



**Red Hat**  
Enterprise Linux



# Red Hat Enterprise Linux

On-Prem Solutions with RHEL



Ahmed Dahia

RHEL Senior Specialist Solutions Architect

Europe Middle East and Africa

[linkedin.com/in/ahmed-dahia](https://www.linkedin.com/in/ahmed-dahia)



# Connected Capabilities of Red Hat Insights include



## Advisor

Recommendations for misconfigurations and best practices to improve stability, performance & availability



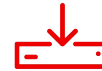
## Patch

Tracks applicable Red Hat errata across environments including security, bug fixes and enhancement advisories



## Vulnerability

Identifies, prioritizes and reports on known security Common Vulnerabilities and Exposures (CVEs)



## Images

Simplifies image customization via the creation of blueprints and deployment across hybrid environments.



## Cost Management

Provides visibility into usage and cost trends across hybrid cloud environments



## Subscriptions

Delivers visibility into Red Hat subscription status, usage trends and utilization across your infrastructure



## Compliance

Monitors compliance with security baselines to report on and meet regulatory requirements at scale



## Malware Detection

Scans for known malware using a curated signature database developed with IBM X-Force



# Red Hat Satellite capabilities include



## Advisor

Recommendations for misconfigurations and best practices to improve stability, performance & availability

---



## Patch

Schedule and automate patch application across system groups to ensure consistent security and stability

---



## Provisioning

Deploy your RHEL estate on bare-metal, virtual and cloud environments

---



## Content management

Distribute and manage software content across your infrastructure

---



## Host configuration

Standardize system configuration using host groups, activation keys, and parameter inheritance across managed systems

---



## Subscriptions

Delivers visibility into Red Hat subscription status, usage trends and utilization across your infrastructure

---



## Compliance

Monitors compliance with security baselines to report on and meet regulatory requirements at scale



# Red Hat Satellite 6.18 highlights:

- ▶ **Red Hat Lightspeed**
  - Technology preview of Vulnerability service.
  - Advisor service is now generally available.
- ▶ **Content Management**
  - Rolling content views
  - Flatpak WebUI support
  - Integrated access to Satellite container registry
- ▶ **AI assistance**
  - Model Context Protocol (MCP) server integration
  - Offline Command Line Assistant

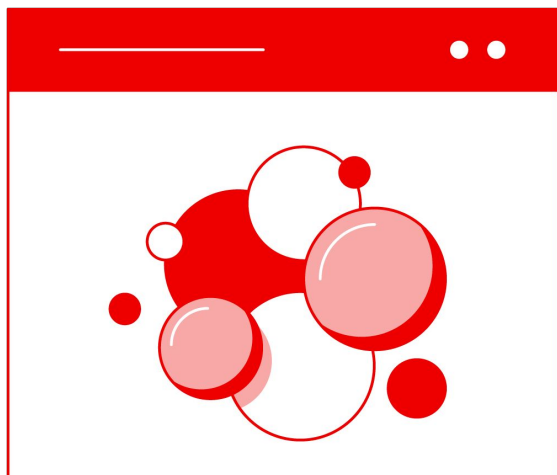


# Red Hat Lightspeed

# Red Hat Enterprise Linux Command-Line Assistant

## Command line assistant Improvements

Proactive guidance,  
knowledge, and  
recommendations



### **Increased request Size** - The Command-Line Assistant now allows for more input

Send even more context along with your queries to the RHEL Command Line Assistant allowing for more clarity in your requests, leading to better responses.



