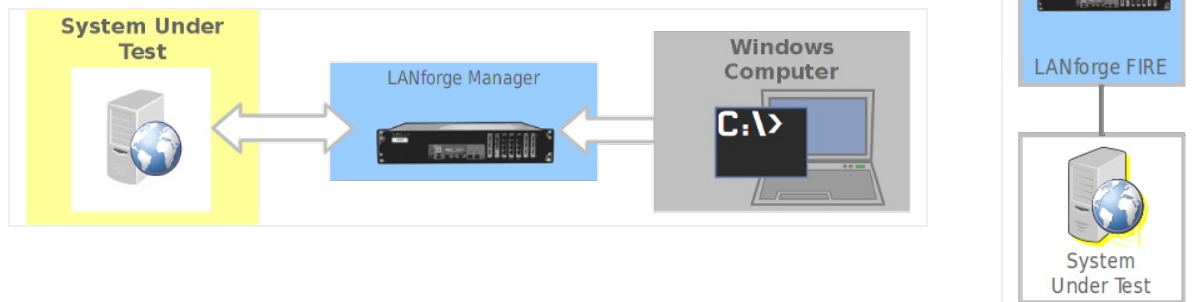


Operate LANforge Scripts from Windows.

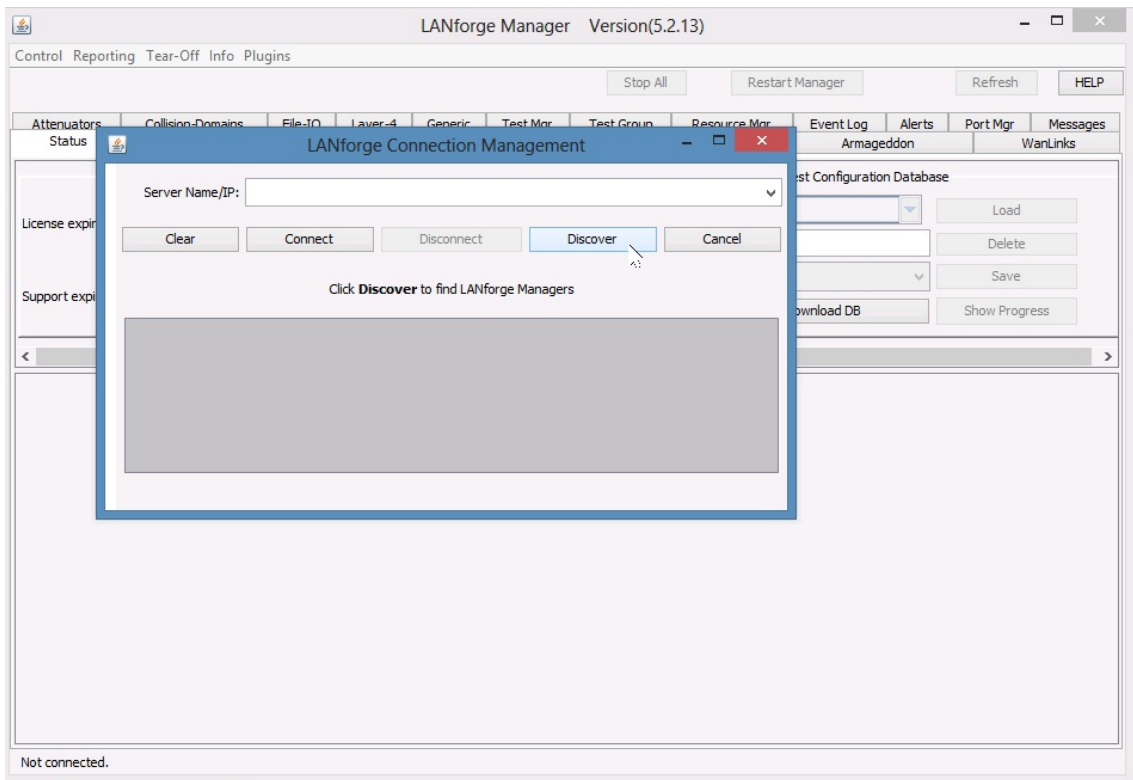
Goal: Use an installation of LANforge and Perl on a Windows computer to operate tests and manage connections on remote LANforge computers.

