Unable to Delete File in Azure File Share_Storage

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Tags
cw.Azure-Files-All-Topics   cw.TSG

Contents

Symptoms

This article covers the issues attempting to delete a file/folder in an Azure File Share. Some common error messages:

Active handle opened:

1. The specified resource is marked for deletion by an SMB client.
2. rm: cannot remove 'FileName': Device or resource busy
3. rm: cannot remove 'FolderName/FileName': Device or resource busy
4. The action can't be completed because the file is open in another program
5. The process cannot access the file because it is being used by another process.

Lease present:

1. Failed to delete file 'ShareName/FolderName/FileName'. Error: There is currently a lease on the file and no lease ID was specified in the request.

2. 412: DELETE ERROR -412 There is currently a lease on the file and no lease ID was specified in the request.. X-Ms-Request-Id:63658422-501a-002d-XXXX-b12500000000

3. Remove-AzStorageFile : There is currently a lease on the file and no lease ID was specified in the request. HTTP Status Code: 412 - HTTP Error Message: There is currently a lease on the file and no lease ID was specified in the request. ErrorCode: LeaseIdMissing ErrorMessage: There is currently a lease on the file and no lease ID was specified in the request.

Public document: [Unable to modify, move/rename, or delete a file or directory](#) ⧉

Cause

Cause 1

An application has an active handle on the file/folder.

Customer is unable to delete the files/folder because the files were Created/Opened with "*DeleteOnClose*" Flag and hence the application took a handle to the file and file will get deleted on its own when the last handle is closed.

The file is to be deleted immediately after all of its handles are closed, which includes the specified handle and any other open or duplicated handles.

If there are existing open handles to a file, the call fails unless they were all opened with the **FILE_SHARE_DELETE** share mode.

Subsequent open requests for the file fail, unless the **FILE_SHARE_DELETE** share mode is specified.

- For more information about SMB create option(s), specifically File_Delete_On_Close see [2.2.13 SMB2 CREATE Request](#) ⧉.

Value	Meaning
FILE_DELETE_ON_CLOSE 0x00001000	The file MUST be automatically deleted when the last open request on this file is closed. When this option is set, the DesiredAccess field MUST include the DELETE flag. This option is often used for temporary files.

Cause 2

A file lease is prevent a file from being modified or deleted. This can also be on a File Share Snapshot in case of a backup service placing a lock and lease on a snapshot.

Resolution for Cause 1

The investigation and resolution will focus into the identification of the opened handles of the file/folder and closure of the same to unblock the deletion. See the below methods:

Option A - **Using Azure PowerShell (Customer Ready)**

Please take a look at the **Requirements**, **How to List** and **How to Close Handles** below:

▼

1) Requirements (Expand/Collapse):

1. [Install latest Azure PowerShell module](#) ⧉ .
2. [Login to Azure Account](#) ⧉
3. Ensure you select the desired Subscription
4. Create a storage account context

```
Connect-AzAccount
Set-AzContext -Subscription "xxxx-xxxx-xxxx-xxxx"
$account = Get-AzStorageAccount -ResourceGroupName myRG -Name mystoraccount
$account.Context
```

▶

2) List Open Handles (Expand/Collapse):

▶

3) Close Open Handles (Expand/Collapse):

If the above steps don't work, proceed to forefully close the handle using [Azure Support Center(ASC)](#)

Option B - **Using Azure REST API(Customer Ready)**

Product group has released an API for customers to be able to close open handles at their end.

```
List Azure File Share Handles

Force Close Azure File Share Handles
```

**Sample script (AS IS).** For better reading, please copy and paste the content in a Notepad or text editor.

▶ Click here to expand or collapse this section
If the above steps don't work, proceed to forefully close the handle using [Azure Support Center(ASC)](#)

Option C - Using Azure Support Center

1. Launch [Azure Support Center](#) ⧉ (ASC).

2. Navigate to Resource Explorer and search for the affected Storage Account resource.

3. Select the File tab from the Storage Account information.

4. Navigate to the subsection "Search File Handle" and input the **Azure File Share, Directory or File** to search for the handle amount. Format: `{fileshare}/{file or directory path}` Example: [Search Handles for a directory in an AFS](#).