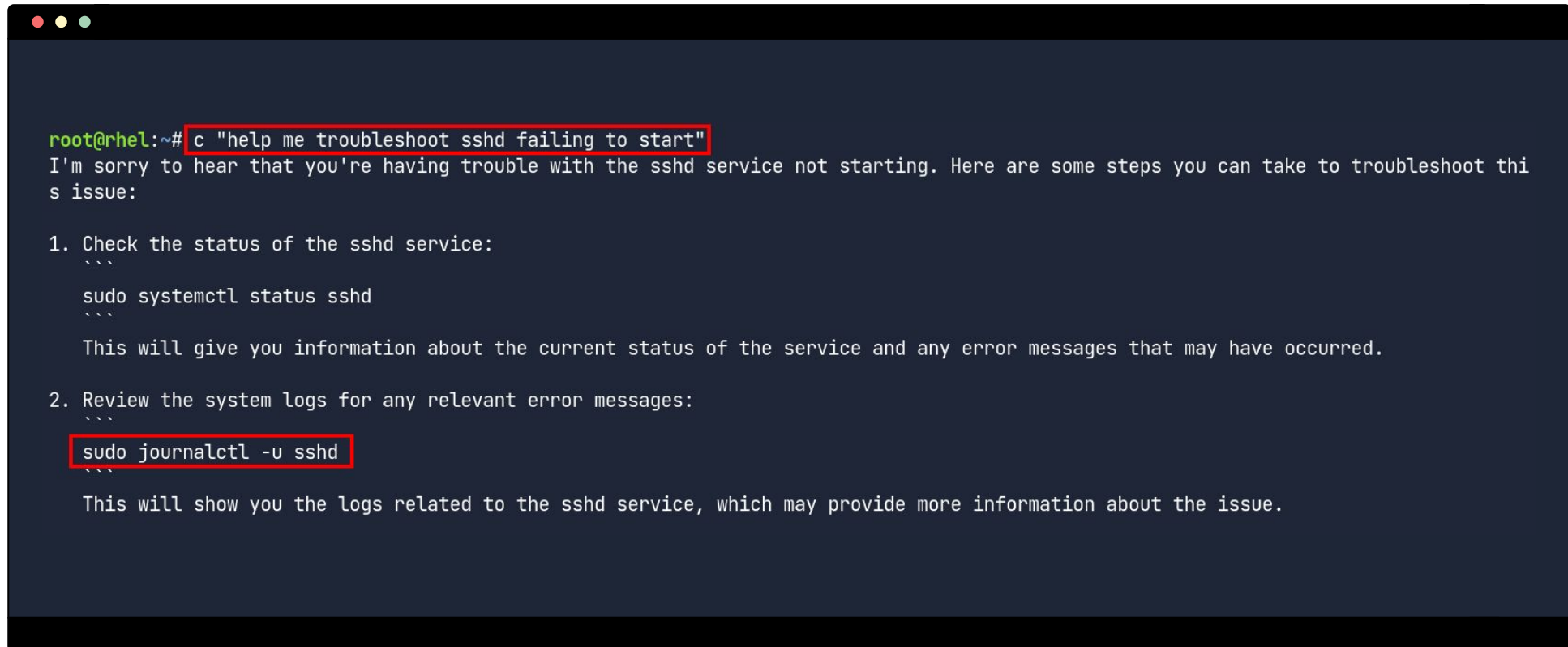
### **Offline Command-Line Assistant (CLA)** - Run the CLA on your own Infrastructure (Developer Preview)

With a satellite subscription, you can now run the Command Line Assistant on your own infrastructure.