You do not need to connect to your LANforge manager using ssh or VNC to manage connections or operate tests. In this cookbook, you will see an example of using the `lf_firemod.pl` script which can give you port information. This example will require a Windows desktop with Java, ActiveState Perl, the LANforge Server and the LANforge GUI installed. You will not need to start the LANforge server on your Windows computer, so no licenses will be required for operating on the Windows computer. This cookbook assumes connectivity between the Windows computer and a running LANforge manager computer.

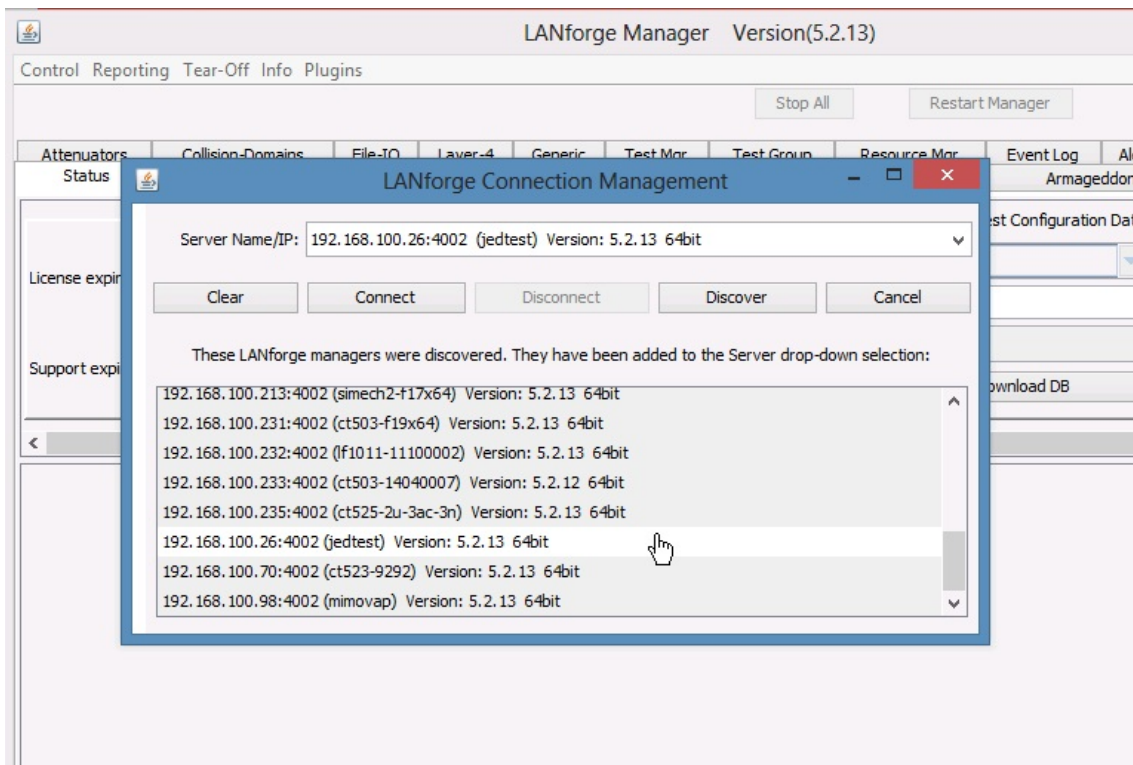


1. Prepare your Windows computer:
2. Install LANforge Server
 - A. You do not need to configure or start this server. Only the perl scripts directory of this installation will be used.
 - B. You can download it from [our current releases page](#). For more information see [LANforge Server Installation](#)
3. Install LANforge GUI
 - A. You can download it from the same location.
 - B. Make sure you can connect to your LANforge manager. In this example, the LANforge manager will be at `192.168.100.26`

