Red Hat CodeReady Workspaces 2.9

Release Notes and Known Issues

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Michal Maléř
mmaler@redhat.com

Robert Kratky
rkratky@redhat.com

Fabrice Flore-Thébault
ffloreth@redhat.com

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Abstract

Information about new and noteworthy features as well as known issues in Red Hat CodeReady Workspaces 2.9.

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MAKING OPEN SOURCE MORE INCLUSIVE

Red Hat is committed to replacing problematic language in our code, documentation, and web properties. We are beginning with these four terms: master, slave, blacklist, and whitelist. Because of the enormity of this endeavor, these changes will be implemented gradually over several upcoming releases. For more details, see our CTO Chris Wright's message .

CHAPTER 1. ABOUT RED HAT CODEREADY WORKSPACES

Red Hat CodeReady Workspaces is a web-based integrated development environment (IDE). CodeReady Workspaces runs in OpenShift and is well-suited for container-based development.

CodeReady Workspaces provides:

- an enterprise-level cloud developer workspace server,

- a browser-based IDE,

- ready-to-use developer stacks for popular programming languages, frameworks, and Red Hat technologies.

Red Hat CodeReady Workspaces 2.9 is based on Eclipse Che 7.30.

1.1. SUPPORTED DEPLOYMENT ENVIRONMENTS

This section describes the availability and the supported installation methods of CodeReady Workspaces 2.9 on OpenShift Container Platform 4.6, 3.11, and OpenShift Dedicated.

Table 1.1. Supported deployment environments for CodeReady Workspaces 2.9 on OpenShift Container Platform and OpenShift Dedicated

Platform	Architecture	Deployment method
OpenShift Container Platform 3.11	AMD64 and Intel 64 (x86_64)	**crwctl**
OpenShift Container Platform 4.6	AMD64 and Intel 64 (x86_64)	OperatorHub, **crwctl**
OpenShift Container Platform 4.6	IBM Z (s390x)	OperatorHub, **crwctl**
OpenShift Container Platform 4.6	IBM Power Systems (ppc64le)	OperatorHub, **crwctl**
OpenShift Container Platform 4.7	AMD64 and Intel 64 (x86_64)	OperatorHub, **crwctl**
OpenShift Container Platform 4.7	IBM Z (s390x)	OperatorHub, **crwctl**
OpenShift Container Platform 4.7	IBM Power Systems (ppc64le)	OperatorHub, **crwctl**
OpenShift Dedicated 4.7	AMD64 and Intel 64 (x86_64)	Add-On

NOTE

Support for deploying CodeReady Workspaces on OpenShift Container Platform on IBM Z (s390x) is currently only available as a Technology Preview feature. Technology Preview features are not supported with Red Hat production service level agreements (SLAs) and might not be functionally complete. Red Hat does not recommend using them in production. These features provide early access to upcoming product features, enabling customers to test functionality and provide feedback during the development process. For details about the level of support for Technology Preview features, see Technology Preview Features Support Scope.

Additional resources

- Installing CodeReady Workspaces from Operator Hub on OpenShift 4.7 .

- Installing CodeReady Workspaces on OpenShift Container Platform 3.11 .

1.2. SUPPORT POLICY

For Red Hat CodeReady Workspaces 2.9, Red Hat will provide support for deployment, configuration, and use of the product.

CodeReady Workspaces 2.9 has been tested on Chrome version 90.0.4430.72 (Official Build) (64-bit).

Additional resources

- CodeReady Workspaces life-cycle and support policy .

1.3. DIFFERENCES BETWEEN ECLIPSE CHE AND RED HAT CODEREADY WORKSPACES

The main differences between CodeReady Workspaces and Eclipse Che are:

- CodeReady Workspaces is built on RHEL8 to ensure the latest security fixes are included, compared to Alpine distributions that take a longer time to update.

- CodeReady Workspaces uses Red Hat Single Sign-On (RH-SSO) rather than the upstream project Keycloak.

- CodeReady Workspaces provides a smaller supported subset of plug-ins compared to Che. CodeReady Workspaces provides devfiles for working with other Red Hat technologies such as EAP and Fuse.

- CodeReady Workspaces is supported on OpenShift Container Platform and OpenShift Dedicated; Eclipse Che can run on other Kubernetes clusters.

Red Hat provides licensing, packaging, and support. Therefore CodeReady Workspaces is considered a more stable product than the upstream Eclipse Che project.

