



Configure BranchCache-enabled SMB shares

ONTAP 9

NetApp
March 21, 2022

Table of Contents

- Configure BranchCache-enabled SMB shares 1
 - Configure BranchCache-enabled SMB shares overview 1
 - Create a BranchCache-enabled SMB share 1
 - Enable BranchCache on an existing SMB share 2

Configure BranchCache-enabled SMB shares

Configure BranchCache-enabled SMB shares overview

After you configure BranchCache on the SMB server and at the branch office, you can enable BranchCache on SMB shares that contain content that you want to allow clients at branch offices to cache.

BranchCache caching can be enabled on all SMB shares on the SMB server or on a share-by-share basis.

- If you enable BranchCache on a share-by-share basis, you can enable BranchCache as you create the share or by modifying existing shares.

If you enable caching on an existing SMB share, ONTAP begins computing hashes and sending metadata to clients requesting content as soon as you enable BranchCache on that share.

- Any clients that have an existing SMB connection to a share do not get BranchCache support if BranchCache is subsequently enabled on that share.

ONTAP advertises BranchCache support for a share at the time the SMB session is set up. Clients that already have established sessions when BranchCache is enabled need to disconnect and reconnect to use cached content for this share.



If BranchCache on a SMB share is subsequently disabled, ONTAP stops sending metadata to the requesting client. A client that needs data retrieves it directly from the content server (SMB server).

Create a BranchCache-enabled SMB share

You can enable BranchCache on an SMB share when you create the share by setting the `branchcache` share property.

About this task

- If BranchCache is enabled on the SMB share, the share must have the offline files configuration set to manual caching.

This is the default setting when you create a share.

- You can also specify additional optional share parameters when you create the BranchCache-enabled share.
- You can set the `branchcache` property on a share even if BranchCache is not configured and enabled on the storage virtual machine (SVM).

However, if you want the share to offer cached content, you must configure and enable BranchCache on the SVM.

- Since there are no default share properties applied to the share when you use the `-share-properties` parameter, you must specify all other share properties that you want applied to the share in addition to the `branchcache` share property by using a comma-delimited list.

- For more information, see the man page for the `vserver cifs share create` command.

Step

1. Create a BranchCache-enabled SMB share:

```
vserver cifs share create -vserver vserver_name -share-name share_name -path  
path -share-properties branchcache[,...]
```

2. Verify that the BranchCache share property is set on the SMB share by using the `vserver cifs share show` command.

Example

The following command creates a BranchCache-enabled SMB share named “data” with a path of `/data` on SVM vs1. By default, the offline files setting is set to `manual`:

```
cluster1::> vserver cifs share create -vserver vs1 -share-name data -path  
/data -share-properties branchcache,oplocks,browsable,changenotify  
  
cluster1::> vserver cifs share show -vserver vs1 -share-name data  
          Vserver: vs1  
          Share: data  
CIFS Server NetBIOS Name: VS1  
          Path: /data  
    Share Properties: branchcache  
                     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: data  
          Offline Files: manual  
    Vscan File-Operations Profile: standard
```

Related information

[Disabling BranchCache on a single SMB share](#)

Enable BranchCache on an existing SMB share

You can enable BranchCache on an existing SMB share by adding the `branchcache` share property to the existing list of share properties.

About this task

- If BranchCache is enabled on the SMB share, the share must have the offline files configuration set to manual caching.

If the existing share's offline files setting is not set to manual caching, you must configure it by modifying the share.

- You can set the `branchcache` property on a share even if BranchCache is not configured and enabled on the storage virtual machine (SVM).

However, if you want the share to offer cached content, you must configure and enable BranchCache on the SVM.

- When you add the `branchcache` share property to the share, existing share settings and share properties are preserved.

The BranchCache share property is added to the existing list of share properties. For more information about using the `vserver cifs share properties add` command, see the man pages.

Steps

1. If necessary, configure the offline files share setting for manual caching:
 - a. Determine what the offline files share setting is by using the `vserver cifs share show` command.
 - b. If the offline files share setting is not set to manual, change it to the required value: `vserver cifs share modify -vserver vserver_name -share-name share_name -offline-files manual`
2. Enable BranchCache on an existing SMB share: `vserver cifs share properties add -vserver vserver_name -share-name share_name -share-properties branchcache`
3. Verify that the BranchCache share property is set on the SMB share: `vserver cifs share show -vserver vserver_name -share-name share_name`

Example

The following command enables BranchCache on an existing SMB share named "data2" with a path of /data2 on SVM vs1:

```
cluster1::> vsserver cifs share show -vsserver vs1 -share-name data2
```

```

    Vserver: vs1
    Share: data2
CIFS Server NetBIOS Name: VS1
    Path: /data2
    Share Properties: oplocks
                     browsable
                     changenotify
                     showsnapshot
    Symlink Properties: -
    File Mode Creation Mask: -
    Directory Mode Creation Mask: -
    Share Comment: -
    Share ACL: Everyone / Full Control
File Attribute Cache Lifetime: 10s
    Volume Name: -
    Offline Files: manual
Vscan File-Operations Profile: standard
```

```
cluster1::> vsserver cifs share properties add -vsserver vs1 -share-name
data2 -share-properties branchcache
```

```
cluster1::> vsserver cifs share show -vsserver vs1 -share-name data2
```

```

    Vserver: vs1
    Share: data2
CIFS Server NetBIOS Name: VS1
    Path: /data2
    Share Properties: oplocks
                     browsable
                     showsnapshot
                     changenotify
                     branchcache
    Symlink Properties: -
    File Mode Creation Mask: -
    Directory Mode Creation Mask: -
    Share Comment: -
    Share ACL: Everyone / Full Control
File Attribute Cache Lifetime: 10s
    Volume Name: -
    Offline Files: manual
Vscan File-Operations Profile: standard
```

Related information

Adding or removing share properties on an existing SMB share

Disabling BranchCache on a single SMB share

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