Red Hat CodeReady Workspaces 2.7

Release Notes and Known Issues

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Abstract

Information about new and noteworthy features as well as known issues in Red Hat CodeReady Workspaces 2.7.

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CHAPTER 1. RELEASE NOTES

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.

This section documents the most important features and bug fixes in Red Hat CodeReady Workspaces. For the list of CodeReady Workspaces 2.7 release issues, see the Chapter 3, *Known issues* section.

- To deploy applications to an OpenShift cluster from CodeReady Workspaces, users must log in to the OpenShift cluster from their running workspace using **oc login**.

- Having multiple CodeReady Workspaces deployments on the same cluster is not recommended, and the ability to do so may be removed in a future release.

- For best performance, use block storage for Persistent Volumes used with CodeReady Workspaces.

- The name of the default CodeReady Workspaces namespace is openshift-workspaces. A user who wishes to use the previous name for the default namespace, **workspaces**, needs to note that documentation was updated to reflect the current state.

- For IBM Power Systems (ppc64le), the memory limit for some plug-ins has been increased by up to 1.5G to allow pods sufficient RAM to run. For example, on IBM Power Systems (ppc64le), the Che-Theia editor pod requires 2G; the OpenShift connector pod requires 2.5G. For AMD64 and Intel 64 (x86_64) and IBM Z (s390x), memory requirements remain lower at 512M and 1500M respectively.

CodeReady Workspaces 2.7.1 with a metrics collection bug fix has been released

In CodeReady Workspaces 2.7, CodeReady Workspaces Operator labels were updated to align object labels with the default object labels used by Kubernetes. One of Operator labels was renamed from **component** to **app.kubernetes.io/component**.

However, this information was not updated in CodeReady Workspaces 2.7 service monitor. Due to this, the CodeReady Workspaces 2.7 service monitor could not retrieve the metrics, as they were not exposed from OpenShift Container Platform instances to the telemeter. The bug has been fixed and the service monitor is now fully operational again.

See RHDEVDOCS-2846.

Upgrade information

- Upgrade automatically to CodeReady Workspaces 2.7.1 using OLM subscription for all supported OpenShift 4 instances.

- For instances on OpenShift 3.11, the upgrade will cause no effect because the telemeter is not supported on this platform.
  For additional information about upgrading, follow the Upgrading CodeReady Workspaces chapter of the Installation Guide.

1.1. ABOUT RED HAT CODEREADY WORKSPACES

Red Hat CodeReady Workspaces 2.7 provides an enterprise-level cloud developer workspace server and browser-based IDE. CodeReady Workspaces includes ready-to-use developer stacks for some of the most popular programming languages, frameworks, and Red Hat technologies.

This minor release of Red Hat CodeReady Workspaces is based on Eclipse Che 7.26 and offers a number of enhancements and new features, including:

- **Improvements to workspace start and overall performance**

- **Bug fixes, such as:**

  - Signing in to GitHub from a CodeReady Workspaces workspace using the GitHub plug-in fails

  - Upgrade to CodeReady Workspaces version 2.7 using **crwctl** fails on OpenShift Container Platform 3.11

  - Plug-in list is empty behind the proxy

  - Missing options in source control: git

  - Debugging of the current file failed to start in the **CakePhp** devfile

- **Plugin and Devfile Registry Updates**

  - **Language updates**

    - VS Code Camel support updated to 0.0.30: See: CRW-1462

  - **Plug-in updates**

    - VS Code Camel K plug-in updated to 0.0.21 See CRW-1612

CodeReady Workspaces 2.7 is available in the Red Hat Container Catalog . Install it on OpenShift Container Platform, starting at version 3.11, by following the instructions in the Installing CodeReady Workspaces on OpenShift Container Platform 3.11 chapter of the Installation Guide.

CodeReady Workspaces 2.7 is available from the OperatorHub in OpenShift 4.6 and beyond. CodeReady Workspaces 2.7 is based on a new Operator that uses the Operator Lifecycle Manager. This makes the CodeReady Workspaces installation flow simpler and doable without leaving the OpenShift Console.

