



Connect

De escritorios remotos a
DevSpaces: el IDE que optimiza tus
recursos, potencia tu clúster y
acelera tu desarrollo.

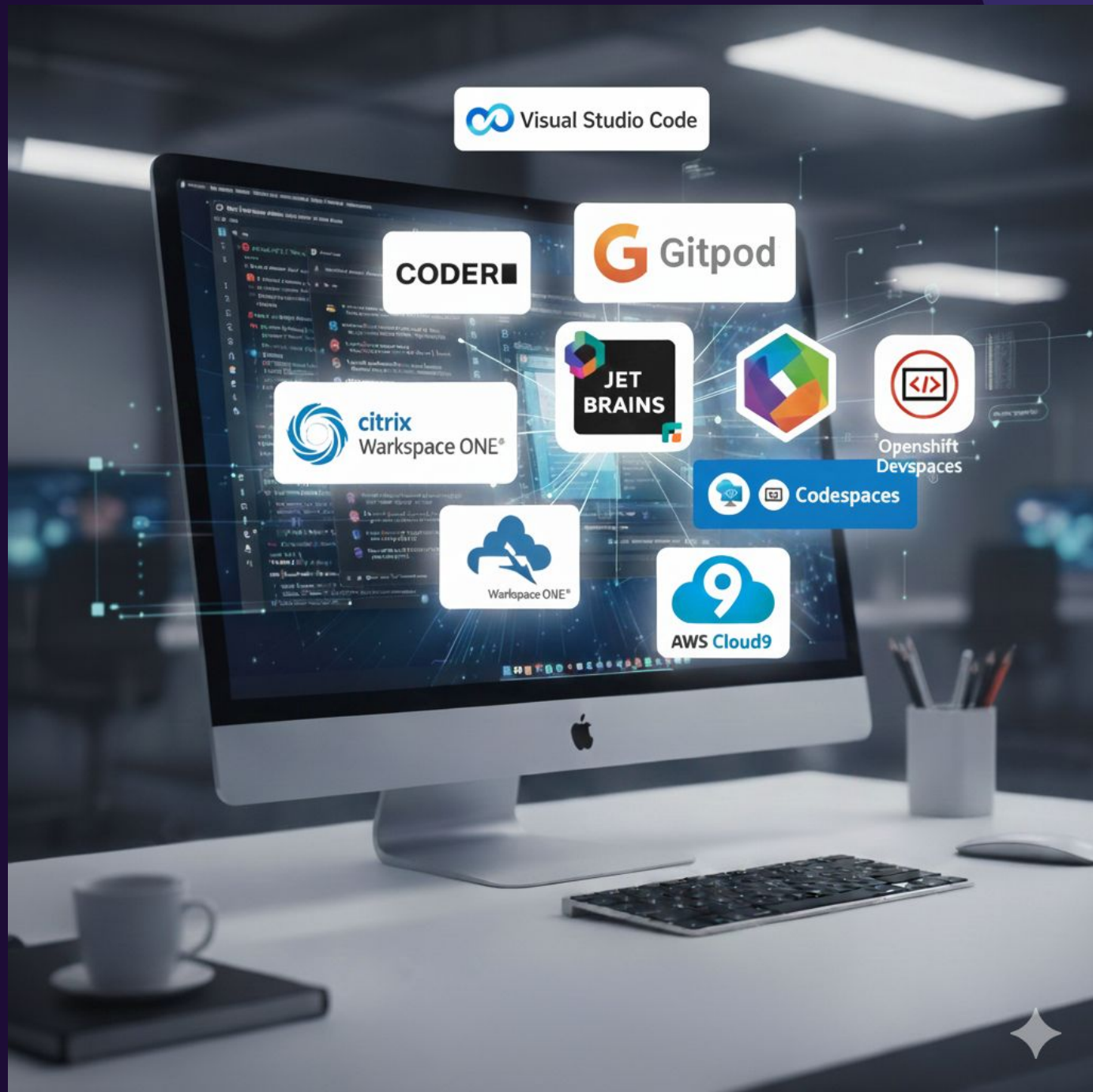




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RedHat





Visual Studio Code

CODER

Gitpod

JET
BRAINS

citrix
Workspace ONE®

OpenShift
Devspaces

Codespaces

Workspace ONE®

AWS Cloud9





Onboarding de un desarrollador



Recuperación de un proyecto para realizar una mejora



Equipos de desarrollo en diferentes franjas horarias



Aprovechamiento del clúster

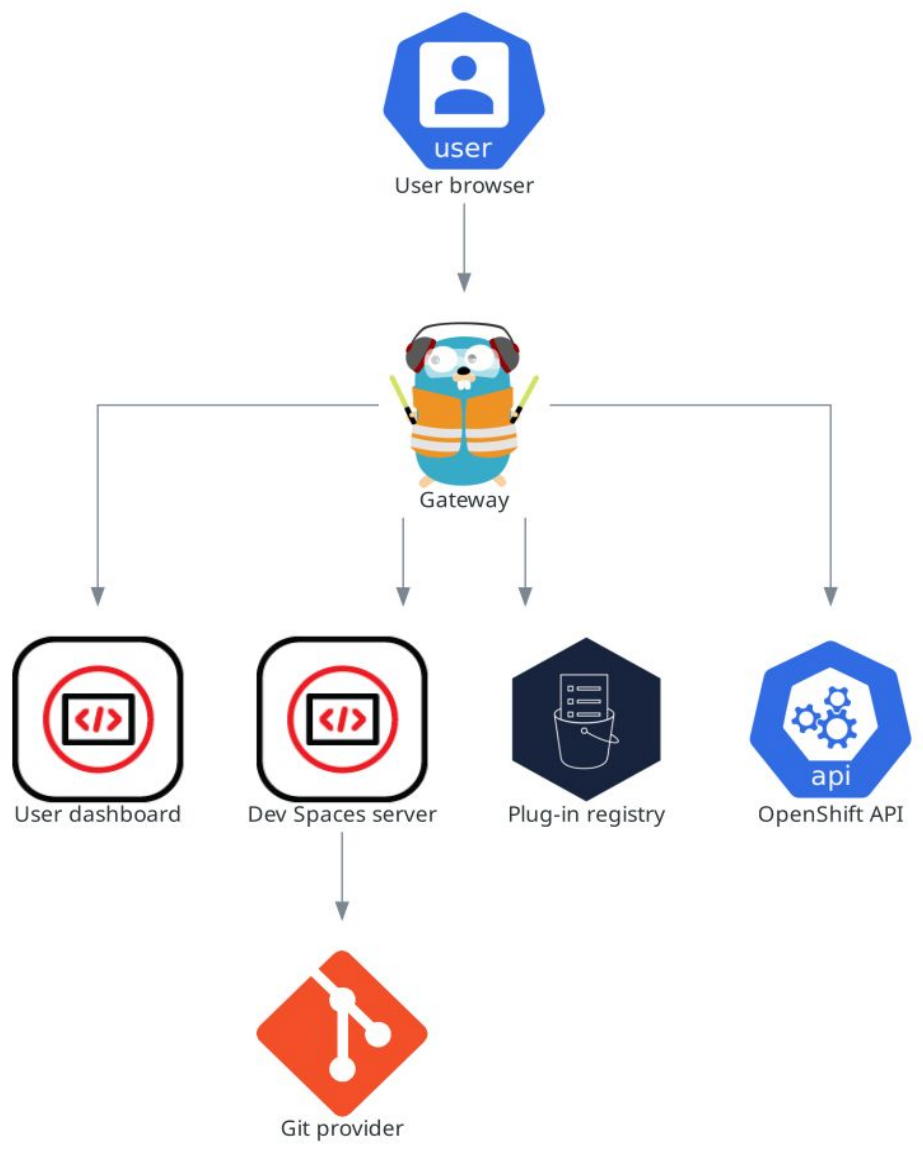


Desarrollo directo en el Clúster



Time	Example 1 - different location	Example 2 - Same location	Example 3 - Mix locations	Example 4 - eventual use	example 4 - eventual use
0:00	x	a	a	a	a
1:00	x	a	a	x	x+a
2:00	x	a	a	x	x
3:00	x	a	a	a	a
4:00	x	a	a	x	x+a
5:00	x	a	a	x	x
6:00	x	a	a	a	a
7:00	x	a	a	a	a
8:00	y	x	y	y	y+a
9:00	y	x	y	a	a
10:00	y	x	y	y	y
11:00	y	x	y	y	y+a
12:00	y	x	y	y	y
13:00	y	x	y	a	a
14:00	y	x	y	y	y
15:00	y	x	y	y	y+a
16:00	z	a	z	z	z
17:00	z	a	z	z	z+a
18:00	z	a	z	a	a
19:00	z	a	z	z	z
20:00	z	a	z	a	a
21:00	z	a	z	a	a
22:00	z	a	z	z	z+a
23:00	z	a	z	a	a





