Version 4.3.2 Release Notes

Pathscape software for Windows and macOS	
Pathscape	v4.3.2
Release Date	March 23, 2022
Firmware bundled with this release	
VIA10 (6730) and VIA12 (674x)	v3.10.0
VIA5 6705 & 6706	v3.9.0
PWELINK	v5.0.12
PWGW N485 (NSB)	v6.0.6
PWWSI NPOE (NSB)	v6.0.6
PWINF NFP	v6.1.5 or v6.1.7 (depends on age)
PWVIA RM & PWVIA DIN	v6.1.8 (new)
PWPP DIN P4 PWPP RM P4 & P8	v6.2.0
PWGW CLK (Clock)	v6.2.0
PWWSI VPOE (Vignette)	v6.2.0
PWPP DIN P1 & P2 PWPP DT & HH & WM P1	v6.2.2
nPWDMX SNAPSHOT	v6.2.2
OEM Pathport Cores	v6.2.3 (new)
PWGW V485 (Vignette)	v6.2.4 (new)
PWPP WM P2 PWPP Sidecars P2	v6.2.4 (new)

v4.3.2 Bug Fixes	
PWPP v6.2.4	Allows a factory default from the front button of a PWPP WM P2 within the first 30 seconds of boot, even if front panel lockout is enabled.
PWGW v6.2.4	Corrected factory default for DMX Sidecar.
OEM v6.2.3	Local factory default added.
PWVIA v6.1.8	Faster Multicast Filtering convergence for IGMP Snooping giving Instantaneous flow of sACN at 'link up' of gateways coming on line. Faster RSTP loop detection allows ports to enter forwarding state sooner.
PS v4.3.2	Cleaned up RDM logging in Message Viewer.

V4.3.1 (January 2022) was the first release to support the nLight Snapshot Controller (nPWDMX). For operational and installation instructions, please see the Product Page on the nLight website.

v4.3.1 New Features (January 31, 2022)	
Support for nLight Snapshot Controller (nPWDMX)	The nLight networked lighting controls platform has added DMX control with the nLight Snapshot Controller (nPWDMX). The nLight Snapshot leverages the power of nLight with the artistry and reliability of Pathway Connectivity Solutions® for DMX control in a simple and unified solution.
Security updates for OEM Pathport Cores	This release was necessary to update custom firmware and Pathscape user interface for some of our OEM customers for Cyber Security compliance. It does not affect products sold directly by Pathway Connectivity Solutions or Acuity Brands.
PWPP P1 & P2	The new v6.2.2 firmware is functionally the same as 6.2.0 from December 1, 2021. This release affected our factory release process only.

Below are notes still relevant to the v4.3.0 Release from December 1, 2021.

New Features	
RDM Offline detection	Pathport Ports that have RDM Background Discovery turned on will dynamically detect RDM devices which drop offline. These are shown by drawing a red dot in the STATUS column. Ports with RDM disabled will show all its RDM children devices as Offline. *See Figure 1* 
RDM Properties saved in Show File	Once you do an RDM Discover on All Ports (and there are no remaining RDM Requests in the queue *Figure 3* ) save the Pathscape Show File to store the entire rig data (start addresses, modes, Mfg PIDs). If anything changes remotely (i.e., from the on device menu of the light), you will see pending transactions in the Transaction Editor, or yellow cells in the device view, highlighting the differences. Before an RDM discovery is done, the devices' Status will not be known to be Online or Offline, so the Status column will show the device icon with a white dot. *Figure 5*  Until the device is Online (discovered), the Properties box will show a red triangle indicating that the pending transaction cannot be sent. *Figure 6* 
Online RDM Count	A Pathport Output's RDM Properties box shows the number of RDM Devices Online as X of Y, where X is the number of devices present and accounted for, where Y is the maximum number of devices detected during discovery on this port. *See Figure 1* 
RDM Sensors	When you have an RDM Device selected, the Properties box shows real-time values for all its sensors. *Figure 7* 
Time since last Discovery	A Pathport Output's RDM Properties box shows the elapsed time since RDM Discovery, either a manual request, or Background Discovery was performed. *See Figure 1*  . The Pathport – Output view has a dedicated column showing the Time of Day since the last discovery was performed. *Figure 2*
RDM Requests in queue	As Discovery is being performed, the devices are first identified, then the requests for all the additional properties are queued up. With larger rigs, this process is not instantaneous. To show the progress, the status bar shows how many requests are still in the RDM queue. *Figure 3* 
Red-block RDM properties	All devices are discovered before additional property values are requested. This can take a bit of time on larger rigs. Until the properties are fetched, the cells in the device table appear in red. *Figure 4* 
Replace RDM Device	Similar to the replace device function of earlier Pathscape releases, v4.3 extends this to RDM equipment. If you have one moving light fail and it was in your current session (or show file), right-click on the red offline device and choose Replace

