

Upgrading CDP Private Cloud Data Services on the Embedded Container Service

Date published: 2020-12-16

Date modified: 2023-1-24



Legal Notice

© Cloudera Inc. 2024. All rights reserved.

The documentation is and contains Cloudera proprietary information protected by copyright and other intellectual property rights. No license under copyright or any other intellectual property right is granted herein.

Unless otherwise noted, scripts and sample code are licensed under the Apache License, Version 2.0.

Copyright information for Cloudera software may be found within the documentation accompanying each component in a particular release.

Cloudera software includes software from various open source or other third party projects, and may be released under the Apache Software License 2.0 (“ASLv2”), the Affero General Public License version 3 (AGPLv3), or other license terms. Other software included may be released under the terms of alternative open source licenses. Please review the license and notice files accompanying the software for additional licensing information.

Please visit the Cloudera software product page for more information on Cloudera software. For more information on Cloudera support services, please visit either the Support or Sales page. Feel free to contact us directly to discuss your specific needs.

Cloudera reserves the right to change any products at any time, and without notice. Cloudera assumes no responsibility nor liability arising from the use of products, except as expressly agreed to in writing by Cloudera.

Cloudera, Cloudera Altus, HUE, Impala, Cloudera Impala, and other Cloudera marks are registered or unregistered trademarks in the United States and other countries. All other trademarks are the property of their respective owners.

Disclaimer: EXCEPT AS EXPRESSLY PROVIDED IN A WRITTEN AGREEMENT WITH CLOUDERA, CLOUDERA DOES NOT MAKE NOR GIVE ANY REPRESENTATION, WARRANTY, NOR COVENANT OF ANY KIND, WHETHER EXPRESS OR IMPLIED, IN CONNECTION WITH CLOUDERA TECHNOLOGY OR RELATED SUPPORT PROVIDED IN CONNECTION THEREWITH. CLOUDERA DOES NOT WARRANT THAT CLOUDERA PRODUCTS NOR SOFTWARE WILL OPERATE UNINTERRUPTED NOR THAT IT WILL BE FREE FROM DEFECTS NOR ERRORS, THAT IT WILL PROTECT YOUR DATA FROM LOSS, CORRUPTION NOR UNAVAILABILITY, NOR THAT IT WILL MEET ALL OF CUSTOMER’S BUSINESS REQUIREMENTS. WITHOUT LIMITING THE FOREGOING, AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, CLOUDERA EXPRESSLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, QUALITY, NON-INFRINGEMENT, TITLE, AND FITNESS FOR A PARTICULAR PURPOSE AND ANY REPRESENTATION, WARRANTY, OR COVENANT BASED ON COURSE OF DEALING OR USAGE IN TRADE.

Contents

- Upgrading..... 4**
 - Upgrading Cloudera Manager..... 4
 - Update from 1.4.0-H1 or 1.4.1 to 1.5.0 (ECS)..... 4
 - Migrating CDE Service Endpoint..... 11

Upgrading

Upgrading Cloudera Manager

You must use Cloudera Manager version 7.9.5 to set up the CDP Private Cloud Data Services cluster.

If you already have a CDP Private Cloud Base cluster set up using an earlier version of Cloudera Manager, you must first upgrade the Cloudera Manager version to Cloudera Manager 7.9.5 release before proceeding with the CDP Private Cloud Data Services update.

A hotfix version of Cloudera Manager is required for Cloudera Runtime 7.1.7 SP2 for the following two use cases:

- If you are updating from CDP Private Cloud Data Services 1.4.0-H1 or 1.4.1 and you would like to use Cloudera Runtime 7.1.7 SP2, you must first upgrade the Cloudera Manager version to the [Cloudera Manager 7.9.5-h1 hotfix release](#) before proceeding with the CDP Private Cloud Data Services update.
- If you are upgrading from earlier Cloudera Manager versions that did not support CDP Private Cloud Data Services (such as Cloudera Manager 7.6.7) and you would like to use Cloudera Runtime 7.1.7 SP2, you must first upgrade the Cloudera Manager version to the [Cloudera Manager 7.9.5-h1 hotfix release](#) before proceeding with the CDP Private Cloud Data Services installation.

