

Platform Engineering as the catalyst for 10x developer productivity

Internal Developer Platform with
Trusted Software Supply Chain

Arunkumar Hariharan

Senior Specialist Solutions Architect

Dean Peterson

Assoc. Principal Specialist Solutions Architect



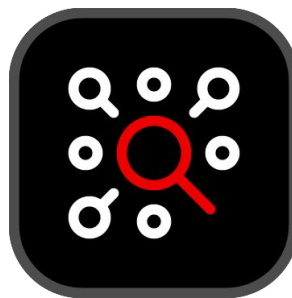
Red Hat One

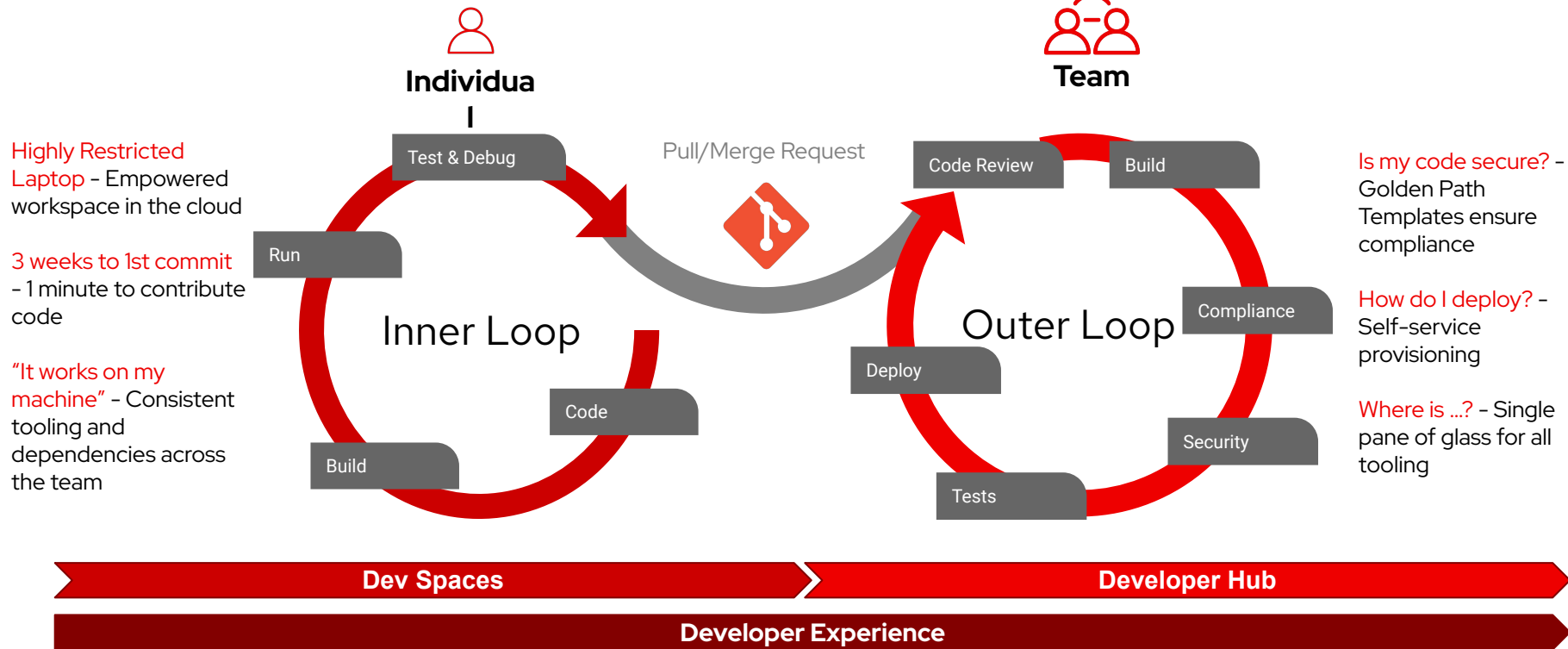
One experience. One team. One purpose.