To install CodeReady Workspaces for OpenShift 4.6 or later, get CodeReady Workspaces from the OperatorHub and follow the Installing CodeReady Workspaces on OpenShift 4 from OperatorHub chapter of the Installation Guide.

1.2. NOTABLE ENHANCEMENTS

1.2.1. Support for OpenShift Container Platform 4.7

In addition to OpenShift 4.6 and 3.11, CodeReady Workspaces 2.7 now supports OpenShift 4.7 on the AMD64 and Intel 64 (x86_64), IBM Z (s390x), and IBM Power Systems (ppc64le) architectures.

1.2.2. Plug-in for a workspace resource monitoring

To allow users to better understand their workspace's performance, a new plug-in that uses an API call to retrieve information about underlying resources, such as CPU and memory usage and available disk space, is added for every new workspace.

1.2.3. JBoss EAP Extension Pack 2.0 Bootable JAR support

A devfile for EAP XP 2 was added in the previous release of CodeReady Workspaces. This devfile is now available for IBM Power Systems and IBM Z architectures.

1.2.4. Added ability to configure workspace Pod tolerations

This feature adds support for setting Pod tolerations for workspaces, allowing users to specify which nodes workspaces run on. For more details, see the Understanding taints and tolerations chapter in the OpenShift documentation.

1.3. OTHER ENHANCEMENTS

1.3.1. Automatic plug-in registry validation

A newly added plug-in validation tool checks the correctness of URL values set in the **chePlugins.repositories** field of the **settings.json** file. After adding a new plug-in registry, the list of plug-ins in the **Plug-ins** view is refreshed, and if the new plug-in registry is not valid, a user is notified by a warning message. This check is also functional for plug-ins added using the Command palette command **Add plugin registry**.

- CRW-1449

1.3.2. CodeReady Workspaces plug-in registry now includes provider icons

The plugin view now includes the third-party provider icons to better differentiate between languages and providers when browsing available plug-ins.

- CRW-1385

1.3.3. Faster failure and improved error description in the case of ReplicaSetCreateError

Creation of workspaces will now fail fast in the case of an underlying **ReplicaSetCreateError**, and provide an appropriate message back to the user. Previously in this scenario, a workspace start would eventually timeout with a generic error.

- The error description related to this case were reworded.

- Issue-18914

CHAPTER 2. INSTALLING AND DEPLOYING CODEREADY WORKSPACES

For OpenShift 3.11, see the Installing CodeReady Workspaces on OpenShift Container Platform 3.11 chapter of the Administrator Guide.

For OpenShift 4.7, see the Installing CodeReady Workspaces from Operator Hub chapter of the Installation Guide.

2.1. SUPPORTED DEPLOYMENT ENVIRONMENTS

This section describes the availability and the supported installation methods of CodeReady Workspaces 2.7 on OpenShift Container Platform 4.6, 3.11, and OpenShift Dedicated.

Table 2.1. Supported deployment environments for CodeReady Workspaces 2.7 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 4.6	AMD64 and Intel 64 (x86_64)	Add-On

NOTE

Support for deploying CodeReady Workspaces on OpenShift Container Platform on IBM Power Systems (ppc64le) and 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 .

2.2. SUPPORT POLICY

For Red Hat CodeReady Workspaces 2.7, Red Hat will provide support for deployment, configuration, and use of the product.

CodeReady Workspaces 2.7 has been tested on Chrome version 88.0.4324.182 (Official Build) (64-bit).

For more information, see CodeReady Workspaces life-cycle and support policy .

2.3. DIFFERENCE 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, vs. Alpine distributions that take a longer time to update.

- CodeReady Workspaces uses Red Hat Single Sign-On (RH-SSO) instead of 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; Che can also run on other Kubernetes clusters.

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

CHAPTER 3. KNOWN ISSUES

This section lists known issues with Red Hat CodeReady Workspaces 2.7. Where available, workaround suggestions are provided.

