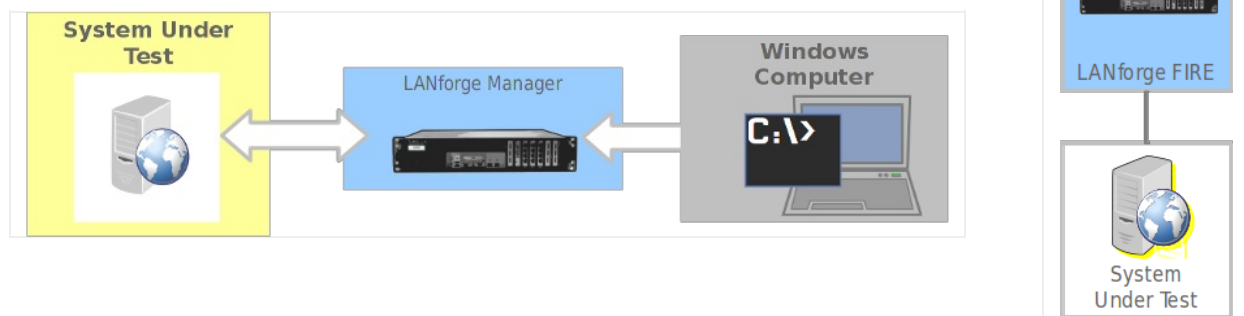


## Operate LANforge Scripts from Windows.

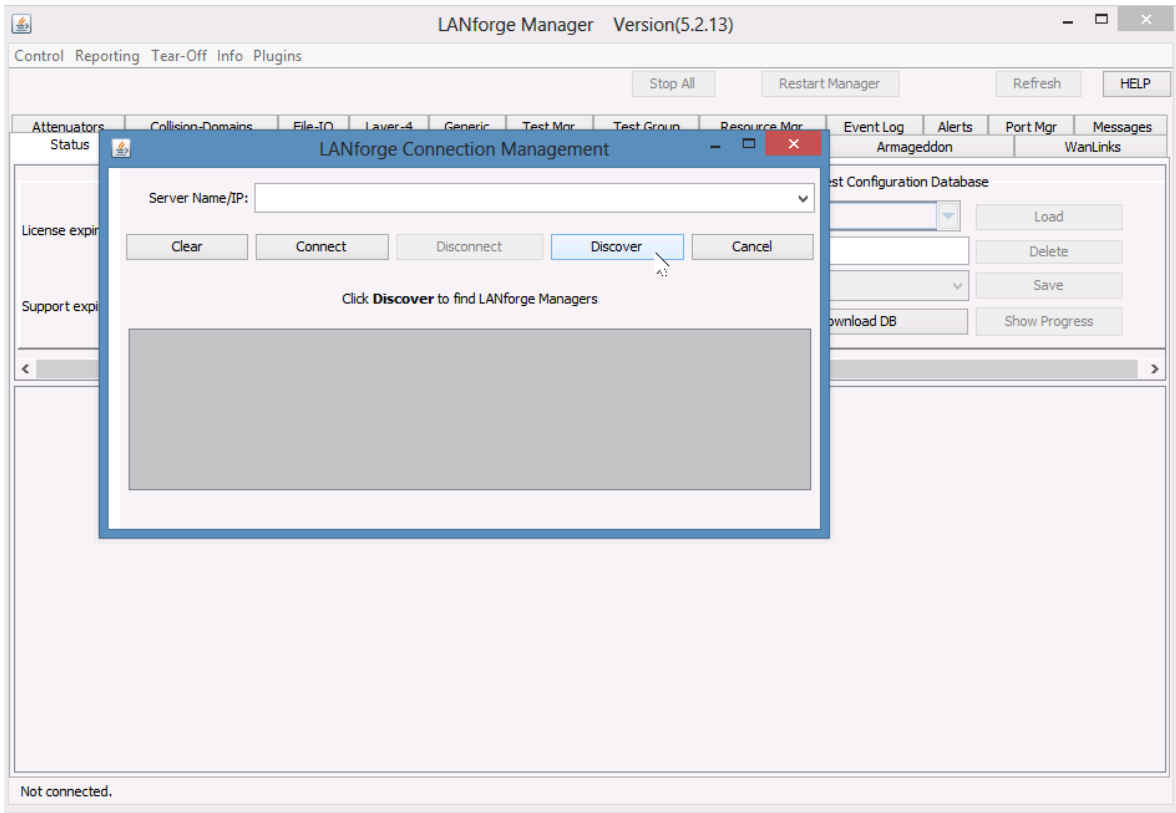
**Goal:** Use an installation of LANforge and Perl on a Windows computer to operate tests and manage connections on remote LANforge computers.

