

Red Hat
Summit

Connect

Transforming Engineering Productivity with an Internal Developer Portal

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What we'll discuss today

- ▶ How a Developer Portal can transform productivity and make life easier for developers and other roles
- ▶ How to enable software supply chain security early and make it more easy
- ▶ Ways to ensure security posture and how to shorten the reaction time on new security vulnerabilities



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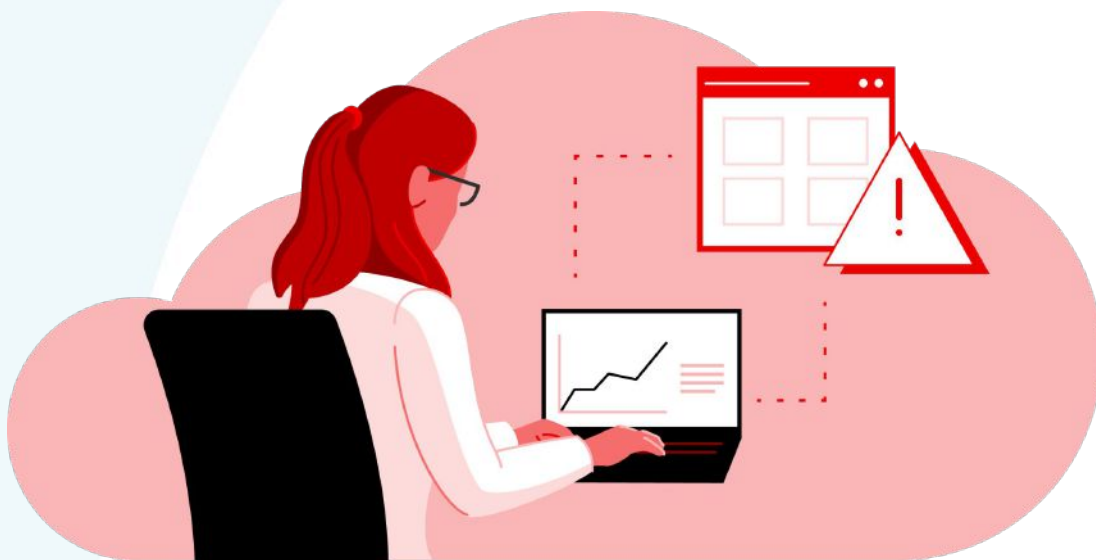
Magnus Eklund

Senior Specialist Solution Architect
Red Hat

Key challenges

- ▶ Developer **productivity** is negatively impacted by “technology overload” and lack of a Self-Service experience
- ▶ Lack of **standardization** lead to tool sprawl and confusion, each team have to adapt to and learn lots of tools and technologies
- ▶ Applying **security** best practices is perceived as complex by developers and is applied, if at all, in the end

Software Delivery and security is under Pressure



76%

of Organizations say "learning our architecture requires **high cognitive load** causing stress, anxiety and limiting productivity"¹

91%

of Organizations say "We **need to automate key processes** for our Development Teams so they can do more with less"¹

742%

average **annual increase in software supply chain attacks** over the past three years²

6 out of 7

project vulnerabilities come from **transitive dependencies**²

[1] [Salesforce productivity survey](#), [1] | [State of the Software Supply Chain](#) [2]

What can we do to **improve**
Developer Experience and
Productivity?

A day in the life of a Software Engineer

- Meet Björn our new Developer...



Onboarding Challenges:

- Where is the documentation?
- What framework should be used to implement the application?
- What version of the framework?
- Which branch of the code should I use?
- What technology stack should I use for CI/CD, logging ... etc.?
- How to stay compliant with organizational standards and security procedures?
- I want to provision an environment and start coding. I've created a ticket but its taking forever!
- ...

