

# Convert an existing Explore cluster that has manager nodes

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If your Explore cluster was configured with a single manager node or you converted full-sized nodes to serve as dedicated managers, complete the procedures in this guide to convert your existing nodes to data-only and add three dedicated manager-only nodes.

Depending on your cluster configuration, you might need to convert former manager nodes (such as a physical node or larger virtual node configured as manager-only node) to data-only nodes or you might need to remove a former manager-only node from the cluster.

- If the cluster has a manager node with insufficient resources, you should remove that node from the cluster.
- If the cluster has a single manager node that meets the resource specifications, you only need to deploy two other manager-only nodes.
- If the cluster has a manager node with the full resources required for a data-only node, you can repurpose the higher-resourced node as a data-only node and deploy three new manager-only nodes.

## Before you begin

- Review the specifications and guidelines in [Deploying manager nodes](#).
- Deploy the new manager nodes according to the [guide for your implementation](#), but do not join the nodes to the cluster or connect the nodes to Discover or Command appliances. Depending on your implementation, reduce the data disk size to meet the [manager node specifications](#).
- [Register each manager node](#) with the correct product license. Manager-only nodes have dedicated SKUs; be sure to verify these licenses with your account team.

## Disable record ingest

1. Log in to the Administration settings on any data-only node.
2. In the Explore Cluster Settings section, click **Cluster Data Management**.
3. Click **Disable Record Ingest**.

## Update the Running Config for all existing nodes

1. Log in to the Administration settings through `https://<extrahop-hostname-or-IP-address>/admin` on an existing node in the cluster.
2. In the Appliance Settings section, click **Running Config**.
3. Click **Edit Config**.
4. In the section for cluster, delete any entries for `"min_master_nodes"` or `"master": false`.
5. Click **Update**.
6. Click **Done**.
7. Click **Save config** and then click **Save**.
8. In the Appliance Settings section, click **Shutdown or Restart**.
9. Next to the Search service, click **Restart**.
10. Repeat these steps on each existing node in the cluster.

## Next steps

[Join each manager-only node](#) to the existing cluster and then continue to configure the new manager-only nodes.

## Configure three manager-only nodes

1. Log in to the Administration settings on a node intended for cluster task management.
2. In the Appliance Settings section, click **Running Config**.
3. Click **Edit config**.
4. Add an entry to the Running Config file by completing the following steps:
  - a) Add a comma after the second to last curly brace (}).
  - b) Press ENTER to create a new line.
  - c) Paste the following code on the new line before the final curly brace:

```
"cluster": {
  "data": false,
  "min_master_nodes": 2
}
```

5. Click **Update**.
6. Click **Done**.
7. Click **Save config** and then click **Save**.
8. In the Appliance Settings section, click **Shutdown or Restart**.
9. Next to the Search service, click **Restart**.
10. Repeat these steps on each manager-only node.

## Configure the data-only nodes

1. Log in to the Administration settings on a node intended for data storage.
2. In the Appliance Settings section, click **Running Config**.
3. Click **Edit config**.
4. Add an entry to the Running Config file by completing the following steps:
  - a) Add a comma after the second to last curly brace (}).
  - b) Press ENTER to create a new line.
  - c) Paste the following code on the new line before the final curly brace:

```
"cluster": {
  "master": false,
  "min_master_nodes": 2
}
```

5. Click **Update**.
6. Click **Done**.
7. Click **Save config** and then click **Save**.
8. In the Appliance Settings section, click **Shutdown or Restart**.
9. Next to the Search service, click **Restart**.
10. Repeat these steps on each data-only node.

### Next steps

After all of the nodes are configured with their designated role, [connect each data-only node to Discover and Command appliances](#). Manager nodes should not be connected to a Discover or Command appliance.



**Tip:** [Learn how to add or remove nodes from a cluster that has manager nodes](#).

## Enable record ingest

1. Log in to the Administration settings on any data-only node.
2. In the Explore Cluster Settings section, click **Cluster Data Management**.
3. Click **Enable Record Ingest**.

## Verify Running Config settings for all nodes

It is critical that only three nodes in the cluster section have entries for `"data": false`.

1. Log in to the Administration settings through `https://<extrahop-hostname-or-IP-address>/admin` on an existing node in the cluster.
2. In the Appliance Settings section, click **Running Config**.
3. Click **Edit Config**.
4. Review the entry in the section for cluster and verify that the node has the correct entry for the node role (such as `"data": false` for manager-only nodes and `"master": false` for data-only nodes). Repeat these steps for each node in the cluster. If more than three nodes in the cluster have an entry for `"data": false`, review your node specifications and update the entries.

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