Troubleshooting Cloudbreak

Date of Publish: 2021-03-16

https://docs.hortonworks.com/

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Migrate existing clusters to access new packages behind the paywall

As described in Software Access Update, HDP, HDF, and Ambari repositories have been moved behind a paywall. You might have noticed that upscales for existing clusters don't work and no new clusters can be launched from prewarmed images. Refer to the following guidelines, which will help you update the repository settings in order to be able to access the new repositories behind the paywall.

Note: These guidelines only work for clusters created from a base image. They do not work for clusters started from a prewarmed image.

Prerequisites

- Update to the latest Cloudbreak version: Before you begin to modify your cluster, make sure that your Cloudbreak version supports the paywall feature. The minimum version is 2.9.3-rc.9. To upgrade, see Upgrade Cloudbreak to the latest version.
- Set up paywall access for 2.9.3-rc.9 or newer: Obtain your customer-specific paywall credentials provided by Cloudera for your active subscription. Authentication credentials for new customers and partners are provided in an email sent from Cloudera to registered support contacts. Existing users can file a non-technical case within the support portal (https://my.cloudera.com) to obtain credentials.

  Next, SSH to you Cloudbreak node and add the following variables to your Profile file, replacing the placeholders with actual user name and password obtained earlier:

  ```
  export CB_PAYWALL_USERNAME=<paywall-username>
  export CB_PAYWALL_PASSWORD=<paywall-password>
  ```

  Next, restart Cloudbreak using:

  ```
  cbd restart
  ```

- Set up paywall access manually for versions older than 2.9.3-rc.9:

  Note: These steps must be performed each time the gateway node is repaired or replaced.

  Log in to the gateway node as root and create a script called paywall.sh. The content should be:

  ```
  #!/usr/bin/env bash

  : ${PAYWALL_USERNAME:? "PAYWALL_USERNAME is required"}
  : ${PAYWALL_PASSWORD:? "PAYWALL_PASSWORD is required"}

  if ! grep -q "password" /srv/salt/ambari/yum/ambari.repo; then
      echo "username=$PAYWALL_USERNAME" >> /srv/salt/ambari/yum/ambari.repo
      echo "password=$PAYWALL_PASSWORD" >> /srv/salt/ambari/yum/ambari.repo
  fi

  if ! grep -q "password" /srv/salt/gateway/yum/hdp.repo; then
      echo "username=$PAYWALL_USERNAME" >> /srv/salt/gateway/yum/hdp.repo
      echo "password=$PAYWALL_PASSWORD" >> /srv/salt/gateway/yum/hdp.repo
  fi

  if ! grep -q "password" /srv/salt/gateway/yum/hdp-utils.repo; then
      echo "username=$PAYWALL_USERNAME" >> /srv/salt/gateway/yum/hdp-
  utils.repo
  ```

```
    echo "password=$PAYWALL_PASSWORD" >> /srv/salt/gateway/yum/hdp-
utils.repo
fi
```

Next, run chmod +x paywall.sh

Next, run:

```
PAYWALL_USERNAME=THEIR_PAYWALL_USERNAME
 PAYWALL_PASSWORD=THEIR_PAYWALL_PASSWORD ./paywall.sh
```

This will put paywall username and password into the necessary salt files, which will be distributed by salt to other nodes.

Once you've met these prerequisites, you are ready to update your clusters. Perform the following steps for each existing cluster.

Step 1: Enable maintenance mode

Prior to updating your cluster, enable maintenance mode for that cluster. This can be done from the Cloudbreak CLI using the following command:

```
cb cluster maintenance-mode enable --name <CLUSTER-NAME>
```

Step 2: Upgrade HDP/HDF repository data in Cloudbreak

1. Run the following command to determine your current stack version. This retrieves the current version and package information for your stack:

```
cb cluster describe --name <CLUSTER-NAME> | jq
 ".cluster.ambariStackDetails"
```

Example result:

```
{
  "enableGplRepo": false,
  "hdpVersion": "3.1.4",
  "mpacks": [
    {
      "name": "my-mpack"
    }
  ],
  "stack": {
    "amazonlinux2": "http://public-repo-1.hortonworks.com/HDP/
amazonlinux2/3.x/updates/3.1.4.0",
    "repoid": "HDP-3.1",
    "repository-version": "3.1.4.0-315",
    "vdf-amazonlinux2": "http://public-repo-1.hortonworks.com/HDP/
amazonlinux2/3.x/updates/3.1.4.0/HDP-3.1.4.0-315.xml",
    "vdf-url": "http://public-repo-1.hortonworks.com/HDP/amazonlinux2/3.x/
updates/3.1.4.0/HDP-3.1.4.0-315.xml"
  },
  "util": {
    "amazonlinux2": "http://public-repo-1.hortonworks.com/HDP-
UTILS-1.1.0.22/repos/amazonlinux2",
    "repoid": "HDP-UTILS-1.1.0.22"
  },
  "verify": true
}
```

In the above example, the operating system is "amazonlinux2", but in your output it will be the operating system that you are using. Note that you will need to provide the operating system name (exactly as it appears in the output of the above command) in a later step to replace the <OS> placeholder.