C. Open the LANforge GUI



D. ... and click **Discover**



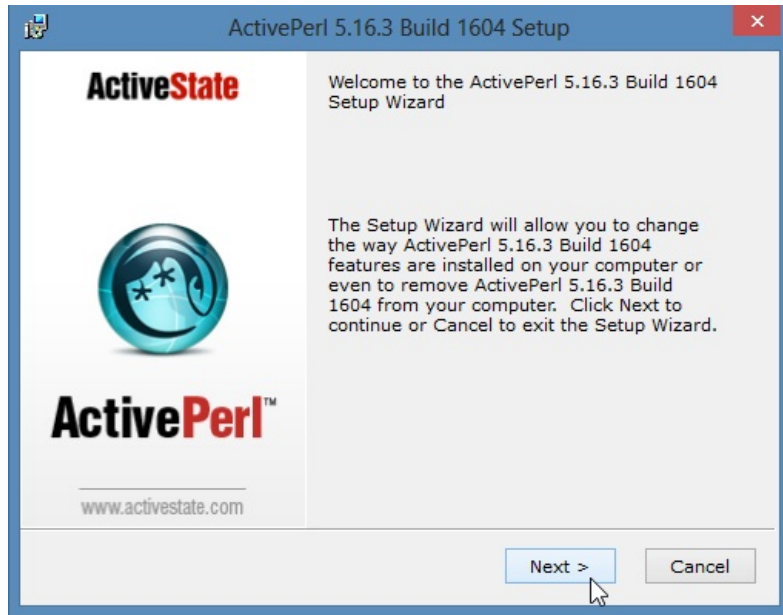
E. If you are able to connect you should be able to browse your ports and connections.