5. Review the report for all open handles.
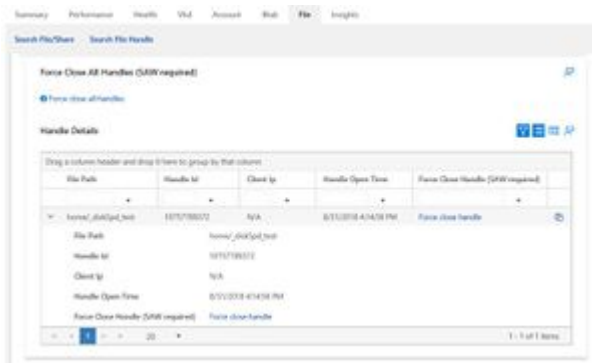
6. Instruct the customer to ensure that all unnecessary handles are closed.

7. With customer consent, you may proceed to Force closure of a handle or Force the closure of all handles.

8. Create ICM with the details of the Handle/s to be closed and Storage Account information. ICM Template: https://portal.microsofticm.com/imp/v3/incidents/create?tmpl=RK24oB ☒

   1. If you are member of project **TM-CSSStgRec** ☒:

      1. Auto assign the ICM.

      2. Proceed to open the "**Force close handle**" link in the ASC report or execute the Jarvis Action "XStore-> Resource Property Retrieval -> Force Close File Handle Operation ☒ **Example**(**Image**).

      3. Use the "Get Access" button to generate the JIT request

      4. Complete the JIT request by filling the "Work-item Id" field with the previously created ICM, select the Access Level as **PlatformServiceOperator** and submit it. The other fields should auto-populate.

      5. Execute the query. Note: Jarvis Actions should automatically refresh after successfully creating the JIT request.

      6. Confirm with Customer that the handle is released and the file/s can be deleted

      7. Resolve the ICM if issue is resolved.

   2. If you are not member of project **TM-CSSStgRec** ☒:, please complete the below Template and send an email with it to the global TA alias: **aivpta@microsoft.com** and **cssstgrec@microsoft.com** to help with the Force Close File Handle Operation ☒.

```
        Force Close File Handles Template
        ============
        Case Number:
        ICM Number:
        StorageAccountName:
        File Share or Path:
        File Handle Id:
        Jarvis Action Query: <Retrieve this value from "Force Close File" Handle link in ASC report:
```

3. If no TA is available to perform this operation, please create an ICM directly using the Template above. Be sure that handles are opened and that customer gave his/her consent to force its closure.

If the above steps don't work or the handle continues to be opened, proceed with [Product Engineering Escalation](#) section to escalate with EEE/WASU as appropriate.

Resolution for Cause 2

A file lease is prevent a file from being modified or deleted. You can check if a file has a file lease with the following PowerShell, replacing <resource-group>, <storage-account>, <file-share>, and <path-to-file> with the appropriate values for your environment. To remove a lease from a file, you can release the lease or break the lease. To release the lease, you need the LeaseId of the lease, which you set when you create the lease. You do not need the LeaseId to break the lease.

Scenario 1: File Lease

1. Check if a file has a lease

```
# Set variables
$resourceGroupName = "<resource-group>"
$storageAccountName = "<storage-account>"
$fileShareName = "<file-share>"
$fileForLease = "<path-to-file>"

# Get reference to storage account
$storageAccount = Get-AzStorageAccount `
        -ResourceGroupName $resourceGroupName `
        -Name $storageAccountName

# Get reference to file
$file = Get-AzStorageFile `
        -Context $storageAccount.Context `
        -ShareName $fileShareName `
        -Path $fileForLease

$fileClient = $file.ShareFileClient

# Check if the file has a file lease
$fileClient.GetProperties().Value
```

2. If a file has a lease, the returned object should contain the following properties:

```
LeaseDuration          : Infinite
LeaseState             : Leased
LeaseStatus            : Locked
```

3. The following example shows how to break the lease for the file indicated in previous steps.
   Note: This example continues with the PowerShell variables from above PowerShell block):

```
$leaseClient = [Azure.Storage.Files.Shares.Specialized.ShareLeaseClient]::new($fileClient)
$leaseClient.Break() | Out-Null
```

Scenario 2: File Share Snapshot Lease

Break a lease on a File Share Snapshot
Scenario:
In the Azure Portal, Attempt to delete a File Share Snapshot results in error: Failed to delete snapshots for file share. Error: LeaseIdMissing: There is currently a lease on the file share and no lease ID was specified in the request. This is usually due to a backup existing which places a lock and lease on the file share. The lock should be able to be removed from the Portal. If unable to remove the lease via Backup Service, try via Powershell:

