# Platform engineering your way to software supply chain security

## with Red Hat Advanced Developer Suite

Markus Nagel

Principal Technical Marketing Manager



Red Hat

# Common Challenges

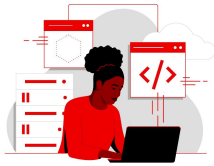
## Application Modernization

**80%**

of enterprise technologists surveyed **plan to modernize** more than half of their legacy applications **in the next 2 years**.

Source: The Newstack

## Developer Productivity



**76%**

of organizations say the **cognitive load is so high** that it is a **source of low productivity**. **Gartner** predicts **75%** of companies will establish platform teams for application delivery.

Source: Salesforce
Source: Gartner

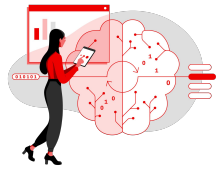
## Software Supply Chain Security

**742%**

Average **annual increase in software supply chain attacks** over the past three years. **45%** of organizations will experience attacks. **Is a matter of when, not if.**

Source: Sonatype

## Rise of Generative AI



**80%**

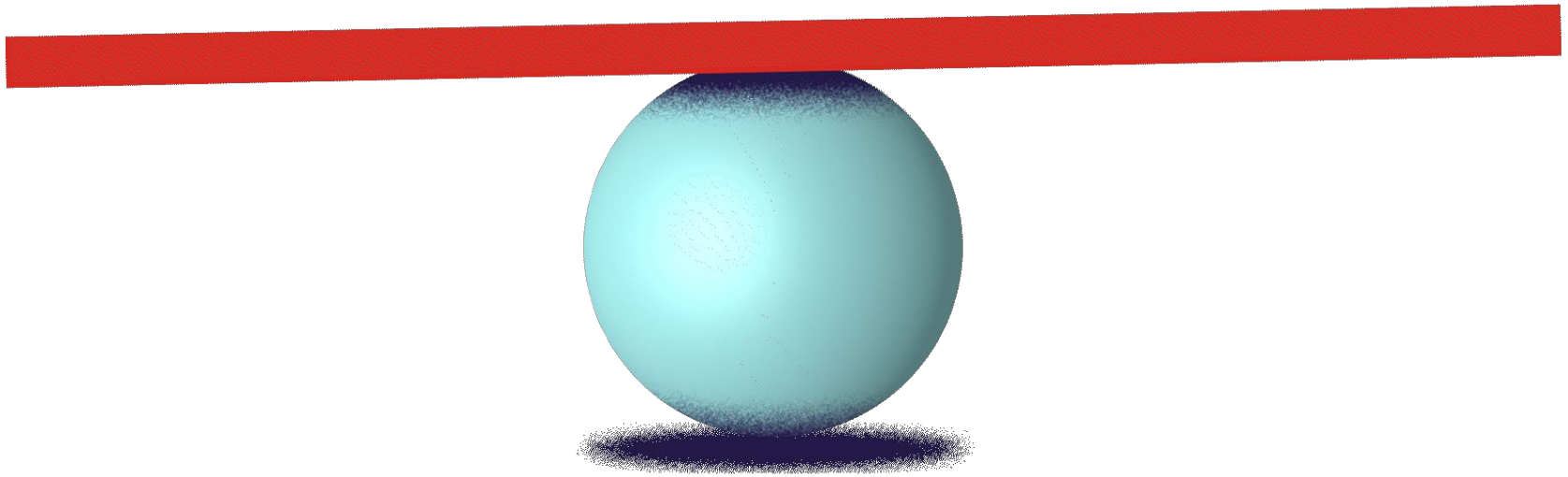
of Enterprises will have deployed **Generative AI-Enabled Applications** by 2026

Source: Gartner

# The Challenge: Balancing Security & Productivity

Security

Innovation



# The Challenge: Balancing Security & Productivity

## Innovation

**52m** Average time spent by developers coding each day

**76%** of organizations say the cognitive load is so high that it is a source of low productivity.

**80%** of Enterprises will have deployed Generative AI-Enabled Applications by 2026.

## Security

**90%** of components in modern applications utilize open source software

**>500K** malicious packages logged in 2024 alone, a 156% increase

**$60B** In estimated damages in 2025 from software supply chain attacks

Source:
[1] Global Code Time Report
[2] New Research Shows How to Keep Developers Happy Amid the 'Great Resignation' - Salesforce
[3] Gartner Says More Than 80% of Enterprises Will Have Used Generative AI APIs ...
[4] The transformation of open source: Lessons from the past decade
[5] Sonatype Reports 156% Increase in OSS Malicious Packages - Infosecurity Magazine
[6] Software Supply Chain Attacks To Cost The World $60 Billion By 2025

Red Hat

# Delivering for Developers with Platform Engineering

in a Cloud Native, AI infused world!

