RHUG Intro and Agenda

Red Hat

Agenda

- Introductions & Announcements
  - Richard Hofmeister
- Embracing Patterns: Automation by Design
  - Brad Krumme
- Why use Kubernetes for AI?
  - Brian Ball
- The Value of RHLS and Red Hat Certifications
  - Brian Dumont

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Platform Release Schedule

All Dates Subject to Change

- RHEL 9.5: Q2 2025
- Satellite 6.16: Q2 2025
- Migration Toolkit for Applications : Very Soon
- OpenShift 4.18 : Q1 2025
- ACM 2.13 : Q1 2025
- Quay 3.13: RELEASED
- ACS 4.6: RELEASED
- RHEL AI 1.3: Very Soon
- AAP 2.5 : RELEASED
- OpenShift Lightspeed: Q1 2025

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Middleware Release Schedule

All Dates Subject to Change

- OpenShift Dev Spaces 4.17.0 : RELEASED
- Streams for Apache Kafka 2.8 : RELEASED
- JBoss EAP 8.0.4 : RELEASED
- Keycloak 26.0 : RELEASED
- 3scale 2.15 : RELEASED
- Service Interconnect 1.8 : RELEASED
- Podman Desktop 1.13 : RELEASED

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Red Hat Summit

AnsibleFest

Red Hat Summit 2025 in Boston

Boston, MA | May 19-22, 2025

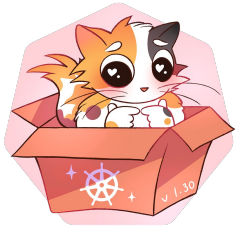
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Kubernetes 1.30

"Uwubernetes"



Notable Stable Features

- Pod Scheduling Readiness
- Common Expression Language (CEL) for Admission Control
- Container resource-based pod autoscaling
- Reduction of Secret-based Service Account Tokens

Notable Beta Features

- Support user namespaces in pods
- Structured Auth Configuration
- Node memory swap support
- Make Kubernetes aware of the LoadBalancer behaviour
- CRD validation ratcheting

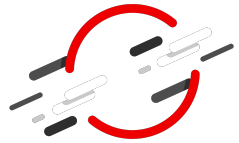
CRI-O 1.30



Kubernetes 1.30



OpenShift 4.17



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Red Hat OpenShift 4.17 highlights

Core

- 4-nodes and 5-nodes control-plane architecture for bare-metal spanned clusters
- Node disruption policies to minimize disruption (GA)
- Native Network Isolation for Namespaces (Tech Preview)
- eBPF Manager (Tech Preview)
- User namespaces in pods (Tech Preview)

Hosted Control Planes (HCP)

- Disconnected Installation enhancements
- Comprehensive Backup and Restore Solution for OpenShift Virtualization HCP Clusters
- NVIDIA GPU support for OpenShift Virtualization HCP Clusters (Tech Preview)
- Multi-architecture HCP

Virtualization

- Safe memory overcommit (GA)
- Memory hotplug for non-disruptive scale-up of VM performance
- Automatic VM workload balancing with descheduler
- VM storage live migration between storage classes (Tech Preview)

OpenShift Platform Plus

- Policy as code via ArgoCD and VEX support in Scanner with Advanced Cluster Security 4.6
- ROSA cluster lifecycle with RHACM 2.12 (Dev Preview)
- Keyless Authentication and auto pruning policies with Red Hat Quay 3.13
- Self-managed OpenShift Data Foundation on ROSA HCP

