

Managing Classic Clusters

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Managing classic clusters

You can register CDH, HDP, and Cloudera Base on premises clusters to Cloudera and later replicate data and workloads from these clusters to the clusters in your Cloudera environments. These clusters are called Classic Clusters in Cloudera.

To add or register CDH, HDP, and Cloudera Base on premises to Cloudera:

1. Make sure all the prerequisites are met before adding the classic cluster.
2. Configure the classic cluster to establish connectivity to Cloudera.
3. On the Cloudera Management Console, add the classic cluster.

For more information, refer to the following documentation:

Related Information

[Prerequisites for adding classic clusters](#)

[Enabling admin and user access to classic clusters](#)

[Troubleshooting classic cluster registration errors \(Cluster Connectivity Manager v2\)](#)

[Resuming the cluster registration](#)

[Upgrading a classic cluster from Cluster Connectivity Manager v1 to Cluster Connectivity Manager v2](#)

Enabling admin and user access to classic clusters

In order to grant admin and user access to a classic cluster, you should assign the required roles.

Consider the following when granting access to admins and users of your classic clusters:

- You need to be a ClassicClustersCreator in order to register classic clusters.
- The user who registers a classic cluster gets the Owner role for that classic cluster.
- Once a classic cluster is registered, the following roles can be assigned to a user or a group on that cluster:
- Owner - Grants all permissions on the classic cluster in Cloudera including the ability to delete them. It does not grant any cluster-level access (such as Cloudera Manager access).
- ClassicClusterAdmin - Grants permission to perform any operation on the cluster, except deleting it. Grants permission to assign access to the cluster to other users.
- ClassicClusterUser - Grants permission to access details of the classic cluster.

The roles are described in detail in [Resource roles](#). The steps for assigning the roles are described in [Assigning resource roles to users](#) and [Assigning resource roles to groups](#).

Related Information

[Account roles](#)

[Resource roles](#)

[Assigning resource roles to users](#)

[Assigning resource roles to groups](#)

Prerequisites for adding classic clusters

Make sure you verify the version requirements of your classic clusters and install or configure all of the classic cluster requirements before you try to add or register them to Cloudera.

Required roles

You need to have the ClassicClustersCreator role to register a classic cluster in Cloudera.

Check the version compatibility

Make sure that the following version requirements are met.

- For adding HDP clusters:
 - HDP - HDP 2.6.5.50000 plus any required patch version
 - DLM Engine version - 1.7.0.0-x
 - Ambari - 2.7.3 or 2.6.2.2 or 2.6.2
- For adding CDH clusters:
 - CDH - 5.x and 6.x
 - Cloudera Manager - 5.x and 6.x
- For adding Cloudera Base on premises clusters
 - Cloudera Base on premises cluster 7.1.1 or later, and its respective Cloudera Manager version; For example, Cloudera Base on premises cluster 7.1.6 uses Cloudera Manager 7.3.1.



Note: Currently, classic cluster registration only supports CentOS and RHEL operating systems, versions 6, 7 and 8.

Verify the required roles are assigned

- Make sure that the user can log in as the admin user to Ambari in the HDP cluster.
- Make sure the user can log in as the admin user to Cloudera Manager in the CDH cluster or the Cloudera Base on premises cluster.

Install the required components (HDP only)

Fulfill the following requirements if using HDP. If using CDH or Cloudera Base on premises, skip this section.

- Make sure that Ambari Metrics is installed in Ambari in the HDP clusters.
- Make sure that Ambari is configured with LDAP.
- Make sure that Knox is installed and the default topology is configured with LDAP.



Note: Knox does not need to be used by other services in the cluster; It is only required for Cloudera communication.

- Make sure that there is at least one topology in the Knox setup with the same LDAP as Ambari.
- If there are policies restricting access through Knox, make sure that Ranger policies allow communication through Knox.
- Make sure that the cluster is configured with Kerberos.
- Make sure that the user credential used for registering the classic cluster is a valid LDAP user with an admin role in Ambari.

Open ports for Cluster Connectivity Manager

Ensure that outgoing traffic is allowed on the port range 443 on the legacy CDH, HDP, or Cloudera Base on premises cluster.

After making sure that your clusters meet all the requirements, you can add your CDH, HDP, and Cloudera Base on premises clusters to Cloudera.

Related Information

[Cluster Connectivity Manager \(CCM\)](#)

[Using classic clusters with a non-transparent proxy](#)

Adding an HDP classic cluster

You must register HDP clusters with Cloudera before you can use them with Cloudera on cloud services and components.

About this task

To ensure optimum security, clusters within the customer environment are not accessible for communication: They have private IP addresses and cannot be accessed outside the firewall. To add your cluster to Cloudera, a communication line needs to be established.

The Cluster Connectivity Manager inverted proxy solves the problem by establishing a connection from the on-premise cluster to Cloudera. You must download and install the jumpgate agent and the connectivity install scripts to establish a secure two-way communication channel. The jumpgate agent ensures that the connectivity is stable. The connectivity scripts and their installation ensure safe connectivity and communication.

Before you begin

- HDP clusters must be managed by Ambari. HDP clusters that are not managed by Ambari cannot be registered to Cloudera.
- HDP clusters must include Knox.
- HDP clusters must include Ranger policy settings
- LDAP/AD must be set up and synced in Ambari.

LDAP settings are automatically detected from the default topology setup in Knox. If the default topology does not have the LDAP setup, you will be asked to provide another topology name where you have configured the LDAP. If that topology has LDAP, the setup continues. If the LDAP is not configured, you will receive an error message.

- Kerberos must be enabled on the HDP cluster and the LDAP/AD must be set up in the Kerberos authentication so that the same set of LDAP/AD credentials can be used to access Ambari APIs as well as Beacon APIs.
- All clusters must meet the requirements identified in [Prerequisites for adding classic clusters](#).



Caution: After you register an HDP cluster in Cloudera, do not change the cluster name in Ambari. A cluster name change in Ambari does not currently propagate to Cloudera, which can result in issues when using the HDP cluster with Cloudera clusters and components.