Gartner®

"By 2026, 80% of software engineering organizations will establish platform teams ...
A **dedicated product team** creates and maintains the engineering platform."

- Gartner

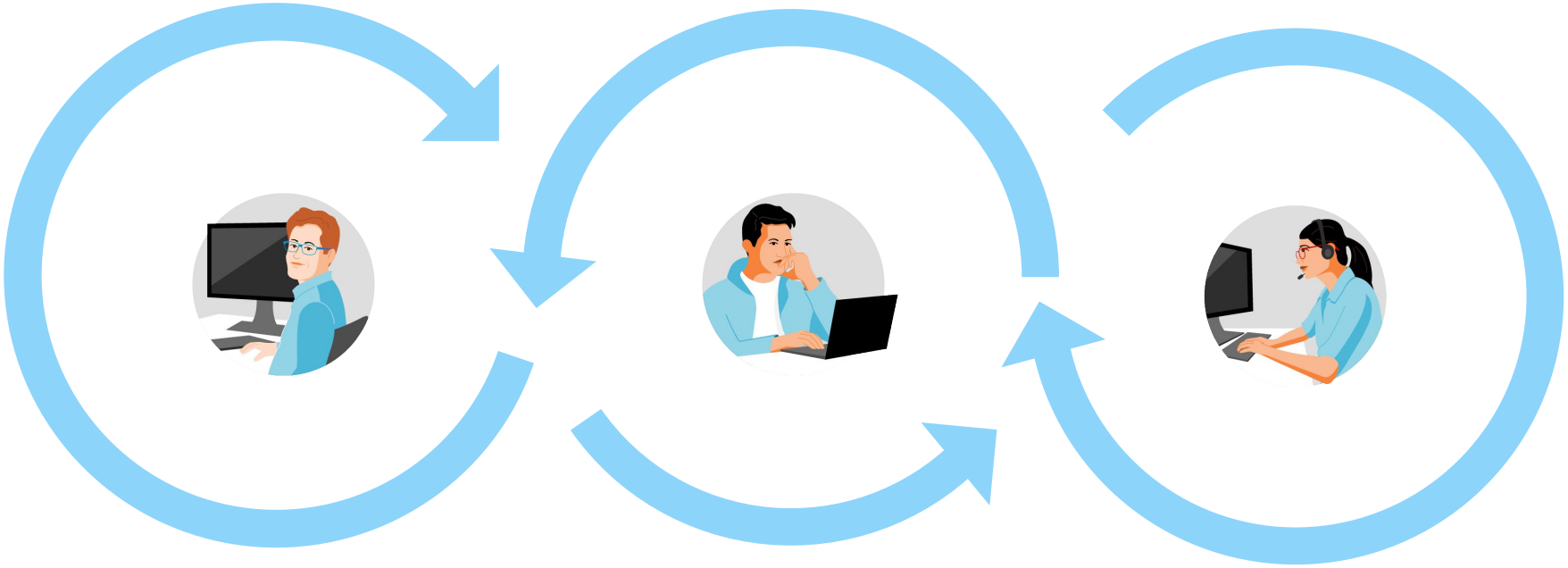
Platform engineering is the **discipline** of building and operating self-service internal developer platforms for development, build, and delivery of software systems.

**Four characteristics:**

- ★ **Self-Service** (e.g. Developer Portals)
- ★ **Automated** (e.g. Infrastructure as Code)
- ★ **Developer experience** (e.g. Golden Path Templates)
- ★ **Continuous improvement** (e.g. Product Mindset)

# Platform Engineers play a key role in offering a standardized platform

Providing Development Teams security guardrails to efficiently create resilient software at scale



Automating security policies for compliance and regulatory

**Development Teams** want tools that allow them to innovate and build quickly without bottlenecks.

**Platform Engineers** implement requirements from Dev, Sec, and Ops via pre-approved, secure, and reusable golden paths.

**Operations Teams** need stability, compliance, and scalability in every environment.

Red Hat

# Delivering for Developers with Platform Engineering

in a Cloud Native, AI infused world!

Gartner®

"By 2026, 80% of software engineering organizations will establish platform teams ...
A **dedicated product team** creates and maintains the engineering platform."

– Gartner

Platform engineering is the **discipline** of building and operating self-service internal developer platforms for development, build, and delivery of software systems.

