Red Hat OpenShift Dev Spaces 3.9 Release notes and known issues

Release notes and known issues for Red Hat OpenShift Dev Spaces 3.9

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Abstract

Information about new and noteworthy features as well as known issues in Red Hat OpenShift Dev Spaces 3.9.
# Table of Contents

**MAKING OPEN SOURCE MORE INCLUSIVE** .................................................. 3

**CHAPTER 1. ABOUT RED HAT OSEPH SHIFT DEV SPACES** .................................. 4
1.1. SUPPORTED PLATFORMS ............................................................... 4
1.2. SUPPORT POLICY ........................................................................ 4
1.3. DIFFERENCES BETWEEN RED HAT OSEPH SHIFT DEV SPACES AND ECLIPSE CHE ......................................................... 4

**CHAPTER 2. NEW FEATURES AND ENHANCEMENTS** ........................................ 6
2.1. SUPPORT SETTING IMAGEPULLPOLICY FOR WORKSPACE CONTAINERS IN CHECLUSTER CR ........................................................................ 6
2.2. ADDING KUBEDOCK TO RUN CONTAINERS IN THE UDI ...................................................... 6
2.3. CONFIGURING DEFAULT CONTAINER AND POD SECURITYCONTEXT IN CHECLUSTER CR ........................................................................ 7
2.4. USING THE DEDICATED CONFIGMAP TO CONFIGURE THE 'GETTING STARTED' SAMPLES .................................................. 7
2.5. NAVIGATION FROM THE DEVWORKSPACE DASHBOARD VIEW TO THE OSEPH SHIFT CONSOLE DEVKORKSPACE OBJECT .................................................. 8
2.6. CUSTOMIZABLE OSEPH SHIFT DEV SPACES LOGO ON USER DASHBOARD .................................................. 8

**CHAPTER 3. BUG FIXES** ........................................................................ 9
3.1. WORKSPACE NOT STARTING WHEN BOTH BITBUCKET PAT AND BITBUCKET OAUTH ARE CONFIGURED ........................................................................ 9
3.2. DEVFILE NOT RESOLVED ON PRIVATE GITLAB REPOSITORIES ........................................................................ 9
3.3. IGNORED VOLUMES SIZE IN DEVFILES ........................................................................ 9
3.4. DEVFILE OF AZURE DEVOPS GIT REPOSITORIES URLS ENDING WITH .GIT NOT RESOLVING ........................................................................ 9
3.5. SUBTLE "EXISTING WORKSPACES" VISUAL GLITCH ........................................................................ 9
3.6. WORKSPACE CREATION RESULTING IN A "409 CONFLICT" ERROR ........................................................................ 10
3.7. WORKSPACE STARTUP FAILED WHEN THE FILE NAME OF A RAW DEVFILE WAS DIFFERENT FROM DEVFILE.YAML ........................................................................ 10
3.8. DOWNLOADING PROJECT ZIP FILE FROM AN EXTERNAL DEVFILE REGISTRY FAILS ........................................................................ 10
3.9. FAILURES IN ROUTE CREATION ........................................................................ 10
3.10. GRANTING EXTRA PERMISSIONS BREAKS BITBUCKET SAAS OAUTH FLOW ........................................................................ 10
3.11. ALLOW DEVFILE WITHOUT METADATA ........................................................................ 11
3.12. WORKSPACE URL PARAMETERS MISSING AFTER ACCEPTING OAUTH AUTHORIZATION ........................................................................ 11
3.13. GITLAB OAUTH TOKENS NOT REFRESHED ON WORKSPACE RESTART ........................................................................ 11
3.14. CHANGES IN WORKSPACE DISAPPEARING AFTER 'RESTART WITH DEFAULT DEVFILE' ........................................................................ 11