# A new command line assistant

## Powered by Red Hat Enterprise Linux Lightspeed



```
root@rhel:~# c "help me troubleshoot sshd failing to start"
I'm sorry to hear that you're having trouble with the sshd service not starting. Here are some steps you can take to troubleshoot this issue:

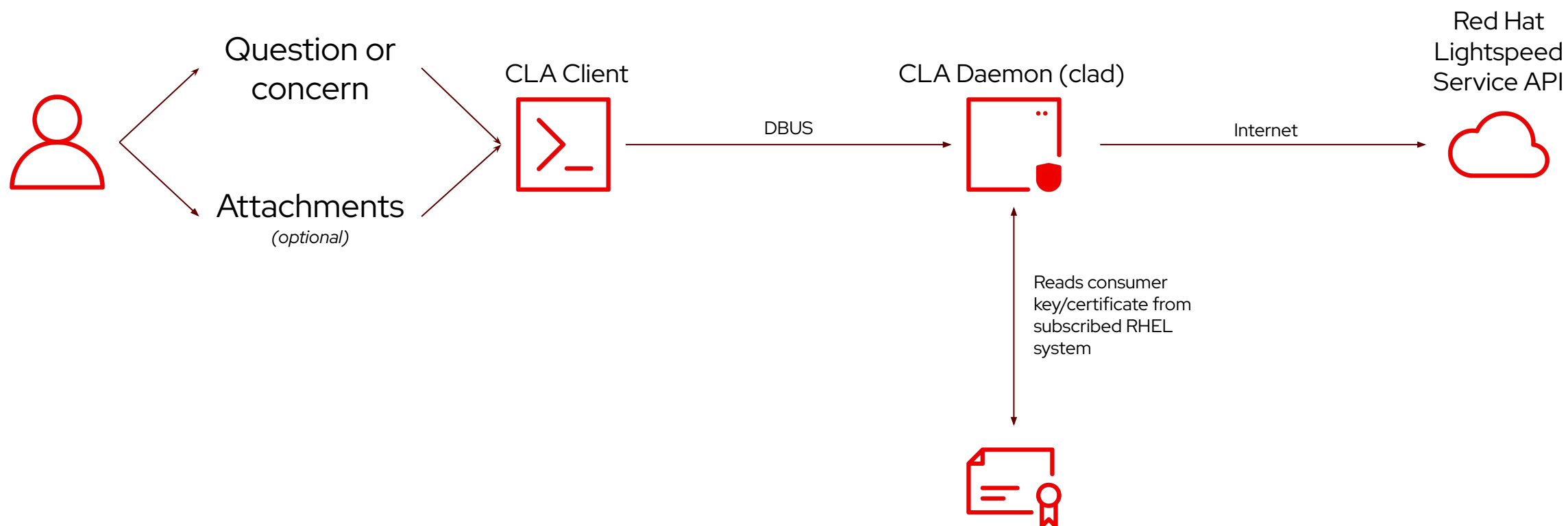
1. Check the status of the sshd service:
...
sudo systemctl status sshd
...
This will give you information about the current status of the service and any error messages that may have occurred.

2. Review the system logs for any relevant error messages:
...
sudo journalctl -u sshd
...
This will show you the logs related to the sshd service, which may provide more information about the issue.
```