Caution: The jumphost and connectivity-install scripts files must be stored in a secure environment

Steps

The process to register an HDP cluster is as follows:

1. Log in to Cloudera and navigate to the Cloudera Management Console.
2. Click Classic Clusters in the left navigation panel.
3. Click Add Cluster.

Cloudera displays the Cluster Details dialog box.

4. If you are a first time user, under Step 1 in the Register Classic Cluster wizard, click GET STARTED. If you are not a first time user, click the ADD CLUSTER button on the right side of the listing page.

Cloudera displays the Cluster Details dialog box.

5. Select HDP.

6. Provide the following connectivity information for your new cluster:

- a. Knox IP Address
- b. Knox port
- c. Data center
- d. Click CONNECT

Step 1 might take up to 5 minutes if you are adding the cluster for the first time. After Classic Cluster establishes connection, Cloudera will highlight Step 2 in the Register Classic Cluster wizard.

7. Start the download and installation process for the connectivity files by clicking the Files button in Step 2 of the wizard.

8. Follow the instructions in the Setup Connectivity Client dialog box. You need to download the jumpgate-agent rpm file and the cluster_connectivity_setup_files zip files and copy them to your Knox node. Or if your Knox is running in HA mode, you need to copy the files to the Knox proxy host in the cluster:

- a. Download the jumpgate-agent RPM and cluster_connectivity_setup_files.zip.
- b. In the command line interface, copy the two files to the Knox or Knox proxy host.
- c. SSH to the host.
- d. Install the jumpgate-agent rpm using:

```
yum --nogpgcheck localinstall < downloaded-jumpgate-agent-rpm >
```

- a. Unzip the cluster_connectivity_setup_files file. Inside this zip file there is a script install.sh.
- b. Run install.sh by using ./install.sh command.
- c. Check service status to see if the agent has been connected:

```
systemctl status jumpgate-agent.service
```

9. Enter the following information as the install script prompts for it:

- a. Enter Ambari URL (http(s)://host:[port]):
- b. Enter Ambari Username:
- c. Enter Ambari Password:

10. If Knox is not installed on a proxy server, proceed to Step 12. Classic Cluster sets up the topology for the Knox server and establishes the connection.

11. If Knox is installed on a proxy server, Classic Cluster displays the following message: We discovered that your Knox is installed in HA mode. Please confirm if this node is your proxy node (yes/no): Enter yes. Classic Cluster generates XML content that you will need to add to your Knox hosts. Classic Cluster also displays three steps you must perform on all of your Knox hosts:

- a. Copy the generated XML to /usr/hdp/current/knox-server/conf/topologies/cdp_default.xml
- b. Run chown knox:knox cdp_default.xml
- c. Check the Knox logs/deployment directory to verify that the cdp_default topology is deployed.
- d. After you have completed steps a through c on all of your Knox hosts, type Enter to continue. This sets up the topology for the Knox server or Knox proxy host and establishes the connection.

12. On the Classic Clusters page, click Test Connection in the Step 2 pane to verify whether the connection is successful.

13. Cloudera starts checking the connectivity with the HDP cluster. When the connectivity is successful, proceed to Step 3 in the wizard.

If the connection attempts fail or if there is an error in the connectivity, Cloudera displays troubleshooting information in Step 2 of the registration wizard. Follow the troubleshooting information to fix the connectivity error, then click Test connection.



Note: After you download the files, the cluster_connectivity_setup_files download is disabled. At this point, you can regenerate the cluster connectivity setup files using the regenerate files option. This option comes in handy if you lose the files previously downloaded before you can set the cluster connectivity in the cluster.

14. Click Register in Step 3 of the registration wizard.

15. In the Cluster Details dialog box, provide the username and password to access the cluster, then click CONNECT.

The user should have admin access to the cluster services.

16. Finish registering the cluster by providing the following information.

- a. Cluster Location
- b. Data Center
- c. Tags (optional)
- d. Description (optional)

If LDAP is not set up on the default topology, the system will ask for the following additional information: Enter knox topology name that contains LDAP setup.

17. Click ADD.

Result

Once the cluster has been registered, you can use it with Cloudera.

Adding a CDH classic cluster

You must register CDH clusters in Cloudera before you can use them with Cloudera on cloud services and components.

About this task

To ensure optimal security, clusters within the customer environment are not accessible for communication; They have private IP addresses and cannot be accessed outside the firewall. To add your cluster to the Cloudera, a communication line needs to be established.

The Cluster Connectivity Manager inverted proxy solves the problem by establishing a connection from the on-premise cluster to Cloudera. You must download and install the jumpgate agent and the connectivity install scripts to establish a secure two-way communication channel. The jumpgate agent ensures that the connectivity is stable. The connectivity scripts and their installation ensure safe connectivity and communication.

The high-level steps to register a CDH cluster using Cluster Connectivity Manager are as follows:

1. In the Cloudera Management Console, you enter the private IP address of your cluster and provide the cluster details.
2. You download the jumpgate agent rpm from the specified location and the connectivity installation scripts from Cloudera on to the cluster.
3. You install jumpgate agent on the cluster.
4. You register the cluster for performing further operations.

Detailed steps are provided below.

Before you begin

- CDH clusters must have been created using Cloudera Manager. Clusters that are not managed by Cloudera Manager cannot be registered to Cloudera.
- All clusters must meet the requirements identified in [Prerequisites for adding classic clusters](#).



Caution: After you register a CDH cluster in Cloudera, do not change the cluster name in Cloudera Manager. A cluster name change in Cloudera Manager does not currently propagate to Cloudera, which can result in issues when using the CDH cluster with Cloudera clusters and components.



Caution: The jumpgate agent and connectivity-install scripts files must be stored in a secure location.

Steps

Perform the following steps to add a CDH cluster:

1. Log in to Cloudera and navigate to the Cloudera Management Console.
2. Click Classic Clusters in the left navigation panel.
3. Click Add Cluster.

Cloudera displays the Cluster Details dialog box.