**CHAPTER 4. TECHNOLOGY PREVIEW** .......................................................... 12

**CHAPTER 5. DEPRECATED FUNCTIONALITIES** ............................................. 13

**CHAPTER 6. REMOVED FUNCTIONALITIES** ............................................... 14

**CHAPTER 7. KNOWN ISSUES** ................................................................. 15
7.1. MICROSOFT VISUAL STUDIO CODE - OPEN SOURCE EXTENSIONS NOT AUTOMATICALLY INSTALLED ........................................................................ 15
7.2. FIPS COMPLIANCE UPDATE ........................................................................ 15
7.3. INCORRECT USER NAME AND EMAIL IN COMMIT MESSAGES FOR SOME USERS ........................................................................ 16
7.4. DEBUGGER DOES NOT WORK IN THE .NET SAMPLE ........................................................................ 16

**CHAPTER 8. FREQUENTLY ASKED QUESTIONS** ............................................. 17
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 OPENSOURCE DEV SPACES

Red Hat OpenShift Dev Spaces provides web-based development environments on Red Hat OpenShift with an enterprise-level setup:

- Cloud Development Environments (CDE) server
- IDEs such as Microsoft Visual Studio Code - Open Source and JetBrains IntelliJ IDEA Community (Technology Preview)
- Containerized environments with popular programming languages, frameworks, and Red Hat technologies

Red Hat OpenShift Dev Spaces is well-suited for container-based development.

Red Hat OpenShift Dev Spaces 3.9 is based on Eclipse Che 7.74.

1.1. SUPPORTED PLATFORMS

OpenShift Dev Spaces runs on OpenShift 4.11–4.13 on the following CPU architectures:

- AMD64 and Intel 64 (x86_64)
- IBM Power (ppc64le) and IBM Z (s390x)

Additional resources

- OpenShift Documentation
- Red Hat OpenShift Dev Spaces administration guide

1.2. SUPPORT POLICY

For Red Hat OpenShift Dev Spaces 3.9, Red Hat will provide support for deployment, configuration, and use of the product.

Additional resources

- OpenShift Dev Spaces life-cycle and support policy.

1.3. DIFFERENCES BETWEEN RED HAT OPENSOURCE DEV SPACES AND ECLIPSE CHE

There are some differences between Red Hat OpenShift Dev Spaces and the upstream project on which it is based, Eclipse Che:

- OpenShift Dev Spaces is supported only on Red Hat OpenShift.
- OpenShift Dev Spaces is based on Red Hat Enterprise Linux and is regularly updated to include the latest security fixes.
- OpenShift Dev Spaces provides devfiles for working with languages and technologies such as Quarkus, Lombok, NodeJS, Python, DotNet, Golang, C/C++, and PHP. You can find the latest sample projects in the devspaces-devfileregistry container image sources.
- OpenShift Dev Spaces uses OpenShift OAuth for user login and management.

Red Hat provides licensing and packaging to ensure enterprise-level support for OpenShift Dev Spaces.
CHAPTER 2. NEW FEATURES AND ENHANCEMENTS

2.1. SUPPORT SETTING IMAGEPULLPOLICY FOR WORKSPACE CONTAINERS IN CHECLUSTER CR

With this update, `ImagePullPolicy` for DevWorkspace containers can be now set using the dedicated CheCluster CR field.

```yaml
apiVersion: org.eclipse.che/v2
kind: CheCluster
spec:
devEnvironments:
  imagePullPolicy: <Always|IfNotPresent>
```

Additional resources

- CRW-3357

2.2. ADDING KUBEDOCK TO RUN CONTAINERS IN THE UDI

With this update, `kubedock` is now a part of the UDI (OpenShift Dev Spaces default image). If the environment variable `KUBEDOCK_ENABLED` is set to `true` in a workspace (this can be done using a devfile), the kubedock server is started at startup.

