ONTAP® Select 9 Quick Start Guide: Deploying an Evaluation Multi-Node Cluster

Updated for ONTAP Select 9.2 using Deploy 2.4.1

The ONTAP Select 9 Quick Start Guide: Deploying an Evaluation Multi-Node Cluster describes how to quickly deploy a 90-day evaluation instance of a four-node or two-node ONTAP Select cluster.

- Up to 2 TB of storage for user data can be allocated at each node
- You do not need to obtain serial numbers or storage capacity licenses from NetApp
- You cannot upgrade the nodes from an evaluation license to a purchased license

You must first install the ONTAP Select Deploy administration utility and then use the utility to deploy a multi-node ONTAP Select cluster. The ONTAP Select Deploy utility provides both a web and CLI user interface for deploying ONTAP Select clusters.

Preparing the ONTAP Select cluster hosts

Use the following requirements to prepare the ESXi hosts where the ONTAP Select cluster is deployed. The platform description is based on the standard or small instance type configuration with local direct-attached storage (DAS) formatted using the VMFS-5 file system. The node management and cluster management networks must be in the same subnet. Also, the Deploy utility must have connectivity to every host where ONTAP Select is running.
Preparing the ONTAP Select Deploy utility host

The ESXi hypervisor host where the ONTAP Select Deploy administration utility is installed must meet the following configuration requirements:

- Both hardware and software are 64-bit
- ESXi version 5.5 u3a and greater or version 6.0 GA and greater
- Virtual CPUs (2)
- Virtual memory (4 GB)
- Storage (40 GB)
- DHCP-enabled (if you will dynamically assign an IP address)

In addition, you must have all the information needed to deploy the virtual machine using vSphere, including the name of the virtual machine and datastore.

Installing the ONTAP Select Deploy utility

Complete the following steps on a supported 64-bit ESXi host server with DHCP enabled:

1. Download the ONTAP Select Deploy utility virtual machine image from the NetApp Support Site to your local workstation; click ONTAP Select and then Deploy Install.
2. In the VMware vSphere client, select File > Deploy OVF Template and complete the wizard. Select Thin Provisioned for the VM disk format and use DHCP or a static IP address to set up the network. You must define the password for the administrator account (admin).
3. Power on the new virtual machine and sign in to the Deploy utility using SSH with the management IP address and administrator account (admin).
4. Make sure there is network connectivity between the Deploy VM and the ESXi hosts where the ONTAP Select cluster will run, and that you have a vCenter account with administrative privileges to deploy the cluster.

Deploying a multi-node ONTAP Select cluster using the web user interface

You can use the ONTAP Select Deploy web user interface to deploy a multi-node cluster.

1. Sign in to the Deploy utility through the web interface using the IP address of the Deploy virtual machine and administrator account.
2. Confirm that you have met the configuration requirements and prerequisites as described in the Welcome to ONTAP Select popup window and click OK.
3. On the Getting Started page, define a hypervisor host and click Add. You can add the ESXi host directly or by connecting to a vCenter server.
4. Repeat step 3 to add three additional hosts (four-node cluster) or one additional host (two-node cluster). Refresh the page to confirm that the Type value for every host is ESX.
5. Click Next to begin the multi-step cluster creation process.
6. In the Cluster Details section of the page, provide all the required information describing the cluster, including evaluation licensing, and click Done.
7. In the Setup HA Pair 1 section of the page, click Select Hosts.
8. In the **Select hosts for the HA pair** popup window, select the hypervisor configuration instance (Small) and minimum datastore capacity that applies to the two nodes.

9. Select two hosts from the list and click **Done**.

10. Click **Configure Hosts** and select the networks and datastores for the hosts and click **Done**.

11. If you are deploying a four-node cluster:
   a. In the **Setup HA Pair 2** section of the page, click **Select Hosts**.
   b. Configure the second HA pair following the same steps used for the first HA pair.

12. Click **Configure Network** and provide all the network configuration parameters for the cluster network in the **Configure Network** window and click **Done**.

13. Review and confirm the configuration of the cluster; you can change the configuration by clicking **Edit** in the applicable section.

14. Click **Create Cluster** to begin the cluster creation process and then click **OK** in the Cluster create operation started popup window. It can take up to 30 minutes for the cluster to be created.

15. On the **Clusters** page, select the new cluster and monitor the four-step cluster creation process.

The page is automatically refreshed at regular intervals. Notice that three tabs are now available at the top of the page: **Clusters, Hypervisor Hosts, Administration**.

**Deploying a multi-node ONTAP Select cluster using the command line interface**

You can use the ONTAP Select Deploy CLI to deploy a multi-node cluster.

1. Sign in to the Deploy utility CLI using SSH with the administrator account.

2. Add the host where the cluster will run:

   ```
   host add --host-id FQDN_hostname --username vcenter_username
   --password password --vcenter vcenter_hostname
   ```

   **Example:**
   host add --host-id shost01.select.mycompany.com --username admin@vsphere.local --password mypwd --vcenter vc01.select.mycompany.com

3. Verify the host status is authenticated:

   ```
   host show-all
   ```

4. Configure the host you have added:

   ```
   host configure --host-id hostname --location location
   --storage-pool name --internal-network name
   ```
--management-network name
--data-network name --instance-type type --eval

Example:
host configure --host-id shost01.select.mycompany.com
--location coco --storage-pool shost01_1 --internal-network shost01_inetwork
--management-network shost01_mnetwork --data-network shost01_mnetwork
--instance-type small --eval

5. Verify the host status is configured:

   host show-all

6. Repeat steps 2 through 5 to add and configure three additional hosts (four-node cluster) or one additional host (two-node cluster). You must make sure that the parameters on the host add and host configure commands are correct for each of the hosts, including: --host-id, --storage-pool, --management-network, and --data-network.

7. Create the four-node cluster:

   cluster create --name cluster_name --cluster-mgmt-ip address
   --node-mgmt-ips address(4) --netmask mask --gateway address
   --node-names node_name(4) --node-hosts host_name(4)
   --node-mirrors ha1_node1 ha1_node2 ha2_node1 ha2_node2

Example:
cluster create --name my-cluster01 --cluster-mgmt-ip 10.96.141.17
--node-mgmt-ips 10.96.141.25 10.96.141.26 10.96.141.27 10.96.141.28
--netmask 255.255.248.0 --gateway 10.96.141.1 --node-names snode01 snode02
snode03 snode04 --node-hosts shost01.select.mycompany.com
shost02.select.mycompany.com shost03.select.mycompany.com
shost04.select.mycompany.com --node-mirrors snode01 snode02 snode03 snode04

Note: To create a two-node cluster, use the same command with only two values for the following parameters: --node-mgmt-ips, --node-names, --node-hosts.

8. Display the ONTAP Select cluster and verify all settings:

   cluster show-all

Support for evaluation deployments
You should refer to the NetApp Community site for support. Click ONTAP Select to start a discussion and to see all the postings related to ONTAP Select.

For more information
• ONTAP Select Resources portal
• NetApp Community