

## **Enable NAS storage**

ONTAP 9

NetApp May 06, 2022

This PDF was generated from https://docs.netapp.com/us-en/ontap/task\_nas\_enable\_linux\_nfs.html on May 06, 2022. Always check docs.netapp.com for the latest.

# **Table of Contents**

| E | nable NAS storage  | . 1 |
|---|--|-----|
|   | Enable NAS storage for Linux servers using NFS                       | . 1 |
|   | Enable NAS storage for Windows servers using SMB.                    | . 1 |
|   | Enable NAS storage for both Windows and Linux using both NFS and SMB | . 2 |

## **Enable NAS storage**

### Enable NAS storage for Linux servers using NFS

Modify storage VMs to enable NFS servers for serving data to Linux clients.

This procedure enables an existing storage VM. It is assumed that configuration details are available for any authentication or security services required in your environment.



#### **Steps**

- 1. Enable NFS on an existing VM: click **Storage > Storage VMs**, select a storage VM, click **Settings**, and then click to under **NFS**.
- 2. Open the export policy of the storage VM root volume:
  - a. Click Storage > Volumes, select the root volume of the storage VM (which by default is volume-name
    \_root), and then click on the policy that is displayed under Export Policy.
  - b. Click Add to add a rule.
    - Client specification = 0.0.0.0/0
    - Access protocols = NFS
    - Access details = UNIX Read-Only
- Configure DNS for host-name resolution: click Storage > Storage VMs, select the storage VM, click Settings, and then click tunder DNS.
- 4. Configure name services as required.
  - a. Click **Storage > Storage VMs**, select the storage VM, click **Settings**, and then click for **t** LDAP or NIS.
  - b. Include any changes in the name services switch file: click 🧪 in the Name Services Switch tile.
- 5. Configure Kerberos if required:
  - a. Click **Storage > Storage VMs**, select the storage VM, and then click **Settings**.
  - b. Click  $\rightarrow$  in the Kerberos tile and then click **Add**.

## **Enable NAS storage for Windows servers using SMB**

Modify storage VMs to enable SMB servers for serving data to Windows clients.

This procedure enables an existing storage VM. It is assumed that configuration details are available for any authentication or security services required in your environment.



#### **Steps**

- 1. Enable SMB on an existing VM: click **Storage > Storage VMs**, select a storage VM, click **Settings**, and then click **t** under **SMB**.
- 2. Open the export policy of the storage VM root volume:
  - a. Click **Storage > Volumes**, select the root volume of the storage VM (which by default is *volume-name root*), and then click on the policy that is displayed under **Export Policy**.
  - b. Click **Add** to add a rule.
    - Client specification = 0.0.0.0/0
    - Access protocols = SMB
    - Access details = NTFS Read-Only
- 3. Configure DNS for host-name resolution:
  - a. Click Storage > Storage VMs, select the storage VM, click Settings, and then click 📩 under DNS.
  - b. Switch to the DNS server and map the SMB server.
    - Create forward (A Address record) and reverse (PTR Pointer record) lookup entries to map the SMB server name to the IP address of the data network interface.
    - If you use NetBIOS aliases, create an alias canonical name (CNAME resource record) lookup entry to map each alias to the IP address of the SMB server's data network interface.
- 4. Configure name services as required
  - a. Click **Storage > Storage VMs**, select the storage VM, click **Settings**, and then click **t** under **LDAP** or **NIS**.
  - b. Include any changes in the name services switch file: click / under Name Services Switch.
- 5. Configure Kerberos if required:
  - a. Click Storage > Storage VMs, select the storage VM, and then click Settings.
  - b. Click  $\rightarrow$  under **Kerberos** and then click **Add**.

# Enable NAS storage for both Windows and Linux using both NFS and SMB

Modify storage VMs to enable NFS and SMB servers to serve data to Linux and Windows clients.

This procedure enables an existing storage VM. It is assumed that configuration details are available for any authentication or security services required in your environment.



#### Steps

- 1. Enable NFS on an existing VM: click **Storage > Storage VMs**, select a storage VM, click **Settings**, and then click ★ under **NFS**.
- Enable SMB on an existing VM: click to under SMB.
- 3. Open the export policy of the storage VM root volume:
  - a. Click **Storage > Volumes**, select the root volume of the storage VM (which by default is *volume-name\_root*), and then click on the policy that is displayed under **Export Policy**.
  - b. Click Add to add a rule.
    - Client specification = 0.0.0.0/0
    - Access protocols = NFS
    - Access details = NFS Read-Only
- 4. Configure DNS for host-name resolution:
  - a. Click Storage > Storage VMs, select the storage VM, click Settings, and then click to under DNS.
  - b. When DNS configuration is complete, switch to the DNS server and map the SMB server.
    - Create forward (A Address record) and reverse (PTR Pointer record) lookup entries to map the SMB server name to the IP address of the data network interface.
    - If you use NetBIOS aliases, create an alias canonical name (CNAME resource record) lookup entry to map each alias to the IP address of the SMB server's data network interface.
- 5. Configure name services as required:
  - a. Click Storage > Storage VMs, select the storage VM, click Settings, and then click to LDAP or NIS.
  - b. Include any changes in the name services switch file: click 🧪 under Name Services Switch.
- 6. Configure Kerberos if required: click  $\rightarrow$  in the Kerberos tile and then click **Add**.
- 7. Map UNIX and Windows user names if required: click  $\rightarrow$  under **Name Mapping** and then click **Add**.

You should use this procedure only if your site has Windows and UNIX user accounts that do not map implicitly, which is when the lowercase version of each Windows user name matches the UNIX user name. This procedure can be done using LDAP, NIS, or local users. If you have two sets of users that do not match, you should configure name mapping.

#### **Copyright Information**

Copyright © 2022 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 <a href="http://www.netapp.com/TM">http://www.netapp.com/TM</a> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.