Port	Pha...	Down	IP	SEC	Alias	Parent Dev	RX Bytes	RX Pkts	Pps RX	bps RX	TX Bytes	TX Pkts	Pps TX	I
1.2.00	<input type="checkbox"/>	<input type="checkbox"/>	192.168.100.42	0	eth0		7,662,812,693	55,122,599	46	55,232	183,573,933...	138,087,7...	128	1
1.1.0	<input type="checkbox"/>	<input type="checkbox"/>	192.168.100.26	0	eth0		184,280,308...	143,090,9...	166	1,473,093	10,246,150,576	53,885,054	133	
1.2.17	<input type="checkbox"/>	<input type="checkbox"/>	10.26.1.19	0	sta9	wiphy0	76,280,536	57,360	0	0	986,461,208	650,662	0	
1.2.16	<input type="checkbox"/>	<input type="checkbox"/>	10.26.1.18	0	sta8	wiphy0	75,164,420	56,514	0	0	988,778,230	652,241	0	
1.2.15	<input type="checkbox"/>	<input type="checkbox"/>	10.26.1.17	0	sta7	wiphy0	76,701,566	57,657	0	0	995,897,302	656,855	0	
1.2.14	<input type="checkbox"/>	<input type="checkbox"/>	10.26.1.16	0	sta6	wiphy0	72,056,940	54,422	0	0	1,002,001,044	660,882	0	
1.2.13	<input type="checkbox"/>	<input type="checkbox"/>	10.26.1.15	0	sta5	wiphy0	75,608,172	56,870	0	0	1,001,813,806	660,757	0	
1.2.12	<input type="checkbox"/>	<input type="checkbox"/>	10.26.1.14	0	sta4	wiphy0	75,117,326	56,525	0	0	1,007,291,372	664,306	0	
1.2.11	<input type="checkbox"/>	<input type="checkbox"/>	10.26.1.13	0	sta3	wiphy0	78,660,442	58,967	0	0	1,041,047,048	686,280	0	
1.2.10	<input type="checkbox"/>	<input type="checkbox"/>	10.26.1.12	0	sta2	wiphy0	75,568,352	56,828	0	0	4,438,595,764	2,900,992	0	
1.2.09	<input type="checkbox"/>	<input type="checkbox"/>	10.26.1.11	0	sta1	wiphy0	83,100,650	61,663	0	0	259,044,274...	168,875,6...	0	
1.2.02	<input type="checkbox"/>	<input type="checkbox"/>	10.26.1.10	0	sta0	wiphy0	35,447,362	27,803	0	0	191,966,135...	125,147,6...	0	
1.1.4	<input type="checkbox"/>	<input type="checkbox"/>	10.26.1.1	0	vap0	wiphy0	456,400,222...	301,529,1...	0	0	735,641,436	514,331	0	
1.2.01	<input type="checkbox"/>	<input type="checkbox"/>	10.26.0.3	0	eth1		458,047,909...	304,987,1...	1	1,985	1,248,935,330	4,042,614	1	
1.1.1	<input type="checkbox"/>	<input type="checkbox"/>	10.26.0.2	0	eth1		1,260,067,886	4,081,375	1	1,997	458,036,042...	304,948,3...	1	
1.2.27	<input type="checkbox"/>	<input type="checkbox"/>	10.26.0.19	0	eth1#9	eth1	980,969,979	681,408	0	156	83,428,626	58,097	0	
1.2.26	<input type="checkbox"/>	<input type="checkbox"/>	10.26.0.18	0	eth1#8	eth1	983,843,653	683,493	0	156	83,340,884	57,952	0	
1.2.25	<input type="checkbox"/>	<input type="checkbox"/>	10.26.0.17	0	eth1#7	eth1	989,626,547	687,089	0	90	83,438,864	58,132	0	
1.2.24	<input type="checkbox"/>	<input type="checkbox"/>	10.26.0.16	0	eth1#6	eth1	996,399,789	692,325	0	90	83,357,150	57,987	0	
1.2.23	<input type="checkbox"/>	<input type="checkbox"/>	10.26.0.15	0	eth1#5	eth1	996,768,295	691,969	0	155	83,407,600	58,078	0	
1.2.22	<input type="checkbox"/>	<input type="checkbox"/>	10.26.0.14	0	eth1#4	eth1	1,001,251,507	695,025	0	89	83,370,596	57,994	0	
1.2.21	<input type="checkbox"/>	<input type="checkbox"/>	10.26.0.13	0	eth1#3	eth1	1,031,768,323	714,516	0	89	83,405,440	58,106	0	

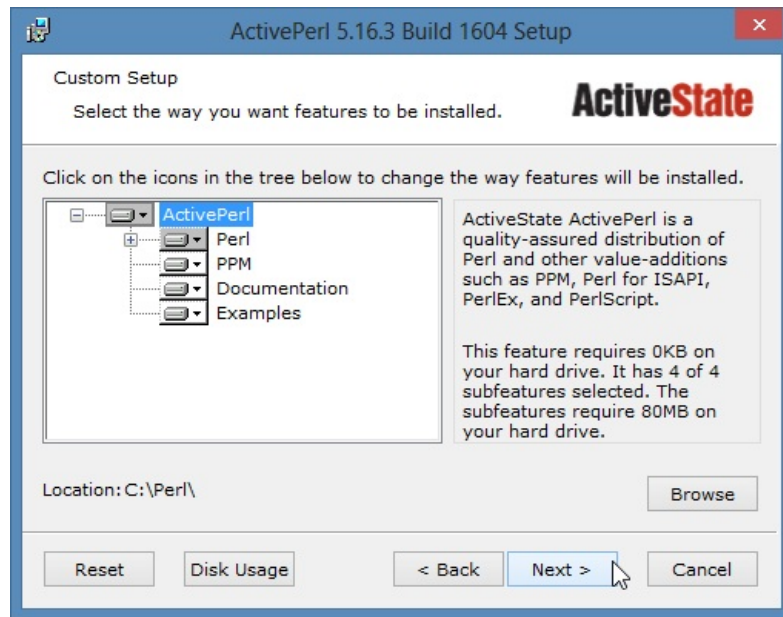
For more information see [LANforge GUI Installation](#)