When `KUBEDOCK_ENABLED=true` then the following commands will be executed with kubedock. The remaining commands, in particular, `podman build`, will be executed by the local Podman:

- `podman run`
- `podman ps`
- `podman exec`
- `podman cp`
- `podman logs`
- `podman inspect`
- `podman kill`
- `podman rm`
- `podman wait`
- `podman stop`
- `podman start`

Additional resources

- CRW-3367
2.3. CONFIGURING DEFAULT CONTAINER AND POD SECURITYCONTEXT IN CHECLUSTER CR

With this update, the following CheCluster CR fields are available: *spec.devEnvironments.security* *
spec.devEnvironments.security.containerSecurityContext* *
spec.devEnvironments.security.podSecurityContext*

Use the `spec.devEnvironments.security.containerSecurityContext` and `spec.devEnvironments.security.podSecurityContext` fields to configure the pod and security contexts used by workspaces by setting the corresponding `DevWorkspaceOperatorConfiguration` fields.

**NOTE**

If you use the `devEnvironments.security.containerSecurityContext` field and `devEnvironments.disableContainerBuildCapabilities` is set to `false`, the container security context required for the container-builds SCC will be used, overriding the security context set in `devEnvironments.security.containerSecurityContext`.

Additional resources

- CRW-4536

2.4. USING THE DEDICATED CONFIGMAP TO CONFIGURE THE 'GETTING STARTED' SAMPLES

With this release, you can configure the 'Getting Started' samples on the User Dashboard by using a dedicated ConfigMap object:

```yaml
apiVersion: v1
type: ConfigMap
metadata:
  name: getting-started-sample
  namespace: openshift-devspaces
  labels:
    app.kubernetes.io/part-of: che.eclipse.org
    app.kubernetes.io/component: getting-started-samples
data:
  my-samples: |
    [-
      {
        "displayName": "Eclipse Che Dashboard",
        "description": "Cloud Development Environment for the Eclipse Che Dashboard.",
        "tags": ["Eclipse Che", "Dashboard"],
        "url": "https://github.com/eclipse-che/che-dashboard"
      }
    ]
```

Additional resources

- CRW-4902
2.5. NAVIGATION FROM THE DEVWORKSPACE DASHBOARD VIEW TO THE OPENSHIFT CONSOLE DEVWORKSPACE OBJECT

Now you can navigate from the Workspace Details → DevWorkspace view on the User Dashboard to the OpenShift Console to inspect or edit the DevWorkspace object.

Additional resources

- CRW-4903

2.6. CUSTOMIZABLE OPENSHIFT DEV SPACES LOGO ON USER DASHBOARD

With this update, you can change the OpenShift Dev Spaces logo using the dedicated CheCluster Custom Resource property:

```yaml
apiVersion: org.eclipse.che/v2
kind: CheCluster
spec:
  components:
    dashboard:
      branding:
        logo:
          base64data: <base64-encoded-data>
          mediatype: image/png
```

Additional resources

- CRW-4904
CHAPTER 3. BUG FIXES

3.1. WORKSPACE NOT STARTING WHEN BOTH BITBUCKET PAT AND BITBUCKET OAUTH ARE CONFIGURED

Before this update, including a Bitbucket Personal Access Token (PAT) in workspaces on a OpenShift Dev Spaces installation with Bitbucket OAuth integration resulted in a “Backend is not available” error message. With this update, the workspace starts without issues.

Additional resources

- CRW-4351

3.2. DEVFILE NOT RESOLVED ON PRIVATE GITLAB REPOSITORIES

Before this update, OpenShift Dev Spaces failed to find devfiles at the root of GitLab private repositories. This update solves the issue.

Additional resources

- CRW-4608

3.3. IGNORED VOLUMES SIZE IN DEVFILES

Before this update, there was an issue with volume sizes in devfiles being ignored. With this update, if at least one volume in a DevWorkspace specifies its size, and the computed PVC size is greater than the default per-workspace PVC size, the computed PVC size will be used.

