Red Hat Insights

Red Hat Insights

Main Deck

Presenter's Name
Title

Presenter's Name
Title

Red Hat

Red Hat Insights assesses your Red Hat Enterprise Linux environment to help you **proactively identify and remediate threats**, avoiding outages, unplanned downtime and risks to security and compliance.

Red Hat

Agenda

- How Insights Helps You
- Red Hat Insights Capabilities
- How to configure Red Hat Insights
- Insights Services
- Insights Use Cases
- Architecture
- Resource and Next Steps

How Insights Helps You

Why Red Hat Insights?

Comprehensive analysis with Red Hat expertise

Continuous vulnerability alerts

Increased visibility to security risks

Simple remediation

Single, consistent management solution across on-premise, hybrid cloud, and public cloud.

Why Red Hat Insights?

Operational Efficiency

Comprehensive analysis with Red Hat expertise

Continuous vulnerability alerts

Increased visibility to security risks

Simple remediation

Single, consistent management solution across on-premise, hybrid cloud, and public cloud.

Security Risk Management

Red Hat

Red Hat Insights

Included with all Red Hat Enterprise Linux subscriptions

Buy

Red Hat Enterprise Linux

Get

Red Hat Insights

Red Hat

Users around the globe have seen the value of Insights

Red Hat Insights adoption is on the rise

450%

Increase in active Insights clients, from January, 2019 to August, 2020

Systems under management with Insights number in the hundreds of thousands.

Advisor (configuration) recommendations growth

600 recommendations at Summit, 2019

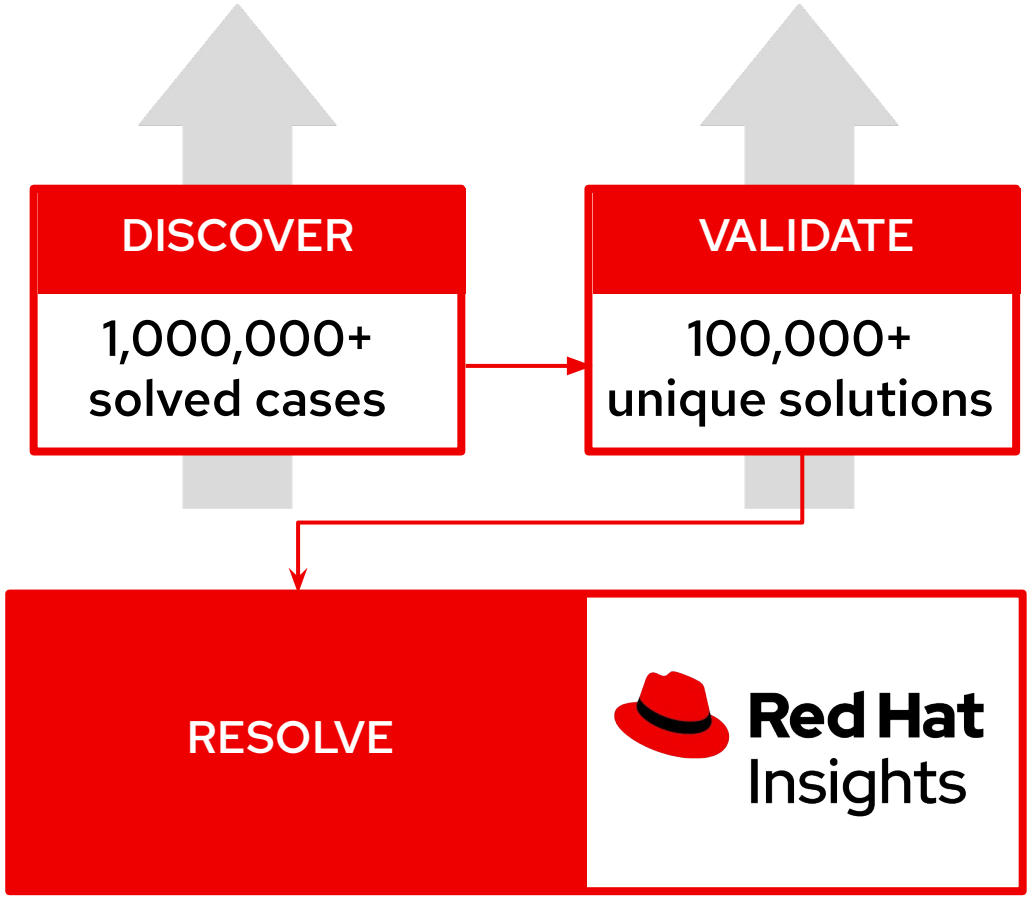
1,000+ recommendations August, 2020

Additional 100+K vulnerability checks

"Building servers that are **tuned, ready-to-go and more secure from day one** is a key need for our IT organization. Red Hat Enterprise Linux with Red Hat Insights gives us this capacity, **enabling us to deploy servers that are immediately usable** and meet our specific needs as they go live." - Steve Short, Kingfisher PLC

Red Hat

Value of experience



" 85% of critical issues raised to Red Hat® support are already known to Red Hat or our partners."

– RED HAT GLOBAL SUPPORT SERVICES

Continuous identification of new risks driven by unique industry data

Based on real-world results from millions of enterprise deployments

Red Hat

Modernized management with analytics and automation

96%	reduction in time to **detect** known risks to availability, performance, stability, and security
26%	reduction in administrator steps to **detect** these known risks
88%	less time to track **patch** status for all systems in environment, versus manual scripted workflow
1m 24s	to **discover** vulnerabilities in a 100-VM environment, versus over 15m when performed manually
91%	less task completion time to **address** a vulnerability
69%	reduction in time to detect a **policy** violation

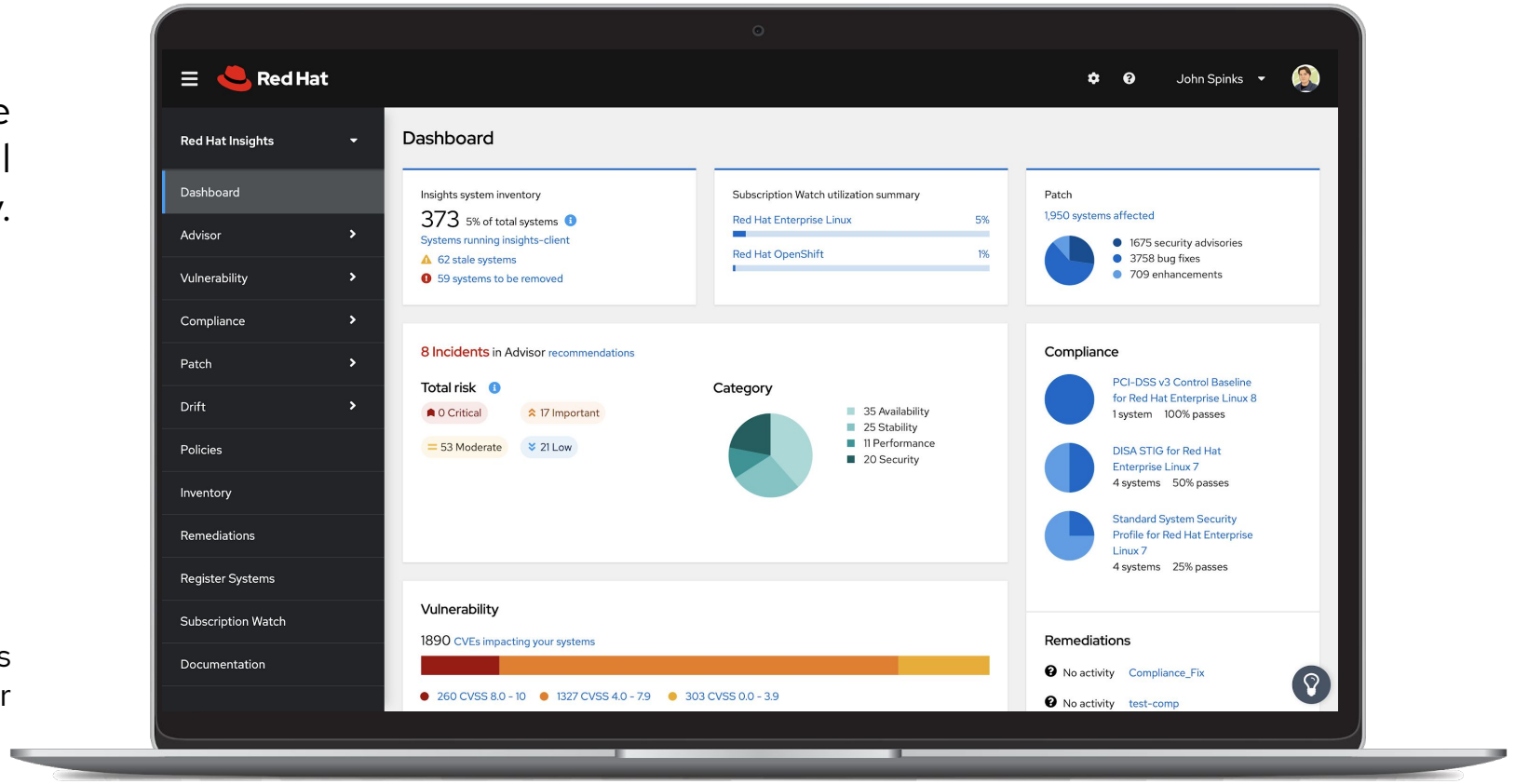
Source: Principled Technologies. "Save administrator time and effort by activating Red Hat Insights to automate monitoring" Sept 2020.

Red Hat

Red Hat Insights

Included with Red Hat Enterprise Linux subscription, now with more value

New and expanded services provide additional security and operational efficiency.



*Active RHEL subscriptions versions 6.4 & higher

Red Hat

Red Hat Insights
Dashboard
Advisor
Vulnerability
Compliance
Patch
Drift
Policies
Inventory
Remediations
Register Systems
Subscription Watch
Documentation

Dashboard

Insights system inventory

373 5% of total systems

Systems running insights-client

62 stale systems

59 systems to be removed

Subscription Watch utilization summary

Red Hat Enterprise Linux 5%

Red Hat OpenShift 1%

Patch

1,950 systems affected

1675 security advisories

3758 bug fixes

709 enhancements

8 Incidents in Advisor recommendations

Total risk

0 Critical

17 Important

53 Moderate

21 Low

Category

35 Availability

25 Stability

11 Performance

20 Security

Compliance

PCI-DSS v3 Control Baseline for Red Hat Enterprise Linux 8

1 system 100% passes

DISA STIG for Red Hat Enterprise Linux 7

4 systems 50% passes

Standard System Security Profile for Red Hat Enterprise Linux 7

4 systems 25% passes

Vulnerability

1890 CVEs impacting your systems

260 CVSS 8.0 - 10

1327 CVSS 4.0 - 7.9

303 CVSS 0.0 - 3.9

Remediations

No activity Compliance_Fix

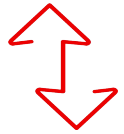
No activity test-comp

Overview of expanded Red Hat Insights services

Advisor
Availability, performance, and stability risk analysis

Vulnerability
Assess, remediate and report on Red Hat Enterprise Linux Common Vulnerability and Exposures (CVEs)

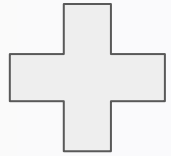
Compliance
Assess and monitor regulatory compliance, built on OpenSCAP



Drift
Create baselines and compare system profiles

Policies
Define and monitor against your own policies to identify misalignment

Patch
Analyze for Red Hat product advisory applicability to stay up to date



Subscription Watch
Track progress of your Red Hat subscription usage efficiently and confidently.

Red Hat

Red Hat Insights Services

Advisor

Availability, performance, stability, and security risk analysis

Vulnerability

Assess Common Vulnerabilities and Exposures (CVEs) with advisories

Compliance

Assess and monitor compliance, built on OpenSCAP

Subscription Watch

Track progress of your Red Hat subscription usage efficiently and confidently

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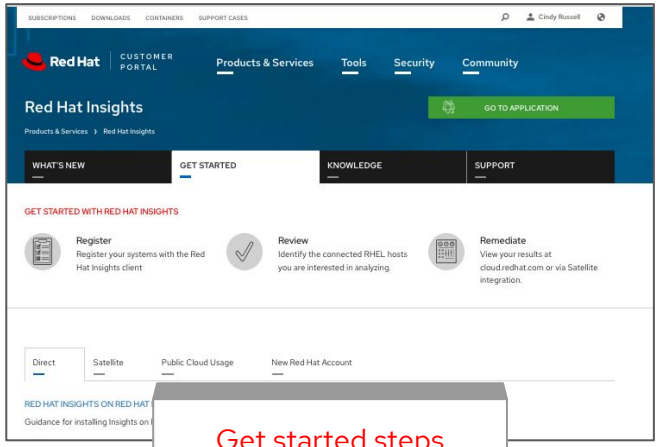
Red Hat

Three steps to advanced RHEL management

Register

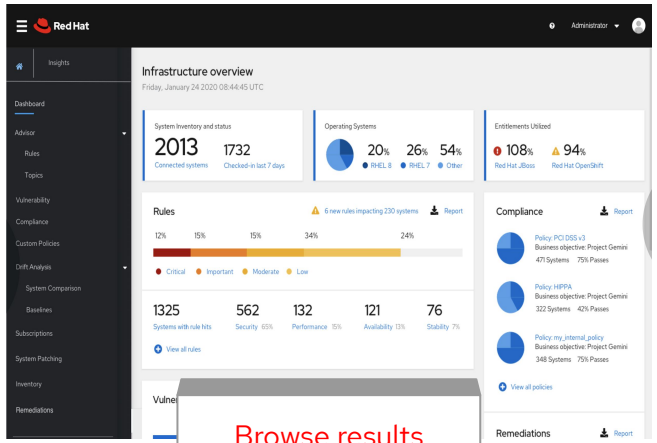
Install client for Red Hat instances on-premises, virtual, cloud.



Get started steps

Review

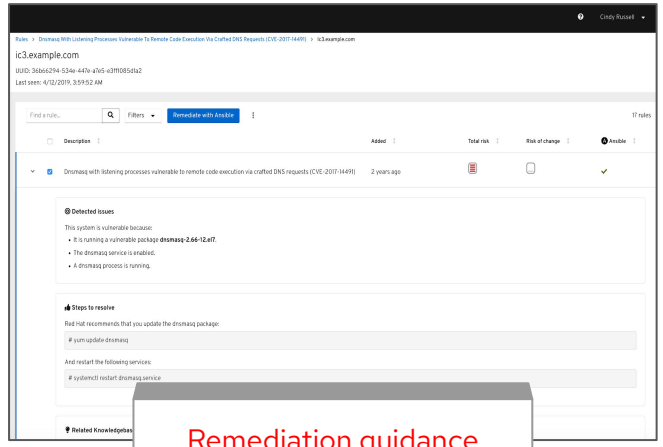
Insights client runs and issues found are reported in the Insights dashboard at cloud.redhat.com



Browse results

Remediate

Review issues and results in the dashboard and choose which you would like to remediate. Leverage guidance, and remediation options.



Remediation guidance

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Take Insights to the next level

With Red Hat Smart Management

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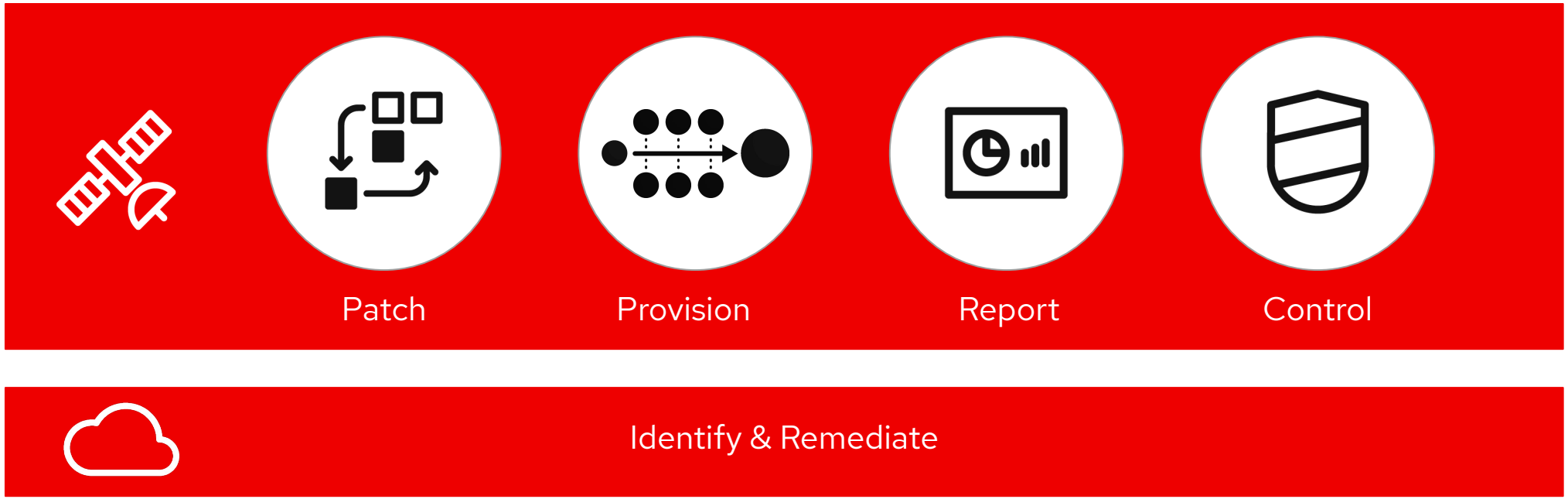
Smart Management for Red Hat Enterprise Linux

Combine the powerful infrastructure capabilities of Red Hat Satellite with the simplicity of cloud management

Improve operational efficiency by 28%*

Overcome scale, skill, and security gaps



*Source: Satellite IDC Business Value Whitepaper

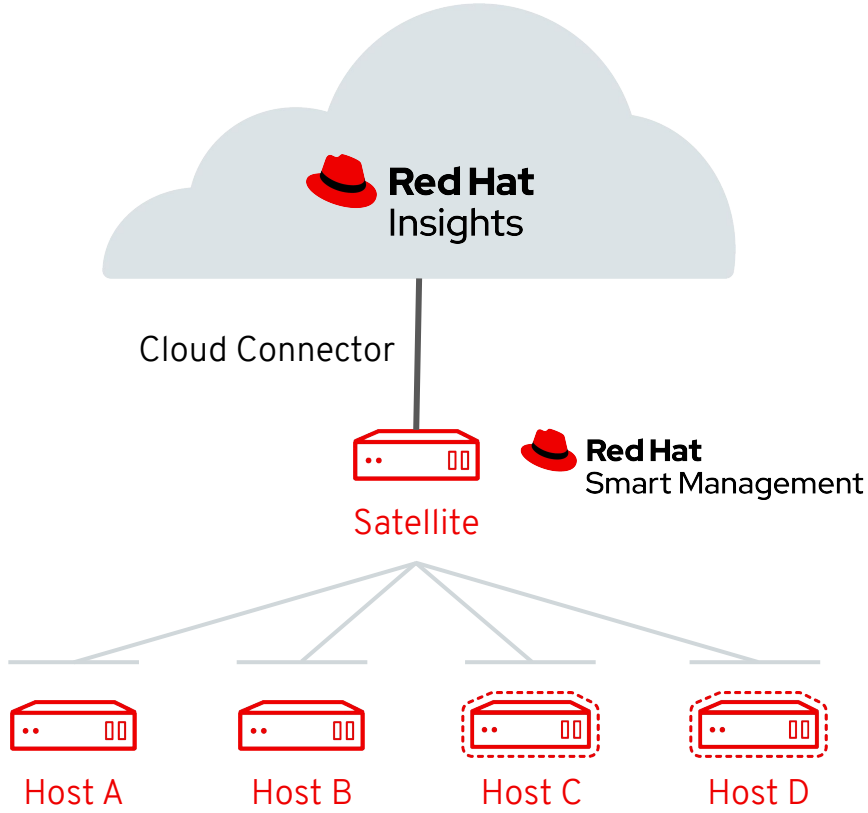
Red Hat

What is Cloud Connector?

Using Red Hat Insights and Smart Management you can easily identify risks, Vulnerability, and Compliance issues in your environment and fix them via your trusted Satellite infrastructure with the click of a button.

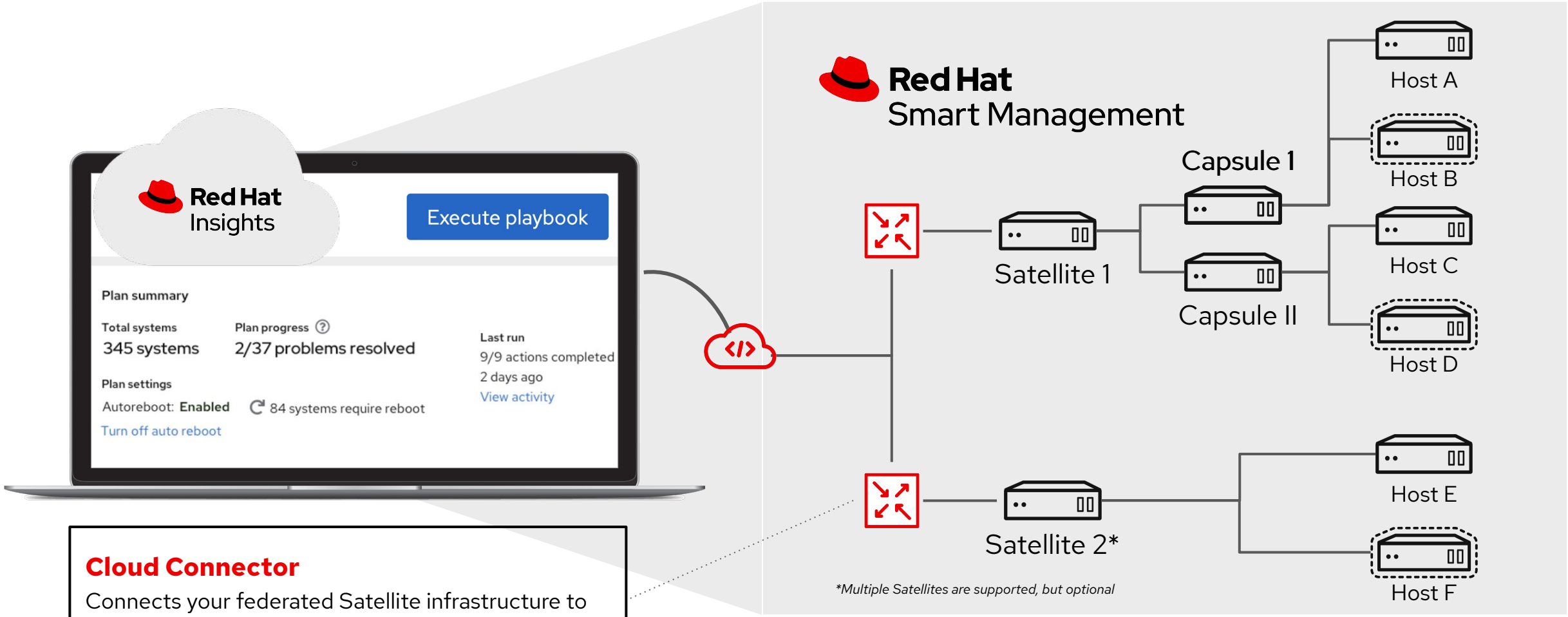
- Connects your Satellite infrastructure to cloud.redhat.com
- Create playbooks via Insights and run them using existing Satellite and Capsules
- Included with your Smart Management subscription

For more information, refer to the intro blog or video



Red Hat Smart Management Cloud Connector

Smart Management subscription enables push-button remediation of issues identified by Insights



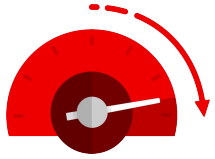
Cloud Connector

Connects your federated Satellite infrastructure to Insights to execute remediation playbooks at scale.

Red Hat Insights Use Cases

Red Hat

Key use cases



Uptime and efficiency

- Manage more with fewer admins
- Move to a managed service provider
- Consolidate operations teams

Security

- Keep up with vulnerabilities
- Harden infrastructure proactively
- Reduce unreasonable demands from security teams

Insights combines with other tools to enhance the Red Hat Enterprise Linux investment.

Insights + technical account manager (TAM) encourages deeper customer conversations and delivers regular assessments.

Insights + Satellite identifies and prioritizes risks and patches so customers can resolve issues faster

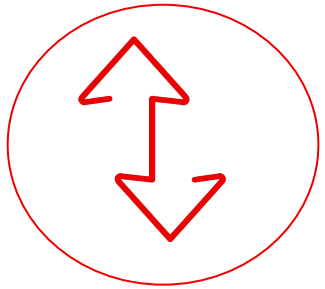
Operational efficiency management

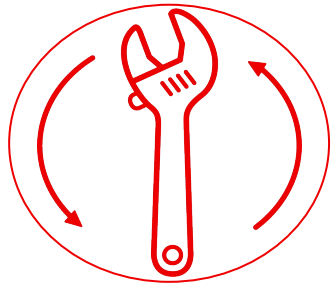
Putting Insights into action

Red Hat Insights

Red Hat Satellite

Red Hat Ansible Automation Platform





CONFIGURATION ASSESSMENT	RISK IDENTIFICATION	CONTINUOUS INSIGHTS	REMEDIATION PLAN

Red Hat

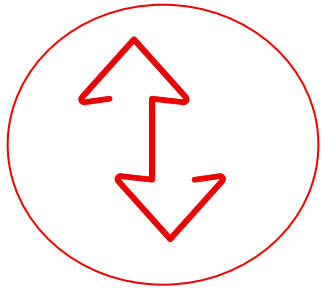
Security and Compliance Risk Management

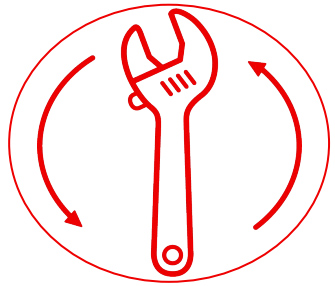
Value for Customers

Red Hat Insights

Red Hat Satellite

Red Hat Ansible Automation Platform





INTEGRATED MANAGEMENT	PROACTIVE GUIDANCE	CONTINUOUS INSIGHTS	REMEDIATION PLAN

Red Hat

Insights Experiences

- Insights was able to immediately identify 10 issues on an Oracle RAC system that has been **plaguing a customer for 6 months.**
    - Oracle RAC systems are EXPENSIVE. Why not keep them running at **optimal** capacity?
- Insights identified a misconfigured network bond, but the customer didn't use bonding. It was **accidentally enabled on a production server**.
  Insights was able to easily fix a problem the customer didn't even know they had!
    - Is your environment **correctly** configured? Has it drifted?