4. Click CDH.
5. Provide the connectivity information for your new cluster:



Note: Make sure that the Data Center name is different from the Data Center names that have already been registered. If the Data Center name exists, make sure that the combination of the Data Center name and the cluster name is unique. Else, you may get an error when you try to add a cluster with an existing Data Center-cluster name combination.

- a. Cloudera Manager IP address
- b. Cloudera Manager Port
- c. Data center
- d. Select the My cluster runs on HTTPS option if the CDH cluster uses HTTPS.

Step 1 might take up to five minutes if you are adding the cluster for the first time. After Step 1 is complete, Cloudera will highlight Step 2.

6. Start the download and installation process for the connectivity files by clicking the Files button in the Step 2 pane.
7. Follow the instructions in the Setup Connectivity Client dialog box. You need to download the jumpgate-agent rpm file and the cluster_connectivity_setup_files zip file onto Cloudera Manager host in your new cluster:
 - a. Download the jumpgate-agent RPM and cluster_connectivity_setup_files.
 - b. In the command line interface, copy the two files to the Cloudera Manager host.
 - c. SSH to the Cloudera Manager host.
 - d. Install the jumpgate-agent rpm using:

```
yum --nogpgcheck localinstall <
downloaded-jumpgate-agent-rpm >
```

- e. Unzip the cluster_connectivity_setup_files file. Inside this zip file there is a script install.sh.
- f. Run install.sh by using ./install.sh command.
- g. Check service status to see if the agent has been connected:

```
systemctl status jumpgate-agent.service
```

On the Classic Clusters page, click Test Connection in the Step 2 pane to verify whether the connection is successful.

After Cloudera successfully connects to your new cluster, it will highlight Step 2. the connectivity with the cluster. When the connectivity is successful, proceed to Step 3 in the UI.

If the connection attempts fail or if there is an error in the connectivity, Cloudera displays troubleshooting information in the Step 2 pane. Follow the troubleshooting information to fix the connectivity error, then click Test connection.



Note: After you download the files, the cluster_connectivity_setup file download is disabled. At this point, you can regenerate the cluster connectivity setup files using the regenerate files option. This option comes in handy if you lose the files previously downloaded before you can set the cluster connectivity in the cluster.

8. Click Register in the Step 3 pane.
9. Provide the username and password of the Cloudera Manager user to access the cluster.

10. Finishing registering the cluster by providing the following information:

- a. Cluster Location
- b. Data Center
- c. Tags (optional)
- d. Description (optional)

11. Click Submit.

Result

Once the cluster has been registered, you can use it with Cloudera.

Adding a Cloudera Base on premises classic cluster

You must register Cloudera Base on premises clusters with Cloudera before you can use them with Cloudera on cloud services and components.

To ensure optimum security, clusters within the customer environment are not accessible for communication: They have private IP addresses and cannot be accessed outside the firewall. To add your cluster to the Cloudera, a communication line needs to be established.

The Cluster Connectivity Manager inverted proxy solves the problem by establishing a connection from the on-premise cluster to Cloudera. You must download and install the jumpgate agent and the connectivity install scripts to establish a secure two-way communication channel. The jumpgate agent ensures that the connectivity is stable. The connectivity scripts and their installation ensure safe connectivity and communication.

Note: The jumpghost and connectivity-install scripts files must be stored in a secure environment.

To register the Cloudera Base on premises cluster as a classic cluster, you enter the Cloudera Base on premises cluster details. The Management Console acquires the configuration details from the Cluster Connectivity Manager service and saves it as ZIP files. You download the ZIP files, install the acquired configurations, and then register the Cloudera Base on premises cluster as a classic cluster.

Note: After you register a Cloudera Base on premises cluster in Cloudera, do not change the cluster name in Cloudera Manager. A cluster name change in Cloudera Manager does not currently propagate to Cloudera, which can result in issues when using clusters with Cloudera clusters and components.

All the clusters must meet the requirements identified in [Prerequisites for adding classic clusters](#).

You have two options for registering your Cloudera Base on premises cluster:

- If you would like to use the Cloudera Base on premises cluster with Cloudera Replication Manager, register the cluster using Cloudera Manager.
- If you would like to use the Cloudera Base on premises cluster with Cloudera Replication Manager and Cloudera Data Catalog, register the cluster using Cloudera Manager and Knox.



Important: Cloudera Base on premises clusters can be used in Cloudera Data Catalog by registering them using Cloudera Manager and Knox endpoints. Note that this is a technical preview feature and is under development. Do not use this in your production environment. If you have feedback, contact Support by logging a case on the Cloudera Support Portal at <https://my.cloudera.com/support.html>. Technical preview features are not guaranteed troubleshooting and fixes

For Cloudera Base on premises cluster registration steps in Cloudera, see the following documentation:

Adding a Cloudera Base on premises cluster for use in Cloudera Replication Manager (Cluster Connectivity Manager v2)

Register a Cloudera Base on premises cluster as a classic cluster using Cloudera Manager so that you can use this cluster as a source cluster in Replication Manager.

Before you begin

All the clusters must meet the requirements identified in [Prerequisites for adding classic clusters](#).

Steps

1. Log in to Cloudera Management Console.
2. Click Classic Clusters.
3. On the Classic Clusters page, click ADD CLUSTER.
4. In the Add Cluster dialog box, navigate to the Cloudera Base on premises tab and enter the following details:
 - a. If your cluster is not reachable by a public network, click “My cluster is accessible only in my private network”.
 - b. Cloudera Manager IP address - Enter the IP address of the Cloudera Manager of the Cloudera Base on premises cluster. The Cloudera Management Console uses this IP address to identify the cluster for registration purposes.
 - c. Cloudera Manager Port - Enter the port of the Cloudera Manager of the Cloudera Base on premises cluster.
 - d. Data center - Enter a unique data center name for the Cloudera Base on premises cluster.
 - e. Select the My cluster runs on HTTPS option if the Cloudera Base on premises cluster uses HTTPS.
 - f. Clear the Register KNOX endpoint (Optional) option, if selected.
 - g. Click CONNECT.

