# *Applying Data Virtualization service patch v1.5.0.0-276*

# Contents

# Introduction

This document describes how to install the Data Virtualization service patch `v1.5.0.0-276`.

The `v1.5.0.0-276` service patch includes the following security issues:

- CVE-2016-2124
- CVE-2020-1472, CVE-2020-5421, CVE-2020-7919, CVE-2020-14039, CVE-2020-14318, CVE-2020-14323, CVE-2020-15586, CVE-2020-25717, CVE-2020-29510
- CVE-2021-3621, CVE-2021-3672, CVE-2021-20254, CVE-2021-20277, CVE-2021-20316, CVE-2021-23192, CVE-2021-43566, CVE-2021-44142
- CVE-2022-22965

# Applying patches

A Red Hat® OpenShift® project administrator can apply patches on a cluster that is connected to the internet or on an air-gapped cluster.

## Before you begin

**Required role:** To install a patch, you must be an administrator of the project (namespace) where the software is deployed.

In this topic, the term *software* can be either the Cloud Pak for Data control plane or a service.

Before you apply patches, ensure that:

- The machine from which you will run the commands meets the requirements described in Preparing your installation node.
- You have the required information about your Red Hat OpenShift cluster, as described in Collecting information about your cluster from your administrator.
- The Data Virtualization service instance is running correctly. All service pods must be running and ready.
- You use the same `repo.yaml` file that you used to deploy Data Virtualization service Version `v1.5.0.0`.
- Obtain the Cloud Pak for Data installation files for Version 3.5.0.

**Tip:** For a list of all available options, enter the following command:

```
./cpd-cli patch --help
```

## Procedure

To install patches:

1. Complete the appropriate task to apply patches on your environment:
   - “Applying patches on clusters connected to the internet” on page 2
   - “Applying patches on air-gapped clusters” on page 3

## Applying patches on clusters connected to the internet

From your installation node:

1. Change to the directory where you placed the Cloud Pak for Data command-line interface and the `repo.yaml` file.
2. Log in to your Red Hat OpenShift cluster as a project administrator:

   ```
   oc login OpenShift_URL:port
   ```

3. Run the following command to patch the service:

   **Important:** If you are using the internal Red Hat OpenShift registry and you are using the default self-signed certificate, specify the `--insecure-skip-tls-verify` flag to prevent x509 errors.

   ```
   ./cpd-cli patch \
   --repo ./repo.yaml \
   --assembly dv \
   --namespace Project \
   --patch-name Patch_name \
   --transfer-image-to Registry_location \
   --cluster-pull-prefix Registry_from_cluster \
   --ask-push-registry-credentials \
   ```

```
--action transfer
```

Replace the following values:

| Variable | Replace with |
|---|---|
| *Project* | Specify the project (namespace) where the software that you want to patch is deployed. |
| *Patch_name* | Specify the name of the patch that you want to install. This information is included in the patch description.<br>**Value:** `v1.5.0.0-276` |
| *Registry_location* | The location to store the images in the registry server.<br>**Guidance for Red Hat OpenShift registry users:**<br>• To determine the external route to the registry, run the appropriate command for your environment:<br>– OpenShift 3.11:<br>`$(oc get route -n default docker-registry -o jsonpath="{.spec.host}")`<br>– OpenShift 4.5:<br>`$(oc get route -n openshift-image-registry \| grep image-registry \| awk '{print $2}')` |
| *Registry_from_cluster* | The location from which pods on the cluster can *pull* images.<br>**Guidance for Red Hat OpenShift registry users:**<br>• This is the internal name of the registry service. The default service name is:<br>– OpenShift 3.11:<br>`docker-registry.default.svc:5000`<br>– OpenShift 4.5:<br>`image-registry.openshift-image-registry.svc:5000` |

4. Run the following command to patch the service instance:

```
./cpd-cli patch \
--repo ./repo.yaml \
--assembly dv \
--namespace Project \
--patch-name Patch_name \
--transfer-image-to Registry_location \
--cluster-pull-prefix Registry_from_cluster \
--ask-push-registry-credentials \
--action transfer \
--all-instances
```

Use the same values that you specified when you patched the service.

