



# **Determine whether SMB sessions are continuously available**

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# Determine whether SMB sessions are continuously available

## Display SMB session information

You can display information about established SMB sessions, including the SMB connection and session ID and the IP address of the workstation using the session. You can display information about the session's SMB protocol version and continuously available protection level, which helps you to identify whether the session supports nondisruptive operations.

### About this task

You can display information for all of the sessions on your SVM in summary form. However, in many cases, the amount of output that is returned is large. You can customize what information is displayed in the output by specifying optional parameters:

- You can use the optional `-fields` parameter to display output about the fields you choose.  
  
You can enter `-fields ?` to determine what fields you can use.
- You can use the `-instance` parameter to display detailed information about established SMB sessions.
- You can use the `-fields` parameter or the `-instance` parameter either alone or in combination with other optional parameters.

### Steps

1. Perform one of the following actions:

If you want to display SMB session information...	Enter the following command...
For all sessions on the SVM in summary form	<code>vserver cifs session show -vserver <i>vserver_name</i></code>
On a specified connection ID	<code>vserver cifs session show -vserver <i>vserver_name</i> -connection-id integer</code>
From a specified workstation IP address	<code>vserver cifs session show -vserver <i>vserver_name</i> -address <i>workstation_IP_address</i></code>
On a specified LIF IP address	<code>vserver cifs session show -vserver <i>vserver_name</i> -lif -address <i>LIF_IP_address</i></code>
On a specified node	<code>vserver cifs session show -vserver <i>vserver_name</i> -node {<i>node_name</i> local}</code>

<p><b>If you want to display SMB session information...</b></p>	<p><b>Enter the following command...</b></p>
<p>From a specified Windows user</p>	<pre><b>vserver cifs session show -vserver vserver_name -windows -user user_name</b></pre> <p>The format for <code>user_name</code> is <code>[domain]\user</code>.</p>
<p>With a specified authentication mechanism</p>	<pre><b>vserver cifs session show -vserver vserver_name -auth -mechanism authentication_mechanism</b></pre> <p>The value for <code>-auth-mechanism</code> can be one of the following:</p> <ul style="list-style-type: none"> <li>• NTLMv1</li> <li>• NTLMv2</li> <li>• Kerberos</li> <li>• Anonymous</li> </ul>
<p>With a specified protocol version</p>	<pre><b>vserver cifs session show -vserver vserver_name -protocol -version protocol_version</b></pre> <p>The value for <code>-protocol-version</code> can be one of the following:</p> <ul style="list-style-type: none"> <li>• SMB1</li> <li>• SMB2</li> <li>• SMB2_1</li> <li>• SMB3</li> <li>• SMB3_1</li> </ul> <div data-bbox="591 1373 646 1432">  </div> <p>Continuously available protection and SMB Multichannel are available only on SMB 3.0 and later sessions. To view their status on all qualifying sessions, you should specify this parameter with the value set to <code>SMB3</code> or later.</p>

<b>If you want to display SMB session information...</b>	<b>Enter the following command...</b>
With a specified level of continuously available protection	<p><b><code>vserver cifs session show -vserver vserver_name -continuously-available continuously_available_protection_level</code></b></p> <p>The value for <code>-continuously-available</code> can be one of the following:</p> <ul style="list-style-type: none"> <li>• No</li> <li>• Yes</li> <li>• Partial</li> </ul> <div>  <p>If the continuously available status is <code>Partial</code>, this means that the session contains at least one open continuously available file, but the session has some files that are not open with continuously available protection. You can use the <code>vserver cifs sessions file show</code> command to determine which files on the established session are not open with continuously available protection.</p> </div>
With a specified SMB signing session status	<b><code>vserver cifs session show -vserver vserver_name -is-session-signed {true false}</code></b>

## Examples

The following command displays session information for the sessions on SVM vs1 established from a workstation with IP address 10.1.1.1:

```
cluster1::> vserver cifs session show -address 10.1.1.1
Node:      node1
Vserver:   vs1
Connection Session
ID          ID      Workstation      Windows User      Open      Idle
-----
3151272279,
3151272280,
3151272281  1      10.1.1.1      DOMAIN\joe      2      23s
```

The following command displays detailed session information for sessions with continuously available protection on SVM vs1. The connection was made by using the domain account.

```
cluster1::> vserver cifs session show -instance -continuously-available  
Yes
```

```
Node: node1  
Vserver: vs1  
Session ID: 1  
Connection ID: 3151274158  
Incoming Data LIF IP Address: 10.2.1.1  
Workstation IP address: 10.1.1.2  
Authentication Mechanism: Kerberos  
Windows User: DOMAIN\SERVER1$  
UNIX User: pcuser  
Open Shares: 1  
Open Files: 1  
Open Other: 0  
Connected Time: 10m 43s  
Idle Time: 1m 19s  
Protocol Version: SMB3  
Continuously Available: Yes  
Is Session Signed: false  
User Authenticated as: domain-user  
NetBIOS Name: -  
SMB Encryption Status: Unencrypted
```

The following command displays session information on a session using SMB 3.0 and SMB Multichannel on SVM vs1. In the example, the user connected to this share from an SMB 3.0 capable client by using the LIF IP address; therefore, the authentication mechanism defaulted to NTLMv2. The connection must be made by using Kerberos authentication to connect with continuously available protection.

```
cluster1::> vserver cifs session show -instance -protocol-version SMB3
```

```

    Node: node1
    Vserver: vs1
    Session ID: 1
    **Connection IDs: 3151272607,31512726078,3151272609
    Connection Count: 3**
Incoming Data LIF IP Address: 10.2.1.2
    Workstation IP address: 10.1.1.3
    Authentication Mechanism: NTLMv2
        Windows User: DOMAIN\administrator
        UNIX User: pcuser
    Open Shares: 1
        Open Files: 0
        Open Other: 0
    Connected Time: 6m 22s
        Idle Time: 5m 42s
    Protocol Version: SMB3
    Continuously Available: No
        Is Session Signed: false
    User Authenticated as: domain-user
        NetBIOS Name: -
    SMB Encryption Status: Unencrypted
```

## Display information about open SMB files

You can display information about open SMB files, including the SMB connection and session ID, the hosting volume, the share name, and the share path. You can also display information about the continuously available protection level of a file, which is helpful in determining whether an open file is in a state that supports nondisruptive operations.

