



Red Hat Container Development Kit 3.4

Release Notes and Known Issues

Highlighted features and identified problems in Red Hat Container Development Kit
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Abstract

This document lists and briefly describes new and improved features of Red Hat Container Development Kit 3.4. 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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CHAPTER 1. INTRODUCING RED HAT CONTAINER DEVELOPMENT KIT

Red Hat Container Development Kit provides a platform for developing containerized applications. It is a set of tools that enables developers to quickly and easily set up an environment for developing and testing containerized applications on the Red Hat Enterprise Linux platform.

- Container Development Kit provides a personal Container Development Environment you can install on your own laptop, desktop, or server system. The Container Development Environment is provided in the form of a Red Hat Enterprise Linux virtual machine.
- Container Development Kit is available for the Microsoft Windows, macOS, and Linux operating systems, thus allowing developers to use their preferred platform while producing applications ready to be deployed in the Red Hat Enterprise Linux ecosystem.

Container Development Kit is a part of the [Red Hat Developers](#) program, which provides tools, resources, and support for developers who wish to utilize Red Hat solutions and products to create applications, both locally and in the cloud. For additional information and to register to become a part of the program, visit [developers.redhat.com](#).

1.1. UNDERSTANDING CONTAINER DEVELOPMENT KIT DOCUMENTATION

- The [Red Hat Container Development Kit 3.4 Release Notes and Known Issues](#) contains information about the current release of the product as well as a list of known problems that users may encounter when using it.
- The [Container Development Kit Getting Started Guide](#) contains instructions on how to install and start using the Container Development Environment to develop Red Hat Enterprise Linux-based containers using tools and services such as **OpenShift Container Platform**, **Docker**, **Eclipse**, and various command line tools.
- Report issues with Red Hat Container Development Kit or request new features using the **CDK** project at <https://issues.jboss.org/projects/CDK>.
- Report issues with the Red Hat Container Development Kit 3.4 Release Notes and Known Issues and Container Development Kit Getting Started Guide using the **RHDEVDOCS** project at <https://issues.jboss.org/projects/RHDEVDOCS>.

CHAPTER 2. RELEASE NOTES

This section documents the most important features and bug fixes in the Red Hat Container Development Kit 3.4 product.

2.1. COMPONENT VERSIONS

Red Hat Container Development Kit 3.4 is shipped with the following versions of the main components:

Table 2.1. Container Development Kit, Component Versions

Component	Version
Docker	1.13.1
Docker API	1.26
Kubernetes	1.9.1
OpenShift Container Platform	3.9.14

2.2. VIRTUALBOX COMPATIBILITY

Red Hat Container Development Kit 3.4 has been tested with **VirtualBox 5.1.14** and higher, but is known to not work correctly with **VirtualBox 5.1.11** or older. Ensure that you have **VirtualBox 5.1.12** or higher if you intend to use **VirtualBox** as your virtualization provider.

2.3. NEW FEATURES

This section highlights some of the new features offered by Red Hat Container Development Kit 3.4. The new version also contains a number of bug fixes.

Red Hat Container Development Kit 3.4 contains the Minishift tool, a Red Hat Enterprise Linux 7 ISO, and the `oc` (OpenShift client) binary for interacting with OpenShift Container Platform.

2.3.1. Minishift

Red Hat Container Development Kit 3.4 is based on Minishift, a command line tool to provision OpenShift locally for application developers. It supports all native hypervisors and some additional ones:

macOS

- [xhyve](#) (default)
- [VirtualBox](#)

Linux

- [KVM](#) (default)
- [VirtualBox](#)

Windows

- [Hyper-V](#) (default)
- [VirtualBox](#)

2.3.2. New Features

- The CDK VM can be assigned a static IP address when run using the Hyper-V hypervisor. See [Assign IP Address to Hyper-V](#) for more information.
- CDK now includes command line tab completion.

2.3.3. Technology Previews

Support for these features falls under the [Technology Preview Features Support Scope](#).

- The CDK VM can now be forced to reuse the IP address it was assigned during the first run of `minishift start`. This will help users who experience IP address changes between the `minishift stop` and `minishift start` commands which make the CDK instance unusable. See [Set Fixed IP Address](#) for more information.
- Host folder mounting now supports using SSHFS. See [Host Folders](#) for more information.

2.3.4. Usability Improvements

- Add-on commands can now ignore the error generated by command execution. Commands starting with the `!` character ignore execution failure, allowing commands to be executed multiple times without changing the final behavior of the add-on. See [Add-ons](#) for more information.

2.4. OTHER NOTABLE CHANGES

- The `--metrics` and `--logging` flags for the `minishift start` command have been moved behind the experimental flag. See [Enabling Experimental oc cluster up Flags](#) for more information.

CHAPTER 3. KNOWN ISSUES

This section describes issues that users of Red Hat Container Development Kit 3.4 may encounter, as well as possible workarounds for these issues.

3.1. GENERAL ISSUES

Issues affecting all supported platforms.