**~~Four~~ Five characteristics:**

- ★ **Self-Service** (e.g. Developer Portals)
- ★ **Automated** (e.g. Infrastructure as Code)
- ★ **Developer experience** (e.g. Golden Paths)
- ★ **Continuous improvement** (e.g. Product Mindset)
- ★ **Security Guardrails** (e.g. Signing & Verification, SBOM Management)

"A **digital platform** is a foundation of self-service APIs, tools, services, knowledge and support which are arranged as a compelling internal product. "

Evan Bottcher - 2018

# Move Fast, Stay Safe

## Red Hat Advanced Developer Suite

### Enable development teams to deliver business value faster

Create an integrated, self-serve developer experience from end to end with **Red Hat Developer Hub**

### Reduce supply chain security risks across the software development lifecycle

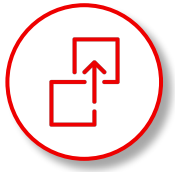
Trust, transparency across devops processes with **Red Hat Trusted Software Supply Chain**

### Extend OpenShift experience to developer desktops

Containers and Kubernetes on the desktop with **Podman Desktop** and **OpenShift Local**

### Standardize Developer tools

Enable application coding locally on the desktop with **IDE Plugins** and remotely in the browser with **OpenShift DevSpaces**



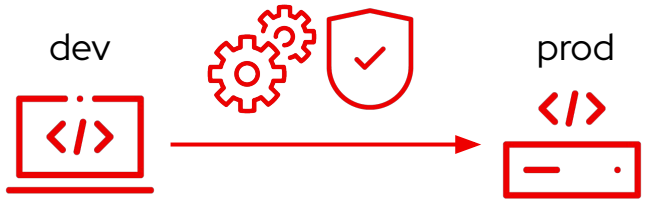
### AI-Accelerated workload migration to OpenShift

