Red Hat CodeReady Containers 2.0

Release Notes and Known Issues

Highlighted features and identified problems in CodeReady Containers 2.0

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Abstract

This document lists and briefly describes new and improved features of CodeReady Containers 2.0. It also contains information about potential problems you may encounter while using the software. Where possible, workarounds are described for identified issues.

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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.

PART I. RELEASE NOTES

This section documents the most important features and bug fixes in the Red Hat CodeReady Containers 2.0 product.

CHAPTER 1. COMPONENT VERSIONS

CodeReady Containers 2.0 is shipped with the following versions of the main components:

Table 1.1. CodeReady Containers, Component versions

Component	Version
OpenShift Container Platform	4.10.3
OpenShift client binary (**oc**)	v4.10.3
Podman binary	3.4.4

CHAPTER 2. MINIMUM SYSTEM REQUIREMENTS

CodeReady Containers has the following minimum hardware and operating system requirements.

2.1. HARDWARE REQUIREMENTS

CodeReady Containers is supported only on AMD64 and Intel 64 processor architectures. CodeReady Containers does not support the ARM-based M1 architecture. CodeReady Containers does not support nested virtualization.

Depending on the desired container runtime, CodeReady Containers requires the following system resources:

2.1.1. For OpenShift Container Platform

- 4 physical CPU cores
- 9 GB of free memory
- 35 GB of storage space

NOTE

The OpenShift Container Platform cluster requires these minimum resources to run in the CodeReady Containers instance. Some workloads may require more resources. To assign more resources to the CodeReady Containers instance, see Configuring the instance.

2.1.2. For the Podman container runtime

- 2 physical CPU cores
- 2 GB of free memory
- 35 GB of storage space

2.2. OPERATING SYSTEM REQUIREMENTS

CodeReady Containers requires the following minimum version of a supported operating system:

2.2.1. Microsoft Windows

- On Microsoft Windows, CodeReady Containers requires the Windows 10 Fall Creators Update (version 1709) or later. CodeReady Containers does not work on earlier versions of Microsoft Windows. Microsoft Windows 10 Home Edition is not supported.

2.2.2. macOS

- On macOS, CodeReady Containers requires macOS 10.14 Mojave or later. CodeReady Containers does not work on earlier versions of macOS.

2.2.3. Linux

- On Linux, CodeReady Containers is supported only on Red Hat Enterprise Linux/CentOS 7.5 or later (including 8.x versions) and on the latest two stable Fedora releases.
- When using Red Hat Enterprise Linux, the machine running CodeReady Containers must be registered with the Red Hat Customer Portal .
- Ubuntu 18.04 LTS or later and Debian 10 or later are not supported and may require manual set up of the host machine.
- See Required software packages to install the required packages for your Linux distribution.

CHAPTER 3. CHANGES AND IMPROVEMENTS

This section highlights some of the notable changes introduced in CodeReady Containers 2.0.

3.1. NEW FEATURES

- CodeReady Containers brings a minimal, preconfigured OpenShift Container Platform 4 cluster or Podman container runtime to your local laptop or desktop computer for development and testing purposes. CodeReady Containers is delivered as a Red Hat Enterprise Linux virtual machine that supports native hypervisors for Linux, macOS, and Microsoft Windows 10.
    - CodeReady Containers is designed for local development and testing on an OpenShift 4 cluster or Podman container runtime. To run an OpenShift 3 cluster locally, see Red Hat Container Development Kit.

3.1.1. Technology Previews

Support for these features falls under the Technology Preview Features Support Scope .

- CodeReady Containers 2.0 includes the ability to create a custom bundle based on the currently running cluster with the **crc bundle generate** command. This command, its parameters, and behavior may change in incompatible ways in future releases.

3.2. NOTABLE CHANGES

- CodeReady Containers now offers container runtime presets. These presets allow you to run an OpenShift Container Platform cluster or a Podman container runtime. For more information about container runtime presets, see About presets.
- The graphical user interface (GUI) for the CodeReady Containers system tray executable has been updated for hosts running Microsoft Windows and macOS. This new GUI is unified across both operating systems.
- CodeReady Containers now offers the ability to enable or disable automatic startup of the CodeReady Containers system tray on Microsoft Windows and macOS. This feature is enabled by default and can be configured using the GUI for the system tray.
- CodeReady Containers 2.0 provides OpenShift Container Platform 4.10.3 as the embedded OpenShift version.