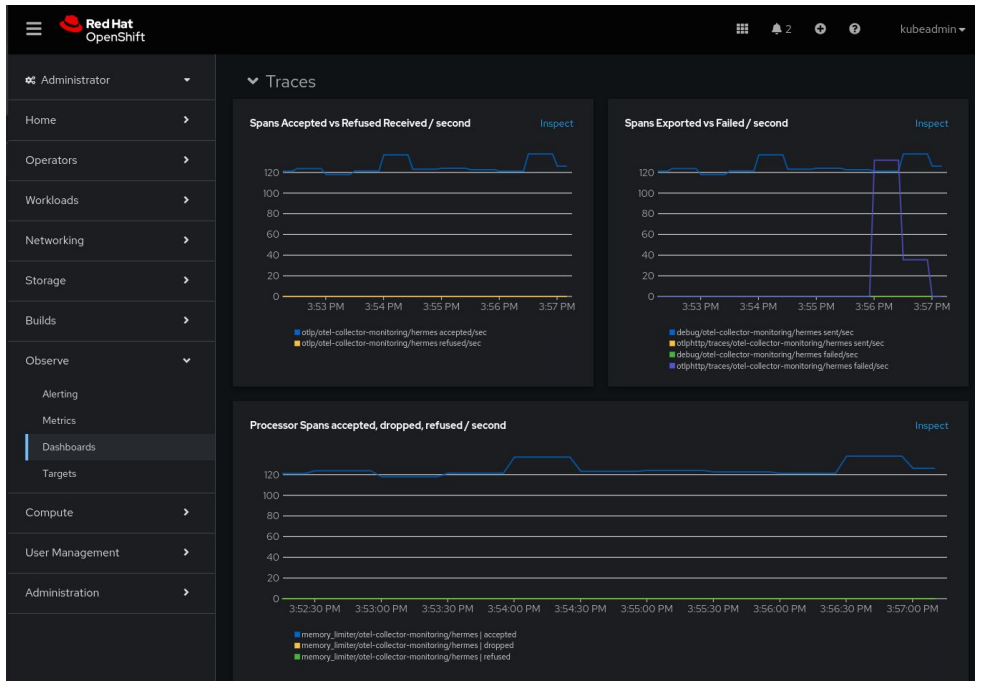
Product Manager: Siamak Sadeghianfar

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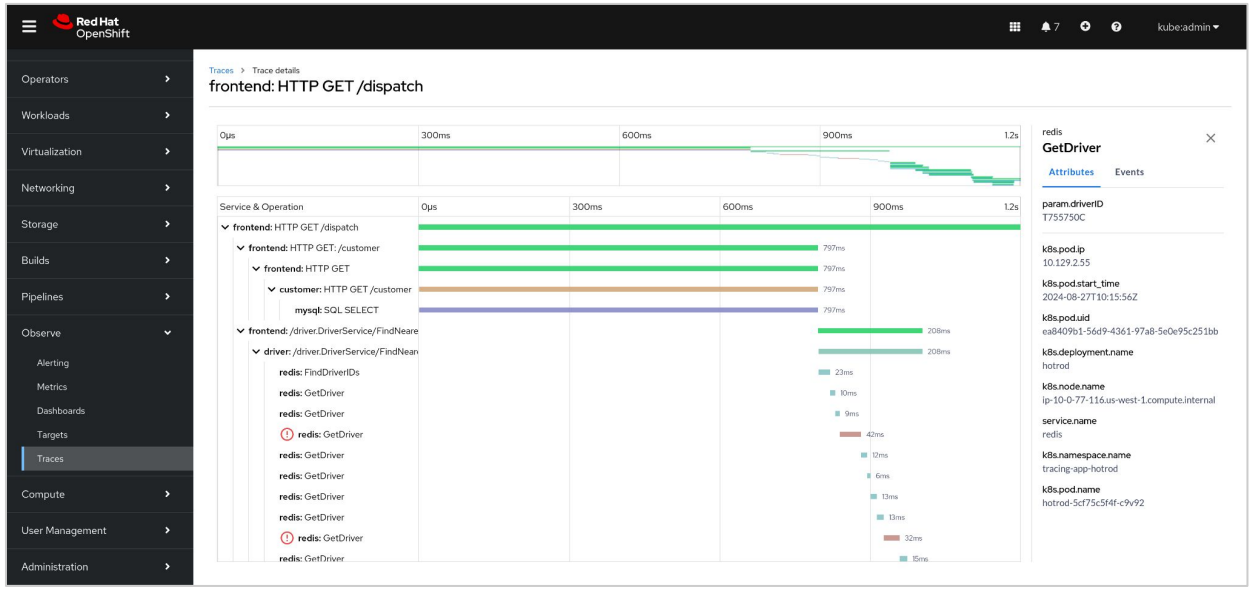
Application Observability and Integrations

Red Hat build of OpenTelemetry

- OpenTelemetry collector **dashboards**
- OTLP Logs are now **native** to OpenShift
- Certificate rotation
- **New components:** Metrics transform processor, Group by attributes processor, Routing connector and Prometheus Remote Write exporter.