4. Install ActiveState Perl

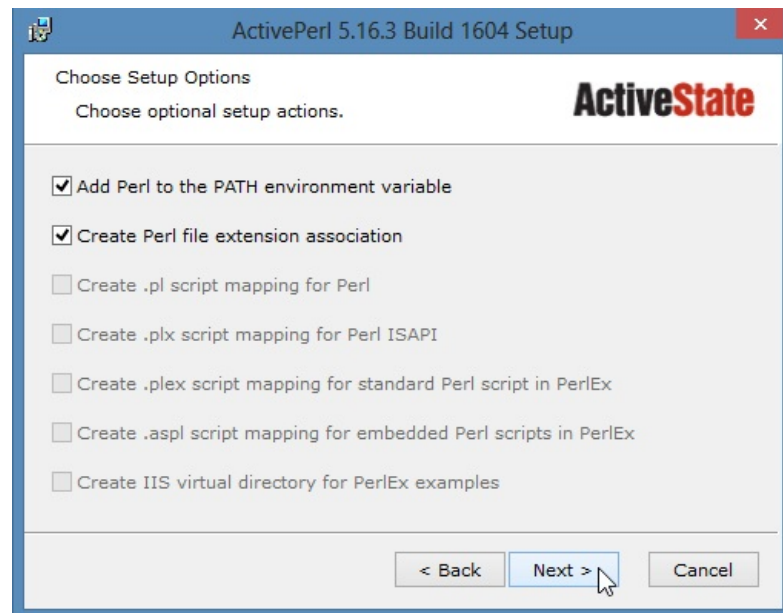
- A. Please download it from the [ActiveState downloads page](#).
- B. Begin and press next...



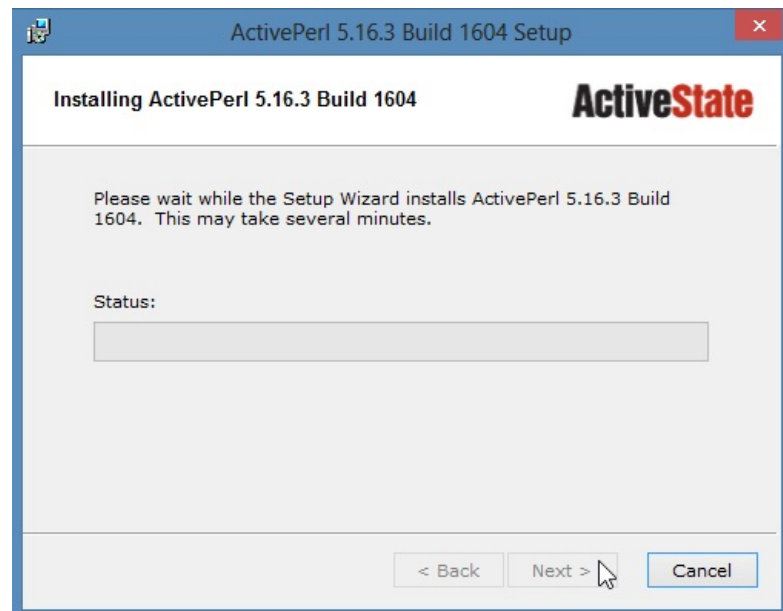
C. ...press next...



