

ONVIF Device Test Tool Installation Guide

December, 2019

Copyright © 2019 by ONVIF. All rights reserved.

Recipients of this document may copy, distribute, publish, or display this document so long as this copyright notice, license and disclaimer are retained with all copies of the document. No license is granted to modify this document.

THIS DOCUMENT IS PROVIDED "AS IS," AND THE CORPORATION AND ITS MEMBERS AND THEIR AFFILIATES, MAKE NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, OR TITLE; THAT THE CONTENTS OF THIS DOCUMENT ARE SUITABLE FOR ANY PURPOSE; OR THAT THE IMPLEMENTATION OF SUCH CONTENTS WILL NOT INFRINGE ANY PATENTS, COPYRIGHTS, TRADEMARKS OR OTHER RIGHTS.

IN NO EVENT WILL THE CORPORATION OR ITS MEMBERS OR THEIR AFFILIATES BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, ARISING OUT OF OR RELATING TO ANY USE OR DISTRIBUTION OF THIS DOCUMENT, WHETHER OR NOT (1) THE CORPORATION, MEMBERS OR THEIR AFFILIATES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, OR (2) SUCH DAMAGES WERE REASONABLY FORESEEABLE, AND ARISING OUT OF OR RELATING TO ANY USE OR DISTRIBUTION OF THIS DOCUMENT. THE FOREGOING DISCLAIMER AND LIMITATION ON LIABILITY DO NOT APPLY TO, INVALIDATE, OR LIMIT REPRESENTATIONS AND WARRANTIES MADE BY THE MEMBERS AND THEIR RESPECTIVE AFFILIATES TO THE CORPORATION AND OTHER MEMBERS IN CERTAIN WRITTEN POLICIES OF THE CORPORATION.

Contents

1. Installation Guide	3
2. ONVIF Device Test Tool installation	4
2.1. Start Installation	4
2.2. Welcome Page.....	4
2.3. License Agreement	4
2.4. Target installation folder	5
2.5. Start installation	6
2.6. Installation information.....	7
2.7. Finish installation.....	8
2.8. Start application	8
3. Configuring ffdshow	9
3.1. Video decoder configuration.....	9
3.2. Video decoder DirectShow control	10
3.3. Audio decoder configuration.....	11
3.4. Audio decoder DirectShow control	12
4. Device Discovery Troubleshooting	14
5. Installing and configuring IPv6	16
5.1. Configuring IPv6 routing.....	16
5.1.1. Start the netsh utility.....	16
5.1.2. Select IPv6 configuration.....	16
5.1.3. Display current interfaces	17
5.1.4. Add routing entry	17
5.1.5. Verify routing information	18
5.1.6. Add routing of other devices.....	18
5.1.7. Close netsh	18

1. Installation Guide

This installation guide document describes the procedure of installing the ONVIF Device Test Tool in section 2, [ONVIF Device Test Tool installation](#).

Before installing the ONVIF Device Test Tool, make sure the media framework **ffdshow** is installed. This framework is required for real-time audio and video playback and display. If installed prior to the installation of the ONVIF Device Test Tool, the framework will be automatically configured during the test tool installation process. Alternatively, the **ffdshow** framework can be configured manually as described in section 3, [Configuring ffdshow](#). The **ffdshow** framework can be downloaded and installed from <http://sourceforge.net/projects/ffdshow-tryout/>.

Windows 7, and later Windows versions, requires the 'Function Discovery Resource Publication' service to be disabled for device discovery to work properly. Section 4, [Device Discovery Troubleshooting](#), describes how to do that.

The installation of ONVIF Device Test Tool does not remove any previously installed ONVIF Device Test Tool versions, i.e. older ONVIF Device Test Tool versions should be manually uninstalled.

2. ONVIF Device Test Tool installation

2.1. Start Installation

To start the installation of the ONVIF Device Test Tool launch **setup.msi** or **setup.exe**. They are located in the directory where the test tool zip-file was unpacked

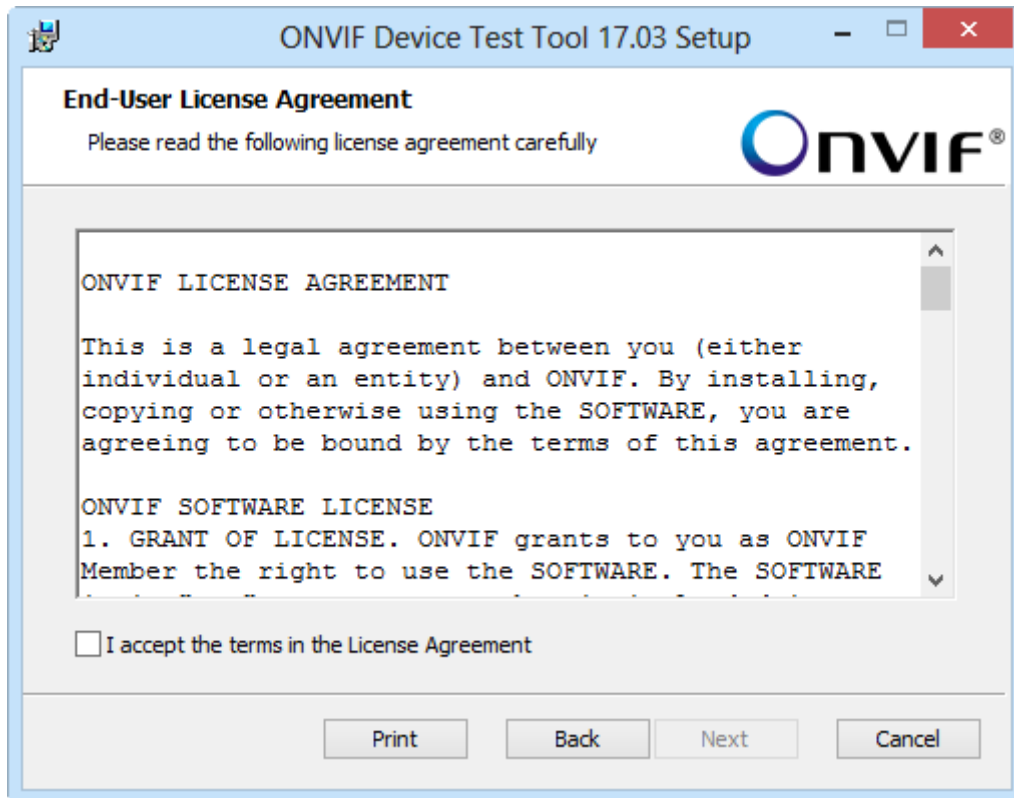
2.2. Welcome Page

The first page of the installation application is the welcome page. Click 'Next' to proceed.



2.3. License Agreement

Read the license agreement. If you accept the license agreement, select the 'I accept the terms in the License Agreement' check-box and click 'Next' to proceed. Otherwise, click the 'Cancel' and the installation will terminate without the ONVIF Device Test Tool being installed. If necessary, click 'Print' to print out the License Agreement.