Related Information

[Upgrading Cloudera Manager](#)

Update from 1.4.0-H1 or 1.4.1 to 1.5.0 (ECS)

You can update your existing CDP Private Cloud Data Services 1.4.0-H1 or 1.4.1 to 1.5.0 without performing an uninstall.

Before you begin



Important:

If you are updating from CDP Private Cloud Data Services 1.4.0-H1 or 1.4.1 and you would like to use Cloudera Runtime 7.1.7 SP2, you must first upgrade the Cloudera Manager version to the [Cloudera Manager 7.9.5-h1 hotfix release](#) before proceeding with the CDP Private Cloud Data Services update.

- Run the following commands on the ECS server hosts:

```
TOLERATION='{ "spec": { "template": { "spec": { "tolerations": [{ "effect": "NoSchedule", "key": "node-role.kubernetes.io/control-plane", "operator": "Exists" } ] } } } }'
```

```
kubectl patch deployment/yunikorn-admission-controller -n yunikorn -p "$TOLERATION"
```

```
kubectl patch deployment/yunikorn-scheduler -n yunikorn -p "$TOLERATION"
```

- Upgrading the Embedded Container Service (ECS) version, while CDE service is enabled, it fails to launch the Jobs page in the old CDE virtual cluster. You must back up CDE jobs in the CDE virtual cluster, and then delete the CDE service and CDE virtual cluster. Restore it after the upgrade. For more information about backup and restore CDE jobs, see [Backing up and restoring CDE jobs](#).

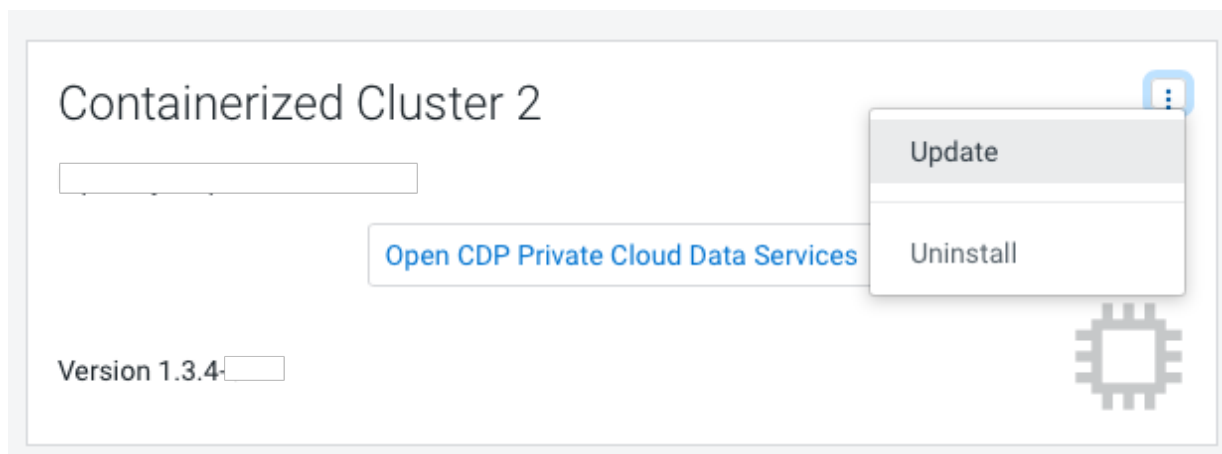
About this task



Note: This procedure requires down time during the upgrade.

Procedure**1.**

In Cloudera Manager, navigate to CDP Private Cloud Data Services and click the  icon, then click Update.