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What’s New in Red Hat Insights

November 2020 Release

Red Hat

Insights release theme - November 2020

New workload management features for SAP with improved ease of use and security.

Application / Workload Management for SAP

Ease-of-Use

Security

Provide a more meaningful Insights experience by giving you the ability to focus on what you care about

Red Hat

Application / Workload Management for SAP

SAP Focus

- Adds a specific view just for SAP on RHEL customers
- Auto detection and profiling of SAP workloads so that Insights identifies SAP systems for you
- Includes SAP specific recommendations, facts, and filters for a focused SAP experience
- Discovery of SAP specific facts
- SAP facts are now available and can be used across services (e.g. Drift, Policies).

Ease-of-use

Register Systems

New Register Systems area guides you on how to setup Insights in your environment (RHSM, Satellite, public cloud, using Ansible, Puppet, or command line)

Filter Insights results by system tags

Tags and filters are applied across Insights services and are available at the top of each page

Editing of SCAP rules in the Compliance service

Insights now allows you to edit the individual rules that make up a policy in the Compliance service

Trigger history in the Policies service

Displays when a policy was triggered and by which system

CVE report in the Vulnerability service

Export a customizable CVE report to PDF

Red Hat

Security

Role Based Access Control (RBAC) enhancements

- Create custom roles with fine-grained user access permissions for Insights and other services. [Beta]
- RBAC enabled on Inventory allowing you to remove Inventory read and write permissions from users in your organization, and selectively configure users who should still have access.

New Trust page

A new trust page is coming soon to help make it clear how Red Hat treats data collected by Insights.
https://cloud.redhat.com/security/insights

Red Hat

Insights Security Page
Available at:
https://cloud.redhat.com/security/insights

Red Hat Insights Data & Application Security

Red Hat Insights is a Software-as-a-Service offering that enables users to obtain actionable intelligence regarding their [illegible] environments, helping to identify and address operational and vulnerability risks before an issue results in downtime. To do this analysis, small pieces of system metadata are sent to the Red Hat Insights service for analysis. This page covers the measures Red Hat has put into place to help reduce security risks when transmitting, processing, and analyzing this data.

Go to Red Hat Insights

Overview | Data collection and controls | Data protection | Frequently asked questions

Data Privacy in Red Hat Insights for Managing Red Hat Enterprise Linux Environments

1. **Insights is designed to work with minimal data.**
   Red Hat Insights collects only the minimum system metadata that is needed to analyze and identify issues in your Red Hat Enterprise Linux environments.

2. **You control what data is sent to Red Hat for analysis.**
   Before data is sent, you have the option to inspect and redact information.

3. **Data is encrypted throughout the processes, with a customizable collection schedule.**
   Red Hat signs its data collection rules and will abort if the signature cannot be verified.

Insights Services

Red Hat

Manage, automate, and optimize your IT

Red Hat Insights

Identify and remediate configuration issues in your Red Hat® environments.

Dashboard
Patch
Advisor
Drift
Vulnerability
Policies
Compliance

Open →

Red Hat OpenShift Cluster Manager

Install, register, and manage Red Hat OpenShift® 4 clusters.

Cluster Manager

Open →

Red Hat Ansible Automation Platform

Extend your automation with analytics, content management, and policy and governance.

Automation Analytics
Automation Hub
Automation Services Catalog

Open →

Subscription Watch

Account-level summaries of your Red Hat subscription utilization

Red Hat Enterprise Linux
Red Hat OpenShift

Open →

Insights for SAP

Leverage Red Hat Insights to manage, optimize and remediate risks to your SAP landscape.

Dashboard

Cost Management

Analyze, forecast and optimize your Red Hat OpenShift cluster costs in hybrid cloud environments.

Cost Management

Migration Services

Get recommendations on migrating your applications and infrastructure to Red Hat.

Migration Analytics

Overview of Red Hat Insights Services

Advisor

Availability, performance, stability, and security risk analysis

Vulnerability

Assess Common Vulnerabilities and Exposures (CVEs) with advisories

Compliance

Assess and monitor compliance, built on OpenSCAP

Subscriptions

Track progress of your Red Hat subscription usage efficiently and confidently

Drift

Create baselines and compare system profiles

Policies

Define and monitor against your own policies to identify misalignment

Patch

Analyze for Red Hat product advisory applicability to stay up to date

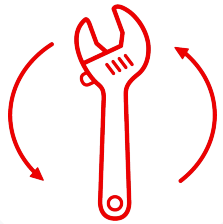
Red Hat

Advisor

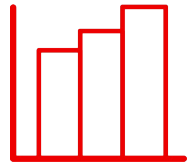
Advisor

Red Hat Recommendations based on 20+ years of supporting RHEL in areas of availability, performance, stability, and security risks.

Assess impact of Red Hat Recommendations on your systems



Remediate findings with prescriptive remediation steps or an Ansible playbook



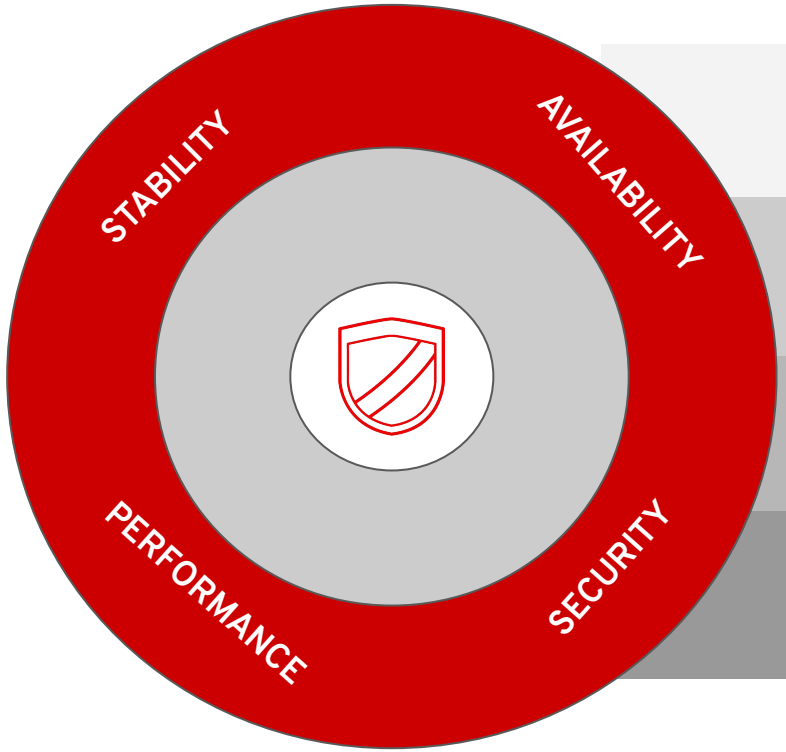
Report via JavaScript Object Notation (JSON) and Comma-Separated Values (CSV) view-based **reports** to keep relevant stakeholders informed

Reduce firefighting and focus more on strategic initiatives

Red Hat

Snapshot of Advisor Recommendations

The Advisor service has more than 1,100+ recommendations across several categories and workloads



SAP running on RHEL

RHEL running on AWS or Azure

Microsoft SQL Server running on RHEL

Other enterprise databases on RHEL

Red Hat

Red Hat

Red Hat Insights

Dashboard

Advisor

Recommendations

Topics

Vulnerability

Compliance

Policies

Drift

Subscription Watch

Patch

Inventory

Remediations

Documentation

Filter by tags: All systems

Recommendations

Advisor
Availability, performance, stability, and security risk analysis

Recommendations | Systems

Description | Filter by description

1 - 7 of 7 | 1 of 1

Status: Enabled | Clear filters

Description	Added	Total risk	Systems	Ansible
Database performance decreases when Transparent Huge Pages is enabled	1 year ago	Moderate	34	
Network connections will hang when insufficient memory is allocated for the TCP packet fragmentation	7 months ago	Important	25	

Recommendation is disabled for 1 system. View systems

Due to a known bug in kernel, network connections hang when insufficient memory is allocated for the TCP packet fragmentation. This is a regression introduced by the fix for CVE-2019-11478.

Knowledgebase article

Total risk

Important

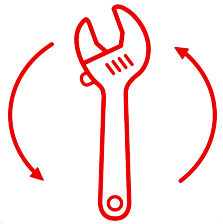
The **likelihood** that this will be a problem is Important.
The **impact** of the problem would be Important if it occurred.

Vulnerability

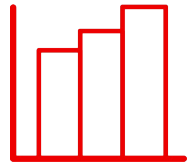
Vulnerability

Remediate all Common Vulnerabilities and Exposures (CVEs)

Assess and monitor the risk of vulnerabilities that impact Red Hat products with operational ease



Remediate known Common Vulnerabilities and Exposures (CVEs)



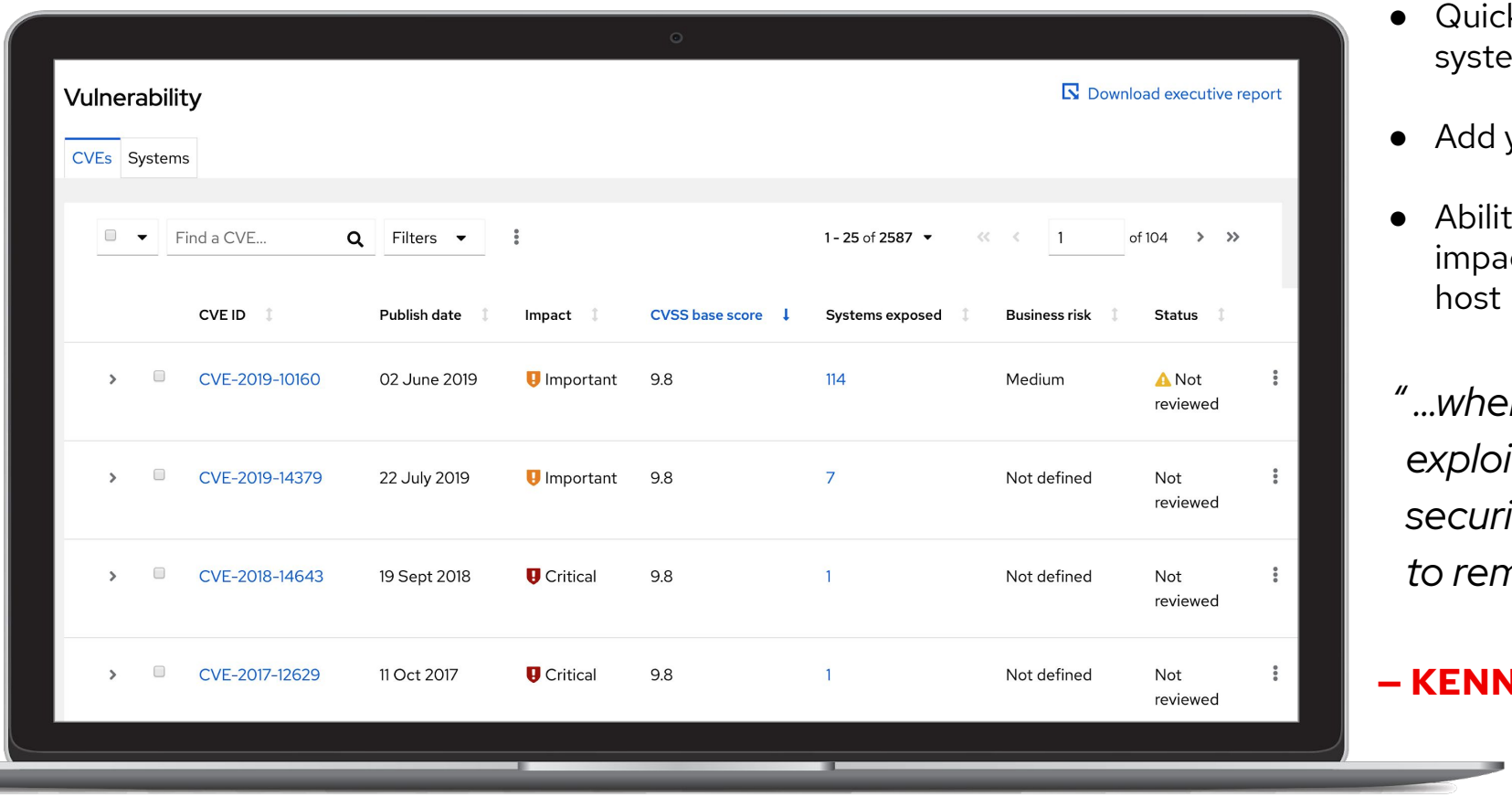
Ability to generate JavaScript Object Notation and CSV view-based **reports** to keep relevant stakeholders informed

Quickly identify and remediate systems impacted by specific CVEs and create a plan for resolution

Red Hat

Get ahead of key security risks

Don’t wait for your security team to tap you on the shoulder



- Quick view of CVEs, CVSS score, impact, and systems exposed across all systems
- Add your own business risk and status
- Ability to create a remediation plan for all hosts impacted by a CVE, or for all CVEs for a specific host

*“ ...when a vulnerability is released, it’s likely to be exploited within **40-60** days. However, it takes security teams between **100-120** days on average to remediate...”*

– KENNA SECURITY GROUP

Red Hat

Red Hat Insights

Dashboard
Advisor
Vulnerability
Compliance
Policies
Drift
Subscription Watch
Patch
Inventory
Remediations

Documentation

Vulnerability

Download executive report

CVEs | Systems

Find a CVE... | Filters | 1 - 25 of 2591 | 1 of 104

CVE ID	Publish date	Impact	CVSS base score	Systems exposed	Business risk	Status
CVE-2019-17666	17 Oct 2019	Important	6.3	226	Low	On-hold
CVE-2018-3646	14 Aug 2018	Important	5.6	226	High	In-review
CVE-2019-11487	21 Apr 2019	Important	7.8	211	Medium	Resolved via mitigation
CVE-2019-18634	29 Jan 2020	Important	7.8	197	Not defined	Not reviewed

Description

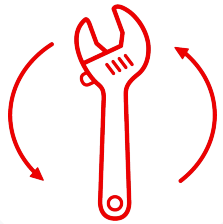
The Linux kernel before 5.1-rc5 allows page->_refcount reference count overflow, with resultant use-after-free issues, if about 140 GiB of RAM exists. This is related to fs/fuse/dev.c, fs/pipe.c, fs/splice.c, include/linux/mm.h, include/linux/pipe_fs_i.h, kernel/trace/trace.c, mm/gup.c, and mm/hugetlb.c. It can occur with FUSE requests.

Compliance

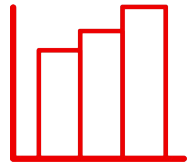
Compliance

Built on OpenSCAP reporting

Assess and monitor the degree/level of compliance to a policy for Red Hat products with operational ease



Remediate known issues of non-compliance in the Red Hat environment via Ansible playbooks based on business risk & relevance

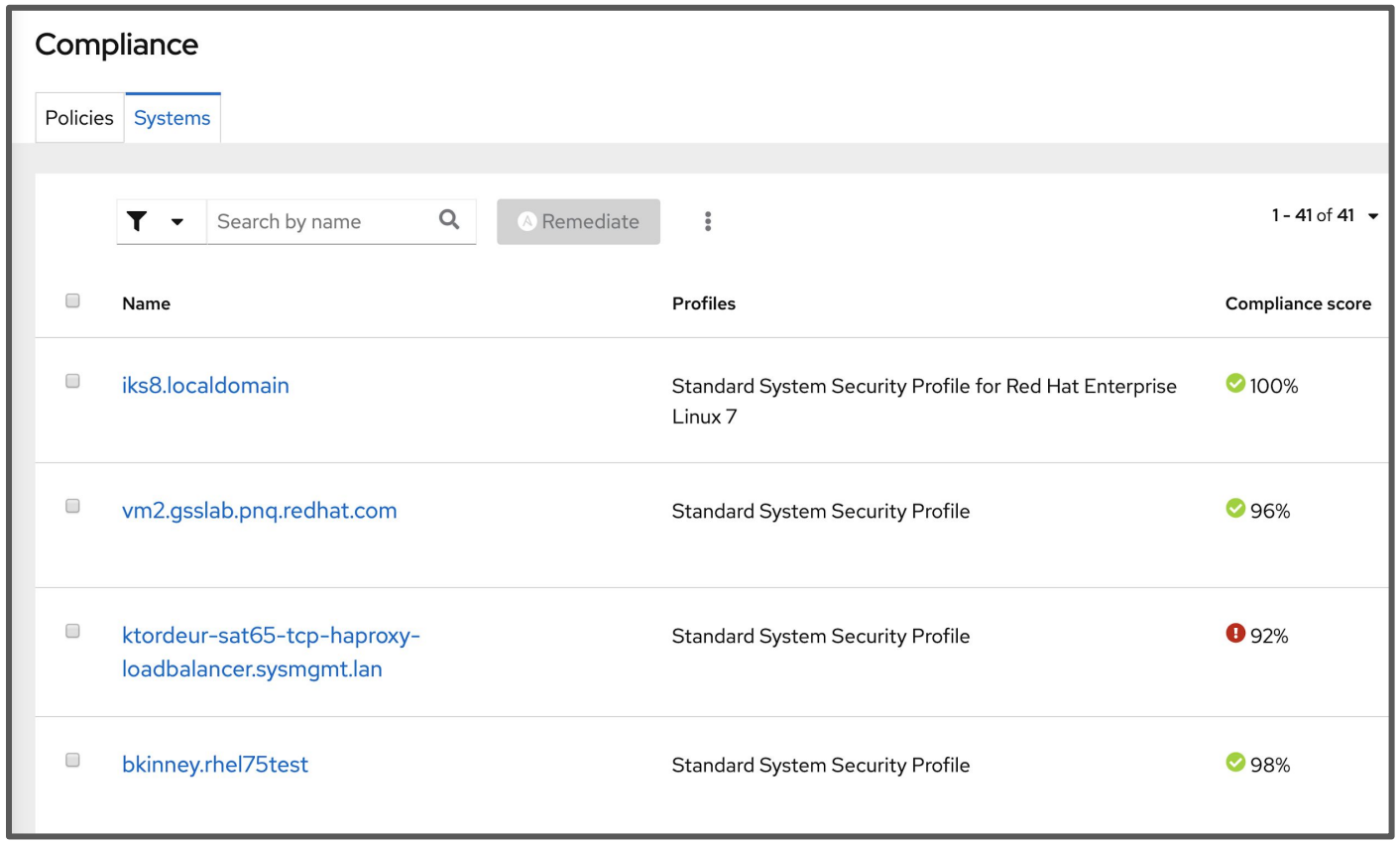


Ability to generate JavaScript Object Notation and CSV view-based **reports** to keep relevant stakeholders informed

Easily identify and remediate systems which are out of compliance or failing specific rules checks

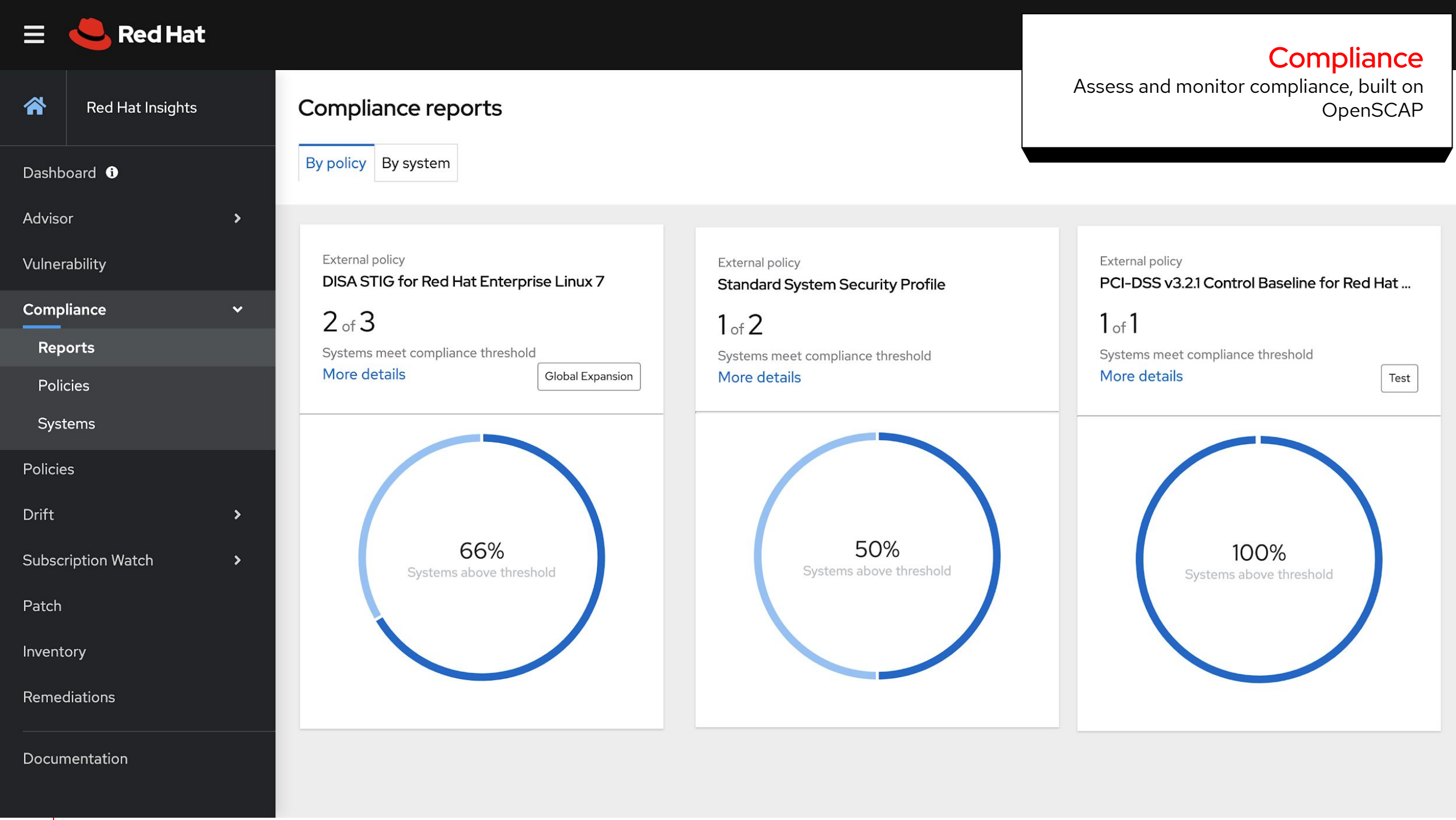
Red Hat

Easily identify and remediate out of compliance systems and specific rules failing



- Report by policy or by system
- Adjustable compliance thresholds
- Easy customization of business objectives
- Can create and tailor your own policies

Red Hat


Red Hat
Red Hat Insights
Dashboard
Advisor
Vulnerability
Compliance
Reports
Policies
Systems
Policies
Drift
Subscription Watch
Patch
Inventory
Remediations
Documentation
Compliance
Assess and monitor compliance, built on OpenSCAP
Compliance reports
By policy
By system
External policy
DISA STIG for Red Hat Enterprise Linux 7
2 of 3
Systems meet compliance threshold
More details
Global Expansion
66%
Systems above threshold
External policy
Standard System Security Profile
1 of 2
Systems meet compliance threshold
More details
50%
Systems above threshold
External policy
PCI-DSS v3.2.1 Control Baseline for Red Hat ...
1 of 1
Systems meet compliance threshold
More details
Test
100%
Systems above threshold

What is OpenSCAP?

- Security Content Automation Protocol (SCAP) is a method for using a specified standard to enable automated policy compliance evaluations for systems.

- OpenSCAP is an open source implementation of the SCAP standard.
  - SCAP and OpenSCAP use security policies, also known as SCAP content, as the centerpoint of the compliance strategy.
  - Several security policies are included as part of the SCAP Security Guide.

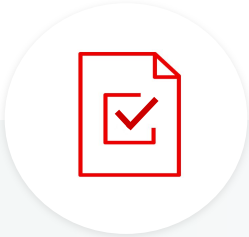
- You can also create your own policy or customize an existing policy to meet your needs.
  - For the purposes of Insights Compliance, you will need to (for each host):
  - Install the OpenSCAP scanner or the OpenSCAP Workbench.
  - Install the SCAP Security Guide (installed with the workbench by default)
  - Evaluate the host against the selected policy.

