



# **Provide folder security on shares with access-based enumeration**

**ONTAP 9**

NetApp  
January 17, 2023

# Table of Contents

- Provide folder security on shares with access-based enumeration . . . . . 1
  - Provide folder security on shares with access-based enumeration overview . . . . . 1
  - Enable or disable access-based enumeration on SMB shares . . . . . 1
  - Enable or disable access-based enumeration from a Windows client . . . . . 3

# Provide folder security on shares with access-based enumeration

## Provide folder security on shares with access-based enumeration overview

When access-based enumeration (ABE) is enabled on an SMB share, users who do not have permission to access a folder or file contained within the share (whether through individual or group permission restrictions) do not see that shared resource displayed in their environment, although the share itself remains visible.

Conventional share properties allow you to specify which users (individually or in groups) have permission to view or modify files or folders contained within the share. However, they do not allow you to control whether folders or files within the share are visible to users who do not have permission to access them. This could pose problems if the names of these folders or files within the share describe sensitive information, such as the names of customers or products under development.

Access-based enumeration (ABE) extends share properties to include the enumeration of files and folders within the share. ABE therefore enables you to filter the display of files and folders within the share based on user access rights. That is, the share itself would be visible to all users, but files and folders within the share could be displayed to or hidden from designated users. In addition to protecting sensitive information in your workplace, ABE enables you to simplify the display of large directory structures for the benefit of users who do not need access to your full range of content. For example, the share itself would be visible to all users, but files and folders within the share could be displayed or hidden.

Learn about [Performance impact when using SMB/CIFS Access Based Enumeration](#).

## Enable or disable access-based enumeration on SMB shares

You can enable or disable access-based enumeration (ABE) on SMB shares to allow or prevent users from seeing shared resources that they do not have permission to access.

### About this task

By default, ABE is disabled.

### Steps

1. Perform one of the following actions:

If you want to...	Enter the command...
Enable ABE on a new share	<code>vserver cifs share create -vserver vserver_name -share-name share_name -path path -share-properties access-based-enumeration</code> You can specify additional optional share settings and additional share properties when you create an SMB share. For more information, see the man page for the <code>vserver cifs share create</code> command.
Enable ABE on an existing share	<code>vserver cifs share properties add -vserver vserver_name -share-name share_name -share-properties access-based-enumeration</code> Existing share properties are preserved. The ABE share property is added to the existing list of share properties.
Disable ABE on an existing share	<code>vserver cifs share properties remove -vserver vserver_name -share-name share_name -share-properties access-based-enumeration</code> Other share properties are preserved. Only the ABE share property is removed from the list of share properties.

2. Verify that the share configuration is correct by using the `vserver cifs share show` command.

### Examples

The following example creates an ABE SMB share named “sales” with a path of `/sales` on SVM vs1. The share is created with `access-based-enumeration` as a share property:

```
cluster1::> vsserver cifs share create -vsriver vs1 -share-name sales -path
/sales -share-properties access-based-
enumeration,oplocks,browsable,changenotify

cluster1::> vsserver cifs share show -vsriver vs1 -share-name sales

          Vserver: vs1
          Share: sales
CIFS Server NetBIOS Name: VS1
          Path: /sales
      Share Properties: access-based-enumeration
                        oplocks
                        browsable
                        changenotify
      Symlink Properties: enable
      File Mode Creation Mask: -
      Directory Mode Creation Mask: -
          Share Comment: -
          Share ACL: Everyone / Full Control
      File Attribute Cache Lifetime: -
          Volume Name: -
          Offline Files: manual
      Vscan File-Operations Profile: standard
```

The following example adds the access-based-enumeration share property to an SMB share named “data2”:

```
cluster1::> vsserver cifs share properties add -vsriver vs1 -share-name
data2 -share-properties access-based-enumeration

cluster1::> vsserver cifs share show -vsriver vs1 -share-name data2 -fields
share-name,share-properties
server  share-name share-properties
-----
vs1     data2      oplocks,browsable,changenotify,access-based-enumeration
```

## Related information

[Adding or removing share properties on an existing SMB share](#)

# Enable or disable access-based enumeration from a Windows client

You can enable or disable access-based enumeration (ABE) on SMB shares from a Windows client, which allows you to configure this share setting without needing to connect to the CIFS server.



The `abecmd` utility is not available in new versions of Windows Server and Windows clients. It was released as part of Windows Server 2008. Support ended for Windows Server 2008 on January 14, 2020.

### Steps

1. From a Windows client that supports ABE, enter the following command: `abecmd [/enable | /disable] [/server CIFS_server_name] {/all | share_name}`

For more information about the `abecmd` command, see your Windows client documentation.

## Copyright information

Copyright © 2023 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.