Prepare the cluster for expansion

System Manager Classic

NetApp
June 22, 2024

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To prepare a cluster for expansion, you must add node-locked licenses, verify the system health, back up the cluster's configuration, and generate an AutoSupport message.

Add node-locked licenses

If the cluster has features that use node-locked licenses (which entitle only specific nodes to the licensed functionality), you must ensure that node-locked licenses are installed for the new nodes. You should add the licenses before the nodes are joined to the cluster.

Complete this task if you are using the *Classic* System Manager UI with ONTAP 9.7 and earlier releases. If you are using the System Manager UI with ONTAP 9.7 and later, see Enable new features by adding license keys.

For more information about managing licenses, see Manage licenses overview.

Steps

1. Add each license key by using the `system license add` command.

```
cluster1::> system license add -license-code AAAAAAAAAAAAA
```

2. View the existing licenses by using the `system license show` command.

```
cluster1::> system license show

Serial Number: 9-99-999999
Owner: cluster1
Package           Type    Description           Expiration
----------------- ------- --------------------- --------------------
Base              site    Cluster Base License  -
NFS               license NFS License           -
CIFS              license CIFS License          -
...
```

3. Review the output to ensure that a node-locked license is displayed for all serial numbers, including serial numbers for existing and new nodes.

Verify the health of the system

Before you expand a cluster, you must verify that all components of the cluster are healthy by running the Config Advisor tool and running several ONTAP CLI commands.

Steps

1. Verify that you have the latest version of Config Advisor:

- If you do not have Config Advisor on your laptop, download it.

  NetApp Downloads: Config Advisor

- If you have Config Advisor, start it, click **Help** > **Check for Updates**, and follow the prompts to upgrade it if necessary.

  > Do not uninstall the previous version of the tool or delete the data folder during the upgrade. The tool uninstalls the previous version and replaces it with the latest version. It renames the data folder as the latest folder and retains all of the contents in the folder.

2. Verify the cabling and configuration by running Config Advisor:
   a. Connect your laptop to the management network for the cluster.
   b. Click **Collect Data**.

      Config Advisor displays any problems found.

   c. If problems are found, correct them and run the tool again.
3. Check the health of the system with the following commands:
   a. Verify that the cluster is in a healthy state by using the `system health status show` command and verifying that the Status is `ok`.

```
cluster1::> system health status show
Status
---------------
ok
```

   b. Verify that all nodes in the cluster are in a healthy state by using the `cluster show` command and verifying that the Health of each node is `true`.

```
cluster1::> cluster show
Node                  Health  Eligibility
--------------------- ------- ------------
cluster1-1            true    true
cluster1-2            true    true
2 entries were displayed.
```

Back up the cluster configuration

Before you expand a cluster, you should use advanced privilege to create a backup file to save the cluster configuration information and optionally save the node configurations.

Steps

1. Set the privilege level to advanced by using the `set -privilege advanced` command.

2. Create a backup file of the cluster configuration by using the `system configuration backup create` command with the `-backup-type cluster` parameter.

```
cluster1::*> system configuration backup create -node cluster1-1 -backup
-name clusterbeforeexpansion.7z -backup-type cluster
[Job 5573] Job is queued: Cluster Backup OnDemand Job.
```

3. Create a backup file of each node's configuration by using the `system configuration backup create` command with the `-backup-type node` parameter for each node.
4. Return the privilege level to admin by using the `set -privilege admin` command.

Generate an AutoSupport message about starting expansion

Immediately before you expand a cluster, you should send an AutoSupport message to indicate that you are about to start the expansion process. The message informs internal and external support staff about expansion and acts as a timestamp for any troubleshooting that might be required later.

Before you begin

AutoSupport must be set up.

Steps

1. For each node in the cluster, send an AutoSupport message by using the `system node autosupport invoke` command.

```
cluster1::> system node autosupport invoke -node * -message "cluster
expansion started" -type all
The AutoSupport was successfully invoked on node "cluster1-1". To view
the status
of the AutoSupport, use the "system node autosupport history show"
command.
Note: It may take several minutes for the AutoSupport to appear in the
history list.
The AutoSupport was successfully invoked on node "cluster1-2". To view
the status
of the AutoSupport, use the "system node autosupport history show"
command.
Note: It may take several minutes for the AutoSupport to appear in the
history list.
2 entries were acted on.
```

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