2024

What we will cover today:

- ▶ Introducing the Inner Loop/Outer Loop
- ▶ OpenShift/ROSA Overview
- ▶ What is **Red Hat Developer Hub**?
- ▶ The two views of **RHDH**
- ▶ The Framework of **RHDH**
- ▶ Understanding **Plugins**
- ▶ Understanding **Templates**
- ▶ Introducing the **RHDH Ux**
- ▶ Red Hat Trusted Trusted Software Supply Chain (TSSC)
- ▶ **Demo time SUPERCHARGING DEVELOPER PRODUCTIVITY**
- ▶ Trying it yourself





Highly Restricted Laptop - Empowered workspace in the cloud

3 weeks to 1st commit - 1 minute to contribute code

"It works on my machine" - Consistent tooling and dependencies across the team

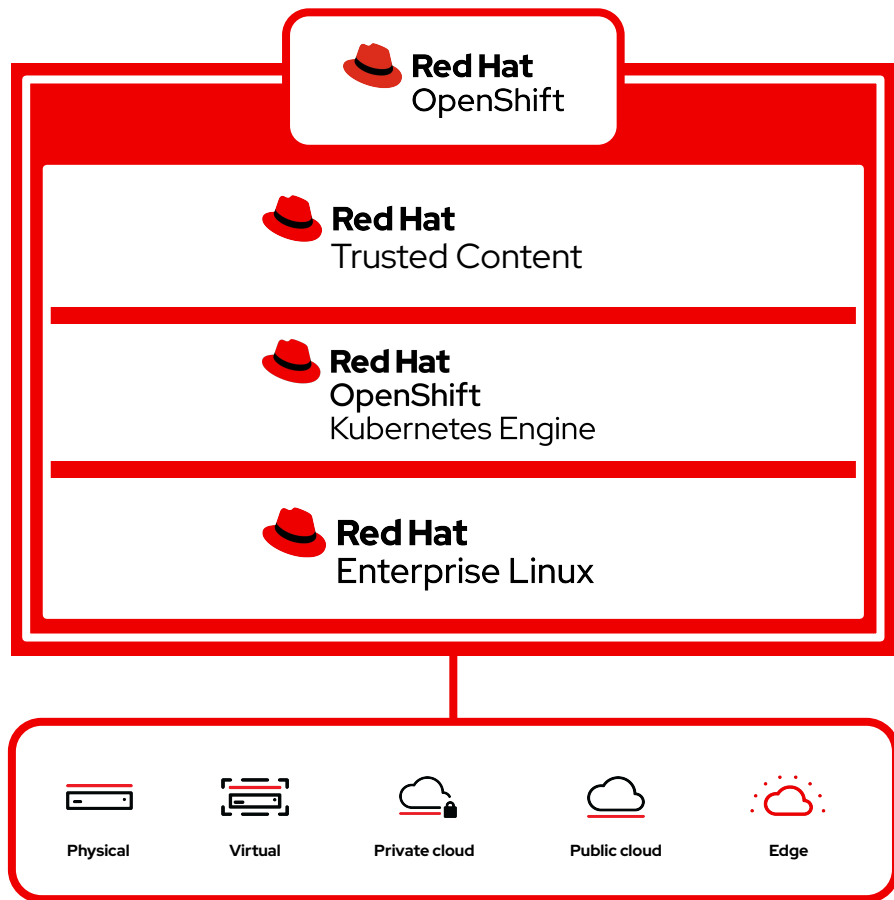
Is my code secure? - Golden Path Templates ensure compliance