	Offline Device. Any 'like' devices that are on-line will appear in the list. You can then turn on Identify and arrow down through the list until you find the active replacement, then choose Replace and all its properties such as Start Address, Mode of Operation and Name will be copied over. *Figure 10 & 12* 
Manufacturer Specific PIDs	The E1.20 RDM protocol standard defines required Properties, but it leaves room for manufacturers to add custom properties in an enumerated list. After retrieving the standard PIDs, Pathscape queries the devices for a list of Manufacturer Specific PIDs and gets their values.
Queued Messages	As an end devices cannot initiate communication with a controller, it's up to the controller to periodically go to each device and ask if it has something it'd like to announce. For instance, a change in its start address. Once you do an RDM Discover on a port, Pathport devices will round robin through the table of devices, retrieving any queued messages the device has to send. Also see "Sensor Polling" in the CHANGES section below.
nLight® SNAPSHOT support	nLight® is launching the nPWDMX SNAPSHOT device which acts as a gateway between the nLight protocol and DMX512. Apart from native support for all IP related properties, Pathscape allows you to configure its two DMX ports, capture DMX Snapthots and define DMX Zones as well as trigger nLight Wallpod channels and Scenes with sACN.
New nLight® functions for Vignette	With an nLight® SNAPSHOT on the network, Vignette Wall Station Buttons and Clock event Functions can trigger an nLight Wallpod or Scene and a Sliders can be configured to mimic an nLight Wallpod channel. *Figure 11* 
Delete Offline device	A new Right-click menu allows you to delete an Offline device without having to Refresh the entire network or close down Pathscape and re-open it. *Figure 10* 
Packet Capture Utility	For macOS installs of Pathscape, the Help menu has an item to launch an Ethernet packet capturing utility. Often when debugging obscure issues with networks, IT professionals use a piece of open-source software called Wireshark. On Windows machines, it can still be handy for advanced debugging purposes to use Wireshark to capture network traffic for further investigation by our engineering team. For those with macOS, this functionality is now built in to Pathscape. *Figure 13* 

Changes	
Refresh Network	The button (*see Figure 7*) used to be labeled Rediscover All. As RDM Discovery may lead to undesirable flashing on non-compliant devices, you must explicitly initiate the discovery process. Refresh Network only finds Ethernet connected products, whereas RDM Discovery on all Ports has moved to a submenu option of the Network menu.
RDM network transport	The whole backend of how RDM traffic travels from Pathports to Pathscape has been overhauled for efficiencies and reliability.
Removal of RDM Get Properties	Earlier version of Pathscape had multiple GET RDM functions (Get Details, Get DMX Info, Get All PIDS). Every PID is now fetched on device selection change. With RDM Background Discover on, all PIDs are fetched and displayed automatically.
Sensor Polling	Even if RDM Background Discovery is not enabled, a Pathport Port which has RDM enabled and has done at least one discovery during a session, will continue to poll the network to update sensor values. If you have non-compliant devices that are adversely affected by the RDM protocol, make sure you disable RDM during a show. This can be done manually within Pathscape, or you can configure the Contact Closure to Pause RDM on ports on newer model Pathport devices.
Pathscape Midair Collisions	There are no issues running multiple Pathscape PCs on a single network, but, Pathscape ensures that only one session is the RDM Controller per gateway. If you do an RDM Rediscover All, you may find that someone else has already tied up one or more specific Pathports. *Figure 9*  . Ask them to Logoff and log back on, or close their session before you 'take control' of those gateways for RDM

	purposes. If you choose to Right-click on specific ports to discover (vs. RDM Discover on all Ports), you may manually avoid this midair collision with the other techs.
ETCNet2 Support removed	Due to updates to our IP stack, new Cyber Security Laws and a waning installed base, we have discontinued support for the ETCNet2 protocol.
BootP replaced by DHCP	The one and two port Pathports now support Dynamic IP mode, meaning they'll obtain an IP address from a DHCP Server on the LAN. Static IP mode is still supported.
PWPP RM UI	The front panel text for Maximum DMX refresh speed has been corrected to 43 Hz.
View Updates	Many views have been updated to take advantage of new properties introduced with advanced RDM functionality and the nLight SNAPSHOT device.