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_fi remod.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.

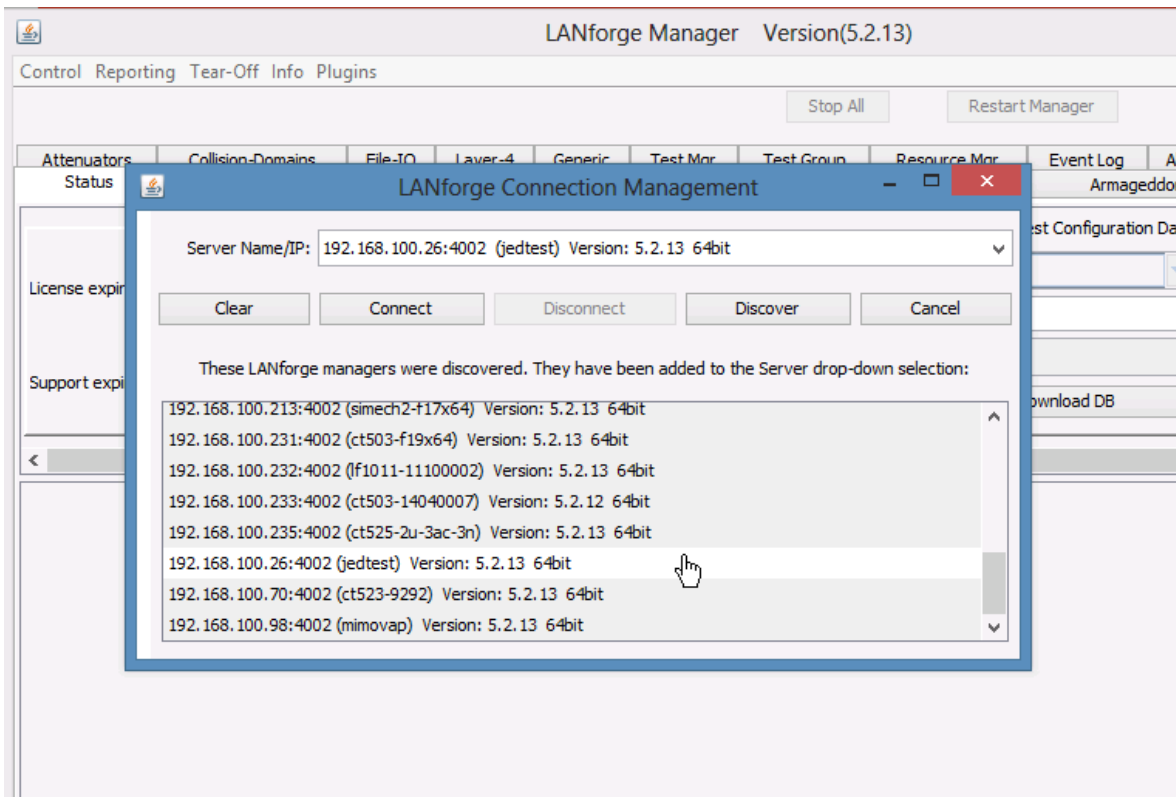


1. Prepare your Windows computer:
2. Install LANforge Server
  - A. You do not need to configure or start this server. Only the perl scripts directory of this installation will be used.
  - B. You can download it from [our current releases page](#). For more information see [LANforge Server Installation](#)
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.

LANforge Manager Version(5.2.13)

Control Reporting Tear-Off Info Plugins

Stop All Restart Manager Refresh HELP

Status Layer-3 L3 Endps VoIP/RTP VoIP/RTP Endps Armageddon WanLinks  
Attenuators Collision-Domains File-IO Layer-4 Generic Test Mgr Test Group Resource Mgr Event Log Alerts Port Mgr Messages

Disp: 192.168.100.135:0.0 Sniff Packets Clear Counters Reset Port Delete  
Rpt Timer: medium (8 s) Apply View Details Create Modify Batch Modify

All Ethernet Interfaces (Ports) for all Resources.