An open platform for building developer portals



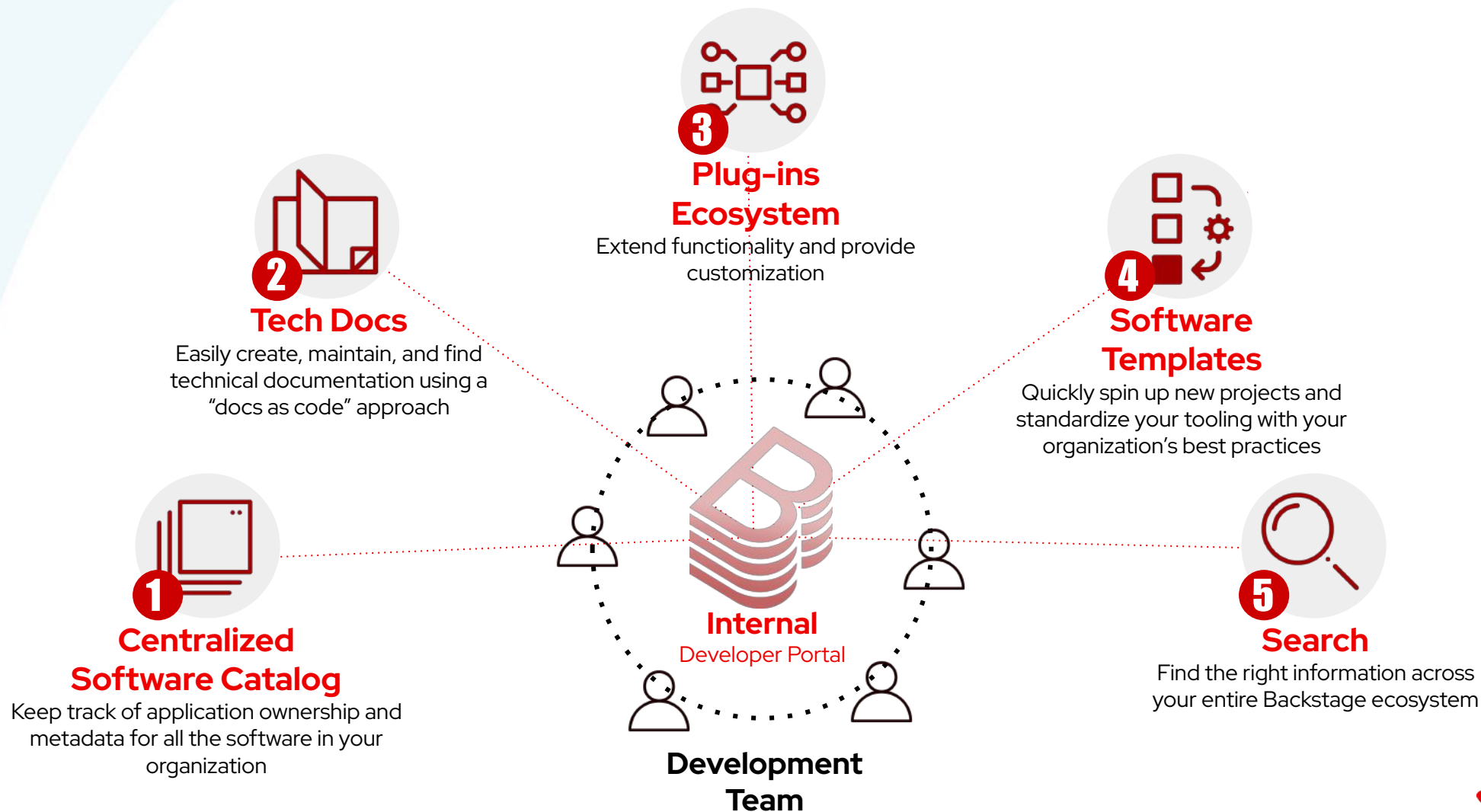
<http://backstage.io>

Allowing developers to focus on what they want to ... coding, rather than navigating to all the different tools

*Resulting in **lowering the cognitive load and unlocking developer productivity***

Happy developers makes happy code!

The 5 fundamental pieces



Red Hat Developer Hub

Red Hat Plug-ins for Backstage

Includes **supported
plugin bundle**



Authentication and
Authorization with Keycloak



GitOps with
Argo CD



Pipelines with
Tekton



Application Topology
for Kubernetes



Container Image
Registry for Quay



Multi Cluster View with
Open Cluster Manager (OCM)

Single pane of
glass to increase
engineering
productivity.

Integrates with industry standards and technologies
through a broad ecosystem of community plugins.



Self-service with
guardrails for
cloud-native
development.