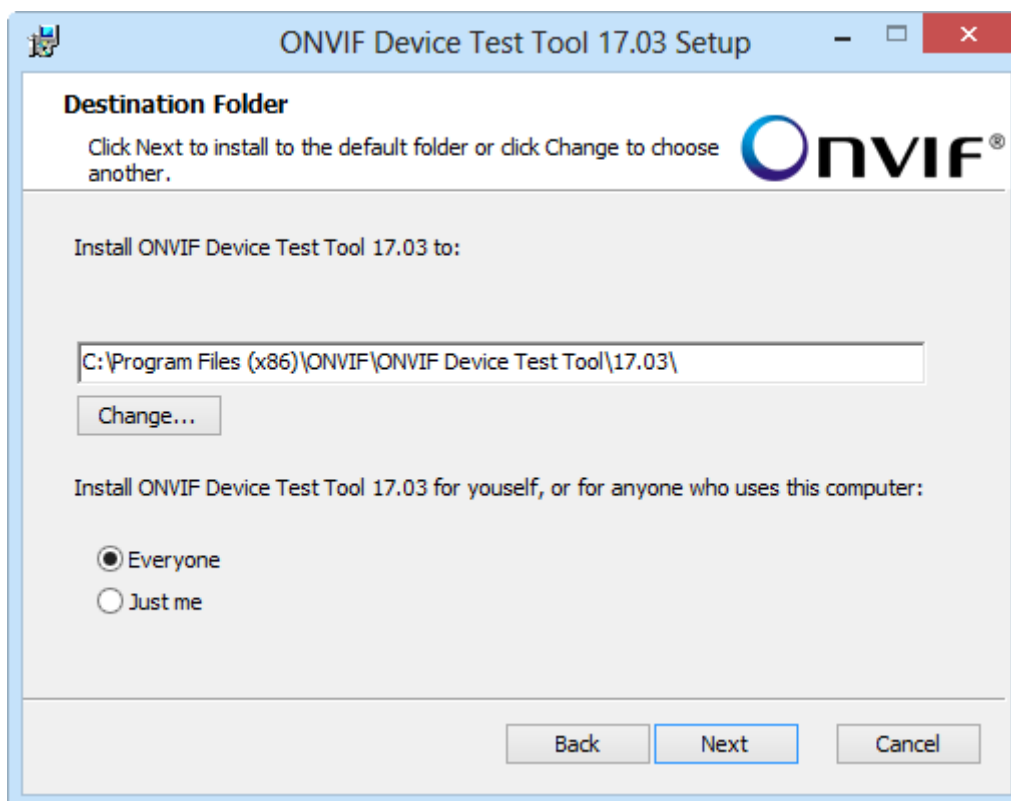


2.4. Target installation folder

The installation application provides a default target installation folder. To select another target directory, click 'Change ...' and select the desired new target installation directory.

Select the ONVIF Device Test Tool availability for all users of the target machine or only the one user installing the tool.

Once the target installation directory and tool availability are correct click 'Next'.



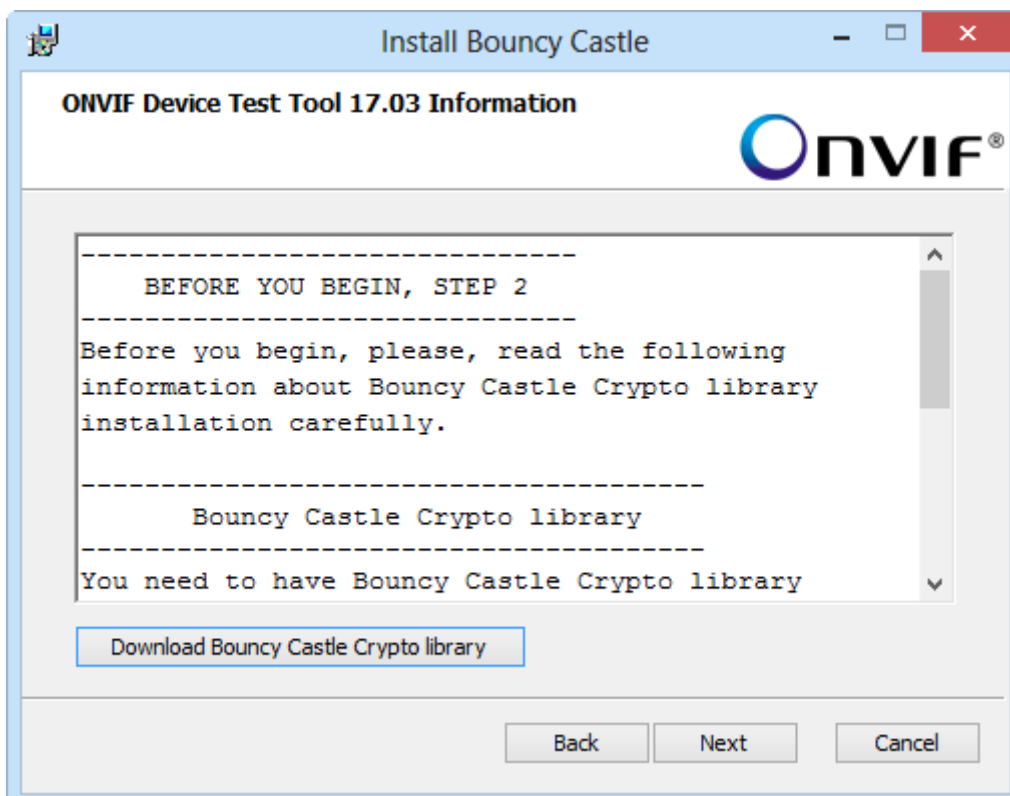
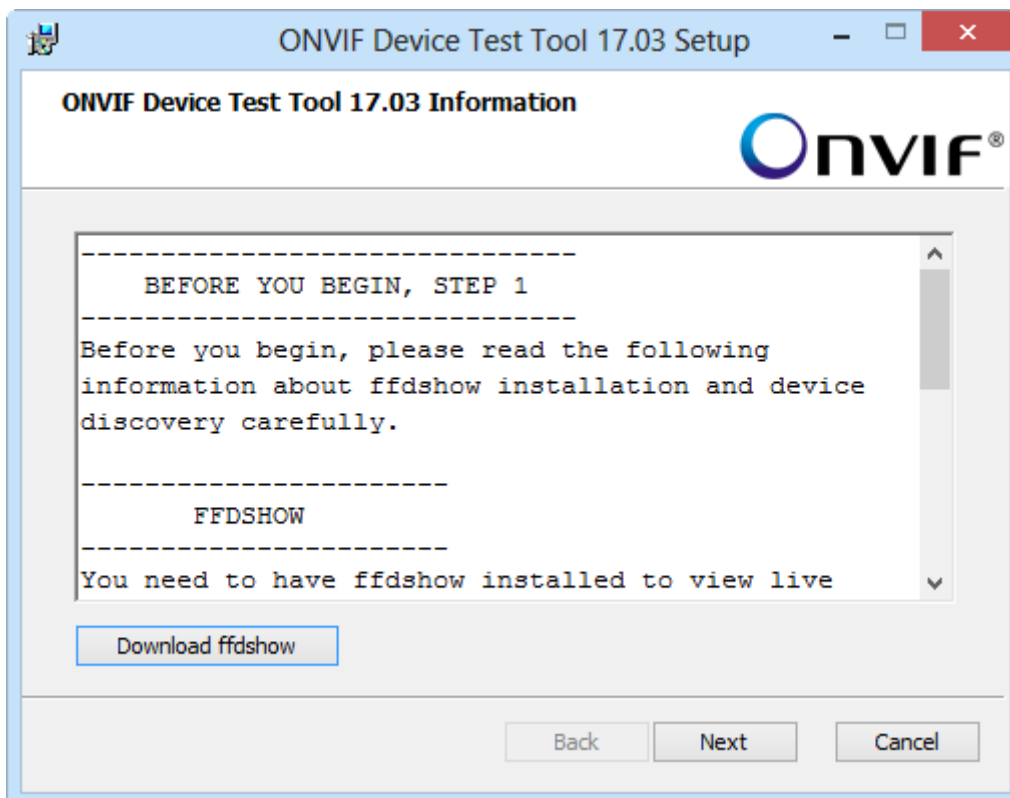
2.5. Start installation

