

Understanding Codeready Workspaces

Red Hat CodeReady Workspaces is a developer workspace server and cloud IDE. Workspaces are defined as project code files and all of their dependencies necessary to edit, build, run, and debug them. Each workspace has its own private IDE hosted within it. The IDE is accessible through a browser. The browser downloads the IDE as a single-page web application.

Red Hat CodeReady Workspaces provides:

- Workspaces that include runtimes and IDEs
- RESTful workspace server
- A browser-based IDE
- Plugins for languages, framework, and tools
- An SDK for creating plugins and assemblies



Why CodeReady Workspaces ?

- From a newly introduced technology to a widely relied upon platform in just a few years, Kubernetes has become an integral part of many organization's cloud-native solutions - including container-based development environments.
- The challenge with building and deploying applications in any Kubernetes distribution is that it's difficult for a developer to set up a Kubernetes environment that enables fast, iterative development cycles. As a result, some development teams fall back to using containers on their laptops and only seeing how things run in Kubernetes after they've merged code back to the origin code repository and triggered a continuous integration (CI) job.



- This is problematic as Kubernetes has unique execution behaviors that might necessitate code changes or optimizations. Waiting to do these until after code is merged back to master is inefficient and can introduce problems in the master branch that affect other developers.
- Red Hat CodeReady Workspaces is the industry's first Kubernetes-native integrated development environment (IDE). It makes it easy for developers to have a fast, "locally hosted-style" development experience directly inside Kubernetes and helps development teams avoid the "it works on my machine" problem.
- Red Hat CodeReady Workspaces puts the developer's environment inside Red Hat OpenShift (the world's most comprehensive enterprise Kubernetes platform) from the start and makes iterative edit, build and debug cycles as fast as on a laptop based on customer experiences. Additionally, CodeReady Workspaces are replicable and shareable developer environments that can speed up developer onboarding to a project and increase cross-team collaboration.



Red Hat CodeReady Workspaces includes:

- Centralized developer environments running in [OpenShift Container Platform](#) or [OpenShift Dedicated](#).
- Multi-container workspaces for each developer that can be replicated with a single click using [workspace Factories](#).
- Pre-built developer workspace stacks based on Red Hat Enterprise Linux 7 and [Red Hat Enterprise Linux 8 Beta](#).
- The ability to create custom stacks for any language or runtime.
- Enterprise integration via Keycloak Single Sign-On (SSO) for Active Directory (AD) or Lightweight Directory Access Protocol (LDAP).
- The option to use the built-in browser-based IDE, or mount-and-sync between OpenShift and a desktop IDE via oc rsync (if enabled on the OpenShift cluster).
- Source code is hosted outside hard-to-secure endpoint devices like developer laptops.
- Other capabilities of Eclipse Che 6.x.



The first Kubernetes-native IDE

- Red Hat CodeReady Workspaces is the market's first IDE that runs inside a Kubernetes cluster and manages the developer's code, dependencies and artifacts inside OpenShift pods and containers. Where traditional tools may only take advantage of Kubernetes during the final phase of testing and deployment, CodeReady Workspaces brings the developer into OpenShift from the start, addressing issues that developers often face when moving applications from development platforms to production systems. Developers do not need to be Kubernetes or OpenShift experts to use the IDE. CodeReady Workspaces is designed to handle the management of Kubernetes artifacts behind the scenes so that developers can get started developing containerized applications in OpenShift with ease.



Accelerate project onboarding

- Red Hat CodeReady Workspaces introduces a powerful sharing feature called Factories. A Factory is a template containing the source code location, runtime and tooling configuration and commands needed for a project. Factories enable development teams to get up and running with a Kubernetes-native developer environment in a couple of minutes. Team members can use any device with a browser, any operating system (OS) and any IDE to access their own or shared workspaces.



DevOps workspace platform

- Red Hat CodeReady Workspaces is an ideal platform for organizations moving to a DevOps philosophy. OpenShift enables IT or development teams to manage workspaces at scale with a programmable and customizable infrastructure that lets them control system performance, security features and functionality.

Teams can:

- Integrate with their preferred version control (public and private repositories)
- Control workspace permissions and resourcing
- Better protect intellectual property by keeping source code off hard-to-secure laptops and mobile devices
- Use Lightweight Directory Access Protocol (LDAP) or Active Directory (AD) authentication for single sign-on



Availability

- Red Hat CodeReady Workspaces is available at no cost with an OpenShift subscription and can be downloaded by joining the Red Hat Developer Program.