Distributed tracing

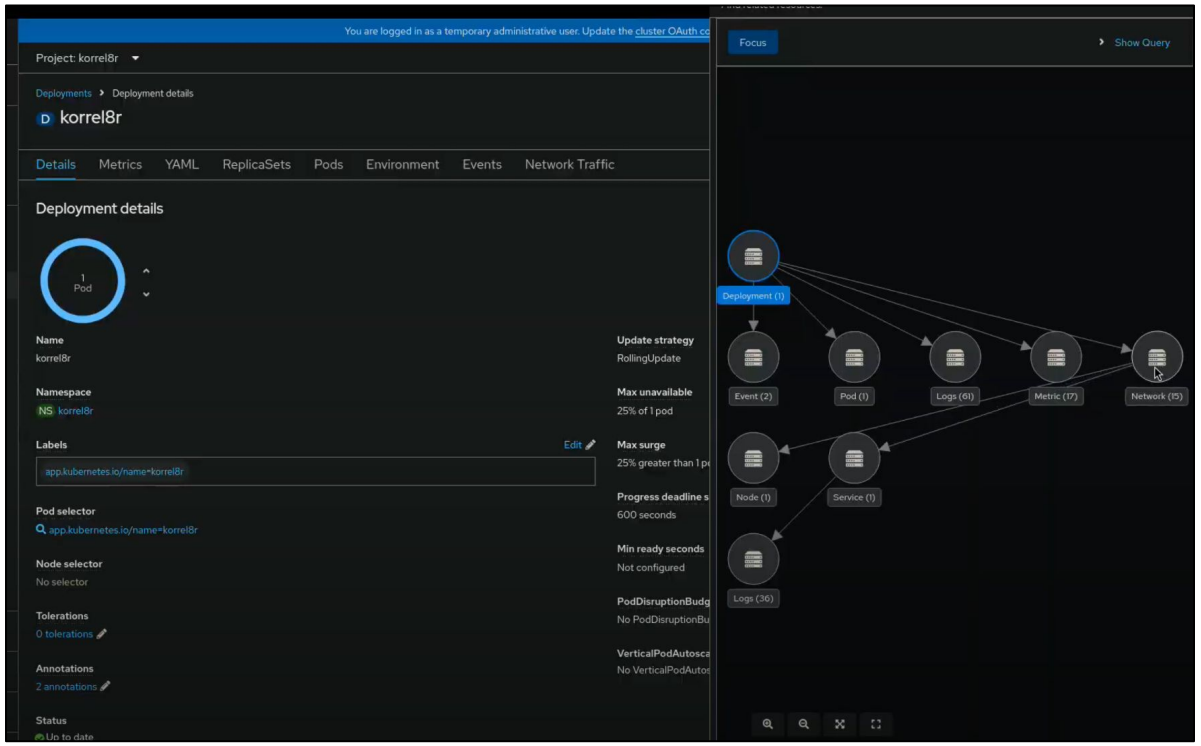


- **Gantt chart**: Observing your requests with context, including a side panel for granular information
- Configure temporary access to AWS S3 with AWS STS
- **TLS** is streamlined in OpenShift via service annotation when gateway/multi tenant is disabled

Product Manager: Jamie Parker (on behalf of Jose Gomez-Selles)

Read more at: https://t.co/FoHfJ9D4BX

Cluster Observability Operator



Read more here

- Cluster Observability Operator 0.4.0 released as **Technology Preview**
- **Observability Signal Correlation** for Red Hat OpenShift
- Enhancements:
  - Focus functionality
  - Show Query & additional experimental features
- **Troubleshooting panel**
  - Triggered from the application launcher menu of the OCP web console

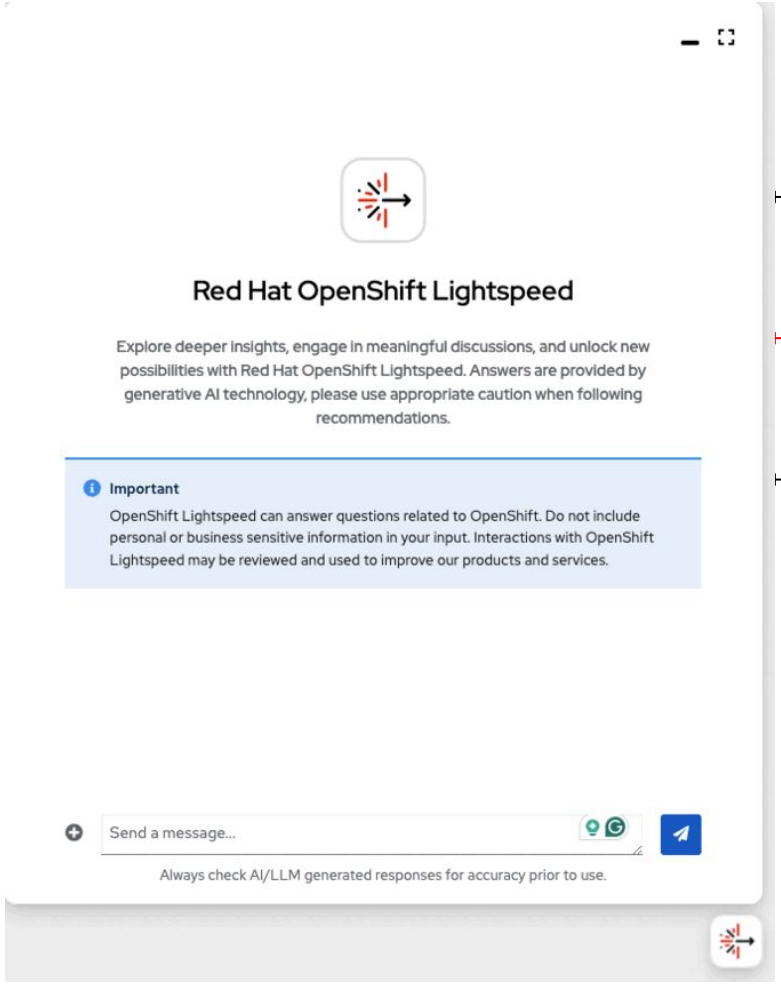
Product Manager: Jamie Parker (on behalf of Vanessa Martini)

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OpenShift Lightspeed

(Technology Preview)

Generative AI based chat assistant



Help where you need it

Integrated directly into the Red Hat OpenShift web console

Explain, investigate and learn more

Provides assistance with explaining and investigating cluster resources

Generative AI

Powerful, pluggable LLMs combined with the latest OpenShift documentation

- RHEL AI
- Red Hat OpenShift AI
- OpenAI
- Azure AI
- Watson X

Product Manager: Gaurav Singh

Red Hat

User Namespaces

Technology preview

- **Enhanced Security for Containers:** User namespaces allow pods to run with distinct user IDs inside the container, while mapping them to different IDs on the host.

- **Better protection against privilege escalation:** By enabling user namespaces, it becomes easier to run containers that require root privileges inside the container while being non-root on the host. This improves security by ensuring that any process that escapes a privileged container will not have privileges on the host.