Drift

Drift

Track configuration changes in RHEL systems
Define baselines and ensure systems are compliant

Compare system configuration over time or to other systems



Define Baselines as standard configuration systems must adhere to

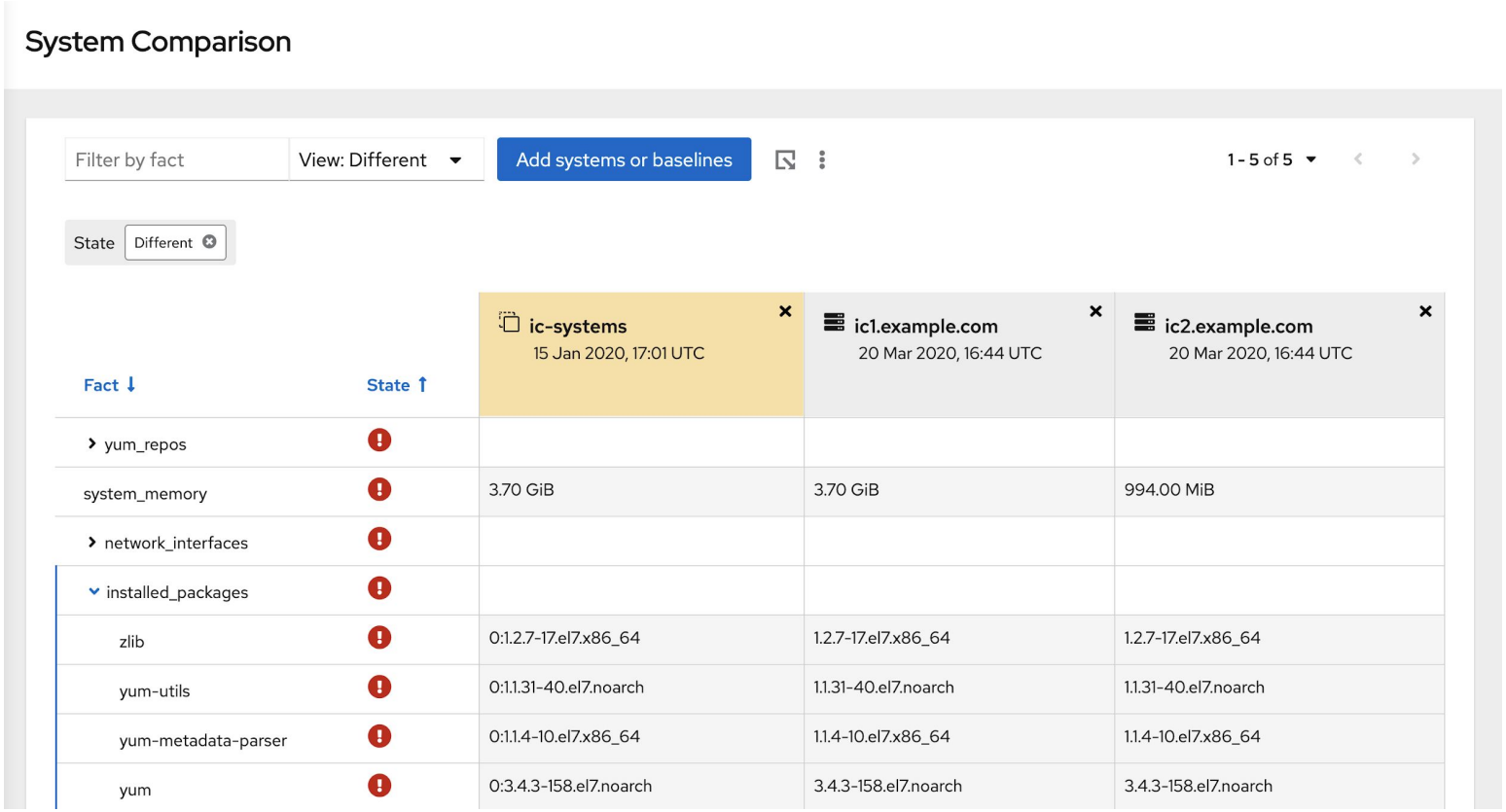
Filter facts or categories of interest, or all matches, differencies, and facts with missing information

Generate comparison reports as JSON or CSV exports

Assist troubleshooting by identifying drift in RHEL configuration over time, between systems, or defined baselines

Red Hat

Set a baseline and compare systems



- Easily create baselines
- Compare a system to a baseline
- Compare systems to other systems
- Filter on what is different, what is the same, and/or where there is not enough info

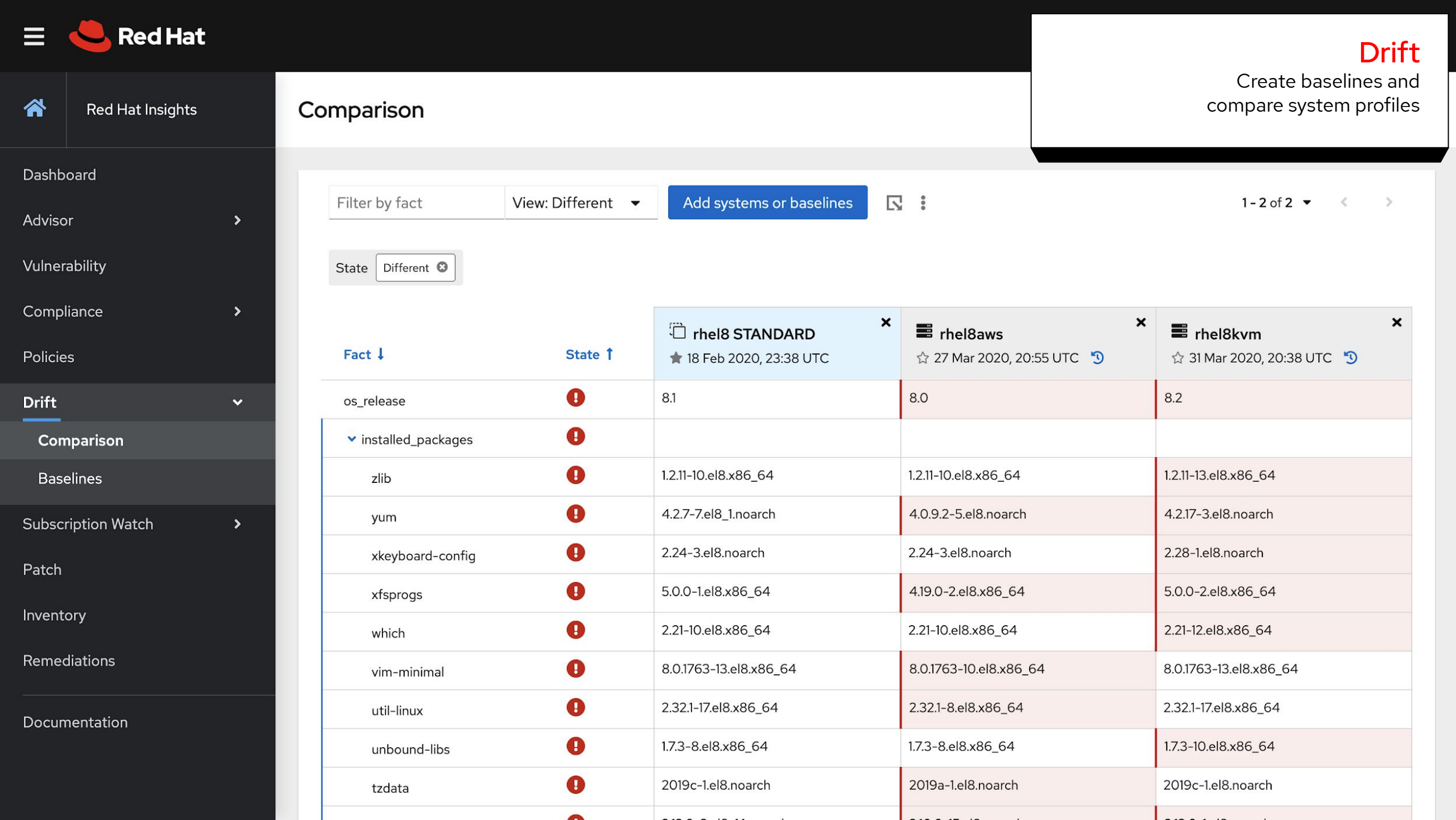
Red Hat

A day in the life of a System Admin

Stay productive in managing day-to-day operations

- Has anything changed recently in this RHEL configuration?
- Are we using the same configuration in Test and Production?
- How are these systems different from our baseline?
- How can I validate that servers A and B adhere to the same standards?

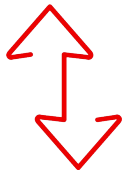
Use analytics instead of time-consuming manual comparisons


Red Hat
Red Hat Insights
Dashboard
Advisor
Vulnerability
Compliance
Policies
Drift
Comparison
Baselines
Subscription Watch
Patch
Inventory
Remediations
Documentation
Comparison
Drift
Create baselines and compare system profiles
Filter by fact
View: Different
Add systems or baselines
1 - 2 of 2
State
Different
Fact
State
rhel8 STANDARD
18 Feb 2020, 23:38 UTC
rhel8aws
27 Mar 2020, 20:55 UTC
rhel8kvm
31 Mar 2020, 20:38 UTC
os_release 8.1 8.0 8.2
installed_packages
zlib 1.2.11-10.el8.x86_64 1.2.11-10.el8.x86_64 1.2.11-13.el8.x86_64
yum 4.2.7-7.el8_1.noarch 4.0.9.2-5.el8.noarch 4.2.17-3.el8.noarch
xkeyboard-config 2.24-3.el8.noarch 2.24-3.el8.noarch 2.28-1.el8.noarch
xfsprogs 5.0.0-1.el8.x86_64 4.19.0-2.el8.x86_64 5.0.0-2.el8.x86_64
which 2.21-10.el8.x86_64 2.21-10.el8.x86_64 2.21-12.el8.x86_64
vim-minimal 8.0.1763-13.el8.x86_64 8.0.1763-10.el8.x86_64 8.0.1763-13.el8.x86_64
util-linux 2.32.1-17.el8.x86_64 2.32.1-8.el8.x86_64 2.32.1-17.el8.x86_64
unbound-libs 1.7.3-8.el8.x86_64 1.7.3-8.el8.x86_64 1.7.3-10.el8.x86_64
tzdata 2019c-1.el8.noarch 2019a-1.el8.noarch 2019c-1.el8.noarch

Policies

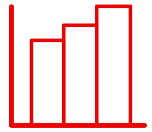
Policies

Identify RHEL configuration misalignment



Define **Policies** to meet your custom needs, by evaluating conditions on RHEL configuration.

Continuously **analyze** environment configurations and spot misaligned systems.

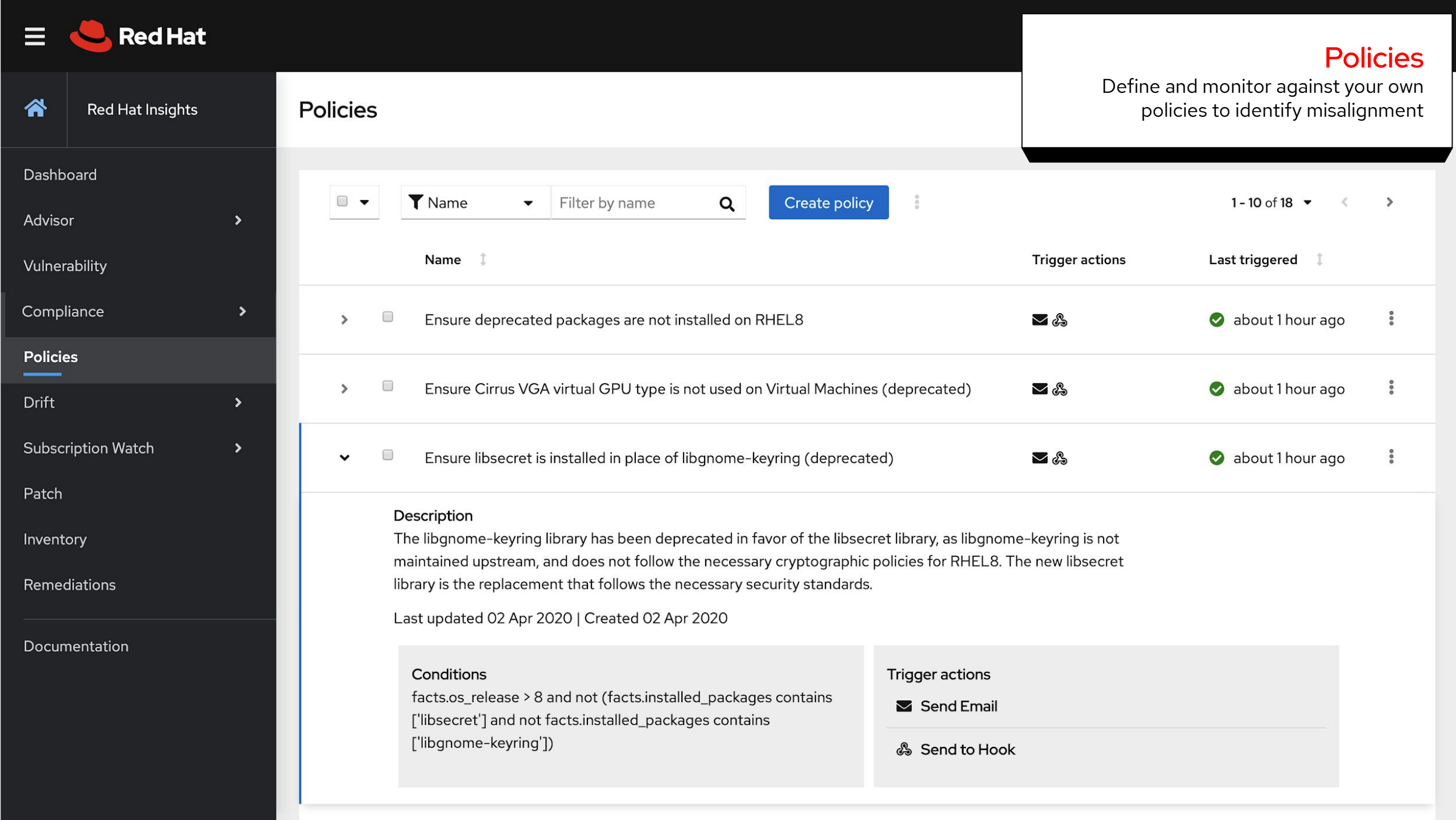


Trigger alerts/notifications and/or actions on policy breach.

Get on-demand **reports** as CSV/JSON exports or by querying the REST API.

Create your own policies to suit your organization's specific requirements

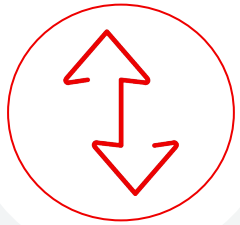
Red Hat


Red Hat
Red Hat Insights
Dashboard
Advisor
Vulnerability
Compliance
Policies
Drift
Subscription Watch
Patch
Inventory
Remediations
Documentation
Policies
Name
Filter by name
Create policy
1 - 10 of 18
Name
Trigger actions
Last triggered
Ensure deprecated packages are not installed on RHEL8
about 1 hour ago
Ensure Cirrus VGA virtual GPU type is not used on Virtual Machines (deprecated)
about 1 hour ago
Ensure libsecret is installed in place of libgnome-keyring (deprecated)
about 1 hour ago
Description
The libgnome-keyring library has been deprecated in favor of the libsecret library, as libgnome-keyring is not maintained upstream, and does not follow the necessary cryptographic policies for RHEL8. The new libsecret library is the replacement that follows the necessary security standards.
Last updated 02 Apr 2020 | Created 02 Apr 2020
Conditions
facts.os_release > 8 and not (facts.installed_packages contains ['libsecret'] and not facts.installed_packages contains ['libgnome-keyring'])
Trigger actions
Send Email
Send to Hook
Policies
Define and monitor against your own policies to identify misalignment

Patch

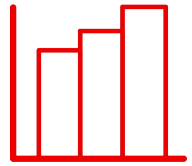
Patch

Patch systems to keep them up to date



Assess and monitor Red Hat product advisories (errata) across all deployment footprints

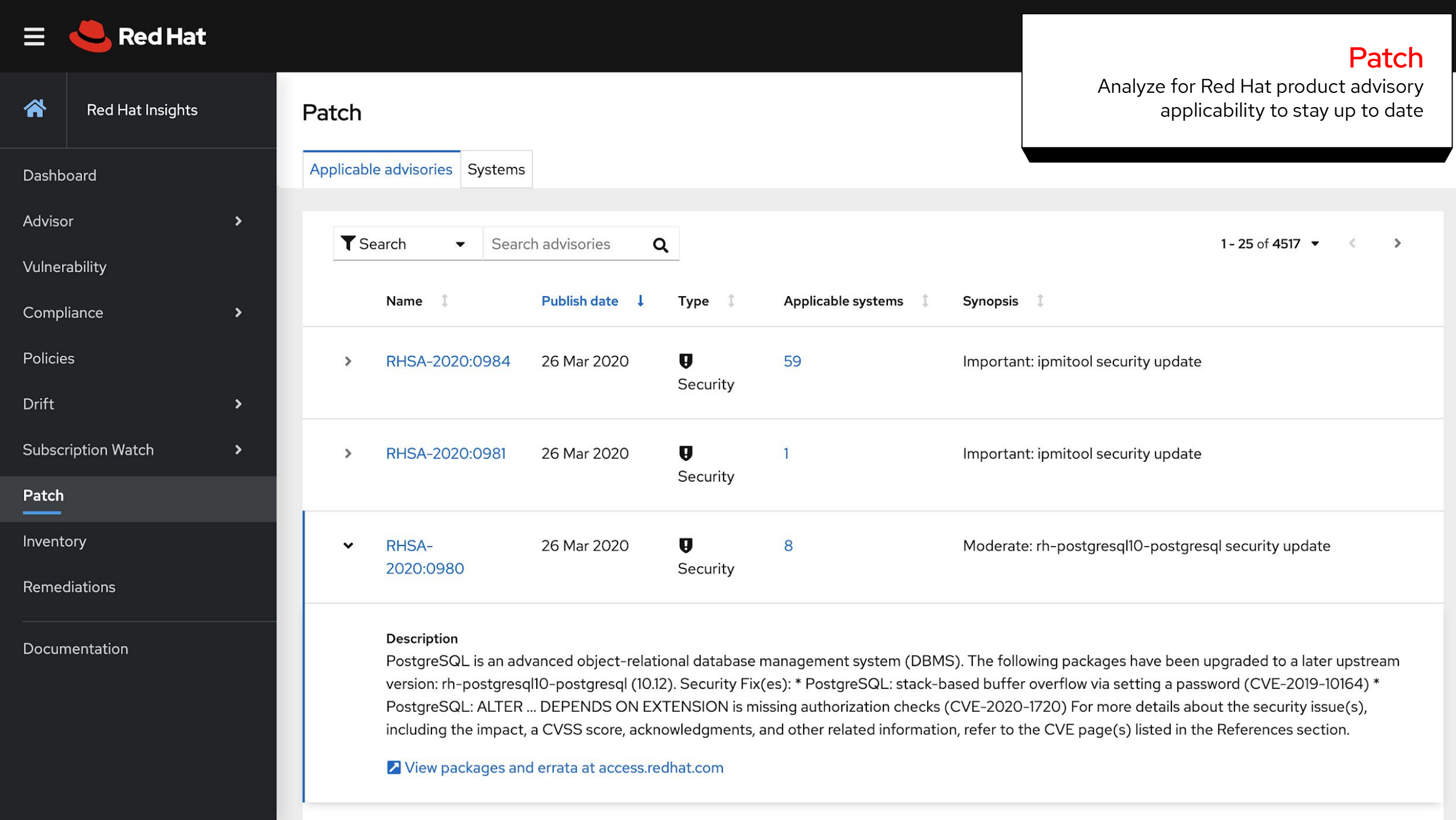
Prioritize most important advisories based on advisory type, severity, and system criticality.



Discover systems that have fallen behind your patching process

Patch will show you all available Red Hat advisories for every system registered to Insights

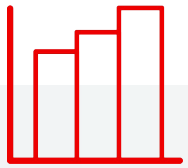
Red Hat


Red Hat
Red Hat Insights
Dashboard
Advisor
Vulnerability
Compliance
Policies
Drift
Subscription Watch
Patch
Inventory
Remediations
Documentation
Patch
Analyze for Red Hat product advisory applicability to stay up to date
Patch
Applicable advisories
Systems
Search
Search advisories
1 - 25 of 4517
Name
Publish date
Type
Applicable systems
Synopsis
RHSA-2020:0984
26 Mar 2020
Security
59
Important: ipmitool security update
RHSA-2020:0981
26 Mar 2020
Security
1
Important: ipmitool security update
RHSA-2020:0980
26 Mar 2020
Security
8
Moderate: rh-postgresql10-postgresql security update
Description
PostgreSQL is an advanced object-relational database management system (DBMS). The following packages have been upgraded to a later upstream version: rh-postgresql10-postgresql (10.12). Security Fix(es): * PostgreSQL: stack-based buffer overflow via setting a password (CVE-2019-10164) * PostgreSQL: ALTER ... DEPENDS ON EXTENSION is missing authorization checks (CVE-2020-1720) For more details about the security issue(s), including the impact, a CVSS score, acknowledgments, and other related information, refer to the CVE page(s) listed in the References section.
View packages and errata at access.redhat.com

Subscription Watch

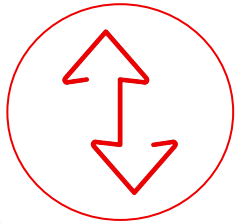
Subscription Watch

Understand your subscription utilization



Account-level view of subscription utilization over time

Aggregated reporting helps your architects understand what they have and procurement understand what they're paying for..



Streamline operations four footprints, four architectures; one account and one report.

Subscription tracking and visibility to operate efficiently and confidently

Red Hat

Red Hat

Subscription Watch

Track progress of your Red Hat subscription usage efficiently and confidently

Subscription Watch

Red Hat Enterprise Linux

- All
- ARM
- IBM Power
- IBM Z systems
- x86

Red Hat OpenShift

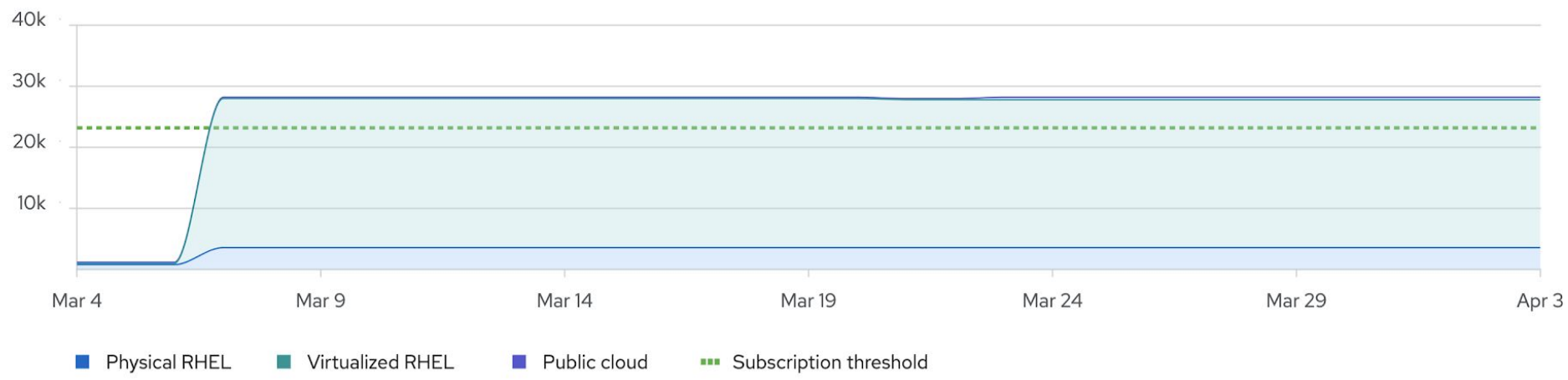
Documentation

Red Hat Enterprise Linux

Filter by SLA

CPU socket usage

Daily

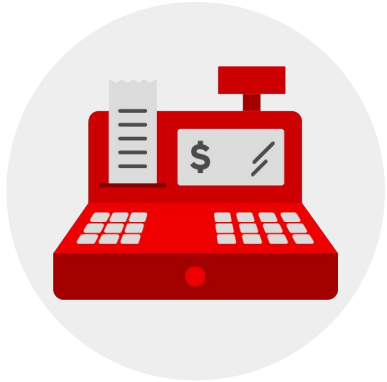


Insights Customers

Red Hat

Top Industries

Healthcare



Retail

Government

Customer references

+ COX AUTOMOTIVE™

+ Cerner

Red Hat

A conversation with Red Hat Insights users

Morgan Peterman, Red Hat TAM, leads a panel discussion with two Red Hat Accelerators

Insights is like having a full-time person to review configurations and double check what we do, which is fantastic because **we cannot always be an expert in every single thing**. It takes care of performance tuning, setting up to align with best practices, and secure with patches installed to **ensure everything is running as it should be**.

If you have a very large environment, it is more like **adding a second team** because when you have more than 10,000 systems **it is a challenge of scale that cannot be solved with people**, you have to solve it with code - and Insights has done that... **we still get surprised by the issue Insights identifies**.

Hear more from Red Hat Insights users: red.ht/Insights_April

Red Hat

Kingfisher

"Building servers that are tuned, ready-to-go and more secure from day one is a key need for our IT organization. Red Hat Enterprise Linux with Red Hat Insights gives us this capacity, enabling us to deploy servers that are immediately usable and meet our specific needs as they go live."

Steve Short
Platforms Manager, UNIX
Kingfisher PLC

Source: Red Hat press release. April 2020.

Red Hat

Red Hat Insights and Red Hat Smart Management: Single point of control to manage massive IT operations at scale

SCENARIO

- Large global name-brand organization
- Tens of thousands of Red Hat Enterprise Linux servers
- Must deliver a healthy, performant platform to lines of business
- Major focus on server performance
- Small team to manage global RHEL footprint

SOLUTION

RHEL with Red Hat Insights and Red Hat Smart Management

- Unified control with Smart Management (Satellite and Capsules) providing robust scalability across a global footprint
- Discover and manage risks using Insights across all deployed versions of RHEL, making it a foundational technology
- Dramatic reduction in time to confidently deploy changes and new instances

OUTCOME

Efficient, unified point of control for tens of thousands of servers with a small administration team

How to configure Red Hat Insights

Installation and registration

Simple and Straightforward

Step #1: Run `# yum install insights-client`

- Red Hat Enterprise Linux 8 customers will not need to perform this step - the Insights client is pre-installed.

Step #2: Run `# insights-client --register`

Step #3 See results at cloud.redhat.com and Remediate.

More information including automation playbooks are available at:

- https://access.redhat.com/insights/getting-started

Red Hat

Inside of Insights

New “Register Systems” wizard

Red Hat

Red Hat Insights

- Dashboard
- Advisor
- Vulnerability
- Compliance
- Patch
- Drift
- Policies
- Inventory
- Remediations
- Register Systems
- Subscription Watch
- Documentation

Register your systems with Red Hat Insights

The Insights registration assistant will guide you through the setup process for the Red Hat Insights Client. You will be prompted with a series of questions about your environment to provide you with setup instructions tailored for your environment.

Step 1: Tell us about your systems

How are the systems managed?

(•) Red Hat Subscription Manager ( ) Red Hat Satellite ( ) Public cloud/RHUI

Operating System

( ) RHEL 8 (•) RHEL 7 & 6

Note: Red Hat Insights can be used on all Red Hat-supported versions of Red Hat Enterprise Linux, version 6.4 and later.

Do you wish to use automation for installation?

(•) Ansible ( ) Puppet ( ) No

Note: You can automate the installation and registration of systems with Ansible, included with your Red Hat Enterprise Linux entitlement.