Example Sizing Devfile Quarkus

```
schemaVersion: 2.2.0
metadata:
  name: java-quarkus
  namespace: adelahoz-dev
  displayName: Quarkus Java
  description: Java application using Quarkus and OpenJDK 21
  icon:
    https://design.jboss.org/quarkus/logo/final/SVG/quarkus_icon_rgb
    _default.svg
  tags:
    - Java
    - Quarkus
  projectType: Quarkus
  language: Java
  version: 1.5.0
  website: https://quarkus.io
components:
  - name: tools
    container:
      image:
        registry.access.redhat.com/ubi8/openjdk-21:1.20-3.1721207868
      args:
        - tail
        - '-f'
        - /dev/null
      memoryLimit: 1024Mi
      cpuLimit: 1
      mountSources: true
      volumeMounts:
        - name: m2
          path: /home/user/.m2
      endpoints:
        - name: https-quarkus
          targetPort: 8080
          protocol: https
        - exposure: none
          name: debug
          targetPort: 5858
      env:
        - name: DEBUG_PORT
          value: '5858'
      - name: m2
      volume:
      size: 3Gi
      commands:
        - id: init-compile
          exec:
            component: tools
            commandLine: ./mvnw
            -Dmaven.repo.local=/home/user/.m2/repository compile
            workingDir: ${PROJECT_SOURCE}
      ...
```

Create Templates

 Empty Workspace Start an empty remote development environment and create files or clone a git repository afterwards	 Java Lombok Java Stack with Project Lombok	 Node.js Express Node.js stack with NPM 8, Node.js 16 and Express Web Application	 Node.js MongoDB Node.js stack with NPM 8, Node.js 16 and MongoDB 3.6	 Python Python Stack with Python 3.9 and pip	 Quarkus Quarkus REST API Quarkus stack with a default REST endpoint application sample	 Ansible Development environment for Ansible playbook creation, testing with Molecule, and ansible-lint checks	 .NET .NET 5.0 .NET 5.0 application	 .NET .NET 6.0 .NET 6.0 application	 .NET .NET 8.0 .NET 8.0 application
 .NET .NET Core 3.1 .NET Core 3.1 application	 Angular Angular is a development platform, built on TypeScript. As a platform, Angular includes: A component-based framework for building scalable web applications. A collection of well-integrated libraries that cover a wide variety of features, including routing, forms management, client-server communication, and more. A suite of developer tools to help you develop, build, test, and update your code	 Django Django is a high-level Python web framework that enables rapid development of secure and maintainable websites. Built by experienced developers, Django takes care of much of the hassle of web development, so you can focus on writing your app without needing to reinvent the wheel. It is free and open source, has a thriving and active community, great documentation, and many options for free and paid-for support.	 Go Go is an open source programming language that makes it easy to build simple, reliable, and efficient software.	 Laravel Laravel is an open-source PHP framework, which is robust and easy to understand. It follows a model-view-controller design pattern. Laravel reuses the existing components of different frameworks which helps in creating a web application. The web application thus designed is more structured and pragmatic.	 Maven Maven Java Java application based on Maven and OpenJDK	 Next.js Next.js gives you the best developer experience with all the features you need for production: hybrid static & server rendering, TypeScript support, smart bundling, route pre-fetching, and more. No config needed.	 node Node.js Runtime Node.js application	 Nuxt.js Nuxt is the backbone of your Vue.js project, giving structure to build your project with confidence while keeping flexibility. Its goal is to help Vue developers take advantage of top-notch technologies, fast, easy and in an organized way.	 Ollama Get up and running with large language models with Ollama, Continue, Llama3, and StarCoder2
 Open Liberty Gradle Java application based on Java 11, Gradle using the Open Liberty runtime 22.0.01	 Open Liberty Maven Java application based on Java 11 and Maven 3.8, using the Open Liberty runtime 22.0.01	 Python Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built-in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language to connect existing components together.	 Quarkus Java Java application using Quarkus and OpenJDK 21	 React React is a free and open-source front-end JavaScript library for building user interfaces based on UI components. It is maintained by Meta and a community of individual developers and companies.	 Spring Boot Spring Boot using Java	 Svelte Svelte is a radical new approach to building user interfaces. Whereas traditional frameworks like React and Vue do the bulk of their work in the browser, Svelte shifts that work into a compile step that happens when you build your app.	 Universal Developer Image Universal Developer Image provides various programming languages tools and runtimes for instant coding	 Vert.x Java Java application using Vert.x and OpenJDK 11	 Vue Vue is a JavaScript framework for building user interfaces. It builds on top of standard HTML, CSS and JavaScript, and provides a declarative and component-based programming model that helps you efficiently develop user interfaces, be it simple or complex.
 WebSphere Liberty Gradle Java application based on Java 11 and Gradle, using the WebSphere Liberty runtime 22.0.01	 WebSphere Liberty Maven Java application based on Java 11 and Maven 3.8, using the WebSphere Liberty runtime 22.0.01	 WildFly JakartaEE application using WildFly	 WildFly Bootable Jar Java application using WildFly in bootable Jar mode, OpenJDK 11 and Maven 3.6	 .NET .NET stack with .NET Core SDK 8, Runtime, C# Language Support and Debugger	 C++ C/C++ C and C++ Developer Tools stack with GCC, cmake and make	 Go Stack with Go	 PHP PHP Stack with PHP		