The Cloudera Management Console acquires the configuration details from Cluster Connectivity Manager service. After Cloudera successfully connects to your new cluster (which should take no more than 5 minutes), it will highlight Step 2.

5. On the Classic Clusters page, click Files in the Step 2 pane.
6. Follow the instructions in the Setup Connectivity Client dialog box. You need to download the jumpgate-agent rpm file and the cluster_connectivity_setup_files zip file onto Cloudera Manager host in your new cluster:
 - a. In the command line interface, copy the jumpgate-agent RPM and cluster_connectivity_setup_files.zip to the Cloudera Manager host.
 - b. SSH to the Cloudera Manager host.
 - c. Install the jumpgate-agent rpm using:

```
yum --nogpgcheck localinstall <
downloaded-jumpgate-agent-rpm >
```

- a. Unzip the cluster_connectivity_setup_files file. Inside this zip file there is a script install.sh.
- b. Run install.sh by using ./install.sh command.
- c. Check service status to see if the agent has been connected:

```
systemctl status jumpgate-agent.service
```



Note: If you regenerate the script files, you cannot use the previously downloaded cluster_connectivity_setup_files.zip file because the file is no longer valid.

7. On the Classic Clusters page, click Test Connection in the Step 2 pane to verify whether the connection is successful.
8. Click Register in the Step 3 pane.
9. In the Cluster Details dialog box, enter the Cloudera Manager credentials that have Admin access to Cloudera Manager and the cluster services.
10. Click CONNECT.

11. To complete the registration, enter the following details on the Classic Clusters page:

- a. Cluster Location - Enter the geographical location of the Data Lake.
- b. Data Center - Ensure that the data center name is the name that you provided for the Cloudera Base on premises cluster during registration.
- c. Tags - Optionally, enter the tags for the cluster.
- d. Description - Optionally, enter a description.

12. Click Add.

Result

You can use the registered classic cluster in the Cloudera Replication Manager.

Adding a Cloudera Base on premises cluster for use in Cloudera Replication Manager and Cloudera Data Catalog (CCMv2)

Register a Cloudera Base on premises cluster as a classic cluster using Cloudera Manager and Knox endpoints so that you can use this cluster in Cloudera Replication Manager and Cloudera Data Catalog.

Before you begin

All the clusters must meet the requirements identified in [Prerequisites for adding classic clusters](#).

Additionally, ensure that the following components and roles are available:

- The Cloudera Base on premises cluster has an active Knox service.
- You can proxy to Cloudera Manager through Knox for communication purposes.
- LDAP is configured in the Cloudera Manager of Cloudera Base on premises cluster. For more information, see [Configure authentication using an LDAP-compliant identity service](#).
- A minimum of one LDAP user with the Full Administrator role.
- An LDAP-based topology `cdp_default.xml` with CM-API, CM-UI, ATLAS, ATLAS-API, RANGERUI, and RANGER services exists. The topology name is used during the classic cluster registration process.



Note: If there are policies that restrict access through Knox, then add the topology name to the `cdp_default` Ranger policy so that the Ranger policies can communicate through Knox.



Important: Cloudera Base on premises clusters can be used in Cloudera Data Catalog by registering them using Cloudera Manager and Knox endpoints. Note that this is a technical preview feature and is under development. Do not use this in your production environment. If you have feedback, contact Support by logging a case on the Cloudera Support Portal at <https://my.cloudera.com/support.html>. Technical preview features are not guaranteed troubleshooting and fixes.

Steps

1. Log in to the Cloudera Management Console.
2. Click Classic Clusters.
3. On the Classic Clusters page, click ADD CLUSTER.

4. In the Add Cluster dialog box, navigate to the Cloudera Base on premises tab and enter the following details:
 - a. If your cluster is not reachable by a public network, click “My cluster is accessible only in my private network”.
 - b. Cloudera Manager IP address - Enter the IP address of the Cloudera Manager of the Cloudera Base on premises cluster. The Management Console uses this IP address to identify the cluster for registration purposes.
 - c. Cloudera Manager Port - Enter the port of the Cloudera Manager of the Cloudera Base on premises cluster.
 - d. Data center - Enter a unique datacenter name for the Cloudera Base on premises cluster.
 - e. Select the My cluster runs on HTTPS option if the Cloudera Base on premises cluster uses HTTPS.
 - f. Select the Register KNOX endpoint (Optional) option.
 - g. KNOX IP Address - Enter the IP address of the Knox host for the Cloudera Base on premises cluster.
 - h. KNOX Port - Enter the port for the Knox service.
 - i. Click CONNECT.

The Management Console acquires the configuration details from Cluster Connectivity Manager (CCM) service. After CDP successfully connects to your new cluster (which should take no more than 5 minutes), it will highlight Step 2.

5. On the Classic Clusters page, click Files in the Step 2 pane.
6. Follow the instructions in the Setup Connectivity Client dialog box. You need to download the jumpgate-agent rpm file and the cluster_connectivity_setup_files zip file onto Cloudera Manager host in your new cluster:
 - a. In the command line interface, copy the RPM and ZIP files to the Cloudera Manager host.
 - b. SSH to the Cloudera Manager host.
 - c. Install the jumpgate-agent rpm using `yum --nogpgcheck localinstall < downloaded-jumpgate-agent-rpm >`
 - d. Unzip the cluster_connectivity_setup_files file. Inside this zip file there is a script install.sh.
 - e. Run install.sh by using `./install.sh` command.
 - f. Check service status to see if the agent has been connected: `systemctl status jumpgate-agent.service`



Note: If you regenerate the script files, you cannot use the previously downloaded cluster_connectivity_setup_files.zip file because the file is no longer valid.

7. On the Classic Clusters page, click Test Connection in the Step 2 pane to verify whether the connection is successful.
8. On the Classic Clusters page, click Register in the Step 3 pane.
9. In the Cluster Details dialog box, enter the Cloudera Manager credentials that have Admin access to Cloudera Manager and the cluster services.
10. Click CONNECT.
11. To complete the registration, enter the following details on the Classic Clusters page:
 - a. Cluster Location - Enter the geographical location of the Data Lake.
 - b. Data Center - Ensure that the data center name is the name that you provided for CDP Private Cloud Base cluster during registration.
 - c. Tags - Optionally, enter the tags for the cluster, if any.
 - d. Description - Optionally, enter a description.
12. Click Add.