CHAPTER 2. NOTABLE ENHANCEMENTS

2.1. INITIAL SUPPORT OF THE NEW DEVWORKSPACE CR ENGINE PRODUCT ARCHITECTURE

An OpenShift CRD and Controller is handling workspace containers, rather than CodeReady Workspaces server. This transfer of responsibility enables a better orchestration. To manage the workspaces, OpenShift native tools and APIs are available, rather than a CodeReady Workspaces-server REST API using services of a custom CRD.

It enables:

- A delegation to the OpenShift authentication using RBAC and persistence using ETCD key-value store.

- Easy provisioning of CodeReady Workspaces workspaces using OpenShift APIs

- More advanced workspace control, such as the configuration of a workspace based on users' geographic location or automatically disabling plug-ins deteriorating workspaces performances.

Additional resources

- CRW-975

2.2. IMPROVED START-UP TIME USING THE IMAGE PULLER

The Image Puller can pre-download any CodeReady Workspaces image on all the nodes of an OpenShift cluster. The **operator-metadata** image doesn't need pre-pulling and is not supported.

Additional resources

- CRW-1594

2.3. TECH-PREVIEW SUPPORT OF DEVFILE 2.0 SPECIFICATION

The Devfile allows for the definition of development environments in a repeatable and shareable manner. The specification continues to evolve as more tools, such as **odo**, adopt Devfiles and expand their usage. We are progressively introducing support in CodeReady Workspaces for the Devfile v2.x to allow for the following:

- increased interoperability between tools

- a simpler experience defining workspaces

- new implementation possibilities with the DevWorkspace engine With Devfile v2.x, IDE plug-ins are no longer a core component and are instead included and managed by references to external files.

- In CodeReady Workspaces 2.9, Che-Theia plug-ins can not be included in the devfile version 2.0-based workspace. This capability will be added in a subsequent release which includes support for the Devfile v2.1 specification.

- Workspaces based on devfile version 1 remain fully supported.

- The support for Devfile 2.0 is disabled by default. To enable this support, set **spec.devWorkspace.enable: true** in the CheCluster Custom Resource.

- CodeReady Workspaces 2.9 requires new containers for enabling the devfile 2.0 support:

    - **devworkspace-controller-rhel8:2.8**

    - **devworkspace-rhel8:2.8**

Additional resources

- CRW-1671

2.4. UPGRADE VS CODE YAML PLUG-IN TO 0.14.0

The VS Code YAML plug-in has been updated to version 0.14.0.

Additional resources

- CRW-1698

2.5. DEPRECATE THE VS CODE ASCIIDOCTOR PLUG-IN

The VS Code Asciidoctor plug-in has been deprecated and will be removed in the future release.

Additional resources

- CRW-1701

2.6. MEMORY LIMITS ARE HANDLED AT THE PLUG-IN AND DEVFILE LEVELS

Memory limits are handled at the plug-in and devfile levels. The **globalMemory** limits have been removed from the **meta.yaml** files inside the devfile registry.

Additional resources

- CRW-1703

2.7. ADD RESOURCES LIMITS AND REQUESTS TO CHE-MACHINE-EXEC AND REMOTE-RUNTIME-INJECTOR PLUG-INS

The **che-machine-exec** and **remote-runtime-injector** plug-ins have defined resource limits.

Additional resources

- CRW-1764

2.8. UPGRADE VS CODE LANGUAGE SUPPORT FOR CAMEL K TO 0.0.24

The VS Code Language support for Camel K has been updated to version 0.0.24.

Additional resources

- CRW-1784

2.9. KUBERNETES IMAGE PULLER CAN PULL IMAGES FROM A PASSWORD PROTECTED REGISTRY

Users can pull images from private registries.

Additional resources

- CRW-1804

2.10. MULTI-ROOT MODE BY DEFAULT

Some VS Code extensions must run in Multi-root mode. CodeReady Workspaces sets the Multi-root mode for all new workspaces.

To turn on the Multi-root mode in workspaces created in an earlier version, set the **multiRoot** parameter in the devfile:

```
attributes:
  multiRoot: 'on'
```

Additional resources

- CRW-1807

2.11. CODEREADY WORKSPACES IS SWITCHING TO THE `PER-USER` NAMESPACE STRATEGY

All namespace strategies except the **per-user** strategy are deprecated and will be unsupported with a future release.

This change:

- Improves security.

- Gives administrators better control over resources that are assigned to users by using namespace quotas.

- Eliminates of the need to duplicate sensitive information using Kubernetes secrets, as with the **per-workspace strategy**.

