# Configure ESXi host settings

ONTAP tools for VMware vSphere 10.1

NetApp
June 21, 2024

This PDF was generated from https://docs.netapp.com/us-en/ontap-tools-vmware-vsphere-10/configure/configure-esx-server-multipath-and-timeout-settings.html on June 21, 2024. Always check docs.netapp.com for the latest.

# Table of Contents

Configure ESXi host settings . . . . . 1
Configure ESXi server multipath and timeout settings . . . . . 1
Set ESXi host values . . . . . 1

# Configure ESXi host settings

## Configure ESXi server multipath and timeout settings

ONTAP tools for VMware vSphere checks and sets the ESXi host multipath settings and HBA timeout settings that work best with NetApp storage systems.

**About this task**

This process might take a long time, depending on your configuration and system load. The task progress is displayed in the Recent Tasks panel. As the tasks are completed, the host status Alert icon is replaced by the Normal icon or the Pending Reboot icon.

**Steps**

1. From the VMware vSphere Web Client home page, click **Hosts and Clusters**.
2. Right-click a host, and then select **NetApp ONTAP tools** > **Update host data**.
3. In the shortcuts page, click on **NetApp ONTAP tools** under the plug-ins section.
4. Go to ESXi Host compliance card in the Overview (Dashboard) of the ONTAP tools for VMware vSphere plug-in.
5. Select **Apply Recommended Settings** link.
6. In the **Apply recommended host settings** window, select the hosts that you want to comply with NetApp recommended host settings and click **Next**

   You can expand the ESXi host to see the current values

7. In the settings page, select the recommended values as required.
8. In the summary pane, check the values and click **Finish** You can track the progress in the Recent task panel.

## Set ESXi host values

You can set timeouts and other values on the ESXi hosts using ONTAP tools for VMware vSphere to ensure best performance and successful failover. The values that ONTAP tools for VMware vSphere sets are based on internal NetApp testing.

You can set the following values on an ESXi host:

### HBA/CNA Adapter Settings

Sets the recommended HBA timeout settings for NetApp storage systems.

- **Disk.QFullSampleSize**

  Set this value to 32 for all configurations. Setting this value helps to prevent I/O errors.

- **Disk.QFullThreshold**

Set this value to 8 for all configurations. Setting this value helps prevent I/O errors.

- **Emulex FC HBA timeouts**

  Use the default value.

- **QLogic FC HBA timeouts**

  Use the default value.

## MPIO Settings

Configures preferred paths for NetApp storage systems. The MPIO settings determine which of the available paths are optimized (as opposed to non-optimized paths that traverse the interconnect cable) and they set the preferred path to one of those paths.

In high-performance environments or when testing performance with a single LUN datastore, consider changing the load balance setting of the round-robin (VMW_PSP_RR) path selection policy (PSP) from the default IOPS setting of 1000 to a value of 1.

## NFS settings

- **Net.TcpipHeapSize**

  Set this value to 32.

- **Net.TcpipHeapMax**

  Set this value to 1024MB.

- **NFS.MaxVolumes**

  Set this value to 256.

- **NFS41.MaxVolumes**

  Set this value to 256.

- **NFS.MaxQueueDepth**

  Set this value to 128 or higher to avoid queuing bottlenecks.

- **NFS.HeartbeatMaxFailures**

  Set this value to 10 for all NFS configurations.

- **NFS.HeartbeatFrequency**

  Set this value to 12 for all NFS configurations.

- **NFS.HeartbeatTimeout**

  Set this value to 5 for all NFS configurations.

## Copyright information

Copyright © 2024 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.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

## 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.