



Using the HD Multicast+ Importer/ Exporter with a Unidirectional STL

IS18003

Issue 1.014 June 2018

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INFORMATION SHEET

1 INTRODUCTION

Some studio-transmitter links (STLs) are unidirectional devices. When the HD Multicast+ Importer/Exporter is used with a unidirectional STL it is unable to dynamically acquire the Engine's MAC address. For this reason, the E2X Ethernet link can only be established if the Engine's MAC address is manually entered in the system's Address Resolution Protocol (ARP) table.

This document provides instructions to modify the ARP table on the HD Multicast+ Importer/Exporter using '*netsh*', a scripting utility included with Microsoft Windows.

1.1 Equipment Affected

This procedure applies to all HD Multicast+ Importer/Exporters that are used with a unidirectional STL.

1.2 Responsibility for Implementation of Procedure

Only qualified station maintenance personnel who are familiar with the HD Multicast+ Importer/Exporter and Microsoft Windows should perform this procedure.

1.3 Scheduling

Implement this procedure at the earliest convenience.

1.4 Manpower Requirements

Completing this procedure will require approximately 30 minutes.

1.5 Special Tools/Test Equipment

Connect a monitor (DVI input), keyboard (USB) and USB mouse to the HD Multicast+ Importer/Exporter during this procedure.

1.6 Materials

No parts or test equipment is needed to complete this procedure.

1.7 Identifying Modified Assemblies/Parts

No assemblies or parts are modified by this procedure.

1.8 Publications Affected

No technical documentation is affected by this procedure.



2 MANUALLY ENTERING THE ARP INFORMATION

2.1 Preliminary Requirements

- (a) Obtain the IP Address and MAC Address of the Exgine.
- (b) Open Network Settings/Change Adapter Options to view Adapter names and locate the name of the Ethernet Adapter in the HDMC+ which will connect to the Exgine.
- (c) Open a command prompt as an Administrator (right-click the Start menu).
- (d) Enter the following command at the prompt:

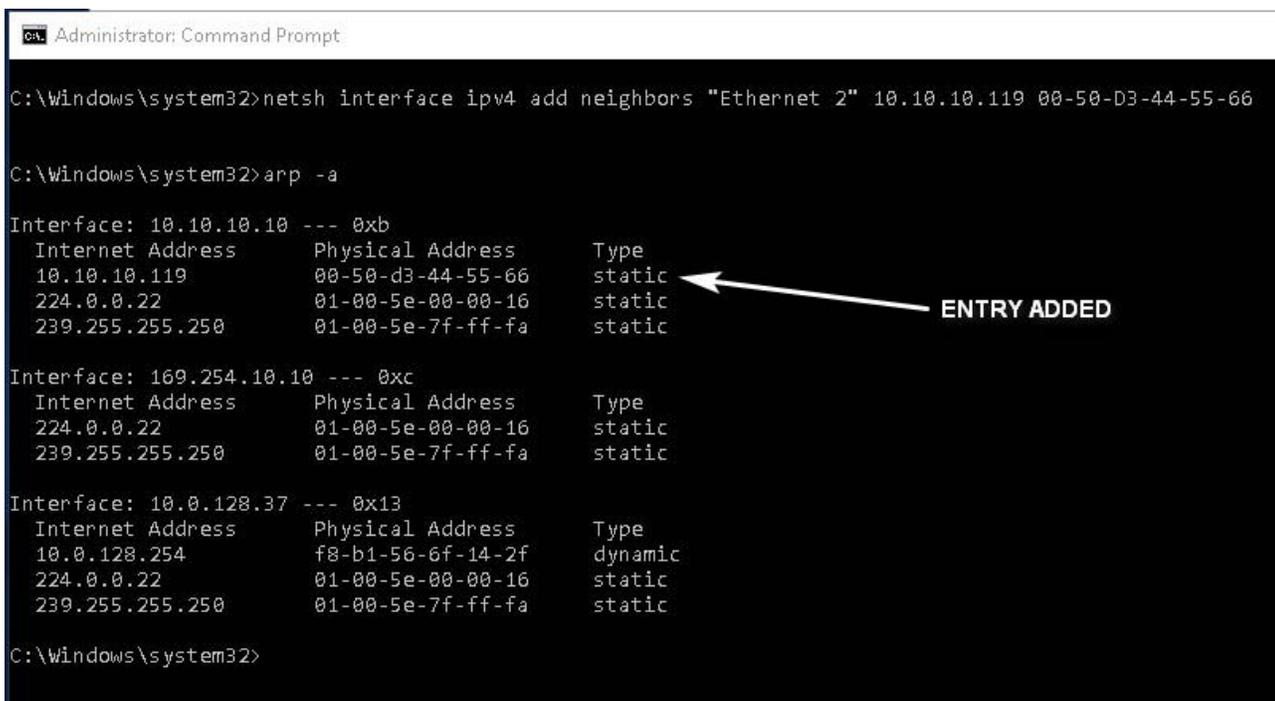
```
netsh interface ipv4 add neighbors "NAME" XXX.XXX.XXX.XXX YY-YY-YY-YY-YY-YY
```