Bug Fixes	
RDM Device move	If you unplug a device from one Pathport Output port to another, the old device would stay under the original port and a 'new' device would appear under the new port. Pathscape now detects that it is in fact the same device, but it has just moved.
DMX Port LED flash	Enabling a DMX port may have left the LED flashing, even if DMX was active.
Failed Security Domain creation	On some networks we had reports of failed security domain creation leading to multiple Security Domains appearing in the Login dialog with the same name. Code has been re-arranged to prevent these types of failures.
PWPP HH display	Using Pathscape to change the IP address now shows the new IP address on the front display without a reboot.
PWPP HH port direction	Changing the port direction of PWPP HH with active DMX re-booted the device.
	Multiple other bug fixes and stability improvements.

Known Issues	
PWELINK, PWPP HH and RM front panel UI	The front panel user interface allows you to edit the IP mode, even if it is set to Dynamic. Any changes you attempt to make will be ignored.
PWWSI VPOE & NPOE 10 Mb link mode	Do not force VIA ports connected to PoE Wall Station Inserts to 10 Mb. Leave as Auto Negotiate.
Vignette Console Lockout	Buttons and Slider will be disabled (as designed) by using the Lockout Universe, but the Playback does not go Inactive. Use Priorities to ensure that theatrical consoles "win" when present.
VIA EAPS and IGMP	Disabling IGMP live may cause EAPS to fail.
VIA RSTP and EAPS	Best practices, for the time being, are to use RSTP or EAPS, but not both at the same time. Enable or Disable one protocol on all VIAs for these settings.
Security Domains and Show Files	Loading a show file in which all devices are not present should not allow you to join online devices to the virtual domain.