2. On the Getting Started page, you can select the Install method - Air Gapped or Internet and proceed.

Internet install method

Update Private Cloud Data Services (cdp)

1 Getting Started

2 Collect Information

3 Install Parcels

4 Update Data Services

5 Summary

Getting Started

This wizard provides step-by-step guidance for updating CDP Private Cloud Data Services.

Visit the [CDP Private Cloud](#) documentation for more information.

Current Version
1.3.4

Install Method
☒ Internet
 ☐ Air Gapped

1. Select Repository

Please ensure all the Data Lake clusters are running Cloudera Runtime 7.1.6 or greater

You are about to update CDP Private Cloud Data Services to version 1.4.0. This is a **minor version** update. Please make sure you have backed up all the external databases.

Air Gapped install method

Update Private Cloud Data Services (cdp)

1 Getting Started

2 Collect Information

3 Install Parcels

4 Update Data Services

5 Summary

Getting Started

This wizard provides step-by-step guidance for updating CDP Private Cloud Data Services.

Visit the [CDP Private Cloud](#) documentation for more information.

Current Version
1.3.4

Install Method
☐ Internet
 ☒ Air Gapped

Installing via a local mirror with an http server. You will need to setup a full mirror of Cloudera's repositories via a temporary http server within the perimeter network of all hosts.

- Download everything under `https://archive.cloudera.com/p/cdp-pvc-ds/latest`
- Modify the file `manifest.json` inside the downloaded directory, change "http_url": "." to "http_url": "http://your_local_repo/cdp-pvc-ds/latest"
- Mirror the downloaded directory to your local http server, e.g. `http://your_local_repo/cdp-pvc-ds/latest`
- Add `http://your_local_repo/cdp-pvc-ds/latest` to your [Custom Repository](#) settings and select it from the dropdown below.
- Select Repository

Please ensure all the Data Lake clusters are running Cloudera Runtime 7.1.6 or greater

You are about to update CDP Private Cloud Data Services to version 1.4.0. This is a **minor version** update. Please make sure you have backed up all the external databases.

Click Continue.

3. On the Collect Information page, click Continue.

Update Private Cloud Data Services (cdp)

✓ Getting Started

2 Collect Information

3 Install Parcels

4 Update Data Services

5 Summary

Collect Information

Sometimes, new configuration information might be needed before you can update. If there are no configuration needed below, just click Next.

Configure Vault

Vault is a secret management tool. You can connect to an existing customer Vault or create a new Vault with this installer. [Learn more](#) on Vault on CDP Private Cloud Data Services.

☒ Embedded vault
 ☐ External Vault (Recommended for production)

4. On the Install Parcels page, click Continue.

Update Private Cloud Data Services (cdp)

Getting Started

Collect Information

Install Parcels

Update Data Services

Summary

Install Parcels

The selected parcels are being downloaded and installed on all the hosts in the cluster.

Embedded Container Service 1.4.0

All (1)

Running (1)

Failed (0)

Completed (0)

Downloaded: 100%

Distributed: 1/1 (3.9 MB/s)

Unpacked: 0/1

| Hostname | Throughput | Status | Errors |
|----------------------------|------------|--------------|--------|
| kpranay-4.vpc.cloudera.com | 9.9 MB/s | DISTRIBUTING | |

7

5. On the Update Progress page, you can see the progress of your update. Click Continue after the update is complete .

Update Private Cloud Data Services (cdp)

Getting Started

Collect Information

Install Parcels

Update Data Services

Summary

Update Data Services

Upgrade Cluster Command

Status Running Context Containerized Cluster 2 May 9, 8:46:13 AM Abort

Completed 5 of 6 step(s).

Show All Steps

Show Only Failed Steps

Show Only Running Steps

Execute command Step on service ECS-2

Execute command Step on service DOCKER-2

Activating parcel

Waiting for Cloudera Manager Agents to detect release: ECS 1.4.0.

Converting configuration parameters

Starting all services in the upgraded cluster.