Additional resources

- CRW-4609

3.4. DEVFILE OF AZURE DEVOPS GIT REPOSITORIES URLS ENDING WITH .GIT NOT RESOLVING

Before this update, OpenShift Dev Spaces failed to find the `devfile.yaml` in Azure DevOps Git repositories when the provided URL ended with the `.git` suffix. This behavior has been addressed in this release.

Additional resources

- CRW-4892

3.5. SUBTLE "EXISTING WORKSPACES" VISUAL GLITCH

Before this update, you could experience the page blinking shortly when navigating to the "Existing Workspace" page on OpenShift Dev Spaces User Dashboard. This has been addressed in this release.

Additional resources

- CRW-4893
3.6. WORKSPACE CREATION RESULTING IN A "409 CONFLICT" ERROR

Before this update, the User Dashboard would sometimes create a workspace twice resulting in the "409 Conflict" error. This behavior has been addressed in this release.

Additional resources
- CRW-4894

3.7. WORKSPACE STARTUP FAILED WHEN THE FILE NAME OF A RAW DEVFILE WAS DIFFERENT FROM devfile.yaml

Before this update, workspace startup failed when the file name of the raw devfile was not `devfile.yaml` or `.devfile.yaml`. With this update, the name of the raw devfile does not prevent a successful workspace startup.

Additional resources
- CRW-4895

3.8. DOWNLOADING PROJECT ZIP FILE FROM AN EXTERNAL DEVFILE REGISTRY FAILS

Before this update, downloading a project zip file from an external devfile registry failed with an "x509: certificate signed by unknown authority" error. With this update, the `project-clone` init container reads any `.crt` or `.pem` files stored in `/public-certs`. These certificates are added to the HTTP client used for preparing zip-based projects in a DevWorkspace and allow you to download project zips from default-untrusted sources by e.g. auto-mounting certificates to `/public-certs` in the container.

Additional resources
- CRW-4896

3.9. FAILURES IN ROUTE CREATION

Before this update, there were failures in route creation. With this update, the handling of routing in the DevWorkspace operator is improved.

Additional resources
- CRW-4898

3.10. GRANTING EXTRA PERMISSIONS BREAKS BITBUCKET SAAS OAUTH FLOW

Before this update, granting extra permissions to the Bitbucket OAuth application broke the workspace startup flow. With this update, the issue is fixed.

Additional resources
3.11. ALLOW DEVFILE WITHOUT METADATA

Before this update, it was not possible to start workspaces based on Devfiles that did not contain metadata. With this update, devfiles without `.metadata.name` are considered valid. This is consistent with the specification.

Additional resources
- CRW-4901

3.12. WORKSPACE URL PARAMETERS MISSING AFTER ACCEPTING OAUTH AUTHORIZATION

Before this update, OpenShift Dev Spaces was missing factory URL parameters after successful OAuth authentication. This resulted in the workspace not starting. With this update, the issue is fixed.

Additional resources
- CRW-4955

3.13. GITLAB OAUTH TOKENS NOT REFRESHED ON WORKSPACE RESTART

Before this update, GitLab OAuth tokens expired after 2 hours and were not refreshed after a workspace restart. With this update, the issue is fixed.

Additional resources
- CRW-4957

3.14. CHANGES IN WORKSPACE DISAPPEARING AFTER 'RESTART WITH DEFAULT DEVFILE'

Before this update, the ephemeral mode was used for the 'Restart with default devfile' functionality. When restarted, any changes in the workspace were lost. With this update, restarting the workspace with the default devfile does not erase changes you made previously.

Additional resources
- CRW-4969
CHAPTER 4. TECHNOLOGY PREVIEW

Technology Preview features provide early access to upcoming product innovations, enabling you to test functionality and provide feedback during the development process. However, these features are not fully supported under Red Hat Subscription Level Agreements, may not be functionally complete, and are not intended for production use. As Red Hat considers making future iterations of Technology Preview features generally available, we will attempt to resolve any issues that customers experience when using these features. See: Technology Preview support scope.