3.1.1. Regression with `--extra-clusterup-flags`

Attempting to run `minishift start` with the `--extra-clusterup-flags` flag results in the following error:

```
$ MINISHIFT_ENABLE_EXPERIMENTAL=y minishift start --extra-clusterup-flags
"--service-catalog"
....
-- Checking if provided oc flags are supported ... Flag 'extra-clusterup-
flags' is not supported for oc version v3.9.14. Use 'openshift-version'
flag to select a different version of OpenShift.
FAIL
Provided oc flag not supported
```

Workaround: Use the `--logging`, `--metrics`, and `--service-catalog` flags for each of these features respectively. For example:

```
$ MINISHIFT_ENABLE_EXPERIMENTAL=y minishift start --service-catalog
```

See [Enabling Experimental oc cluster up Flags](#) for more information.

3.1.2. `minishift delete --clear-cache` results in unusable binary

Using `minishift delete --clear-cache` will remove the cached `minishift-rhel7.iso` file used to start the virtual machine. Attempting to start CDK after clearing the cache results in the following error:

```
Error starting the VM: Error creating the VM. Error creating machine: Error
in driver during machine creation: open
/home/user/.minishift/cache/iso/minishift-rhel7.iso: no such file or
directory
```

Workaround: Run `minishift setup-cdk` followed by `minishift start` to recreate the cached `minishift-rhel7.iso` file and `oc` binary.

3.1.3. Unable to remove the Che add-on

Attempting to remove the Che add-on via `minishift addon remove` results in the following error:

```
$ minishift addon remove che
-- Removing addon 'che':
[CHE] Removing Che server Template.
```

```
[CHE] Removing mini-che project..error: unable to find target [developer]
Error removing the add-on: Error executing command 'oc adm policy remove-
role-from-user system:image-builder developer -n openshift'.
```

No workaround is required, as the Che add-on is removed despite this error.

3.1.4. `minishift version` creates the `MINISHIFT_HOME` directory

Calling the `minishift version` command before running `minishift setup-cdk` causes the default `MINISHIFT_HOME` directory (`~/.minishift`) to be created. This leads to `minishift setup-cdk` prompting for confirmation to overwrite the contents of `MINISHIFT_HOME`.

Workaround: Type `y` to confirm. This warning may be ignored.

3.1.5. The "latest" tag is not supported with `--ocp-tag`

The `--ocp-tag` flag for the `minishift start` command does not support the "latest" tag.

Workaround: If you want to use any OCP image other than the default, you need to find the version number of the specific image you want and select that version. You can find the image using the `minishift openshift version list` command. The tag will be in the format "v.X.Y.Z".

3.2. ISSUES ON MACOS

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

3.2.1. OpenShift web console does not work with older versions of Safari

`minishift console` does not work on older versions of the Safari web browser such as version 10.1.2 (12603.3.8). Attempting to access the web console results in the following error:

```
Error unable to load details about the server
```

Retry after updating Safari to the latest version or use the Firefox or Chrome web browsers for this. Safari version 11.0.3 (13604.5.6) has been tested and works with the OpenShift web console. You can use `minishift console --url` to get the web console URL.

3.3. ISSUES ON MICROSOFT WINDOWS

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

3.3.1. Default Switch does not work as expected with static IP

The experimental [static IP](#) feature is not possible with the Default Switch provided by Windows. The `minishift` virtual machine will receive an IP address, but network traffic will not be able to pass through it.

See [Assign IP Address to Hyper-V](#) for more information about how to assign a static IP address to the `minishift` VM on Windows.

3.3.2. Windows Command Prompt and PowerShell improperly parse JSON patches for the `minishift openshift config set` command

Windows Command Prompt and PowerShell have problems with parsing JSON into the `minishift openshift config set` command. Special attention is required when using this command on Windows.

The workaround for Windows Command Prompt environments is to escape the quotes so that the JSON content is correctly parsed:

```
C:\Users\CDK> minishift.exe openshift config set --patch "{\routingConfig\": {\subdomain\": \"192.168.99.101.nip.io\"}}"
```

The workaround for Windows PowerShell environments is to use a variable to store the JSON content:

```
PS C:\Users\CDK> $json='{\"routingConfig\": {\"subdomain\": \"192.168.99.101.nip.io\"}}'
PS C:\Users\CDK> echo $json
{\"routingConfig\": {\"subdomain\": \"192.168.99.101.nip.io\"}}
PS C:\Users\CDK> minishift.exe openshift config set --patch $json
Patching OpenShift configuration
/var/lib/origin/openshift.local.config/master/master-config.yaml with
{\"routingConfig\": {\"subdomain\": \"192.168.99.101.nip.io\"}}
```

3.3.3. `minishift openshift config set --patch` may fail on some Windows 7 and 10 hosts

The reason for this failure is currently unknown.

Workaround: Configure the OpenShift cluster from inside of the provisioned VM using `minishift ssh`:

```
C:\Users\CDK> minishift.exe ssh
[docker@minishift ~]$ docker exec -t origin /usr/bin/openshift ex config
patch /var/lib/origin/openshift.local.config/master/master-config.yaml --
patch='<json-to-be-applied-to-the-cluster>'
```

CHAPTER 4. ADDITIONAL RESOURCES

- See the [Container Development Kit Getting Started Guide](#) for an overview of Container Development Kit features and an introduction to the use of the **Docker** service and **OpenShift Container Platform**.
- Report issues with Red Hat Container Development Kit or request new features using the **CDK** project at <https://issues.jboss.org/projects/CDK>.