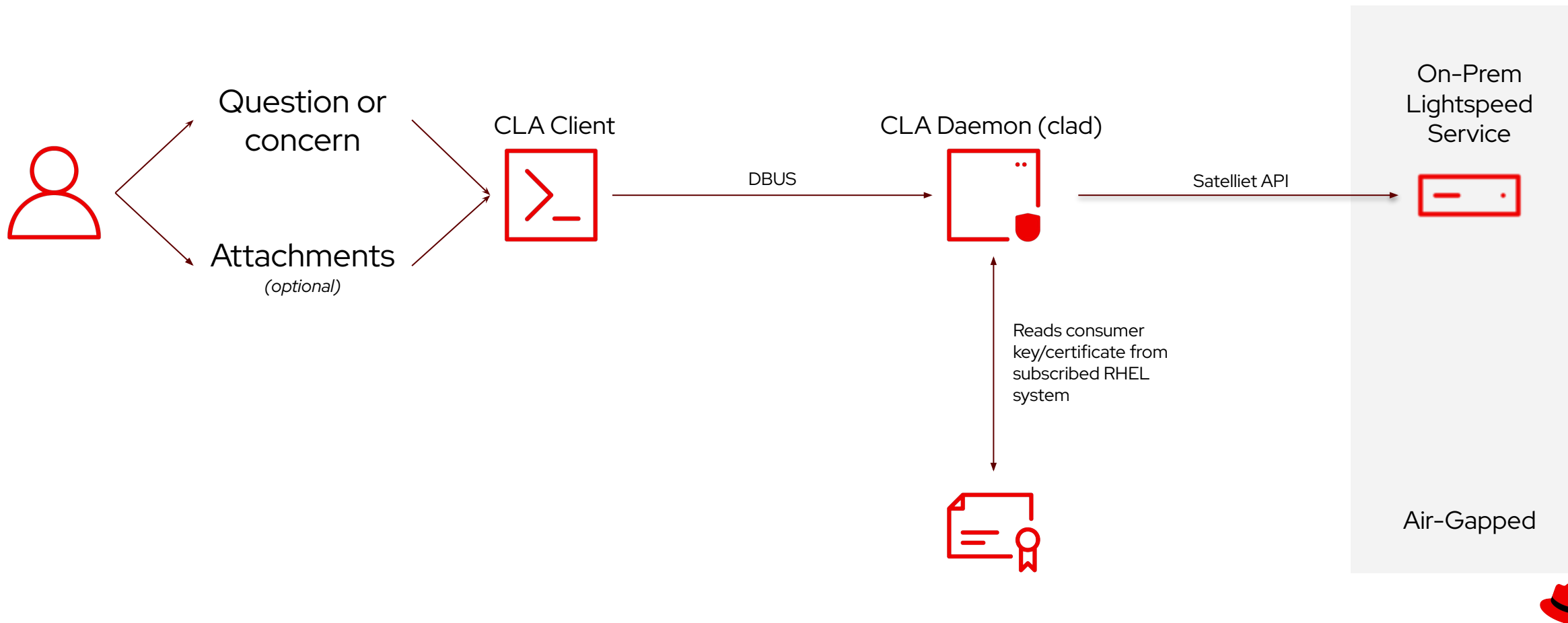




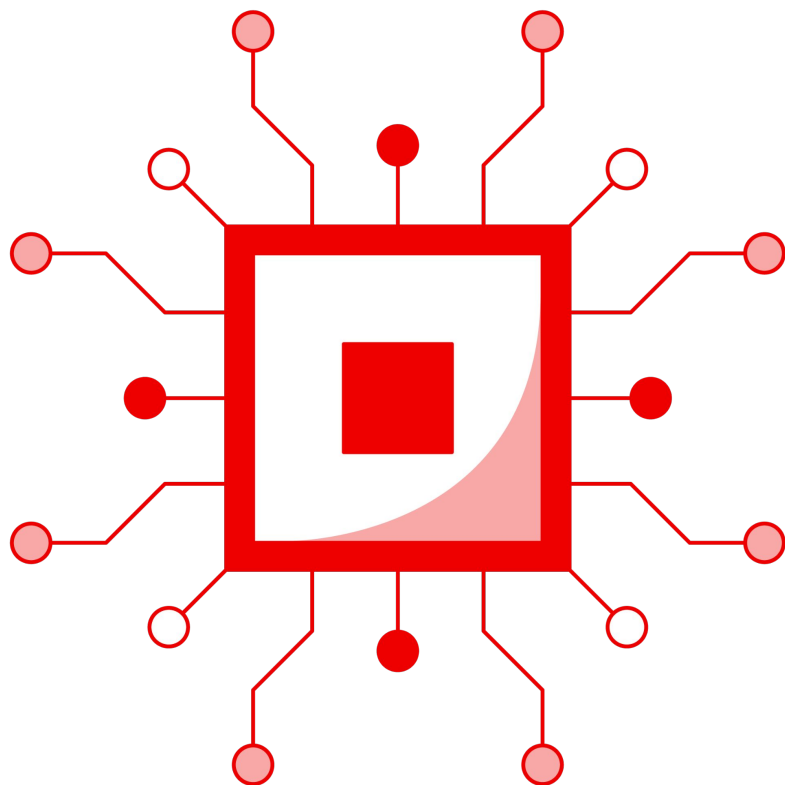
## CLA: What happens on the customer's system?



