Red Hat Container Development Kit 3.17

Release Notes and Known Issues

Highlighted features and identified problems in Red Hat Container Development Kit 3.17

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Abstract

This document lists and briefly describes new and improved features of Red Hat Container Development Kit 3.17. 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.
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 3.17 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.

CHAPTER 2. RELEASE NOTES

This section documents the most important features and bug fixes in the Red Hat Container Development Kit 3.17 product.

2.1. COMPONENT VERSIONS

Red Hat Container Development Kit 3.17 is shipped with the following versions of the main components:

<table>
<thead>
<tr>
<th>Component</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Docker</td>
<td>1.13.1</td>
</tr>
<tr>
<td>Docker API</td>
<td>1.26</td>
</tr>
<tr>
<td>Kubernetes</td>
<td>1.11.0</td>
</tr>
<tr>
<td>OpenShift Container Platform</td>
<td>3.11.374</td>
</tr>
</tbody>
</table>

2.2. VIRTUALBOX COMPATIBILITY

Red Hat Container Development Kit 3.17 has been tested with VirtualBox 5.2.12 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. VirtualBox 5.2.12 is recommended.

2.3. CHANGES AND IMPROVEMENTS

This section highlights some of the notable changes introduced in Red Hat Container Development Kit 3.17. Red Hat Container Development Kit 3.17 is a maintenance release and does not introduce any new features. This version contains updates to the default add-ons.


2.3.1. Minishift

Red Hat Container Development Kit 3.17 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**
  - HyperKit (default)
  - VirtualBox

- **Linux**
  - KVM (default)
  - VirtualBox
Windows
- Hyper-V (default)
- VirtualBox

2.3.2. Notable Changes
- The xpaas add-on has been updated, adding the rhpam and rhdm 7.11.1 imagestreams and templates.
- The default OpenShift Container Platform version is now 3.11.374.
CHAPTER 3. KNOWN ISSUES

This section describes issues that users of Red Hat Container Development Kit 3.17 may encounter, as well as possible workarounds for these issues.

3.1. GENERAL ISSUES

Issues affecting all supported platforms.

3.1.1. The Container Development Kit virtual machine contains docker-1.13.1-161

The Container Development Kit virtual machine contains `docker-1.13.1-161` instead of the newer `docker-1.13.1-162`. The advisory for `docker-1.13.1-162` informed customers of CVE fixes that were previously applied in `docker-1.13.1-109`. The included `docker-1.13.1-161` package contains these CVE fixes but may be flagged by security scanning tools.

For more information, see the [Vulnerability Response article](https://example.com) for a `runc` regression in `docker-1.13.1-108`.

3.1.2. Container Development Kit does not start with VirtualBox 6

When running Container Development Kit with VirtualBox 6, you may encounter the following error message:

```
Error starting the VM: Error creating the VM. Error with pre-create check: "Virtual Box version 4 or lower will cause a kernel panic if xhyve tries to run. You are running version: 6.0.4r128413\n\nPlease upgrade to version 5 at https://www.virtualbox.org/wiki/Downloads"
```

Workaround: run `minishift start` with the `--vm-driver virtualbox` option.

3.1.3. OpenShift Container Platform cluster times out waiting for response from API server

When starting the cluster via `minishift start`, you may encounter the following error message:

```
Error: timed out waiting for the condition
```

Cause: This issue is caused by `oc cluster up`, which is used by Container Development Kit to start the OpenShift Container Platform cluster. The underlying cause of the timeout is unknown.

Workaround: Delete the existing Container Development Kit virtual machine, then retry starting the cluster using the following commands:

```
$ minishift delete
$ minishift start
```

**NOTE**

This issue may be persistent on your hardware. In this case, the only known workaround is to use a more powerful host machine.

3.1.4. Building FUSE templates with registry.redhat.io streams fails
When you attempt to build a FUSE template, it fails because the template specifies that images are to be pulled from registry.redhat.io, and credentials for the registry are not included in the myproject OpenShift namespace used by Container Development Kit. This works as expected in the openshift namespace.

### 3.1.5. xPaaS addon causes start failure

When running `minishift start` and the xPaaS addon is applied before the API server becomes responsive, the process fails with the following error message:

```bash
Error during post cluster up configuration: Error executing command 'oc apply -f v# [OPENSHIFT_VERSION]/xpaas-streams -n openshift'.
```

To work around this issue, re-apply the addon:

```bash
$ minishift addons apply xpaas
```

### 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:

```bash
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. System tray icon does not reflect profile status

The system tray icon (introduced as a Technology Preview feature in Container Development Kit 3.7) does not show profile status. There is no workaround available.

#### 3.3.2. 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.
3.3.3. 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"}}
```

3.3.4. `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>'
```

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.