Additional resources

- CRW-1808

2.12. ACCESSING GITLAB PRIVATE REPOSITORIES FROM A FACTORY URL

To access and authenticate a private GitLab repository using a factory URL pointer:

1. Store a personal access token as a secret in the CodeReady Workspaces user namespace.

2. Use a factory URL pointer to access and authenticate the private GitLab repository.

Additional resources

- CRW-1811

2.13. SUPPORT TELEMETRY FOR RED HAT VS CODE EXTENSIONS IN CODEREADY WORKSPACES

CodeReady Workspaces optionally collects Red Hat telemetry data from extensions that support it.

Additional resources

- CRW-1818

2.14. PROMPT USERS TO PROVIDE AN SSH KEY PAIR WHEN USING GIT WITH SSH IN A DEVFILE

Upon starting a workspace whose devfile uses Git with SSH to clone a sample project, CodeReady Workspaces prompts you to provide an SSH key.

Additional resources

- CRW-1820

2.15. GITLAB PUBLIC REPOSITORY SUPPORT IN A FACTORY URL

CodeReady Workspaces supports workspace creation using a GitLab-based factory URL.

Additional resources

- CRW-1822

2.16. SUPPORT FOR MERMAID DIAGRAMS AND FLOWCHARTS

The Bierner Markdown plug-in enables users to render Mermaid diagrams and flowchart graphs directly using Che-Theia Markdown preview.

Additional resources

- CRW-1845

2.17. THE DASHBOARD IS RUNNING IN A DEDICATED CONTAINER

The dashboard is running in a dedicated container rather than in the CodeReady Workspaces server container.

Additional resources

- CRW-1865

2.18. THE VS CODE EXTENSIONS UPDATE

- cobol-language-support to v0.19.0

- hlasm-language-support to v0.13.0

- COBOL Control Flow to v0.4.0.

Additional resources

- CRW-1964

CHAPTER 3. BUG FIXES

3.1. FIXES FOR SONARLINT PLUG-IN

The Sonarlint plug-in is fully functional and works as expected.

Additional resources

- CRW-1604

3.2. NODE.JS WORKSPACES STARTING PROPERLY

CodeReady Workspaces 2.8 Node.js workspaces no longer fails to start after migration to the latest version.

Additional resources

- CRW-1773

3.3. FIXES FOR JAVA PLUG-INS

All Java plug-ins (Java11, Java8, and Java) initialize as expected.

Additional resources

- CRW-1793

3.4. SSH KEY PAIRS SUPPORT

CodeReady Workspaces supports the ability to upload SSH keys that are password protected. When a workspace starts, the existing encrypted SSH keys are registered by the SSH agent.

Additional resources

- CRW-1812

3.5. FIXING ISSUE WITH JWT AUTHENTICATION SECRET KEY IN THE PHP LARAVEL WITH MYSQL GETTING STARTED SAMPLE

The command *Generate a new JWT authentication secret key* of the **PHP Laravel with MySQL** getting started sample has been fixed. CodeReady Workspaces generates the JWT authentication secret key properly.

Additional resources

- CRW-1814

3.6. CODEREADY WORKSPACES UPDATES PROPERLY WHEN USING EXTERNAL KEYCLOAK AUTHENTICATION

CodeReady Workspaces no longer fails to update when using external keycloak authentication.

Additional resources

- CRW-1816

CHAPTER 4. KNOWN ISSUES

4.1. DEBUGGING CANNOT BE ACTIVATED IN GO WORKSPACES ON IBM Z AND IBM POWER SYSTEMS

Delve, a debugger for the Go programming language, is not available for IBM Z and IBM Power Systems architecture. Therefore, debugging features cannot be activated in the Go workspace in CodeReady Workspaces 2.9. An attempt to activate this feature results in the **Failed to continue** error message.

Workaround

- Delve debugger is not available for IBM Z and IBM Power Systems architectures, therefore cannot be used.

Additional resources

- [CRW-1349](#)

4.2. LANGUAGE SERVER FEATURES ARE NOT PREINSTALLED IN THE GO WORKSPACE

In a workspace created using the default Go devfile, some features fail because additional tools are missing. For instance, Auto-complete is unavailable.

Procedure

1. Run the CodeReady Workspaces instance in a non-restricted environment.

2. Install the required module using the **Install** button of the pop-up window in the IDE.

Additional resources

- [CRW-1521](#)

4.3. MISLEADING ERROR MESSAGE FOR A WORKSPACE FAILURE CAUSED BY THE MKDIR POD TIMEOUT

The failure caused by a lack of OpenShift Container Platform cluster resources is accompanied by a misleading error message:

> Your session has expired. Please, log in to CodeReady Workspaces again to get access to your OpenShift account.