## CLA: What happens on the customer's system?



# AI Foundations Roadmap



- ▶ **RHEL MCP server (Developer Preview):** Leverage generative AI to assist with log analysis and to help identify performance bottlenecks
- ▶ **Enhanced RHEL command line assistant:** Support for MCP tool calling within the command line assistant to accelerate problem resolution
- ▶ **RHEL command line assistant enterprise offline version:** Building on the already launched individual offline version developer preview, this solution will enable large-scale, on-premises deployment of the command line assistant across your RHEL environment



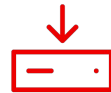
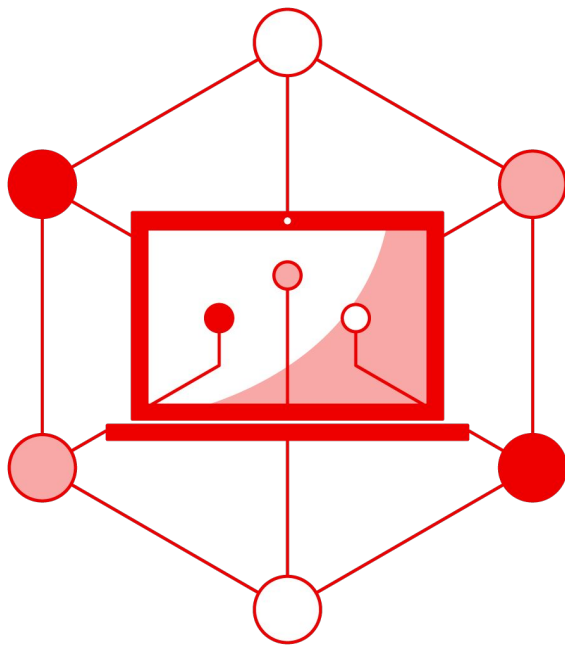


## Vulnerability service powered by Red Hat Lightspeed

- ▶ **Vulnerability Service powered by Red Hat Lightspeed** is the primary method for tracking security issues involving viewing and triaging CVEs (Common Vulnerabilities and Exposures).
- ▶ The system displays detailed information about CVEs, including the CVE ID, description, publish date, severity, and CVSS score.
- ▶ We want to provide a security-first experience for CVEs in Satellite, to complement the current errata-first view of CVEs.

# Red Hat Insights advisor in Satellite

Analyze and remediate availability, performance, and security risks in disconnected environments



Use Insights advisor's business rules and logic—codified from decades of Red Hat Enterprise Linux expertise—to **monitor system configurations, detect risks, and prescribe remediations without sending data off-premise**

- ▶ Flexible options for installing and upgrading
- ▶ Separation, minimal access, and ultimate control for highly regulated industries and geographies
- ▶ Proactive recommendations catch problems early, minimizing downtime



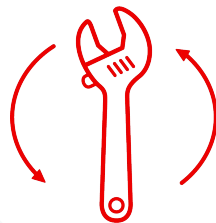
# Advisor

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

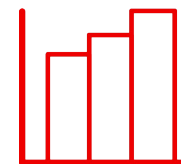
With Advisor:



**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



# Image Mode on RH Satellite



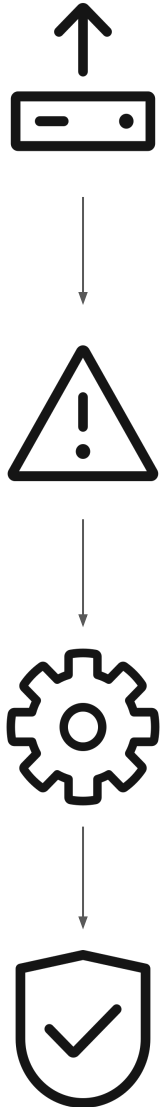
## Image mode support

Simplify RHEL management workflows for both containers and traditional OS with a single, consistent set of tools. Image mode also helps streamline transitions to containerized environments.