| 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 |        |      | 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  |        |      | 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 |        |      | 10.26.1.19     | 0   | sta9   | wiphy0     | 76,280,536      | 57,360       | 0      | 0         | 986,461,208     | 650,662      | 0      |   |
| 1.2.16 |        |      | 10.26.1.18     | 0   | sta8   | wiphy0     | 75,164,420      | 56,514       | 0      | 0         | 988,778,230     | 652,241      | 0      |   |
| 1.2.15 |        |      | 10.26.1.17     | 0   | sta7   | wiphy0     | 76,701,566      | 57,657       | 0      | 0         | 995,897,302     | 656,855      | 0      |   |
| 1.2.14 |        |      | 10.26.1.16     | 0   | sta6   | wiphy0     | 72,056,940      | 54,422       | 0      | 0         | 1,002,001,044   | 660,882      | 0      |   |
| 1.2.13 |        |      | 10.26.1.15     | 0   | sta5   | wiphy0     | 75,608,172      | 56,870       | 0      | 0         | 1,001,813,806   | 660,757      | 0      |   |
| 1.2.12 |        |      | 10.26.1.14     | 0   | sta4   | wiphy0     | 75,117,326      | 56,525       | 0      | 0         | 1,007,291,372   | 664,306      | 0      |   |
| 1.2.11 |        |      | 10.26.1.13     | 0   | sta3   | wiphy0     | 78,660,442      | 58,967       | 0      | 0         | 1,041,047,048   | 686,280      | 0      |   |
| 1.2.10 |        |      | 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 |        |      | 10.26.1.11     | 0   | sta1   | wiphy0     | 83,100,650      | 61,663       | 0      | 0         | 259,044,274,... | 168,875,6... | 0      |   |
| 1.2.02 |        |      | 10.26.1.10     | 0   | sta0   | wiphy0     | 35,447,362      | 27,803       | 0      | 0         | 191,966,135,... | 125,147,6... | 0      |   |
| 1.1.4  |        |      | 10.26.1.1      | 0   | vap0   | wiphy0     | 456,400,222,... | 301,529,1... | 0      | 0         | 735,641,436     | 514,331      | 0      |   |
| 1.2.01 |        |      | 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  |        |      | 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 |        |      | 10.26.0.19     | 0   | eth1#9 | eth1       | 980,969,979     | 681,408      | 0      | 156       | 83,428,626      | 58,097       | 0      |   |
| 1.2.26 |        |      | 10.26.0.18     | 0   | eth1#8 | eth1       | 983,843,653     | 683,493      | 0      | 156       | 83,340,884      | 57,952       | 0      |   |
| 1.2.25 |        |      | 10.26.0.17     | 0   | eth1#7 | eth1       | 989,626,547     | 687,089      | 0      | 90        | 83,438,864      | 58,132       | 0      |   |
| 1.2.24 |        |      | 10.26.0.16     | 0   | eth1#6 | eth1       | 996,399,789     | 692,325      | 0      | 90        | 83,357,150      | 57,987       | 0      |   |
| 1.2.23 |        |      | 10.26.0.15     | 0   | eth1#5 | eth1       | 996,768,295     | 691,969      | 0      | 155       | 83,407,600      | 58,078       | 0      |   |
| 1.2.22 |        |      | 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 |        |      | 10.26.0.13     | 0   | eth1#3 | eth1       | 1,031,768,323   | 714,516      | 0      | 89        | 83,405,440      | 58,106       | 0      |   |

Logged in to: 192.168.100.26:4002 as: Admin

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...