Product Manager: Gaurav Singh

OpenShift Virtualization highlights

Modernize your operations with comprehensive lifecycle and infrastructure management

Performance and Scale

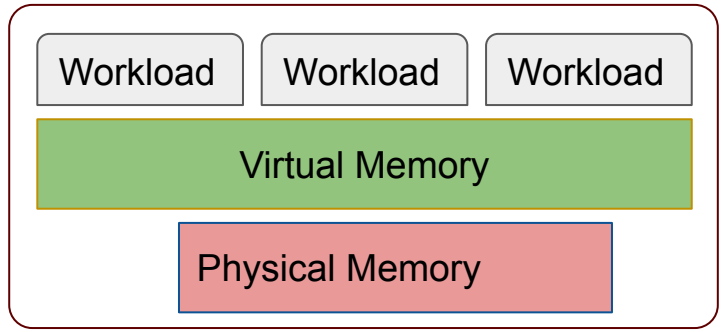
- Memory Oversubscription for workload density
- Memory hotplug for non-disruptive scale-up of VM performance
- GPU workload on hosted clusters. (Tech Preview)
- Live Migration optimizations for busy workloads

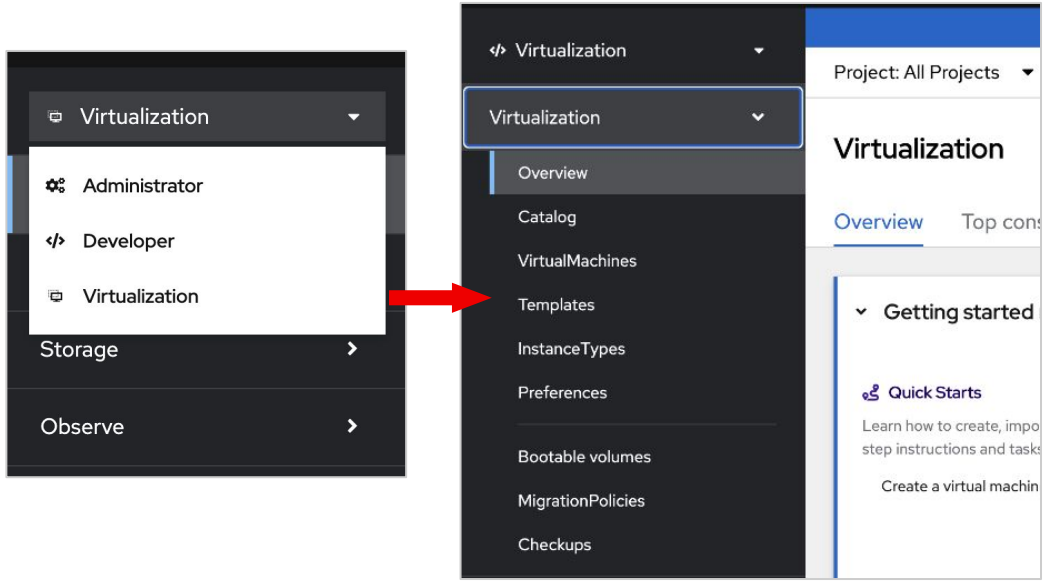
Improved infrastructure optimization

- Automatic VM workload balancing with descheduler
- Easily deploy disconnected hosted clusters
- VM storage live migration between storage classes (Tech Preview)

Simplified VM Management

- Virtualization Admin focused view
- MTV 2.7 preserves static IPs and drive letters for warm migration