Mitigation via Powershell:

```
$storageAccount = "<StorageAccountName>"
$RG = "<ResourceGroupName>"
$snapshotTime = "<TimeStampofFileShareSnapshot>" # In the Azure Portal at the Snapshots list, the "Name"
$sharename = "<FileShareName>"
$sa = get-azstorageaccount -Name $storageAccount -ResourceGroupName $RG
$snap = Get-AzStorageShare -Name $sharename -SnapshotTime "$snapshotTime" -Context $sa.Context
$lease = [Azure.Storage.Files.Shares.Specialized.ShareLeaseClient]::new($snap.ShareClient)
$lease.Break()

EXAMPLE:
$storageAccount = "javanstorageragrs"
$RG = "rg1"
$snapshotTime = "2022-05-27T19:47:56.0000000Z"
$sharename = "share1"
$sa = get-azstorageaccount -Name $storageAccount -ResourceGroupName $RG
$snap = Get-AzStorageShare -Name $sharename -SnapshotTime "$snapshotTime" -Context $sa.Context
$lease = [Azure.Storage.Files.Shares.Specialized.ShareLeaseClient]::new($snap.ShareClient)
$lease.Break()
```

File Recovery

- If a file is deleted from a FileShare, it is not possible to recover the files as of now. However SoftDelete for Azure files is being planned and we don't have an ETA yet.
- To overcome this limitation, you could use Shared snapshot feature. https://docs.microsoft.com/en-us/azure/storage/files/storage-snapshots-files ↗

Case Coding

Support Topic: Routing Azure Storage File\Deletion Issue
**Root Cause: Root cause - Azure Storage\File\Open File Handles\Unable to delete files**

Product Engineering Escalation

If you have completed all of the above steps, and are still not able to resolve the issue, you can file an ICM from Azure Support Center(ASC) to get assistance from the engineering team. Please include all relevant

troubleshooting information in the ICM.

Note: DO NOT include any PII information in the title of any request. More information can be found here ⬚.

1. You can **file the ICM in Azure Support Center(ASC)** by using the **Escalate ticket** option within **Case Overview** section:
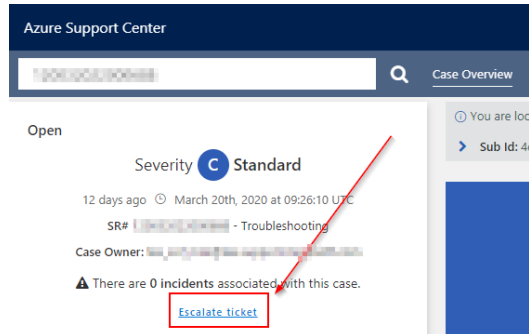
You can create an ICM from within MSSolve.

2. Make sure that the Case has the **correct Support Topic** within the ASC details. If not, please adjust it to the correct one by clicking **Edit & Run Again** in **ASC**.

3. **Select the Template** that best match the Service for the issue, **complete the details required** for the ICM and **submit**.

If you **can't** create the ICM in **Azure Support Center(ASC)**

- For **Severity B and C** issues, you should engage the EEE team, and provide the appropriate template using these links:
  - Storage: http://aka.ms/cri-xeee ⬚
- For **Severity A and 0** issues, you should engage WASU, and provide the appropriate template using these links:
  - Storage: http://aka.ms/CXPCRI-StorageSRP ⬚

A complete list of all ICM templates is available here ⬚

More Information

https://docs.microsoft.com/en-us/windows/desktop/api/fileapi/nf-fileapi-createfilea ⬚

Need additional help or have feedback?

To engage the Azure Files All Topics SMEs...	*To provide feedback on this page...*	*To provide kudos on this page...*
Please reach out to the **Azure Files All Topics SMEs** ↗ AVA channel via Teams. Make sure to use the **Ava process** for faster assistance.	Use the **Azure Files All Topics Feedback** form to submit detailed feedback on improvements or new content ideas for Azure Files All Topics. ***Please note*** the link to the page is required when submitting feedback on existing pages! If it is a new content idea, please put N/A in the Wiki Page Link.	Use the **Azure Files All Topics Kudos** form to submit kudos on the page. Kudos will help us improve our wiki content overall! ***Please note*** the link to the page is required when submitting kudos!