The ONVIF Device Test Tool installation is now configured and the ONVIF Device Test Tool is now ready to be installed. Click 'Install' to proceed with the installation.



2.6. Installation information

The last step in the installation procedure is the installation information pages. Review the installation information carefully. Once finished, click 'Next'.



2.7. Finish installation

When installation is completed, click 'Finish' to exit the Setup Wizard. The ONVIF Device Test Tool is now ready for use.



2.8. Start application

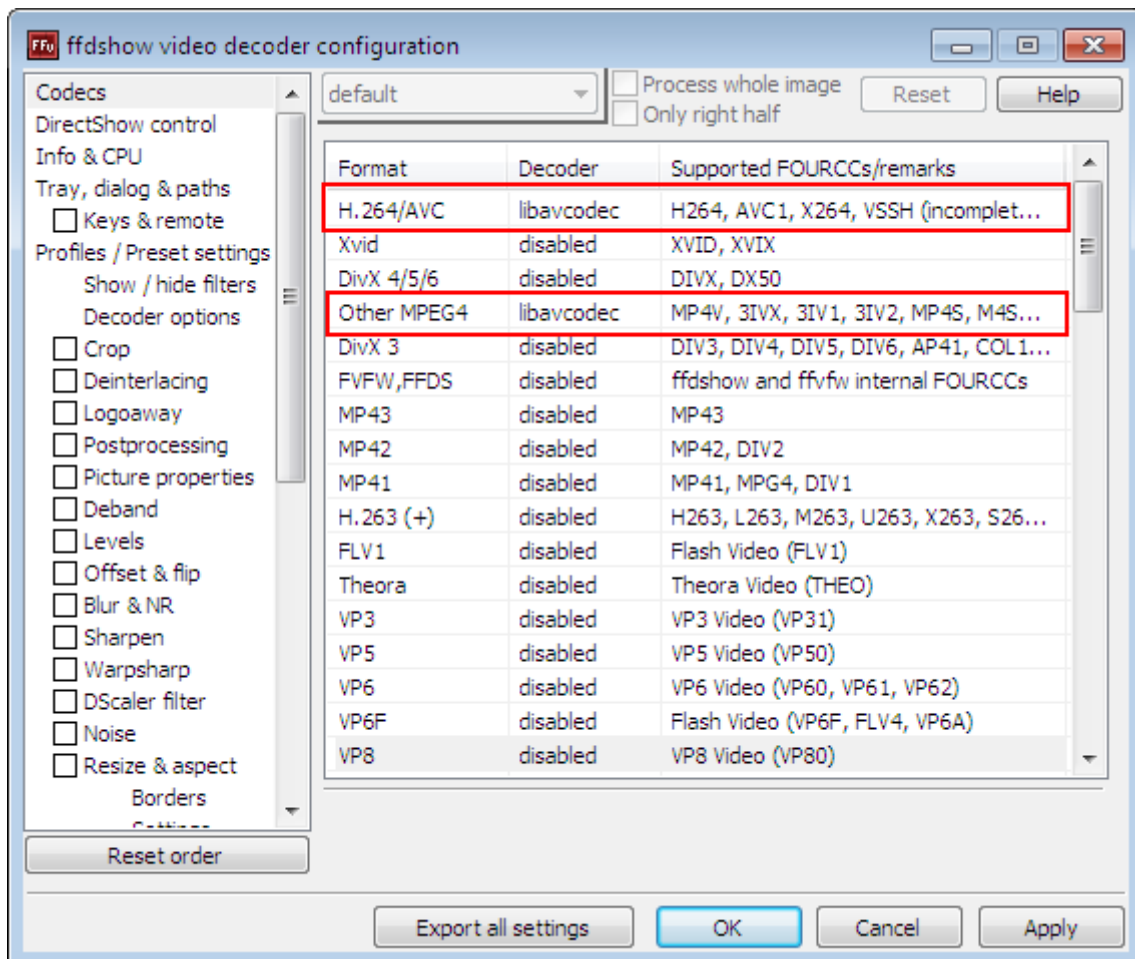
After the application installation is complete, there is a shortcut to the ONVIF Device Test Tool on the Windows Desktop and another one on the **Start** menu. Start the ONVIF Device Test Tool by clicking the icon. ONVIF Device Test Tool is automatically run with administrator privileges. Therefore, there might be a dialog displayed asking to confirm application start.

