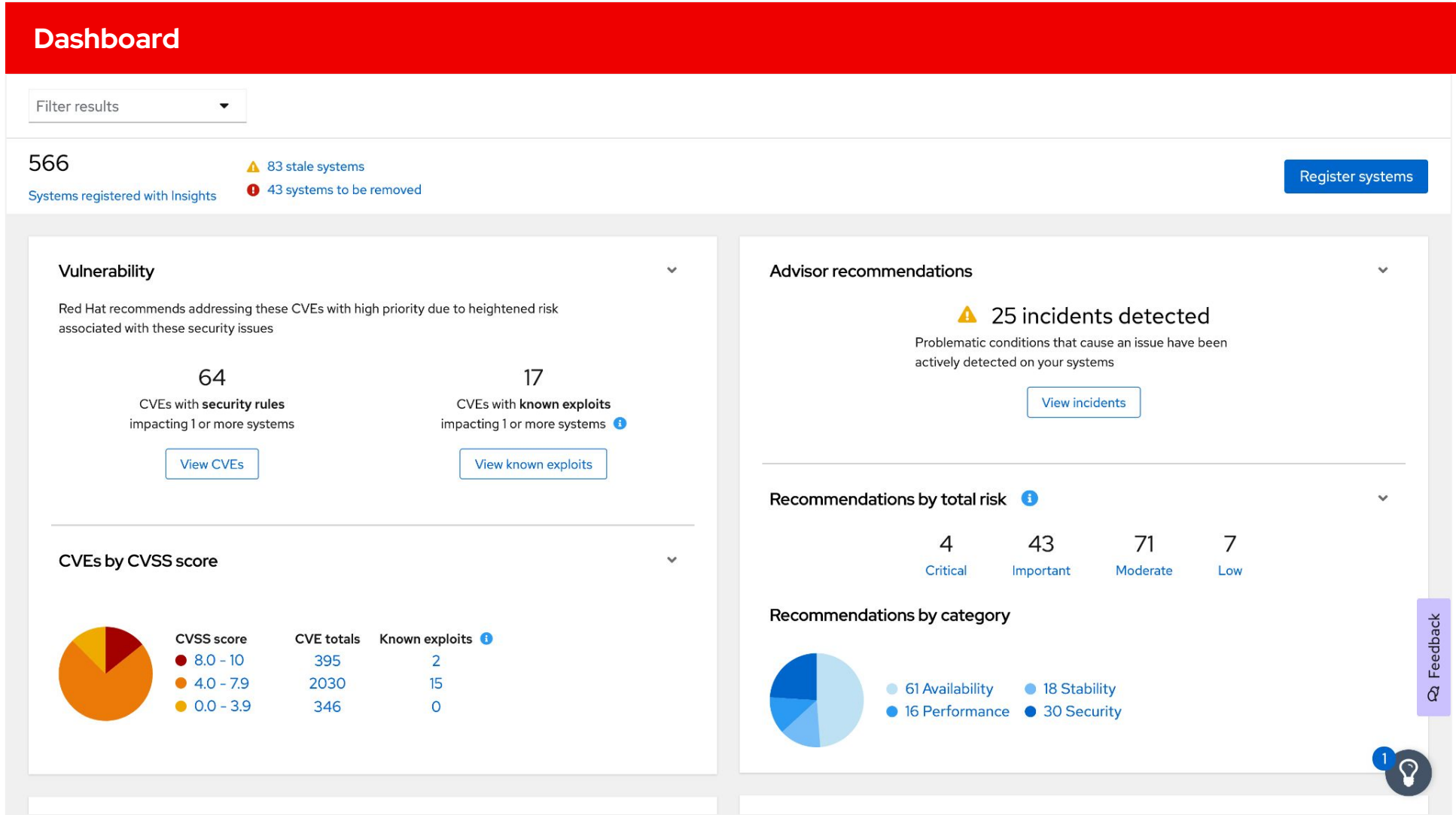
Dashboard
Filter results
566
Systems registered with Insights
83 stale systems
43 systems to be removed
Register systems
Vulnerability
Red Hat recommends addressing these CVEs with high priority due to heightened risk associated with these security issues
64
CVEs with security rules impacting 1 or more systems
View CVEs
17
CVEs with known exploits impacting 1 or more systems
View known exploits
CVEs by CVSS score
CVSS score
CVE totals
Known exploits
8.0 - 10
395
2
4.0 - 7.9
2030
15
0.0 - 3.9
346
0
Advisor recommendations
25 incidents detected
Problematic conditions that cause an issue have been actively detected on your systems
View incidents
Recommendations by total risk
4
Critical
43
Important
71
Moderate
7
Low
Recommendations by category
61 Availability
18 Stability
16 Performance
30 Security
Feedback
1

Vulnerability

Remediate common vulnerabilities and exposures (CVEs)