How do I deploy? - Self-service provisioning

Where is ...? - Single pane of glass for all tooling

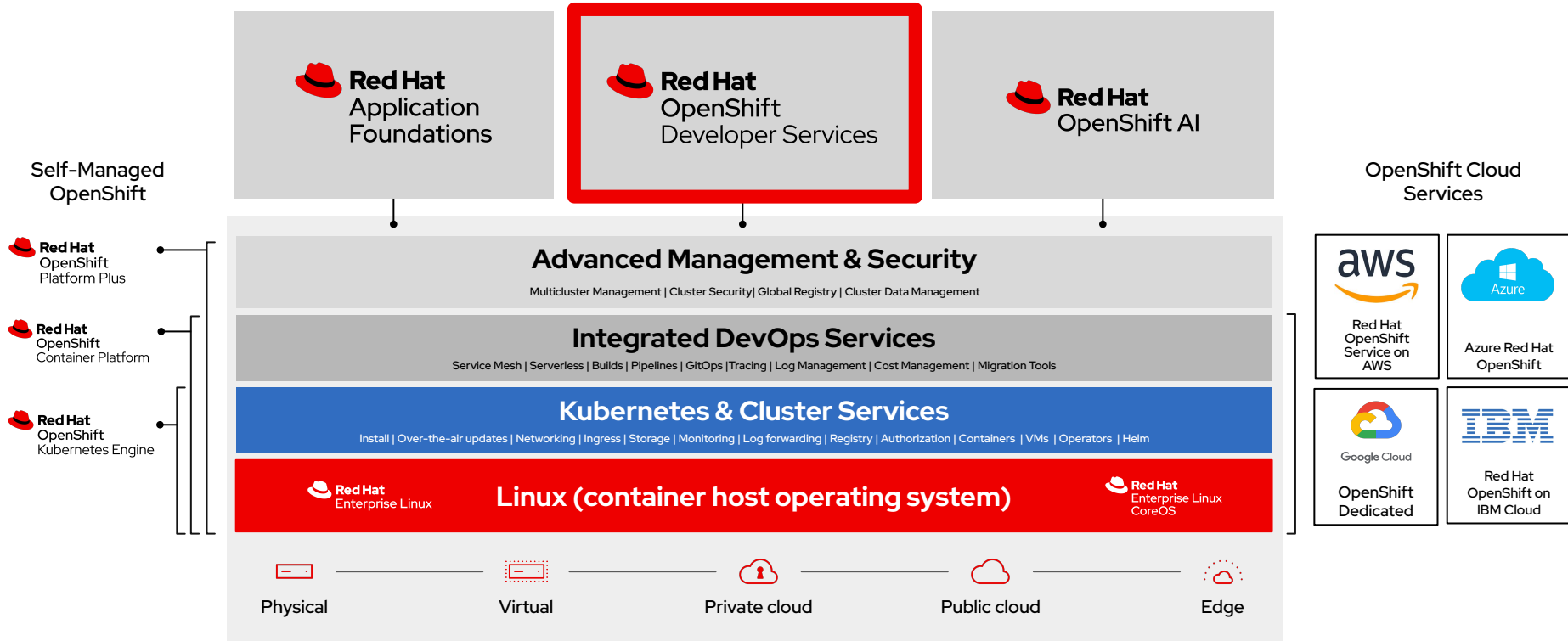


OpenShift built on a
Trusted
Container Engine



Red Hat open hybrid cloud platform

CONFIDENTIAL designator

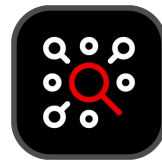


V0000000



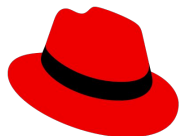


What is Red Hat Developer Hub?



Red Hat's version of CNCF Backstage

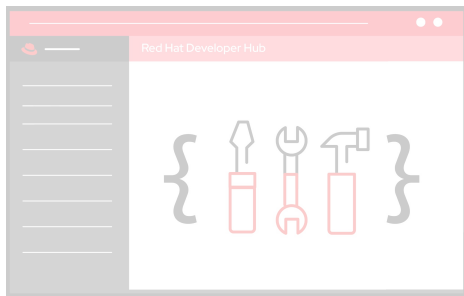
Ensuring the development team is continually delivering



Red Hat Developer Hub



Based on
Backstage.io



Centralized
Catalog



Self-Service



Search



Plug-ins
Ecosystem








Software
Templates



Technical
Documentation

The five parts of Developer Hub

| | | |
|---|---|--|
|  | Centralized Software Catalog | Keep track of application ownership and metadata for all the software in your organization (services, websites, libraries, data pipelines, etc.) |
|  | Plugins | Extend functionality and provide customization |
|  | Software Templates (Golden Path) | Quickly spin up new projects and standardize your tooling with your organization's best practices |
|  | Tech Docs | Easily create, maintain, and find technical documentation using a "docs as code" approach |
|  | Search | Find the right information across your entire Developer Hub ecosystem |