This message will be fixed in the upcoming release.

Workaround

- Provide more resources to the OpenShift Container Platform cluster.

Additional resources

- CRW-1767

4.4. STARTING THE SAME TASK MULTIPLE TIMES DOESN'T WORK PROPERLY

If you start a task from **My workspace** multiple times, the task doesn't end properly. The IDE displays a spinning-wheel icon as a replacement for the "✓" marker. As a consequence, the subsequent task execution can't be started.

Workaround

- Execute a task in the **My workspace** environment once.

Additional resources

- CRW-1782

4.5. GET-STARTED DEVFILES HAVE INCORRECT SOURCE LOCATION

Get-Started devfiles have incorrect source location after the switch from multi-host to single-host exposure strategy.

Additional resources

- CRW-1851

4.6. THE LOCATION OF THE GET STARTED DEVFILES IS NOT CALCULATED PROPERLY WHEN AN EXTERNAL DEVFILE REGISTRY IS SPECIFIED

When building the devfile registry, the build process updates the devfiles to set the source location of the artifact archives. When specifying multiple registries, the build process doesn't update the archive source location in the devfiles properly.

> **Example 4.1. Deployment using multiple registries**
>
> The Developer Sandbox enables the community registry and the CodeReady Workspaces registry.

Workaround

- Build the registries specifying one unique registry.

Additional resources

- CRW-1853

4.7. CRWCTL BINARIES ARE UNSUPPORTED ON IBM Z AND IBM POWER SYSTEMS

The **crwctl** binaries don't run on IBM Z and IBM Power Systems. These platforms are available uniquely as targets to deploy CodeReady Workspaces to.

Workaround

- Run **crwctl** from a supported platform.

Additional resources

- CRW-1864

4.8. UNSUPPORTED DEVFILES ON IBM Z AND IBM POWER SYSTEMS

These devfiles are not supported on IBM Z and IBM Power Systems:

- EAP for OpenJDK 8

- .Net

- Fuse

Workaround

- Don't use unsupported languages on IBM Z and IBM Power Systems.

Additional resources

- CRW-1896

4.9. TECHNOLOGY PREVIEW SUPPORT FOR IBM POWER SYSTEMS AND IBM Z

Support for deploying CodeReady Workspaces on OpenShift Container Platform on IBM Power Systems and IBM Z is available as a Technology Preview feature. Technology Preview features are not supported with Red Hat production service level agreements (SLAs) and might not be functionally complete. Red Hat does not suggest using them in production. These features provide early access to upcoming product features, enabling customers to test functionality and provide feedback during the development process.

Additional resources

- CRW-1897

4.10. FAILED TO ACTIVATE VS CODE TOOLING FOR APACHE CAMEL K EXTENSION

The activation of the **VS Code Tooling for Apache Camel K by Red Hat** plug-in fails with the message:

> Activating extension `Tooling for Apache Camel K by Red Hat` failed: Dependent extension `redhat.vscode-commons` is not installed.

Additional resources

- CRW-1951

CHAPTER 5. FREQUENTLY ASKED QUESTIONS

Is it possible to deploy applications to an OpenShift cluster from CodeReady Workspaces?

Yes. The user must log in to the OpenShift cluster from their running workspace using **oc login**.

For best performance, what is the recommended storage to use for Persistent Volumes used with CodeReady Workspaces?

Use block storage.

Is it possible to deploy more than one CodeReady Workspaces instance on the same cluster?

It is not recommended. This feature is subject to removal in a future release.

Is it possible to install CodeReady Workspaces offline (that is, disconnected from the internet)?

Yes. See Installing CodeReady Workspaces in restricted environments .

Is it possible to use non-default certificates with CodeReady Workspaces?

Yes, you can use self-signed or public certificates. See Installing CodeReady Workspaces on OpenShift Container Platform 3.11.

Is it possible to run multiple workspaces simultaneously?

Yes. See Configuring the number of workspaces a user can run .

What specific changes have been implemented for IBM Power Systems?

The memory limit for some plug-ins has been increased, to give Pods sufficient RAM to run.

Table 5.1. Example memory limits differences between IBM Power System and other architectures

Plug-in	IBM Power System	Other architectures
Che-Theia editor	2G	512M
OpenShift connector	2.5G	1.5G