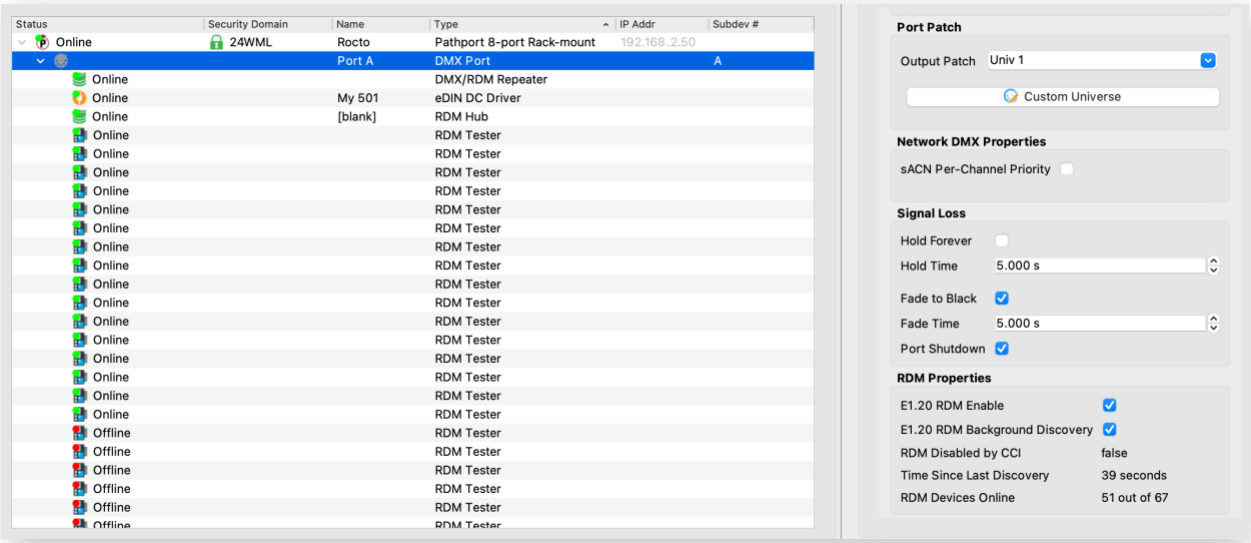


Figure 1 – Online/Offline Status, Time Since Last Discovery, RDM Devices Online

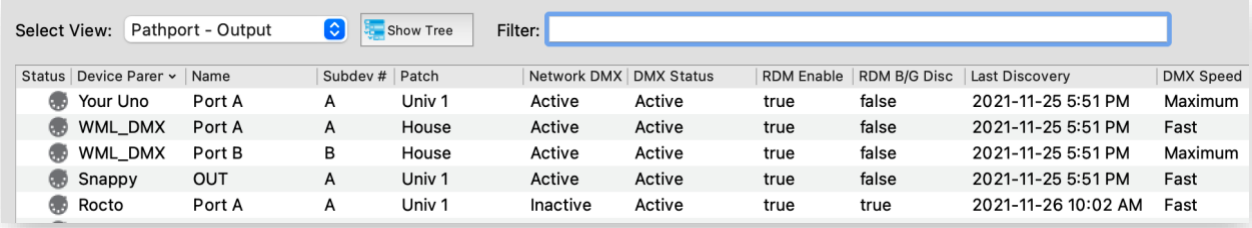
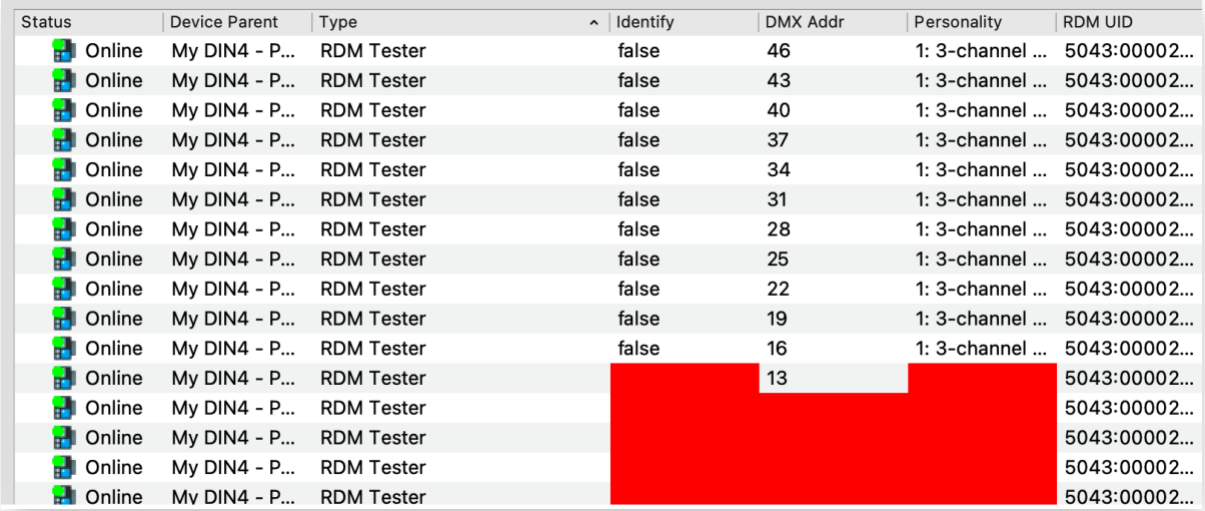


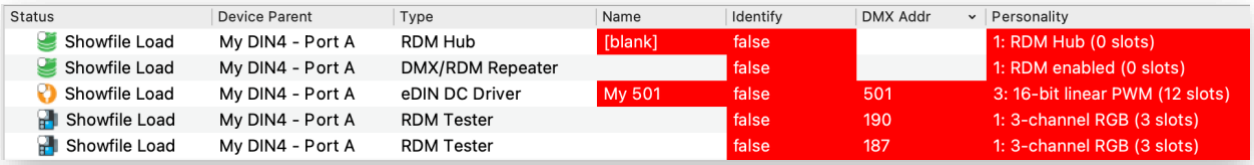
Figure 2 – Time stamp column showing DMX Output port's Last Discovery