8

Single Pane-Of-Glass for Developers



The screenshot displays the Red Hat Developer Hub interface. At the top, a red banner reads "Welcome to Red Hat Developer Hub!". Below this is a search bar with a "Search" input and a "CLEAR" button. The left sidebar is dark grey and contains navigation options: Home, Catalog, APIs, Docs, Learning Paths, Clusters, Create..., and Tech Radar. The main content area is divided into three sections: "Quick Access" (COMMUNITY), "DEVELOPER TOOLS", and "C/CD TOOLS".

Quick Access

COMMUNITY

- Website
- Blog
- GitHub
- Slack
- YouTube Channel
- Mailing List
- Calendar

DEVELOPER TOOLS

- Podman Desktop

C/CD TOOLS

- ArgoCD
- SonarQube (Coming Soon)
- Quay.io

Your Starred Entities

Click the star beside an entity name to add it to this list!



Understanding Plugins



Plugins – the real power of RHDH

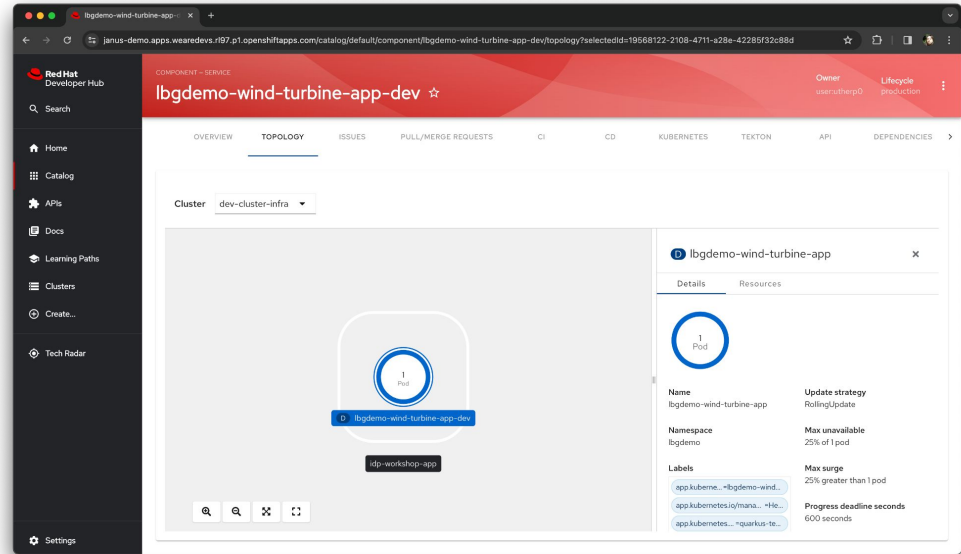


By design, Backstage is an extensible framework

In fact, out of the box, it's an empty framework, just maintaining the base objects

Plugins provide Backstage with the ability to:

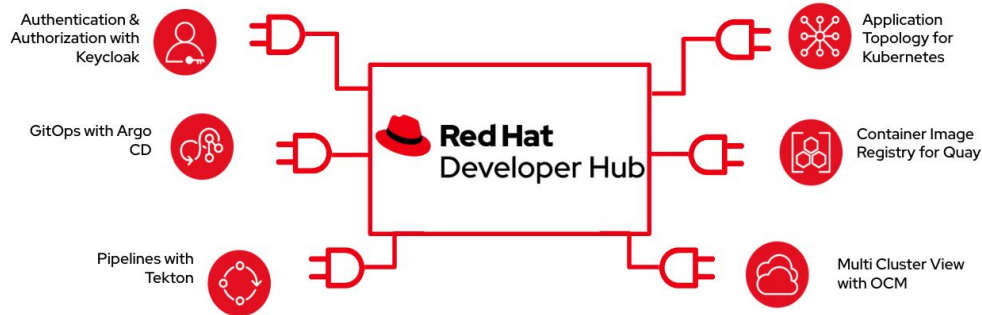
- ▶ Extends the visualisation of the IDP for the end consumer
- ▶ Provide executable external endpoints for inclusion in Templates