- Triage, prioritize, and remediate CVEs that impact your registered systems
- Threat intelligence
  - CVEs with known public exploits
  - Deep threat intelligence on specific high-profile branded CVEs
- Customize and triage CVEs based on your company's definitions of risk
- Customized reporting with the right dataset based on stakeholder profile
- Automate remediation via Ansible Automation playbooks for vulnerabilities

What's New - Q2 2022:

- RBAC improvements

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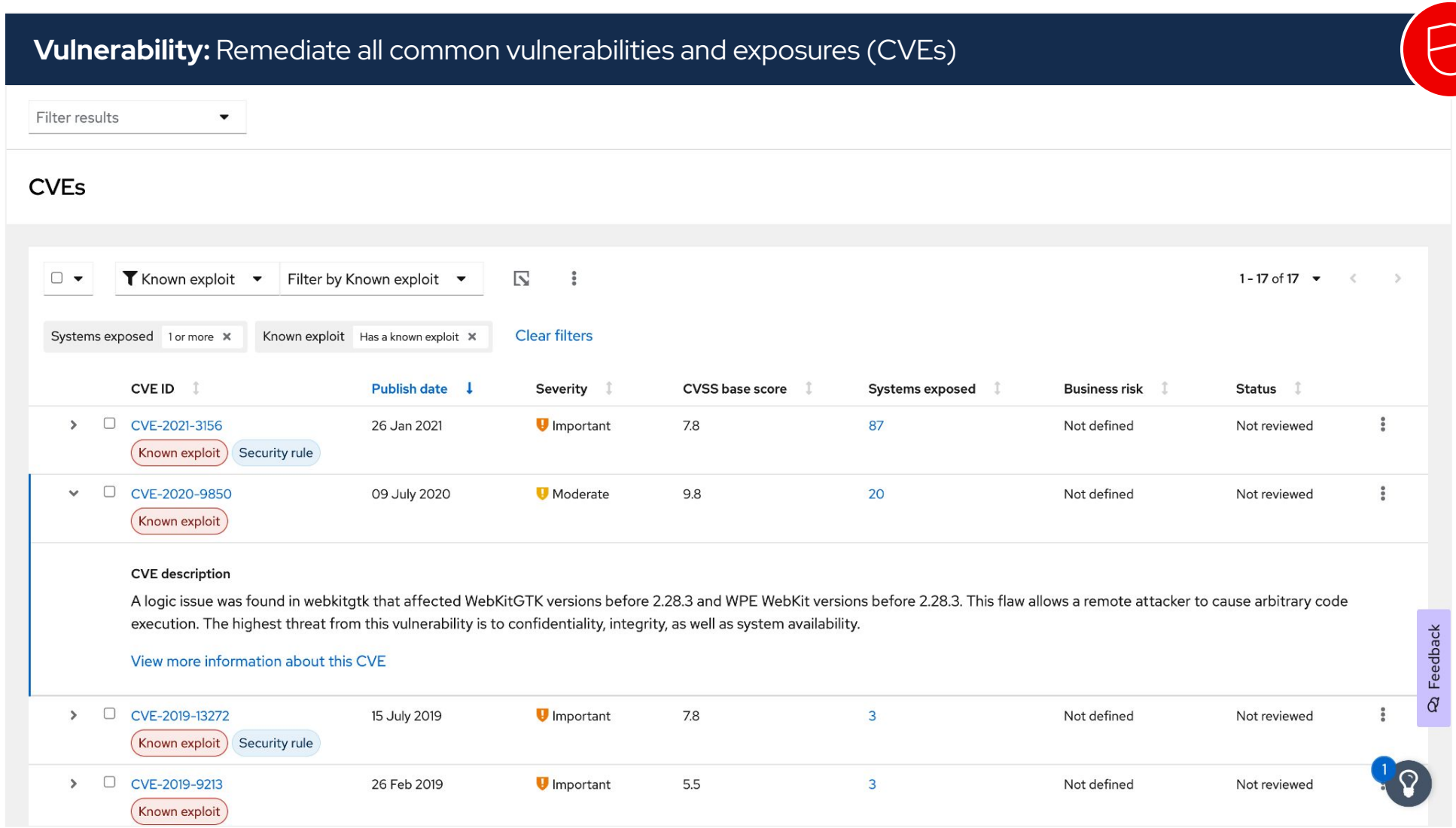
Vulnerability: Remediate all common vulnerabilities and exposures (CVEs)

Security



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Next Steps

SATELLITE RESOURCES

Red Hat Satellite Blog - https://satelliteblog.redhat.com/
Red Hat Satellite Product page
Red Hat Satellite Customer Portal
Red Hat Satellite Documentation

SATELLITE TRAINING AND VIDEOS

RH053: Satellite Technical Overview also available on Udemy
RH403: Red Hat Satellite 6 Administration
Satellite 6.5 Reporting Engine Video: https://www.youtube.com/watch?v=sBciejh1G80

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Thank you

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github.com/RedHatSatellite

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