2. Based on the information obtained in the previous step, populate the following JSON file and save it to your local file system as stack.json. You can select a different name, just note that the subsequent commands refer to this file as stack.json. This file should contain new stack details copied from the result obtained in the previous step. For example:

```
{
  "enableGplRepo":false,
  "osType":"amazonlinux2",
  "repositoryVersion":"3.1.4.0-315",
  "stackBaseURL":"https://archive.cloudera.com/p/HDP/3.x/3.1.4.0/
amazonlinux2",
  "stackRepoId":"HDP-3.1.4",
  "utilsBaseURL":"https://archive.cloudera.com/p/HDP-UTILS/1.1.0.22/repos/
amazonlinux2",
  "utilsRepoId":"HDP-UTILS-1.1.0.22",
  "version":"3.1.4",
  "versionDefinitionFileUrl":"https://archive.cloudera.com/p/
HDP/3.x/3.1.4.0/amazonlinux2/HDP-3.1.4.0-315.xml"
}
```

If you have a management pack registered to your stack, you need to register a new management pack with a new name and a new archive.cloudera.com URL, as described in Add management pack documentation. After this, you need to add this new mpack name to the JSON file. For example:

```
{
  "enableGplRepo":false,
  "mpacks": [
    {
      "name": "my-new-paywall-mpack"
    }
  ],
  "osType":"amazonlinux2",
  "repositoryVersion":"3.1.4.0-315",
  "stackBaseURL":"https://archive.cloudera.com/p/HDP/3.x/3.1.4.0/
amazonlinux2",
  "stackRepoId":"HDP-3.1.4",
  "utilsBaseURL":"https://archive.cloudera.com/p/HDP-UTILS/1.1.0.22/repos/
amazonlinux2",
  "utilsRepoId":"HDP-UTILS-1.1.0.22",
  "version":"3.1.4",
  "versionDefinitionFileUrl":"https://archive.cloudera.com/p/
HDP/3.x/3.1.4.0/amazonlinux2/HDP-3.1.4.0-315.xml"
}
```

3. Modify the stack repository metadata in Cloudbreak with the following commands based on your stack type:

HDP cluster:

```
cb cluster maintenance-mode hdp --name <CLUSTER-NAME> --cli-input-json
 stack.json
```

HDF cluster:

```
cb cluster maintenance-mode hdf --name <CLUSTER-NAME> --cli-input-json
 stack.json
```

4. (Optional) Verify that the update was successful using this command:

```
cb cluster describe --name <CLUSTER-NAME> | jq
 ".cluster.ambariStackDetails"
```

5. Once you have successfully validated the repository configuration, disable maintenance mode by using the following CLI command:

```
cb cluster maintenance-mode disable --name <CLUSTER-NAME>
```

Step 3: Update Ambari repository information

You only need to perform the upgrade steps listed below if you are running a release Ambari version (such as 2.6.2.0) or if you are not using the latest hotfix version (for example, you should upgrade if your current version is 2.6.2.1 but the 2.6.2.2 is available).

1. Run the following command to determine your current Ambari version:

```
cb cluster describe --name <CLUSTER-NAME> | jq
 ".cluster.ambariRepoDetailsJson"
```

Example result:

```
{
  "baseUrl": "http://public-repo-1.hortonworks.com/ambari/
amazonlinux2/2.x/updates/2.7.4.0/",
  "gpgKeyUrl": "http://public-repo-1.hortonworks.com/ambari/
amazonlinux2/2.x/updates/2.7.4.0/RPM-GPG-KEY/RPM-GPG-KEY-Jenkins",
  "version": "2.7.4"
}
```

The following table includes the upgrade matrix. You should find your current Ambari version and determine the target Ambari version that you need to upgrade to:

Table 1:

Your current Ambari version	Target Ambari version	Your current HDP version
2.7.4	2.7.4.14	3.1.4
2.7.3	2.7.3.39	3.1.0
2.7.1	2.7.1.3	3.0.1
2.7.0	2.7.0.7	3.0.0
2.6.2	2.6.2.59	2.6.5
2.6.2.2	2.6.2.59	2.6.5
2.6.1	2.6.1.21	2.6.5
2.6.1.5	2.6.1.21	2.6.5

2. Cloudbreak can update your Ambari cluster to a given Ambari version. This endpoint is not exposed as an API call, so you need to fill this example cURl command with the proper parts and run it.

You can retrieve AUTH-TOKEN from the Cloudbreak with the following cURL command:

```
AUTH-TOKEN=$(curl -k -iX POST -H "accept: application/x-
www-form-urlencoded" -d 'credentials={"username":"<USER-
NAME>","password":"<PASSWORD>"}' "<CB-ADDRESS>/identity/oauth/authorize?
response_type=token&client_id=cloudbreak_shell&scope.0=openid&source=login&redirect_u
cloudbreak.shell" | grep -i location | cut -d'=' -f 3 | cut -d'&' -f 1)
```

You need to replace the following placeholders:

```
<USER-NAME>  (Should be in the following format: admin@example.com)
<PASSWORD>   (Cloudbreak password)
<CB-ADDRESS> (Cloudbreak https url, for example: https://cloudbreak-
controller-6uhdxz2xtuhww.westus.cloudapp.azure.com)
```

3. Obtain your stack identifier by running the following command, replacing the <CLUSTER-NAME> with an actual name):

```
cb cluster describe --name <CLUSTER-NAME> | jq .id
```