NOTE: NAME is the Ethernet Adapter name from step (b)
XXX.XXX.XXX.XXX is the Exgine IP from step (a)
YY-YY-YY-YY-YY-YY is the Exgine MAC Address from step (a)

- (e) Verify the setting by entering the following command in the command window:

```
arp -a
```

- (f) The IP address and MAC address of the Exgine should appear under the appropriate interface. Figure 1 shows an example of the command entry for an Exgine with IP address of 10.10.10.119 and a MAC address of 00-50-D3-44-55-66. The Ethernet Adapter is called "Ethernet 2".



```
Administrator: Command Prompt
C:\Windows\system32>netsh interface ipv4 add neighbors "Ethernet 2" 10.10.10.119 00-50-D3-44-55-66
C:\Windows\system32>arp -a
Interface: 10.10.10.10 --- 0xb
  Internet Address      Physical Address      Type
  10.10.10.119          00-50-d3-44-55-66    static
  224.0.0.22            01-00-5e-00-00-16    static
  239.255.255.250       01-00-5e-7f-ff-fa    static
Interface: 169.254.10.10 --- 0xc
  Internet Address      Physical Address      Type
  224.0.0.22            01-00-5e-00-00-16    static
  239.255.255.250       01-00-5e-7f-ff-fa    static
Interface: 10.0.128.37 --- 0x13
  Internet Address      Physical Address      Type
  10.0.128.254          f8-b1-56-6f-14-2f    dynamic
  224.0.0.22            01-00-5e-00-00-16    static
  239.255.255.250       01-00-5e-7f-ff-fa    static
C:\Windows\system32>
```

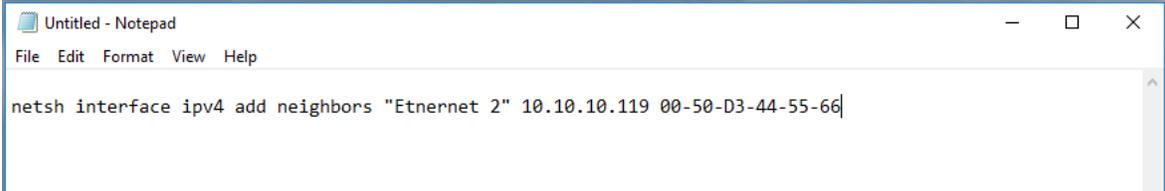
Figure 1: Example of Netsh Command Line Entries



2.2 Automating the Process

The ARP entry will not persist through a power loss. If the HD Multicast+ is not on a UPS, Nautel recommends that you automate the process to add the static ARP entry. This is done by creating a batch file and then running that batch file, using the Windows Task Scheduler, when the system boots and the HD Multicast+ user logs in, as follows:

- (a) In the Start menu, go to Windows Accessories. Right-click Notepad and select More > Run as administrator.
- (b) Create a text file that includes the netsh command in section 2.1 (see also Figure 2).

A screenshot of a Notepad window titled "Untitled - Notepad". The window has a menu bar with "File", "Edit", "Format", "View", and "Help". The main text area contains the command: `netsh interface ipv4 add neighbors "Ethernet 2" 10.10.10.119 00-50-D3-44-55-66`.

```
netsh interface ipv4 add neighbors "Ethernet 2" 10.10.10.119 00-50-D3-44-55-66
```