Step 2: Download the insights-client playbook

Download playbook

Step 3: Install and configure your playbook

Register with RHSM

You must register all Red Hat Enterprise Linux (RHEL) systems with Red Hat Subscription Manager to receive necessary updates and to resolve software dependencies.

> subscription-manager register --auto-...

Note: If the system cannot be subscribed to RHSM, basic authentication can be configured on the client.

If you have a web-based proxy between your system and the Internet, you can configure the insights-client to connect through it. For more information, refer to How to access Red Hat Insights through a firewall/Proxy.

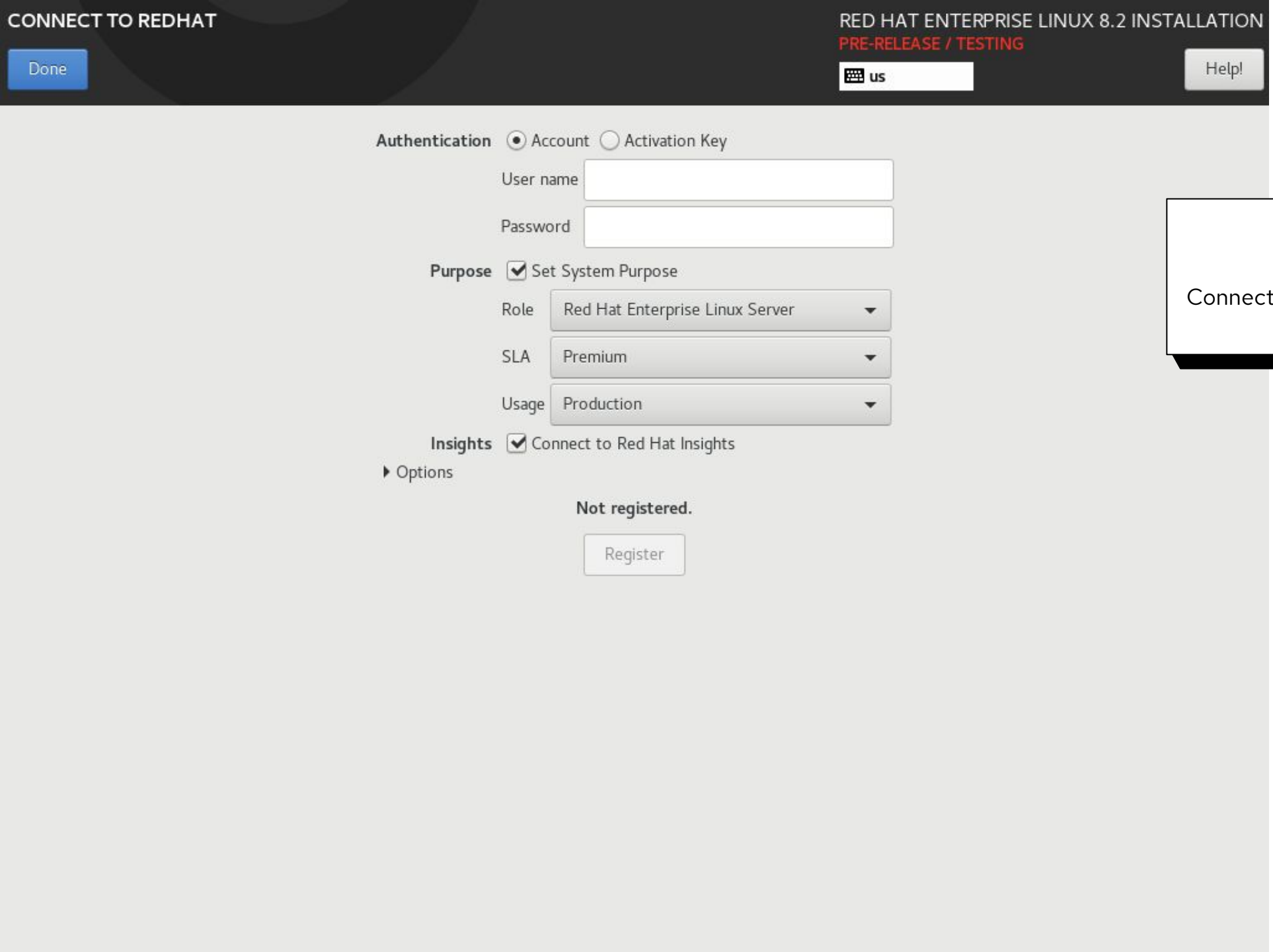
Data collection & controls Learn more

Setup and Configure

Assess and monitor the compliance of your RHEL systems using Policies Learn more

Detect and be notified of system configuration changes using Custom Policies Learn more

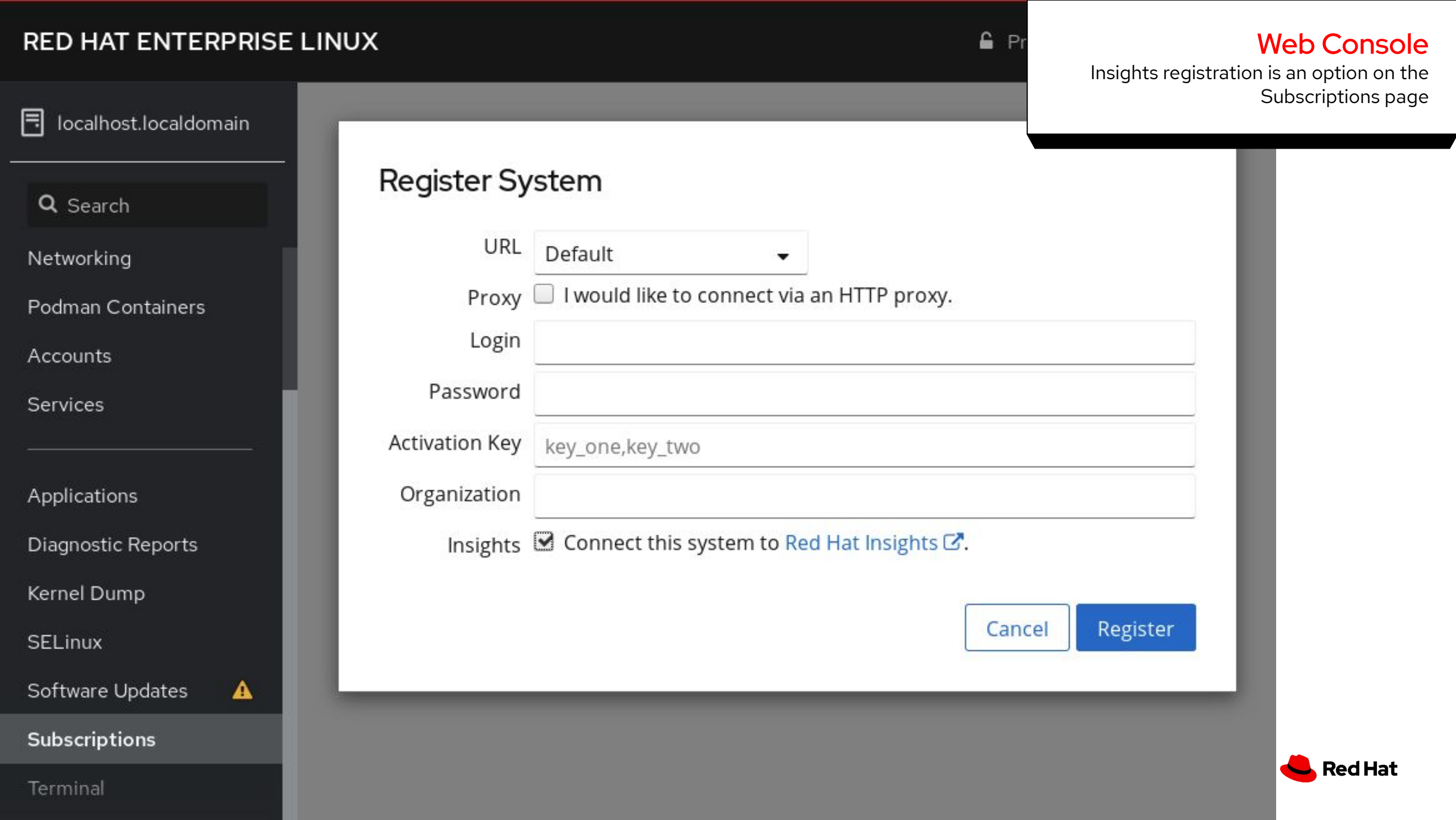
Red Hat® Smart Management



Anaconda Installation

Connecting to Insights is an installation option.

Red Hat



Web Console

Insights registration is an option on the Subscriptions page

Red Hat

Registration Assistant

Insights is part of the Registration Assistant in Labs.
https://access.redhat.com/labs/registrationassistant/

Registration Assistant

Your guide to registering your Red Hat Enterprise Linux systems.

To get started, please select the version of Red Hat Enterprise Linux you are trying to register. Once you've selected the appropriate major and minor versions for your systems, the Registration Assistant will provide you with instructions to register your systems via any channel available for your chosen release.

Version

Red Hat Enterprise Linux 8 - All Versions

Red Hat Insights

WHAT IS RED HAT INSIGHTS?

Red Hat Insights is a proactive management solution in Red Hat Enterprise Linux (RHEL) subscriptions. It helps you identify, prioritize, and resolve risks to your infrastructure before they become urgent issues. Insights provides ongoing analysis by using a growing list of 1,000+ rules based on Red Hat's extensive knowledge of RHEL. Delivered as-a-service, it is a single tool for managing complex RHEL environments whether they are on-premise or in the cloud. Visit the Red Hat Insights page to learn more.

- [x] **Register your systems to Red Hat Insights.**

Data collection

No sensitive data targeted for collection

Example files

```
/etc/redhat-release
/proc/meminfo
/var/log/messages
/boot/grub/grub.conf
/boot/grub2/grub.cfg
/etc/modprobe.conf
```

Commands

```
/bin/rpm -qa
/bin/uname -a
/usr/sbin/dmidecode
/bin/netstat -i
/bin/ps auxcww
```

We do not collect log files, but we collect the lines that match a potential recommendation (e.g., page allocation failure.)

Deconstructing Insights Rules

Data required

System hostname

Version of the RHEL kernel it's running

Confirm it's one of those specified CPUs

Identify how long the the system has been up

How it is collected

/bin/hostname -A

/bin/uname -a

/proc/cpuinfo

/sys/devices/system/clocksource/clocksource0/current_clocksource

Rule: Kernel panic after 200+ days of uptime on certain Xeon CPUs

Description: Intel Xeon P5, P5 v2, and P7 v2 CPUs running certain Red Hat Enterprise Linux kernels are susceptible to a bug that can lead to a system panic based on accumulated uptime.

Rule on Insights:
https://cloud.redhat.com/insights/advisor/recommendations/tsc_xeon_reboot_uptime%7CTSC_XEON_REBOOT_UPTIME

Red Hat

Four things you should know about data collection in Red Hat Insights

1 **Only portions of logs are collected.**

Bits of information about server configuration, recommendation match to the line of a log file.

2 **Data uploads are customizable.**

For example, you can delete server names or IP addresses. Collection schedules are also customizable.

3 **Information is encrypted.**

From the client's servers through transmission to the Insights service.

4 **Data remains for a short period of time.**

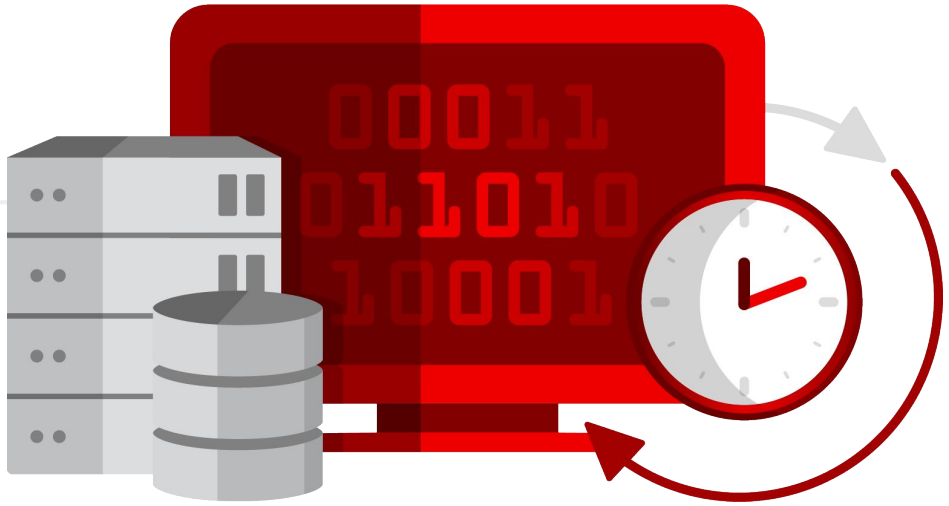
Daily replace of server upload. If upload is not sent, the current upload is typically deleted after 14 days.

How long does Red Hat store data?

Typically 24 hours

Typically 2 weeks maximum*

No permanent data storage



*Some services aggregate information and retain it longer to show historical trending

Common concerns, answered

I can't use Software-as-a-Service (SaaS).
Many times we find that SaaS is already being used. Services like Salesforce, ServiceNow, and New Relic are often deployed as SaaS.

We can't share our data or what data is collected.
Data collection is <1% of an SoS Report, which you likely use today. You also have full control of what is collected.

Adding new firewall rules is a long, painful process or my systems don't connect to the internet.
HTTP proxies are supported, and Satellite has one built in. You may be able to use existing approved infrastructure.

Hostname / IP are sensitive, and we are concerned about sharing information about our systems.
All data is encrypted in transit AND at rest, and you can easily redact that further.

I am located in <LOCATION>, and can't use Insights.
Many regions have restrictions around citizen data storage, e.g., GDPR, but these types of laws are unrelated to the type of data Insights collects.

We don't want an agent in the background taking up resources.
Insights is a client that runs during off hours, staggered, customizable time, is not constantly running. Items like cgroup constraints and timeouts, all can be configured.

Data collection customization

Commonly used configuration items

```
# Example options in this file are the defaults

# Change log level, valid options DEBUG, INFO, WARNING, ERROR, CRITICAL. Default DEBUG
#loglevel=DEBUG

# Attempt to auto configure with Satellite server
#auto_config=True

# Change authentication method, valid options BASIC, CERT. Default BASIC
#authmethod=BASIC

# username to use when authmethod is BASIC
#username=

# password to use when authmethod is BASIC
#password=

#base_url=cert-api.access.redhat.com:443/r/insights

# URL for your proxy.  Example: http://user:pass@192.168.100.50:8080
#proxy=

# Automatically update the dynamic configuration
#auto_update=True

# Obfuscate IP addresses
#obfuscate=False

# Obfuscate hostname. Requires obfuscate=True.
#obfuscate_hostname=False
```

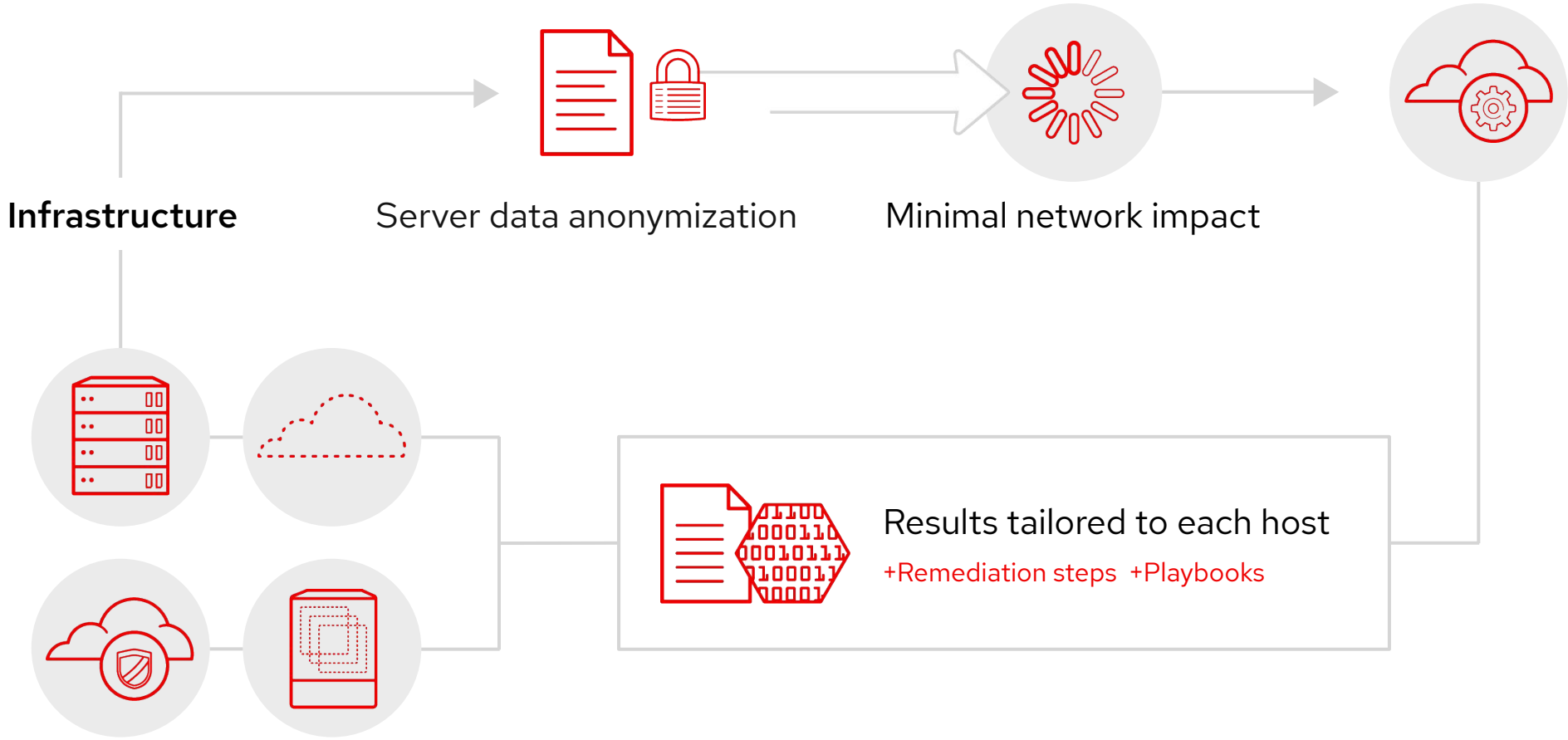
/etc/insights-client/insights-client.conf

- Change log level
- Configure satellite server
- Change auth level
- Configure proxy settings
- Hide IP address
- Hide hostname
- Change display name
- Eliminate timeouts

Architecture

Red Hat Insights

Insights Communication Flow



Direct Connection

Insights client(s)

Hybrid cloud infrastructure

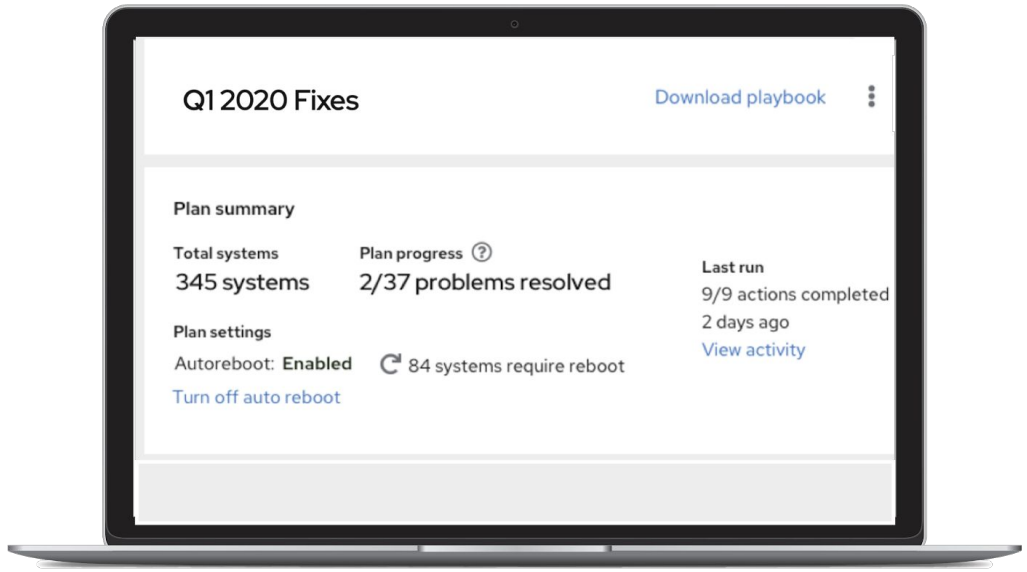
Customers environment

Port 443

cloud.redhat.com

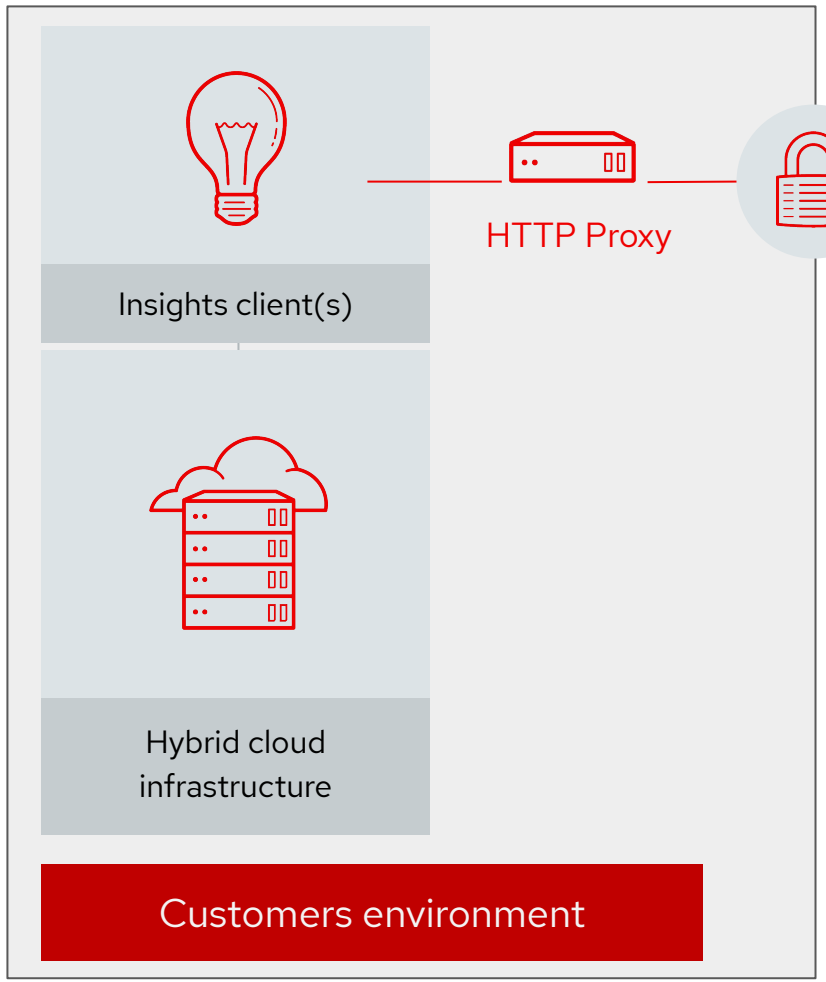
Red Hat Insights

Subscription Watch



Red Hat

HTTP Proxy



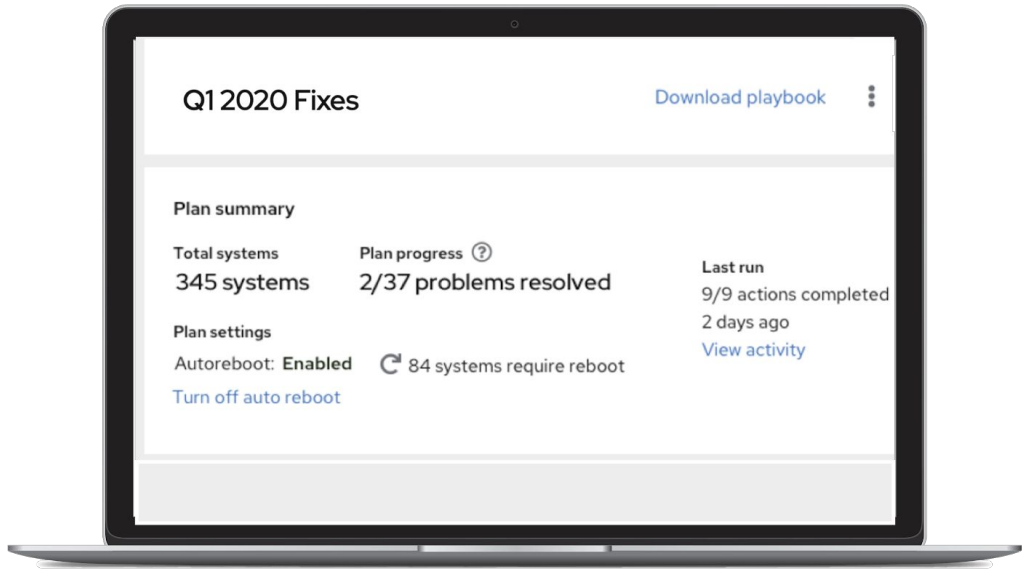
HTTP Proxy

Port 443

cloud.redhat.com

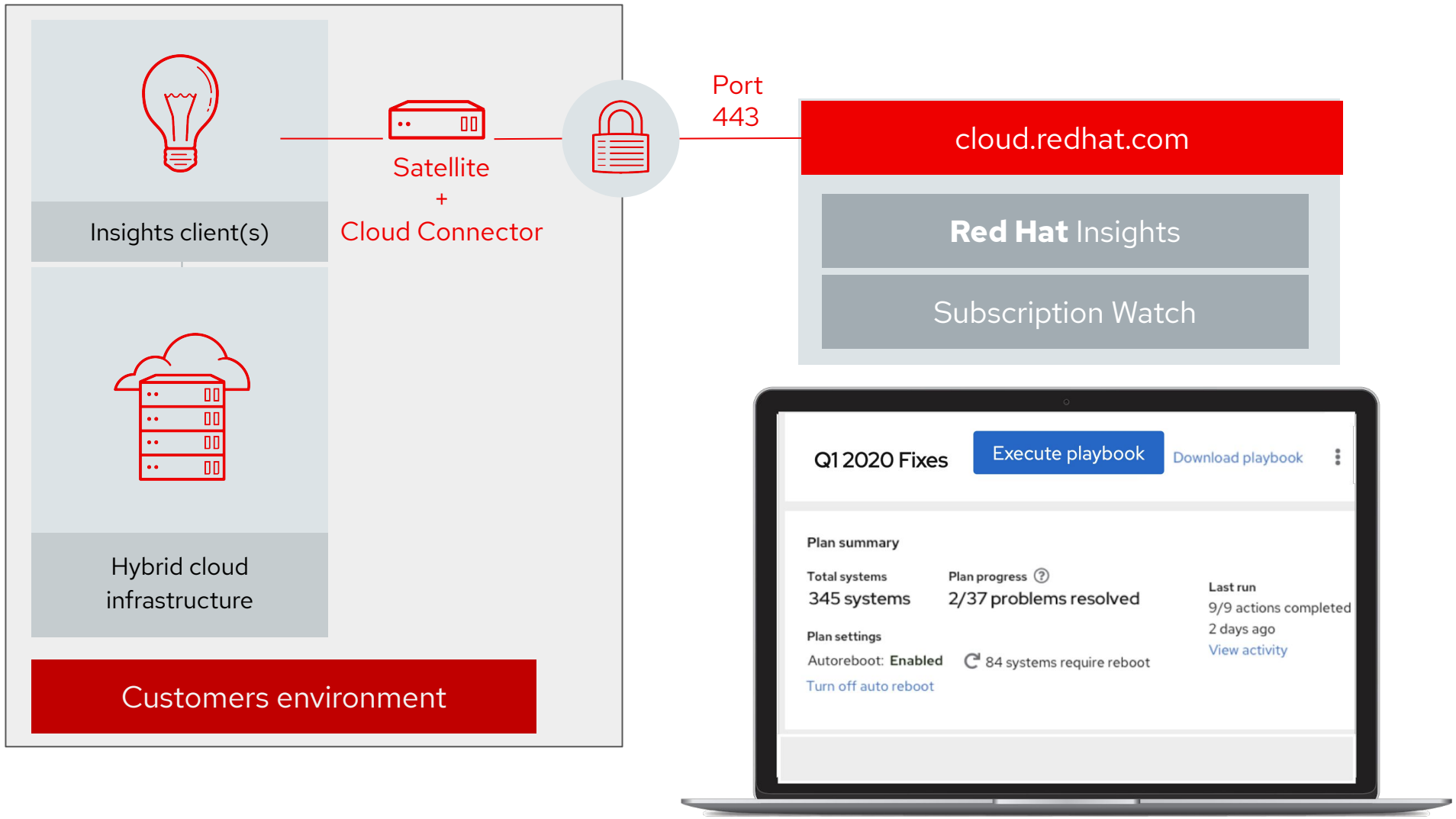
Red Hat Insights

Subscription Watch



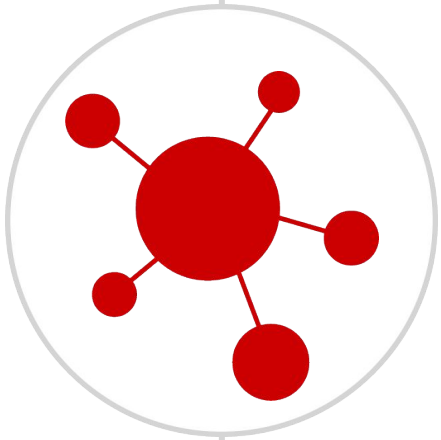
Red Hat

Smart Management



Red Hat

Common Questions



Where are my systems?

