Configure BranchCache-enabled SMB shares

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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::> vserver cifs share show -vserver 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::> vserver cifs share properties add  -vserver vs1 -share-name
data2 -share-properties branchcache

cluster1::> vserver cifs share show -vserver 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

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