Red Hat Plugins



RHDH comes with a number of fully supported plugins that wrap Red Hat technologies and Ux components

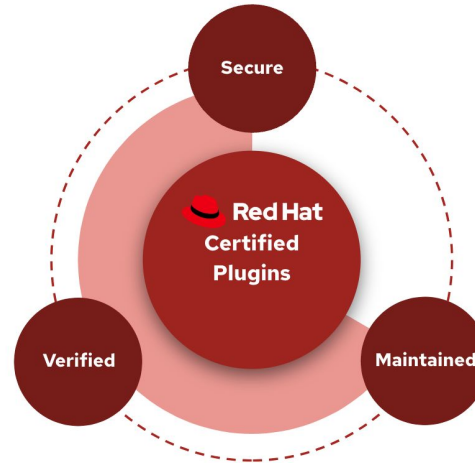


Expanding RHDH with 3rd Party Plugins



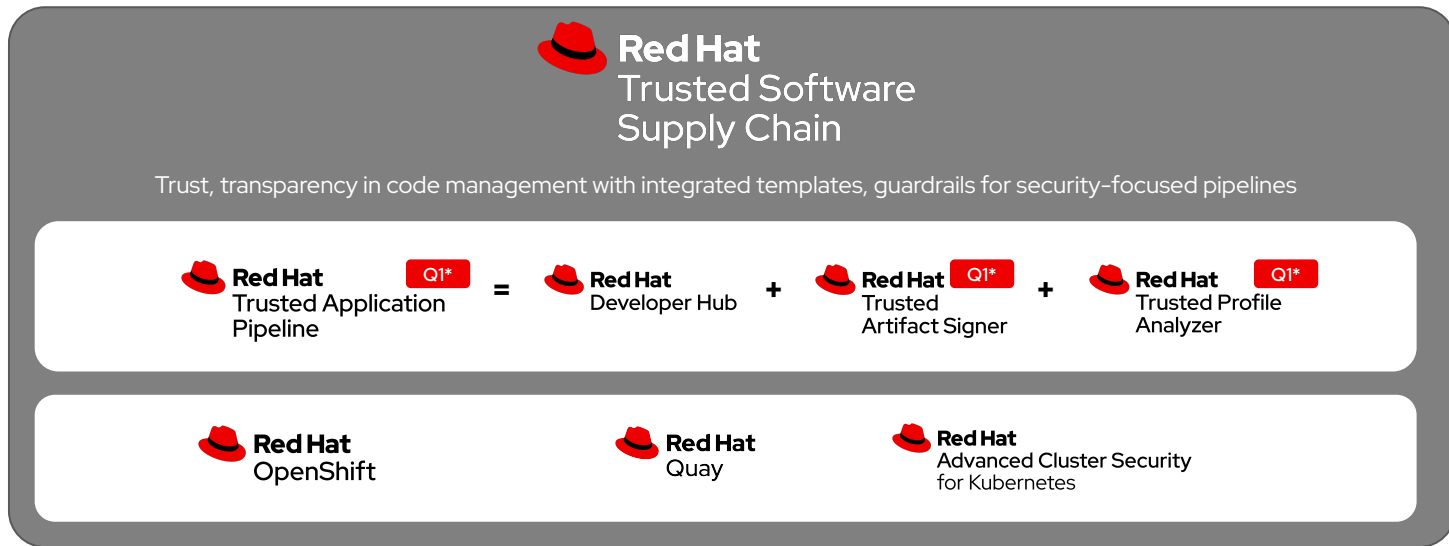
RHDH is Backstage, so any plugin produced for Backstage will be useable with RHDH

RHDH will support dynamic additions of appropriately coded Plugins, removing the necessity to recompile/redeploy Backstage



Shift Left Security in the Software Supply Chain

Protect the components, processes and practices early in your software factory



Roadmap items are subject to change without notice

*Note: **Red Hat Trusted Application Pipeline** is a single product SKU that includes RHDH, RHTAS, RHTPA.
Red Hat Application Pipeline, Red Hat Trusted Artifact Signer, Red Hat Trusted Profile Analyzer are in service/technical preview

