

Configuring ONTAP on a system that uses only array LUNs

ONTAP MetroCluster

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Configuring ONTAP on a system that uses only array LUNs

If you want to configure ONTAP for use with array LUNs, you must configure the root aggregate and root volume, reserve space for diagnostics and recovery operations, and set up the cluster.

- The ONTAP system must be connected to the storage array.
- The storage array administrator must have created LUNs and presented them to ONTAP.
- The storage array administrator must have configured the LUN security.

You must configure each node that you want to use with array LUNs. If the node is in an HA pair, then you must complete the configuration process on one node before proceeding with the configuration on the partner node.

Steps

- 1. Power on the primary node and interrupt the boot process by pressing Ctrl-C when you see the following message on the console: Press CTRL-C for special boot menu.
- 2. Select option 4 (Clean configuration and initialize all disks) on the boot menu.

The list of array LUNs made available to ONTAP is displayed. In addition, the array LUN size required for root volume creation is also specified. The size required for root volume creation differs from one ONTAP system to another.

 If no array LUNs were previously assigned, ONTAP detects and displays the available array LUNs, as shown in the following example:

```
mcc8040-ams1::> disk show NET-1.6 -instance
                Disk: NET-1.6
       Container Type: aggregate
          Owner/Home: mcc8040-ams1-01 / mcc8040-ams1-01
             DR Home: -
   Stack ID/Shelf/Bay: - / - / -
                LUN: 0
              Array: NETAPP INF 1
              Vendor: NETAPP
              Model: INF-01-00
        Serial Number: 60080E50004317B4000003B158E35974
                UID:
60080E50:004317B4:000003B1:58E35974:00000000:0000000:0000000:0000000
00:0000000:00000000
                BPS: 512
        Physical Size: 87.50GB
            Position: data
Checksum Compatibility: block
           Aggregate: eseries
                Plex: plex0
Paths:
                            LUN Initiator Side
                                                  Target
Side
                                                   Link
Controller
            Initiator ID Switch Port
                                                   Switch
                                            TPGN Speed
Port
            Acc Use Target Port
I/O KB/s
               IOPS
_____
mcc8040-ams1-01 2c
                          0 mccb6505-ams1:16 mccb6505-
ams1:18 AO INU 20330080e54317b4
                                            1 4 Gb/S
           0
                      0 mccb6505-ams1:17 mccb6505-
mcc8040-ams1-01 2a
ams1:19 ANO RDY 20320080e54317b4
                                                 4 Gb/S
           Ω
Errors:
```

If array LUNs were previously assigned, for example, through the maintenance mode, they are either
marked local or partner in the list of the available array LUNs, depending on whether the array LUNs
were selected from the node on which you are installing ONTAP or its HA partner:

In this example, array LUNs with index numbers 3 and 6 are marked local because they had been previously assigned from this particular node:

************* * No disks are owned by this node, but array LUNs are assigned. * You can use the following information to verify connectivity from * HBAs to switch ports. If the connectivity of HBAs to switch ports * does not match your expectations, configure your SAN and rescan. * You can rescan by entering 'r' at the prompt for selecting * array LUNs below. ****************** HBA HBA WWPN Switch port Switch port WWPN 0e 500a098001baf8e0 vgbr6510s203:25 20190027f88948dd Of 500a098101baf8e0 vgci9710s202:1-17 2011547feeead680 0g 500a098201baf8e0 vgbr6510s203:27 201b0027f88948dd Oh 500a098301baf8e0 vgci9710s202:1-18 2012547feeead680 No native disks were detected, but array LUNs were detected. You will need to select an array LUN to be used to create the root aggregate and root volume. The array LUNs visible to the system are listed below. Select one array LUN to be used to create the root aggregate and root volume. **The root volume requires 350.0 GB of space.** Warning: The contents of the array LUN you select will be erased by ONTAP prior to their use. Index Array LUN Name Model Vendor Size Owner Checksum Serial Number

0	vgci9710s202:2-24.0L19	RAID5	DGC	217.3 GB			
Block	6006016083402B0048E576D7						
1	vgbr6510s203:30.126L20	RAID5	DGC	217.3 GB			
Block	6006016083402B0049E57	76D7					
2	vgci9710s202:2-24.0L21	RAID5	DGC	217.3 GB			
Block	6006016083402B004AE57	76D7					
3	vgbr6510s203:30.126L22	RAID5	DGC	405.4 GB	local		
Block	ck 6006016083402B004BE576D7						
4	vgci9710s202:2-24.0L23	RAID5	DGC	217.3 GB			
Block 6006016083402B004CE576D7							
5	vgbr6510s203:30.126L24	RAID5	DGC	217.3 GB			
Block 6006016083402B004DE576D7							
6	vgbr6510s203:30.126L25	RAID5	DGC	423.5 GB	local		
Block	ck 6006016083402B003CF93694						
7	vgci9710s202:2-24.0L26	RAID5	DGC	423.5 GB			
Block	6006016083402B003DF93	3694					

3. Select the index number corresponding to the array LUN you want to assign as the root volume.

The array LUN must be of sufficient size to create the root volume.