Accelerates large scale migrations and modernization with **migration toolkits**



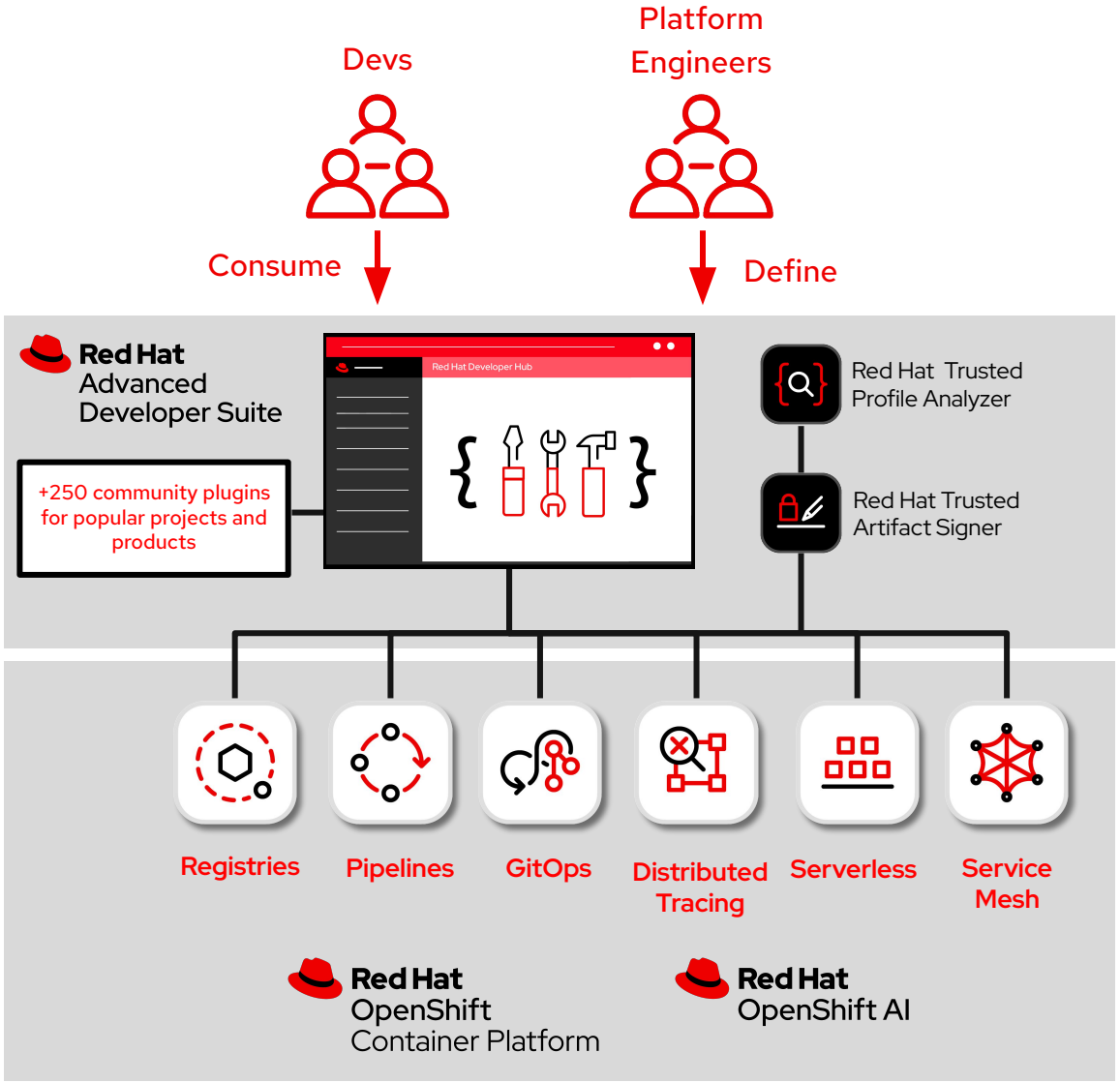
Red Hat

# Red Hat Advanced Developer Suite




RHADS combines platform engineering tools with enhanced security capabilities to help accelerate and simplify application development with new enhancements to speed the adoption of AI

- Modular design allows it to be integrated with existing platforms and systems including Red Hat's platforms
- Integrates with existing security capabilities found in Red Hat Advanced Cluster Security
- Complements existing developer tools from Red Hat including OpenShift DevSpaces
- Built on leading open source projects like Backstage and Sigstore




Red Hat

# Red Hat Advanced Developer Suite

IDP: Internal Developer Portal

Red Hat Developer Hub

AI/Kube Developer Desktop Experience : **Podman Desktop**

Migration toolkits

Development Tools

IDE Plugins

Red Hat OpenShift Dev Spaces

Trusted Software Supply Chain

Red Hat Trusted Artifact Signer

Red Hat Trusted Profile Analyzer

AI Enablement

Developer Lightspeed

Podman Desktop AI Lab

Red Hat Developer Hub AI Integration

## Products that allow developers to **quickly and securely deliver applications to production**

Enabling platform engineers to more easily enforce operational controls and compliance across hybrid multi-cloud environments