SLSA Levels



Level 1

Easy to adopt, giving you supply chain visibility and being able to generate provenance



Level 2

Starts to protect against software tampering and adds minimal build integrity guarantees



Level 3

Hardens the infrastructure against attacks, more trust integrated into complex systems



Level 4

The highest assurances of build integrity and measures for dependency management in place

Red Hat OpenShift Platform Plus

Unified experience, secure and platform consistent everywhere



Red Hat OpenShift Platform Plus



Red Hat
Advanced Cluster
Management
for Kubernetes



Red Hat
Advanced Cluster
Security
for Kubernetes



Red Hat
Quay



Red Hat
OpenShift
Data Foundation

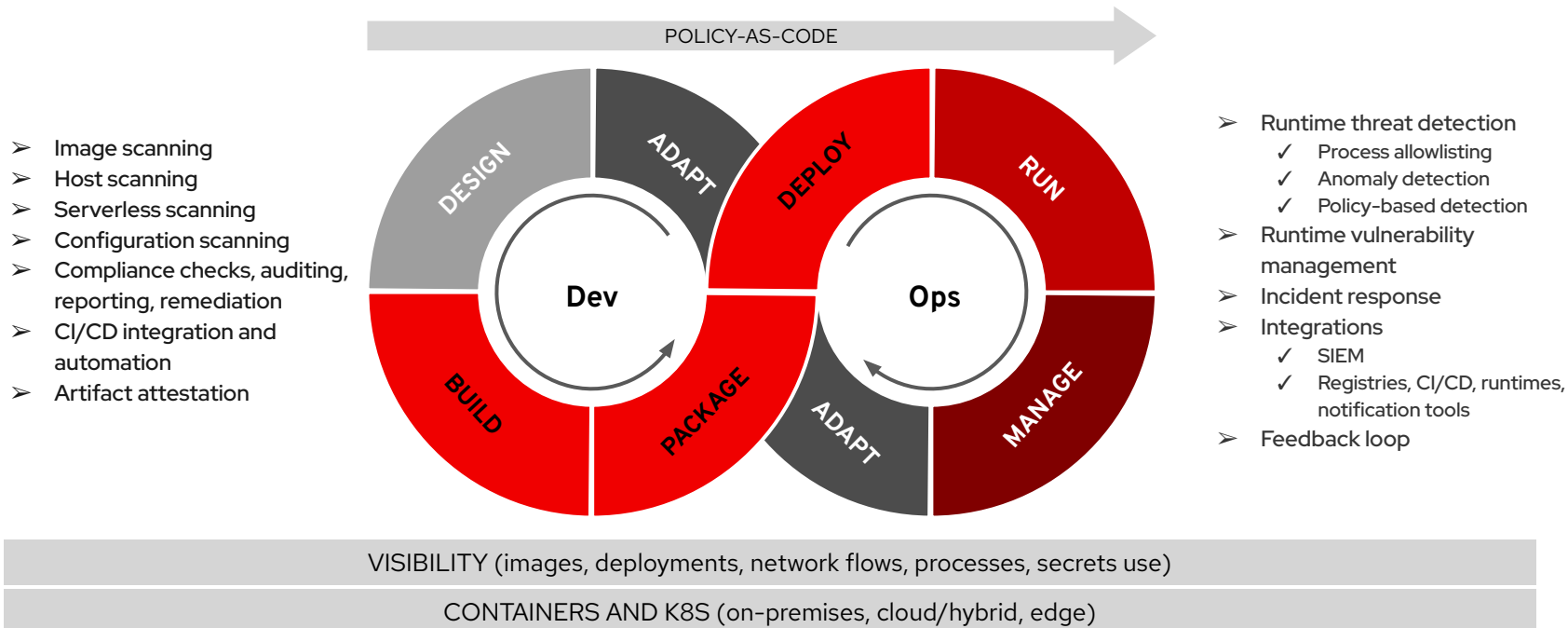


Red Hat
OpenShift
Container Platform

Advanced Cluster Security

Red Hat Advanced Cluster Security: Use Cases

Security across the entire application lifecycle

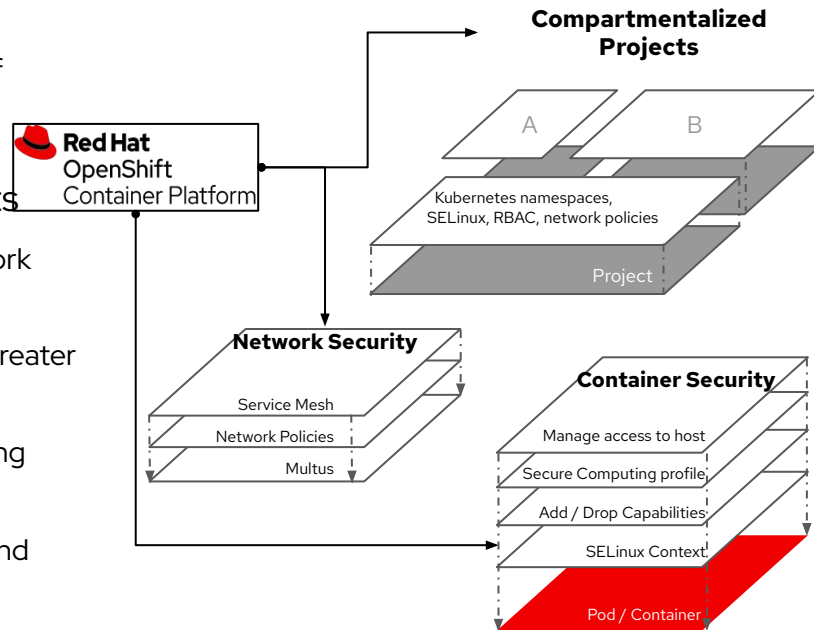


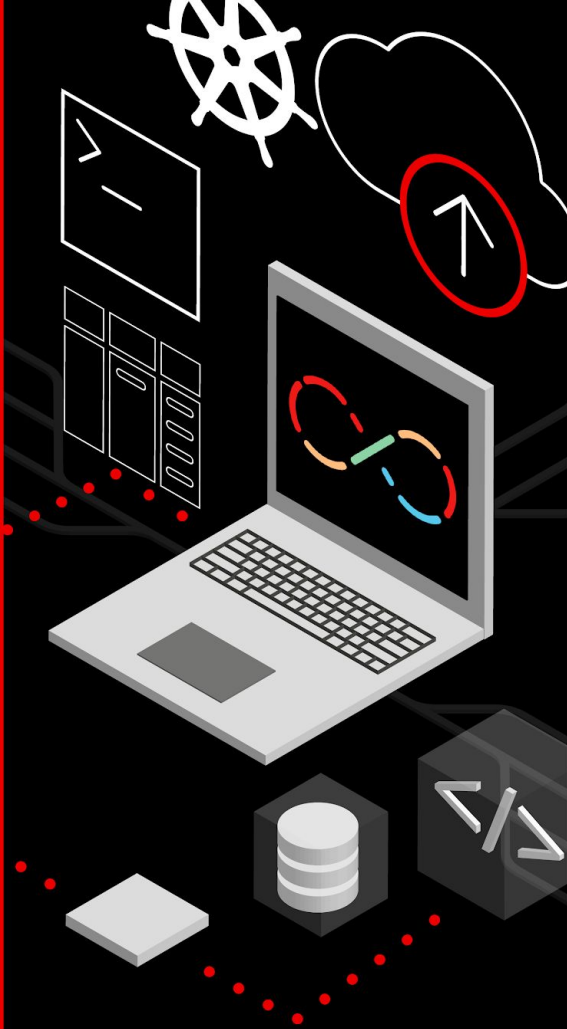
Run

Secure the container runtime, effectively triage issues, and fix problems upstream