D. ...press next...



E. ...and then wait a few minutes...



F. Now, you are done, press **Finish**.



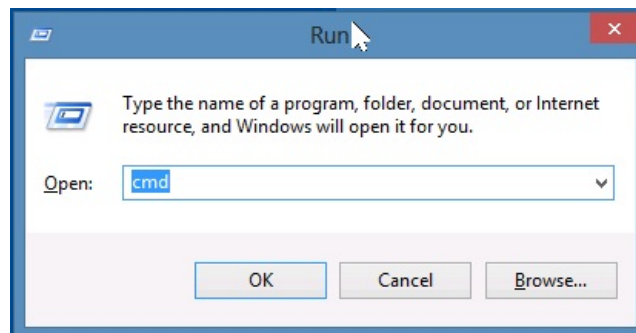
G. For advanced GUI scripting in Windows, you may also wish to view the [Win32::GuiTest perl module page](#).

5. Using scripts from Windows

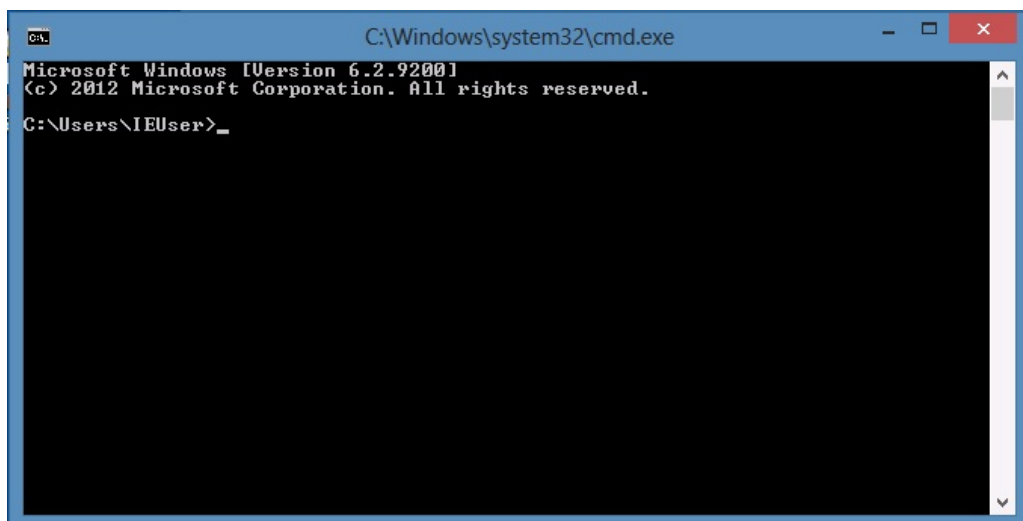
A. The scripts installed on your Windows computer will communicate with the LANforge manager over the management port (TCP 4001).

B. Open a **cmd** window. Click **Start->Run**, type `cmd` and press **Enter**

A.



B.



C. Change directory to `C:\Program Files\LANforge-Server\scripts`

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.2.9200]
(c) 2012 Microsoft Corporation. All rights reserved.

C:\Users\IEUser>cd "c:\Program Files"
c:\Program Files>cd LANforge-Server
c:\Program Files\LANforge-Server>cd scripts
c:\Program Files\LANforge-Server\scripts>
```

D. List the script files: `dir *.pl`

```
c:\Program Files\LANforge-Server\scripts>dir *.pl
Volume in drive C has no label.
Volume Serial Number is B6DE-1E48