ActivePerl 5.16.3 Build 1604 Setup

**ActiveState**

Welcome to the ActivePerl 5.16.3 Build 1604 Setup Wizard

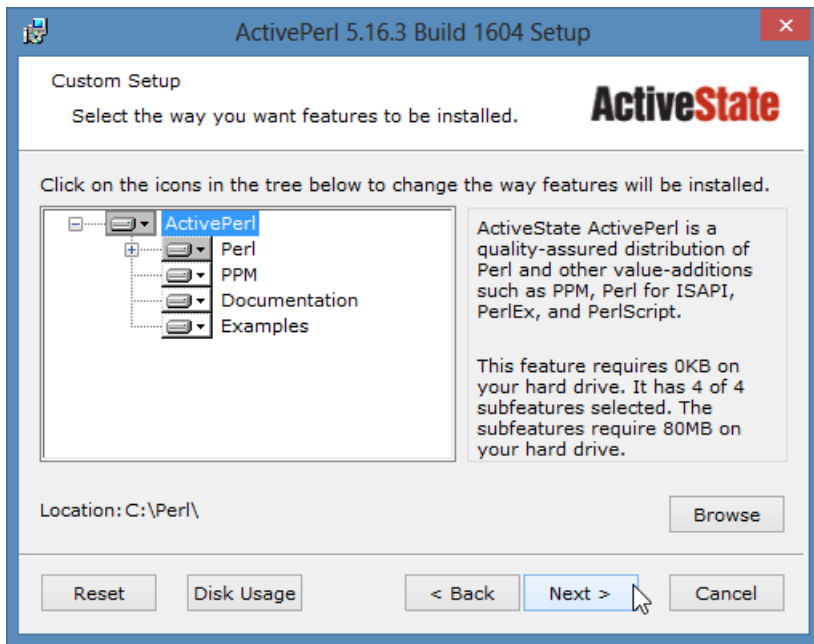
The Setup Wizard will allow you to change the way ActivePerl 5.16.3 Build 1604 features are installed on your computer or even to remove ActivePerl 5.16.3 Build 1604 from your computer. Click Next to continue or Cancel to exit the Setup Wizard.

**ActivePerl™**

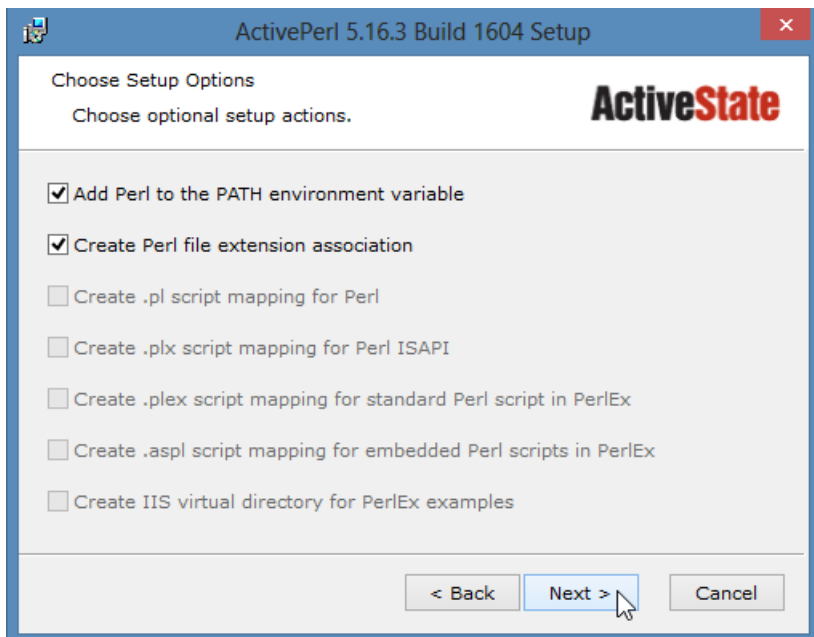
www.activestate.com

Next > Cancel

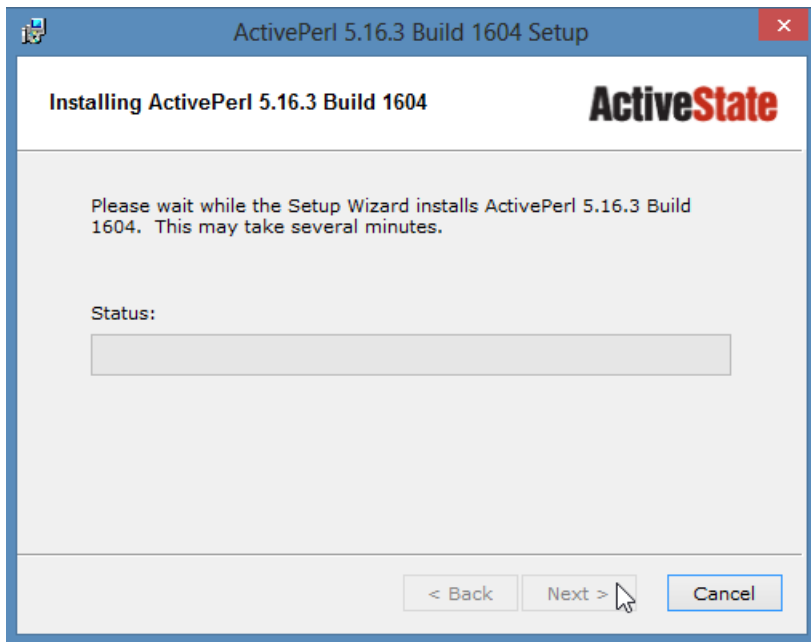
C. ...press next...