3.1. RESOURCE MONITOR PLUG-IN CANNOT ACCESS THE WORKSPACE POD

Resource Monitor plug-in placed in **Status Bar** fails to reach the workspace Pod and displays an error message notification for all Devfile workspaces.

CRW-1649

3.2. SOME API CALLS STOP WORKING WHEN A USER IS LOGGED OFF FROM CODEREADY WORKSPACES FOR MORE THAN A DAY

If a user did not log in to a CodeReady Workspaces instance for a period longer than the expiration period of an OpenShift token, which is one day, some API calls stop working, and a user can not reuse them.

As a temporary workaround, a user can log in to CodeReady Workspaces using a web browser and enable API calls functionality for another day.

CRW-1650

3.3. TEMPORARY FACTORY AUTHENTICATION FLOW FOR BITBUCKET WITH REQUIRED MANUAL CONFIGURATION

CodeReady Workspaces provides the ability to use factories with Bitbucket repositories. The current factory authentication flow requires manual configuration for the user's project credentials that the user or administrator must do.

For more information, see Configuring Bitbucket servers and Deploying CodeReady Workspaces with support for Git repositories with self-signed certificates.

- Bitbucket support lacks the following features:

    - Direct login redirection

    - Request for personal access token creation using Bitbucket REST API

    - Storing of authentication tokens in user's namespace for further usage

- CRW-1490

3.4. A WORKSPACE IDE IS NOT LOADING WHEN THE WORKSPACE PVC IS USED TO ITS MAXIMUM LIMIT

An inability to load the **keycloak.js** JavaScript file when the Persistent Volume Claims (PVCs) of a workspace operate on their maximum limit. As a consequence, the IDE cannot start properly with the workspace.

This issue occurs in CodeReady Workspaces workspaces with a disabled OpenShift OAuth service combined with the Common PVC strategy.

- [CRW-1541](#)

3.5. BREAKPOINTS OF THE DEBUG SESSION DO NOT WORK CORRECTLY IN A QUARKUS WORKSPACE

A breakpoint is currently triggered only if it is set during the current debug session.

- [CRW-1543](#)

3.6. DEBUG CONFIGURATION IS NOT DISPLAYED IN THE DEBUG VIEW

A problem related to file watchers infrequently occurs, causing a disability to start a debug session because of the missing debug configuration in the Debug view.

To work around this issue, open the **/projects/.theia/launch.json** file and use the configuration file, which will now be present in the Debug view.

- [CRW-1526](#)

- [Issue 5738](#)

3.7. MISSING PREINSTALLED LANGUAGE SERVER TOOLS FOR GO WORKSPACES

The absence of additional tools causes a feature, such as Auto-complete, to fail in a workspace created using the default GO devfile.

To work around this issue in a non-restricted environment installation, install the required module using the **Install** button of the pop-up window in the IDE.

- [CRW-1521](#)

3.8. RARE WORKSPACE STARTUP FAILURES

Infrequently, CodeReady Workspaces workspaces fail at the start when multiple workspaces are started in a cluster simultaneously. The issue affects less than 1% of all workspaces started.

- [CRW-1354](#)

- [CRW-1359](#)

3.9. THE TOPOLOGY VIEW DOES NOT RESPECT CODEREADY WORKSPACES ICON ON OPENSHIFT CONTAINER PLATFORM 4.6

After creating an application in the Developer console of OpenShift Container Platform 4.6, the **Edit source** icon in the **Topology view** displays as Eclipse Che logo.

- [CRW-1256](#)

3.10. THE INSTALL DEPENDENCIES COMMAND FAILS IN THE PHP-DI WORKSPACE ON OPENSHIFT CONTAINER PLATFORM 4.6

The **Install dependencies (with composer)** command, predefined the **php-di/console.php** file, fails in a workspace created using the PHP-DI default yaml.

- CRW-1335

3.11. INABILITY TO REQUEST A JSON RESPONSE FROM OPENSHIFT CLIENT

Attempts to obtain a JSON response request from OpenShift client fails and are accompanied by a warning message in the Red Hat Single Sign-On Pod.