Result

You can use the registered classic cluster in Cloudera Replication Manager and Cloudera Data Catalog.

Using classic clusters with a non-transparent proxy

If your organization has a non-transparent proxy on the Cloudera Manager/Knox node, the following steps must be performed prior to classic cluster registration.



Note: These steps only apply if you have a non-transparent proxy. You do not need to perform them if you have a transparent proxy.



Note: An https proxy is supported only if the certificate is added to the system trust store.

When you register a cluster in Cloudera as a classic cluster, Cloudera installs Cluster Connectivity Manager on the Cloudera Manager/Knox node of CDH and HDP clusters to establish connection between the on-premise cluster and Cloudera, allowing communication with the Cloudera Control Plane to kick off replication jobs on schedule. To do this, Cluster Connectivity Manager must be able to connect to the outside of the Data Center.

Steps

Create the following file on the Cloudera Manager node (in case of a CDH or Cloudera Base on premises cluster) or on the Knox node (in case of an HDP cluster):

```
/etc/cdp/proxy.env
```

The file should include a proxy link. The format of the file should be:

```
https_proxy=http://<username>:<password>@<proxy.com>
```

- The <username> and <password> should be replaced with an actual username that allows access to the proxy.
- The <proxy.com> should be replaced with the URL of the proxy server.

Once you've performed these steps, you can proceed to registering your cluster in Cloudera.

Troubleshooting classic cluster registration errors (Cluster Connectivity Manager v2)

While trying to resume the registration process, you can identify the problem behind the error and fix it.

Issues during registration in Cloudera

Error or issue details	Resolution
Alert: Registration is pending for a cluster with the same details.	<ul style="list-style-type: none"> • A cluster with the same IP Address and Data Center cannot be registered again. • Check if you have registered this cluster already. To check this, navigate to the Classic Clusters page and search for your cluster. • Check if the IP address is correct. • Provide a different Data Center name.

Cluster side issues

Error or issue details	Resolution
Connection refused even though the systemctl status jumpgate-agent.service shows that the jumpgate agent is running.	Make sure that you copied the right setup files for the cluster or check if the port number CCM_TUNNEL_SERVICE_PORT in cluster_connectivity.conf is your Cloudera Manager's port number in case of CDH/Cloudera Base on premises cluster and Knox port number in case of HDP cluster.

Error or issue details	Resolution
Test connection failure	<p>Try the following:</p> <ul style="list-style-type: none"> • Check if the jumpgate agent is running: systemctl status jumpgate-agent.service • If the jumpgate agent is not running, start the agent by running the install script. • If the agent is active, check if the port number entered during registration is correct. • If the port number is incorrect, delete the registration attempt from the UI, remove all the setup-related files from the cluster node and re-register the cluster with the correct information. • If the port number is correct, check if outbound connection to the Cloudera Control Plane is allowed. <ul style="list-style-type: none"> • cat cluster_connectivity.conf and collect the RELAY_SERVER • Check if the RELAY_SERVER is reachable from the node: <ul style="list-style-type: none"> • On the node, execute the command nslookup <RELAY_SERVER> to check if the RELAY_SERVER is reachable from the node. • Or execute curl command as mentioned here for connectivity check: curl https://<RELAY_SERVER>:443 • Or execute telnet command as mentioned here: telnet <RELAY_SERVER> 443 • If this fails, then the traffic to the cloudera network is blocked on the customer's VPC. • You should check the outbound rules on your VPC to make sure that the traffic to the Cloudera network is allowed. If the agent is active, check if there are any Ranger policies set up to deny access to the cluster. If such policies exist on the cluster, modify or set up policies to allow access to the cluster cdp_default topology • If the agent is active, check if there are any Ranger policies set up to deny access to the cluster. If such policies exist on the cluster, modify or set up policies to allow access to the cluster cdp_default topology • If the tunnel is active, check if the port number entered during registration is correct. • If the port number is incorrect, delete the registration attempt from the UI, remove all the setup-related file from the cluster node and re-register the cluster with the correct information. • If the port number is correct, check if outbound connection to CDP control plane (host/port = CCM_HOST/CCM_SSH_PORT) is allowed on the directory which has the ssh setup files. <ul style="list-style-type: none"> • cat reverse_tunnel.conf or cat cluster_connectivity.conf and collect the following properties - CCM_HOST, CCM_SSH_PORT, CCM_TUNNEL_INITIATOR_ID • Check if the NLB is reachable from the node: <ul style="list-style-type: none"> • On the node, execute the command nslookup <CCM_HOST> to check if the NLB is reachable from the node. • If this fails, then the traffic to the cloudera network is blocked on the customer's VPC. • The customer should check the outbound rules on their VPC to make sure that the traffic to the cloudera network is allowed.

Cluster Connectivity Manager issues

Classic Clusters registration uses Cluster Connectivity Manager, enabled by the installation of the Cluster Connectivity Manager client and secrets on the Cloudera Manager node.

Error or issue details	Resolution
<p>"Unable to identify a backendId for this request. This usually happens if either the backendId is invalid or the agent has not yet connected to the relay server"</p> <p>OR</p> <p>"No route found for backend with id <backend-id>. This usually happens if either the backendId is invalid or the agent has not yet connected to the relay server."</p>	<p>The Cluster Connectivity Manager v2 Network Load Balancers (NLBs) might be unreachable. To verify, execute <code>cat cluster_connectivity.conf</code> and collect the <code>RELAY_SERVER</code> field's value and make sure that the <code>RELAY_SERVER</code> on port 443 is reachable from the legacy CDH/HDP master nodes.</p>

Other issues

Error or issue details	Resolution
<p>If Cluster name and Display name are different, few details are missing from the cluster detail page.</p>	<p>Cluster name and Display name must be the same.</p>

If registering your cluster for use with Cloudera Data Catalog, also check the following:

- Check Proxy to Cloudera Manager through Apache Knox is enabled.
- Make sure that you created the `cdp_default` topology on the Knox host with required services and LDAP configuration; it's a prerequisite.
- When creating the `cdp_default` topology on the Knox host, make sure that you use `cdp-proxy-api.xml` instead of `cdp-proxy.xml`, otherwise the connection will fail.