Insights has a single unified inventory to centralize all registered systems.

What kinds of risks does Insights identify?

Each Insights services focuses on a different risk.

These could be CVEs, compliance issues, systems in need of patches, or Red Hat recommendations for availability or performance

How do I fix issues that Insights find?

Most services provide remediation in the form of step-by-step instructions and in many cases an Ansible playbook.

Download the playbook and run it with Ansible Automation Platform

Red Hat

How do I fix issues that Insights finds at scale?

With **Red Hat Smart Management**, you can use the combination of Red Hat Satellite and cloud connector to enable an “Execute Remediation” button and run remediation playbooks from Insights.

Red Hat

Four ways Red Hat Insights can help you manage your Linux environment

1 **Where** is my inventory?

Insights has a **single unified inventory** to centralize all registered systems.

2 **What** kinds of risks does Insights identify?

Each Insights service focuses on a different type of risk.

These could be CVEs, compliance issues, systems in need of patches, or Red Hat recommendations for availability or performance

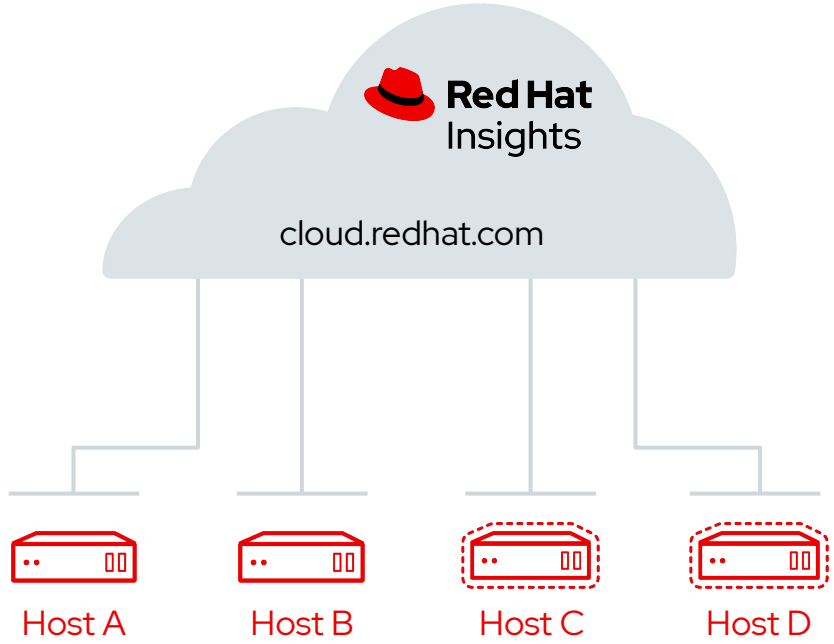
How do I fix issues that Insights find?

3 Most services provide **remediation** in the form of step-by-step instructions and in many cases an Ansible playbook.

Download the playbook and run it with Ansible Automation Platform

4 **How** do I fix issues that Insights finds at scale?

With **Red Hat Smart Management,** you can use the combination of Red Hat Satellite and cloud connector to enable an "**Execute Remediation**" button and run remediation playbooks from Insights.



Red Hat

Top 3 Insights Concerns

I can't use Software-as-a-Service (SaaS).

Often we find that SaaS is already being used.
Services like Salesforce, ServiceNow, and New Relic are often deployed as SaaS.

Hostname / IP are sensitive, and we are concerned about sharing information about our systems.

All data is encrypted in transit AND at rest, and you can easily redact that further.

I am located in <LOCATION>, and can't use Insights.

Many regions have restrictions around citizen data storage, e.g., GDPR, but these types of laws are unrelated to the type of data Insights collects.

Top 3 Insights Data Collection Concerns

At a high level, what information does Insights collect?

Red Hat Insights Security Information article:

https://red.ht/2V6doqg

How can my Security team review the actual Insights collection?

Generate a collection and inspect it in detail. Follow instructions in this article:

System Information Collected by Red Hat Insights

https://red.ht/2yPlWsH

How can I redact information from the Insights collection?

See article on Obfuscating IP Addresses and Host Names in Red Hat Insights

https://red.ht/2KebCgB

For more complicated redaction, refer to the: Use a YAML-style denylist Knowledgebase article:

https://red.ht/36lo6gB

Resources & Next Steps

Red Hat

Insights Security Page
Available at:
https://cloud.redhat.com/security/insights

Red Hat Insights Data & Application Security

Red Hat Insights is a Software-as-a-Service offering that enables users to obtain actionable intelligence regarding their [illegible] environments, helping to identify and address operational and vulnerability risks before an issue results in downtime. To do this analysis, small pieces of system metadata are sent to the Red Hat Insights service for analysis. This page covers the measures Red Hat has put into place to help reduce security risks when transmitting, processing, and analyzing this data.

Go to Red Hat Insights

Overview | Data collection and controls | Data protection | Frequently asked questions

Data Privacy in Red Hat Insights for Managing Red Hat Enterprise Linux Environments

1. **Insights is designed to work with minimal data.**
   Red Hat Insights collects only the minimum system metadata that is needed to analyze and identify issues in your Red Hat Enterprise Linux environments.

2. **You control what data is sent to Red Hat for analysis.**
   Before data is sent, you have the option to inspect and redact information.

3. **Data is encrypted throughout the processes, with a customizable collection schedule.**
   Red Hat signs its data collection rules and will abort if the signature cannot be verified.

Red Hat Insights:

Additional resources and next steps

Already a Red Hat Enterprise Linux user?

You have Red Hat Insights at no additional cost:
https://red.ht/insights_start

Would you like to learn more about Red Hat Insights?

https://redhat.com/insights
For more info, visit: https://access.redhat.com/insights/info

Refer to the Insights webinar library

Replays and upcoming webinars from this series

bit.ly/insights_webinarlibrary

- Watch the **intro video**.

- Read the **Insights blog**.

Red Hat

Insights Resources

Webpages and Docs:

- Red Hat Insights product webpage - https://www.redhat.com/insights
- Get Started with Insights - https://cloud.redhat.com/insights/registration OR https://access.redhat.com/products/red-hat-insights/#getstarted
- Red Hat Insights Documentation - https://access.redhat.com/documentation/en-us/red_hat_insights
- Principled Technologies Analyst report: Save administrator time and effort by activating Red Hat Insights - https://www.redhat.com/en/resources/save-administrator-time-and-effort-analyst-paper
- IDC Analyst Whitepaper: value of Red Hat Insights and predictive analytics - https://www.redhat.com/en/resources/idc-whitepaper-optimizing-infrastructure-management-with-predictive-analytics
- Insights blog: https://www.redhat.com/en/blog/channel/red-hat-insights

Security Links:

- Insights Security page: https://access.redhat.com/insights/security

Videos:

- Insights webinar library: http://bit.ly/insights_webinarlibrary
- Introduction to Red Hat Insights Video: https://youtu.be/MdT4xrIlvpY
- Installation and Registration of Red Hat Insights Video: https://youtu.be/BOhQ9IarUb8
- Find it. Fix it. Before it breaks. Satellite, Insights, and Ansible: https://youtu.be/mCBhUuxRCgA

Red Hat

Thank you

Red Hat is the world's leading provider of enterprise open source software solutions. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500.


linkedin.com/company/red-hat


youtube.com/user/RedHatVideos


facebook.com/redhatinc

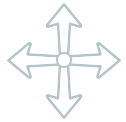

twitter.com/RedHat

Alternative Slides

Your Challenges

Complexity of managing systems in a **hybrid and multi-cloud** environment

Lack of flexibility to manage these systems on-prem or in the cloud



Ensuring that systems are always **up to date and easily scalable**

Inability to proactively **assess, analyze, and remediate** any security **vulnerabilities**

PREDICT RISK. GET GUIDANCE. STAY SECURE.

PREDICTIVE I.T. ANALYTICS

AUTOMATED EXPERT ASSESSMENT

SIMPLE REMEDIATION

Red Hat

Software as a Service Benefits

No infrastructure to maintain

Register Once

Easy Setup

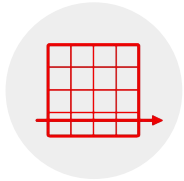
Always on the latest version

Easier to access and scale capabilities

Red Hat

Key risks discovered

Tailored resolution steps included for resolution



Performance issue
Network interface is not performing at maximum speed

Recommended action
Check cable, connections, and remote switch settings

Security risk detected
Privilege escalation

Recommended action
Apply mitigation and update the kernel

Availability
OpenShift operations fail if insufficient CPU or memory

Recommended action
Increase CPU and/or memory reservation

Stability
Filesystem has exceeded 95% capacity

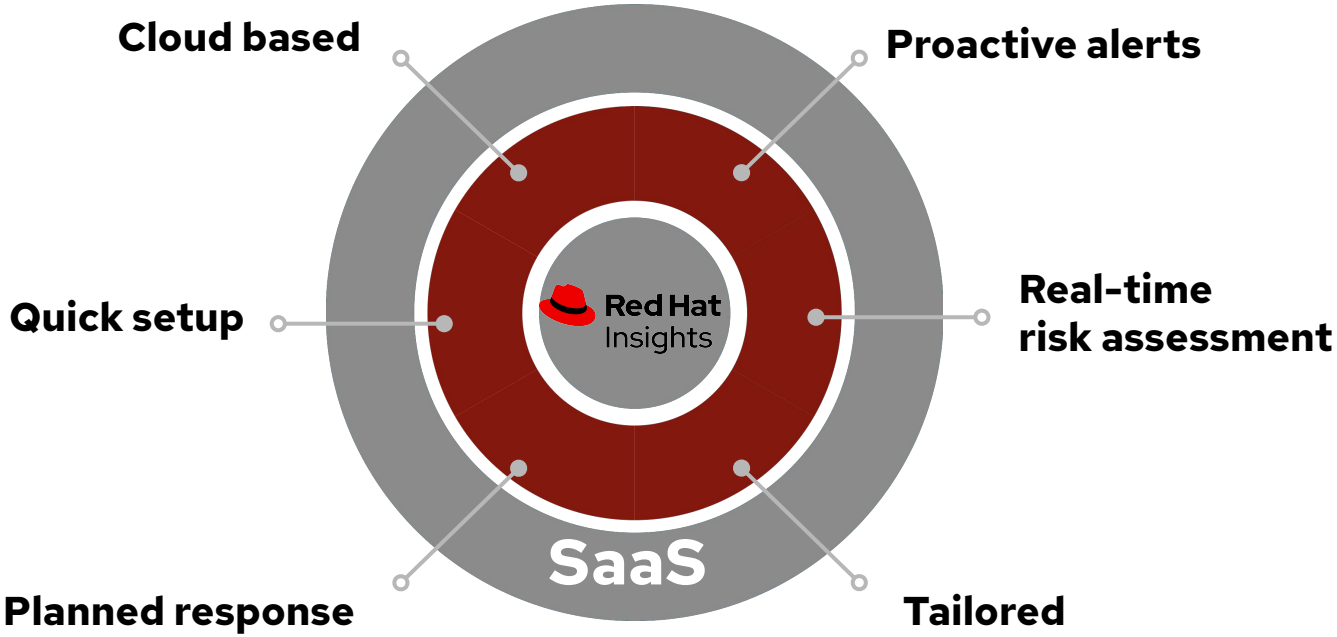
Recommended action
Increase free space on the host.

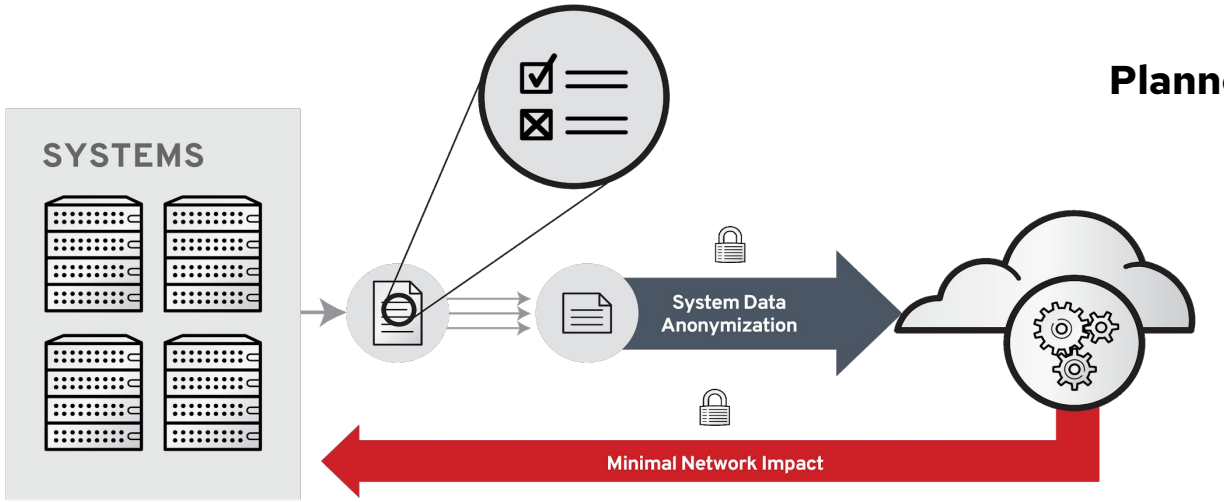
Red Hat

Quick Value in 15 Minutes or Less

Insights installs in minutes

- Registers to Satellite or Customer Portal
- Automation-enabled
- Simple registration (one command)
- Reporting available instantly
- Client can run at customer defined interval

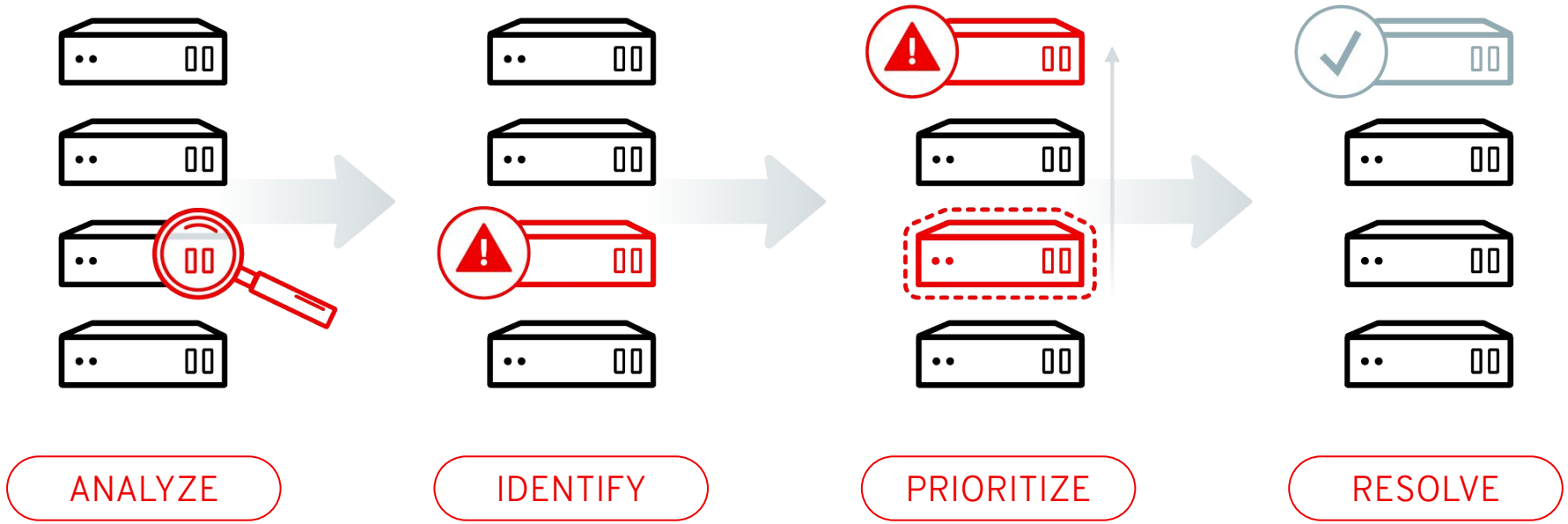




Security is built in. Insights customers have control via blacklist and obfuscation of any metadata collected.

Red Hat

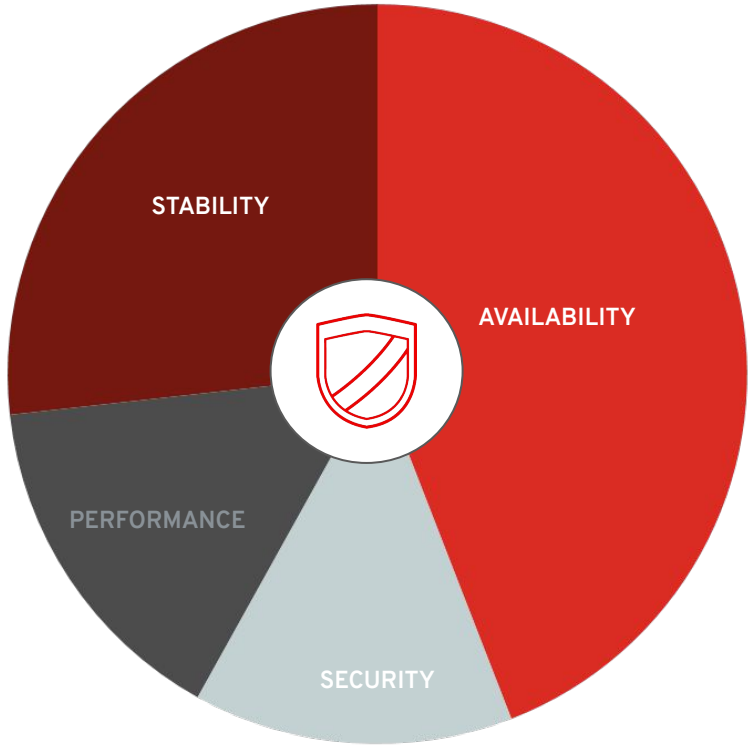
Managing infrastructure risk



Red Hat

Advisor is more than just security

Red Hat Insights has more than 1100 rules—here is how they stack up across categories



- **Availability** 44%
- **Security** 15%
- **Stability** 27%
- **Performance** 14%

Red Hat

What Options does the client give?

Commonly Used Command Line Options

`insights-client`

- **`--register`** // register the host to Insights. Will automatically enable the nightly cron job unless **--disable-schedule** is set.
- **`--unregister`** // unregister the host from Insights.
- **`--displayname=DISPLAYNAME`** // set the host's display name in the UI. Can be used with --register to set the display_name on host registration, or on its own to change display name of an existing host.
- **`--group=GROUP`** // set a host group on registration.
- **`--retry=RETRIES`** // number of times to retry an upload. Default is 1. 180 seconds between tries.
- **`--validate`** // validate the structure of the remove.conf file.
- **`--quiet`** // only log error messages to console.
- **`--silent`** // log nothing to console.
- **`--enable-schedule`** // enable the nightly cron job.
- **`--disable-schedule`** // disable the nightly cron job.
- **`--conf=CONF, -c=CONF`** //use a custom configuration file CONF.
- **`--to-stdout`** // dump the binary archive contents to stdout instead of uploading.
- **`--compressor`** //select the compressor to be used when creating the archive. Available options are gz, bz2, xz, and none. Defaults to gz.
- **`--no-upload --keep archive`** // Generates .tar insights bundle doesn't upload it to Red Hat
- **`--logging-file=LOGFILE`** // log to a specified file LOGFILE.
- **`--diagnosis`** // fetch diagnosis information from the API. Can only be used after the system has registered and uploaded at least once.
- **`--payload=PAYLOAD`** // upload a specific archive PAYLOAD. Requires --content-type.
- **`--content-type=TYPE`** // set the content-type for PAYLOAD.

What Options does the client give?

Commonly Used configuration Items

/etc/insights-client/insights-client.conf

```
# Example options in this file are the defaults

# Change log level, valid options DEBUG, INFO, WARNING, ERROR, CRITICAL. Default DEBUG
#loglevel=DEBUG

# Attempt to auto configure with Satellite server
#auto_config=True

# Change authentication method, valid options BASIC, CERT. Default BASIC
#authmethod=BASIC

# username to use when authmethod is BASIC
#username=

# password to use when authmethod is BASIC
#password=

#base_url=cert-api.access.redhat.com:443/r/insights

# URL for your proxy.  Example: http://user:pass@192.168.100.50:8080
#proxy=

# Automatically update the dynamic configuration
#auto_update=True

# Obfuscate IP addresses
#obfuscate=False

# Obfuscate hostname. Requires obfuscate=True.
#obfuscate_hostname=False

# Display name for registration
#display_name=

# Timeout for commands run during collection, in seconds
#cmd_timeout=120

# Timeout for HTTP calls, in seconds
#http_timeout=120

# Location of remove file
#remove_file=/etc/insights-client/remove.conf
```

- Change Log Level
- Configure Satellite Server
- Change Auth Level
- Proxy Settings
- Hide IP Address
- Hide Hostname
- Change Display Name
- Timeouts

What is the size of the data upload?

The upload from the Insights client **(.tar)** can vary widely on a variety of factors.

