

Cloudera Data Engineering 1.15.2

Cloudera Data Engineering Release Notes

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Contents

What's new in Cloudera Data Engineering Private Cloud.....	4
September 15, 2022.....	4
June 21, 2022.....	4
May 25, 2022.....	4
April 13, 2022.....	4
January 14, 2022.....	5
November 10, 2021.....	5
October 4, 2021.....	5
 Fixed issues in Cloudera Data Engineering on CDP Private Cloud.....	 6
 Known issues and limitations in Cloudera Data Engineering on CDP Private Cloud.....	 6
 How to make base cluster configuration changes.....	 8

What's new in Cloudera Data Engineering Private Cloud

This section lists major features and updates for the Cloudera Data Engineering (CDE) service.

September 15, 2022

There are no new features for the Cloudera Data Engineering (CDE) service in the CDP Data Services 1.4.0-H1 release.

For known issues and limitations, see [Known issues and limitations in Cloudera Data Engineering](#).

June 21, 2022

There are no new features for the Cloudera Data Engineering (CDE) service in the CDP Data Services 1.4.0.

For known issues and limitations, see [Known issues and limitations in Cloudera Data Engineering](#).

May 25, 2022

This release 1.15.2 of Cloudera Data Engineering (CDE) on CDP Private Cloud 1.4.0 includes the following features.

For known issues and limitations, see [Known issues and limitations in Cloudera Data Engineering](#).

Security Improvements

CVE-2021-44228 (Apache Log4j 2 vulnerability) has been addressed in CDE on CDP Private Cloud 1.4.0 by upgrading Apache Log4j 2 to version 2.17.

April 13, 2022

This release 1.15.1 of Cloudera Data Engineering (CDE) on CDP Private Cloud 1.3.4 includes the following features.

For known issues and limitations, see [Known issues and limitations in Cloudera Data Engineering](#).

CDE diagnostic bundles

You can now generate and download diagnostic data of Cloudera Data Engineering for troubleshooting purposes. You can specify the time duration, the associated environments and services, and limit the size of the file to include in the diagnostic data.

For more information, see [Working with CDP Private Cloud diagnostic data](#).

Embedded Grafana dashboards for monitoring virtual clusters

You can now access Grafana dashboards for advanced visualization of Virtual Cluster's metrics such as memory and CPU usage in Cloudera Data Engineering (CDE) Private Cloud.

For more information, see [Connecting to Grafana dashboards](#).

Access key based authentication

Cloudera Data Engineering (CDE) now supports transparent authentication using a password file, Cloudera Data Platform (CDP) access keys, and CDP credentials file.

For more information, see [Getting an API access token](#) and [CLI authentication](#).

Custom Docker runtime images

Support for custom docker runtime images is now GA. Custom dependencies and packages can be included in a docker image built on top of the default CDE Spark runtime. Jobs using custom runtime images can be deployed using the API or the CLI.

For more information, see [Using Custom Spark Runtime Docker Images](#).

January 14, 2022

This release (1.13.1) of Cloudera Data Engineering (CDE) on CDP Private Cloud 1.3.3 includes the following features and fixes.

For known issues and limitations, see [Known issues and limitations in Cloudera Data Engineerings](#).

New features

Support for HDFS transparent encryption

Encryption at rest (HDFS transparent encryption) is now supported.

Custom Docker container images

Custom Docker container images are now supported.

Apache Spark 3

You can now create Spark 3 virtual clusters and run Spark 3 jobs.

Apache Airflow 2

The embedded Apache Airflow deployment has been upgraded to Airflow 2.

Default external volume size increased to 500 GB

The default external volume size is now 500 GB for each virtual cluster (100 GB each for the 5 components in a virtual cluster).

Fixed issues

DEX-4860 : Add support for cross-VC Apache Airflow jobs

Airflow workflows that run jobs in a separate virtual cluster (VC) now work.

CVE-2021-44228 (Apache Log4j 2 vulnerability)

CVE-2021-44228 has been addressed in CDE on CDP Private Cloud 1.3.3 by upgrading Apache Log4j 2 to version 2.16.