Platform capabilities

- ▶ Minimize the impact of an attack with runtime enforcement of
 - Security contexts, pod security standards
 - Network Policies for microsegmentation
 - Analyze kube-audit logs for high risk events
- ▶ Analyze network traffic in real-time and flag anomalous network behavior as well as other anomalous runtime behavior
- ▶ Combine configuration details with vulnerability details for a greater understanding of risk and impact of running workloads.
- ▶ Get compliance information tied directly to workloads, enabling Security teams to respond effectively.
- ▶ Automate threat detection and response with build, deploy, and runtime policies integrated into your supply chain.
- ▶ Export security information to scheduled reports, notification services or SIEM tools

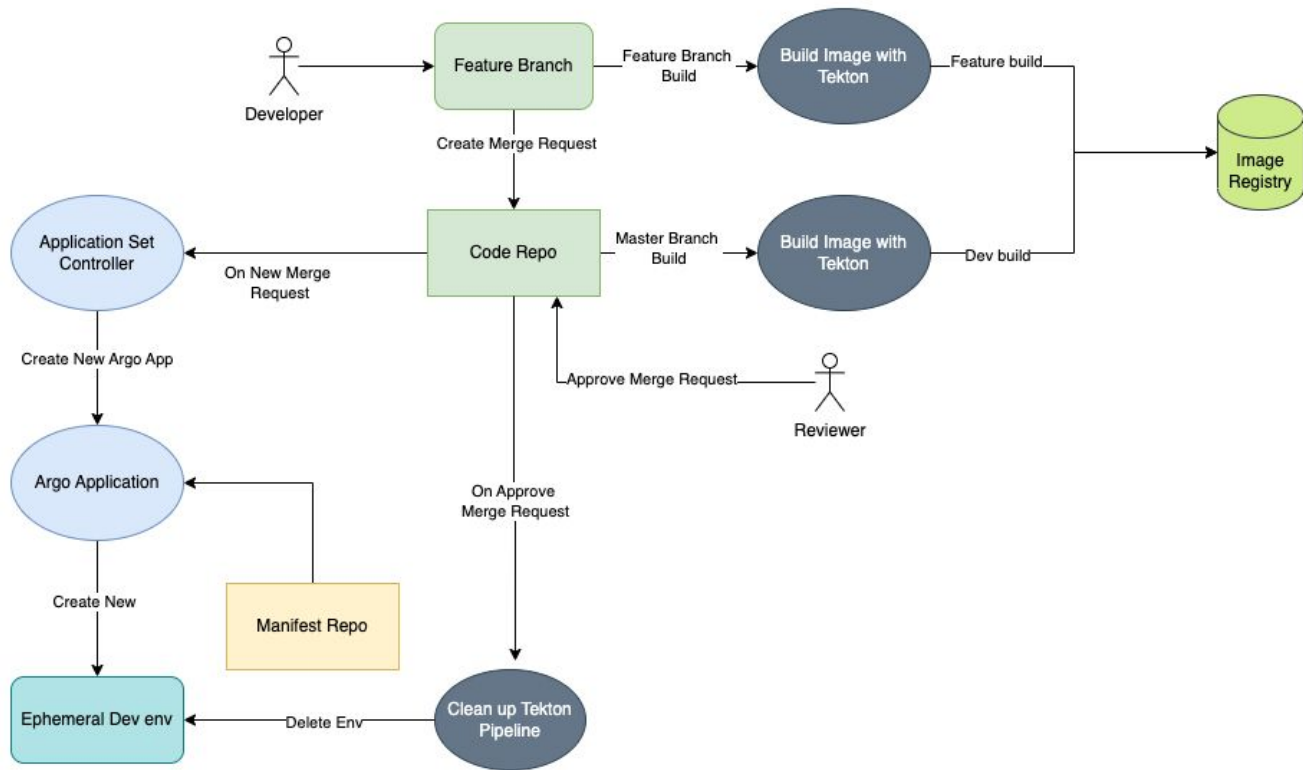




Demo Time



Dev Branch builds - RHDH Template flow



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://www.linkedin.com/company/red-hat)



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



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



twitter.com/RedHat

1. Git Repository
2. Code Scaffold & Documentation
3. OpenShift DevSpaces tools & workspace configuration
4. ArgoCD (OpenShift GitOps) manifests
5. Security-focused Pipeline & Repository Webhooks