PART II. KNOWN ISSUES

This section describes issues that users of CodeReady Containers 2.0 may encounter, as well as possible workarounds for these issues.

CHAPTER 4. GENERAL ISSUES

Issues affecting all supported platforms.

4.1. INCREASED STARTUP TIME FOR THE OPENSHIFT CONTAINER PLATFORM 4.7 CLUSTER

Due to an upstream issue, the cluster embedded in CodeReady Containers will take longer than usual to start using the **crc start** command.

For more information about the issue, see BZ#1927263: kubelet service takes around 43 secs to start container when started from stopped state.

4.2. METRICS ARE DISABLED BY DEFAULT

To ensure CodeReady Containers can run on a typical laptop, some resource-heavy services are disabled by default. One of these services is Prometheus and all of the related monitoring, alerting, and telemetry functionality.

Enabling these features will require more resources than the CodeReady Containers virtual machine uses by default.

NOTE

Monitoring cannot be disabled after enabling these features. To disable monitoring again, delete the virtual machine with **crc delete** and recreate a new one with **crc start**.

See Starting Monitoring, Alerting, and Telemetry in the Red Hat CodeReady Containers Getting Started Guide to enable monitoring.

4.3. ENABLING MULTIPLE OPERATORS REQUIRES MORE MEMORY THAN THE DEFAULT

The **crc start** command assigns 9 GiB of memory to the CodeReady Containers virtual machine by default. Enabling multiple Operators may increase memory requirements.

See Configuring the virtual machine in the Red Hat CodeReady Containers Getting Started Guide to assign additional memory.

4.4. CODEREADY CONTAINERS DOES NOT WORK WHEN THE FIRST NAMESERVER IS IPV6

DNS resolution to the CodeReady Containers virtual machine can be disrupted if the first nameserver is IPv6.

To work around this issue, specify an IPv4 nameserver when starting the CodeReady Containers virtual machine using the **-n** flag:

```
$ crc start -n 8.8.8.8
```

CHAPTER 5. ISSUES ON MACOS

This section describes CodeReady Containers issues that affect users on a macOS host.

5.1. HIBERNATION CAUSES VM TIME TO DESYNCHRONIZE

Time in the CodeReady Containers virtual machine can become desynchronized with the time on your host machine. This issue occurs if the CodeReady Containers virtual machine is running when the host machine enters hibernation. To resolve this issue, stop the CodeReady Containers virtual machine and restart it:

```
$ crc stop
$ crc start
```

CHAPTER 6. ISSUES ON MICROSOFT WINDOWS

This section describes CodeReady Containers issues that affect users on a Microsoft Windows host.

6.1. THE CRC SETUP COMMAND MUST BE RUN FOLLOWING INSTALLATION WITH THE MSI INSTALLER

After installing CodeReady Containers with the MSI installer and rebooting your computer, ensure you run the **crc setup** command in Command Prompt or PowerShell to complete the installation.

6.2. THE CRC CLEANUP COMMAND MAY FAIL WITH A PERMISSION ERROR

Running **crc setup** followed by **crc cleanup** without restarting your host machine between commands will cause **crc cleanup** to report the following error:

```
Post "http://unix/clean": open \\.\pipe\crc-admin-helper: Access is denied.
```

To complete the **crc cleanup** command, restart your host machine and run the command again.

6.3. UNEXPECTED BEHAVIOR WHEN RUN OUTSIDE OF %WINDRIVE%

The Hyper-V driver will fail when the **crc** binary is executed from a network drive. The **crc** binary must be placed in a location on **%WINDRIVE%**. **%WINDRIVE%** is normally set to **C:**.

6.4. CODEREADY CONTAINERS EXPECTS FULLLANGUAGE SUPPORT IN POWERSHELL

The **ConstrainedLanguage** PowerShell mode is supported with exceptions determined by your system administrator.

6.5. THE CRC OC-ENV COMMAND DOES NOT WORK WITH SPECIAL CHARACTERS IN %PATH%

On Microsoft Windows, PowerShell and Command Prompt do not use the UTF-8 encoding. As a result, running the **crc oc-env** command with special characters present in the **%PATH%** will not accurately encode UTF-8 characters. There is no known workaround for this issue.

ADDITIONAL RESOURCES

- See the Red Hat CodeReady Containers Getting Started Guide for an overview of CodeReady Containers features and an introduction to the use of **OpenShift Container Platform**.
- Report issues with CodeReady Containers or request new features using the **OpenShift Container Platform** product with the **crc** component on Red Hat BugZilla.