Troubleshoot SMI-S Provider

NetApp SMI-S Provider

NetApp
October 05, 2026

This PDF was generated from https://docs.netapp.com/us-en/smis-provider/concept-troubleshoot-smi-s-agent-overview.html on October 05, 2026. Always check docs.netapp.com for the latest.

Table of Contents

Troubleshoot SMI-S Provider . . . 1
- Overview . . . 1
- Access is denied error . . . 1
- Possible errors while loading shared libraries . . . 1
- Connection refused . . . 2
- Filer return: No ontap element in response . . . 2
- Clone/Snapshot operations are not allowed . . . 3
- Warning 26130 . . . 3
  - Message . . . 3
  - Description . . . 3
  - Corrective action . . . 3
- HostAgentAccessDenied (ID: 26263) . . . 4
  - Message . . . 4
  - Description . . . 4
  - Corrective action . . . 4
- Cannot connect to localhost:5988 . . . 4
- Cannot connect to localhost:5989 . . . 5
- SMI-S Provider crashes in Windows . . . 6
- Issue entering passwords containing special characters . . . 7
  - Issuing passwords with special characters . . . 7
- Clone technology used in SMI-S Provider . . . 7
- Confirm visibility of important objects . . . 7
- Requirement for using fileshares on Windows . . . 8
  - Creating a volume to be used for CIFS shares and SCVMM . . . 8
- Nondefault firewalls must have ports manually added as exceptions . . . 8
- Cannot add a storage system using a nondefault HTTP or HTTPS port . . . 8
  - Adding a storage system that uses port 8000 for HTTP traffic . . . 9
- No response from the server . . . 9
- Runtime library issues . . . 10
- NetApp SMI-S Provider takes a long time to start . . . 10
- Total managed space for a storage pool (volume) discrepancy . . . 10
- Network path not found . . . 11
- Insufficient system resources exist to complete the requested service . . . 11
- SMB share size dropping to 0 in SCVMM . . . 12
- SCVMM rescan operation failed to locate or communicate with SMI-S Provider . . . 12

Troubleshoot SMI-S Provider

Overview

If you encounter a problem with NetApp SMI-S Provider, you should use any error messages that you receive to help with troubleshooting.

Access is denied error

- **Message**

  `Access is denied.`

- **Description**

  This message occurs in two possible situations:

  - If you are not logged in as Administrator when accessing SMI-S Provider from the Start menu shortcut
  - If the SMI-S Provider directory is not pointing to `C:\Program Files (x86)\NetApp\smis\pegasus\bin`

- **Corrective action**

  Complete the action that corresponds to the situation:

  - Log in with Administrator-level privileges and reopen SMI-S Provider from the Start menu, or right-click and select **Run as administrator**.
  - Log in with Administrator-level privileges and manually change the directory to `C:\Program Files (x86)\NetApp\smis\pegasus\bin`.

Possible errors while loading shared libraries

- **Messages**

  `Error while loading shared libraries: libssl.so 1.0.0: cannot open shared object file: No such file or directory.`

  The `smis cimserver` status shows the cimserver is running properly, but all other `/usr/netapp/smis/pegasus/bin/cim` commands show various failure messages.

  For example, you might receive the message `cimserver not running` when executing the `cimserver`, or you might receive the message `/usr/netapp/smis/pegasus/bin/ cimcli: symbol lookup error: /usr/netapp/smis/pegasus/bin/cimcli: undefined symbol: _ZN7Pegasus16StringConversion21decimalStringToUint64EPKcRy` when executing cimcli. These examples are not all-inclusive.

- **Description**

  This message (and similar messages) occur when the `LD_LIBRARY_PATH` environment is not set to the installation directory.

- **Corrective action**

  Enter one of the following commands to set the `LD_LIBRARY_PATH` environment variable to the installation directory:

```
export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/netapp/smis/pegasus/lib

setenv LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/netapp/smis/pegasus/lib
```

Connection refused

A `Connection refused` message indicates that the CIM server used by NetApp SMI-S Provider has not been started. Verify the CIM server status and start it if needed.

- **Message**

  `Connection refused`

- **Cause**

  The CIM server has not been started.

- **Corrective action**

  Navigate to the `bin` directory in the directory in which you installed NetApp SMI-S Provider, and enter the following command to verify that the CIM server is started:

  ```
  smis cimserver status
  ```

  If the CIM server is not running, enter the following command:

  ```
  smis cimserver start
  ```

Filer return: No ontap element in response

The `Filer return: No ontap element in response` message occurs when an ONTAP API call made by NetApp SMI-S Provider times out. Increase the timeout value to resolve this issue.