Red Hat

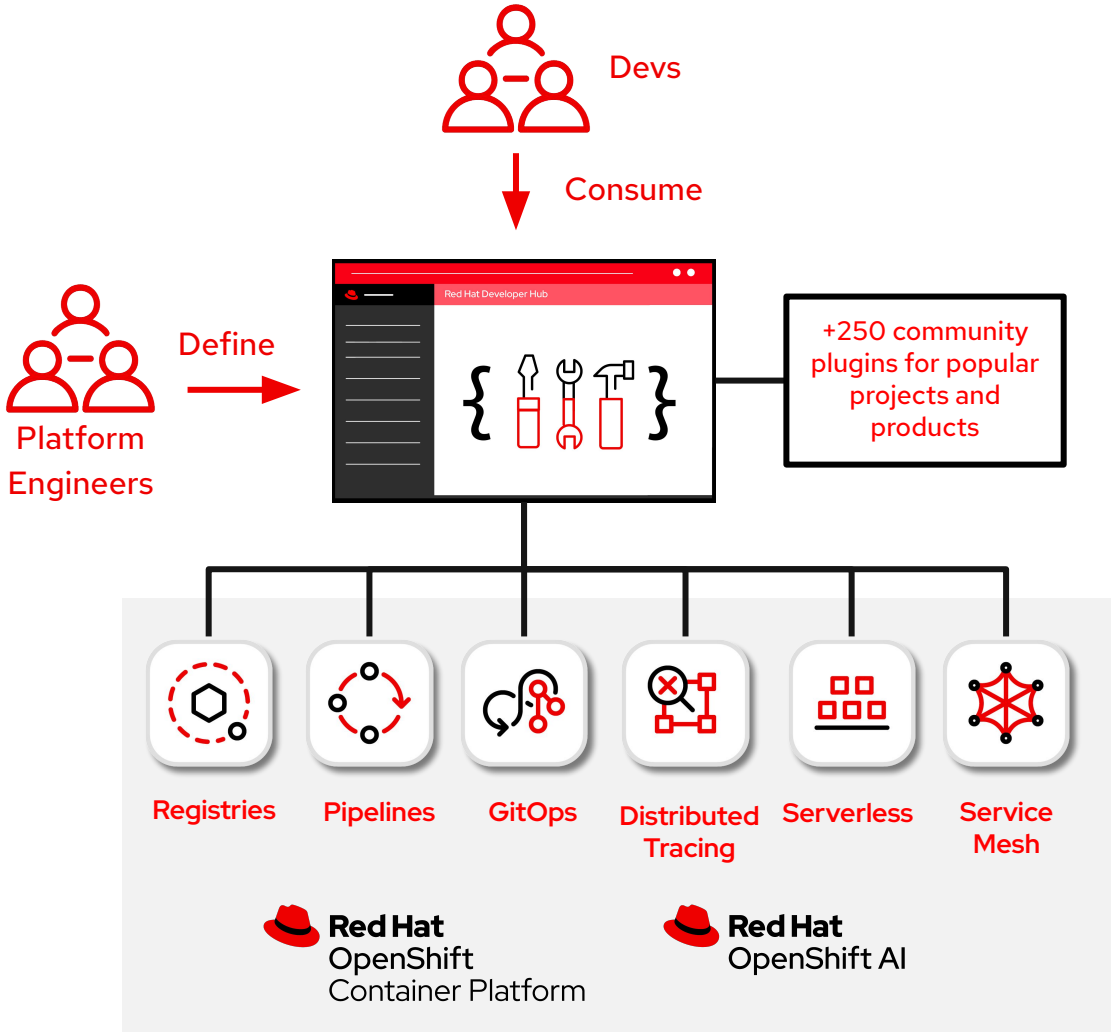
# Increased Developer Productivity

## Spend more time focusing on business problems

Red Hat Developer Hub provides a comprehensive and convenient view, which **reduces friction and increases efficiency** for development teams building services and applications

# Red Hat Developer Hub

## An Internal Developer Portal (IDP) based on the CNCF Backstage project




**Increasing Developer Efficiency**

**Faster Onboarding & Setup:** Instant onboarding with preconfigured, trusted environments, integrated services, and curated tools—all powered by cloud-based workspaces.

**Streamlined Development Workflow:** Automated software templates, self-services capabilities and a central source-of-truth reduce friction.

**Integrated Collaboration & Flexibility:** Development teams can work on local laptops while the source code stays secure, leveraging integrated tools.

# Enhanced Software Supply Chain Security

## Unlock a secure and compliant Software Development Lifecycle

**Red Hat Trusted Artifact Signer** and **Red Hat Trusted Profile Analyzer** automate software artifact signing and verification, ensuring cryptographic integrity and a trusted path to deployment. This robust foundation enables end-to-end provenance with an immutable audit trail, proactive risk monitoring, and policy-based enforcement to secure your entire software supply chain.

# Secure Software Supply Chain

## From Code Commit to Runtime Enforcement

Identify dependencies and recommend trusted content before coding

Provide guidance, templates, tools to catch known vulnerabilities and misconfigurations improving dev productivity, reducing cost to fix, securing the pipeline

Vulnerability Scanning

Policy Enforcement

Artifact Signing

Automate guardrails to prevent deployment of problematic code and deliver risk mitigation

Detect and respond to runtime threats with prioritized risk assessments

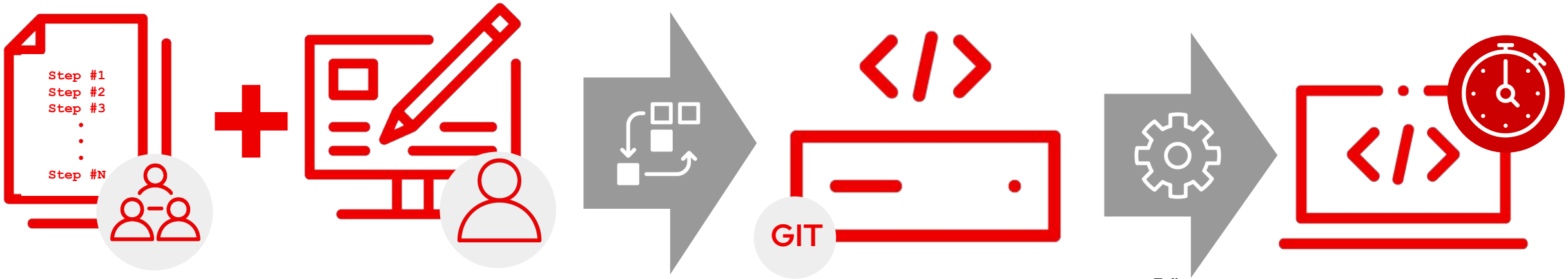
Red Hat Trusted Profile Analyzer

Red Hat Trusted Artifact Signer

Red Hat Advanced Developer Suite

Red Hat Advanced Cluster Security

# Self-Service with Software Templates




## Capture Your Best Practices

Codify your existing practices as Templates

## Bake-in Your Processes

Use templates to automatically generate perfect projects

## Generate New Projects

New projects go straight into version control so development can start straight away