Based on Backstage, an open source
platform for building developer portals.



Best practices
with GitOps
and
automation.

Red Hat Developer Hub - **supported when deployed on**

Customer-managed Red Hat OpenShift



Managed Red Hat OpenShift services



Managed Kubernetes Services




Welcome back!

Search Clear


Quick Access

COMMUNITY ▼

DEVELOPER TOOLS ▲


Podman Desktop

CI/CD TOOLS ▲

  
ArgoCD SonarQube Quay.io

OPENSIFT CLUSTERS ▲


OpenShift

MONITORING TOOLS ▼

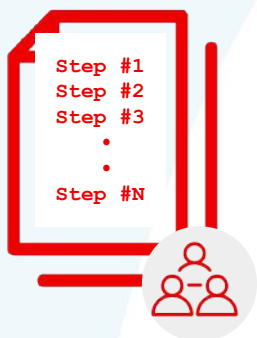
SECURITY TOOLS ▼

Your Starred Entities

- ★ crm-application
- ★ fraud-detection-system
- ★ Quarkus Service with ArgoCD and a Tekton Pipeline

Self-Service with Software Templates

Capture and Share **YOUR** best practices



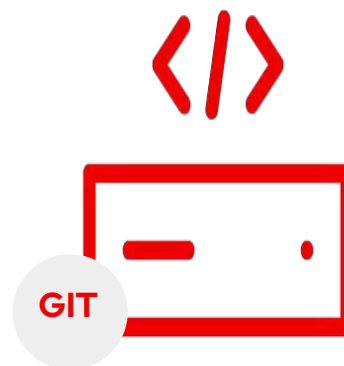
Capture Your Best Practices

Codify your existing practices as Templates



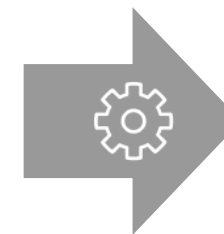
Bake-in Your Processes

Use templates to automatically generate perfect projects



Generate New Projects

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



Fully Automated



Get Started in Seconds

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

Can this help us *secure* the
Software Supply Chain?

The Software Supply Chain



Securing the software supply chain

Software supply chain security considerations for the software development lifecycle

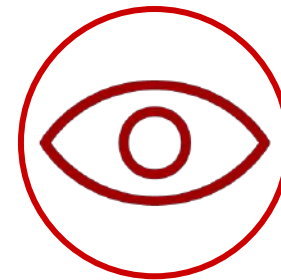
Prevent & identify
malicious **code**



Safeguard **build**
systems early

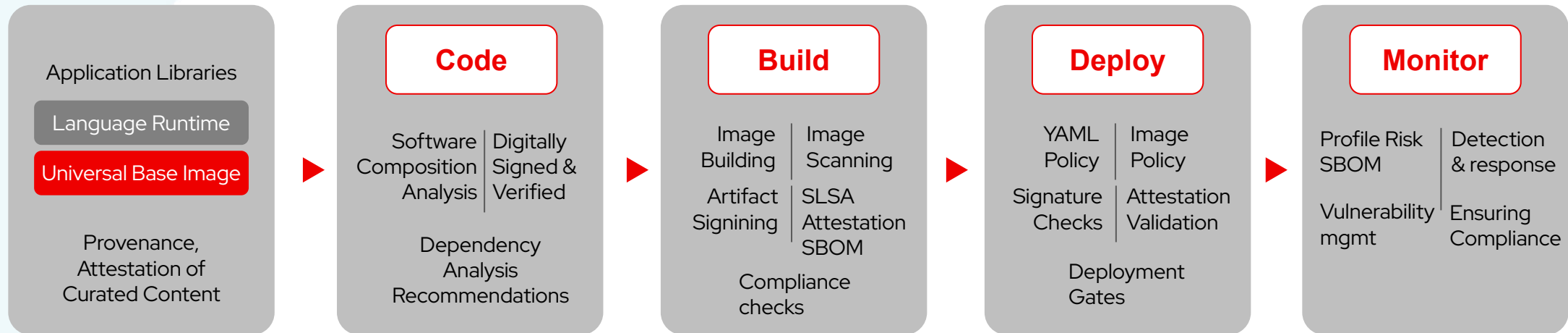


Continuously **monitor**
security at runtime



Augment and secure your deployment process

From end to end (CI+CD)



