

## Scaling up or down a NiFi Cluster

Date published: 2019-12-16

Date modified: 2024-04-03

# CLouDERA

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# Contents

<b>Scaling up or down a NiFi cluster.....</b>	<b>4</b>
Scaling up a NiFi cluster.....	4
Scaling down a NiFi cluster.....	5

## Scaling up or down a NiFi cluster

You can scale up or down a NiFi cluster based on your requirement by adding or removing nodes respectively.

### Scaling up a NiFi cluster

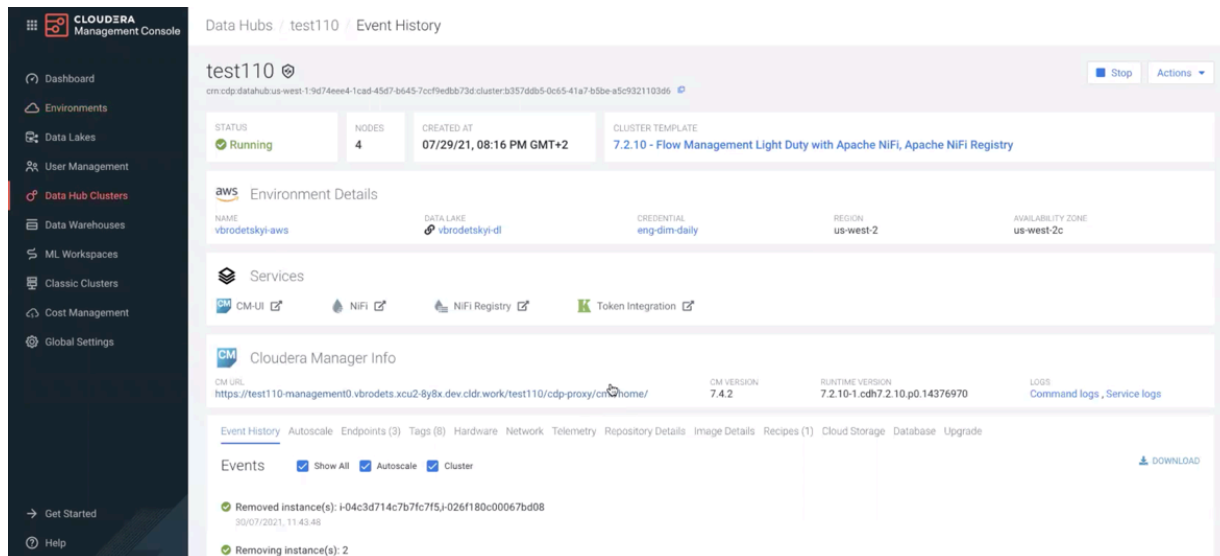
You have a NiFi cluster and you want to increase the throughput by adding new nodes to your NiFi cluster.

#### Before you begin

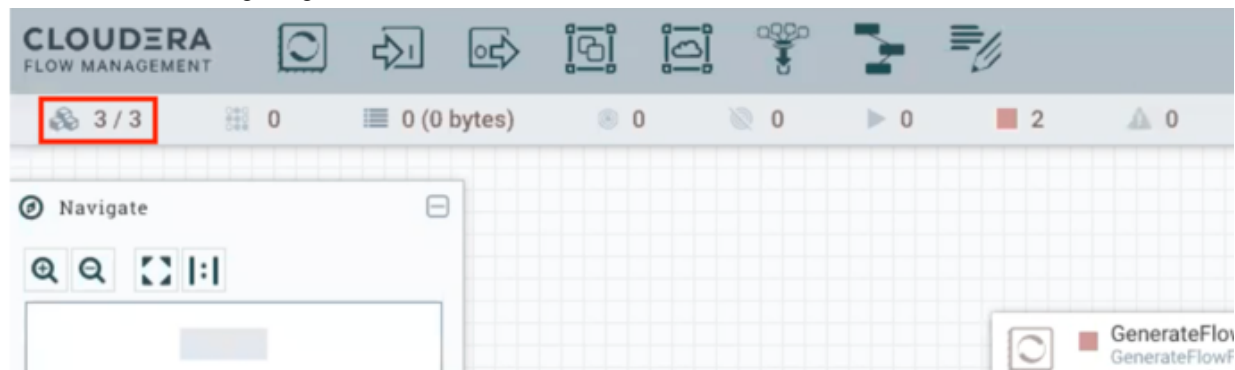
You have a NiFi flow which is running.

