

# Convert a Replica Set to a Sharded Cluster

❗ Cloud Manager will no longer support Automation, Backup, and Monitoring for MongoDB 3.6 and 4.0 after August 30th, 2024. Please [upgrade your MongoDB deployment](#) or [migrate to Atlas](#).

Cloud Manager provides the ability to convert a [replica set](#) to a [sharded cluster](#).

## 1 Navigate to the **Clusters** view for your deployment.

- If it is not already displayed, select the organization that contains your desired project from the **Organizations** menu in the navigation bar.
  - If it is not already displayed, select your desired project from the **Projects** menu in the navigation bar.
  - If it is not already displayed, click **Deployment** in the sidebar.
- Click the **Clusters** view.

## 2 Convert your desired replica set.

From the [Clusters](#) menu on the desired [replica set](#), click **Convert to Sharded Cluster**.

## 3 Provide Details for your New Sharded Cluster.

Configure the following settings in the **Provide details for your new sharded cluster** modal:

- Name your [sharded cluster](#) components:

Field	Action
<b>Cluster Name</b>	Type the name of your new cluster.
<b>CSRS Name</b> (MongoDB 3.2 or later)	Type the name of the <b>CSRS</b> .

### NOTE

You cannot change these values after you click **Convert**.

- Set the following values for each [mongod](#) process in your **Config Servers**. All fields are required.


**i**  
**NOTE**

You must deploy at least one configuration server.

Field	Action
<b>Host Name</b>	<p>From the menu, select an existing hostname or type a hostname in the search box above the list to find a host.</p> <p>If you need to add a new host:</p> <ol style="list-style-type: none"><li>1. Click the <b>New Server</b> link.</li><li>2. Click <b>Next</b>.</li><li>3. Follow the instructions to install a new Automation on that new host.</li><li>4. Click <b>Verify Agent</b>.</li></ol>
<b>Port</b>	Type the <u>IANA</u> port number.
<b>Data Directory</b>	<p>Type the absolute directory path to the database files for each <code>mongod</code>.</p> <p>The example path is <code>/data</code>.</p> <p>The <code>mongod</code> must have exclusive use of these paths on the specified host. The Cloud Manager Automation must have file system permission to read, write, and execute all files and folders in this directory.</p>
<b>Log File</b>	<p>Type the absolute file path for the log file for each <code>mongod</code>.</p> <p>The example path is <code>/data/mongodb.log</code>.</p> <p>The <code>mongod</code> must have exclusive use of these paths on the specified host. The Cloud Manager Automation must have file system permission to read, write, and execute all files and folders in this directory.</p>

**i**  
**NOTE**

### Adding or Removing Config Servers

- To add a new configuration server, click **Add a Config Server**.
- To remove a config server, click  to the right of the config server you want to remove.

- c. Set the following values for each **MongoS** process in your **sharded cluster**. All fields are required.

**NOTE**

You must deploy at least one **mongos**.


Field	Action
Host Name	<p>From the menu, select an existing hostname or type a hostname in the search box above the list to find a host.</p> <p>If you need to add a new host:</p> <ol style="list-style-type: none"><li>1. Click the <b>New Server</b> link.</li><li>2. Click <b>Next</b>.</li><li>3. Follow the instructions to install a new Automation on that new host.</li><li>4. Click <b>Verify Agent</b>.</li></ol>
Port	Type the <b>IANA</b> port number.
Log File	<p>Type the absolute file path for the log of each <b>mongos</b> process.</p> <p>The example path is <code>/data/mongodb.log</code>.</p> <p>The <b>mongos</b> must have exclusive use of these paths on the specified host. The Cloud Manager Automation must have file system permission to read, write, and execute all files and folders in this directory.</p>

**NOTE**

**Adding or Removing Mongo Shard Routers**

- To add a new **mongos**, click **Add a MongoS**.
- To remove a **mongos**, click to the right of the **mongos** you want to remove.

- 4 Click **Convert**.
- 5 Modify your Application to Connect to the **mongos** Processes Instead of the Replica Set.

From the Cloud Manager UI, click the  icon, then click **Connect to this instance**. The **Connect to your Deployment** dialog provides the hostname and port of a `mongos` in the cluster.

For complete documentation on connecting to an Cloud Manager deployment, see [Connect to a MongoDB Process](#)

## 6 Change any Cluster-Wide Settings.

If you want to make any further changes to the [sharded cluster](#), see the **Sharded Cluster** tab on the [Edit a Deployment's Configuration](#) page.

After you convert a replica set to a sharded cluster, you can enable sharding for a database and shard collections.

To learn how to shard collections, see [Shard a Collection](#).

If you need to add additional shards to support greater capacity, click on the wrench menu for the sharded cluster to create additional shards.

### NOTE

#### Effects on Backup after Converting

The converted shard (original replica set) has:

- Backup enabled
- Previous snapshots retained
- Ability to restore snapshots to this shard only

After converting, you should [enable Backup](#) for the entire sharded cluster. On databases running MongoDB [FCV](#) 4.0 or earlier, activating Backup causes Cloud Manager to start an initial sync on the config servers and the converted shard. Restores to the entire sharded cluster should use snapshots taken after conversion only.