Recover a management node

HCI

Michael Wallis, Dave Bagwell
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Recover a management node

You can manually recover and redeploy the management node for your cluster running NetApp Element software if your previous management node used persistent volumes.

You can deploy a new OVA and run a redeploy script to pull configuration data from a previously installed management node running version 11.3 and later.

What you'll need

- Your previous management node was running NetApp Element software version 11.3 or later with persistent volumes functionality engaged.
- You know the MVIP and SVIP of the cluster containing the persistent volumes.
- Your cluster version is running NetApp Element software 11.3 or later.
- Your installation uses IPv4. The management node 11.3 does not support IPv6.
- You have permission to download software from the NetApp Support Site.
- You have identified the management node image type that is correct for your platform:

Platform	Installation image type
Microsoft Hyper-V	.iso
KVM	.iso
VMware vSphere	.iso, .ova
Citrix XenServer	.iso
OpenStack	.iso

Steps

1. Download ISO or OVA and deploy the VM
2. Configure the network
3. Configure the management node

Download ISO or OVA and deploy the VM

1. Download the OVA or ISO for your installation from the NetApp Support Site:

   Element software: https://mysupport.netapp.com/site/products/all/details/element-software/downloads-tab
   NetApp HCI: https://mysupport.netapp.com/site/products/all/details/netapp-hci/downloads-tab

   a. Click **Download Latest Release** and accept the EULA.

b. Select the management node image you want to download.

2. If you downloaded the OVA, follow these steps:
   a. Deploy the OVA.
   b. If your storage cluster is on a separate subnet from your management node (eth0) and you want to use persistent volumes, add a second network interface controller (NIC) to the VM on the storage subnet (for example, eth1) or ensure that the management network can route to the storage network.
3. If you downloaded the ISO, follow these steps:
   a. Create a new 64-bit virtual machine from your hypervisor with the following configuration:
      - Six virtual CPUs
      - 24GB RAM
      - 400GB virtual disk, thin provisioned
      - One virtual network interface with internet access and access to the storage MVIP.
      - (Optional for SolidFire all-flash storage) One virtual network interface with management network access to the storage cluster. If your storage cluster is on a separate subnet from your management node (eth0) and you want to use persistent volumes, add a second network interface controller (NIC) to the VM on the storage subnet (eth1) or ensure that the management network can route to the storage network.

Do not power on the virtual machine prior to the step indicating to do so later in this procedure.

   b. Attach the ISO to the virtual machine and boot to the .iso install image.

Installing a management node using the image might result in 30-second delay before the splash screen appears.

4. Power on the virtual machine for the management node after the installation completes.

Configure the network

1. Using the terminal user interface (TUI), create a management node admin user.

To move through the menu options, press the Up or Down arrow keys. To move through the buttons, press Tab. To move from the buttons to the fields, press Tab. To navigate between fields, press the Up or Down arrow keys.

2. Configure the management node network (eth0).

If you need an additional NIC to isolate storage traffic, see instructions on configuring another NIC: Configure a storage Network Interface Controller (NIC).

Configure the management node

1. Log in to the management node using SSH or the console provided by your hypervisor.
2. Run the following command to gain root privileges. Enter your password when prompted:

```
sudo su
```

3. Ensure time is synced between the management node and the storage cluster using NTP:
   a. Edit the `/etc/ntp.conf` file.
   b. Change the default time server(s) to the same NTP server used on the storage cluster.
   c. In vSphere, verify that the **Synchronize guest time with host** box is un-checked in the VM options.

Do not enable this option if you make future changes to the VM.

4. Create a temporary destination directory for the management services bundle contents:

```
mkdir -p /sf/etc/mnode/mnode-archive
```

5. Download the management services bundle (version 2.15.28 or later) that was previously installed on the existing management node and save it in the `/sf/etc/mnode/` directory.
6. Extract the downloaded bundle using the following command, replacing the value in [ ] brackets (including the brackets) with the name of the bundle file:

```
tar -C /sf/etc/mnode -xvf /sf/etc/mnode/[management services bundle file]
```

7. Extract the resulting file to the `/sf/etc/mnode-archive` directory:

```
tar -C /sf/etc/mnode/mnode-archive -xvf /sf/etc/mnode/services_deploy_bundle.tar.gz
```

8. Create a configuration file for accounts and volumes:

```
echo '{"trident": true, "mvip": "[mvip IP address]", "account_name": "[persistent
volume account name]"}' | sudo tee /sf/etc/mnode/mnode-archive/management-services-
metadata.json
```

a. Replace the value in [ ] brackets (including the brackets) for each of the following required parameters:

   - **[mvip IP address]**: The management virtual IP address of the storage cluster.
   - **[persistent volume account name]**: The name of the account associated with all persistent volumes in this storage cluster.

9. Configure and run the management node redeploy command to connect to persistent volumes hosted on the cluster and start services with previous management node configuration data:

You will be prompted to enter passwords in a secure prompt. If your cluster is behind a proxy server, you must configure the proxy settings so you can reach a public network.

```
/sf/packages/mnode/redeploy-mnode --mnode_admin_user [username]
```

a. Replace the value in [ ] brackets (including the brackets) with the user name for the management node administrator account. This is likely to be the username for the user account you used to log into the management node.

You can add the user name or allow the script to prompt you for the information.

b. Run the `redeploy-mnode` command. The script displays a success message when the redeployment is complete.

c. If you access Element or NetApp HCI web interfaces (such as the management node or NetApp Hybrid Cloud Control) using the Fully Qualified Domain Name (FQDN) of the system, reconfigure authentication for the management node.

Find more Information

- Persistent volumes
- NetApp HCI Documentation Center
- NetApp HCI Resources Page

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