#### Procedure

1. Log into CDP Public Cloud UI.
2. Go to Management Console Environments .
3. Select the datahub cluster where your NiFi flow is running.



If you go to the NiFi UI by clicking NiFi, you can check the current number of NiFi nodes in your cluster, as shown in the following image:



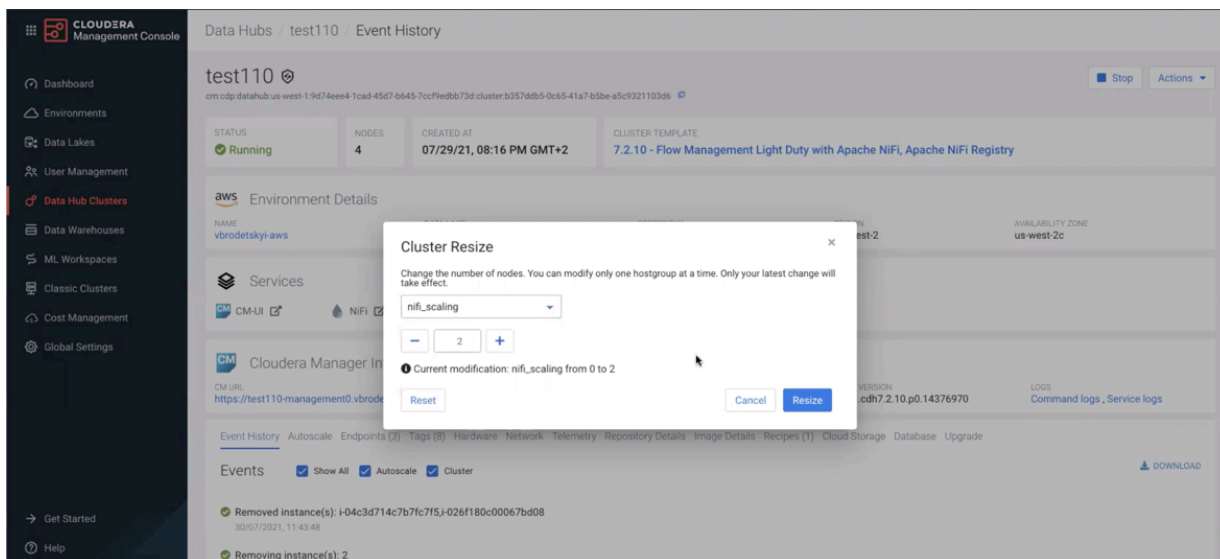
4. Click Actions, and select Resize.

The Cluster Resize window appears.

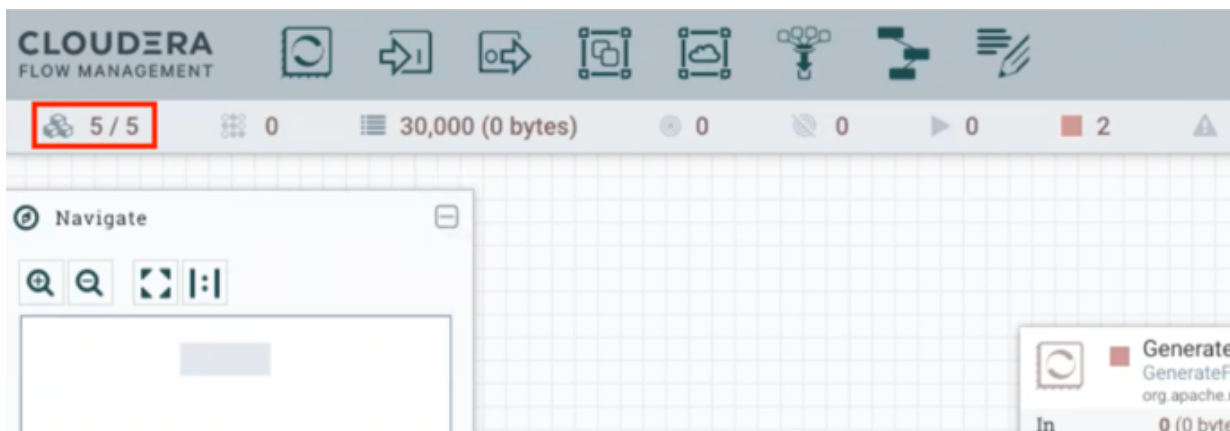
- Select your hostgroup from the dropdown, increase the number of nodes by clicking the + icon, and then click Resize.