4. Run the following command, passing the obtained token:

```
curl -k --location --request POST '<CB-ADDRESS>/cb/api/v1/stacks/<STACK-
ID>/cluster/upgrade' \
--header 'Authorization: Bearer <AUTH-TOKEN>' \
--header 'Content-Type: application/json' \
--data-raw '{
  "version":"<TARGET-AMBARI-VERSION>",
  "baseUrl":"https://archive.cloudera.com/p/ambari/2.x/<TARGET-AMBARI-
VERSION>/<OS>",
  "gpgKeyUrl":"https://archive.cloudera.com/p/ambari/2.x/<TARGET-AMBARI-
VERSION>/<OS>/RPM-GPG-KEY/RPM-GPG-KEY-Jenkins"
}'
```

You need to replace the following placeholders:

```
<CB-ADDRESS>  (Cloudbreak https url, for example: https://cloudbreak-
controller-6uhdxz2xtuhww.westus.cloudapp.azure.com)
<STACK-ID>    (Stack identifier obtained in the previosu step)
<AUTH-TOKEN>  (Token obtained in one of the previous steps)
<TARGET-AMBARI-VERSION>  (Target Ambari version from the table in step 1.
 For exampe, 2.7.4.14)
<OS>          (Operating system. For example, amazonlinux2)
```

After the successful execution, your existing cluster nodes will be upgraded to the new version.

5. Sync your cluster:

```
cb cluster sync --name <cluster-name>
```

Getting help

If you need help with Cloudbreak, you have two options:

Option	Description
Hortonworks Community Connection	This is free optional support via Hortonworks Community Connection (HCC).
Hortonworks Flex Support Subscription	This is paid Hortonworks enterprise support.

HCC

You can register for optional free community support at Hortonworks Community Connection, where you can browse articles and previously answered questions and ask questions of your own.

When posting questions related to Cloudbreak, make sure to use the “Cloudbreak” tag.

Flex subscription

You can optionally use your existing Hortonworks flex support subscription(s) to cover the Cloudbreak node and clusters managed by it.

Note:

You must have an existing SmartSense ID and a Flex subscription. For general information about the Hortonworks Flex Support Subscription, visit the Hortonworks Support page at https://hortonworks.com/services/support/enterprise/.

The general steps are:

1. Configure Smart Sense in your Profile file.
2. Register your Flex subscription in the Cloudbreak web UI. You can register and manage multiple Flex subscriptions.
3. When creating a cluster, in the General Configuration > Flex Subscription, select the Flex subscription that you want to use for the cluster.
4. Use the Flex subscription to cover your Cloudbreak instance.

Configure SmartSense

To configure SmartSense in Cloudbreak, enable SmartSense and add your SmartSense ID to the Profile.

Add the following variables to the Profile:

```
export CB_SMARTSENSE_CONFIGURE=true
export CB_SMARTSENSE_ID=YOUR-SMARTSENSE-ID
```

For example:

```
export CB_SMARTSENSE_CONFIGURE=true
export CB_SMARTSENSE_ID=A-00000000-C-00000000
```

You can do this in one of the two ways:

- When initiating Cloudbreak deployer
- After you've already initiated Cloudbreak deployer. If you choose this option, you must restart Cloudbreak using cbd restart.

Register and manage Flex subscriptions

Once you log in to the Cloudbreak web UI, you can manage your Flex subscriptions from the Cloudbreak web UI.

You can manage your Flex subscriptions from the Settings page > Flex Subscriptions.

You can:

- Register a new Flex subscription
- Set a default Flex subscription ("Default")
- Select a Flex subscription to be used for the Cloudbreak node ("Use for controller")
- Delete a Flex subscription

Use Flex subscription for a cluster

When creating a cluster, you can select the Flex subscription that you would like to use for the cluster.

You can do this from the General Configuration page by using the Flex Subscription option.

Use Flex subscription for Cloudbreak node

You can use a Flex subscription for Cloudbreak node.

To use a Flex subscription for Cloudbreak node, on the Settings page, in the Flex Subscriptions section, check the "Use for controller option" for the selected Flex ID.

More Cloudbreak resources

Cloudbreak documentation only includes the information related to deploying Cloudbreak and Cloudbreak-managed clusters. If you are looking for information related to Ambari, HDP, or HDF, check out the following resources.

Resource	Description
Hortonworks documentation	During cluster create process, Cloudbreak automatically installs Ambari and sets up a cluster for you. After this deployment is complete, refer to the Ambari documentation and HDP documentation for help.
Hortonworks tutorials	Use Hortonworks tutorials to get started with Apache Spark, Apache Hive, Apache Zeppelin, and more.
Apache documentation	In addition to Hortonworks documentation, refer to the Apache Software Foundation documentation to get information on specific Hadoop services.
Ambari blueprints	Learn about Ambari blueprints. Ambari blueprints are a declarative definition of a Hadoop cluster that Ambari can use to create Hadoop clusters.
Cloudbreak project	Visit the Hortonworks website to see Cloudbreak-related news and updates.
Apache Ambari project	Learn about the Apache Ambari project. Apache Ambari is an operational platform for provisioning, managing, and monitoring Apache Hadoop clusters. Ambari exposes a robust set of REST APIs and a rich web interface for cluster management.

Create a troubleshooting bundle

Cloudbreak includes the cbd create-bundle command that allows you to export Cloudbreak logs into a bundle. When filing a support case ticket, you should use this command to generate a bundle and then attach the bundle to the support case ticket.

Steps

1. Access the Cloudbreak VM via SSH.
2. Navigate to your Cloudbreak deployment directory, typically /var/lib/cloudbreak-deployment:

```
/var/lib/cloudbreak-deployment/
```

3. Run the following command:

```
cbd create-bundle
```

This generates a file called cbd_export_timestamp.tar.gz.