Figure 2: Batch File Content (Notepad) – Save As c:\sete2xarp.bat

- (c) Save the file in the root directory of the C: drive, with the name “*SetE2XArp. bat*”.
- (d) Set up a Task in the Windows Task Manager to run the batch file when the HD Multicast+ user is logged in.
 - Right Click Start and select Computer Management
 - Select Task Scheduler
 - Select Action/Create Task
 - Under the **General** tab (see Figure 3):
 - Name the task SetE2XArp
 - Select HDMC-XXXX\HD Multicast as the user account
 - Select ‘Run only when user is logged on’
 - Check the ‘Run with highest privileges’ box
 - Select Windows 10 in the “Configure for:” drop-down menu
 - Under the **Triggers** tab (see Figure 4):
 - Select New...
 - Select ‘At log on’ in the ‘Begin the task’ drop-down menu
 - Select ‘Specific user’ and use HDMC-XXXX\HD Multicast
 - Check the ‘Enabled’ box
 - Click OK
 - Under the **Actions** tab (see Figure 5):
 - Select New...
 - Select ‘Start a program’ from the Action drop-down menu
 - Select Browse... and select the batch file created in step (c).
 - Click OK
- (e) Select OK at the bottom of the SetE2XArp dialog.



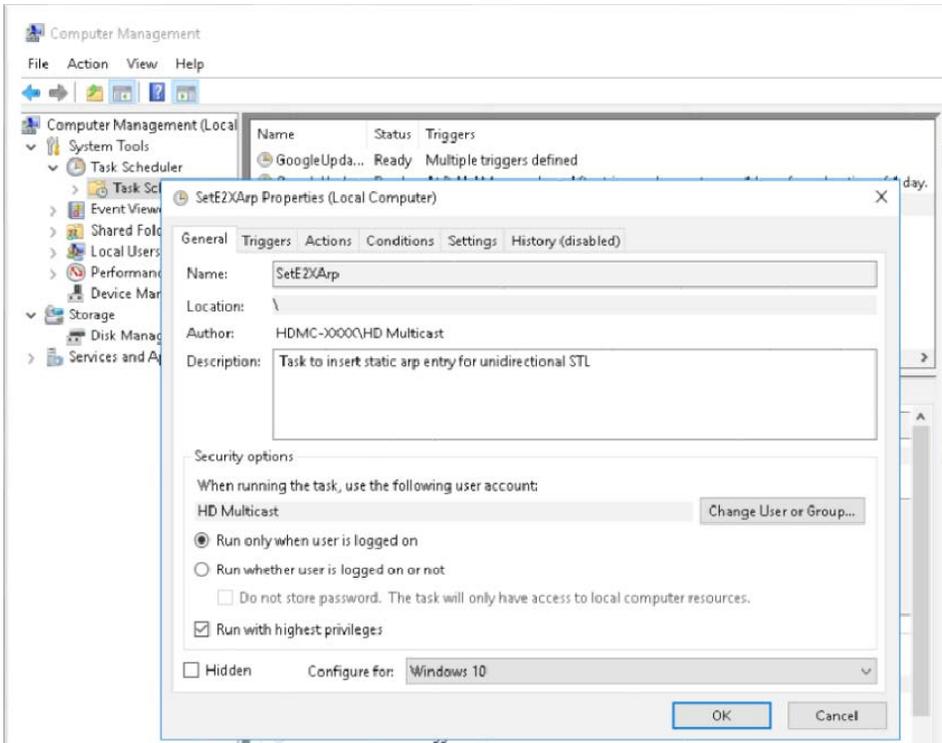


Figure 3: Task Scheduler – General tab

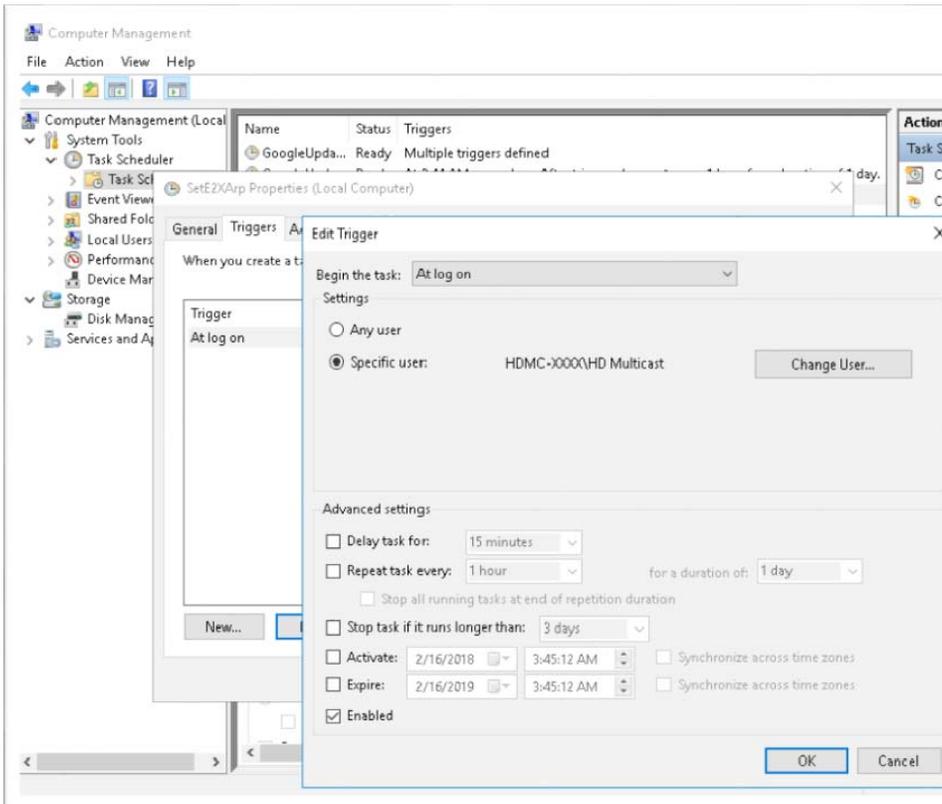


Figure 4: Task Scheduler – Triggers tab

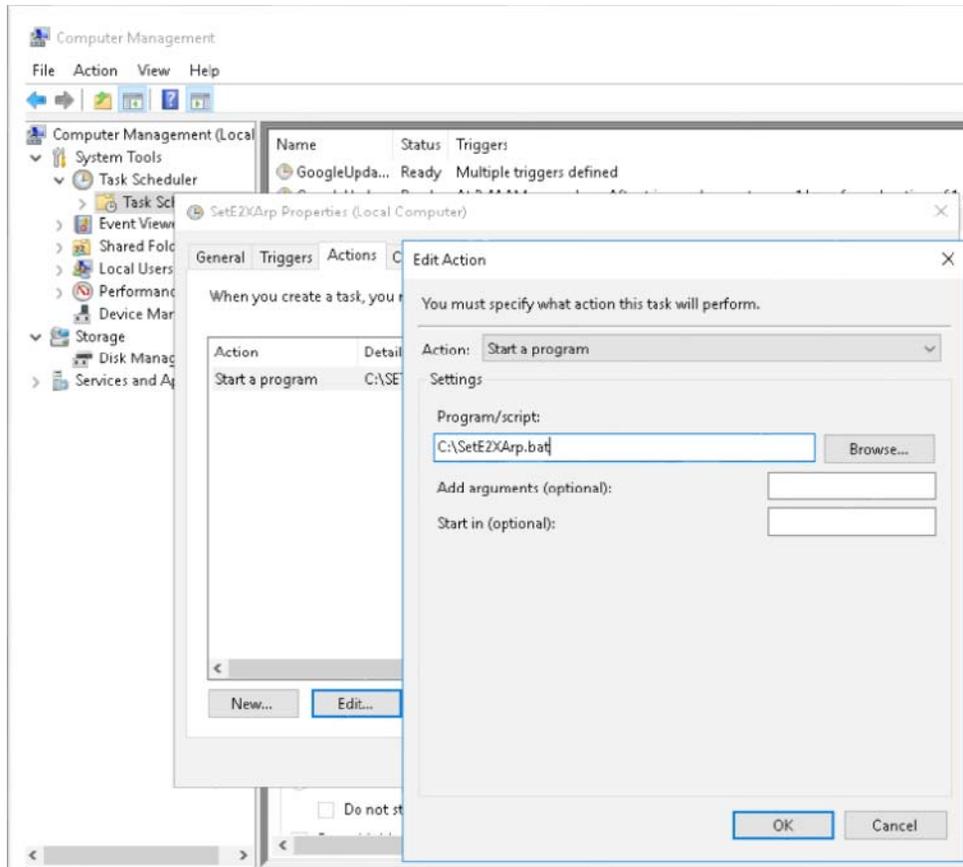


Figure 5: Task Scheduler – Actions tab

If you have any questions or require additional assistance, please contact Nautel's Customer Service Department at:

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