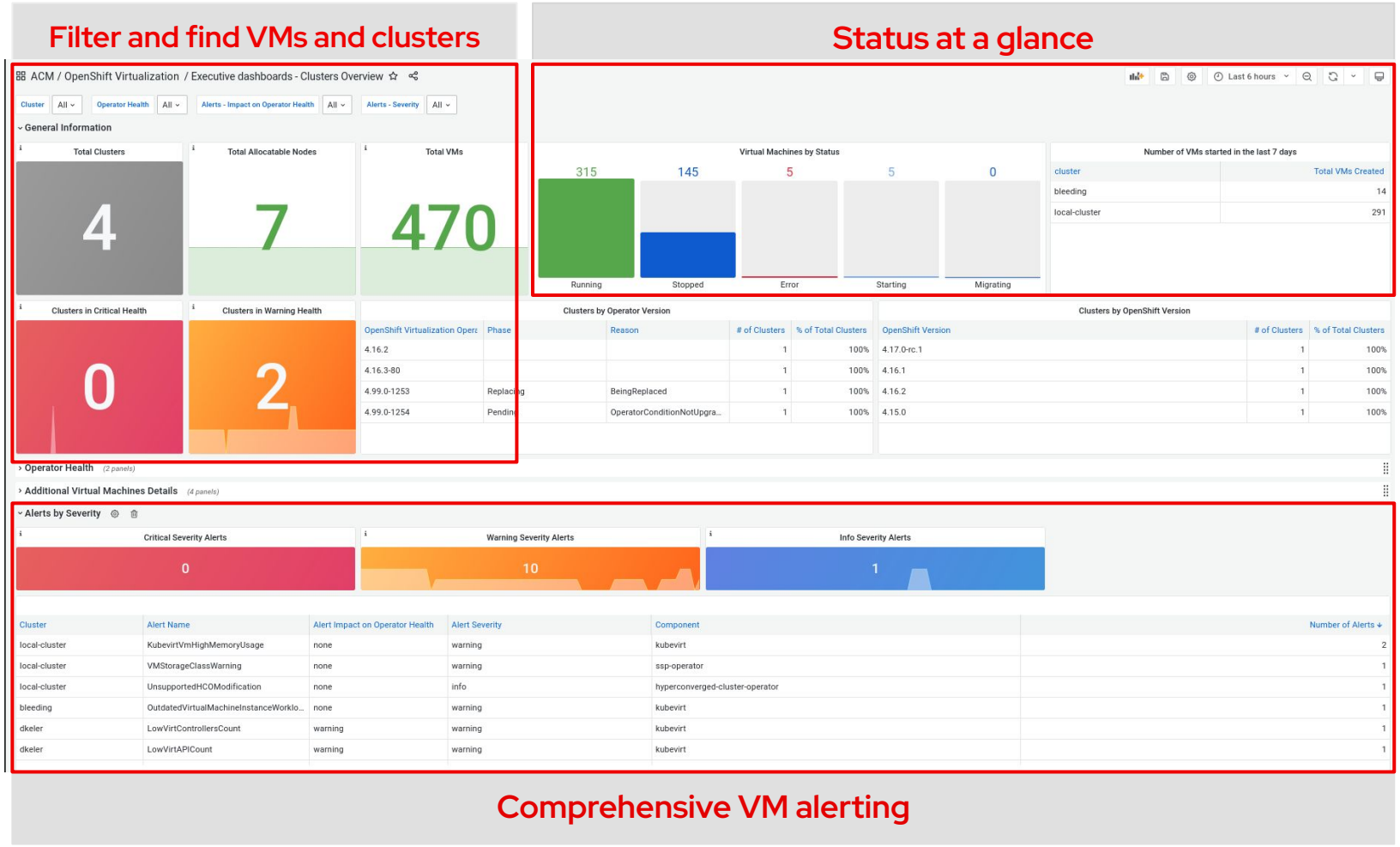




Product Manager: Peter Lauterbach

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Multicluster Virtual Machine Observability with RHACM



- Comprehensive set of dashboards addressing important use cases
- Flexible Single VM/Single-Cluster view versus Multi VM/MultiCluster view
- Based on a rich set of metrics to retrieve valuable status of individual VM's and inventories

Product Manager: Peter Lauterbach (speaking on behalf of Christian Stark)

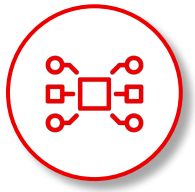
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OpenShift Dev Spaces

Version 3.16 is now available

Red Hat OpenShift Dev Spaces 3.16 is based on Eclipse Che 7.90





Warning users that creating a CDE from an unknown source could be dangerous

When you start a CDE from a URL, you are asked if you trust the authors of the repository since creating a workspace from unknown or untrusted sources could be dangerous.



Advanced “Import from Git” flow

Starting from this release, it is possible to configure the container image, temporary storage, memory and CPU limits when starting a CDE using the "Import from Git" flow.



Enabling fuse-overlayfs for all workspaces

With the fuse-overlayfs storage driver, you can enable faster builds and more optimized storage usage for podman build and buildah within your Red Hat OpenShift Dev Spaces cloud development environment (CDE).



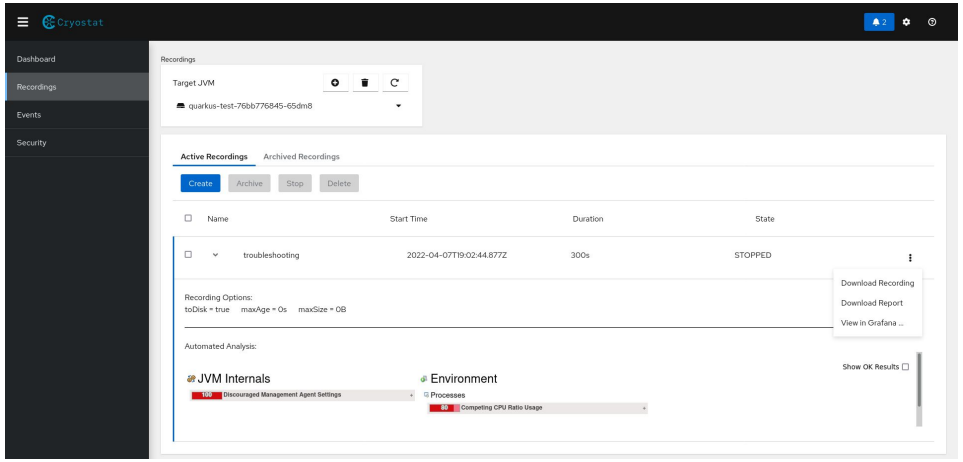
Automatic 'podman login' into external container registries

Starting from this release, podman login is performed automatically during workspace startup for all container registries configured in the User Preferences.

Red Hat build of Quarkus

What's New in 3.15 (late Oct)

- Improved integration with Red Hat Developer Hub
- Security improvements
  - Auto generated TLS certificates for development
  - Easier configuration
- Front end development improvement
  - WebBundler (NPM integration)
  - HTMX support
  - WebComponents
- Java Flight Recorder extension for monitoring containerized Java app stats on OpenShift with Cryostat