Figure 3 – RDM Activity in Status Bar



Status	Device Parent	Type	Identify	DMX Addr	Personality	RDM UID
Online	My DIN4 - P...	RDM Tester	false	46	1: 3-channel ...	5043:00002...
Online	My DIN4 - P...	RDM Tester	false	43	1: 3-channel ...	5043:00002...
Online	My DIN4 - P...	RDM Tester	false	40	1: 3-channel ...	5043:00002...
Online	My DIN4 - P...	RDM Tester	false	37	1: 3-channel ...	5043:00002...
Online	My DIN4 - P...	RDM Tester	false	34	1: 3-channel ...	5043:00002...
Online	My DIN4 - P...	RDM Tester	false	31	1: 3-channel ...	5043:00002...
Online	My DIN4 - P...	RDM Tester	false	28	1: 3-channel ...	5043:00002...
Online	My DIN4 - P...	RDM Tester	false	25	1: 3-channel ...	5043:00002...
Online	My DIN4 - P...	RDM Tester	false	22	1: 3-channel ...	5043:00002...
Online	My DIN4 - P...	RDM Tester	false	19	1: 3-channel ...	5043:00002...
Online	My DIN4 - P...	RDM Tester	false	16	1: 3-channel ...	5043:00002...
Online	My DIN4 - P...	RDM Tester		13		5043:00002...
Online	My DIN4 - P...	RDM Tester				5043:00002...
Online	My DIN4 - P...	RDM Tester				5043:00002...
Online	My DIN4 - P...	RDM Tester				5043:00002...
Online	My DIN4 - P...	RDM Tester				5043:00002...

Figure 4 – RDM view midway during Discovery, showing presence of counted Devices, and red blocks showing PIDs still in the request queue



Status	Device Parent	Type	Name	Identify	DMX Addr	Personality
Showfile Load	My DIN4 - Port A	RDM Hub	[blank]	false		1: RDM Hub (0 slots)
Showfile Load	My DIN4 - Port A	DMX/RDM Repeater		false		1: RDM enabled (0 slots)
Showfile Load	My DIN4 - Port A	eDIN DC Driver	My 501	false	501	3: 16-bit linear PWM (12 slots)
Showfile Load	My DIN4 - Port A	RDM Tester		false	190	1: 3-channel RGB (3 slots)
Showfile Load	My DIN4 - Port A	RDM Tester		false	187	1: 3-channel RGB (3 slots)

Figure 5 – RDM devices loaded from a Show File, but have not yet been discovered. It is not known if their status is Online or Offline.

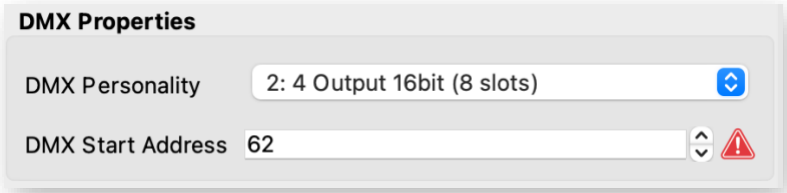


Figure 6 – RDM Property of a Light that is Offline showing you cannot send the transaction until it is discovered.

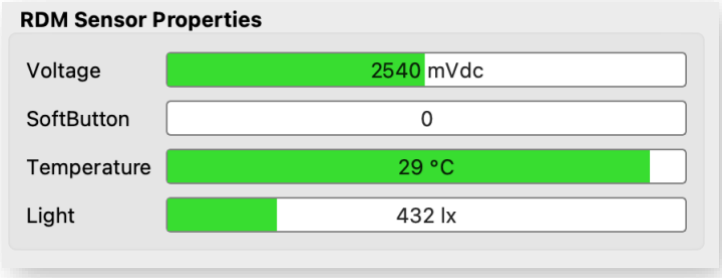


Figure 7 – Real-time graphs of RDM sensor values.

Figure 8 – Rediscover All button's function changed to Refresh Network

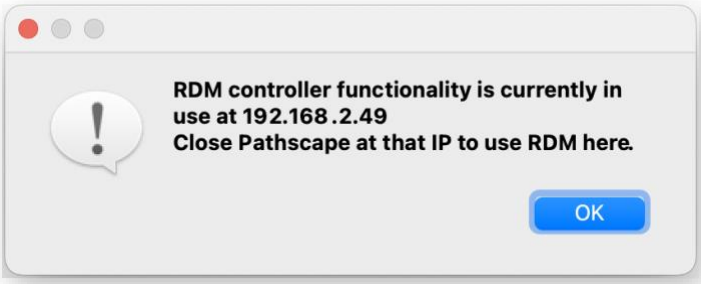


Figure 9 – Dialog showing another session of Pathscape is using RDM on requested Pathport gateways

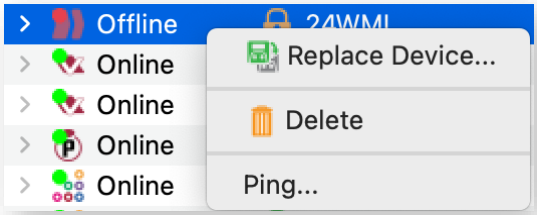


Figure 10 – Right-click menu for Offline devices and Replace or Delete.

