Expanding a ClustrixDB AMI Cluster

This page outlines how to expand your ClustrixDB cluster using the Private AMI.

If you have deployed a cluster using the Private AMI, you must continue to use the Private AMI to expand your cluster.

- Obtain the appropriate version of the Private AMI
- Launch instance(s) of that AMI
- Update your License (optional)
- Add Node(s) to Your Cluster
- Verify Successful Node Addition

Obtain the appropriate version of the Private AMI

This can be requested here or by contacting Clustrix Support. The AMI should be for the appropriate AWS region and be the same as the version of ClustrixDB that your database is *currently* running.

You may have initially provisioned your cluster using a different AMI, then upgraded to a newer version. For expanding your cluster, Clustrix recommends using the AMI for the version currently in use.

Launch instance(s) of that AMI

Ensure that the instances use the same configuration options as your current cluster, including:

- instance type
- key pair
- VPC (where applicable)
- Security Group

Update your License (optional)

If you are expanding your cluster, you may need a license for more cores or nodes. Before expanding your cluster, update your license key in the WebUI or at the command line:

```
sql> set global license = 'l
icense_key_including_braces';
```

After each new node has been prepared using the step above, you are now ready to expand your cluster's capacity.

Add Node(s) to Your Cluster

Connect to one of the existing nodes of your cluster and run the following from a SQL prompt. The IP(s) specified are those for new nodes being added.

Add nodes to your cluster

```
sql> ALTER CLUSTER ADD '
ip' [, 'ip'] ...;
```

ClustrixDB will perform a Group Change to add new node(s).

Clustrix recommends running this command during non-peak periods or during a scheduled maintenance window.

There will be a short disruption of service while the node(s) are being added.

You may also notice a slight degradation of performance while the Rebalancer moves data to the new node(s).

Verify Successful Node Addition

There are multiple ways to verify that the new node was successfully added.

1. Run this query from a SQL prompt. The new node(s) will be added using the next consecutive node number(s), so the new node(s) will appear at the end of the resulting display.

   ```
   sql> SELECT * FROM system.nodeinfo ORDER BY nodeid;
   ```

2. You can also use The CLX Command Line Administrative Tool to view your cluster's status by providing the following at a bash prompt.

```
shell> /opt/clustrix/bin
/clx status
```

You should see that all nodes appear OK on the display. You may also notice that the data distribution amongst your nodes is not yet balanced.

Congratulations, your cluster has been successfully expanded. At this time, your new nodes are part of your cluster and available to service queries, but do not yet contain data. The ClustrixDB Rebalancer will work in the background to move data onto the new node(s). To monitor this process, refer to the instructions regarding Managing the Rebalancer.