Cryostat Automated Analysis Report



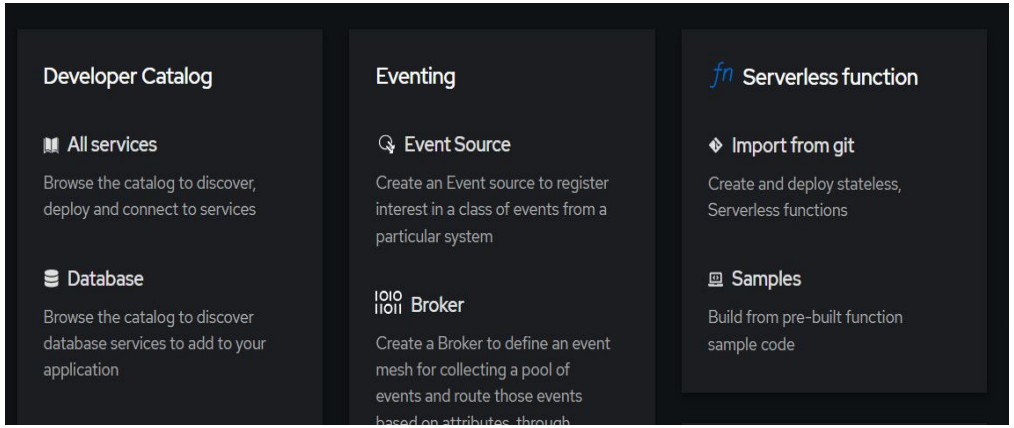
Cryostat Grafana dashboard

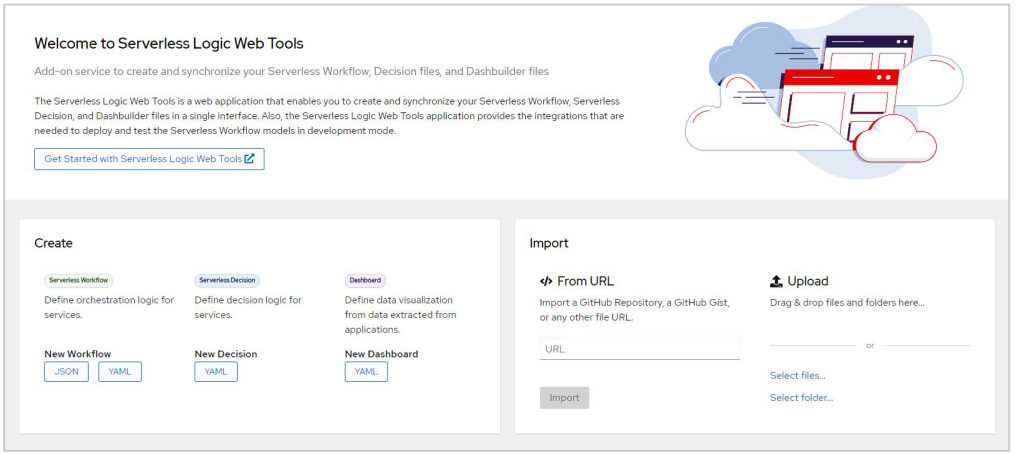
PMM: Jeff Beck

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OpenShift Serverless

- Serverless 1.34 release based on Knative 1.14
- Serverless functions
  - Golang functions (Tech Preview)
  - Easy Event Subscription through CLI
- Autoscaling of Knative Kafka Triggers using KEDA/CMA
- Internal and External services hops encrypted (Tech Preview)
- Support for Startup probe for faster startup times
- Serverless Logic
  - Access OpenAPI specs definitions across multiple namespaces
  - Management Console (Tech Preview)





PM: Naina Singh

Red Hat

ACS 4.6 top enhancements at a glance



Policy as Code [TP]

- OpenShift GitOps (ArgoCD) support
- UI Enhancements

Policy Violations

- NEW! Select View (Application or Platform)
- Upgraded UI filters

Vulnerability Management

- Adopt Red Hat CSAF/VEX
- CVE Scoring: NVD + RH
- NEW! UI Column Management

Compliance

-  Reporting [TP]
- PCI-DSS 4.0 for OCP

ACS CS

- PCI-DSS 4.0
- Use Service Accounts as OAuth Clients for OCM

Network Security

-  External Entity IP [TP]

Integrations

- MS Sentinel Notifier

Platform

-  ARM based secured cluster [TP]
-  Runtime configuration [TP]

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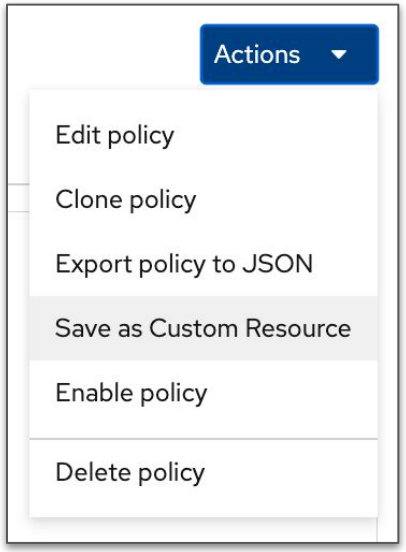
Policy as Code





Native support for OpenShift Gitops (ArgoCD)

- ACS Policy CRD + Controller
  - Installed automatically, no user action needed
- User (ArgoCD) applies Policy CRs in Central's namespace
  - Each policy is a single CR , ACS updates the **`status`** field
  - YAML Schema, reflects familiar JSON
  - Custom policies only (Users may clone, then disable System policies)
- ACS tags the policy origin:
  - **System**: Out of the box, default policies
  - **Locally Managed**: Traditional custom policies
  - **Externally Managed** : New custom policies managed as code
- Save-as CR
  - Easy to get started from current policies
  - Available in API and UI



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Ansible Automation Platform 2.5 General Availability

Available to customers on September 30, 2024

Accelerate automation adoption at scale

Maximize current resources while investing and involving your entire IT organization

NEW! Unified User Interface

- **A new and improved interface**
  Which delivers a consistent and centralized experience for operators, developers, and administrators

Containerized Installation 100% Supported!