- ▶ **Overview** of booted container images via:
  - API
  - Hammer
  - UI
- ▶ **Distinguish** image mode from package mode hosts
- ▶ **Searchable** bootc details on hosts
- ▶ **bootc** remote execution category

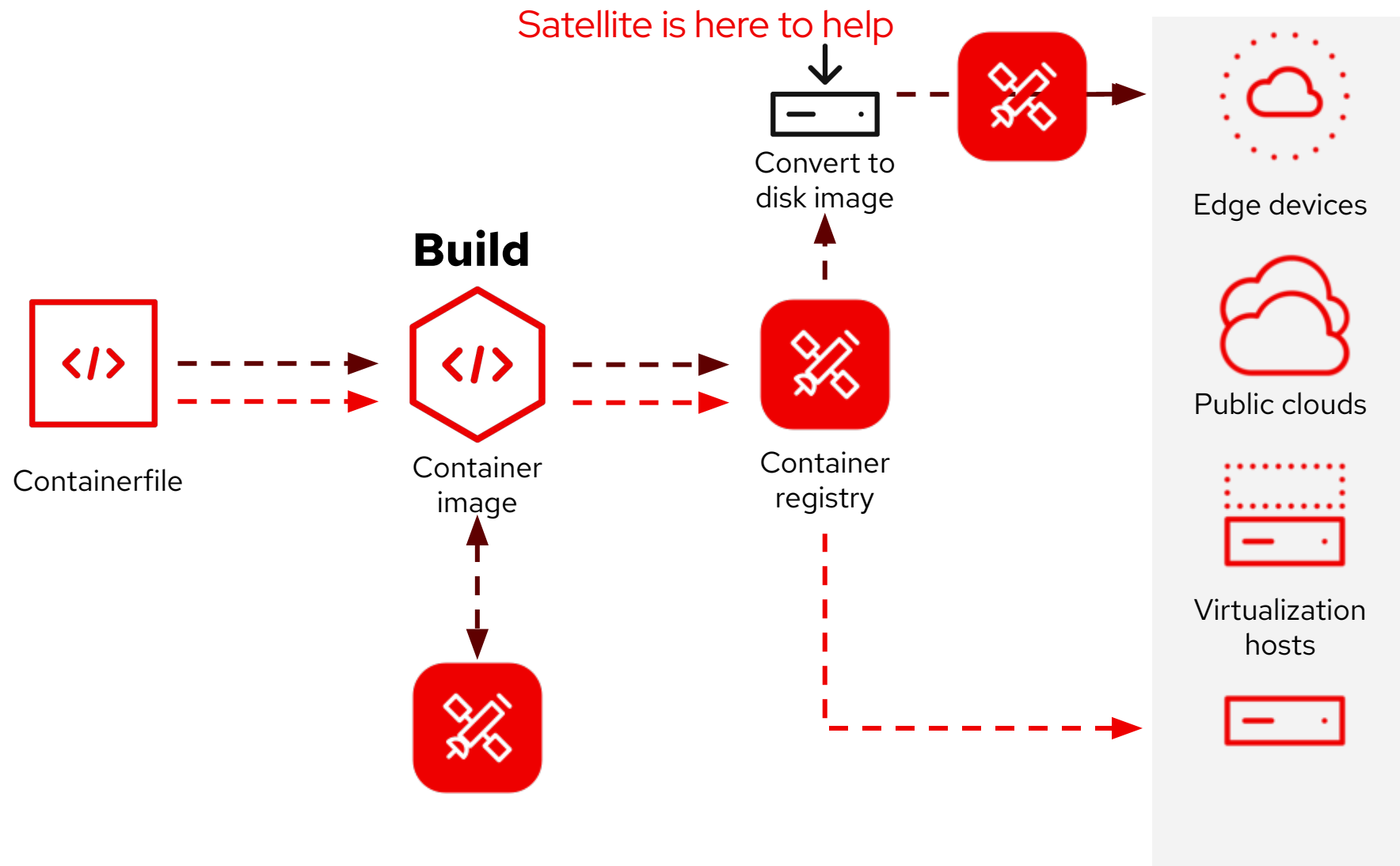


## General image mode flow in Satellite 6.18



1. **Register** image mode hosts
2. **View** their images via the Booted Container Images page
3. **Navigate** to hosts that need updates via the Hosts page
4. **Inspect** hosts' specific bootc status via the Host details page
5. **Manage** hosts via new bootc remote execution jobs

# Image mode for Red Hat Enterprise Linux



# Management overview

Same Satellite, another RHEL footprint!