Optionally you can customize the file name by specifying its name by running this command instead:

```
cbd create-bundle my-bundle-name
```

This command collects all Cloudbreak logs and configurations (such as Cloudbreak configurations, firewall and iptables configurations, os type, and open ports). After collection, all data is anonymized and compressed into a tar.gz archive. During the bundle creation process temporary folders are created and then removed.

4. After the process finished, you can find the bundle in the location where you issued the command. Copy the bundle onto your machine, for example by using the secure copy command (scp).
5. When filing a support case ticket, attach the bundle to the ticket.

Checking Cloudbreak logs

When troubleshooting, you can access the following Cloudbreak logs.

Cloudbreak logs

When installing Cloudbreak using a pre-built cloud image, the Cloudbreak deployer location and the cbd root folder is /var/lib/cloudbreak-deployment. You must execute all cbd actions from the cbd root folder as "cloudbreak" user.

Note:

Your cbd root directory may be different if you installed Cloudbreak on your own VM.

Aggregated logs

Cloudbreak consists of multiple microservices deployed into Docker containers. To check aggregated service logs, use the following commands:

cbd logs shows all service logs.

cbd logs | tee cloudbreak.log allows you to redirect the input into a file for sharing these logs.

Individual service logs

To check individual service logs, use the following commands:

cbd logs cloudbreak shows Cloudbreak logs. This service is the backend service that handles all deployments.

cbd logs uluwatu shows Cloudbreak web UI logs. Uluwatu is the UI component of Cloudbreak.

cbd logs identity shows Identity logs. Identity is responsible for authentication and authorization.

cbd logs periscope shows Periscope logs. Periscope is responsible for triggering autoscaling rules.

Docker logs

The same logs can be accessed via Docker commands:

docker logs cbreak_cloudbreak_1 shows the same logs as cbd logs cloudbreak.

Cloudbreak logs are rotated and can be accessed later from the Cloudbreak deployment folder. Each time you restart the application via cbd restart a new log file is created with a timestamp in the name (for example, cbreak-20170821-105900.log).

Note:

There is a symlink called cbreak.log which points to the latest log file. Sharing this symlink does not share the log itself.

Saltstack logs

Cloudbreak uses Saltstack to install Ambari and the necessary packages for the HDP/HDF provisioning. Salt Master always runs alongside the Ambari Server node. Each instance in the cluster runs a Salt Minion, which connects to the Salt Master.

There can be multiple Salt Masters if the cluster is configured to run in HA (High Availability) mode and in this case each Salt Minion connects to each Salt Master.

Cloudbreak also uses SaltStack to execute user-provided customization scripts called “recipes”.

Salt Master and Salt Minion logs can be found at the following location: /var/log/salt

Ambari logs

Cloudbreak uses Ambari to orchestrate the installation of the different HDP/HDF components. Each instance in the cluster runs an Ambari agent which connects to the Ambari server. Ambari server is declared by the user during the cluster installation wizard.

Ambari server logs

Ambari server logs can be found on the nodes where Ambari server is installed in the following locations:

/var/log/ambari-server/ambari-server.log

/var/log/ambari-server/ambari-server.out

Both files contain important information about the root cause of a certain issue so it is advised to check both.

Ambari agent logs

Ambari agent logs can be found on the nodes where Ambari agent is installed in the following locations:

/var/log/ambari-agent/ambari-agent.log

Recipe logs

Cloudbreak supports “recipes” - user-provided customization scripts that can be run prior to or after cluster installation. It is the user’s responsibility to provide an idempotent well tested script. If the execution fails, the recipe logs can be found at /var/log/recipes on the nodes on which the recipes were executed.

It is advised, but not required to have an advanced logging mechanism in the script, as Cloudbreak always logs every script that are run. Recipes are often the sources of installation failures as users might try to remove necessary packages or reconfigure services.

Troubleshooting Cloudbreak

This section includes common errors related to launching Cloudbreak and steps to resolve them.

Invalid PUBLIC_IP in CBD Profile

Invalid PUBLIC_IP error when starting Cloudbreak.

Error: Invalid PUBLIC_IP error when starting Cloudbreak.

Solution: The PUBLIC_IP property must be set in the Profile file or else you won’t be able to log in to the Cloudbreak web UI. If you are migrating your instance, check the Profile file to make sure that after the start the value of the PUBLIC_IP property remains valid. If editing the IP, make sure to restart Cloudbreak by using cbd restart.

Cbd cannot get VM’s public IP

When starting Cloudbreak, cbd cannot get VM’s public IP.

Error: When starting Cloudbreak, cbd cannot get VM’s public IP.

Solution: By default, the cbd tool tries to get the VM’s public IP to bind Cloudbreak web UI to it. But if cbd cannot get the IP address during the initialization, you must set it manually. To solve the issue, check your Profile and if PUBLIC_IP is not set, add the PUBLIC_IP variable and set it to the public IP of the VM. For example:

```
export PUBLIC_IP=192.134.23.10
```

Next, restart Cloudbreak by using cbd restart.

Docker does not start and returns an error

Failed to start Docker Application Container Engine.