November 10, 2021

There are no new features for the Cloudera Data Engineering (CDE) service in the CDP Data Services 1.3.2

For known issues and limitations, see [Known issues and limitations in Cloudera Data Engineering](#).

October 4, 2021

This is the initial release of CDE in CDP Private Cloud Experiences. For known issues and limitations, see [Known issues and limitations in Cloudera Data Engineering](#).

Fixed issues in Cloudera Data Engineering on CDP Private Cloud

Review the list of issues that are resolved in the Cloudera Data Engineering (CDE) service in the CDP Data Services 1.4.0-H1 release.

DEX-6358: The storage class name NFS is expected during CDE data service provisioning in Red Hat OpenShift Container Platform (OCP).

With this fix, CDE does not expect the storage class name nfs in Red Hat OpenShift Container Platform (OCP). CDE uses underlying platform-provided storage classes to provision the CDE data service.

DEX-6998: Airflow launched Spark job logs are unavailable.

With this fix, Spark job logs which were launched from airflow are available for viewing or downloading.

Known issues and limitations in Cloudera Data Engineering on CDP Private Cloud

This page lists the current known issues and limitations that you might run into while using the Cloudera Data Engineering (CDE) service.

DEX-5444: Cloudera Data Engineering Private Cloud is not able to distinguish between stdout and stderr when forwarding logs

Entire Spark job driver and executor logs stderr and stdout are all redirected to the stderr log file.

Refer the driver/executor stderr log file which contains both stderr and stdout content.

DEX-14676: Deep Analysis is not working in CDE PvC under analysis tab

If you are using Spark version 2.x for running your jobs, then the Run Deep Analysis feature present under the Analysis tab is not supported on Cloudera Data Engineering Private Cloud.

DEX-7000: Parallel Airflow tasks triggered at exactly same time by the user throws the 401:Unauthorized error.

Error 401:Unauthorized is displayed when parallel Airflow tasks in an airflow job are triggered or launched exactly at the same time by the user.

1. Navigate to the Cloudera Data Engineering Overview page by clicking the Data Engineering tile in the Cloudera Data Platform (CDP) management console.
2. In the Environments column, select the environment containing the virtual cluster where you want to create the job.
3. In the Virtual Clusters column on the right, click the View Jobs icon on the virtual cluster where you want to create the application.
4. In the left hand menu, click Jobs.
5. Click the Create Job button.
6. Provide the job details:
 - a. Select Airflow for the job type.
 - b. Specify the job name as bashoperator-job.
 - c. Save the following python script to attach it as a DAG file.

```
from dateutil import parser
from airflow import DAG
from airflow.utils import timezone
from airflow.operators.bash_operator import BashOperator
```

```

default_args = {
    'depends_on_past': False,
}
dag = DAG(
    'bashoperator-job',
    default_args = default_args,
    start_date = parser.isoparse('2022-06-17T23:52:00.123Z'
).replace(tzinfo=timezone.utc),
    schedule_interval = None,
    is_paused_upon_creation = False
)
task1 = BashOperator(
    task_id = 'task1',
    dag = dag,
    bash_command = 'sleep 600'
)
task2 = BashOperator(
    task_id = 'task2',
    dag = dag,
    bash_command = 'sleep 600'
)
task3 = BashOperator(
    task_id = 'task3',
    dag = dag,
    bash_command = 'sleep 600'
)
[task1, task2] >> task3

```

- d. Select File, click Select a file to upload the above python, and select a file from an existing resource.
7. Select the Python Version, and optionally select a Python Environment.
8. Click Create and Run.

DOCS-17844: Logs are lost if the log lines are longer than 50000 characters in fluentd

This issue occurs when the `Buffer_Chunk_Size` parameter for the `fluent-bit` is set to a value that is lesser than the size of the log line.

The values that are currently set are:

```

Buffer_Chunk_Size=50000
Buffer_Max_Size=50000

```

When required, you can set higher values for these parameters in the `fluent-bit` configuration map which is present in the `DEX-APP-XXXX` namespace.

DEX-7001: When Airflow jobs are run, the privileges of the user who created the job is applied and not the user who submitted the job.