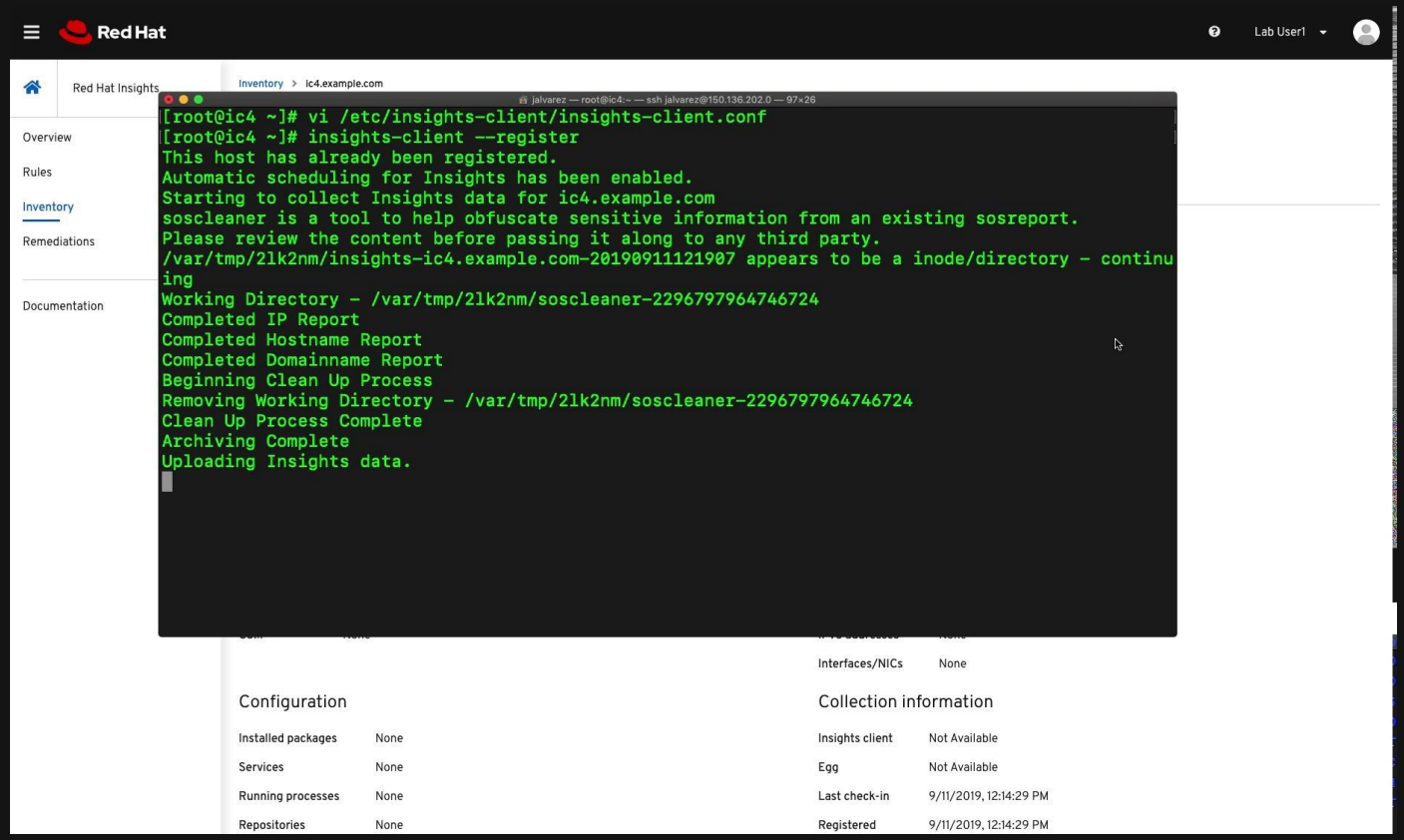
This upload is generally very small
Is a compressed file

- **Average size:** 317 Kb
- **Minimum seen:** 548 bytes
- **Maximum seen:** 238 Mb
- **Median upload size:** 201 Kb

Systems connected to NAS generated larger data packets
The Recursive /etc listing is generally the largest part, but if you have many disks then /dev might be larger

To see exactly what is sent, run: `insights-client --no-upload --keep-archive`

Obfuscate Hostname and IP address

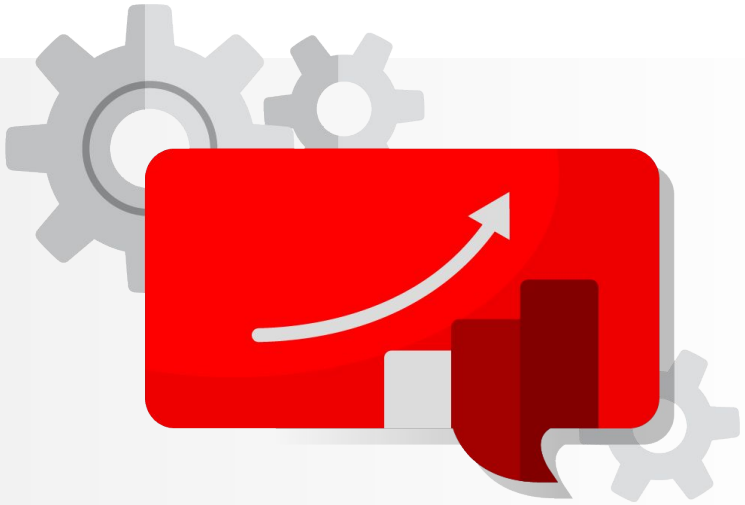


Red Hat

Automatic remediation with Insights and Red Hat Management

Advisor performance recommendations for Smart Management

Customers can use Insights recommendations to recommend Satellite performance tunings, listed in the "Tuning Red Hat Satellite" guide.



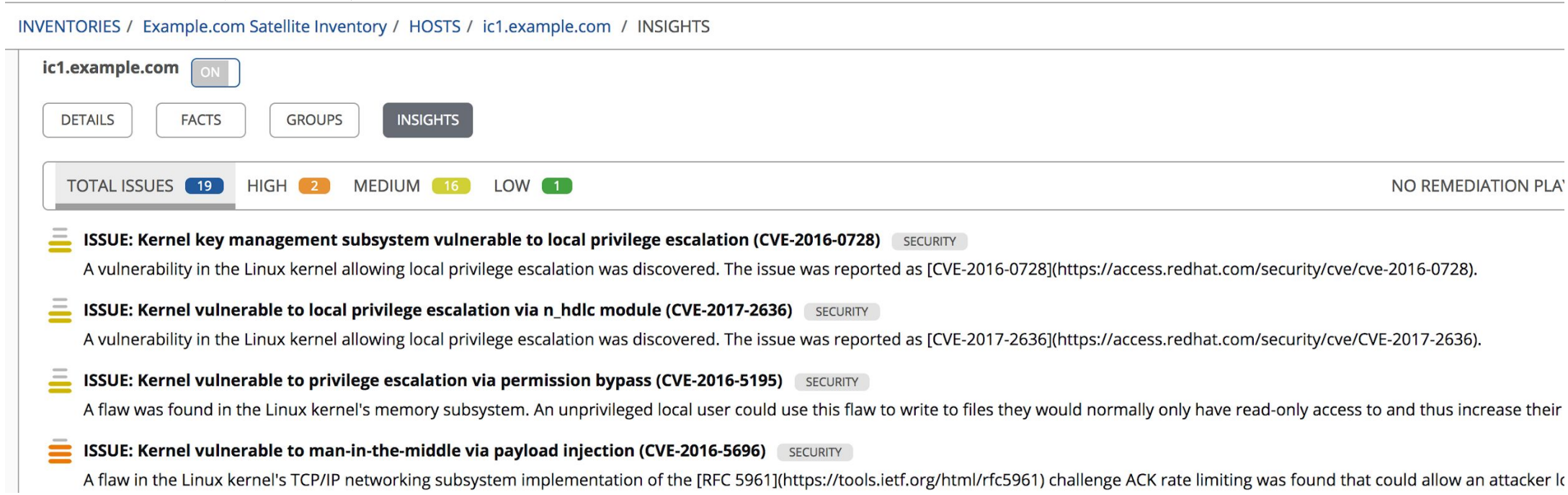
Performance rules and tests include:

- MinInstance rule for Foreman.
- Passenger performance rule.
- Postgresql_frequent_checkpoints.py.
- Rule for pulp filetype to be of non-NFS type.
- Server limit rule for HTTPD access and error logs.
- Tests for pulp_ftype.
- Tests for serverLimit.
- Tests for postgresql_frequent_checkpoints.

Automatic reporting and remediation with Ansible Tower

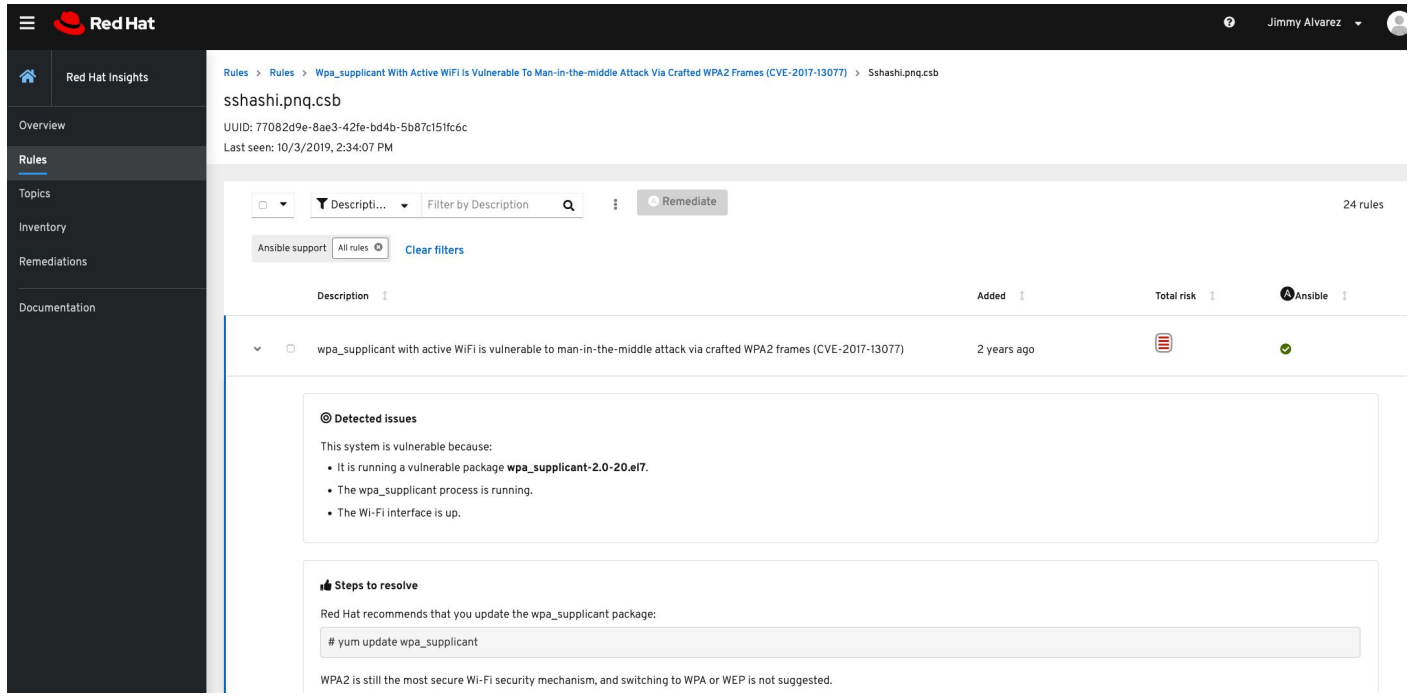
Reporting and Remediation is also available on Red Hat Ansible Tower

- Reporting and Remediation, both manual and automatic (scheduling it)
  - Different look and feel, Tower approach



Red Hat

Showcase Critical Rule hits:



This showcases some of the issues that have been encounter by Insights on other systems.

Red Hat

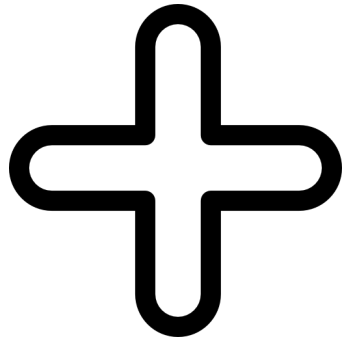
Showcase Remediation via Ansible Playbooks

```
# Version: b8071b342fec71076730e3247db838d109fd0f94
- name: Modify '/sys/fs/selinux/avc/cache_threshold' to 8192 for current boot
  hosts: "rhel76-inst-my-instance-mi3ehqnltk7o,rhel76.usersys.redhat.com,vm255-66.gsslab.pnq2.redhat.com"
  become: true

  tasks:
    - name: Modify '/sys/fs/selinux/avc/cache_threshold' to 8192
      shell: echo 8192 > /sys/fs/selinux/avc/cache_threshold


- name: run insights
  hosts: "rhel76-inst-my-instance-mi3ehqnltk7o,rhel76.usersys.redhat.com,vm255-66.gsslab.pnq2.redhat.com"
  become: True
  gather_facts: False
  tasks:
    - name: run insights
      command: insights-client
      changed_when: false
```

This will help understand how we can resolve issues at Scale

Insights & Ansible Integration

Red Hat



Better together

INSIGHTS AND ANSIBLE TOWER INTEGRATION

Connect Insights to Tower through projects and templates

Red Hat Insights can easily be integrated with Red Hat Ansible® Tower.

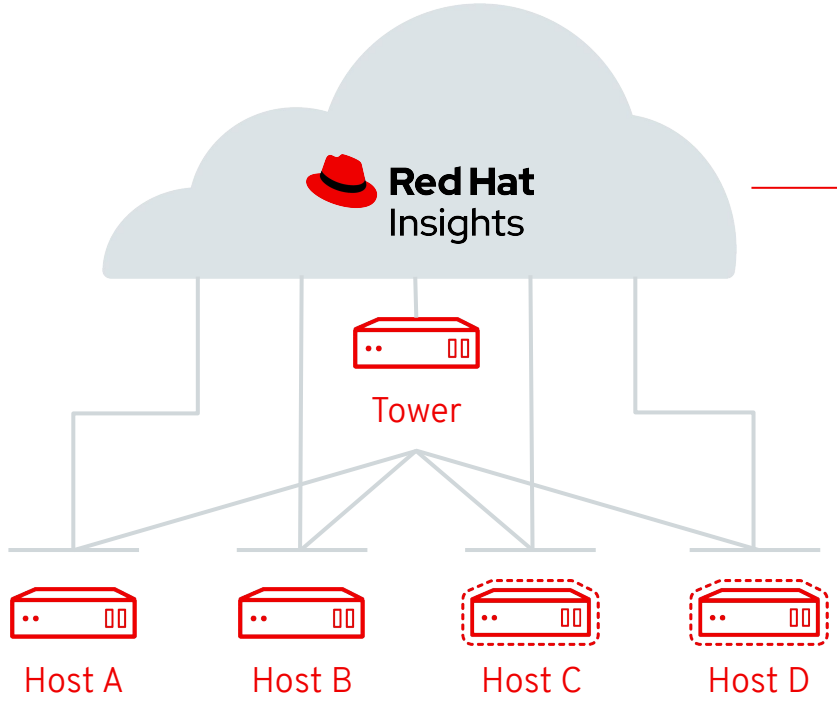
Single steps to integrate

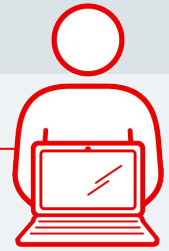
1. Create Insights Credentials
2. Insights scan (link Tower & Insights)
3. Planner sync
4. Remediate

Ansible Tower + Insights Architecture

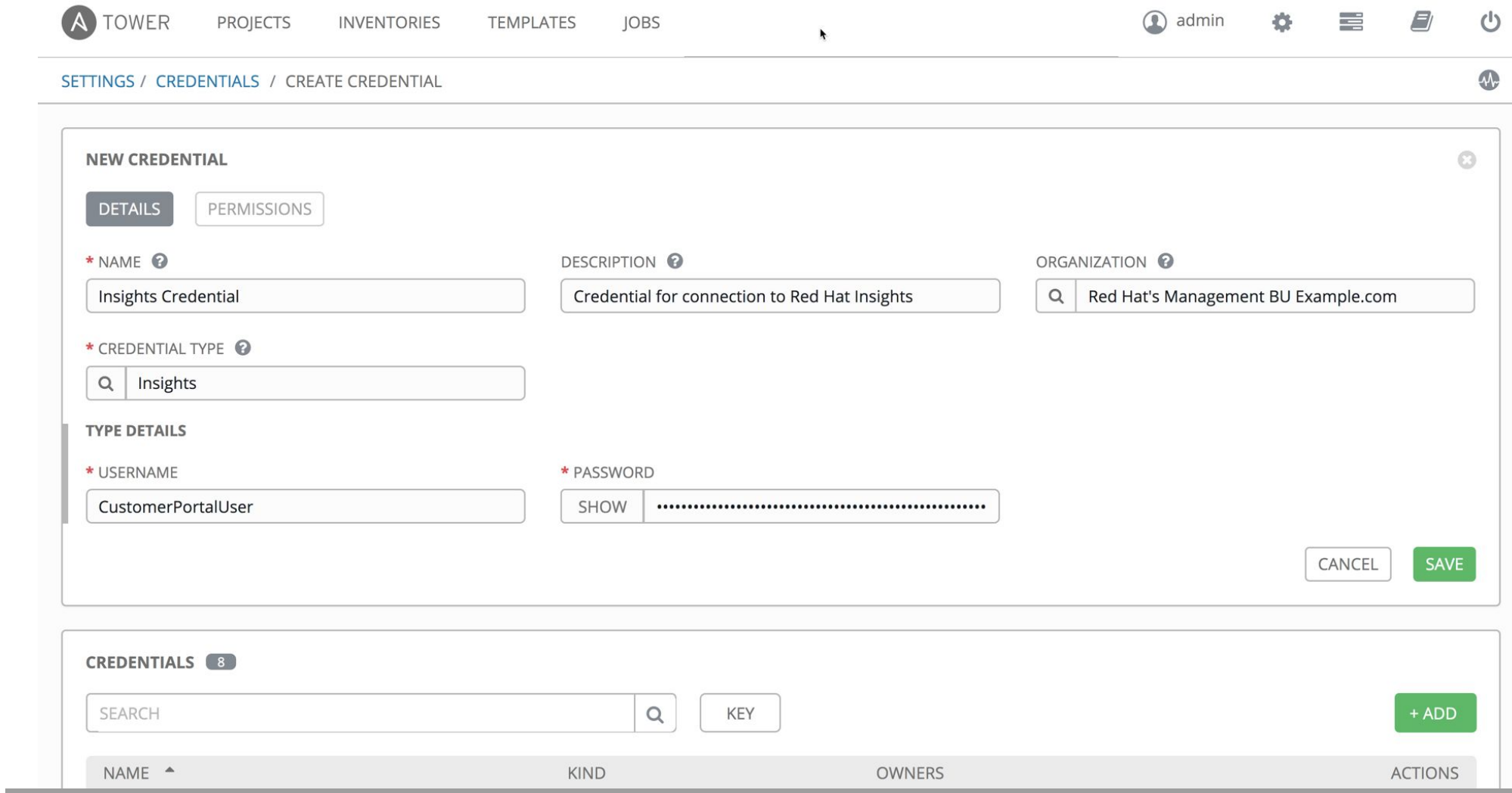
Products entitled

- Red Hat Insights
- Red Hat Enterprise Linux
- Red Hat Ansible Tower

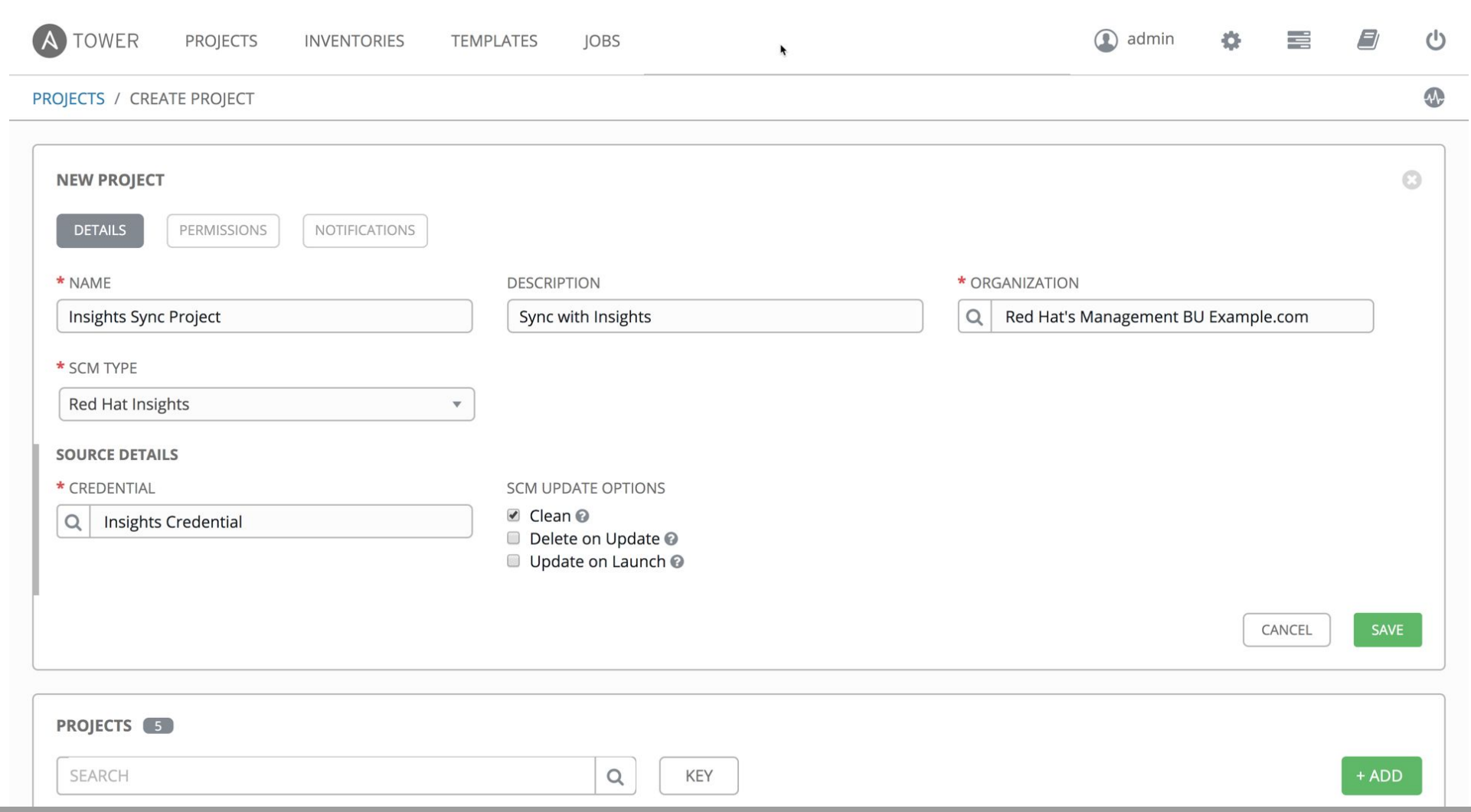




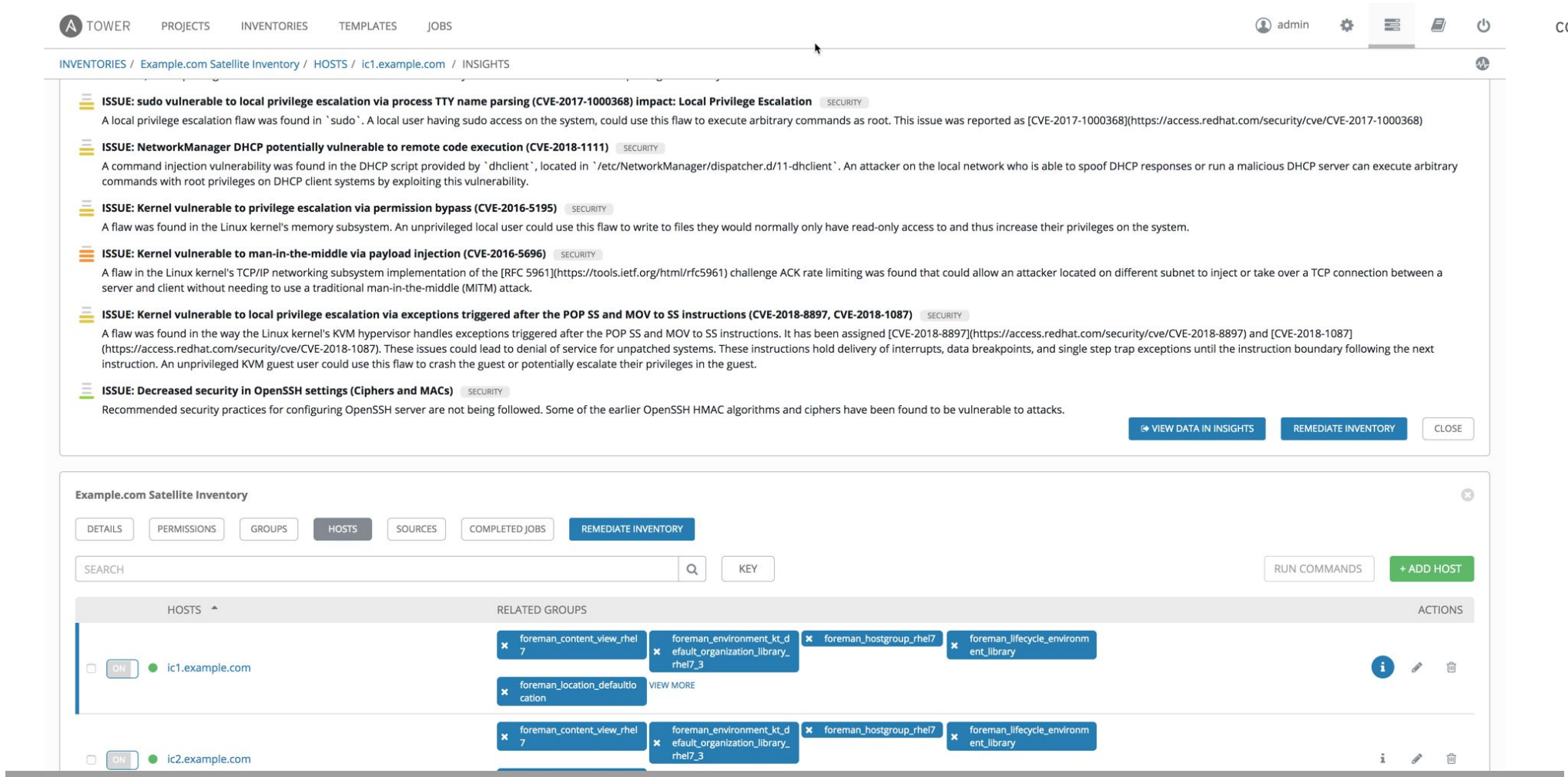
- Hosts are directly connected to cloud.redhat.com
- User creates playbook through Ansible Tower
- Playbook is run by Ansible Tower