Error: In newer versions of Docker (1.12+) for CentOS, overlay2 is not a supported filesystem and Docker might not start with the following message:

```
-- Unit docker.service has begun starting up.
Aug 06 12:47:01 ip-172-31-24-242 dockerd-current[1622]:
 time="2018-08-06T12:47:01.431682737-04:00" level=warning msg="could not
 change group /var/run/docker.sock
STORAGE_DRIVER=devicemapper
Aug 06 12:47:01 ip-172-31-24-242 dockerd-current[1622]:
 time="2018-08-06T12:47:01.433641166-04:00" level=info msg="libcontainerd:
 new containerd process, pid: 16
Aug 06 12:47:02 ip-172-31-24-242 dockerd-current[1622]:
 time="2018-08-06T12:47:02.440563079-04:00" level=warning msg="overlay2: the
 backing xfs filesystem is for
Aug 06 12:47:02 ip-172-31-24-242 dockerd-current[1622]: Error starting
 daemon: SELinux is not supported with the overlay2 graph driver on this
 kernel. Either boo
Aug 06 12:47:02 ip-172-31-24-242 systemd[1]: docker.service: main process
 exited, code=exited, status=1/FAILURE
Aug 06 12:47:02 ip-172-31-24-242 systemd[1]: Failed to start Docker
 Application Container Engine.
-- Subject: Unit docker.service has failed
```

Solution: To resolve this error, open the following files in an editor:

```
/etc/sysconfig/docker-storage
/etc/sysconfig/docker-storage-setup
```

For example:

```
vi /etc/sysconfig/docker-storage
vi /etc/sysconfig/docker-storage-setup
```

Next, in each of the files, change "overlay2" to "devicemapper".

Permission or connection problems

An error related to permission or connection problems when starting Cloudbreak.

Error: An error related to permission or connection problems when starting Cloudbreak.

Solution: The most common reason for this typo of error is that SELinux is enabled. To solve it:

1. Disable SELINUX:

```
setenforce 0
sed -i 's/SELINUX=enforcing/SELINUX=disabled/g' /etc/selinux/config
```

2. Ensure the SELinux is not turned on afterwards:

```
sestatus | grep -i mode
Current mode:                   permissive
Mode from config file:          permissive
```

Creating cbreak_sultans_1 … Error

Cannot create container for service sultans

Error: cbd start returns the following error:

```
Creating cbreak_sultans_1 ... error

ERROR: for cbreak_sultans_1  Cannot create container for service sultans:
 unknown log opt 'max-size' for journald log driver
Creating cbreak_consul_1
Creating cbreak_logrotate_1 ... error
Creating cbreak_periscope_1 ... error
Creating cbreak_mail_1 ... error
Creating cbreak_haveged_1 ... error

ERROR: for cbreak_mail_1  Cannot create container for service mail: unknown
 log opt 'max-size' for journald log driver

Creating cbreak_uluwatu_1 ... error

Creating cbreak_smartsense_1 ... error

Creating cbreak_consul_1 ... error
Creating cbreak_identity_1 ... error

ERROR: for cbreak_identity_1  Cannot create container for service identity:
 unknown log opt 'max-file' for journald log driver
Creating cbreak_logsink_1 ... error
Creating cbreak_commondb_1 ... error

ERROR: for cbreak_commondb_1  Cannot create container for service commondb:
 unknown log opt 'max-size' for journald log driver

ERROR: for haveged  Cannot create container for service haveged: unknown log
 opt 'max-size' for journald log driver

ERROR: for uluwatu  Cannot create container for service uluwatu: unknown log
 opt 'max-size' for journald log driver

ERROR: for consul  Cannot create container for service consul: unknown log
 opt 'max-size' for journald log driver

ERROR: for commondb  Cannot create container for service commondb: unknown
 log opt 'max-size' for journald log driver

ERROR: for logrotate  Cannot create container for service logrotate: unknown
 log opt 'max-size' for journald log driver
```

```
ERROR: for periscope  Cannot create container for service periscope: unknown
 log opt 'max-size' for journald log driver

ERROR: for sultans  Cannot create container for service sultans: unknown log
 opt 'max-size' for journald log driver

ERROR: for mail  Cannot create container for service mail: unknown log opt
 'max-size' for journald log driver

ERROR: for logsink  Cannot create container for service logsink: unknown log
 opt 'max-size' for journald log driver

ERROR: for smartsense  Cannot create container for service smartsense:
 unknown log opt 'max-size' for journald log driver

ERROR: for identity  Cannot create container for service identity: unknown
 log opt 'max-file' for journald log driver
Encountered errors while bringing up the project.
```

Solution: This error means that your Docker logging drivers are not configured correctly. To resolve the issue, on your Cloudbreak VM:

1. Check the Docker Logging Driver configuration:

   ```
   docker info | grep "Logging Driver"
   ```

   If it is set to “Logging Driver: journald”, you must set it to “json-file”.
2. Open the docker file for editing:

   ```
   vi /etc/sysconfig/docker
   ```
3. Edit the following part of the file so that it looks like below (showing log-driver=json-file):

   ```
   # Modify these options if you want to change the way the docker daemon
    runs
   OPTIONS='--selinux-enabled --log-driver=json-file --signature-
   verification=false'
   ```
4. Restart Docker:

   ```
   systemctl restart docker
   systemctl status docker
   ```

Copy the JSON button does not work in Firefox

When using the Copy the JSON or Copy the Command button with Firefox, the content does not does not get copied.

Error: When using the Show CLI Command > Copy the JSON or Copy the Command button with Firefox, the content does not does not get copied if adblock plugin or other advertise blocker plugins are present.