Directory of c:\Program Files\LANforge-Server\scripts

08/07/2014  04:32 PM                3,205 ftp-upload.pl
08/07/2014  04:32 PM            32,537 lf_associate_ap.pl
08/07/2014  04:32 PM                3,163 lf_attenmod.pl
08/07/2014  04:32 PM                7,370 lf_firemod.pl
08/07/2014  04:32 PM               10,162 lf_ice.pl
08/07/2014  04:32 PM                4,322 lf_icemod.pl
08/07/2014  04:32 PM                 419 lf_log_parse.pl
08/07/2014  04:32 PM            44,633 lf_maculan.pl
08/07/2014  04:32 PM            15,644 lf_maculan2.pl
08/07/2014  04:32 PM            17,240 lf_maculan3.pl
08/07/2014  04:32 PM            19,122 lf_maculan_l4.pl
08/07/2014  04:32 PM            17,419 lf_maculan_streams.pl
08/07/2014  04:32 PM            13,830 lf_many_conn.pl
08/07/2014  04:32 PM             8,557 lf_monitor.pl
08/07/2014  04:32 PM            18,031 lf_netoptics.pl
08/07/2014  04:32 PM            32,819 lf_nfs_io.pl
08/07/2014  04:32 PM            11,610 lf_portmod.pl
08/07/2014  04:32 PM             8,191 lf_port_walk.pl
08/07/2014  04:32 PM             6,751 lf_stress1.pl
08/07/2014  04:32 PM             6,038 lf_stress2.pl
08/07/2014  04:32 PM             9,939 lf_stress3.pl
08/07/2014  04:32 PM             6,145 lf_stress4.pl
08/07/2014  04:32 PM            24,688 lf_verify.pl
08/07/2014  04:32 PM            22,242 lf_voip.pl
                24 File(s)            344,077 bytes
                 0 Dir(s)      117,004,115,968 bytes free

c:\Program Files\LANforge-Server\scripts>_
```

E. Your installation of Perl should have put it into your path variable (%PATH%). Please verify that it did with this command: `perl -v`

```
C:\Windows\system32\cmd.exe

c:\Program Files\LANforge-Server\scripts>perl -v

This is perl 5, version 16, subversion 3 (v5.16.3) built for MSWin32-x86-multi-t
hread
(with 1 registered patch, see perl -U for more detail)

Copyright 1987-2012, Larry Wall

Binary build 1604 [298023] provided by ActiveState http://www.ActiveState.com
Built Apr 14 2014 14:32:20

Perl may be copied only under the terms of either the Artistic License or the
GNU General Public License, which may be found in the Perl 5 source kit.

Complete documentation for Perl, including FAQ lists, should be found on
this system using "man perl" or "perldoc perl".  If you have access to the
Internet, point your browser at http://www.perl.org/, the Perl Home Page.

c:\Program Files\LANforge-Server\scripts>_
```

F. If perl is not found (Command not found) then you might need to close your DOS window and open a new one, or your Windows computer might need a reboot for the PATH variable to take effect.

G. Start the `lf_firemod.pl` script with the `--help` switch to see the options.

```

C:\Windows\system32\cmd.exe
c:\Program Files\LANforge-Server\scripts>perl lf_firemod.pl --help
Unknown option: help
lf_firemod.pl --action < show_endp | set_endp | show_port | list_ports | do_cmd
> ]
    [--endp_vals <key,key,key,key>]
    # show_endp output can be narrowed with key-value arguments
    # Examples:
    # --action show_endp --endp_vals MinTxRate,DestMAC,Avg-Jitt
er
    # Not available: Latency,Pkt-Gaps, or rows below steps-fail
ed.
    # Special Keys:
    # --endp_vals tx_bps      (Tx Bytes)
    # --endp_vals rx_bps     (Rx Bytes)
[--mgr <host-name | IP>]
[--mgr_port <ip port>]
[--cmd <lf-cli-command text>]
[--endp_name <name>]
[--port_name <name>]
[--resource <number>]
[--speed <speed in bps>]
[--quiet < yes | no >]

Example:
lf_firemod.pl --action set_endp --endp_name udp1-A --speed 154000
c:\Program Files\LANforge-Server\scripts>_

```

A. `perl lf_firemod.pl --help`

H. Open a second `cmd` window so that you can see the help text in the first window. Change directory to `C:\Program Files\LANforge-Server\Scripts`

I. Use this command to list ports available on `192.168.100.26`:

A. `perl lf_firemod.pl --mgr 192.168.100.26 --resource 1 --action list_ports`

B.