- **Message**

  `Filer return: No ontap element in response.`

- **Description**

  This message occurs when the ONTAP API call times out. The default ONTAP API call timeout is 60 seconds, which might be too short in some scenarios.

- **Corrective action**

  Change the ONTAP API call timeout to a value greater than 60 seconds by setting the environment variable `ONTAPI_TIMEOUT_SEC`, and then restart SMI-S Provider.

Clone/Snapshot operations are not allowed

You might encounter an error indicating that clone or Snapshot copy operations are not allowed while a LUN clone split operation is in progress. Wait for the LUN clone split to finish, and then retry the operation.

- **Message**

  ```
  Clone/Snapshot operations are not allowed while LUN clone split operations are
  going on in the volume. Please wait for some time and try again.
  ```

- **Description**

  This error occurs if you attempt to execute Snapshot operations during a LUN clone split. You cannot perform Snapshot operations in a volume where a LUN is being split, if that LUN clone split is running in the background.

- **Corrective action**

  Try your Snapshot operations after the LUN is split.

Warning 26130

Warning 26130 occurs when storage capacity is allocated to a host group in which none of the hosts have access to the storage array, preventing you from placing virtual machines on the storage system. Grant the required access to each host to resolve this warning.

Message

```
Warning (26130) Storage pool has been allocated to host group where none of hosts
in host group has access to storage array.
```

Description

This error occurs when you allocate storage capacity and grant an array access to hosts that are in a host group. With this warning, it is impossible to put virtual machines on the storage systems.

Corrective action

1. On each host machine, add the IP address of each storage system to the iSCSI Initiator application.
2. If required, on each storage system, for each host machine, create one unique igroup linked with the proper iSCSI node name from the corresponding host machine.
3. For each host machine connected to ONTAP, open the MPIO application and add the following hardware ID:
   - For ONTAP, enter **`NETAPP LUN C-Mode`**.
4. Reboot the host machines.
5. Remove the provider.

6. Set the storage pool again.

HostAgentAccessDenied (ID: 26263)

The `HostAgentAccessDenied` error (ID: 26263) occurs when System Center Virtual Machine Manager (SCVMM) attempts to connect to NetApp SMI-S Provider using a user account that is not part of the SMI-S Provider trust store. Add a valid CIM user to the trust store to resolve this error.

Message

`Registration of storage provider` *`smis_provider_machine`* `for user` *`name`* `failed from` *`SCVMM_ (machine)`* `with error code HostAgentAccessDenied. Specify valid provider, port and user credentials for storage discovery. ID: 26263`

Description

This message occurs when a user is specified in SCVMM to connect to SMI-S Provider but is not part of the SMIS trust store.

To enable communication between SCVMM and SMI-S Provider, a valid CIM user (Local Administrator user or Domain user of the Local Administrators group) must be added to the SMIS trust store using the `cimuser` command.

Corrective action

Add the Local Administrator user (on the SMI-S Provider machine) to the CIM server database using the `cimuser` command: `cimuser -a -u` *`admin user`* `-w` *`password`*. You must then use that administrative user when adding NetApp SMI-S Provider to SCVMM.

If the domain controller takes too long to authenticate the Domain user, you must use the Local Administrator user on the SMI-S Provider machine.

If the error persists, you can disable authentication in SMI-S Provider.

Cannot connect to localhost:5988

NetApp SMI-S Provider can fail to connect to `localhost:5988` when the required connection settings are disabled or misconfigured, or when the provider has stopped responding. Verify your connection settings and restart the provider to resolve the issue.

- **Message**

  `Cannot connect to localhost:5988. Connection failed. Trying to connect to localhost:5988`

- **Description**

  This message occurs when HTTPS connections are disabled or the HTTPS port is not set to 5988, or if the provider has stopped working and remains in a hanging state.

- **Corrective action**

  Verify that the values of `enableHttpsConnection` and `httpsPort` are correct:

  ```
  cimconfig -g enableHttpConnection

  cimconfig -g enableHttpsConnection

  cimconfig -g httpPort

  cimconfig -g httpsPort
  ```

  If `enableHttpConnection` or `enableHttpsConnection` is not set to `true`, enter the following commands:

  ```
  cimconfig -s enableHttpConnection -p

  smis cimserver restart
  ```

  If `httpPort` is not set to 5988, enter the following commands:

  ```
  cimconfig -s httpPort=5988 -p

  smis cimserver restart
  ```

  If the provider has stopped working and remains in a hanging state, open Task Manager and end the process, and then restart the provider.