Example Sizing Average Application

Assumptions:

- 20 developers
- 5 GB of storage for Git, .m2, etc.
- 4 GB of RAM and 2 cores for compilation, execution, etc.
- 384 MB of RAM and 1 core for the IDE
- Possible densification by a factor of 2
- One workspace per developer

Calculation:

- Memory: $16 + 20 \times 1 \times (4096 + 384) / 2 = 43.7$ GB of RAM
- CPU: $10 + 20 \times 1 \times (2 + 1) / 2 = 35$ cores
- Storage: $20 \times 5 = 100$ GB

Configure CheCluster to Guarantee Capacity

maxNumberOfRunningWorkspacesPerUser	The maximum number of running workspaces per user. The value, -1, allows users to run an unlimited number of workspaces.
startTimeoutSeconds	StartTimeoutSeconds determines the maximum duration (in seconds) that a workspace can take to start before it is automatically failed. If not specified, the default value of 300 seconds (5 minutes) is used.
maxNumberOfWorkspacesPerUser	Total number of workspaces, both stopped and running, that a user can keep. The value, -1, allows users to keep an unlimited number of workspaces.
secondsOfInactivityBeforeIdling	Idle timeout for workspaces in seconds. This timeout is the duration after which a workspace will be idled if there is no activity. To disable workspace idling due to inactivity, set this value to -1.
pvcStrategy	Persistent volume claim strategy for the Che server. The supported strategies are: per-user (all workspaces PVCs in one volume), per-workspace (each workspace is given its own individual PVC) and ephemeral (non-persistent storage where local changes will be lost when the workspace is stopped.)

More ...