ECS-2

DOCKER-2

Containerized Cluster 2

Containerized Cluster 2

Containerized Cluster 2

Containerized Cluster 2

Containerized Cluster 2

May 9, 8:46:13 AM

May 9, 8:46:14 AM

May 9, 8:46:16 AM

May 9, 8:46:16 AM

May 9, 8:46:31 AM

May 9, 8:46:31 AM

309ms

2.31s

68ms

15.07s

24ms

8



Note: The upgrade might occasionally fail with error messages or conditions such as the following:

- Error message: During the following step: Execute command Install Tolerations Webhook on service ECS-3 the Upgrade progress page mentions a failure waiting for kube-proxy to come up.

Workaround:

- a. Log in using ssh to one of the ECS Server nodes and run the following command:

```
/var/lib/rancher/rke2/bin/kubectl get nodes
```

The output will look similar to the following:

| NAME | STATUS | ROLES |
|------------------------|----------|---------------------------|
| ecs-abc-1.vpc.myco.com | Ready | control-plane,etcd,master |
| 4h50m v1.21.8+rke2r2 | | |
| ecs-abc-2.vpc.myco.com | NotReady | <none> |
| 4h48m v1.20.8+rke2r1 | | |
| ecs-abc-3.vpc.myco.com | Ready | <none> |
| 4h48m v1.21.8+rke2r2 | | |
| ecs-abc-4.vpc.myco.com | NotReady | <none> |
| 4h48m v1.20.8+rke2r1 | | |
| ecs-abc-5.vpc.myco.com | NotReady | <none> |
| 4h48m v1.20.8+rke2r1 | | |

If any of the version numbers in the last column are lower than the expected version, reboot those nodes. (For example, v1.20.8 in the output above.)

- b. In the Command Output window, in the step that failed, click Resume.
- Upgrade hangs on the Execute command Post upgrade configuration on service ECS step for more than an hour.

Workaround:

- a. Log in to one of the ECS server nodes and run the following command:

```
kubectl get nodes
```

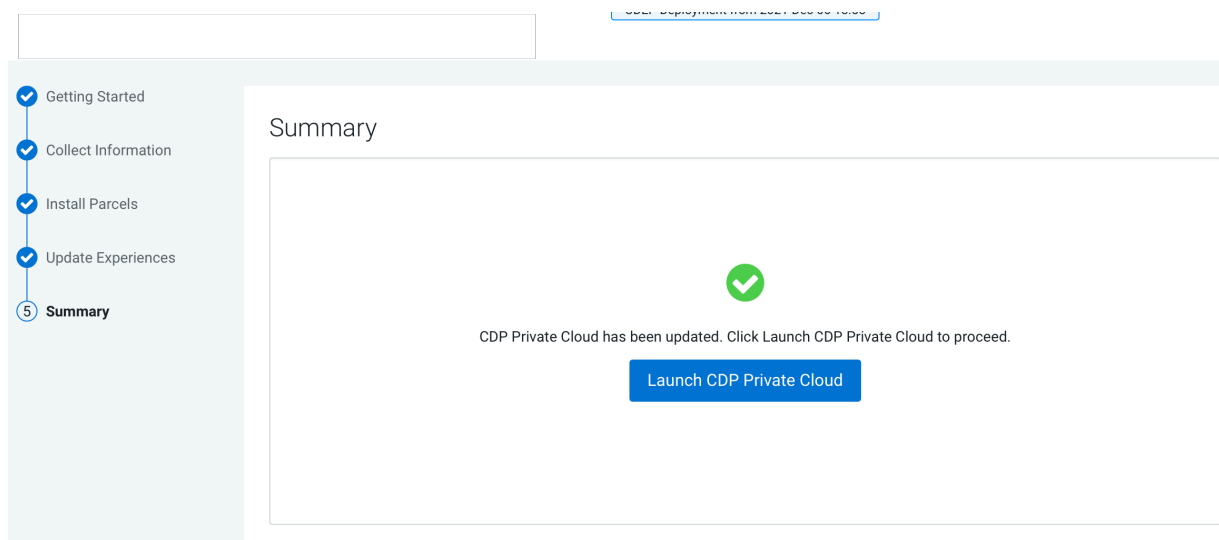
The output looks similar to the following:

| NAME | STATUS | ROLES |
|------------------------|----------|---------------------------|
| ecs-abc-1.vpc.myco.com | Ready | control-plane,etcd,master |
| 3h47m v1.21.11+rke2r1 | | |
| ecs-abc-2.vpc.myco.com | NotReady | <none> |
| 3h45m v1.21.8+rke2r2 | | |
| ecs-abc-3.vpc.myco.com | NotReady | <none> |
| 3h45m v1.21.8+rke2r2 | | |
| ecs-abc-4.vpc.myco.com | NotReady | <none> |
| 3h45m v1.21.8+rke2r2 | | |

If you any nodes display a status of NotReady, click the Abort button in the command output window.

- b. Reboot all nodes showing NotReady.
- c. Check the node status again as shown above. After all the nodes show Ready, click the Resume button in the command output window to continue with the upgrade.

6. After the update is complete, the Summary page appears. You can now Launch CDP Private Cloud from here.



If you see a Longhorn Health Test message about a degraded Longhorn volume, wait for the cluster repair to complete.

Or you can navigate to the CDP Private Cloud Data Services page and click Open CDP Private Cloud Data Services.

CDP Private Cloud Data Services opens up in a new window.

- If the upgrade stalls, do the following:

1. Check the status of all pods by running the following command on the ECS server node:

```
kubectl get pods --all-namespaces
```

2. If there are any pods stuck in “Terminating” state, then force terminate the pod using the following command:

```
kubectl delete pods <NAME OF THE POD> -n <NAMESPACE> --grace-period=0 -f  
orce
```

If the upgrade still does not resume, continue with the remaining steps.

3. In the Cloudera Manager Admin Console, go to the ECS service and click Web UIStorage UI.

The Longhorn dashboard opens.

4. Check the "in Progress" section of the dashboard to see whether there are any volumes stuck in the attaching/ detaching state in. If a volume is that state, reboot its host.

- You may see the following error message during the Upgrade Cluster > Reapplying all settings > kubectl-patch :

```
kubectl rollout status deployment/rke2-ingress-nginx-controller -n kube-  
system --timeout=5m  
error: timed out waiting for the condition
```

If you see this error, do the following:

1. Check whether all the Kubernetes nodes are ready for scheduling. Run the following command from the ECS Server node:

```
kubectl get nodes
```

You will see output similar to the following:

```
NAME STATUS ROLES AGE VERSION
```

```
<node1> Ready,SchedulingDisabled control-plane,etcd,master 103m v1.21.11+rke2r1
<node2> Ready <none> 101m v1.21.11+rke2r1
<node3> Ready <none> 101m v1.21.11+rke2r1
<node4> Ready <none> 101m v1.21.11+rke2r1
```

2. Run the following command from the ECS Server node for the node showing a status of SchedulingDisabled:

```
kubectl uncordon
```

You will see output similar to the following:

```
<node1>node/<node1> uncordoned
```

3. Scale down and scale up the rke2-ingress-nginx-controller pod by running the following command on the ECS Server node:

```
kubectl delete pod rke2-ingress-nginx-controller-<pod number> -n kube-system
```

4. Resume the upgrade.

What to do next

- If you specified a custom certificate, select the ECS cluster in Cloudera Manager, then select Actions > Update Ingress Controller. This command copies the cert.pem and key.pem files from the Cloudera Manager server host to the ECS Management Console host.

Migrating CDE Service Endpoint

You can now manually migrate an old CDE service endpoint to another new CDE service seamlessly. Migration provides endpoint stability and enables you to access the new CDE version with the previous endpoint. In upgrade scenarios, you can use the latest CDE version with the existing endpoints without changing configurations at the application level.

Contact your Cloudera Account team to help you in migrating your CDE Service endpoint manually.