The array LUN selected for root volume creation is marked local (root).

In the following example, the array LUN with index number 3 is marked for root volume creation:

The root volume will be created on switch 0:5.183L33.

**ONTAP requires that 11.0 GB of space be reserved for use in diagnostic and recovery

operations.** Select one array LUN to be used as spare for diagnostic and recovery operations.

Index	Array LUN Name	Model	Vendor	Size	Owner	
Checks	sum Serial Number					
0	switch0:5.183L1	SYMMETRIX	EMC	266.1 GB		
Block	6006048034363	13734316631				
1	switch0:5.183L3	SYMMETRIX	EMC	266.1 GB		
Block	6006048034363	16333353837				
2	switch0:5.183L31	SYMMETRIX	EMC	266.1 GB		
Block	6006048034363	13237643666				
3	switch0:5.183L33	SYMMETRIX	EMC	658.3 GB	local	(root)
Block	6006048034363	16263613066				
4	switch0:7.183L0	SYMMETRIX	EMC	173.6 GB		
Block	6006048034363	13261356235				
5	switch0:7.183L2	SYMMETRIX	EMC	173.6 GB		
Block	6006048034363	13438396431				
6	switch0:7.183L4	SYMMETRIX	EMC	658.3 GB		
Block	6006048034363	13161663031				
7	switch0:7.183L30	SYMMETRIX	EMC	173.6 GB		
Block	6006048034363	16538353834				
8	switch0:7.183L32	SYMMETRIX	EMC	266.1 GB		
Block	6006048034363	13237353738				
9	switch0:7.183L34	SYMMETRIX	EMC	658.3 GB		
Block	6006048034363	13737333662				

4. Select the index number corresponding to the array LUN you want to assign for use in diagnostic and recovery options.

The array LUN must be of sufficient size for use in diagnostic and recovery options. If required, you can also select multiple array LUNs with a combined size greater than or equal to the specified size. To select multiple entries, you must enter the comma-separated values of all of the index numbers corresponding to the array LUNs you want to select for diagnostic and recovery options.

The following example shows a list of array LUNs selected for root volume creation and for diagnostic and recovery options:

Here is a list of the selected array LUNs						
Index Array LUN Name	Model	Vendor	Size	Owner		
Checksum Serial Number						
2 switch0:5.183L31	SYMMETRIX	EMC	266.1 GB	local		
Block 60060480343631	3237643666					
3 switch0:5.183L33	SYMMETRIX	EMC	658.3 GB	local	(root)	
Block 60060480343631	6263613066					
4 switch0:7.183L0	SYMMETRIX	EMC	173.6 GB	local		
Block 60060480343631	3261356235					
5 switch0:7.183L2	SYMMETRIX	EMC	173.6 GB	local		
Block 60060480343631	3438396431					
Do you want to continue	(yes no)?					



Selecting "no" clears the LUN selection.

5. Enter $\underline{\mathbf{y}}$ when prompted by the system to continue with the installation process.

The root aggregate and the root volume are created and the rest of the installation process continues.

6. Enter the required details to create the node management interface.

The following example shows the node management interface screen with a message confirming the creation of the node management interface:

```
You can enter the following commands at any time:
   "help" or "?" - if you want to have a question clarified,
   "back" - if you want to change previously answered questions, and
   "exit" or "quit" - if you want to quit the setup wizard.
        Any changes you made before quitting will be saved.

To accept a default or omit a question, do not enter a value.

Enter the node management interface port [eOM]:
Enter the node management interface IP address: 192.0.2.66

Enter the node management interface netmask: 255.255.255.192
Enter the node management interface default gateway: 192.0.2.7
A node management interface on port eOM with IP address 192.0.2.66 has been created.

This node has its management address assigned and is ready for cluster setup.
```

After configuring ONTAP on all of the nodes that you want to use with array LUNs, you should complete the cluster setup process.

Software setup

Related information

FlexArray virtualization installation requirements and reference

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