```

C:\Windows\system32\cmd.exe
C:\Program Files\LANforge-Server\scripts>perl lf_firemod.pl --mgr 192.168.100.26
--resource 1 --action list_ports
eth1 link=UP speed=1G
wiphy0 link=DOWN speed=UNKNOWN
eth0 link=UP speed=1G
wiphy1 link=DOWN speed=UNKNOWN
vap0 link=UP speed=UNKNOWN
C:\Program Files\LANforge-Server\scripts>_

```

J. Most command output shows considerably more text than the output of the previous command. You may want to pipe it to a file. In this example, the output is redirected to `C:\tmp\port-vap0.txt` and shown with Notepad.

A. Query the port stats using: `perl lf_firemod.pl --mgr 192.168.100.26 --resource 1 --action show_port --port vap0 > c:\tmp\port-vap0.txt`

```

C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.2.9200]
(c) 2012 Microsoft Corporation. All rights reserved.

C:\Users\IEUser>cd "C:\Program Files\LANforge-Server\scripts"

C:\Program Files\LANforge-Server\scripts>perl lf_firemod.pl --mgr 192.168.100.26
--resource 1 --action show_port --port_name vap0 > c:\tmp\port-vap0.txt

C:\Program Files\LANforge-Server\scripts>

```

B. Show the output with: `notepad c:\tmp\port-vap0.txt`

```
C:\Windows\system32\cmd.exe
Microsoft Windows [Version 6.2.9200]
(c) 2012 Microsoft Corporation. All rights reserved.

C:\Users\IEUser>cd "C:\Program Files\LANforge-Server\scripts"
C:\Program Files\LANforge-Server\scripts>perl lf_firemod.pl --mgr 192.168.100.26
--resource 1 --action show_port --port_name vap0 > c:\tmp\port-vap0.txt
C:\Program Files\LANforge-Server\scripts>notepad c:\tmp\port-vap0.txt
C:\Program Files\LANforge-Server\scripts>

port-vap0 - Notepad
File Edit Format View Help

>>RSLT: 0 Cmd: 'nc_show_port' '1' '1' 'vap0'

Shelf: 1, Card: 1, Port: 4 Type: VAP Alias:
Win32-Name: Win32-Desc: Parent/Peer: wiphy0 Rpt-Timer: 1000 CPU-Mask: 0
Current: UP LINK-UP GSO GRO
Supported: UP SEND_TO_SELF
Partner: UP
Advertising: GRO-ENABLED
IP: 10.26.1.1 MASK: 255.255.255.0 GW: 0.0.0.0 VID: 0 ResetState: COMPLETE
DNS Servers:
IPv6-Global: DELETED
IPv6-Link: fe80::20e:8eff:fe78:9d4d/64
IPv6-Gateway: DELETED
MAC: 00:0e:8e:78:9d:4d DEV: vap0 MTU: 1500 TX Queue Len: 1000
LastDHCP: 0ms
Bridge Port-Cost: Ignore Port-Prio: Ignore
pps_tx: 0 pps_rx: 0 bps_tx: 0 bps_rx: 0
Rxp: 301529231 Txp: 514331 Rxb: 456400223610 Txb: 735641436 RxERR: 0 TxERR: 0
RxDrop: 0 TxDrop: 0 Multi: 0 Coll: 0 RxLenERR: 0 RxOverflow: 0
RxCRC: 0 RxFrame: 0 RxFifo: 0 RxMissed: 0 TxAbort: 0 TxCarrier: 0
TxFifo: 0 TxHeartBeat: 0 TxWindow: 0 RxBytesLL: 456400223610 TxBytesLL: 735641436
Configured: Mode: 802.11abgn ESSID: jedtest Antenna: Diversity
Key: Flags: 262152 ()
```