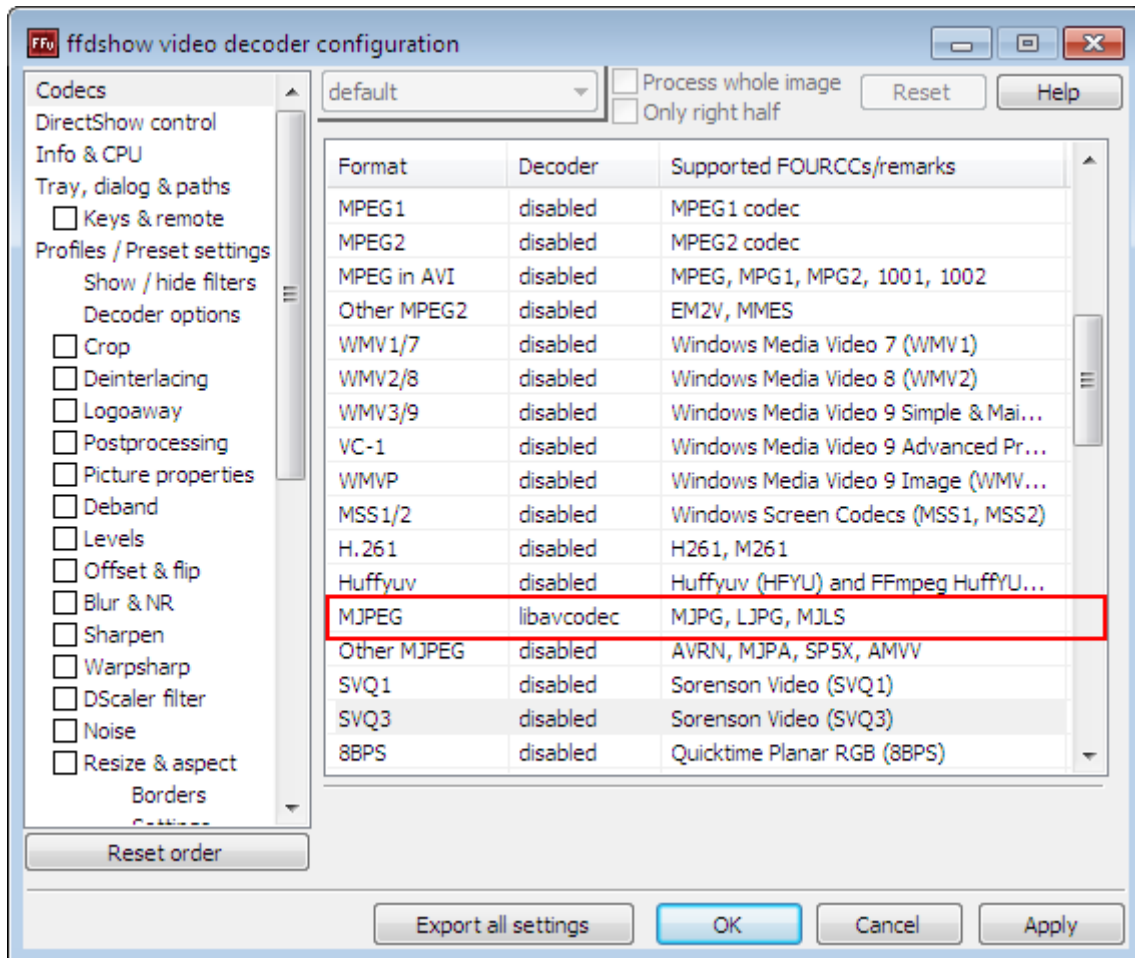
3. Configuring ffdshow

To display and playback video and audio the ONVIF Device Test Tool requires a multimedia framework, such as the ffdshow, to be installed on the computer. If ffdshow is installed before the installation of the ONVIF Device Test Tool, the installation program correctly configures ffdshow for use with the ONVIF Device Test Tool. Alternatively, ffdshow can be manually configured following the instructions below.

3.1. Video decoder configuration

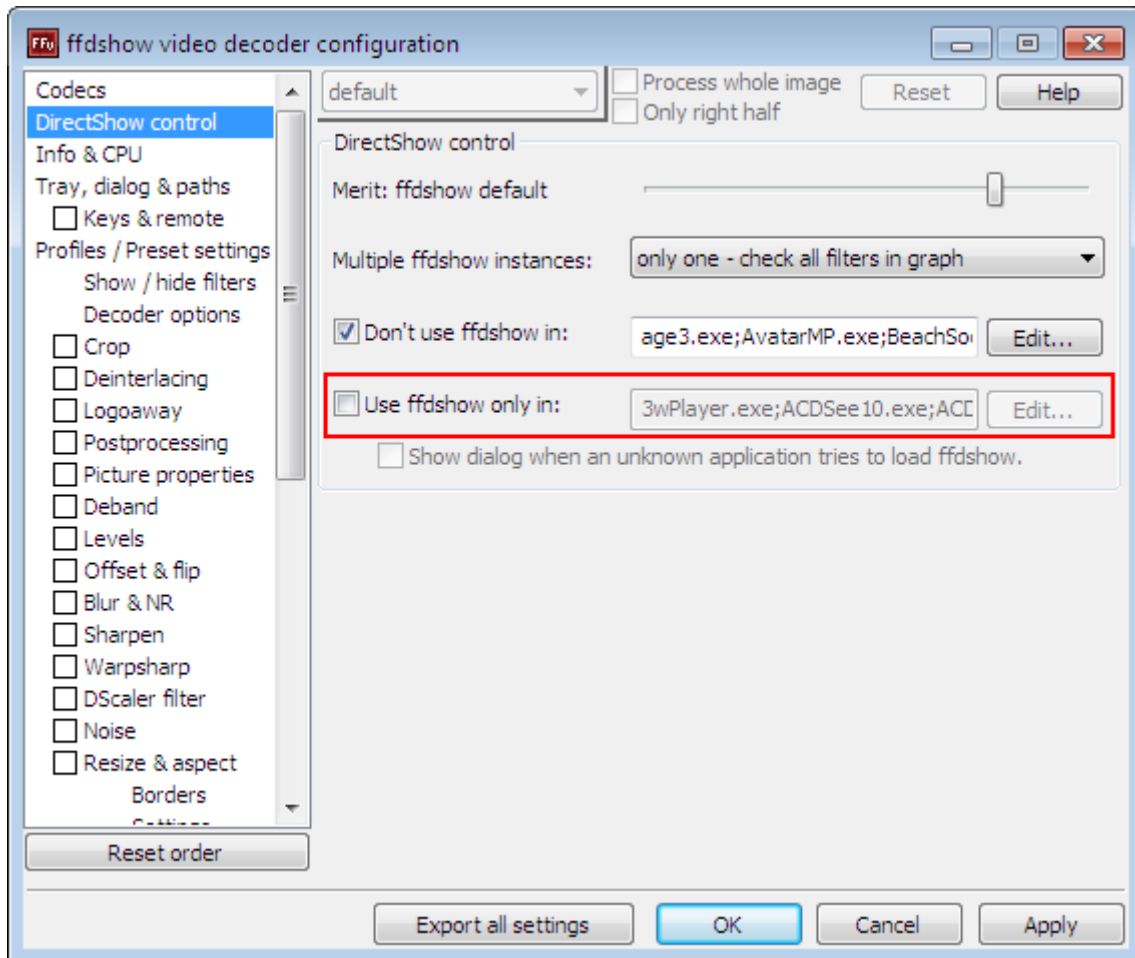
To configure ffdshow, launch the ffdshow video codec configuration utility and select the codecs configuration as illustrated below. Make sure 'H.264/AVC' and 'Other MPEG4' video formats have the 'libavcodec' selected as decoder, as well as the 'MJPEG' video format further down the video format list.