Irrespective of who submits the Airflow job, the Airflow job is run with the user privileges who created the job. This causes issues when the job submitter has lesser privileges than the job owner who has higher privileges.

Spark and Airflow jobs must be created and run by the same user.

DEX-7022: Virtual Cluster does not accept spark or airflow jobs if the tzinfo library is used as the start date.

If you use the `tzinfo` library for `start_date`, then the Virtual Cluster may not complete execution of spark or airflow jobs launched later. For example:

```

example_dag = DAG(
    'bashoperator-parameter-job',
    default_args=default_args,

```

```
start_date=parser.isoparse("2020-11-11T20:20:04.268Z").replace(tzinfo=timezone.utc),
schedule_interval='@once',
is_paused_upon_creation=False
)
```

Use `start_date` as `start_date=pendulum.datetime(2017, 1, 1, tz="UTC")` instead of code like the `tzinfo` library. For more information about time zones, see [Airflow time zone aware DAGs documentation](#).

Changing LDAP configuration after installing CDE breaks authentication

If you change the LDAP configuration after installing CDE, as described in [Configuring LDAP authentication for CDP Private Cloud](#), authentication no longer works.

Re-install CDE after making any necessary changes to the LDAP configuration.

Gang scheduling is not supported

Gang scheduling is not currently supported for CDE on CDP Private Cloud.

HDFS is the default filesystem for all resource mounts

For any jobs that use local filesystem paths as arguments to a Spark job, explicitly specify `file://` as the scheme. For example, if your job uses a mounted resource called `test-resource.txt`, in the job definition, you would typically refer to it as `/app/mount/test-resource.txt`. In CDP Private Cloud, this should be specified as `file:///app/mount/test-resource.txt`.

The CDE virtual cluster quota is hard-coded to 100 CPUs and 10240 GB memory

Each CDE virtual cluster created is hard-coded to have a maximum of 100 CPU cores and 10240 GB memory.

None.

Apache Ozone is supported only for log files

Apache Ozone is supported only for log files. It is not supported for job configurations, resources, and so on.

Scheduling jobs with URL references does not work

Scheduling a job that specifies a URL reference does not work.

Use a file reference or create a resource and specify it

Limitations

Access key-based authentication will not be enabled in upgraded clusters prior to CDP PVC 1.3.4 release.

After you upgrade to PVC 1.3.4 version from earlier versions, you must create the CDE Base service and Virtual Cluster again to use the new Access Key feature. Otherwise, the Access Key feature will not be supported in the CDE Base service created prior to the 1.3.4 upgrade.

How to make base cluster configuration changes

In general, as Administrator you perform the following steps:

1. Make the necessary configuration changes in the base cluster.
2. Restart the base cluster.
3. In the Private Cloud compute cluster, run the specific kubernetes commands to restart the pods for CDE after identifying the correct CDE Service namespace.

Identifying the CDE Namespace

1. Navigate to the Cloudera Data Engineering Overview page by clicking the Data Engineering tile in the Cloudera Data Platform (CDP) management console.
2. In the CDE Services column, click the Service Details for the CDE service.
3. Note the Cluster ID shown in the page. For example, if the Cluster ID is cluster-abcd1234, then the CDE Namespace is dex-base-abcd1234.
4. Use this CDE Namespace (in the above example, it is dex-base-abcd1234) in the following instructions to run `kubernetes` commands.

Embedded Container Service

1. Access Cloudera Manager.
2. Navigate to the Experiences Cluster ECS Web UI: Clusters Your embedded Cluster ECS Web UI ECS Web UI .
3. Select the CDE namespace obtained previously on the top left dropdown.
4. Navigate to Workloads Deployments .
5. Locate dex-base-configs-manager in the list and click Restart from the breadcrumbs on the right.

OpenShift Container Platform

Access the openshift cluster with `oc` or `kubectrl`, and scale the deployment of dex-base-configs-manager down and back up. Use the following commands:

```
oc scale deployment/dex-base-configs-manager --namespace <CDE Namespace> --replicas 0
```

```
oc scale deployment/dex-base-configs-manager --namespace <CDE Namespace> --replicas 1
```