Cannot connect to localhost:5989

NetApp SMI-S Provider can fail to connect to `localhost:5989` when HTTPS connections are disabled, the HTTPS port is misconfigured, or the provider has stopped responding. Verify your HTTPS connection settings and restart the provider to resolve the issue.

- **Message**

  ```
  Cannot connect to localhost:5989. Connection failed. Trying to connect to
  localhost:5989
  ```

- **Description**

  This message occurs when HTTPS connections are disabled or the HTTPS port is not set to 5989, or if the provider has stopped working and remains in a hanging state.

- **Corrective action**

  Verify that the values of `enableHttpsConnection` and `httpsPort` are correct:

  ```
  cimconfig -g enableHttpsConnection

  cimconfig -g httpsPort
  ```

If `enableHttpsConnection` is not set to “true”, enter the following commands:

```
cimconfig -s enableHttpsConnection -p

smis cimserver restart
```

If `httpsPort` is not set to 5989, enter the following commands:

```
cimconfig -s httpsPort=5989 -p

smis cimserver restart
```

If the provider has stopped working and remains in a hanging state, open Task Manager and end the process, and then restart the provider.

SMI-S Provider crashes in Windows

NetApp SMI-S Provider can occasionally crash in a Windows environment. Collect the dump, log, and trace files generated at the time of the crash and send them to technical support for further analysis.

- **Issue**

  SMI-S Provider crashes in Windows.

- **Cause**

  This issue occurs for a variety of reasons, documented in files generated at the time of the crash.

- **Corrective action**

  Restart the provider and send the following information to technical support for further analysis:

  - Dump file from the `C:\Program Files (x86)\NetApp\smis\pegasus\pegasus\logs` directory
  - Log files from the `C:\Program Files (x86)\NetApp\smis\pegasus\pegasus\logs` directory
  - Trace files from the `C:\Program Files (x86)\NetApp\smis\pegasus\pegasus\traces` directory

    Messages similar to the following also appear in the trace file:

    ```
    23-May-2013 20:46:36.874 INFO cimserver: createMiniDump: SMI-S Agent has
    crashed, attempting to generate a dump file

    23-May-2013 20:46:37.14 INFO cimserver: createMiniDump: Process dumped to
    C:\Program Files (x86)\netapp\smis\pegasus\logs\SMI-S Agent-8be55da-
    2011_05_23-20_46_36.dmp
    ```

  - The files `version.txt` and `cimserver_current.conf` from the `C:\Program Files (x86)\NetApp\smis\pegasus\pegasus` directory

Issue entering passwords containing special characters

Passwords that contain special characters can cause the `smis` command to fail in a Windows environment. Enclose such passwords in double quotes to enter them successfully.

- **Issue**

  In English-language operating systems, using a password that contains special characters with the `smis` command does not work in a Windows environment. This issue has not been tested with non-English operating systems.

- **Cause**

  In Windows, the following characters, plus any spaces, are considered special characters and cause password input to fail if the password is not enclosed in quotation marks:

  , & ' < > ; | = ^ "

- **Corrective action**

  If a password contains spaces or special characters, enclose it in double quotes (" ") when you use it in the `smis` command. Note that the quote character (") is a special character and should never be used in your password.

Issuing passwords with special characters

```
smis add 1.2.3.4 Administrator "pass word"

smis add 1.2.3.4 Administrator "pass&word"
```

Clone technology used in SMI-S Provider

You must have a FlexClone license for SMI-S Provider to create LUN clones.

SMI-S Provider creates LUN clones on that storage system using only FlexClone technology. If you do not have a FlexClone license, SMI-S Provider does not generate clones using LUN clone technology, and it generates the following error message:

```
FlexClone license is not enabled on the storage system.
```

If you have LUN clones that were created using LUN clone technology, and the ONTAP version is then upgraded to 7.3.1 or later, you cannot use SMI-S Provider to split those clones. They must be managed by the storage system administrator.

Confirm visibility of important objects

After adding a managed storage system, you should confirm that you can see all the important logical and physical objects in NetApp SMI-S Provider.

You can use the `smis` command to see the objects that are in the NetApp SMI-S Provider CIMOM repository.

For example, use `smis list` to display added storage systems, and use `smis luns` to display LUN information.