- **New deployment method**
  For teams who want to use containers without kubernetes

New Resources for Managing AAP

- **Quick starts**
  Guided Experiences for performing common platform tasks
- **New certified collections**
  Enhanced capabilities for managing AAP using Config as Code methodology



Empower Automation Engineers

Increase compliance while minimizing errors and reducing the cost of production

NEW! Integrated Developer Tooling

- Supported, integrated, enterprise-grade components to enable building, testing, and deployment of Ansible

Orchestrate Across the Enterprise

Accelerate business outcomes

Enhanced Event-Driven Ansible Capabilities

- **Event Streams**
  Streamlined connections to Ansible Rulebooks
- **Additional Ecosystem Integrations**

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Updates from 2.4 to 2.5



AAP 2.4



AAP 2.5

Create

- Private Automation Hub 4.7
- EE's can be pulled from Hub Only
- Automation Hub Repository Management
- Validated Content Integration
- Ansible Builder v3.0

→

- **Private Automation Hub 4.10**
- **Ansible Development Tools Package**
- **Ansible Plugins for Red Hat Developer Hub**
- **On-Premise Ansible Lightspeed**

Manage

- Automation controller 4.4
- Ansible Lightspeed
- Power and Z Support for Platform
- ARM Support for Platform

→

- **Automation controller 4.6**
- **Containerized Installation Full Support**
- **New Collections for Managing AAP**
- **Ansible Quick Starts**
- ***Unified User Interface***

Scale

- Event Driven Ansible

→

- **Event Driven Ansible Controller 1.1**
- **HA and Proxy Support in EDA Controller**
- **Event Streams**

* Tech Preview
** Developer Preview

Red = New AAP component or major change

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Ansible Automation Platform Lifecycle

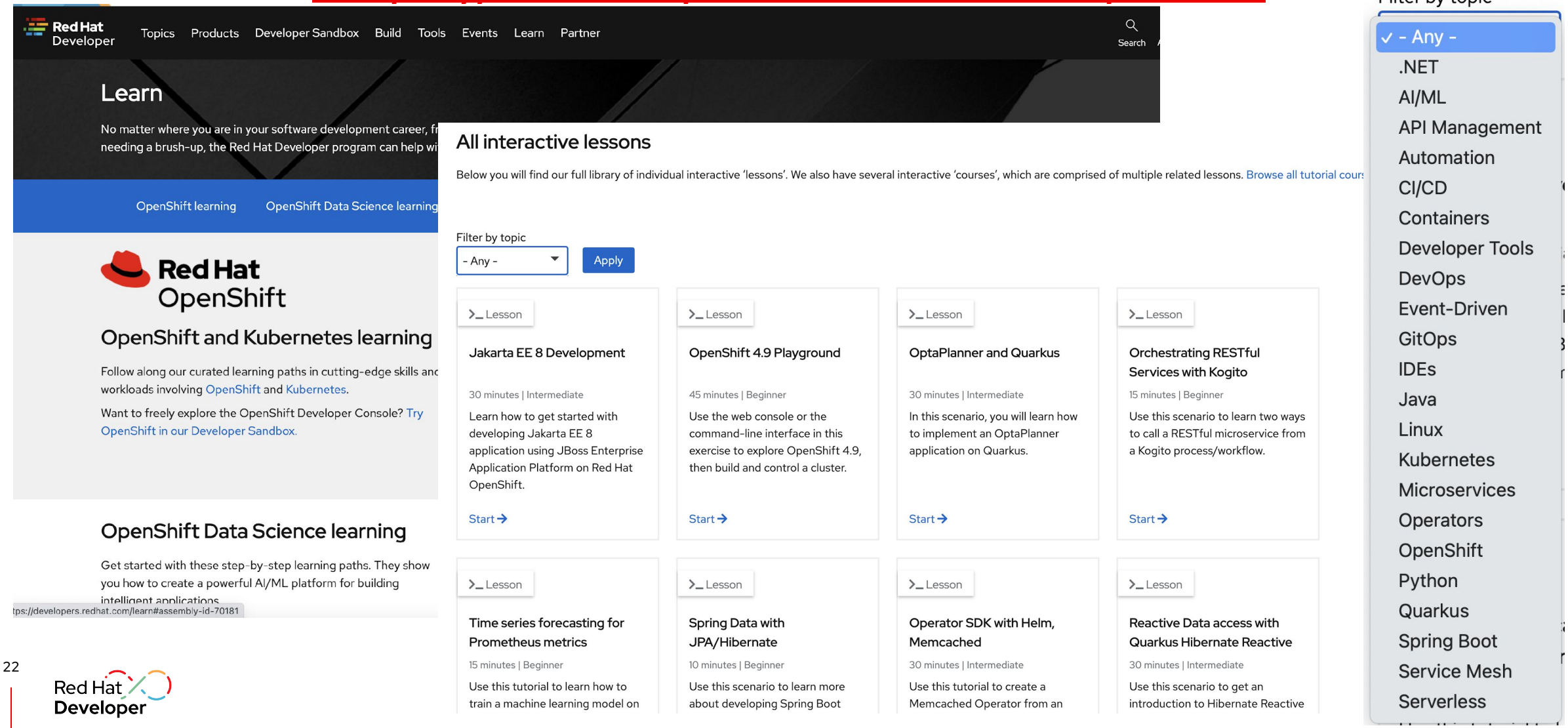
Key Dates in the AAP Lifecycle

Full Support	**General Availability**	**Full Support Ends**	**Maint Support 1 Ends**	**Maint Support 2 Ends**
AAP 2.5	September 30, 2024	September 30, 2025	September 30, 2026	March 31, 2027
Maintenance Support				
AAP 2.4	June 27, 2023	June 27, 2024	June 27, 2025	December 31, 2025
End of Life				
AAP 2.3	November 29, 2022	June 30, 2023	November 29, 2023	May 31, 2024
AAP 2.2	May 26, 2022	November 24, 2022	May 24, 2023	November 26, 2023
AAP 2.1	December 2, 2021	June 2, 2022	December 2, 2022	June 2, 2023
Extended Support		**Full Support Ended**		**ELS Ends***
AAP 1.2		May 18, 2021		December 31, 2024