**Note:** You need to select the hostgroup carefully. For light duty templates, the hostgroup is nifi\_scaling. For heavy duty templates, the hostgroup is nifi.



It takes some time for the change to take place. In the NiFi UI you can see when the upscale event is completed and the new nodes are added to the NiFi cluster.



### Results

You have now successfully scaled up your NiFi cluster.

## Scaling down a NiFi cluster

You can also remove nodes from your NiFi cluster for cost optimization. For example, scale down the NiFi cluster when there is less data to be processed in order to save infrastructure costs.

### Before you begin

You have a NiFi flow which is running.

### Procedure

- Log into CDP Public Cloud UI.
- Go to Management Console Environments .

- Select the datahub cluster where your NiFi flow is running.

The screenshot shows the Cloudera Management Console interface. The left sidebar contains navigation options like Dashboard, Environments, Data Lakes, User Management, Data Hub Clusters, Data Warehouses, ML Workspaces, Classic Clusters, Cost Management, and Global Settings. The main content area displays details for a cluster named 'test110' in the 'Hardware' category. Key information includes:
 

- STATUS:** Running
- NODES:** 6
- CREATED AT:** 07/29/21, 08:16 PM GMT+2
- CLUSTER TEMPLATE:** 7.2.10 - Flow Management Light Duty with Apache NiFi, Apache NiFi Registry

 Below this, there are sections for 'aws Environment Details' (listing name, data lake, credential, region, and availability zone), 'Services' (listing CM-UI, NiFi, NiFi Registry, and Token Integration), and 'Cloudera Manager Info' (listing CM URL, CM version, runtime version, and logs). At the bottom, a 'Management' table shows the cluster's ID, FQDN, status (Running), and IP addresses.

Before scaling down you can go to the NiFi UI by clicking NiFi to check the current number of NiFi nodes you have in your NiFi cluster, as shown in the following image:

The screenshot shows the Cloudera Flow Management NiFi UI. The top navigation bar includes the Cloudera logo and various icons for cluster management. A status bar below the navigation bar displays '5/5' nodes, indicating that all 5 nodes in the cluster are active. Below this, there is a 'Navigate' panel on the left and a flow diagram on the right. A tooltip for a 'GenerateFlow' node is visible, showing statistics such as 'In: 0 (0 bytes)', 'Read/Write: 0 bytes / 0 I', 'Out: 20,000 (0 b)', and 'Tasks/Time: 20,000 / 00'.

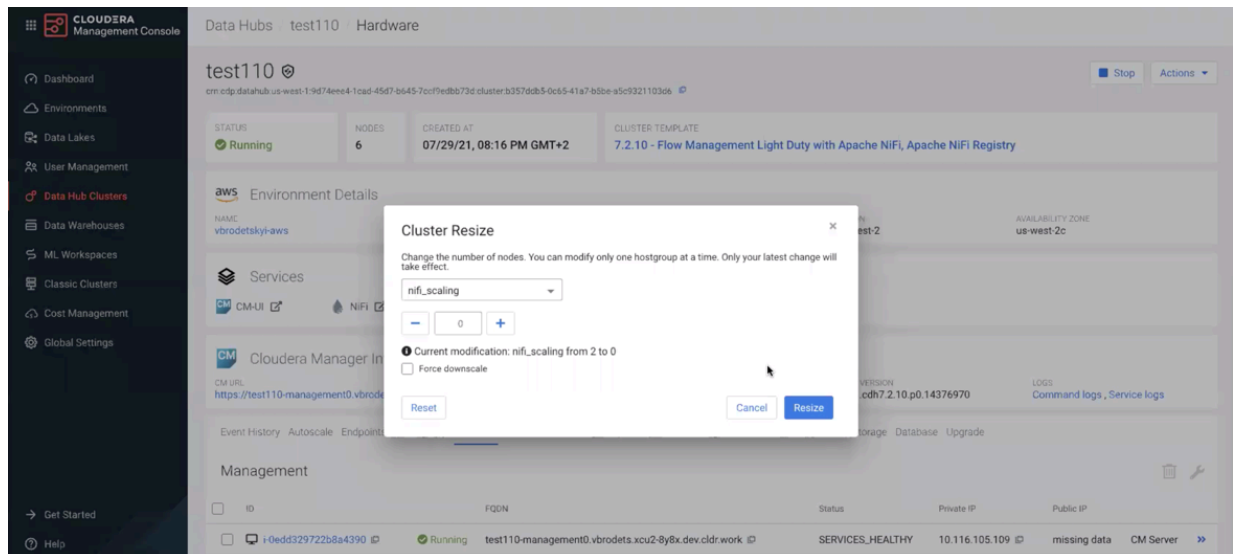
- Click Actions, and select Resize.