 **Red Hat**
Developer Hub

 **Red Hat**
Trusted
Artifact Signer

 **Red Hat**
Trusted Profile
Analyzer

 **Red Hat**
Advanced Cluster Security
for Kubernetes

 **Red Hat**
Quay

EXPLORER

- (WORKSPACE)
- demo-tssc
 - .mvn
 - .vscode
 - docs
 - application-migration
 - index.md
 - onboard-openshift.md
 - src
 - .devfile.yaml
 - .dockerignore
 - .gitignore
 - .gitlab-ci.yml
 - catalog-info.yaml
 - Dockerfile
 - mkdocs.yaml
 - mvnw
 - mvnw.cmd
 - openapi.yaml
 - pom.xml** 2, M
 - README.md

OUTLINE
TIMELINE
ENDPOINTS

Red Hat Overview of security Issues

Vendor Issues

Below is a list of dependencies affected with CVE.

OSV

Severity	Count
Critical	9
High	16
Medium	16
Low	0

Red Hat Remediations

2 remediations are available from Red Hat for osv

Join to explore Red Hat TPA

Check out our new Trusted Profile Analyzer to get visibility and insight into your software risk profile, for instance by exploring vulnerabilities or analyzing SBOMs.

[Take me there](#)

OSV

Filter by Dependency name

1 - 5 of 5 1 of 1

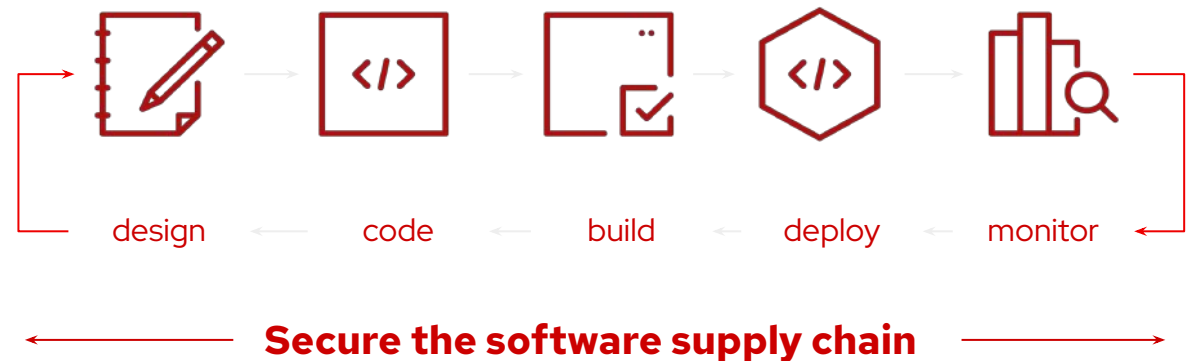
Build security checks into the software development lifecycle

An opinionated view of a secured software supply chain

- ▶ **Secure application production** - include security throughout the whole process
- ▶ **Improve vulnerability detection and remediation** - find and fix vulnerabilities in source code and images
- ▶ **Continuously monitor for threats** - Monitor applications' codebase risk profile



Red Hat Trusted Software Supply Chain



Key takeaways

- ▶ A developer portal with golden path templates helps to simplify the onboarding and the development process - ***“reduce cognitive load”***
- ▶ Self-service and a single pane of glass through a developer portal not only increase efficiency but also collaboration - ***“enable productivity and focus”***
- ▶ ***“Shift security left”*** - security focus is applied from the beginning in the development process
- ▶ Templating and an automated process makes it easy to set up a software delivery pipeline including security steps - ***“pave for security best practices”***

What's next? Ansible, OpenShift AI, etc integrations

Red Hat Developer Hub

Search

Home

Catalog

APIs

Learning Paths

Create...

Ansible

Tech Radar

Docs

Clusters

Administration

Settings

Welcome to the Ansible plug-ins for Red Hat Developer Hub

This Ansible out-of-the-box experience accelerates content creation and meets you where you are in the development process.

