NetScanTools® Pro
Monthly Newsletter
www.netscantools.com

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News...

From the Editor...

There were no new NetScanTools Pro releases during the month of March but another release is on the way with a new feature in Network Connection Endpoints and an SQLite update. A new switch port mapper release was published March 3 and another release is being planned with default value changes and an SQLite update.

-Kirk

Support Issue: Switch Port Mapping Problems – No MAC Addresses

Recently we have had a customer tell us about identically configured same model switches where one would map fine and the other would give some information like interfaces but no MAC addresses using SNMPv3. *[Just to be clear, the bridge MIBs give us MAC addresses. The switches do not record IP addresses in the bridge MIBs so we gather other tables from various sources to match IP addresses to MAC addresses. MAC addresses are the key to mapping the switch.]* The customer complained of timeout messages popping up during the mapping process.
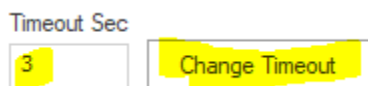
I suspect part of this problem is switch activity. If a switch is too busy to respond to an SNMP query, it sends back nothing resulting in a timeout message –

usually after at least one 'retry' given our default settings. In other words, SNMP may not be a high priority. In the case of this set of switches, the customer fixed the problem by setting the timeout much longer than our default 3 seconds to 9 seconds and increasing the retries to 5 (1 is default). While this worked for them, it could result in a much longer time to map the switch – possibly up to 45 seconds (9x5) for non-response to a single SNMP query. I intend to change the default timeout to 5 seconds from the current default of 3.

After reviewing the diagnostic logs for both switches, I found what I believe to be another part of the problem: Bulk Reps (or 'max-repetitions' which is part of the SNMP GETBULK message). In the case of the customer's switch that failed to fully map, the Bulk Reps value was 32 and the successfully mapped switch had a value of 2. What this value does is tell the SNMP server on the switch that our client can accept up to 32 return records (or 2 for the successfully mapped switch) in response to a single query. The purpose of Bulk Reps is to reduce the SNMP communication traffic between the client and server - if you are requesting a large table of values it takes less responses to provide the information. However, there are limits to how much can be placed in a single return SNMP UDP packet. The value 32 is beyond a reasonable limit and was the default value of our older versions 2.x. This value was later changed to 8 in v2.74 and is now 4 as of v2.86.1. New versions of the switch port mapper do not change any previously entered Bulk Reps values so if a switch was set up before v2.74, it might have 32 as the default. This needs to be fixed. Here is how.

You can globally change these values (timeout, retries and Bulk Reps) for all switches and other SNMP devices. Steps:
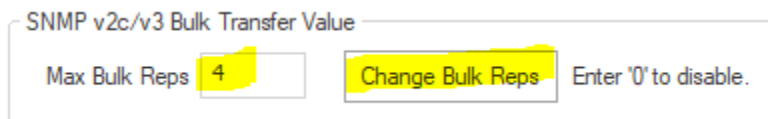
1. Start the Managed Switch Port Mapper.
2. Under the menu item Settings and Tools, click on Bulk Edit SNMP and other settings.
3. To change the timeout value for all SNMP devices, find the Timeout Sec box and change it from 3 to 5 as below, then press Change Timeout. *This is optional.*

Timeout Sec

3   Change Timeout

4. To change the Bulk Reps value for all SNMP devices, find the SNMP v2c/v3 Bulk Transfer Value and enter 4 then press Change Bulk Reps. *This is highly recommended – not optional.* (Note: if you enter the value 0, bulk transfers are disabled and the mapping process slows significantly just like using SNMP v1.)

SNMP v2c/v3 Bulk Transfer Value

Max Bulk Reps   4   Change Bulk Reps   Enter '0' to disable.

The procedure above changes the values for all SNMP devices you have saved – be careful. You can also review the settings for each device (switch) by manually checking the settings as you pull up a previously saved switch or other device.

Managed Switch Port Mapping Tool v2.86.3 released March 3, 2022

This release was the result of looking more carefully at the oldest part of the mapping algorithm – the part dealing with Bridge MIB and Cisco community name indexing. There are some minor changes in the algorithm and more Support Diagnostic Mode messages inside the algorithm.

A user requested that we add sorting by clicking on the header of each table. An example of this would be under Switch Lists/Device Settings Editor. You can now click on any of the headers in this list to sort them. Another example is 'Select Switch' on the left control panel. Sort by whichever column is most useful.

If you have the 'installed' version, click on Help/Check for Update. Download and install the latest trial over your current version. If you have the USB version, click on Help/Check for Update to download the patch. Exit the software and run the patch.

Changes in this release:

-Minor changes to Bridge MIB processing mostly affecting Cisco IOS based switches.
-Added sorting of items by clicking on list control headers.
-Added and enhanced Support Diagnostic Mode messages.
-Updated MAC address/Manufacturer database.
-Updated SQLite to version 3.38.0
-Updated dates to 2022.

NetScanTools Pro 12 Roadmap

Once we get the Windows 11 development computer operational, work will begin on version 12. Changes we have in mind (updated with a possible list of tools):

1. Back when we changed from v10 to v11, several people told us they missed the tree format tool selector. The tree is coming back, with a twist – there will be a search bar at the top. For example, if you are looking for the ping based tools, you would type ping in the search box and all tools with 'ping' in the title would appear and the other tools would disappear.
2. **Some legacy tools are being considered for removal.** Current candidates: Cache Forensics/Protected Storage Viewer, Finger, Network Shares – SMB, OS Fingerprinting, RFC Reference Library, *nix RPC Info, Simple Services, TTCP. Comments?
3. Some integrated tools may become 'launched' for easier maintenance (separate applications).
4. New tools will be added.

NOW is the time for suggestions and comments. Send them to support at netscantools.com.

NetScanTools Pro Licensees Please Do This ASAP (version 11.92.1 and earlier)

Please click on Help menu/Preferences. Please check the box to force the software to Launch Web Browser Separately as shown below:

Note: this checkbox was removed in NetScanTools Pro 11.92.2.

Contact Information

If you have any questions or suggestions, please feel free to email.

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