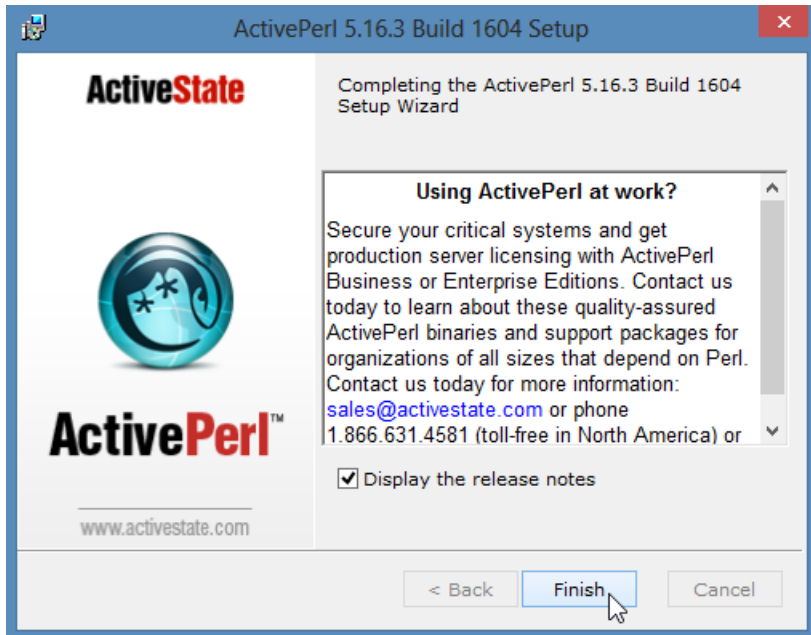
D. ...press next...