## Applying patches on air-gapped clusters

From your installation node:

1. Change to the directory where you placed the Cloud Pak for Data command-line interface and the `repo.yaml` file.

2. Run the following command to download the patch to your local machine:

```
./cpd-cli patch \
--repo ./repo.yaml \
--assembly dv \
--version 1.5.0 \
--patch-name Patch_name \
--action download
```

Replace the following values:

| Variable | Replace with |
|---|---|
| *Patch_name* | Specify the name of the patch that you want to install. This information is included in the patch description.<br>**Value:** `v1.5.0.0-276` |

3. Transfer the following items to a machine that can connect to the cluster and to the registry server:
   - The `cpd-cli-workspace` directory. Ensure that the directory structure remains unchanged.
   - A copy of the Cloud Pak for Data installation command-line interface. Ensure that the command-line interface is compatible with the machine that you are transferring the files to and that it is the same version as the command-line interface that you ran in the preceding steps.
4. From the machine that can connect to the cluster, run the following command to apply the service patch:

   **Important:** If you are using the internal Red Hat OpenShift registry:
   - Do not specify the `--ask-pull-registry-credentials` parameter.
   - If you are using the default self-signed certificate, specify the `--insecure-skip-tls-verify` flag to prevent `x509` errors.

```
./cpd-cli patch \
--namespace Project \
--load-from Image_directory_location \
--assembly dv \
--patch-name Patch_name \
--transfer-image-to Registry_location \
--cluster-pull-prefix Registry_from_cluster \
--ask-push-registry-credentials \
--action push
```

Replace the following values:

| Variable | Replace with |
|---|---|
| *Project* | Specify the project (namespace) where the software that you want to patch is deployed. |
| *Image_directory_location* | The location of the `cpd-cli-workspace` directory. |
| *Patch_name* | Specify the name of the patch that you want to install. This information is included in the patch description.<br>**Value:** `v1.5.0.0-276` |
| *Registry_location* | The location to store the images in the registry server. |

| Variable | Replace with |
|---|---|
| | • To determine the external route to the registry, run the appropriate command for your environment:<br>– OpenShift 3.11:<br>`$(oc get route -n default docker-registry -o jsonpath="{.spec.host}")`<br>– OpenShift 4.5:<br>`$(oc get route -n openshift-image-registry \| grep image-registry \| awk '{print $2}')` |
| *Registry_from_cluster* | The location from which pods on the cluster can *pull* images.<br>**Guidance for Red Hat OpenShift registry users:**<br>• This is the internal name of the registry service. The default service name is:<br>– OpenShift 3.11:<br>`docker-registry.default.svc:5000`<br>– OpenShift 4.5:<br>`image-registry.openshift-image-registry.svc:5000` |

5. Run the following command to download the service instance patch to your local machine:

```
./cpd-cli patch \
--repo ./repo.yaml \
--assembly dv \
--version 1.5.0 \
--patch-name Patch_name \
--action download \
--all-instances
```

Replace the following values:

| Variable | Replace with |
|---|---|
| *Patch_name* | Specify the name of the patch that you want to install. This information is included in the patch description.<br>**Value:** `v1.5.0.0-276` |

6. Run the following command to patch the service instance:

```
./cpd-cli patch \
--assembly dv \
--namespace Project \
--load-from Image_directory_location \
--patch-name Patch_name \
--transfer-image-to Registry_location \
--cluster-pull-prefix Registry_from_cluster \
--all-instances \
--action push
```

Use the same values that you specified when you patched the service.

# Troubleshooting

If you complete all steps to install the Data Virtualization service patch `v1.5.0.0-276` but you see errors, consider the following troubleshooting resources.

If you see that the dv-engine-0 pod failed to restart and the dv-engine-0 pod log shows an error that is similar to this message, consider the following resource.

```
2021-03-08_01.26.17,468_UTC ERROR ERROR: Failed during SSL setup for DV engine. Exit

2021-03-08_01.26.17,480_UTC ERROR Failed to start DV engine
```

- Failure to start DV engine after upgrading Cloud Pak for Data 3.5.0 or applying a patch to Cloud Pak for Data 3.5.0 control plane

If the dv-engine-0 pod starts after you install the Data Virtualization service patch `v1.5.0.0-276`, but you see HTTP 500 errors on the Data Virtualization console, see the following resource.

- Resolving SSL certificates in Data Virtualization after you upgrade or patch

For general troubleshooting information, see the following resources.

- Cannot connect to Data Virtualization
- Troubleshooting the Data Virtualization service