Solution: To resolve this issue, use a browser without an adblock plugin.

UnicodeEncodeError when starting Cloudbreak

UnicodeEncodeError when starting Cloudbreak.

Error:

```
{{root@sldifrdwbso02:/sldifrdwbso02/solr/cloudbreak # ./cbd start
generating docker-compose.yml
```

```
generating uaa.yml
Initialize and migrate databases
Starting cbreak_commondb_1 ... done
Pulling uluwatu (hortonworks/hdc-web:2.8.0)...
Trying to pull repository registry.access.redhat.com/hortonworks/hdc-
web ...
Trying to pull repository docker.io/hortonworks/hdc-web ...
2.8.0: Pulling from docker.io/hortonworks/hdc-web
Trying to pull repository registry.fedoraproject.org/hortonworks/hdc-
web ...
Pulling repository registry.fedoraproject.org/hortonworks/hdc-web
Trying to pull repository quay.io/hortonworks/hdc-web ...
Pulling repository quay.io/hortonworks/hdc-web
Trying to pull repository registry.centos.org/hortonworks/hdc-web ...
Pulling repository registry.centos.org/hortonworks/hdc-web
Trying to pull repository docker.io/hortonworks/hdc-web ...
2.8.0: Pulling from docker.io/hortonworks/hdc-web
Traceback (most recent call last):
File "logging/init.py", line 861, in emit
File "logging/init.py", line 734, in format
File "logging/init.py", line 469, in format
UnicodeEncodeError: 'ascii' codec can't encode character u'\xab' in position
 3000: ordinal not in range(128)
Logged from file main.py, line 80
}}
```

Solution: Try setting the following variables in the Profile, one by one, and see if Cloudbreak starts or not.

```
export LANG=C.UTF-8
export LANG=en_US.UTF-8
export PYTHONIOENCODING=utf8
```

Cloudbreak not working after VM restart

After VM restart, Cloudbreak web UI is not working.

Error: After VM restart, Cloudbreak web UI is not working.

Solution: After VM restart, you must SSH to the VM and manually start Cloudbreak from the directory in which it was deployed (typically /var/lib/cloudbreak-deployer/):

```
cd /var/lib/cloudbreak-deployer/
cbd start
```

Troubleshooting Cloudbreak on AWS

The following section lists common issues related to launching Cloudbreak on AWS and steps to resolve them.

User is not authorized to perform: sts:AssumeRole

User: arn:aws:iam:::user/assume-only-user is not authorized to perform: sts:AssumeRole.

Error: User: arn:aws:iam:::user/assume-only-user is not authorized to perform: sts:AssumeRole

Solution: This error occurs when the Cloudbreak instance is not authorized to use the role that you are trying to register as part of the Cloudbreak credential creation. The most common reason for this error is that when creating the

CredentialRole AWS IAM role you did not provide the AWS ID. Refer to the Create CredentialRole documentation for correct steps.

Troubleshooting Cloudbreak on Azure

The following section lists common issues related to launching Cloudbreak on Azure and steps to resolve them.

Resource was not found

Resource was not found error when deploying Cloudbreak on Azure.

Error: Resource /subscriptions/…/resourceGroups//providers/Microsoft.Network/virtualNetworks/cbdeployerVnet/subnets/cbdeployerSubnet referenced by resource /subscriptions/…/resourceGroups/Manulife-ADLS/providers/Microsoft.Network/networkInterfaces/cbdeployerNic was not found. Please make sure that the referenced resource exists, and that both resources are in the same region.

Solution: The most common reason for this error is that you did not provide the Vnet RG Name (last parameter in the template). To solve this, when launching Cloudbreak, under “Vnet RG Name” provide the name of the resource group in which the selected VNet is located. If using a new VNet, enter the same resource group name as in “Resource group”.

You don't have permissions to assign roles on Azure

Permissions errors when user is not authorized to perform role assignment,

Error: When fulfilling prerequisites for an app-based Cloudbreak credential, you must register an application and assign the Contributor role to it.

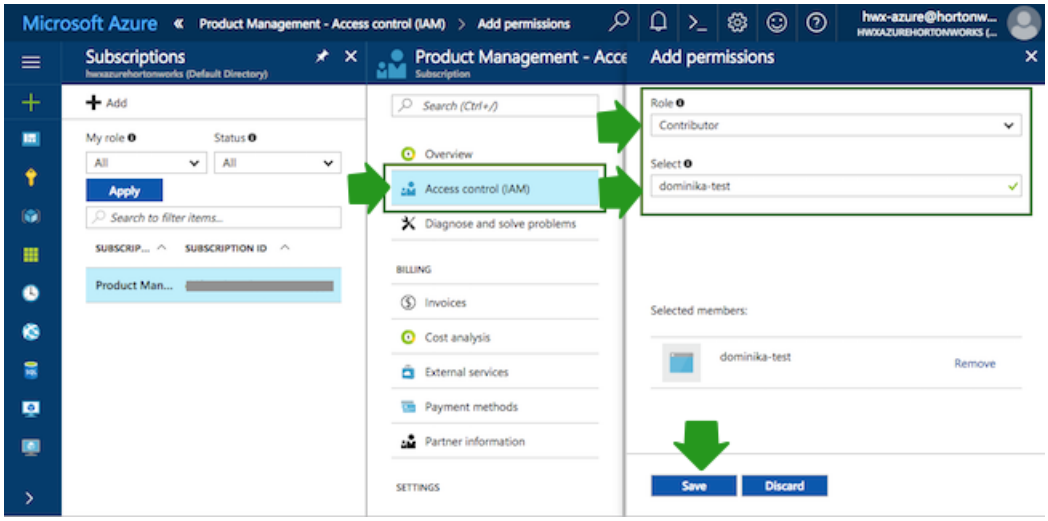
If you are authorized to perform role assignment, you will get the following error:

```
You don't have enough permissions to assign roles, please contact with your
 administrator
```