Requirement for using fileshares on Windows

When using fileshares (CIFS shares) on Windows, the volume on which the fileshare is created must be an NTFS-only volume.

If you want to create a fileshare and use it on Windows, the volume where the fileshare is created must be an NTFS-only volume. This is to avoid problems with the credentials that access the fileshare.

From System Center 2016 Virtual Machine Manager (SCVMM), you can create virtual machines (VMs) only on fileshares that were created on NTFS-only volumes. Mixed and UNIX-style volumes are not supported.

Creating a volume to be used for CIFS shares and SCVMM

When creating a volume to be used for CIFS shares and System Center Virtual Machine Manager (SCVMM), the volume has to be of NTFS type. To create the volume with NTFS, enter the following: *`vol create -vserver <vserver_name> -volume <volume_name> -aggregate <aggr_name> -size<volume_size> -security-style ntfs`*

Nondefault firewalls must have ports manually added as exceptions

If you use a firewall other than the default Windows firewall, NetApp SMI-S Provider might be unable to communicate with clients or send indications unless the required ports are added as exceptions. Add these ports to your firewall configuration to resolve the issue.

- **Issue**

  If you are using a firewall other than the default Windows firewall, you might experience the following issues:

  - SMI-S Provider is unable to communicate with a removed SMI-S client.
  - The SMI-S client is unable to receive indications from SMI-S Provider.

- **Cause**

  This issue occurs when you use a firewall other than the default Windows firewall without first manually adding the necessary ports as exceptions.

- **Corrective action**

  Add ports 427, 5988, and 5989 as exceptions to your firewall.

Cannot add a storage system using a nondefault HTTP or HTTPS port

You cannot add a NetApp storage system to NetApp SMI-S Provider when that system uses HTTP or HTTPS on a nondefault port. Add the storage system by specifying the

nondefault port explicitly.

- **Issue**

  You cannot add a storage system running HTTP or HTTPS on a nondefault port.

- **Cause**

  By default, NetApp SMI-S Provider uses port 80 for communicating with storage systems over HTTP and port 443 for communicating over HTTPS.

- **Corrective action**

  Use the following command to add a storage system that uses a port other than 80 for HTTP traffic or port 443 for HTTPS traffic:

  ```
  cimcli ci -n root/ontap ONTAP_FilerData hostName=storage_sys_ip_address
  port=non_default_port userName=storage_sys_user password=storage_sys_pwd
  comMechanism=HTTP -u agent_user -p agent_pwd-llocalhost:5989 -s
  ```

  `-u`, `-p`, `-l`, and `-s` are optional parameters.

Adding a storage system that uses port 8000 for HTTP traffic

```
cimcli ci -n root/ontap ONTAP_FilerData hostName=10.60.167.12 port=8000
userName=root password=netapp1! comMechanism=HTTP -u root -p netapp1! -l
localhost:5989 -s --timeout 180
```

No response from the server

NetApp SMI-S Provider might not respond to a query when no storage system has been added to the CIMOM repository. Verify whether a storage system is registered and add one if needed.

- **Issue**

  The server does not respond when queried.

- **Cause**

  This issue occurs when there is no storage system added to the CIMOM repository.

- **Corrective action**

  Enter the following command to verify that a storage system is added:

  ```
  smis list
  ```

  If there is no storage system listed, add a storage system by entering the following command:

  ```
  smis add storage_sys storage_sys_user storage_sys_pwd
  ```

Runtime library issues

NetApp SMI-S Provider might encounter runtime library issues on Windows. Install the required Microsoft Visual C++ redistributable package to resolve them.

- **Issue**

  You encounter runtime library issues.

- **Corrective action**

  Install the Microsoft Visual C++ 2010 Redistributable Package (x86) from www.microsoft.com.

NetApp SMI-S Provider takes a long time to start

NetApp SMI-S Provider can take up to 15 minutes to start on Windows systems with storage systems already under management, because the `smis cimserver` command waits for the provider local cache to populate. Use the `smis cimserver` command, the recommended method for starting the provider, and expect this delay before the provider becomes available.

- **Description**

  On Windows systems, with storage systems that are already under management, when you start NetApp SMI-S Provider using the `smis cimserver` command, the command does not return until the provider local cache is populated. It waits a maximum of 15 minutes while the cache is populated, and you cannot use NetApp SMI-S Provider until it returns.

  Using the `smis cimserver` command is the recommended method of starting NetApp SMI-S Provider.