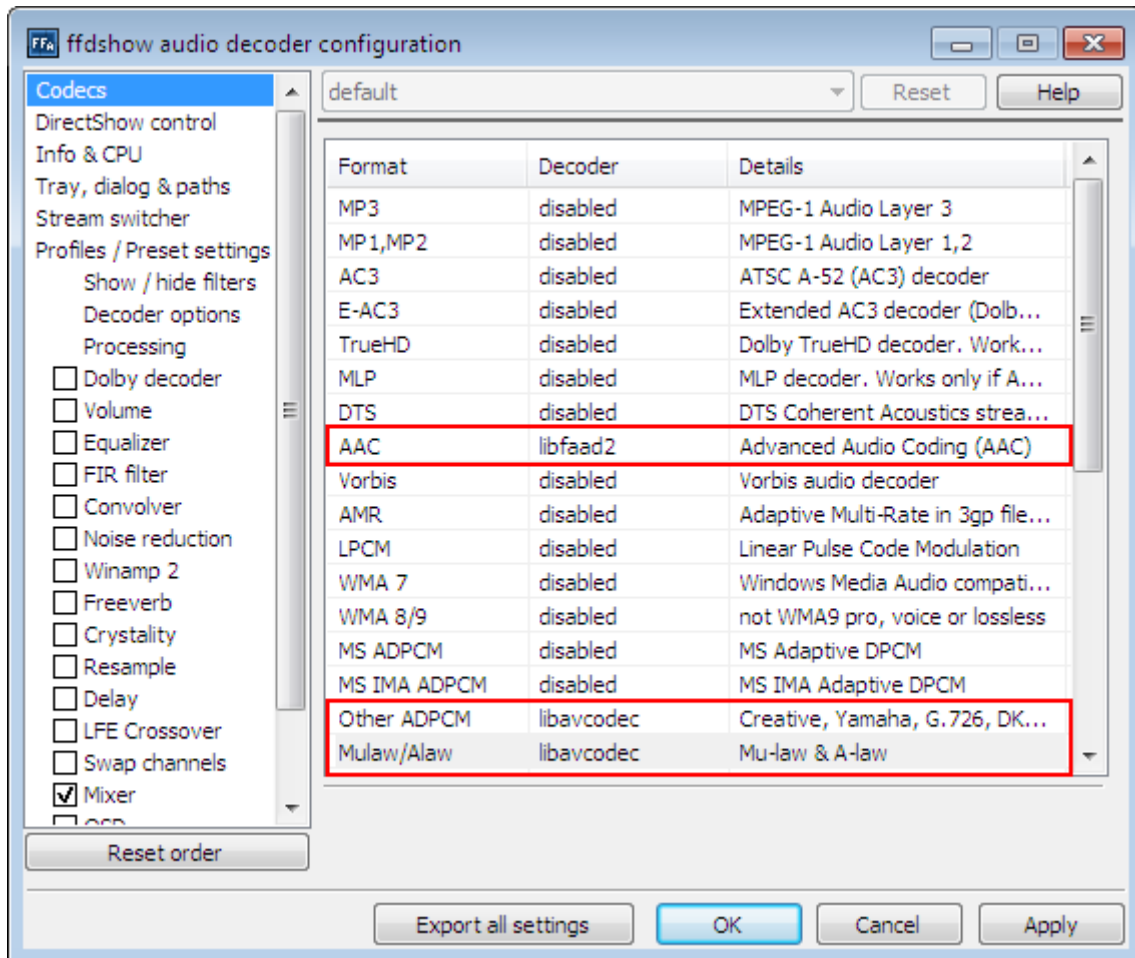
3.2. Video decoder DirectShow control

In the 'DirectShow control' menu pane, uncheck the 'Use ffdshow only in:' checkbox as illustrated below.



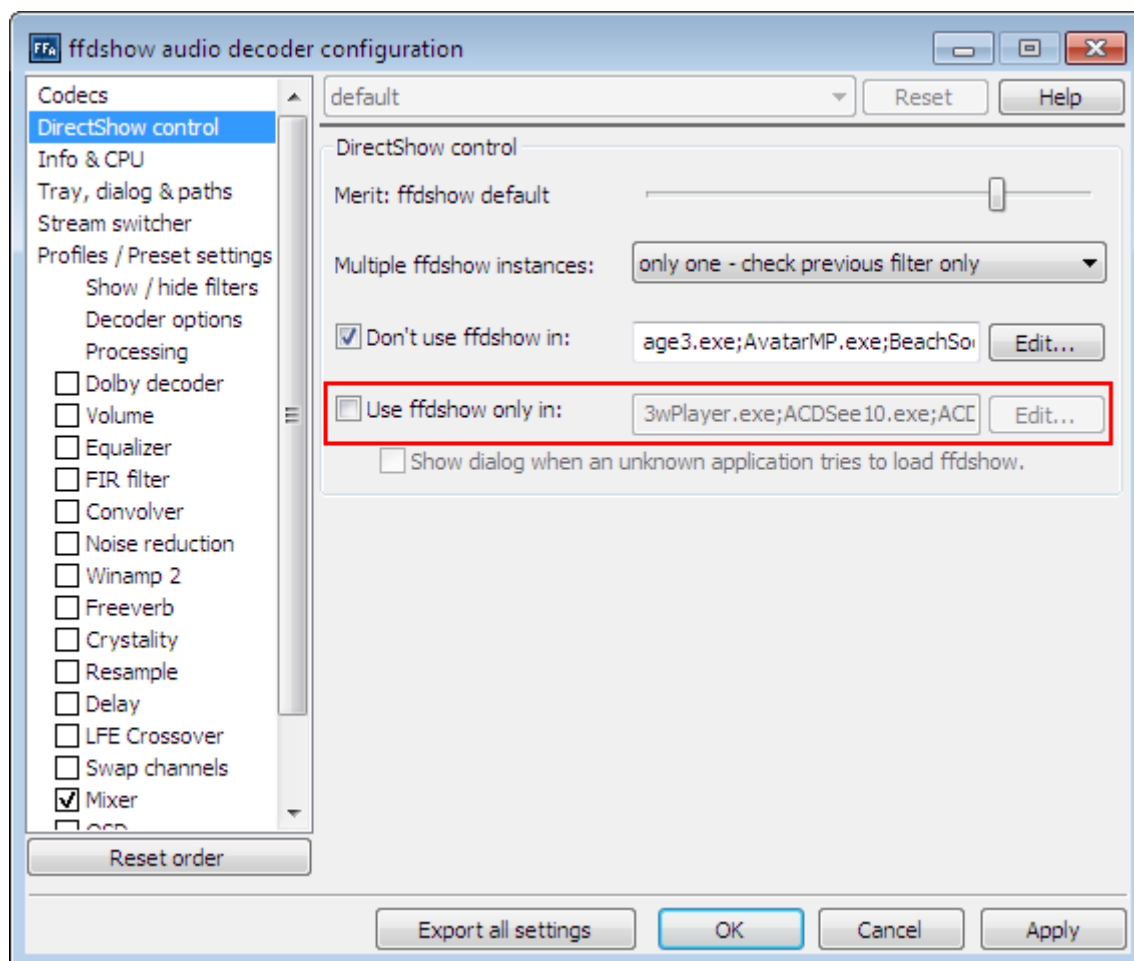
3.3. Audio decoder configuration

Launch the ffdshow audio codec configuration utility and select the 'Codecs' menu. Make sure 'libfaad2' decoder is selected for 'AAC' audio format, and 'libavcodec' is selected for 'Other ADPCM' and 'Mulaw/Alaw' audio formats, as illustrated below.