If you skip the role assignment step you will get the following error when creating an app-based credential:

```
Failed to verify the credential:
         Status code 403, {"error":{"code":"AuthorizationFailed","message":
         "The client 'someid' with object id 'someid' does not have
 authorization to perform action
         'Microsoft.Storage/storageAccounts/read' over scope '/
subscriptions/someid'."}}
```

Solution: To solve the problem, ask your Azure administrator to perform the step of assigning the “Contributor” role to your application:



Credential creation errors on Azure

The following errors may occur during credential creation.

Role already exists

Error: Role already exists in Azure with the name: CloudbreakCustom50

Solution: This error occurs because you specified that you want to create a new role for Cloudbreak credential, but an existing role with the same name already exists in Azure. To solve this, you should either rename the role during credential creation or select the Reuse existing custom role option.

Role does not exist

Error: Role does not exist in Azure with the name: CloudbreakCustom60

Solution: This error occurs because you specified that you want to reuse an existing role for your Cloudbreak credential, but that particular role does not exist in Azure. To solve this, you should either rename the new role during the credential creation to match the existing role's name or select the Let Cloudbreak create a custom role option.

Role does not have enough privileges

Error: CloudbreakCustom 50 role does not have enough privileges to be used by Cloudbreak!

Solution: This error occurs because you specified that you want to reuse an existing role for your Cloudbreak credential, but that particular role does not have the necessary privileges for Cloudbreak cluster management. To solve this, you should either select an existing role with enough privileges or select the Let Cloudbreak create a custom role option. The necessary action set for Cloudbreak to be able to manage the clusters includes: "Microsoft.Compute/*", "Microsoft.Network/*", "Microsoft.Storage/*", "Microsoft.Resources/*"

Client does not have authorization

Error: Failed to verify credential: Status code 403, {"error":{"code":"AuthorizationFailed", "message":"The client 'X' with object id 'z' does not have authorization to perform action 'Microsoft.Storage/storageAccounts/read' over scope 'subscriptions/…'"}

Solution: This means that your Azure account does not have sufficient permissions to create a Coudbreak credential. If you get this error during interactive credential creation, ensure that your Azure account has Microsoft.Authorization/*/Write permission; Otherwise contact your Azure administrator to either give your account that permission or create the necessary resources for the app-based credential creation method.

Cloud not validate publickey certificate

Error: Could not validate publickey certificate [certificate: ‘fdfdsf’], detailed message: Corrupt or unknown public key file format

Solution: The syntax of your SSH public key is incorrect. You must correct the syntax of your SSH key. For information about the correct syntax, refer to this page.

Troubleshooting cluster creation

The following section lists common issues related to cluster creation.

Configure communication via private IPs on AWS

Cloudbreak uses public IP addresses when communicating with cluster nodes. On AWS, you can configure it to use private IPs instead of public IPs by setting the CB_AWS_VPC variable in the Profile.

Note:

This configuration is available for AWS only. Do not use it for other cloud providers.

Steps

1. Navigate to the Cloudbreak deployment directory and edit Profile. For example:

```
cd /var/lib/cloudbreak-deployment/
vi Profile
```

2. Add the following entry, setting it to the AWS VPC identifier where you have deployed Cloudbreak:

```
export CB_AWS_VPC=your-VPC-ID
```

   For example:

```
export CB_AWS_VPC=vpc-e261a185
```

3. Restart Cloudbreak by using cbd restart.

Cannot access Oozie web UI

Ext JS is GPL licensed software and is no longer included in builds of HDP 2.6. Because of this, the Oozie WAR file is not built to include the Ext JS-based user interface unless Ext JS is manually installed on the Oozie server.

If you add Oozie using Ambari 2.6.1.0 to an HDP 2.6.4 or greater stack, no Oozie UI will be available by default. Therefore, if you plan to use Oozie web UI with Ambari 2.6.1.0 and HDP 2.6.4 or greater, you must manually install Ext JS on the Oozie server host.

You can install Ext JS by adding the following PRE-AMBARI-START recipe:

```
export EXT_JS_VERSION=2.2-1
     export OS_NAME=centos6
     wget http://public-repo-1.hortonworks.com/HDP-UTILS-GPL-1.1.0.22/repos/
$OS_NAME/extjs/extjs-$EXT_JS_VERSION.noarch.rpm
     rpm -ivh extjs-$EXT_JS_VERSION.noarch.rpm
```

Make the following changes to the script:

- Change the EXT_JS_VERSION to the specific ExtJS version that you want to use.
- Change the OS_NAME to the name of the operating system. Supported values are: centos6, centos7, centos7-ppc.

The general steps are:

1. Be sure to review and agree to the Ext JS license prior to using this recipe.
2. Create a PRE-AMBARI-START recipe. For instructions on how to create a recipe, refer to Add recipes.
3. When creating a cluster, choose this recipe to be executed on all host groups of the cluster.