Add the Insights credentials

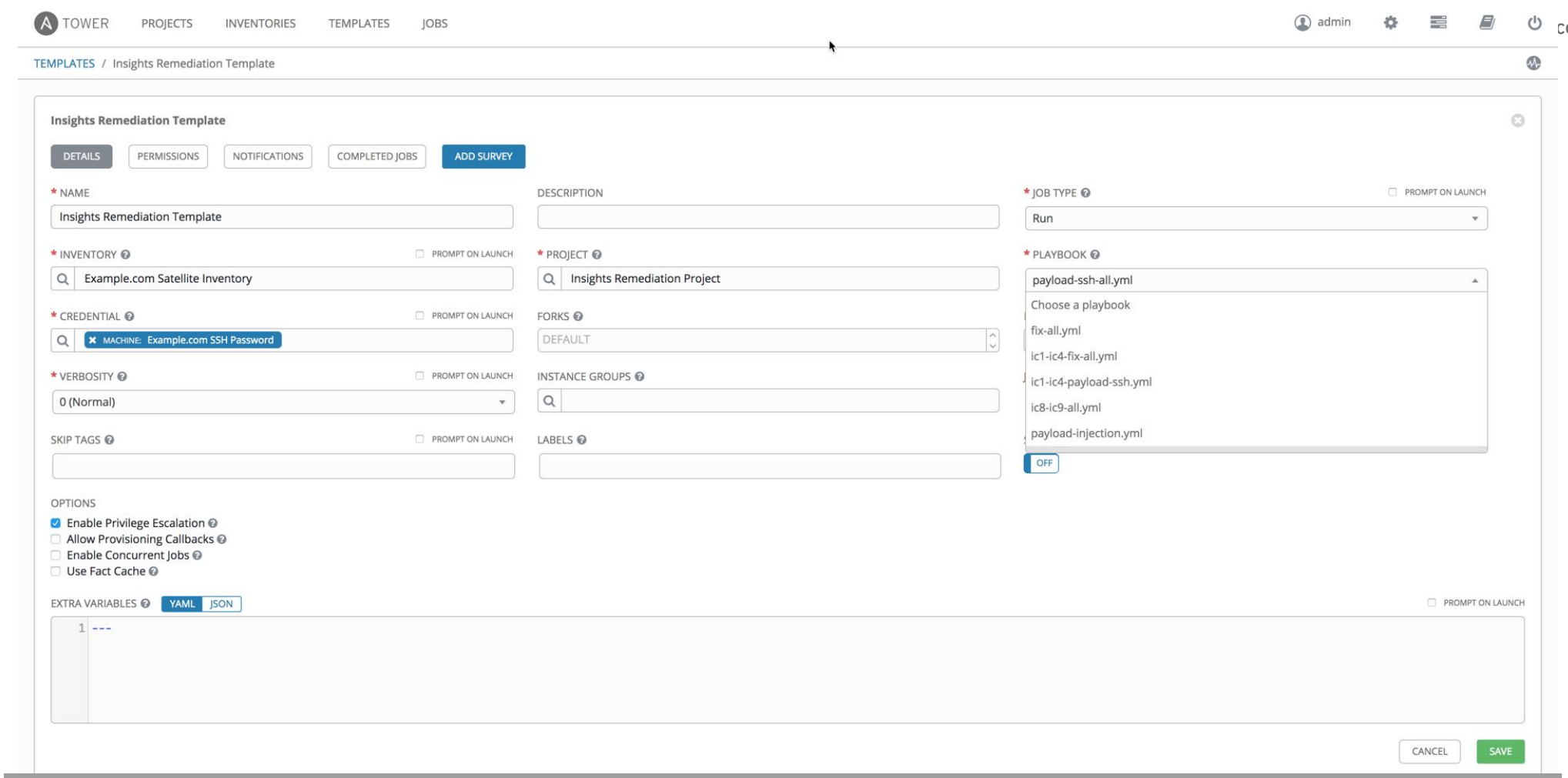


Sync Insights with Ansible Tower

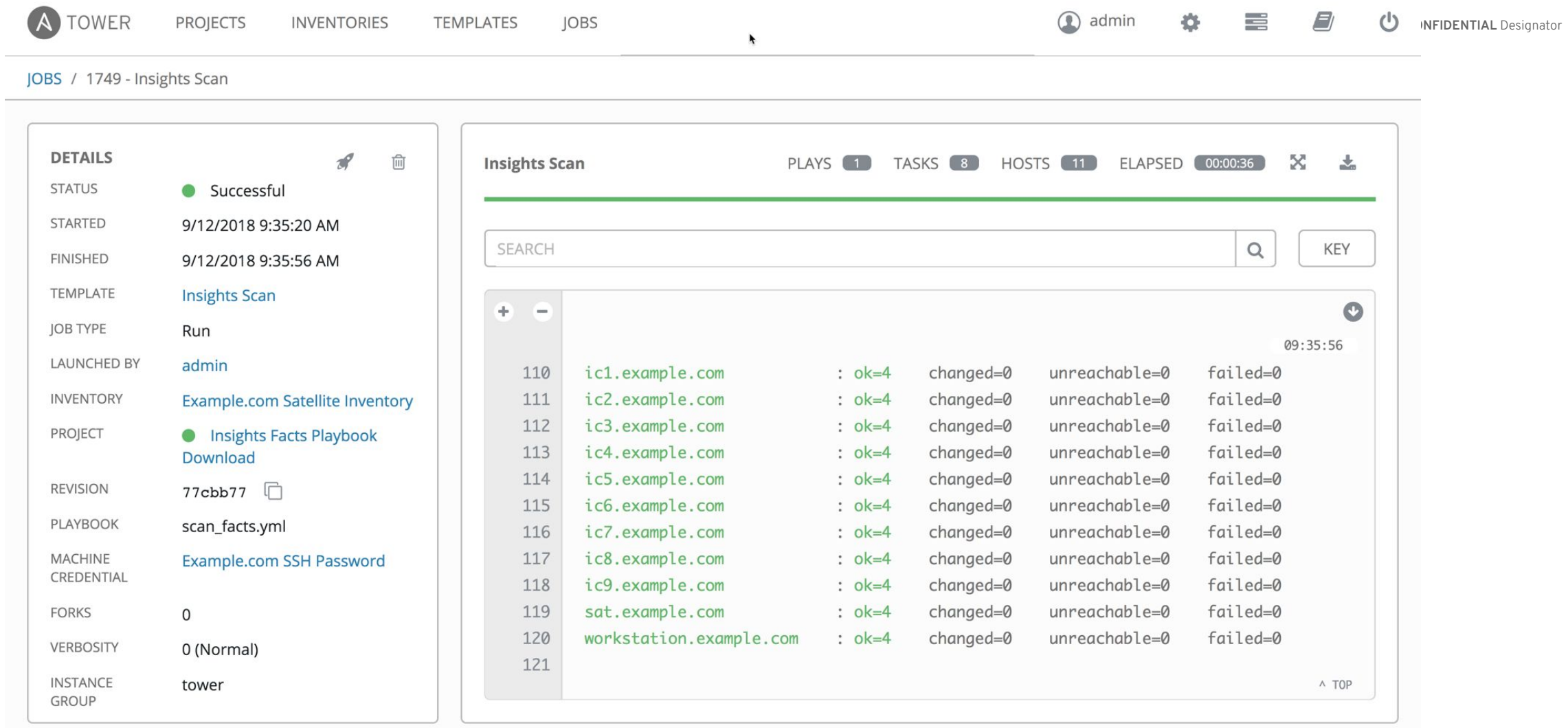


See risks from Inside Ansible Tower

Red Hat



Select a Playbook to resolve an issue



Run Playbook

Red Hat

ANSIBLE & INSIGHTS

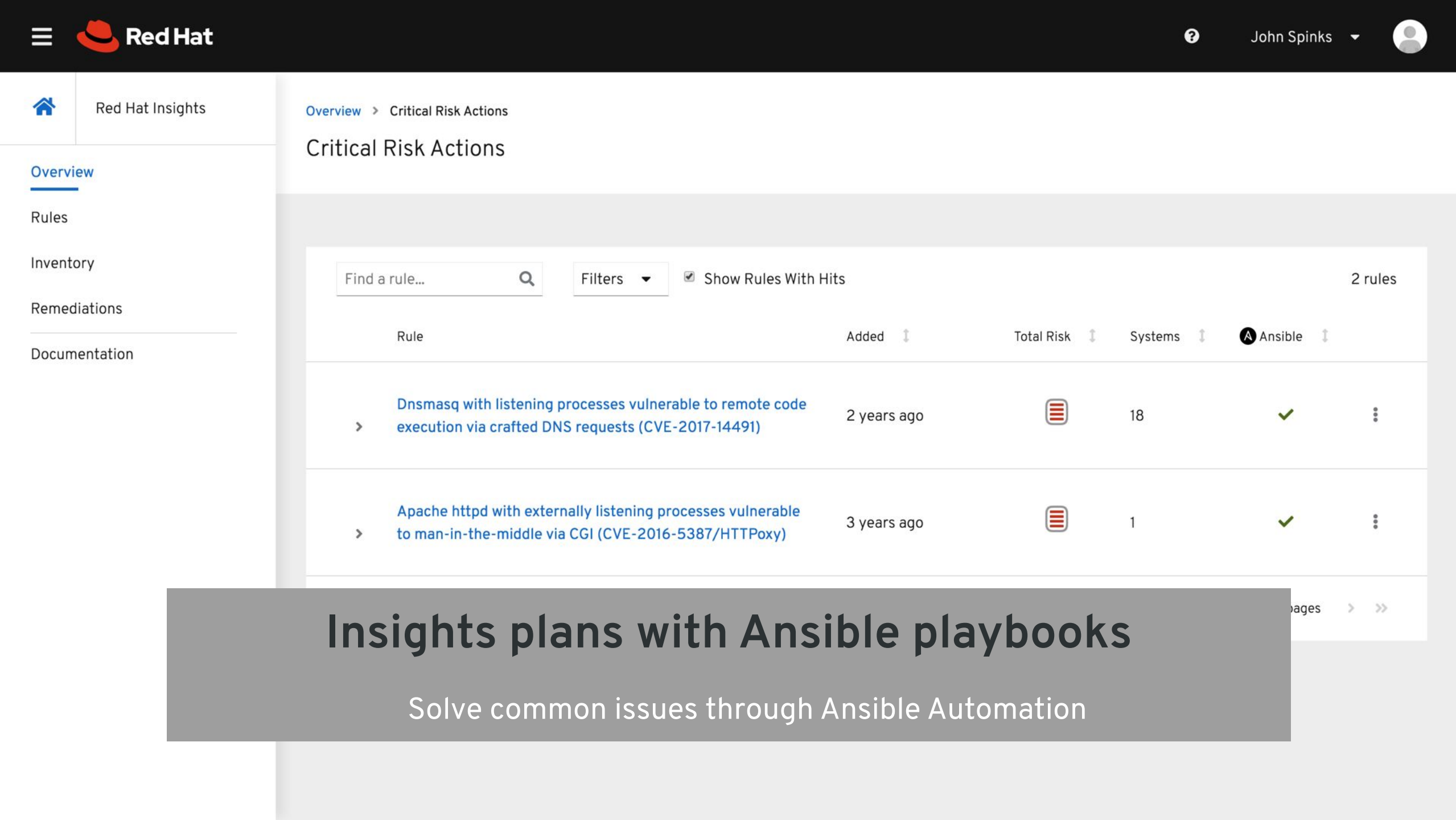
While Insights includes Ansible playbooks for risks, Insights alone can't perform remediation of the risks.

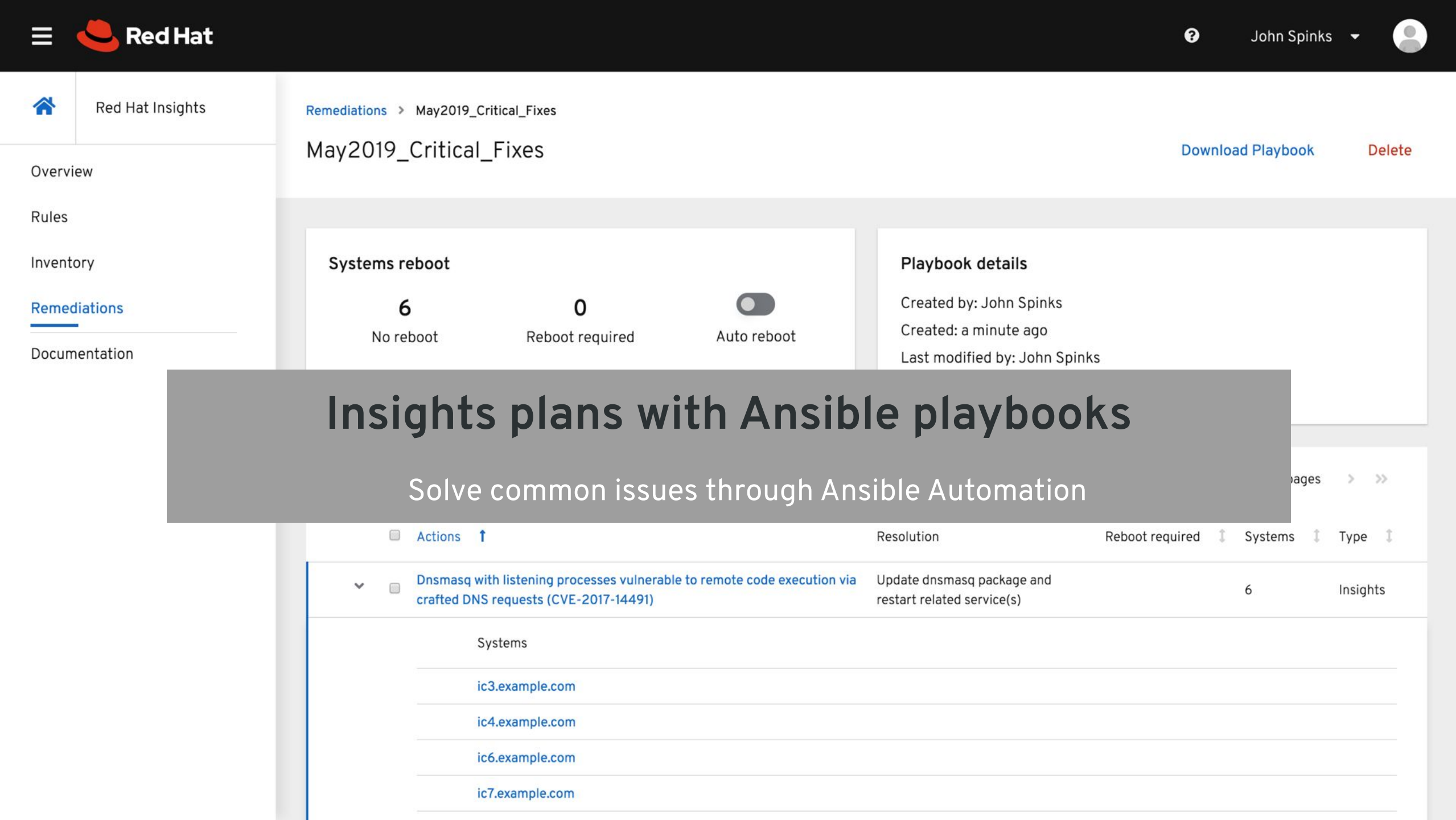
Insights

- Insights provides Ansible Playbooks for resolving many common risks.
- Dynamically generates Ansible Playbooks for risk remediation
- Playbooks can be downloaded and run via `ansible-playbook` or Satellite

Insights connected to Ansible Tower

- View identified risks in the Tower inventory
- Execute generated Ansible Playbook as a Tower job
- Use Tower for enterprise risk remediation


Red Hat
John Spinks
Red Hat Insights
Overview
Rules
Inventory
Remediations
Documentation
Overview > Critical Risk Actions
Critical Risk Actions
Find a rule...
Filters
Show Rules With Hits
2 rules
Rule
Added
Total Risk
Systems
Ansible
Dnsmasq with listening processes vulnerable to remote code execution via crafted DNS requests (CVE-2017-14491)
2 years ago
18
Apache httpd with externally listening processes vulnerable to man-in-the-middle via CGI (CVE-2016-5387/HTTPoxy)
3 years ago
1
Insights plans with Ansible playbooks
Solve common issues through Ansible Automation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John Spinks
Red Hat Insights
Overview
Rules
Inventory
Remediations
Documentation
Remediations > May2019_Critical_Fixes
May2019_Critical_Fixes
Download Playbook
Delete
Systems reboot
6
No reboot
0
Reboot required
Auto reboot
Playbook details
Created by: John Spinks
Created: a minute ago
Last modified by: John Spinks
Insights plans with Ansible playbooks
Solve common issues through Ansible Automation
Actions
Resolution
Reboot required
Systems
Type
Dnsmasq with listening processes vulnerable to remote code execution via crafted DNS requests (CVE-2017-14491)
Update dnsmasq package and restart related service(s)
6
Insights
Systems
ic3.example.com
ic4.example.com
ic6.example.com
ic7.example.com

Ansible Integration & Support

Ansible Playbook Generation & Execution

Insights can generate Ansible playbooks to help remediate issues

- Insights can natively generate playbooks
- How playbooks are executed depends on a few factors...

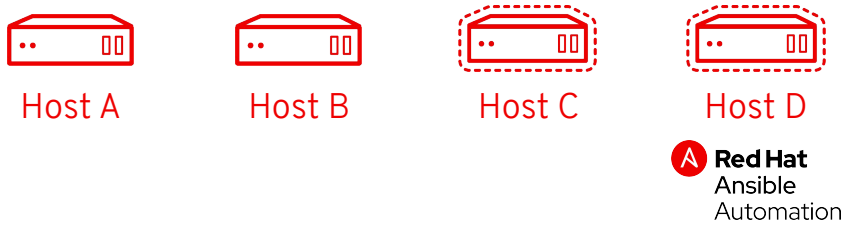
Download and run playbooks

Products entitled

Red Hat Insights

Red Hat Enterprise Linux

Red Hat Smart Management



Red Hat

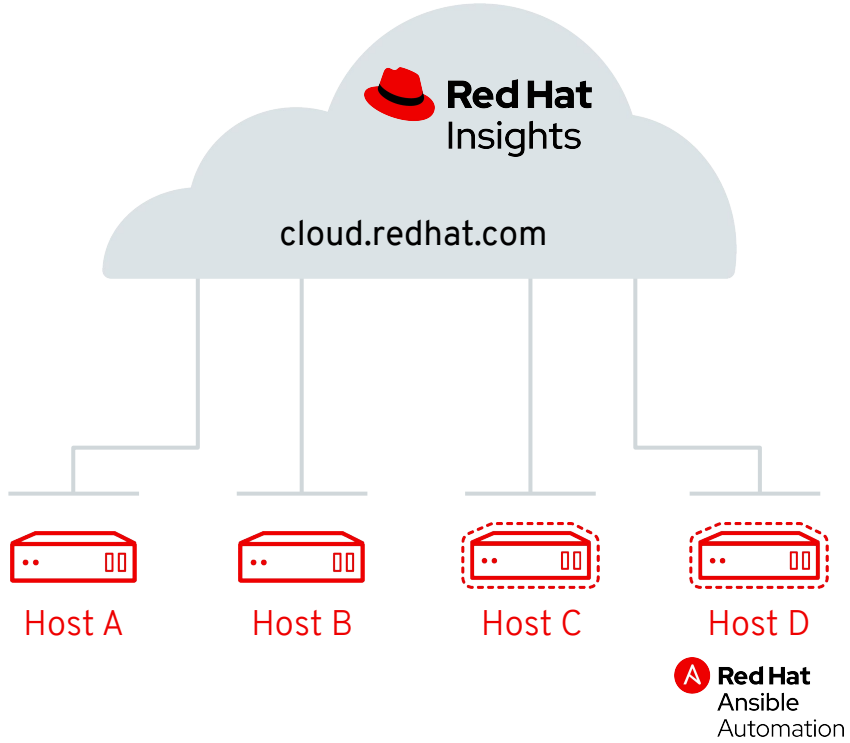
Download and run playbooks

Products entitled

Red Hat Insights

Red Hat Enterprise Linux

Red Hat Smart Management



Red Hat

Download and run playbooks

Products entitled

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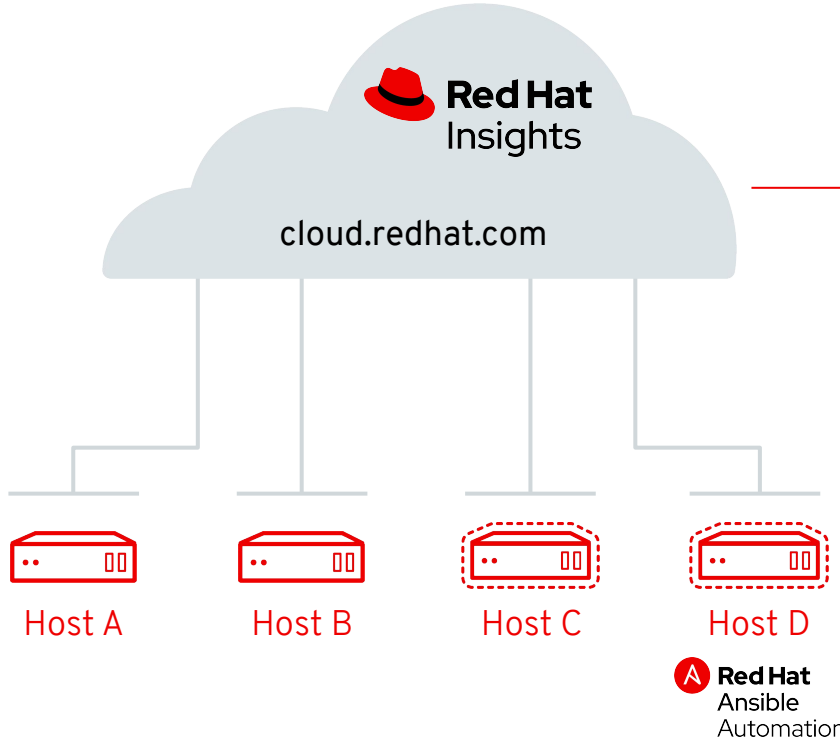
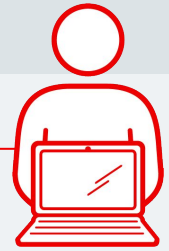
- Red Hat Smart Management





- User creates and downloads playbook from **cloud.redhat.com**

Red Hat

Download and run playbooks

Products entitled

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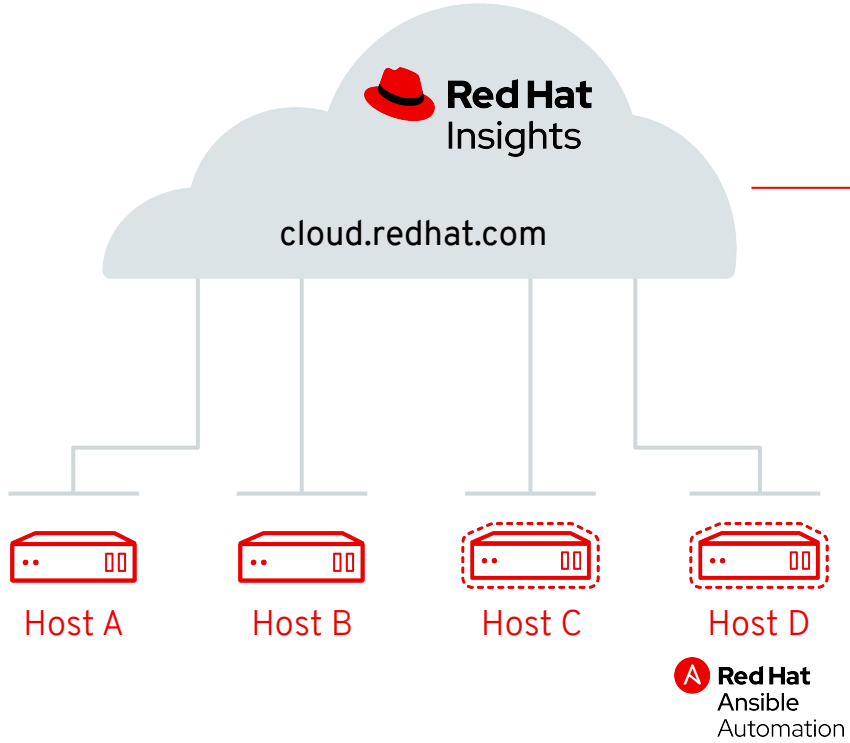
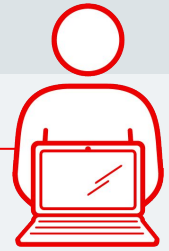
- Red Hat Enterprise Linux
- Red Hat Smart Management





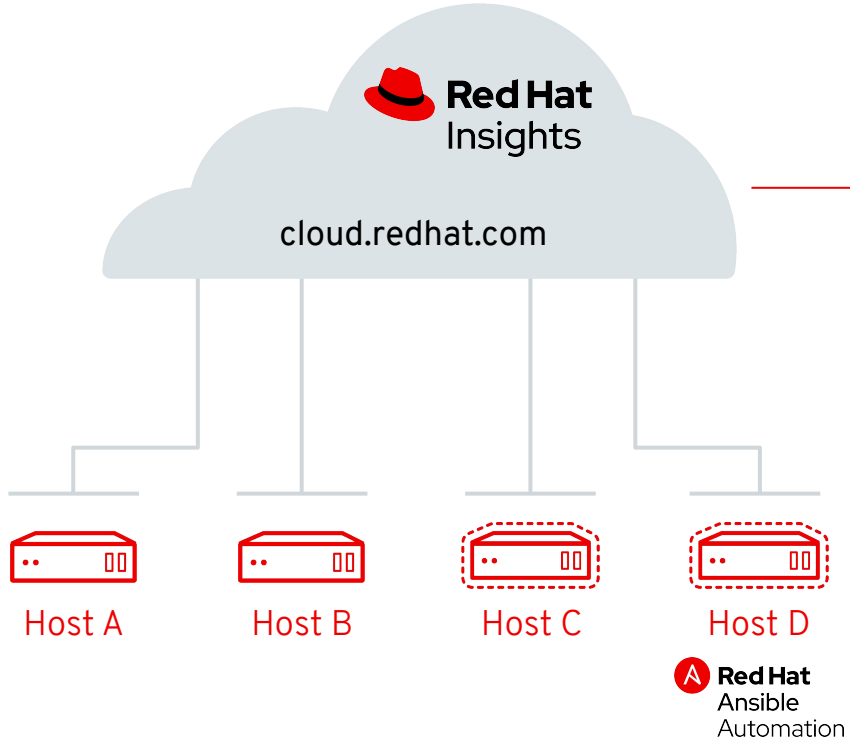
- User creates and downloads playbook from **cloud.redhat.com**
- User transfers playbook to Red Hat Enterprise Linux host with Ansible installed

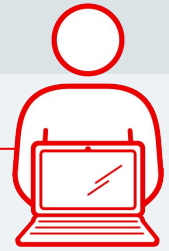
Red Hat

Download and run playbooks

Products entitled

- Red Hat Insights
- Red Hat Enterprise Linux
- Red Hat Smart Management





- User creates and downloads playbook from **cloud.redhat.com**
- User transfers playbook to Red Hat Enterprise Linux host with Ansible installed
- Playbook is run by Red Hat Enterprise Linux host

Red Hat

How do I get Ansible for running playbooks?