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



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

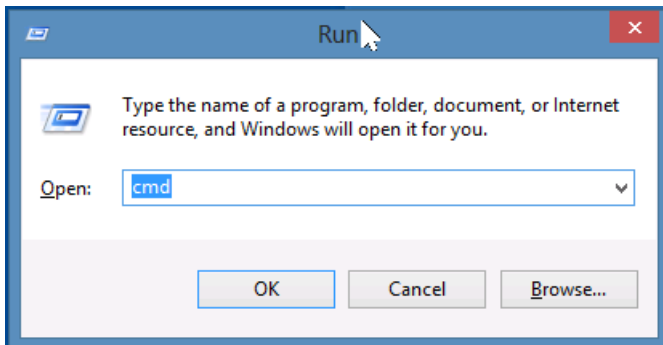


G. For advanced GUI scripting in Windows, you may also wish to view the [Win32::GuiTest perl module page](#).

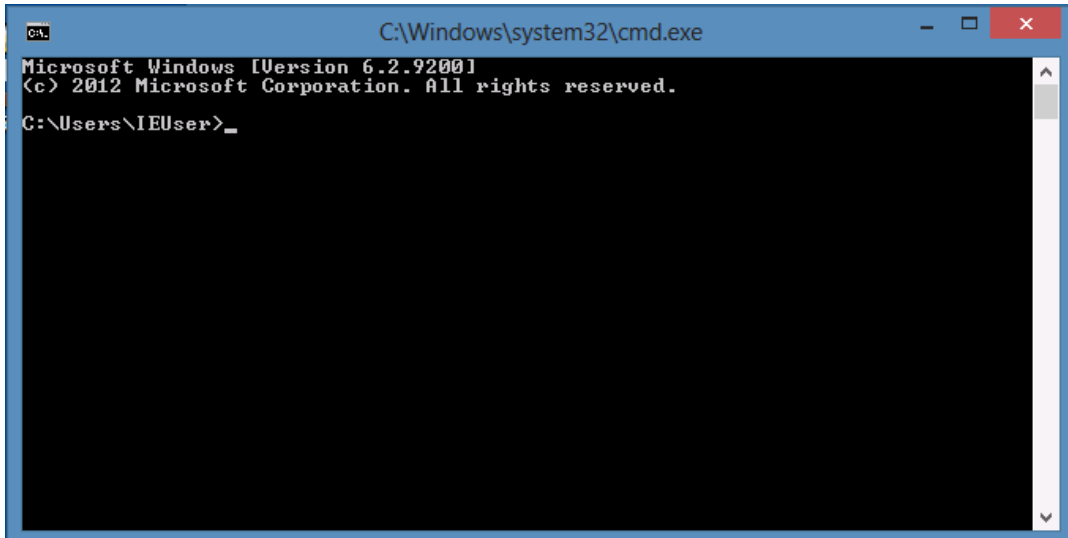
## 5. Using scripts from Windows

- 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**

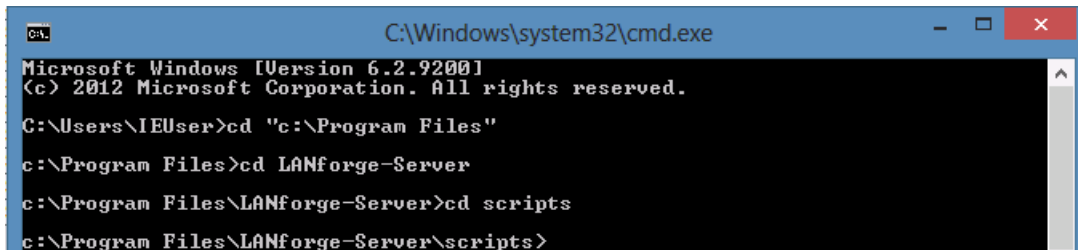
A.



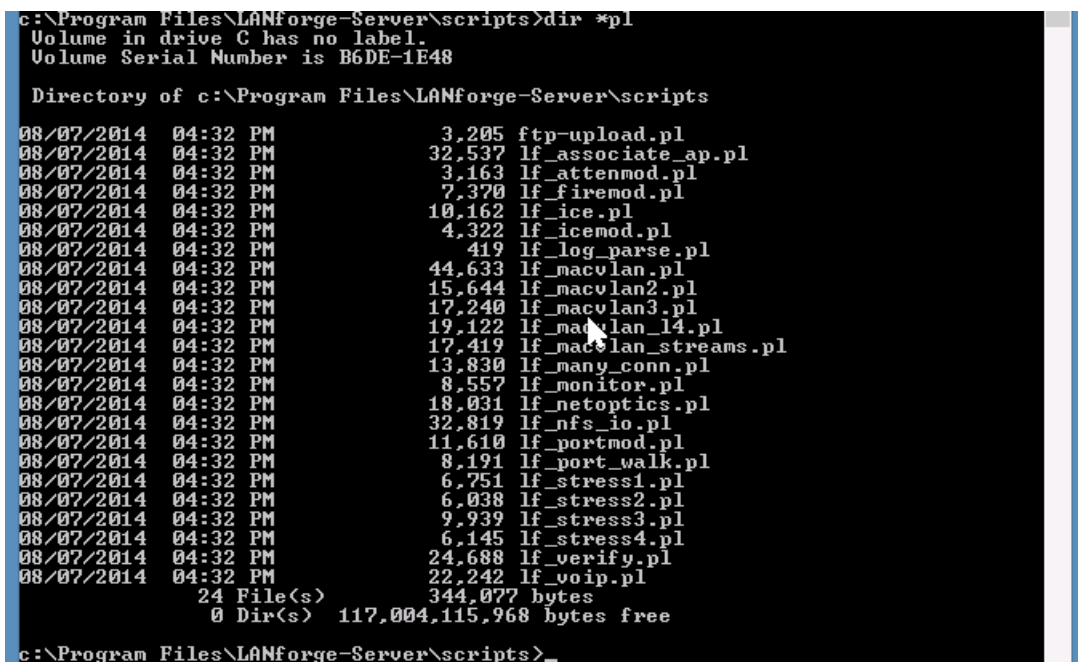
B.