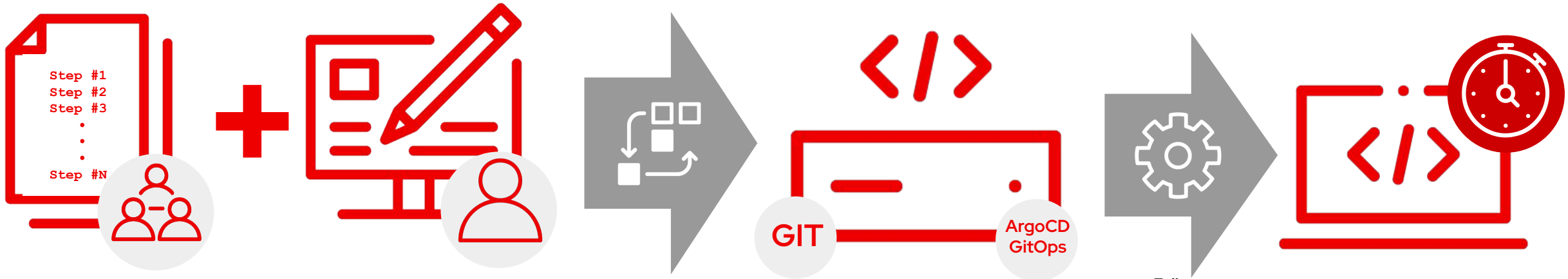
## Get Started in Seconds

No more tickets. No more Unzip.
No more search & replace.
No more Copy & Paste



Red Hat

# Self-Service with Security Augmented Software Templates




## Capture Your Best Practices

Codify your existing practices as Templates

## Bake-in Your Processes and Security Guardrails

Use templates to automatically generate perfect projects

## Generate New Projects & Pipelines

New projects go straight into version control so development can start straight away