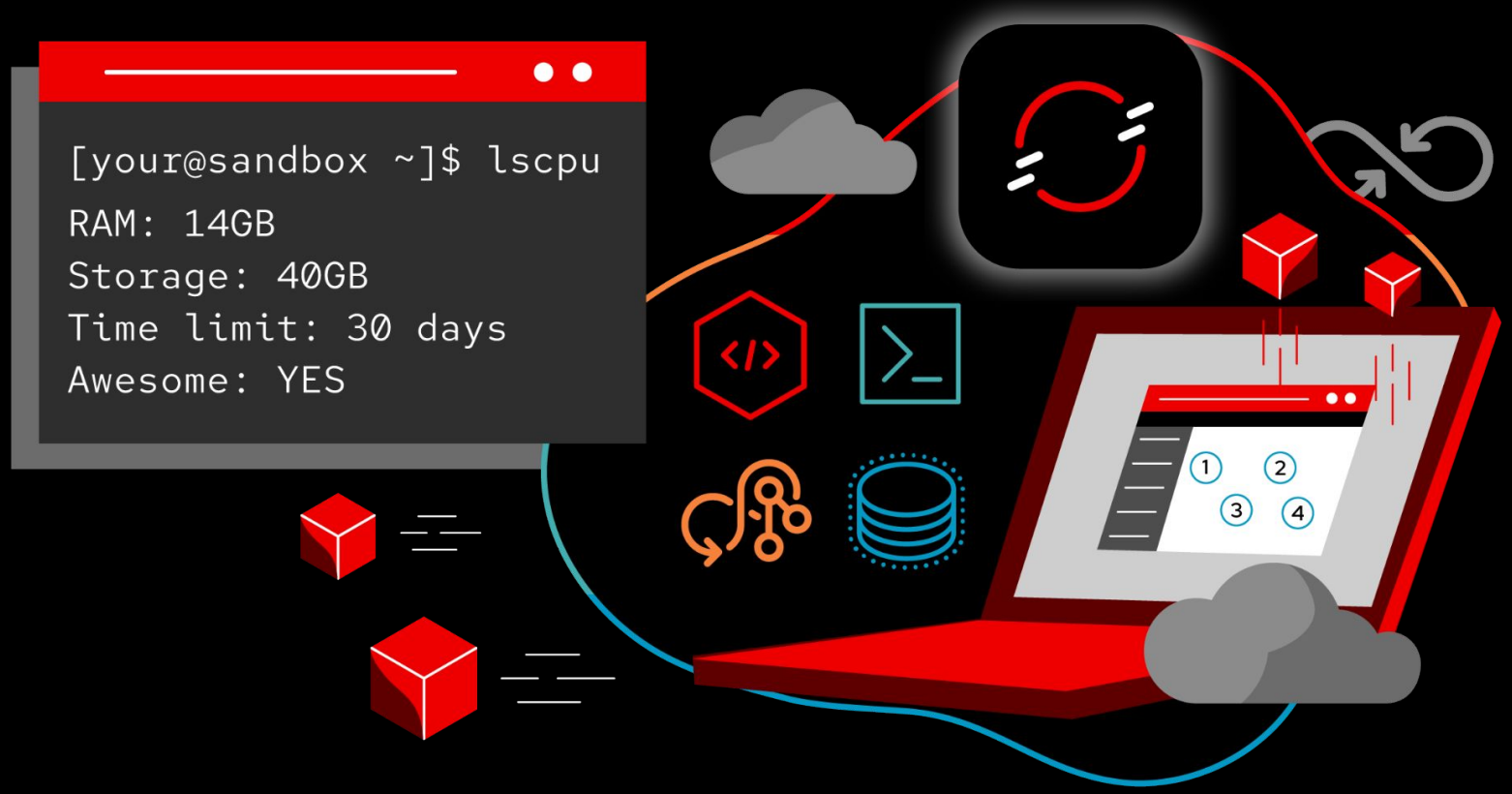
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Quarter	Speaker	Topic	Slide Deck
Q4 - 2022	Richard Hofmeister	Agenda	pdf
	Brian Dumont	Using the Insights API to apply Compliance Profiles	pdf
	Richard Hofmeister	Application Modernization With Konveyor	pdf
	Patrick Regan	What's New in RHEL 9	pdf
	Brad Krumme	Enterprise Architecture Patterns	pdf
Quarter	**Speaker**	**Topic**	**Slide Deck**
Q3 - 2022	Brian Dumont	Enterprise Automation	pdf
	Alan Patrick	Red Hat Satellite	pdf
	Jay Ryan	Managing Complex Workloads in a Kubernetes Native Environment	pdf
	David Brugger	Empowering Event Driven Architectures Across the Hybrid Cloud	pdf
	Andy Block	Introduction to GitOps and Secrets Management	pdf