Resuming the cluster registration

If the cluster registration does not succeed due to some factors, you can resume the registration, identify and fix any issues, and complete the registration process.

Procedure

1. Go to the Classic Clusters page.
2. From the list of unregistered clusters that appears, select your cluster and start the process from the point you left off.

Deleting an unregistered classic cluster

If you started registering an on-prem cluster in Cloudera on cloud using Cluster Connectivity Manager v1 and have not yet completed it, we recommend that you delete the unregistered cluster and re-register it using Cluster Connectivity Manager v2.

Classic clusters that are already registered with Cluster Connectivity Manager v1 continue to use Cluster Connectivity Manager v1, but new cluster registrations should be using Cluster Connectivity Manager v2. If you started registering an on-prem cluster in Cloudera on cloud using Cluster Connectivity Manager v1 and have not yet completed it, we recommend that you delete the unregistered cluster and re-register it using Cluster Connectivity Manager v2. We suggest this as it will save the future efforts required to upgrade from Cluster Connectivity Manager v1 to Cluster Connectivity Manager v2.

Steps

1. If you reached step 2 or 3 in classic cluster registration, you should first stop the Cluster Connectivity Manager tunnel and then clean up the setup files that you must have downloaded for Cluster Connectivity Manager v1. Run

the following commands on the Cloudera Manager host (CDH or Cloudera Base on premises cluster) or on the KNOX host (HDP cluster).

- a. Check the tunnel status:

```
systemctl status ccm-tunnel@CM.service
```

- b. Use below commands to stop tunnel and cleanup Cluster Connectivity Manager v1 resources:

- CentOS7/RHEL7:

CDH or Cloudera Base on premises cluster

```
systemctl stop ccm-tunnel@CM.service  
yum remove autossh
```

HDP cluster

```
systemctl stop ccm-tunnel@KNOX.service  
yum remove autossh
```


- CentOS6/RHEL6:

CDH or Cloudera Base on premises cluster

```
service reverse-tunnel stop 'CM'  
yum remove autossh
```

HDP cluster

```
service reverse-tunnel stop 'KNOX'  
yum remove autossh
```

2. Delete the cluster from the classic cluster UI by clicking on the  context menu next to the cluster name and selecting Remove.
3. Enter the cluster name and click Remove.

Managing a classic cluster

You can manage a CDH, HDP, or Cloudera Base on premises cluster using the Classic Cluster user interface.

About this task

You can perform the following management functions using the Classic Cluster user interface.

Procedure

1. You can delete a cluster if it has not been completely registered by clicking the delete icon next to the cluster entry in the list of clusters.

Type	Status	Name	IP Address	Data center	Port	Last Updated		
	Registration In Progress	NA	127.0.0.1	test12345	8989	21-Apr-2020 10:03:11	▼	
	Registration In Progress	NA	172.27.128.68	test1170	7180	16-Apr-2020 02:41:05	▼	
	Registration In Progress	NA	172.27.128.68	test3625	7180	14-Apr-2020 22:12:21	▼	
	Registration In Progress	NA	172.27.128.68	test2485	7180	14-Apr-2020 22:10:02	▼	

2. You can view cluster details from the UI by clicking the cluster name in the list of clusters.

Type	Status	Name	IP Address	Data center	Port	Last Updated	
	Active	Cluster 1	172.27.82.4	577Multi2	7180	30-Apr-2020 02:25:21	
	Active	cl1	172.27.128.193	hdg26	8080	30-Apr-2020 01:42:28	
	Active	mycluster0	172.27.68.6	344HDPrivateCCM	8443	29-Apr-2020 18:07:53	

Classic Cluster displays the Details dialog box.

The screenshot shows the Cloudera Management Console interface. On the left is a sidebar with navigation options: Dashboard, Environments, Data Lakes, User Management, Data Hub Clusters, Data Warehouses, ML Workspaces, Classic Clusters (selected), and Cost Management. The main content area is titled 'Classic Clusters / Details' and shows the details for 'Cluster 1'. The cluster is located in Chennai, India, with data center 577Multi2, version 7.1.1, and 3/3 nodes. It is registered at Wed Apr 29 2020 by Arun Sarin. The 'Cluster Services' section lists ZooKeeper, HDFS, HIVE, YARN, and KAFKA. The 'Cluster Registration Details' section shows the Cluster Manager URL, Registration Mode (Basic Auth), Kline URL (NA), and SSL Validation (DISABLED).

LOCATION	DATA CENTER	CLUSTER VERSION	NODES	TAGS	REGISTERED AT	REGISTERED BY
Chennai, India	577Multi2	7.1.1	3/3	577	Wed Apr 29 2020	Arun Sarin

Cluster 1 (Last Updated: 30-Apr-2020 02:25:21)

INFORMATION

- Description: 577
- Connectivity: Reachable
- DataNodes: 2
- NodeManagers: 2
- Average Kafka Broker Topics In: 0 / sec
- Kafka Active Controller Count: 1
- Kafka Partition Count: 0