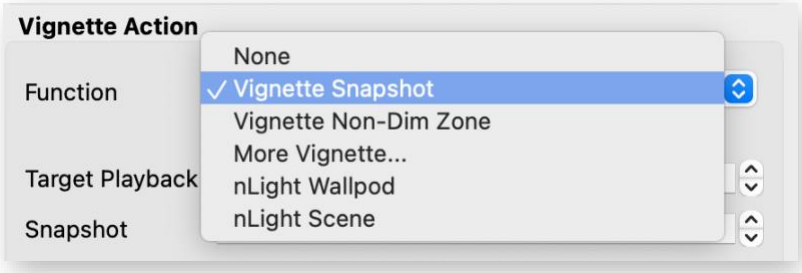


Figure 11 – New Vignette Actions for nLight®

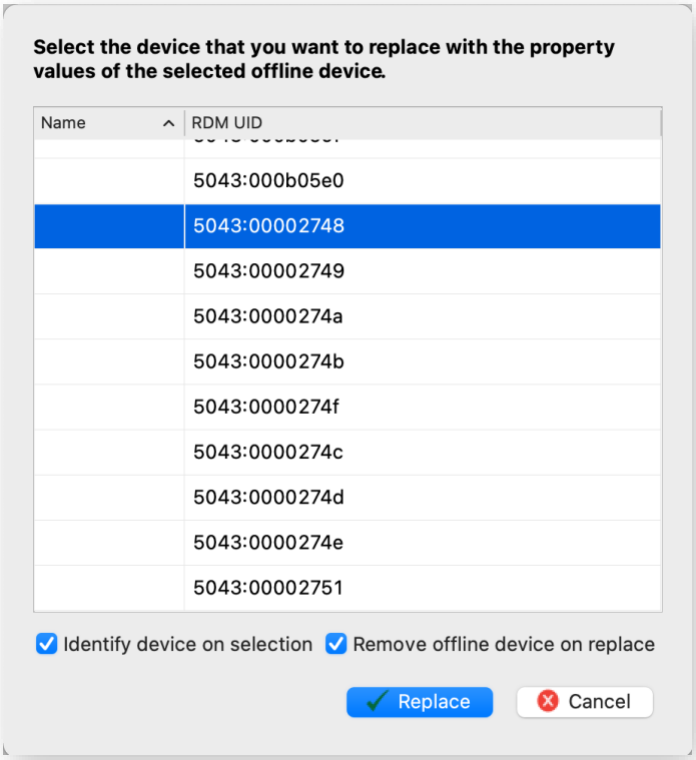


Figure 12 – Copy Offline RDM device to Online RDM device having the same RDM Manufacture, Device Type and Version PIDs. This is the same dialog box used when replacing Pathway Connectivity devices, except the RDM UID column is replaced with the Pathway Serial Number. Only like devices can replace Offline devices.

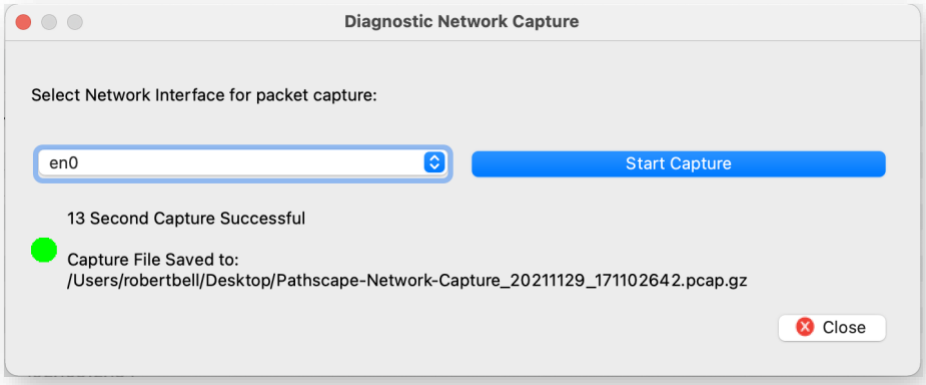


Figure 13 – macOS Diagnostic Network Capture utility.

If you have an questions or issues, as always,
please contact pathway-support@acuitybrands.com.