### About this task

You can display information about open files on an established SMB session. The displayed information is useful when you need to determine SMB session information for particular files within an SMB session.

For example, if you have an SMB session where some of the open files are open with continuously available protection and some are not open with continuously available protection (the value for the `-continuously-available` field in `vserver cifs session show` command output is `Partial`), you can determine which files are not continuously available by using this command.

You can display information for all open files on established SMB sessions on storage virtual machines (SVMs) in summary form by using the `vserver cifs session file show` command without any optional parameters.

However, in many cases, the amount of output returned is large. You can customize what information is displayed in the output by specifying optional parameters. This can be helpful when you want to view information for only a small subset of open files.

- You can use the optional `-fields` parameter to display output on the fields you choose.

You can use this parameter either alone or in combination with other optional parameters.

- You can use the `-instance` parameter to display detailed information about open SMB files.

You can use this parameter either alone or in combination with other optional parameters.

## Steps

1. Perform one of the following actions:

If you want to display open SMB files...	Enter the following command...
On the SVM in summary form	<code>vserver cifs session file show -vserver vserver_name</code>
On a specified node	<code>vserver cifs session file show -vserver vserver_name -node {node_name local}</code>
On a specified file ID	<code>vserver cifs session file show -vserver vserver_name -file-id integer</code>
On a specified SMB connection ID	<code>vserver cifs session file show -vserver vserver_name -connection-id integer</code>
On a specified SMB session ID	<code>vserver cifs session file show -vserver vserver_name -session-id integer</code>
On the specified hosting aggregate	<code>vserver cifs session file show -vserver vserver_name -hosting -aggregate aggregate_name</code>
On the specified volume	<code>vserver cifs session file show -vserver vserver_name -hosting-volume volume_name</code>
On the specified SMB share	<code>vserver cifs session file show -vserver vserver_name -share share_name</code>
On the specified SMB path	<code>vserver cifs session file show -vserver vserver_name -path path</code>



If you want to display open SMB files...	Enter the following command...
With the specified level of continuously available protection	<div data-bbox="834 149 1495 315"><pre><b>vserver cifs session file show</b> <b>-vserver vserver_name -continuously</b> <b>-available</b> <b>continuously_available_status</b></pre></div> <div data-bbox="834 315 1495 409"><p>The value for <code>-continuously-available</code> can be one of the following:</p></div> <div data-bbox="834 409 1495 546"><ul style="list-style-type: none"><li>• No</li><li>• Yes</li></ul></div> <div data-bbox="834 546 1495 951"><div data-bbox="922 703 976 758"></div><div data-bbox="1036 577 1437 882"><p>If the continuously available status is <code>No</code>, this means that these open files are not capable of nondisruptively recovering from takeover and giveback. They also cannot recover from general aggregate relocation between partners in a high-availability relationship.</p></div></div>
With the specified reconnected state	<div data-bbox="834 951 1495 1092"><pre><b>vserver cifs session file show</b> <b>-vserver vserver_name -reconnected</b> <b>reconnected_state</b></pre></div> <div data-bbox="834 1092 1495 1186"><p>The value for <code>-reconnected</code> can be one of the following:</p></div> <div data-bbox="834 1186 1495 1323"><ul style="list-style-type: none"><li>• No</li><li>• Yes</li></ul></div> <div data-bbox="834 1323 1495 1789"><div data-bbox="922 1503 976 1558"></div><div data-bbox="1036 1344 1453 1722"><p>If the reconnected state is <code>No</code>, the open file is not reconnected after a disconnection event. This can mean that the file was never disconnected, or that the file was disconnected and is not successfully reconnected. If the reconnected state is <code>Yes</code>, this means that the open file is successfully reconnected after a disconnection event.</p></div></div>

There are additional optional parameters that you can use to refine the output results. See the man page for more information.

Examples

The following example displays information about open files on SVM vs1:

```
cluster1::> vserver cifs session file show -vserver vs1
Node:          node1
Vserver:       vs1
Connection:    3151274158
Session:       1
File           File           Open Hosting           Continuously
ID            Type            Mode Volume            Share            Available
-----
41            Regular      r      data              data              Yes
Path: \mytest.rtf
```

The following example displays detailed information about open SMB files with file ID 82 on SVM vs1:

```
cluster1::> vserver cifs session file show -vserver vs1 -file-id 82
-instance

Node: node1
Vserver: vs1
File ID: 82
Connection ID: 104617
Session ID: 1
File Type: Regular
Open Mode: rw
Aggregate Hosting File: aggr1
Volume Hosting File: data1
CIFS Share: data1
Path from CIFS Share: windows\win8\test\test.txt
Share Mode: rw
Range Locks: 1
Continuously Available: Yes
Reconnected: No
```

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