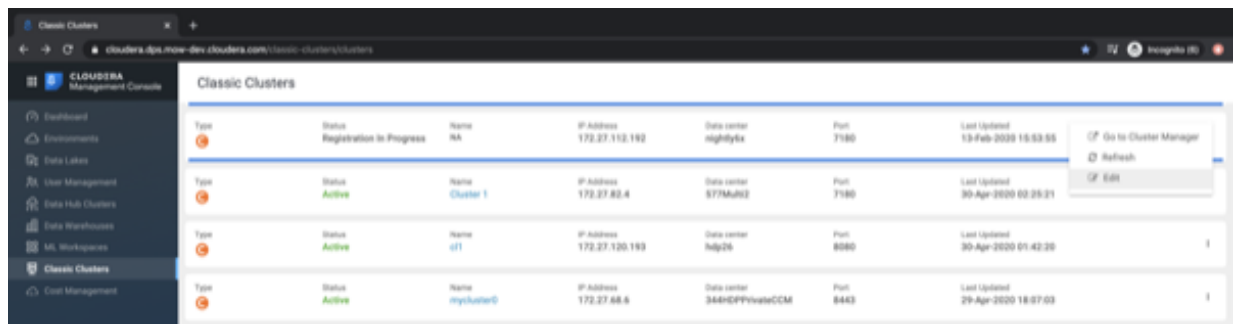
Cluster Services

- ZOOKEEPER
- HDFS
- HIVE
- YARN
- KAFKA

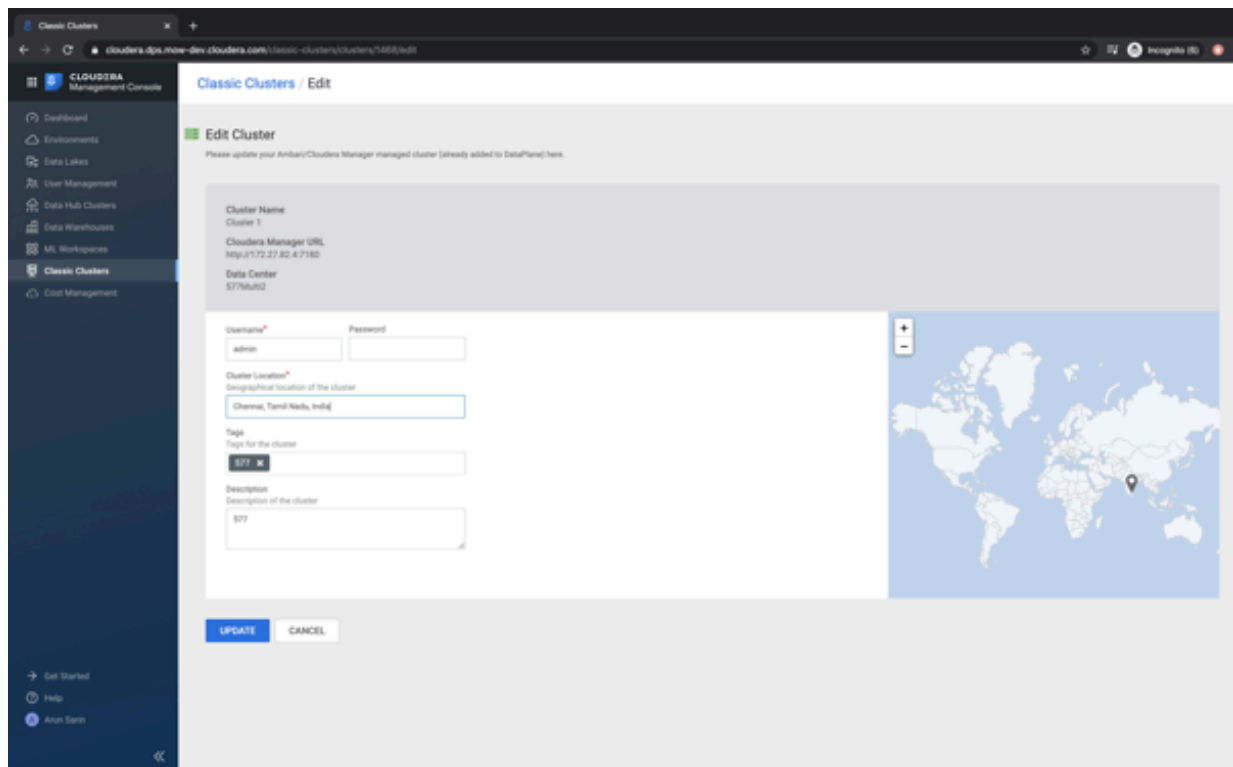
CLUSTER REGISTRATION DETAILS

- Cluster Manager URL: http://172.27.82.4:7180
- Registration Mode: Basic Auth
- Kline URL: NA
- SSL Validation: DISABLED

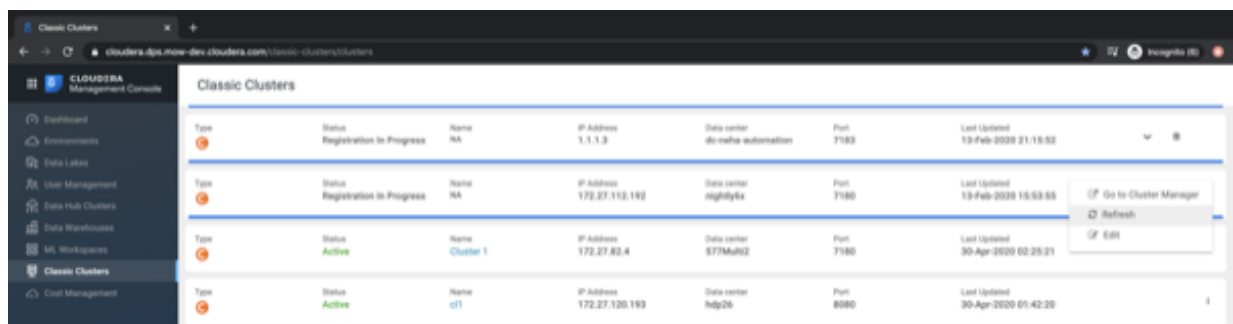
- You can edit a cluster from the UI by choosing the Edit option from the pull down menu next to the cluster entry in the list of clusters.



Classic Cluster displays the Edit dialog box.



- You can refresh cluster information for a registered cluster by choosing the Refresh option from the pull down menu next to the cluster entry in the list of clusters.



Upgrading a classic cluster from Cluster Connectivity Manager v1 to Cluster Connectivity Manager v2

Existing classic clusters (CDH, HDP, or Cloudera Base on premises) registered in Cloudera on cloud's Management Console with Cloudera Base on premises v1 (Cluster Connectivity Manager v1) should be upgraded to use Cluster Connectivity Manager v2.

