



Required parameters for 3PAR arrays with ONTAP systems

ONTAP FlexArray

NetApp
September 20, 2021

Table of Contents

- Required parameters for 3PAR arrays with ONTAP systems 1
- Host persona settings 1
- Port persona settings 1
- Workaround for the unknown device (L254/SES) problem with 3PAR storage arrays 2

Required parameters for 3PAR arrays with ONTAP systems

Certain parameter settings are required on the storage array for the storage array to work successfully with ONTAP systems.

Host persona settings

For 3PAR arrays with firmware 2.3.1 and later, the required host persona values must be set as shown in the following table:

Connection type	Host persona
Direct connect	10
Fabric attached	10

The host definition, with the required host persona, should be created on a 3PAR storage array before the switch is zoned to connect the ONTAP system to a 3PAR storage array. If zoning is configured before the host definition, ONTAP discovers a 3PAR LUN as LUN 254 and product type SES, which ONTAP cannot use. The result is that newly mapped 3PAR LUNs cannot be assigned to ONTAP system and some 3PAR LUNs that might have already been added to an aggregate cannot be used because ONTAP sees a LUN 254 instead of a 3PAR LUN. If this problem occurs, ONTAP generates the following EMS message:

```
mlm.array.unknown:warning - Array LUN XXXXXXXX.126L254 [S/N 'XXXXXXX'  
vendor '3PARdata' product 'SES'] is unknown and is not supported in this  
version of Data ONTAP.
```

If zoning was configured prior to the host definition, you can resolve the problem by doing path re-initialization to force a rediscovery of the array LUNs that are mapped from the 3PAR storage array. See the [Workaround for the unknown device \(L254/SES\) problem with 3PAR storage arrays](#) section for the workaround for this problem.

[Workaround for the unknown device \(L254/SES\) problem with 3PAR storage arrays](#)

Port persona settings

For 3PAR arrays with firmware 2.2.x, the required port persona values must be set as shown in the following table:

Connection type	Port persona
Direct connect	18
Fabric attached	19

Workaround for the unknown device (L254/SES) problem with 3PAR storage arrays

The host definition, with the host persona specified in the required parameters for 3PAR arrays with ONTAP systems section, should be created on a 3PAR storage array before the switch is zoned to connect the ONTAP system to a 3PAR storage array. If zoning is configured before the host definition, ONTAP discovers a 3PAR array LUN as LUN 254 and product type SES, which ONTAP cannot use.

Required parameters for 3PAR arrays with ONTAP systems

When ONTAP discovers 3PAR array LUNs as LUN 254 and product type SES, newly mapped 3PAR LUNs cannot be assigned to ONTAP systems and some 3PAR LUNs that might have already been added to an aggregate cannot be used because ONTAP sees a LUN 254. ONTAP generates EMS messages for the LUN it discovered as LUN 254 and product type SES, reporting some LUNs as unknown devices.

If zoning was configured before the host definition, you can resolve the LUN 254/SES unknown device problem by forcing a rediscovery of the array LUNs that are mapped from the 3PAR storage array. The procedure you use depends on whether aggregates with 3PAR array LUNs have already been configured on the ONTAP system. (In the following procedures, assume that Node-1 and Node-2 are the names of the ONTAP nodes.)

If aggregates with 3PAR array LUNs were already created on an ONTAP system

1. Run the following command to ensure that an HA configuration is enabled on your ONTAP systems:

```
cluster ha show
```

The following output is displayed:

```
High Availability Configured: true
```

2. Run the following command to ensure that storage failover is configured on your ONTAP systems:

```
storage failover show
```

The following output is displayed:

```
                Takeover
Node           Partner      Possible State Description
-----
Node-1      Node-2      true      Connected to Node-2
Node-2      Node-1      true      Connected to Node-1
2 entries were displayed.
```

3. Perform a takeover operation on Node-1 by running the following command: **storage failover takeover -ofnode Node-1**
4. Run the following command again to verify that Node-2 is ready for a giveback operation: **storage failover show**

The following output is displayed:

```

                Takeover
Node           Partner           Possible State Description
-----
-----
Node-2        Node-1        false           In takeover, Auto giveback will be
                               initiated in 348 seconds
Node-1        Node-2        -               Waiting for giveback (HA mailboxes)
2 entries were displayed.
```

5. Perform a giveback operation on Node-1 by running the following command: **storage failover giveback -ofnode Node-1 -require-partner-waiting true**
6. From other nodes in the cluster, repeat Step 3 through Step 5.

If aggregates with 3PAR array LUNs have not been created on an ONTAP system

1. Run the following command to list all of the ONTAP FC initiator ports that are connected to the 3PAR storage array: **system node run -node <node name> -command "sysconfig -v"**

The following example shows the command with a specific node name included: **system node run -node Node-1 -command "sysconfig -v"**

2. Run the following command to take all of the listed ports offline: **system node run -node <node name> -command "priv set advanced;fcadmin offline <adapter>"**

The following example shows the command with a specific node name and adapter included: **system node run -node Node-1 -command "priv set advanced;fcadmin offline 0a"**

3. Run the following command to bring all of the listed ports online: **system node run -node <node name> -command "priv set advanced;fcadmin online <adapter>"**

The following example shows the command with a specific node name and adapter included: **system node run -node Node-1 -command "priv set advanced;fcadmin online 0a"**

Copyright Information

Copyright © 2021 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system- without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

Trademark Information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.