Total managed space for a storage pool (volume) discrepancy

The total managed space reported for a storage pool (volume) by NetApp SMI-S Provider can differ from the size shown by other storage management tools, such as FilerView, because SMI-S Provider includes the WAFL and Snapshot reserve. This discrepancy is expected behavior and requires no corrective action.

- **Issue**

  If you are using another storage management tool, such as FilerView, you might notice a different size reported for the total managed space for a storage pool (volume) than the size returned by SMI-S Provider.

- **Cause**

  This discrepancy occurs because the size returned by SMI-S Provider includes the WAFL and Snapshot reserve, while FilerView and other tools show only the usable space, excluding WAFL and Snapshot reserve.

- **Corrective action**

This is an expected behavior; no corrective action.

Network path not found

A `Network path not found` message during VM deployment on an SMB share typically indicates a DNS issue in which the host does not yet have a record on the DNS server. Resolve this issue by updating the DNS record or the host file.

- **Message**

  `Network path not found`

- **Description**

  This message reflects a DNS issue and occurs during VM deployment on an SMB share when the host does not have a record on the DNS server.

  Typically, the domain DNS server should automatically update the host record within 24 to 48 hours when a new host is configured in the domain. However, this update does not always automatically happen.

- **Corrective action**
  - If you are a domain administrator, manually update the DNS host record.
  - If you are not a domain administrator, update the host file (`C:\Windows\System32\drivers\etc\hosts`).

    The host file does not have a file extension (`.txt`).

Insufficient system resources exist to complete the requested service

The `Insufficient system resources exist to complete the requested service` message occurs when the maximum limit on user sessions per connection is reached while provisioning a large number of VMs on a single file share in System Center Virtual Machine Manager (SCVMM). Increase this limit to support larger VM deployments.

- **Message**

  `Insufficient system resources exist to complete the requested service`

- **Description**

  This message occurs when the maximum limit on user sessions from the same user per connection has been reached when provisioning a large number of VMs on a single file share in SCVMM.

  SCVMM creates one TCP connection per Hyper-V host, and each connection creates many sessions with two users: the computer name (COMPUTER$) of the Hyper-V host and the SCVMM “Run As account”. The number of sessions with COMPUTER$ is exactly one more than number of virtual hard disks deployed in that Hyper-V host.

  The default value of `Max Same User Session Per Connection` is 50. This limit blocks a large-scale

VM deployment with SCVMM. If you deploy more than 50 VMs per Hyper-V host, then you encounter this issue.

- **Corrective action**

  Increase the counter that controls the maximum number of sessions on the same connection for CIFS protocol. For example, the following command changes the maximum user sessions on the same connection from the default 50 to 100:

  ```
  SVM::*> cifs op modify -max-same-user-sessions-per-connection 100
  ```

SMB share size dropping to 0 in SCVMM

An SMB 3.0 share size can drop to 0 in System Center Virtual Machine Manager (SCVMM) when quota reinitialization takes a long time in ONTAP due to heavy I/O, preventing new VMs from being provisioned. Resolve this issue by adjusting quota settings.

- **Issue**

  New or existing SMB 3.0 share size can drop to 0 in System Center Virtual Machine Manager (SCVMM).

- **Cause**

  If quota reinitialization takes a long time in ONTAP due to heavy I/O, new or existing SMB 3.0 share size can drop to 0 in SCVMM. When this issue occurs, new VMs cannot be provisioned on new or existing SMB 3.0 shares.

- **Corrective action**

  a. Turn off the quotas.

  b. Add one default quota rule of type “tree” on each volume hosting SMB shares.

  c. Turn on the quotas for those volumes to which you added a default quota rule and restart SMI-S Provider.

SCVMM rescan operation failed to locate or communicate with SMI-S Provider

In rare instances, System Center Virtual Machine Manager (SCVMM) cannot locate or communicate with NetApp SMI-S Provider after a security infrastructure update. Resolve this issue by reinstalling the provider and running the rescan operation in SCVMM.

- **Issue**

  In rare instances, SCVMM is not able to locate SMI-S Provider.

- **Cause**

  This issue can occur if the security infrastructure is updated with new GPOs. When they take effect after the reboot of SMI-S Provider host, SCVMM host might not trust the SMI-S Provider or the host.

- **Corrective action**
  a. Uninstall SMI-S Provider and install it again.
  b. Run the rescan operation in SCVMM for the SMI-S Provider.

Copyright information

Copyright © 2026 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.