The Cluster Resize window appears.

- Select your hostgroup from the dropdown, decrease the number of nodes by clicking the - icon, and then click Resize.



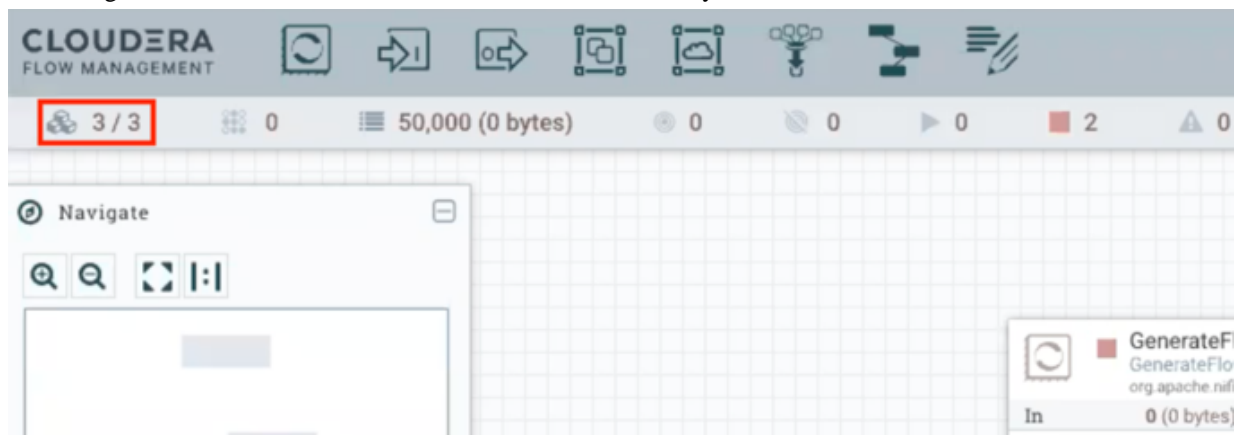
**Note:** You need to select the hostgroup carefully. For light duty templates, the hostgroup is nifi\_scaling. For heavy duty templates, the hostgroup is nifi.