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



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



- 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-thread
(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-Jitter
        # Not available: Latency,Pkt-Gaps, or rows below steps-failed.
        # 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`:

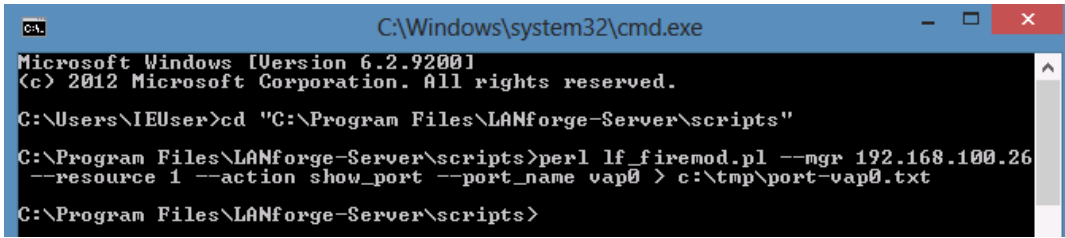
- A. `perl lf_firemod.pl --mgr 192.168.100.26 --resource 1 --action list_ports`
- B.

```
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.

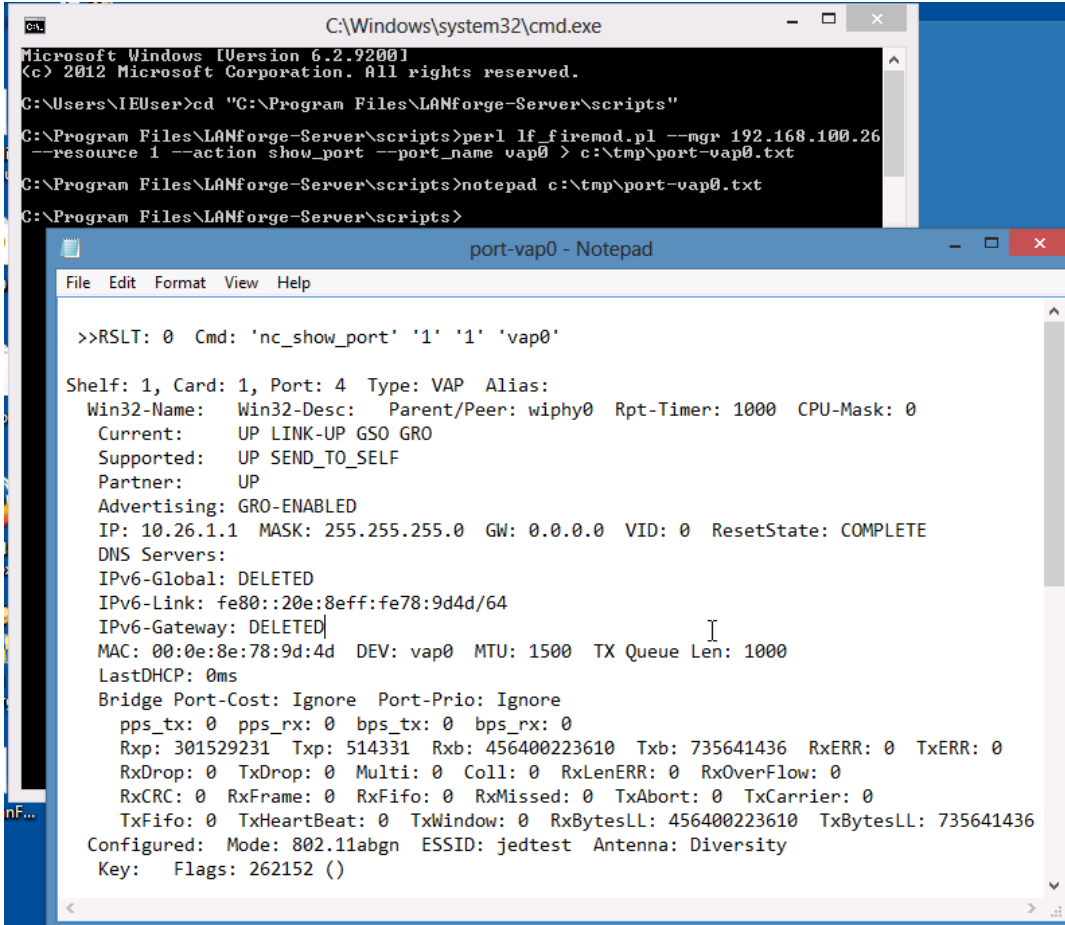
- A. Query the port stats using: `perl lf_firemod.pl --mgr 192.168.100.26 --resource 1 --action show_port --port vap0 > c:\tmp\port-vap0.txt`



```
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 ()
```