3.4. Audio decoder DirectShow control

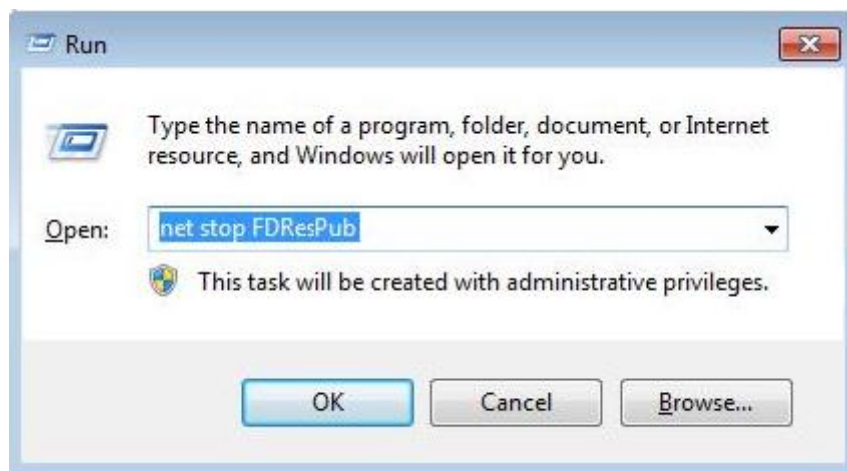
Similar as for video decoder configuration, also uncheck the 'Use ffdshow only in:' checkbox for DirectShow control in the audio decoder configuration.



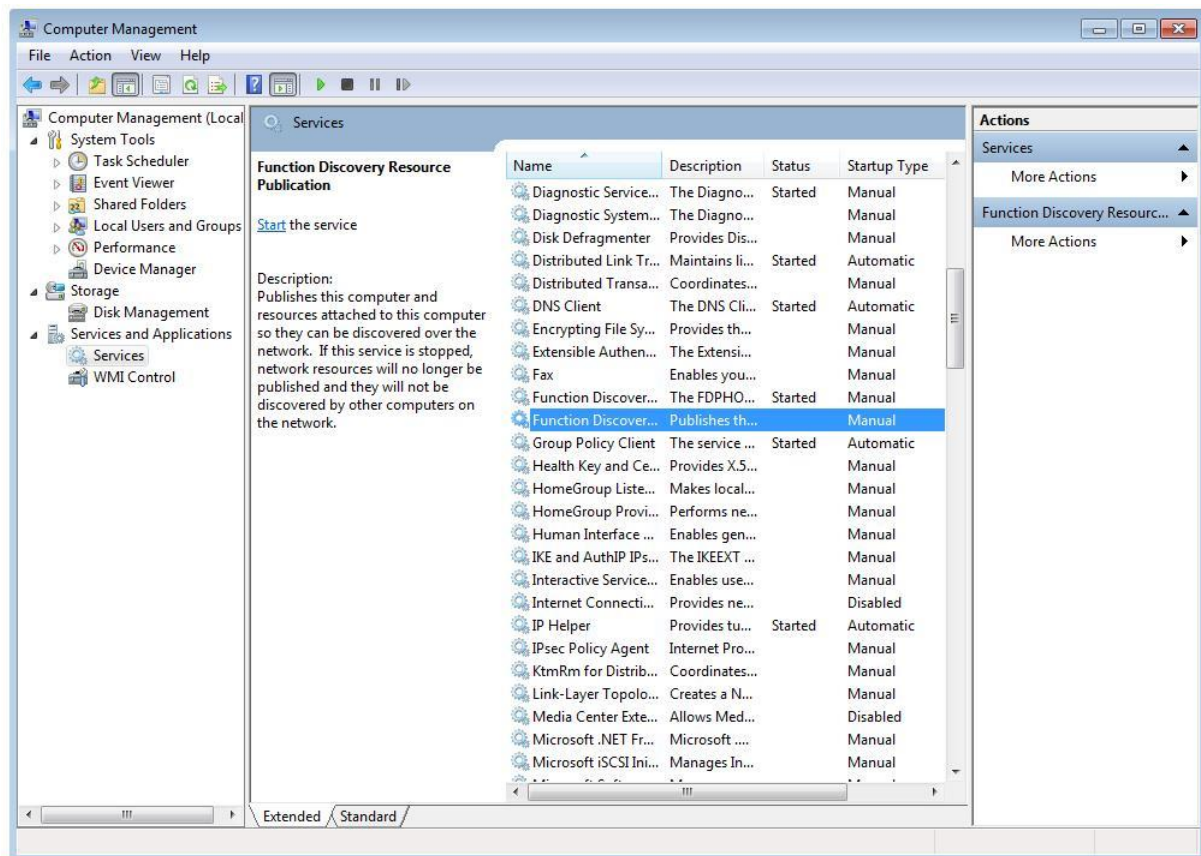
4. Device Discovery Troubleshooting

If using Windows 7 or higher, the Function Discovery Resource Publication service needs to be disabled for device discovery to work properly. This can be done either by executing the command 'net stop FDResPub' in the Command Prompt, as illustrated below, or alternatively through the Services dialog, as described in the next section.

To disable the service, make sure you are logged in as the Administrator. Press the  -button of the keyboard and, while holding down the  -button, press the 'R' key on the keyboard to open up the 'Run' dialog window. In the 'Open' text frame type 'net stop FDResPub' as illustrated below, and press 'OK'.



Alternatively, start the Services tool and find the 'Function Discovery Resource Publication' in the service list. Make sure it is stopped, illustrated below.



The service can also be disabled to prevent it from start after reboot using the management console.

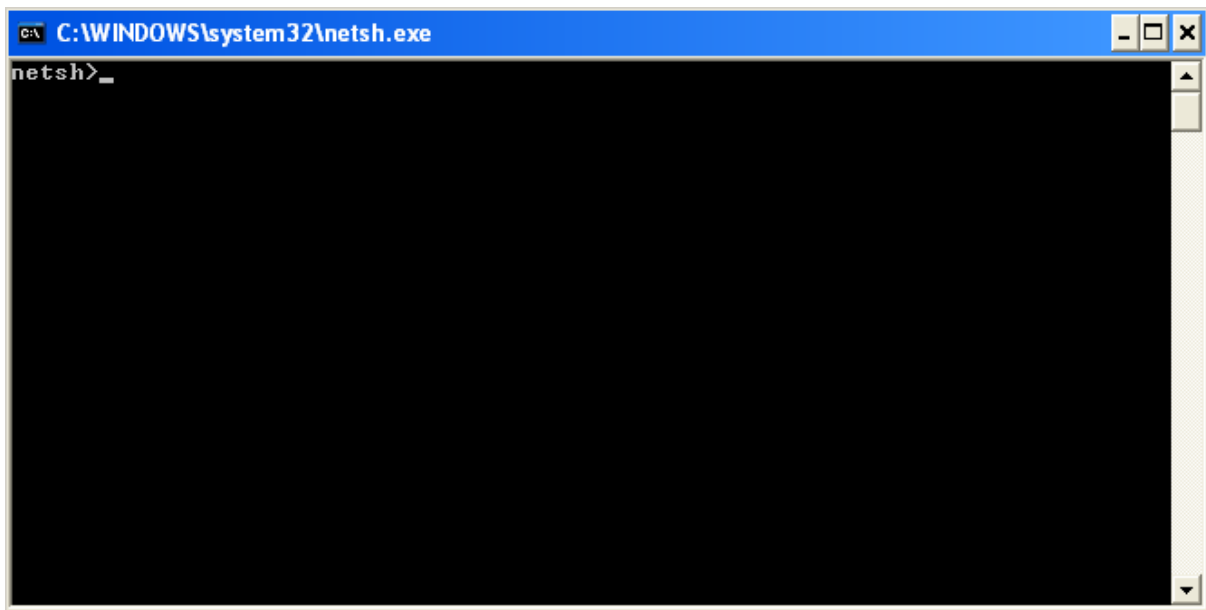
5. Installing and configuring IPv6

5.1. Configuring IPv6 routing

If experiencing problems connecting to devices using IPv6, manually configure the IPv6 routing table as described below.