You don’t have to buy anything else to use playbooks generated by Insights

- Ansible can be easily installed per the directions here: https://access.redhat.com/articles/3174981
- Red Hat Enterprise Linux ships with the Ansible Engine Repository

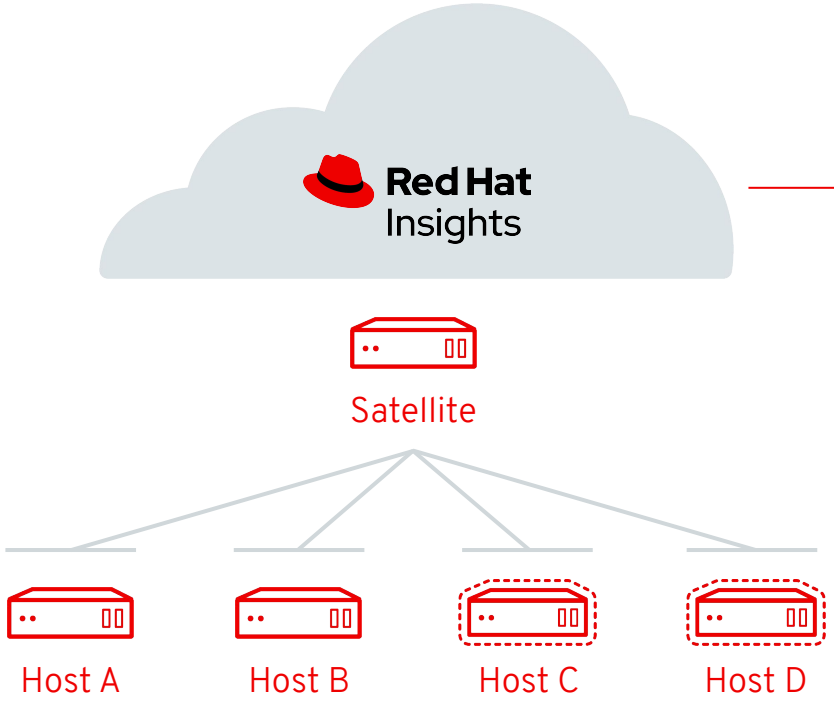
  (this does NOT confer an Ansible Automation Platform subscription)
- You can use this same repository as a limited, supported version of Ansible for the express purpose of running RHEL system roles and playbooks created by Red Hat products.

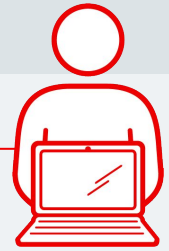
Build and run playbooks in Red Hat Satellite

Scenario applies to Insights Advisor service only

Products entitled

- Red Hat Insights
- Red Hat Enterprise Linux
- Red Hat Smart Management
- Red Hat Satellite





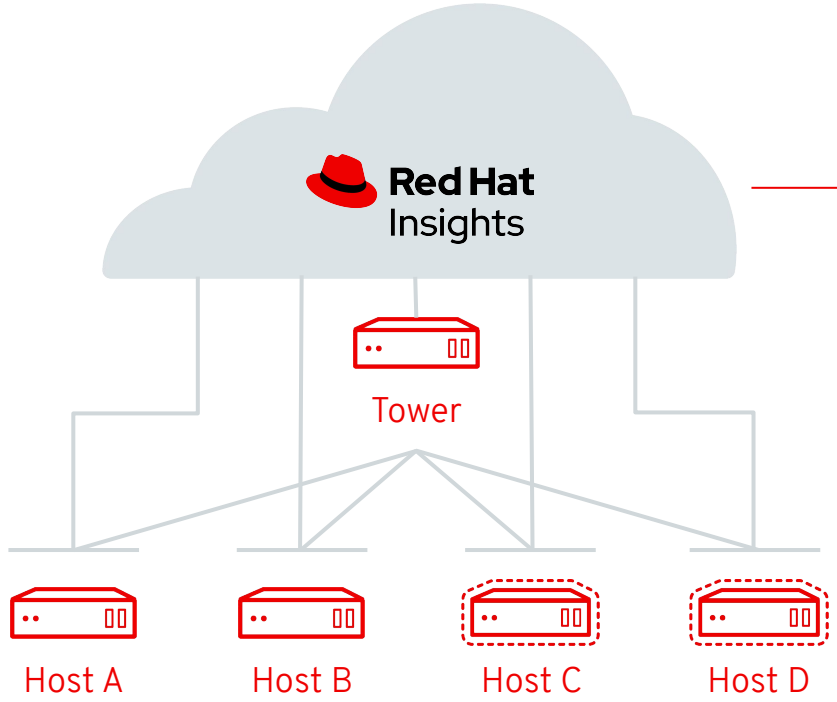
- Satellite connects to cloud.redhat.com
- User creates playbook through Satellite
- Playbook is run by Satellite

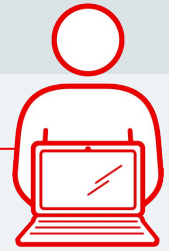
Red Hat

Build and run playbooks in Ansible Tower

Products entitled

- Red Hat Insights
- Red Hat Enterprise Linux
- Red Hat Smart Management
- Red Hat Ansible Tower





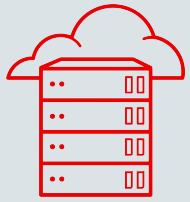
- Hosts are directly connected to cloud.redhat.com
- User creates playbook through Ansible Tower
- Playbook is run by Ansible Tower

Red Hat

Mid-level detail Architecture

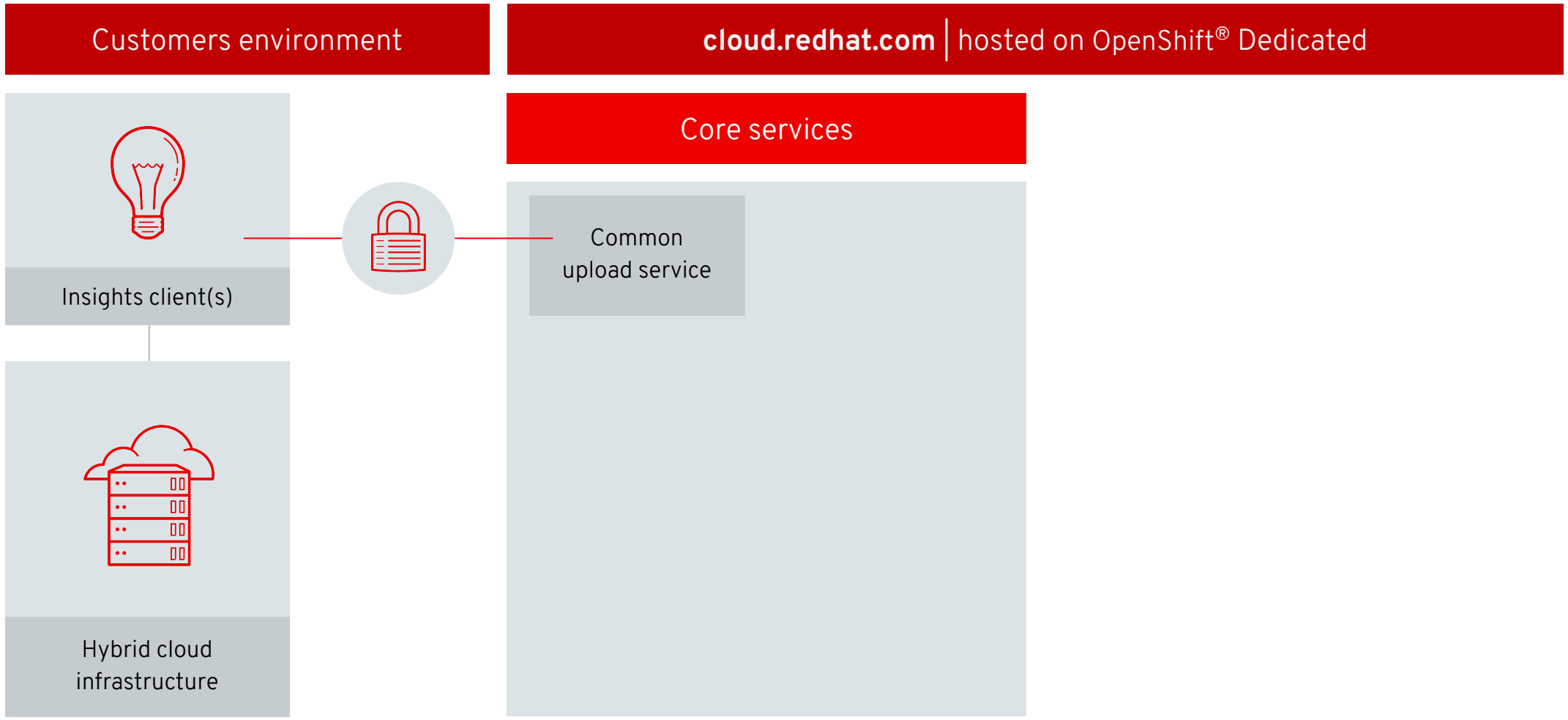
Customers environment

Insights client(s)

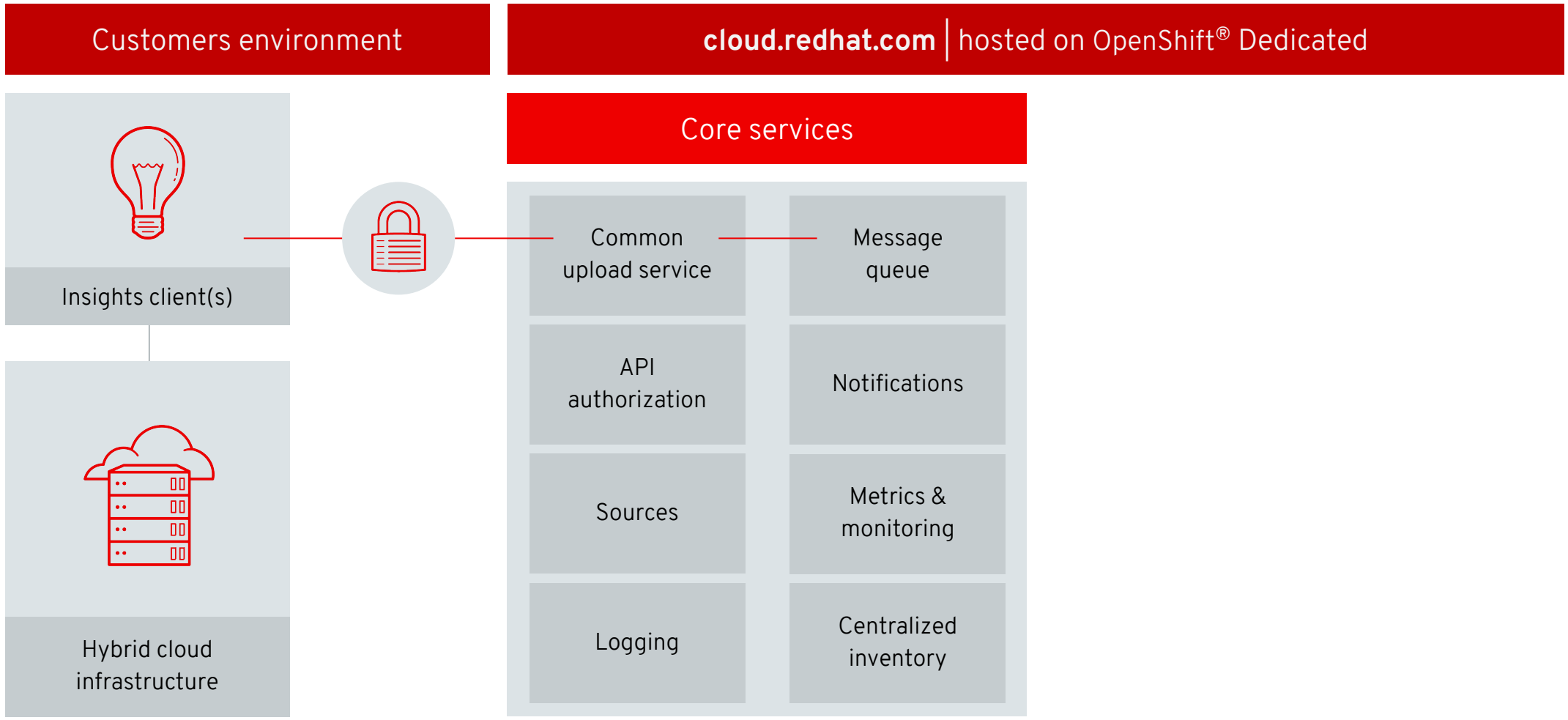


Hybrid cloud infrastructure

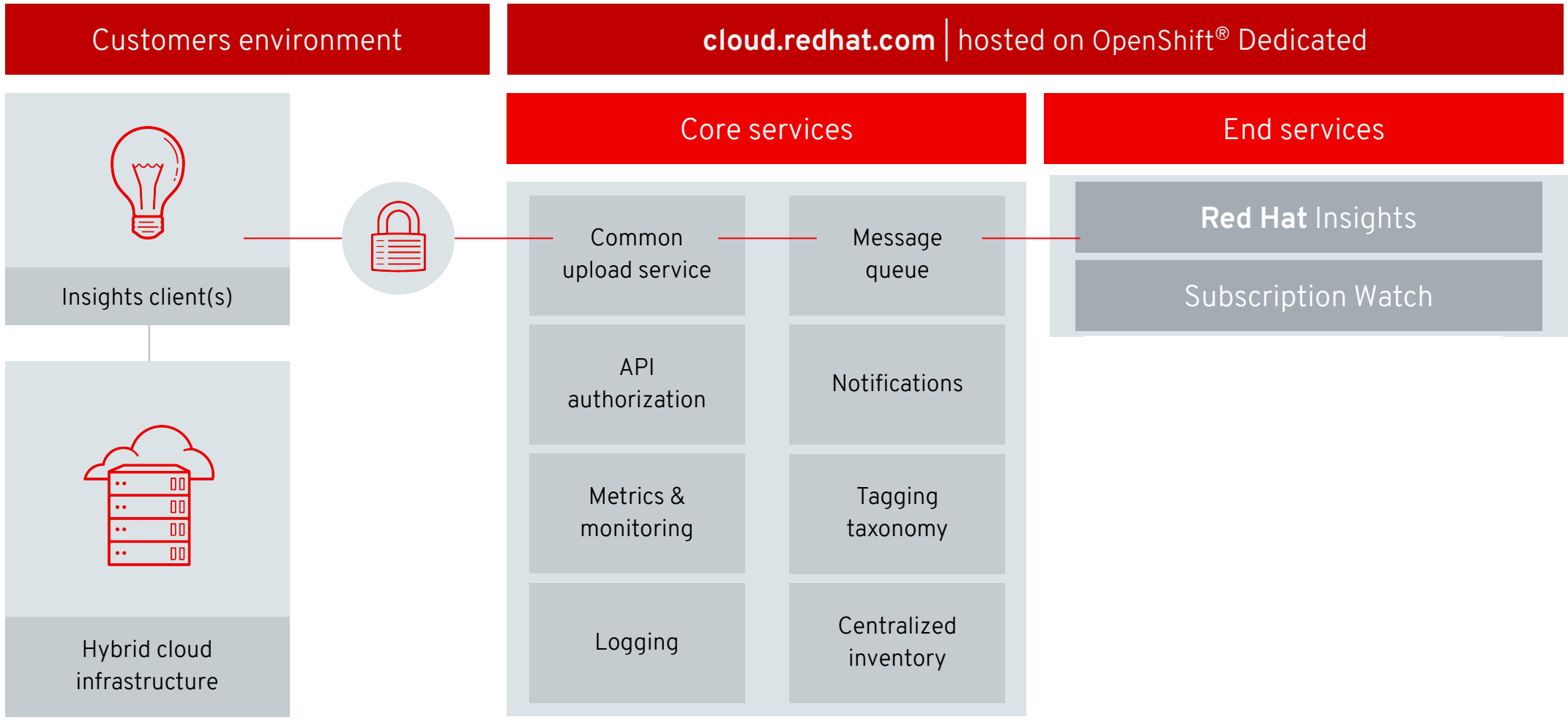
Red Hat


Customers environment
cloud.redhat.com | hosted on OpenShift® Dedicated
Core services
Common upload service
Insights client(s)
Hybrid cloud infrastructure

Red Hat


Customers environment
cloud.redhat.com | hosted on OpenShift® Dedicated
Insights client(s)
Hybrid cloud infrastructure
Core services
Common upload service
Message queue
API authorization
Notifications
Sources
Metrics & monitoring
Logging
Centralized inventory

Red Hat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cloud.redhat.com | hosted on OpenShift® Dedicated
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Insights client(s)
Hybrid cloud infrastructure
Common upload service
Message queue
API authorization
Notifications
Metrics & monitoring
Tagging taxonomy
Logging
Centralized inventory
Red Hat Insights
Subscription Watch

Red Hat

INTERNAL INFORMATION ONLY

How to Demo

How to Demo Insights

Insights works at the account level - shared accounts can cause issues with demos

Recommended: (Requires you have a Red Hat account of your own)

1. Use RHDPS
2. Checkout the Integrated Management Lab
   [Services → Catalog → Red Hat Summit 2019 → Hands-on integrated management lab]
3. Unregister all hosts
4. Register hosts to your account via subscription manager
5. Register hosts to Insights

You can also demo cloud management services with the same setup.
Requires you have MCT-3718.

Working on a better solution.

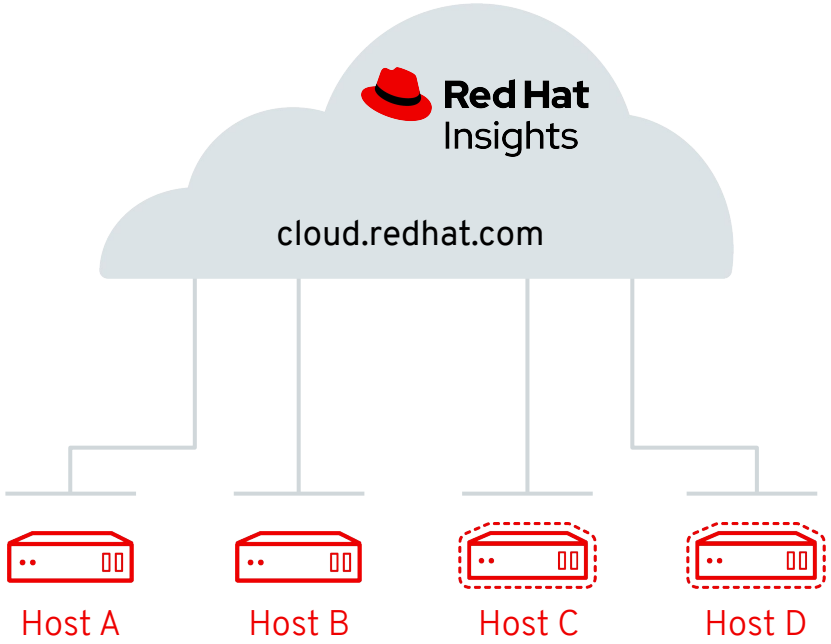
For shared environments - use the --display-name field when registering hosts

Red Hat

Insights Client Communication Flow

Default Insights Client behavior

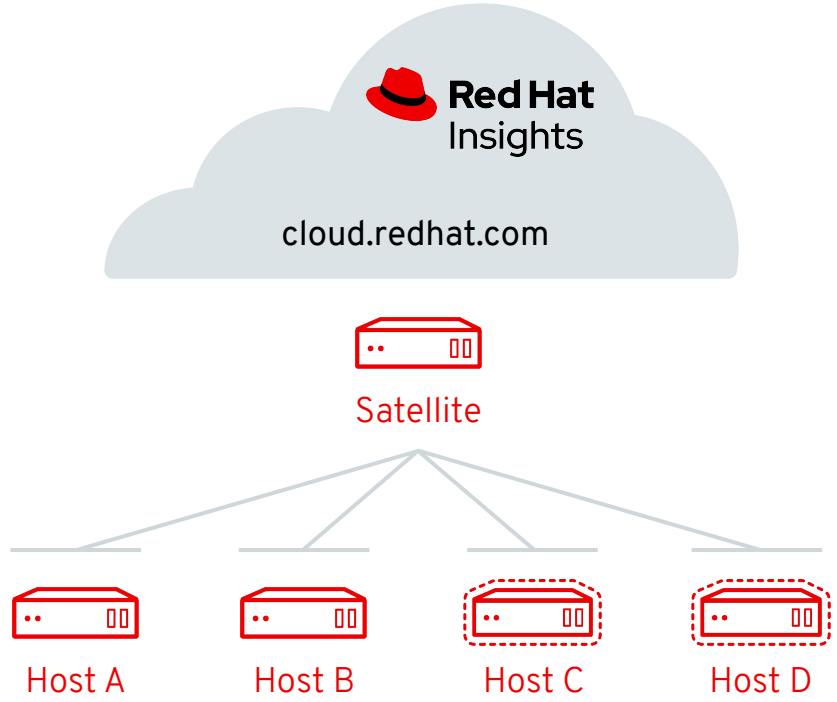
Each host connects directly to cloud.redhat.com



Red Hat

Insights Client when connected to Satellite

Insights Client uses Satellite as a proxy
No additional config needed



Red Hat

Insights Client when connected to HTTP Proxy

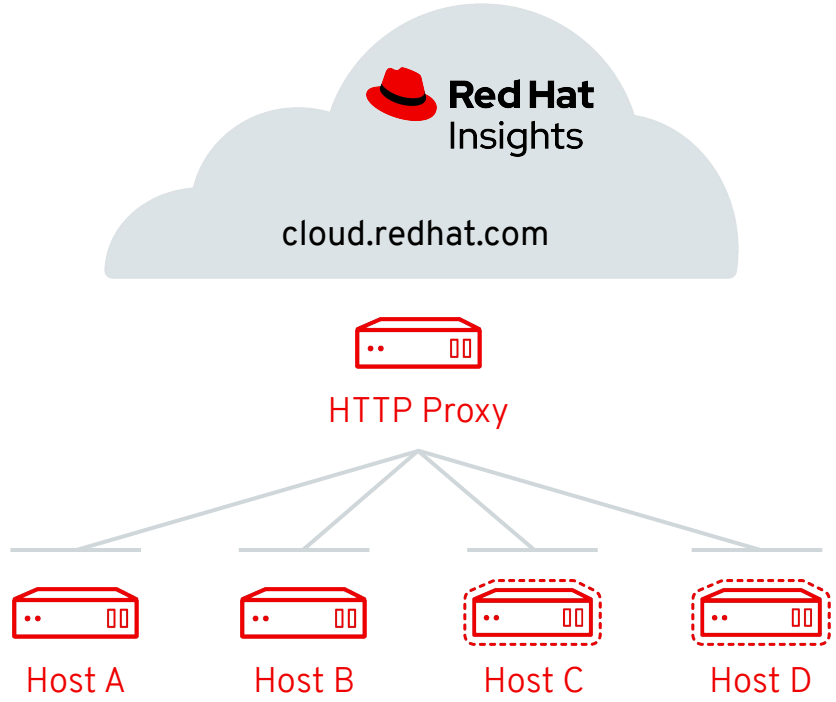
Insights Client can be configured with HTTP Proxy

Configure a HTTP Proxy in the insights-client.conf

/etc/insights-client/ insights-client.conf

Change:

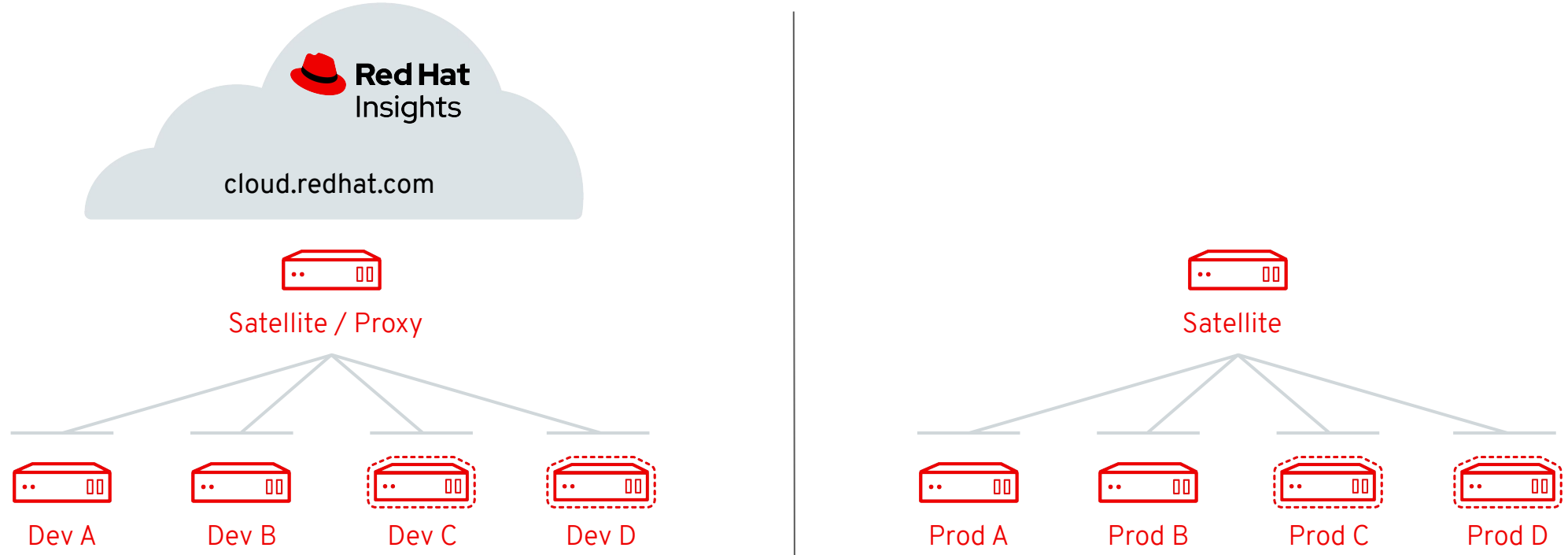
proxy=http://user:pass@ 192.168.100.50:8080



Red Hat

Insights with more Secure Environments

Connect Test/Dev environment to internet via proxy
Production remains airgapped



Connected Network

Disconnected / Airgapped Network

Red Hat