The screenshot shows the Red Hat Satellite web interface. The top navigation bar includes the Red Hat Satellite logo, 'Home\_Organization', 'Home', and a user profile 'Admin User'. The left sidebar contains a search bar and a menu with options: Monitor, Content, Hosts (expanded), Discovered Hosts, All Hosts (selected), Create Host, Content Hosts, Host Collections, Register Host, Provisioning Setup, and Templates. The main content area is titled 'Hosts' and features a search bar, a 'Schedule a job' dropdown, and buttons for 'Register' and 'Create'. Below this is a table of hosts with the following columns: Power, Type, Name, Host group, OS, RHEL Lif..., Installable updates, Lifecycle..., and Content view. The table contains 7 rows of data. The last row, for 'sonia-zakowski.homelab.com', is highlighted with a red box. The bottom right of the table shows pagination: '1 - 7 of 7 items' and '1 of 1'.

Power	Type	Name	Host group	OS	RHEL Lif...	Installable updates	Lifecycle...	Content view
<input type="checkbox"/>		build.homelab.com	rhel_package_mode	RHEL 9.6	Full support	0 0 0 0	test	home_content_view
<input type="checkbox"/>		carol-wymer.homelab.com	rhel_image_mode_from_image	RedHat 10.0	Full support	0 0 0 0	test	home_content_view
<input type="checkbox"/>		irene-gillson.homelab.com	rhel_package_mode	RedHat 9.4	Full support	106 236 7 859	prod	home_content_view
<input type="checkbox"/>		leo-meccia.homelab.com	rhel_package_mode	RedHat 10.0	Full support	6 5 1 31	test	home_content_view
<input type="checkbox"/>		loren-kilby.homelab.com	rhel_package_mode	RHEL 9.5	Full support	13 75 0 209	test	home_content_view
<input type="checkbox"/>		satellite.homelab.com		RHEL 9.6	—	—	—	—
<input type="checkbox"/>		sonia-zakowski.homelab.com	rhel_image_mode_from_image	RHEL 9.5	Full support	19 90 0 243	test	home_content_view



# Additional enhancements

# New Image Builder Command Line Interface

Build your Red Hat Enterprise Linux images without the need for a service

- Easier installation
- Container-friendly
- Daemonless
- Easier to integrate into CI/CD workflows



Tech Preview  
10.1 only



# Red Hat Offline Knowledge Portal

Now available with a Satellite subscription. A secure, offline version of our expert knowledge and product contents. Wherever you go, you can take the content you need to set up, run, and diagnose our products. And it's light enough to run at the edge! Meet the devs and get hands on demos at the Experience Zone.



Contains the content you need to set up, run, and diagnose our products:

- Product documentation
- Knowledgebase
- CVEs (content)
- Errata (content)
- Product Lifecycles
- Security Data API
- Pages from the Customer Portal
- Search Interface for All Content

Built for intentional disconnection or intervals of low or no bandwidth:

- Desktop at a work site that is air-gapped for security
- Closed circuit network on a ship at sea
- Phone at a remote cell tower
- Consulting firm laptop for client site visits without WiFi
- A Red Hat certification exam room

RHOKP is a single image appliance that is:

- Total is 7GB in size
- Runnable with Podman
- OpenShift ready

# 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](https://linkedin.com/company/red-hat)



[youtube.com/user/RedHatVideos](https://youtube.com/user/RedHatVideos)



[facebook.com/redhatinc](https://facebook.com/redhatinc)



[x.com/RedHat](https://x.com/RedHat)