> WARN [org.jgroups.protocols.kubernetes.KUBE_PING] (thread-138,ejb,ycloak-598b6c57b4-khhfb) failed getting JSON response from Kubernetes Client[masterUrl=https://172.30.0.1:443/api/v1 , headers={Authorization=#MASKED:883#}, connectTimeout=5000, readTimeout=30000, operationAttempts=3, operationSleep=1000, streamProvider=org.jgroups.protocols.kubernetes.stream.TokenStreamProvider@792525a5] for cluster [ejb], namespace [default], labels [null]; encountered [java.lang.Exception: 3 attempt(s) with a 1000ms sleep to execute [OpenStream] failed. Last failure was [java.io.IOException: Server returned HTTP response code: 403 for URL: https://172.30.0.1:443/api/v1/namespaces/default/pods]]

- CRW-1248

3.12. INABILITY TO EDIT A RED HAT SINGLE SIGN-ON USER ACCOUNADDINGT

After logging in to Red Hat Single Sign-On, a user is not able to edit an account profile using the **Manage account** tab.

- CRW-1247

3.13. INABILITY TO INSTALL CODEREADY WORKSPACES ON OPENSHIFT CONTAINER PLATFORM 3.11 WITHOUT CLUSTER-ADMIN ROLE

The customer in an organization with a strict security policy cannot install CodeReady Workspaces v2.1.1 on OCP 3.11 cluster with the **crwctl** utility, which requires a user with cluster-admin privileges.

- CRW-843

3.14. PROXY SETTINGS BLOCKS ACCESS TO DEPENDENCIES OF BUILDING TOOLS IN RESTRICTED ENVIRONMENTS

For instances of CodeReady Workspaces deployed in restricted environments, their proxy blocks to reach downloadable dependencies for building tools such as Maven, Gradle, and others.

To work around this issue, configure the proxy settings to allow the specific builder to reach needed dependencies.

- [CRW-781](#)

3.15. PARTIALLY-DEPLOYED CRW OPERATOR CRASHES IF THE CHECLUSTER CUSTOM RESOURCE IS DELETED

A partially-deployed codeready-operator, installed from the OperatorHub, crashes after deleting a CheCluster CR.

> (runtime error: invalid memory address or nil pointer dereference)

- [CRW-763](#)

3.16. WRONG DEFAULT VALUE FOR A QUARKUS PROJECT DEFAULT FOLDER

Instead of suggesting /**projects**/ as the default target folder of the Quarkus sample project, the **Create Quarkus project** button of the Quarkus wizard suggests the root folder **(/)** instead, which is not visible from the IDE.

To work around this issue, reject the suggested destination and use /**projects**.

- [Issue 18006](#)

3.17. CODEREADY WORKSPACES 2.6 RED HAT FUSE WORKSPACES FAIL TO START AFTER MIGRATION TO 2.7

CodeReady Workspaces 2.6 Red Hat Fuse workspaces deployed on OpenShift with enabled OpenShift OAuth support fail to start after updating to 2.7.

- [CRW-1322](#)

3.18. MANUALLY ADDED REGISTRIES USING THEIA PLUGIN VIEW ARE NOT REFLECTED IN THE VIEW AUTOMATICALLY

To work around this issue, refresh the page by pressing **F5** or **Comd**+**r** if using macOS.

- [Issue 17263](#)

3.19. SOME RUN AND BUILD COMMANDS OF THE THEGETTING STARTED EXAMPLES MAY FAIL IN THE AIRGAP INSTALLATIONS

Some of the sample projects included in the **Getting started** section are not designed for offline or airgapped use, so some commands may not work. To resolve this, user may have to talk to a organization's administrator to get access to internal mirrors, such as NMP, Maven, and PIP.

The base functions of the **Getting started** ZIP-archived samples embedded in the offline devfile registry do not work.