Failed to retrieve the server's certificate

Cloudbreak-managed cluster fails with "Infrastructure creation failed. Reason: Failed to retrieve the server's certificate".

Error: Cloudbreak-managed cluster fails with "Infrastructure creation failed. Reason: Failed to retrieve the server's certificate".

Solution: The most common reasons for this error are related to using your own custom image. If you are using your own custom image:

- If using the CLI, you must send the imageId explicitly in the CLI in the cluster template request.
- There was a breaking change between Cloudbreak 2.4 and 2.7 versions. If you burned your image for Cloudbreak 2.4, and you would like to use Cloudbreak 2.7 or newer, you must burn a new image.

Quota limitations

Each cloud provider has quota limitations on various cloud resources, and these quotas can usually be increased on request. If there is an error message in Cloudbreak stating that there are no more available EIPs (Elastic IP Address) or VPCs, you need to request more of these resources.

To see the limitations visit the cloud provider's site:

- AWS service limits
- Azure subscription and service limits, quotas, and constraints
- GCP resource quotas

Example error on OpenStack

Cluster creation fails with the following error:

```
Infrastructure creation failed. Reason: Failed to create the
 stack for CloudContext{id=3689, name='test-exisitngnetwork',
 platform='StringType{value='OPENSTACK'}', owner='e0307f96-bd7d-4641-8c8f-
b95f2667d9c6'} due to: Resource CREATE failed: ResourceInError:
 resources.ambari_volume_master_0_0: Went to status error due to "Unknown"
```

This may mean that the volumes that you requested exceed volumes available on your cloud provider account. When creating a cluster, on the advanced Hardware and Storage page of the create cluster wizard, try reducing the amount of requested storage. If you need more storage, try using a different region or ask your cloud provider admin to increase the resource quota for volumes.

Connection timeout when ports are not open

A common reason for connection timeout is security group misconfiguration.

In the cluster installation wizard, you must specify on which node you want to run the Ambari server. Cloudbreak communicates with this node to orchestrate the installation. A common reason for connection timeout is security group misconfiguration. Cloudbreak allows configuring different security groups for the different instance groups; however, there are certain requirements for the Ambari server node. For more information, refer to Default cluster security group documentation.

Blueprint errors

The following sections list common blueprint-related issues.

Invalid services and configurations

Ambari blueprints are a declarative definition of a cluster. With a blueprint, you specify a stack, the component layout, and the configurations to materialize a Hadoop cluster instance via a REST API without having to use the Ambari cluster install wizard.

Cloudbreak supports any type of blueprints, which is a common source of errors. These errors are only visible once the core infrastructure is up and running and Cloudbreak tries to initiate the cluster installation through Ambari. Ambari validates the blueprint and rejects it if it's invalid.

For example, if there are configurations for a certain service like Hive but Hive as a service is not mapped to any host group, the blueprint is invalid.

To fix these type of issues, edit your blueprint and then reinstall your cluster. Cloudbreak web UI has support for this so the infrastructure does not have to be terminated.

There are some cases when Ambari cannot validate your blueprint beforehand. In these cases, the issues are only visible in the Ambari server logs. To troubleshoot, check Ambari server logs.

Wrong HDP/HDF version

In the blueprint, only the major and minor HDP/HDF version should be defined (for example, "2.6"). If wrong version number is provided, the following error can be found in the logs:

```
5/15/2017 12:23:19 PM testcluster26 - create failed: Cannot use the
 specified Ambari stack: HDPRepo
{stack='null'; utils='null'}
. Error: org.apache.ambari.server.controller.spi.NoSuchResourceException:
 The specified resource doesn't exist: Stack data, Stack HDP 2.6.0.3 is not
 found in Ambari metainfo
```

For correct blueprint layout, refer to the Ambari cwiki page.

Recipe errors

The following sections list common recipe related issues.

Recipe execution times out

If the scripts are taking too much time to execute, the processes will time out, as the threshold for all recipes is set to 15 minutes. To change this threshold, you must override the default value by adding the following to the cbd Profile file:

```
export CB_JAVA_OPTS=" -Dcb.max.salt.recipe.execution.retry=90"
```

This property indicates the number of tries for checking if the scripts have finished with a sleep time (i.e. the wait time between two polling attempts) of 10 seconds. The default value is 90. To increase the threshold, provide a number greater than 90. You must restart Cloudbreak after changing properties in the Profile file.

Recipe execution fails

It often happens that a script cannot be executed successfully because there are typos or errors in the script. To verify this you can check the recipe logs at /var/log/recipes. For each script, there will be a separate log file with the name of the script that you provided on the Cloudbreak web UI.

Troubleshooting Cloudbreak CLI

The following section lists common issues related to Cloudbreak CLI.

Special characters in blueprint name cause an error

When registering a blueprint via blueprint create CLI command, if the name of the blueprint includes one or more of the following special characters @#$%|:&*; you will get an error similar to:

```
cb blueprint create from-url --name test@# --url https://myurl.com/
myblueprint.bp
[1] 7547
-bash: application.yml: command not found
-bash: --url: command not found
 ~ # integration-test # 1 # time="2018-02-01T12:56:44+01:00" level="error"
 msg="the following parameters are missing: url\n"
```

Solution: When using special characters in a blueprint name, make sure to use quotes; for example “test@#”:

```
cb blueprint create from-url --name "test@#" --url https://myurl.com/
myblueprint.bp
```