5.1.1. Start the netsh utility

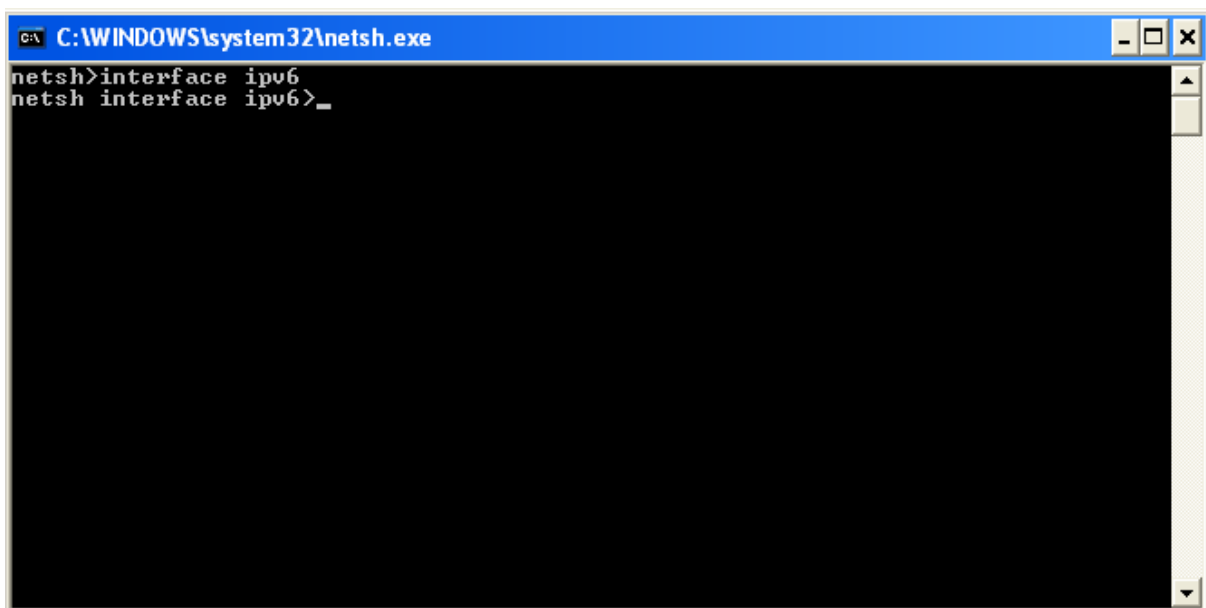
In the Command Prompt window, type 'netsh' and press 'ENTER'. A 'netsh' prompt will be shown, as is seen below.



```
C:\WINDOWS\system32\netsh.exe
netsh>_
```

5.1.2. Select IPv6 configuration

At the 'netsh' command prompt, type 'interface ipv6' and press 'ENTER'.

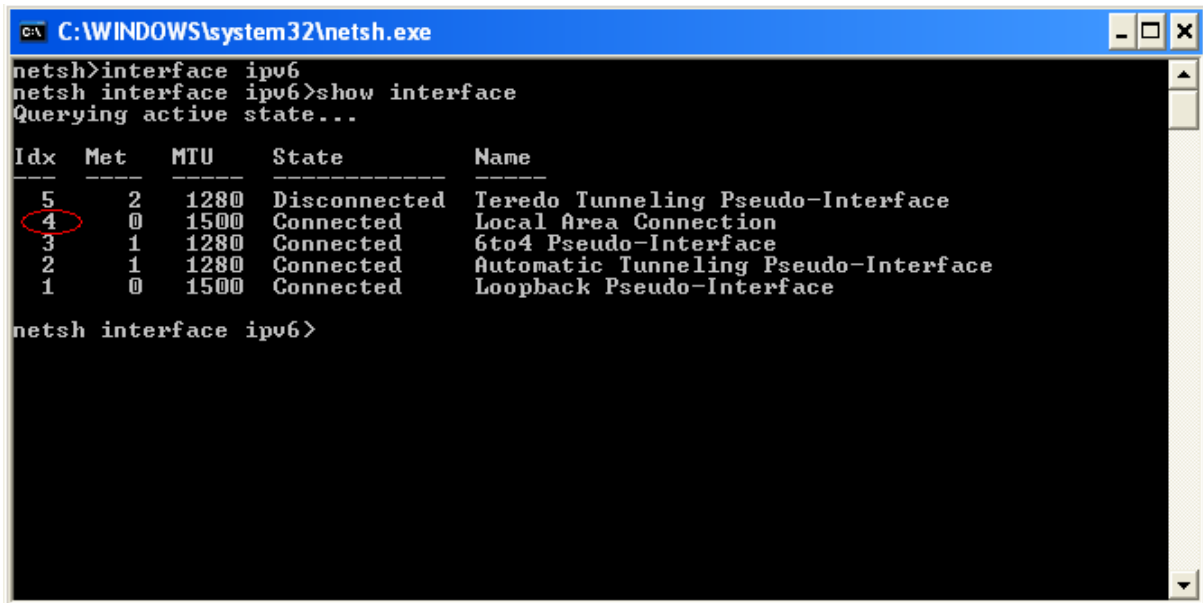


```
C:\WINDOWS\system32\netsh.exe
netsh>interface ipv6
netsh interface ipv6>_
```

5.1.3. Display current interfaces

To display the current interfaces, type 'show interface' and press 'ENTER' and the 'netsh interface ipv6' prompt.