Overview My Items Create Learn

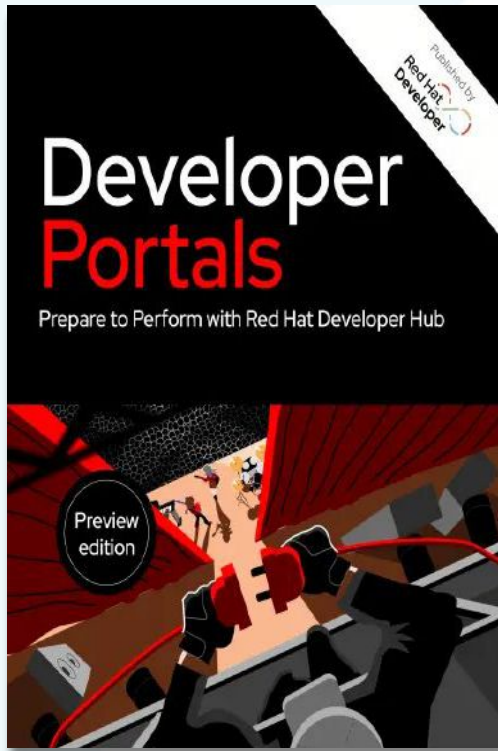
1. LEARN	▼
2. DISCOVER EXISTING COLLECTIONS	▼
3. CREATE	▼
4. DEVELOP	▼
5. OPERATE	▼
6. USEFUL LINKS	▼

Starred Ansible Items

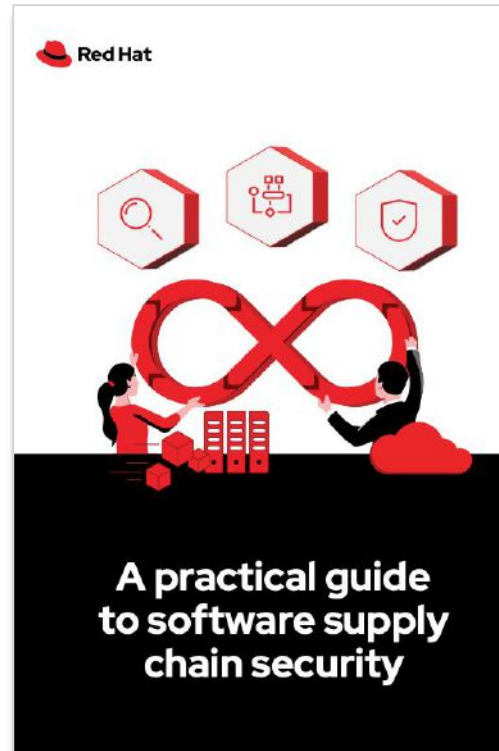
Click the star beside an Ansible entity name to add it to this list!

FEEDBACK

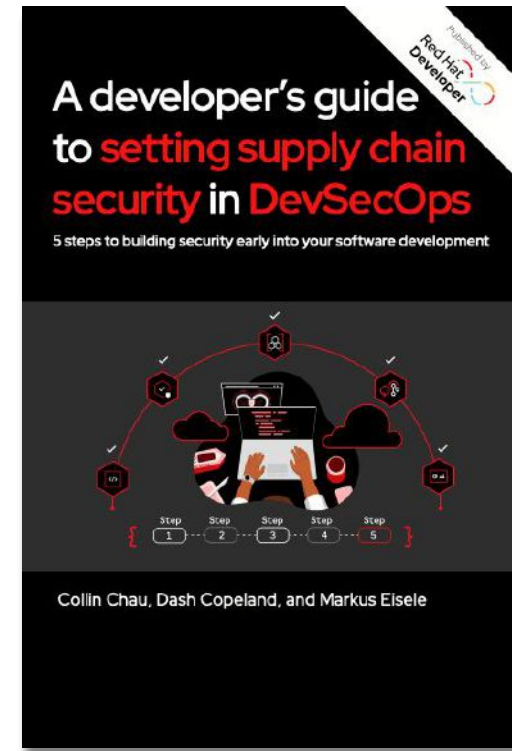
Free e-books



<https://red.ht/developer-hub-ebook>



<https://red.ht/supplychainsecurity-ebook>



<https://red.ht/devsecops-ebook>



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