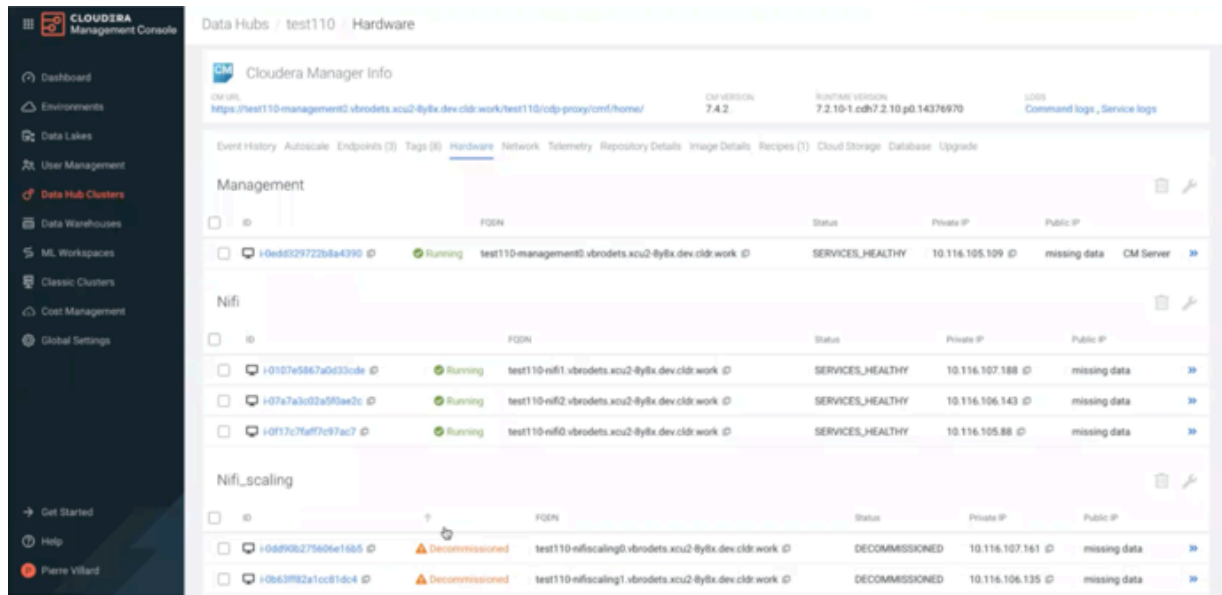
It takes some time for the change to take place. In the background, the following processes occur:

- The nodes to be removed are disconnected from the NiFi cluster.
- Processing of data on these nodes is stopped.
- The data located on the nodes to be removed are moved to the remaining nodes of the cluster. This ensures no data loss during a scale down event.
- The NiFi service is stopped on these nodes
- The underlying virtual machines are stopped and deleted.

You can go to the NiFi UI to check that the nodes are successfully removed from the NiFi cluster:



The scale down event is complete only after the nodes are no longer listed in the Hardware tab of the Data Hub Clusters page, as shown in the following image:



The screenshot displays the Cloudera Management Console interface for a Data Hub environment. The left sidebar shows navigation options like Dashboard, Environments, Data Lakes, User Management, Data Hub Clusters, Data Warehouses, ML Workspaces, Classic Clusters, Cost Management, and Global Settings. The main content area is titled 'Data Hubs / test110 / Hardware' and shows 'Cloudera Manager Info' with details like CM URL, CM VERSION (7.4.2), and SOFTWARE VERSION (7.2.10-1.cdh7.2.10.p0.14376970). Below this, there are tabs for Event History, Autoscale, Endpoints, Tags, Hardware, Network, Telemetry, Repository Details, Image Details, Recipes, Cloud Storage, Database, and Upgrade. The 'Management' section shows a table of nodes with columns for ID, FQDN, Status, Private IP, and Public IP. The 'NiFi' section shows a table of NiFi nodes, and the 'NiFi\_scaling' section shows a table of scaling nodes. The scaling nodes are marked as 'Decommissioned'.

ID	FQDN	Status	Private IP	Public IP
+0ed6929722b6a4390	test110-management0.vbrodets.xcu2-8yflx.dev.cldr.work	Running	10.116.105.109	missing data
+0107e5867a0633cde	test110-nifi1.vbrodets.xcu2-8yflx.dev.cldr.work	Running	10.116.107.188	missing data
+07a7a3a02a5f8ae2c	test110-nifi2.vbrodets.xcu2-8yflx.dev.cldr.work	Running	10.116.106.143	missing data
+0f13c7fa97c97ac7	test110-nifi0.vbrodets.xcu2-8yflx.dev.cldr.work	Running	10.116.105.88	missing data
+08d906275609e1685	test110-nifiscaling0.vbrodets.xcu2-8yflx.dev.cldr.work	Decommissioned	10.116.107.161	missing data
+0863f92a1cc81dc4	test110-nifiscaling1.vbrodets.xcu2-8yflx.dev.cldr.work	Decommissioned	10.116.106.135	missing data

## Results

You have now successfully scaled down your NiFi cluster.