Find the interface to be used, typically named 'Local Area Connection' and note its index in the 'Idx' column.



```

C:\WINDOWS\system32\netsh.exe
netsh>interface ipv6
netsh interface ipv6>show interface
Querying active state...

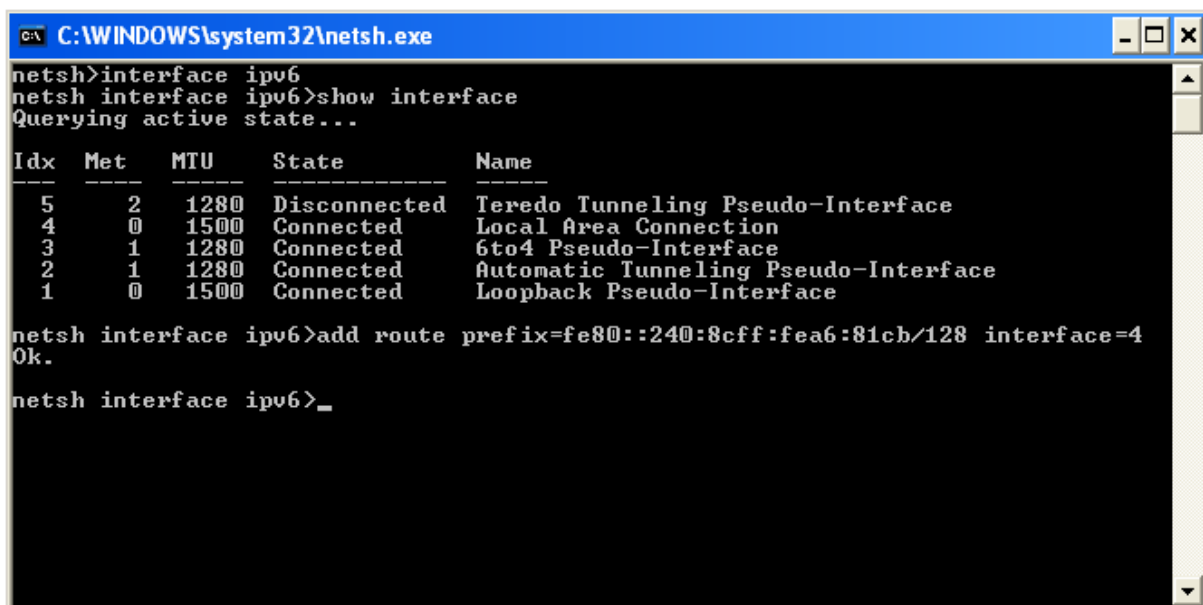
Idx  Met  MTU  State          Name
----  --  ---  -
5     2   1280 Disconnected   Teredo Tunneling Pseudo-Interface
4     0   1500 Connected      Local Area Connection
3     1   1280 Connected      6to4 Pseudo-Interface
2     1   1280 Connected      Automatic Tunneling Pseudo-Interface
1     0   1500 Connected      Loopback Pseudo-Interface

netsh interface ipv6>

```

5.1.4. Add routing entry

Also at the 'netsh interface ipv6' prompt, type 'add route prefix=<address prefix> interface=<interface idx>' and press 'ENTER'. The '<interface idx>' is the index of the network interface as being identified above. The '<address prefix>' is the prefix for the device (DUT) IPv6 address, in the format of '<address>/<prefix length>', e.g. '2001:1:1:1:1:1:1:1/128' or 'ff00::/8'.



```

C:\WINDOWS\system32\netsh.exe
netsh>interface ipv6
netsh interface ipv6>show interface
Querying active state...

Idx  Met  MTU  State          Name
----  --  ---  -
5     2   1280 Disconnected   Teredo Tunneling Pseudo-Interface
4     0   1500 Connected      Local Area Connection
3     1   1280 Connected      6to4 Pseudo-Interface
2     1   1280 Connected      Automatic Tunneling Pseudo-Interface
1     0   1500 Connected      Loopback Pseudo-Interface

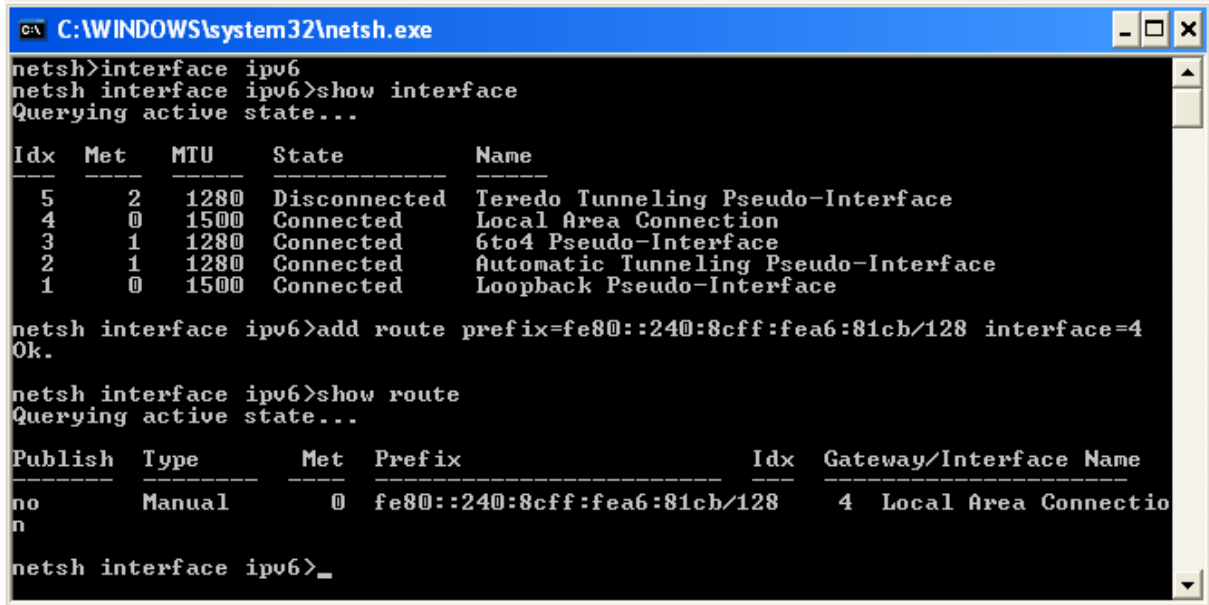
netsh interface ipv6>add route prefix=fe80::240:8cff:fea6:81cb/128 interface=4
Ok.

netsh interface ipv6>_

```

5.1.5. Verify routing information

To verify the added routing information, type 'show route' and press 'ENTER'. Verify that the new route is added to the routing table.



```

C:\WINDOWS\system32\netsh.exe
netsh>interface ipv6
netsh interface ipv6>show interface
Querying active state...

Idx  Met  MTU  State          Name
----  --  ---  -
5     2    1280 Disconnected   Teredo Tunneling Pseudo-Interface
4     0    1500 Connected      Local Area Connection
3     1    1280 Connected      6to4 Pseudo-Interface
2     1    1280 Connected      Automatic Tunneling Pseudo-Interface
1     0    1500 Connected      Loopback Pseudo-Interface

netsh interface ipv6>add route prefix=fe80::240:8cff:fea6:81cb/128 interface=4
Ok.

netsh interface ipv6>show route
Querying active state...

Publish Type    Met Prefix                                     Idx Gateway/Interface Name
-----
no       Manual      0   fe80::240:8cff:fea6:81cb/128             4   Local Area Connection
netsh interface ipv6>_

```

5.1.6. Add routing of other devices

All ONVIF devices to be tested for IPv6 based traffic need to have a valid routing entry added to the routing table. That is, repeat the last two steps for all devices intended to be tested.

Note that routing for the address '2001:1:1:1:1:1:1:1' should be added to the routing table because it is used in the testing procedure.

5.1.7. Close netsh

To close the netsh configuration tool type 'close' and press 'ENTER'. The routing table of your windows installation has now been manually configured and can now be used by the ONVIF Device Test Tool to test IPv6 services.