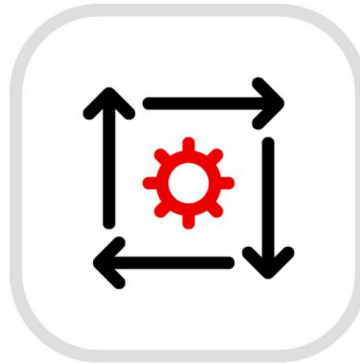


Optimize Resources

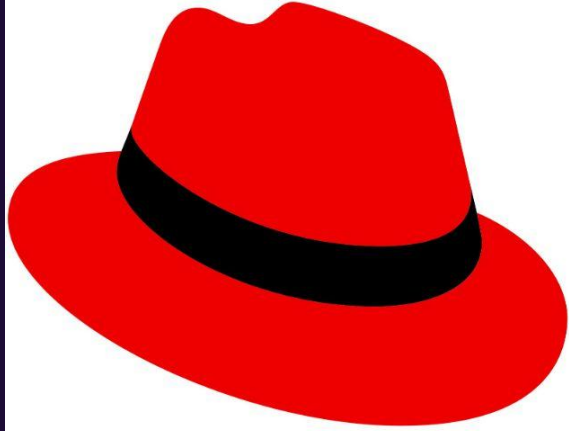


Custom Metrics Autoscaler

2.7.1 provided by Red Hat



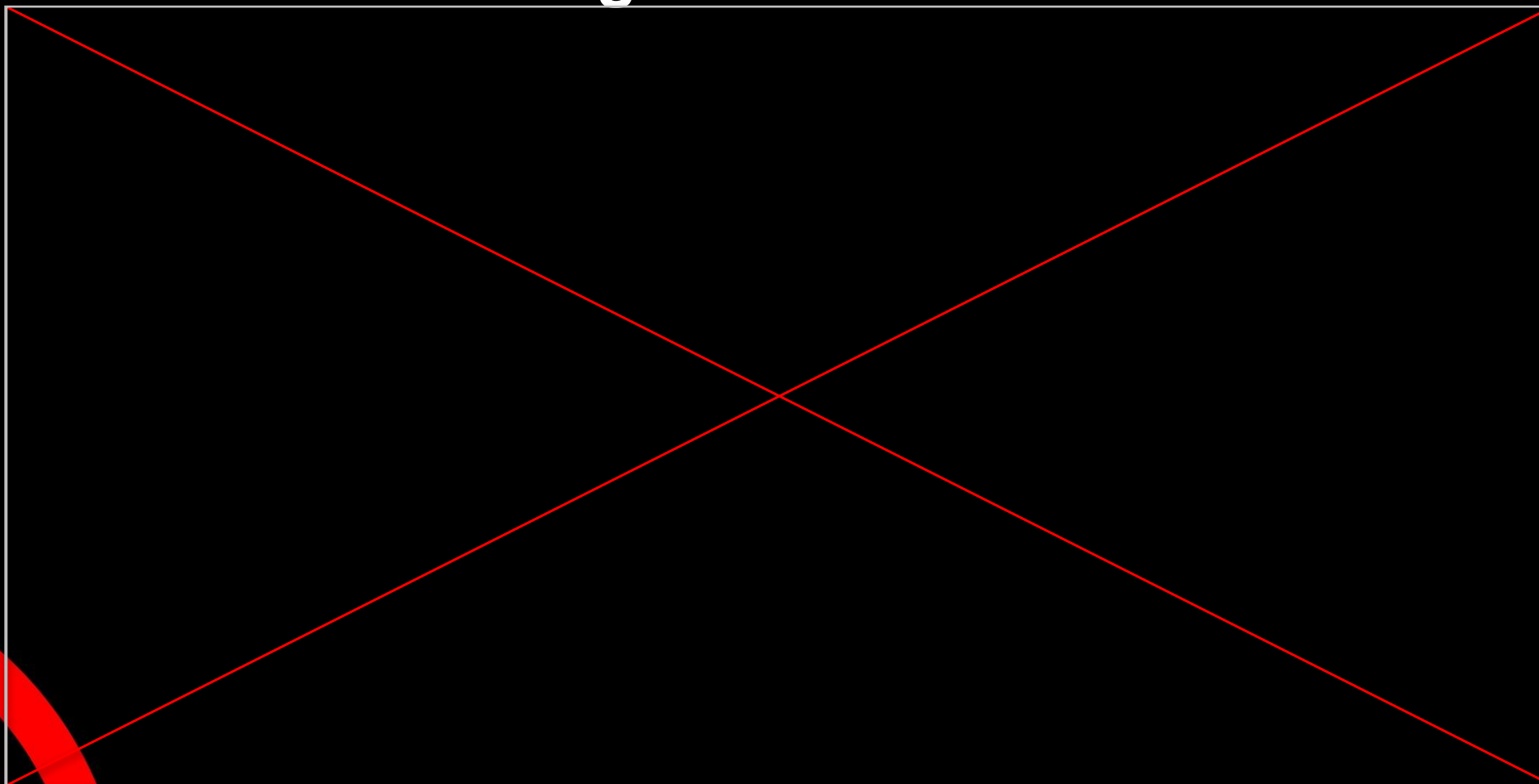
Event Driven Ansible



Red Hat Services



Monitoring with Prometheus



Red Hat
Summit

Connect

Thank you



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