None.
CHAPTER 5. DEPRECATED FUNCTIONALITIES

None.
CHAPTER 6. REMOVED FUNCTIONALITIES

None.
CHAPTER 7. KNOWN ISSUES

7.1. MICROSOFT VISUAL STUDIO CODE - OPEN SOURCE EXTENSIONS NOT AUTOMATICALLY INSTALLED

There is a known issue where automatic installation of the recommended Microsoft Visual Studio Code - Open Source extensions fails if you’re using a Java or Ansible sample.

Workaround

- Refresh the workspace tab in the browser.

Additional resources

- CRW-4790

7.2. FIPS COMPLIANCE UPDATE

There’s a known issue with FIPS compliance that results in certain cryptographic modules not being FIPS-validated. Below is a list of requirements and limitations for using FIPS with OpenShift Dev Spaces:

Required cluster and operator updates

Update your Red Hat OpenShift Container Platform installation to the latest z-stream update for 4.11, 4.12, or 4.13 as appropriate. If you do not already have FIPS enabled, you will need to uninstall and reinstall.

Once the cluster is up and running, install OpenShift Dev Spaces 3.7.1 (3.7-264) and verify that the latest DevWorkspace operator bundle 0.21.2 (0.21-7) or newer is also installed and updated. See https://catalog.redhat.com/software/containers/devworkspace/devworkspace-operator-bundle/60ec9f48744684587e2186a3

Golang compiler in UDI image

The Universal Developer Image (UDI) container includes a golang compiler, which was built without the CGO_ENABLED=1 flag. The check-payload scanner (https://github.com/openshift/check-payload) will throw an error, but this can be safely ignored provided that anything you build with this compiler sets the correct flag CGO_ENABLED=1 and does NOT use extldflags -static or -tags no_openssl.

The resulting binaries can be scanned and should pass without error.

Statically linked binaries

You can find statically linked binaries not related to cryptography in these two containers:

- code-rhel8
- idea-rhel8.

As they are not related to cryptography, they do not affect FIPS compliance.

Helm support for FIPS

The UDI container includes the helm binary, which was not compiled with FIPS support. If you are in a FIPS environment do not use helm.
7.3. INCORRECT USER NAME AND EMAIL IN COMMIT MESSAGES FOR SOME USERS

There is currently a known issue for users who are using a Kubernetes Secret with their Git-provider credentials. The user name and email for Git operations in workspaces for those users are currently taken from the user-profile Secret of the `<user>`-devspaces namespace.

**IMPORTANT**

This known issue does not impact Git-provider OAuth that has been configured by administrators.

**Workaround**

- In the editor terminal of the running workspace, run the following commands to set your commit author name and email:
  
  ```
  git commit config --global user.name <your_name>
  git commit config --global user.email <your_email>
  ```

**Additional resources**

- CRW-3883

7.4. DEBUGGER DOES NOT WORK IN THE .NET SAMPLE

Currently, the debugger in Microsoft Visual Studio Code - Open Source does not work in the .NET sample.

**Workaround**

- Use a different image from the following sources:
  
  - Custom UBI-9 based Dockerfile
  - devfile.yaml

**Additional resources**

- CRW-3563
CHAPTER 8. FREQUENTLY ASKED QUESTIONS

Is it possible to deploy applications from OpenShift Dev Spaces to an OpenShift cluster?

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 OpenShift Dev Spaces?

Use block storage.

Is it possible to deploy more than one OpenShift Dev Spaces instance on the same cluster?

Only one OpenShift Dev Spaces instance can be deployed per cluster.

Is it possible to install OpenShift Dev Spaces offline (that is, disconnected from the internet)?

See Installing Red Hat OpenShift Dev Spaces in restricted environments on OpenShift.

Is it possible to use non-default certificates with OpenShift Dev Spaces?

You can use self-signed or public certificates. See Importing untrusted TLS certificates.

Is it possible to run multiple workspaces simultaneously?

See Enabling users to run multiple workspaces simultaneously.