Commands that require internet access to run: **Run**, **Simple build**, **Outline**

- [CRW-1059](#)

3.20. DELETING A CHECLUSTER CUSTOM RESOURCE CAUSES CODEREADY WORKSPACES OPERATOR ERRORS

Uninstalling the CodeReady Workspaces manually by deleting the **checluster** custom resource in the OperatorHub causes errors in the CodeReady Workspaces Operator. As a consequence, attempting to re-install CodeReady Workspaces in OperatorHub fails.

- CRW-763

3.21. CODEREADY WORKSPACES DEPLOYED WITHOUT TLS SUPPORT CAUSES SOME FEATURES TO NOT WORK PROPERLY

In CodeReady Workspaces 2.1 and later, secure HTTPS is required to use the most recent Theia IDE, and therefore TLS mode is enabled by default. Disabling the TLS support will cause user experience to suffer and some UI will not work as expected or at all.

For example, the welcome page may be blank or broken, images may be missing, and other functionality may not work properly.

- Issue 17012

CHAPTER 4. KNOWN ISSUES FOR CODEREADY WORKSPACES ON IBM Z AND IBM POWER SYSTEMS

4.1. IBM Z [TECHNOLOGY PREVIEW]

Support for deploying CodeReady Workspaces on OpenShift Container Platform on IBM Z 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.

4.1.1. Installations in restricted environments are not supported on IBM Z

Advanced features like, for example, restricted environment installation, while possible, are unsupported.

4.1.2. Unsupported devfiles on IBM Z

- EAP for OpenJDK 8

- .Net

- Fuse

4.1.3. Debugging cannot be activated in Go workspaces

Delve is a debugger for the Go programming language which is not available for IBM Z architecture, therefore debugging features cannot be activated in Go workspace in CodeReady Workspaces 2.7. An attempt to activate this feature results in the **Failed to continue** error message.

- CRW-1349

4.2. IBM POWER SYSTEMS [TECHNOLOGY PREVIEW]

Support for deploying CodeReady Workspaces on OpenShift Container Platform on IBM Power Systems 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 .

4.2.1. Unsupported devfiles on IBM Power Systems

- EAP for OpenJDK 8

- .Net

- Fuse

4.2.2. Debugging cannot be activated in Go workspaces

Delve is a debugger for the Go programming language which is not available for IBM Power Systems architecture, therefore debugging features cannot be activated in Go workspace in CodeReady Workspaces 2.7. An attempt to activate this feature results in the **Failed to continue** error message.

- CRW-1349

4.2.3. Increase in RAM requirements to allow pods to run

For IBM Power Systems (ppc64le), the memory limit for some plug-ins has been increased by up to 1.5G to allow pods sufficient RAM to run. For example, on IBM Power Systems (ppc64le), the Che-Theia editor pod requires 2G; the OpenShift connector pod requires 2.5G. For AMD64 and Intel 64 (x86_64) and IBM Z (s390x), memory requirements remain lower at 512M and 1500M respectively.

However, some devfiles may still be configured to set the lower limit valid for AMD64 and Intel 64 (x86_64) and IBM Z (s390x), so to work around this, edit devfiles for workspaces that are crashing to increase the default memoryLimit by at least 1 - 1.5 GB.

- CRW-1475

CHAPTER 5. FAQ

1. Can I install CodeReady Workspaces **offline** (that is, disconnected from the internet)?
   Yes, you can. For detailed instructions, see Installing CodeReady Workspaces in restricted environments chapter of the *Installation Guide*.

2. Can I 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 chapter of the *Installation Guide*.

3. Can I run multiple workspaces simultaneously?
   Yes. The following two conditions must be met to run multiple workspaces simultaneously:

   - CodeReady Workspaces must use the **per-workspace** Persistent Volume Claim (PVC) strategy (default), and

   - Persistent volumes (PVs) must use **ReadWriteMany** (RWX) access mode.
     Thus to run multiple workspaces simultaneously, ensure the following configuration is set:

   - Set **ReadWriteMany** (RWX) access mode for PVs.

   - Use the **per-workspace** PVC strategy (default in CodeReady Workspaces), or optionally, the **unique** strategy.