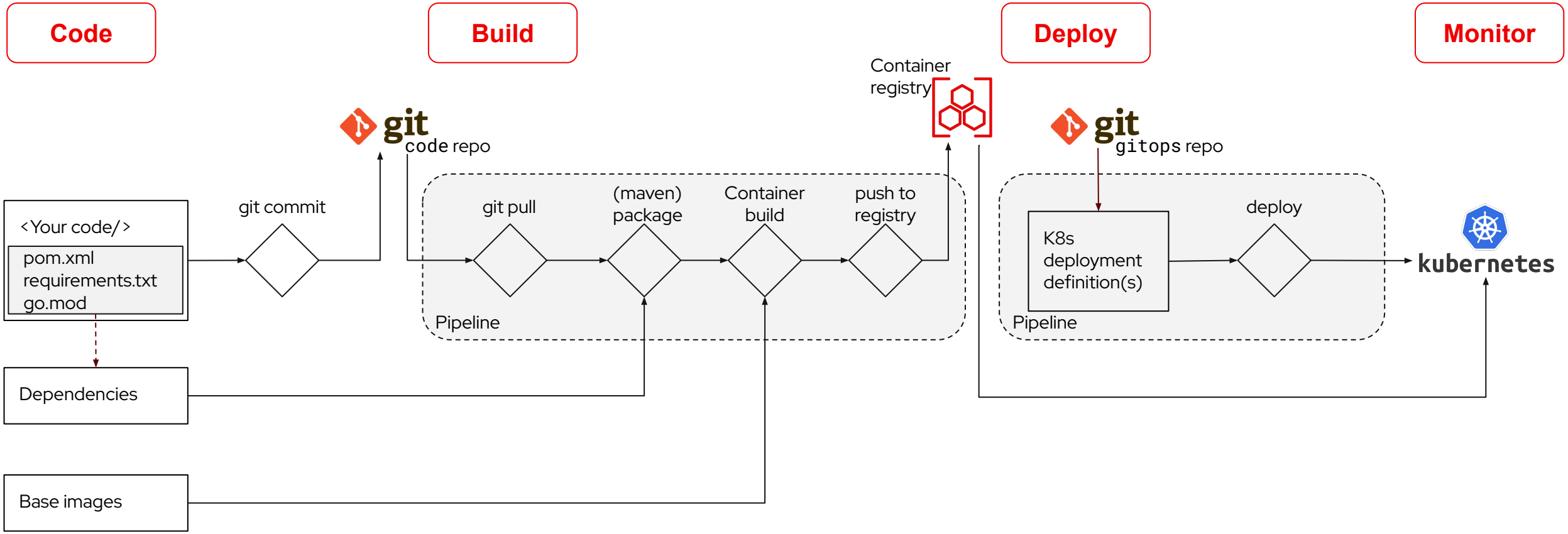
## Get Started in Seconds

No more tickets. No more Unzip.
No more search & replace.
No more Copy & Paste

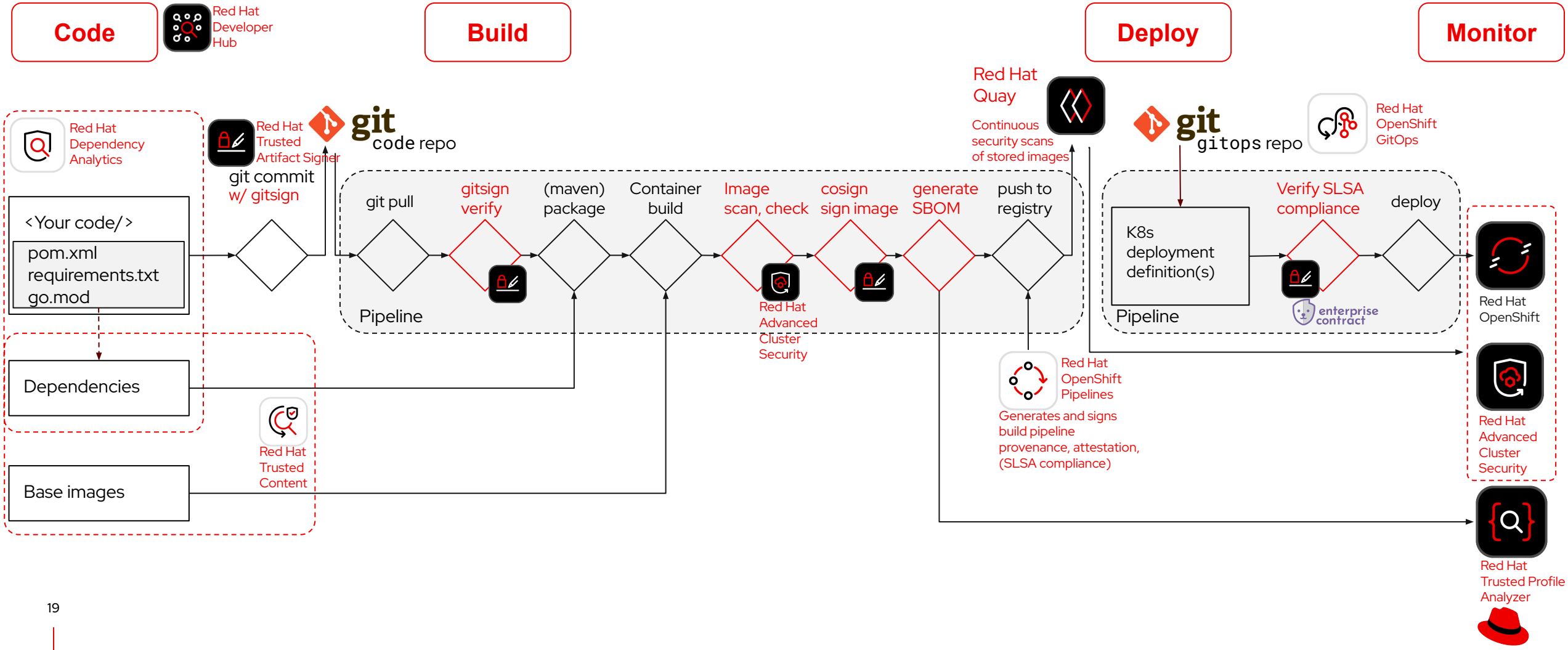


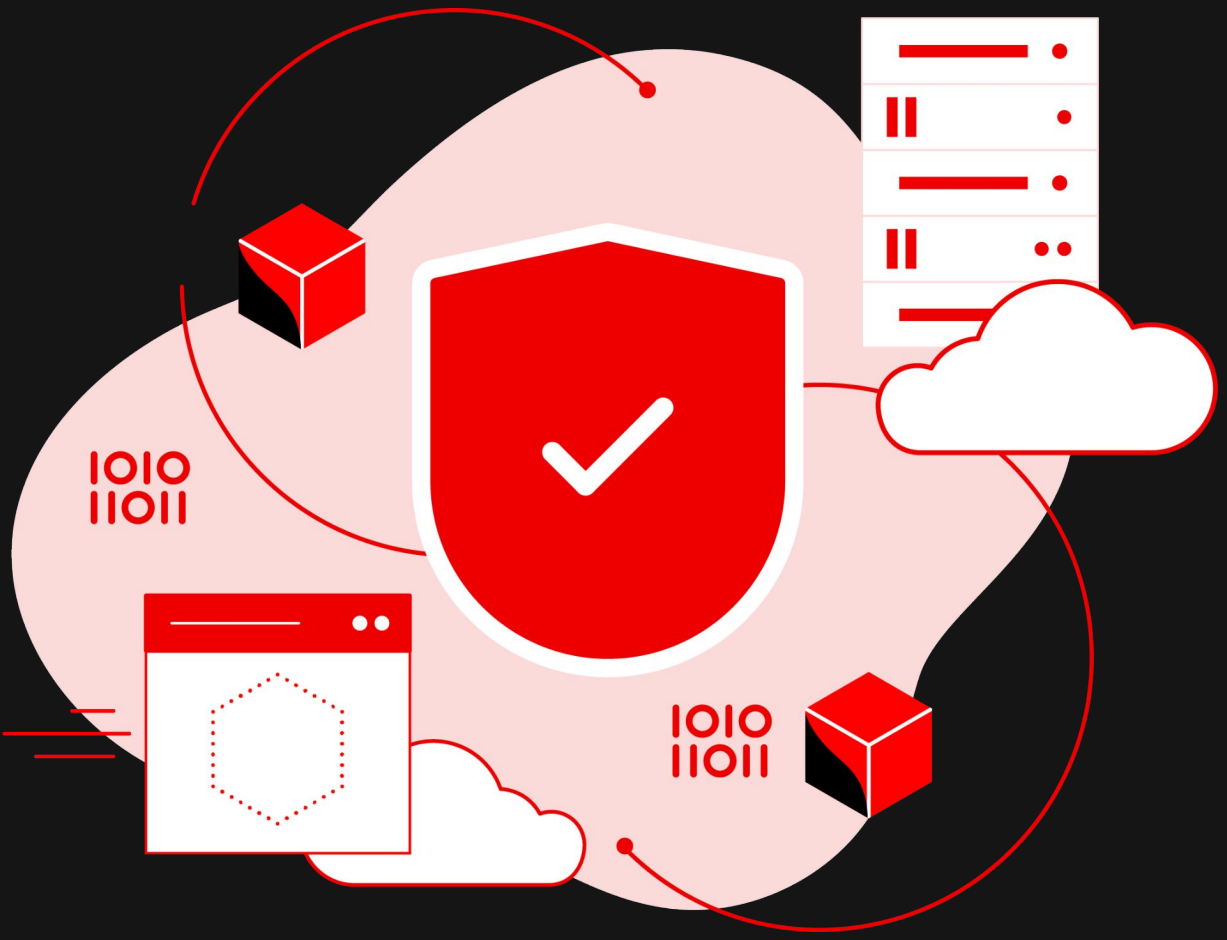
Red Hat

# A generic development process



# A security-augmented development process

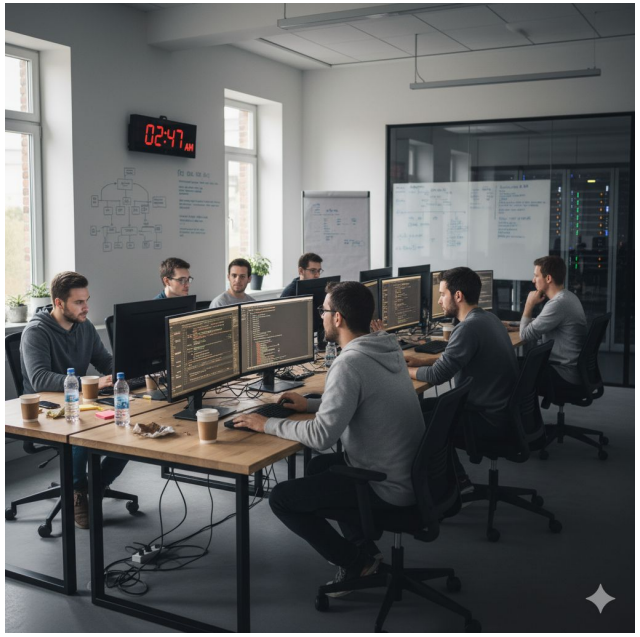




# *What does it look like?*
# *Demo time!*

# Roadshows for deeper dive lab experience

Platform Engineering Roadshow




Typically 1-1.5 days with lots of room for questions

OpenShift Security Roadshow

Red Hat Summit

# Thank you

linkedin.com/company/red-hat

facebook.com/redhatinc

youtube.com/user/RedHatVideos

x.com/RedHat

Red Hat