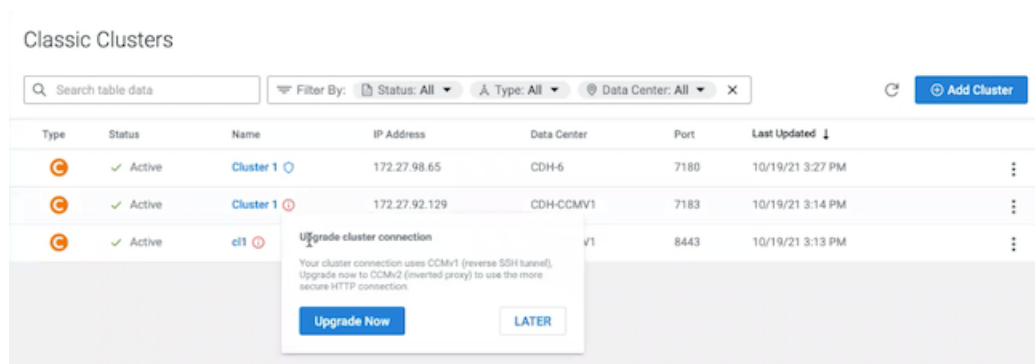
Before you begin

Prior to upgrading, open ports for Cluster Connectivity Manager v2. If you would like to use Cluster Connectivity Manager v2 (Cluster Connectivity Manager v2), ensure that outgoing traffic is allowed on port 443 on the legacy CDH, HDP, or Cloudera Base on premises cluster.

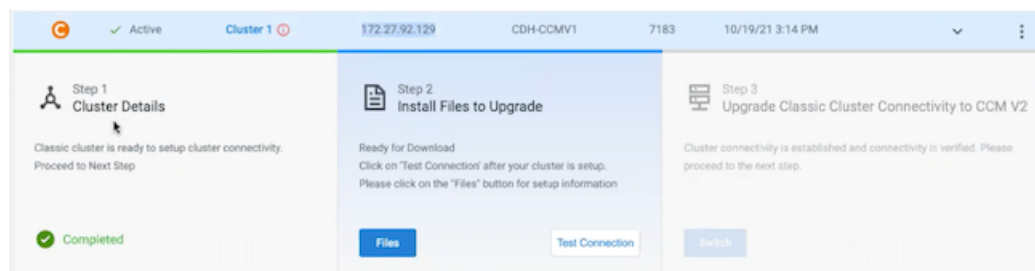
Procedure

1. Log in to the Cloudera web interface.
2. Navigate to the Cloudera Management Console.
3. From the left navigation pane, select Classic clusters.
4. Find your previously registered classic cluster.
- 5.

If your cluster need to be upgraded, you will see the  icon next to its name. After clicking on this icon, you will see the Upgrade Now button, as shown in the following screenshot:



6. Click the Upgrade Now button to start the upgrade process.
7. Information about three upgrade steps is displayed:



8. Cloudera automatically starts step 1. It normally takes 2-4 minutes. Once step 1 is marked as Completed, you can proceed to step 2.

9. In step 2:

- a) Click on Files.
- b) On the Setup Connectivity Client page, select the operating system of your cluster.

Setup Connectivity Client

×

Select OS

Centos7/Centos8/RHEL7/RHEL8, ▾

Follow the instructions on this page to setup the Cluster Connectivity Client on your Cluster in a sequence.

📄

Files

Download files and copy it to the node where your CM is running.

jumpgate-agent	
cluster_connectivity_setup_files	✓

💡

How to Install?

1. Install jumpgate-agent rpm using `yum --nogpgcheck localinstall < downloaded-jumpgate-agent-rpm >`
2. Unzip `cluster_connectivity_setup_files.zip` into a directory
3. Run install.sh file using `./install.sh`
4. Check service status using `jumpgate-agent status` to see if Agent has been connected.

Close

Regenerate Setup Script

ⓘ The previously downloaded zip files will no longer be valid if you regenerate script files.

- c) Download the files mentioned under Files.
- d) Follow the installation steps described under How to Install. You will need to SSH to the host mentioned in these instructions and run the commands.
- e) Once done, click Close.
- f) Click on Test Connection.
- g) Once the connection is successful, step 2 is marked as Completed. You can proceed to step 3.

10. In step 3:

- a) Click on Switch.
- b) A pop-up window appears with instructions on how to clean up Cluster Connectivity Manager v1 resources. Under Select OS, select your operating system and then follow the cleanup steps described for your cluster type. You need to SSH to the specific cluster node indicated in the instructions in order to perform the cleanup. The steps that you need to perform are as follows (The same steps are printed in the UI):

- Centos7/RHEL7

On a CDH or Cloudera Base on premises cluster, run the following on the Cloudera Manager host:

```
systemctl stop ccm-tunnel@CM.service
yum remove autossh
```

On an HDP cluster, run the following on the KNOX host:

```
systemctl stop ccm-tunnel@KNOX.service
yum remove autossh
```

- Centos6/RHEL6


On a CDH or Cloudera Base on premises cluster, run the following on the Cloudera Manager host:

```
service reverse-tunnel stop 'CM'
```







```
yum remove autossh
```

On an HDP cluster, run the following on the KNOX host:

```
service reverse-tunnel stop KNOX
yum remove autossh
```

11. Once your cluster has been upgraded the  icon appears next to its name.

12. From the ICON menu of the upgraded cluster select Refresh to synchronize the cluster with Cloudera:

Type	Status	Name	IP Address	Data Center	Port	Last Updated ↓	
	Connecting	Cluster 1 	172.27.92.129	CDH-CCMV1	7183	10/19/21 3:40 PM	⋮
	✓ Active	Cluster 1 	172.27.98.65	CDH-6	7180	10/19/21 3:27 PM	Launch Cluster Manager
	✓ Active	cdt 	172.27.69.199	HDP-CCMV1	8443	10/19/21 3:13 PM	Refresh Edit Remove Manage Access

13. The cluster status changes to Active.

Results

Once you have performed the upgrade, you can continue using your cluster as usual.