A terminal window with a dark background and light text. The title bar at the top shows 'ssh admin@10.16.113.10' and a temperature icon. The terminal content shows the command 'AVS# show wavetunnel' being entered. Below it, the text 'Incomplete Command: show wavetunnel' is displayed. Then, a 'Help:' section lists several options: 'node', 'downstream', 'upstream', 'stats', 'upstatus', and 'downstatus', each followed by a description of what it shows. The prompt 'AVS#' is visible at the bottom left of the terminal area.

```
ssh admin@10.16.113.10
AVS# show wavetunnel

Incomplete Command: show wavetunnel

Help:
    node - Show the wave tunnel node settings
    downstream - Show the downstream wave tunnel settings
    upstream - Show the upstream wave tunnel settings
    stats - Show the wave tunnel statistics
    upstatus - Show the upstream wave tunnel status
    downstatus - Show the downstream wave tunnel status

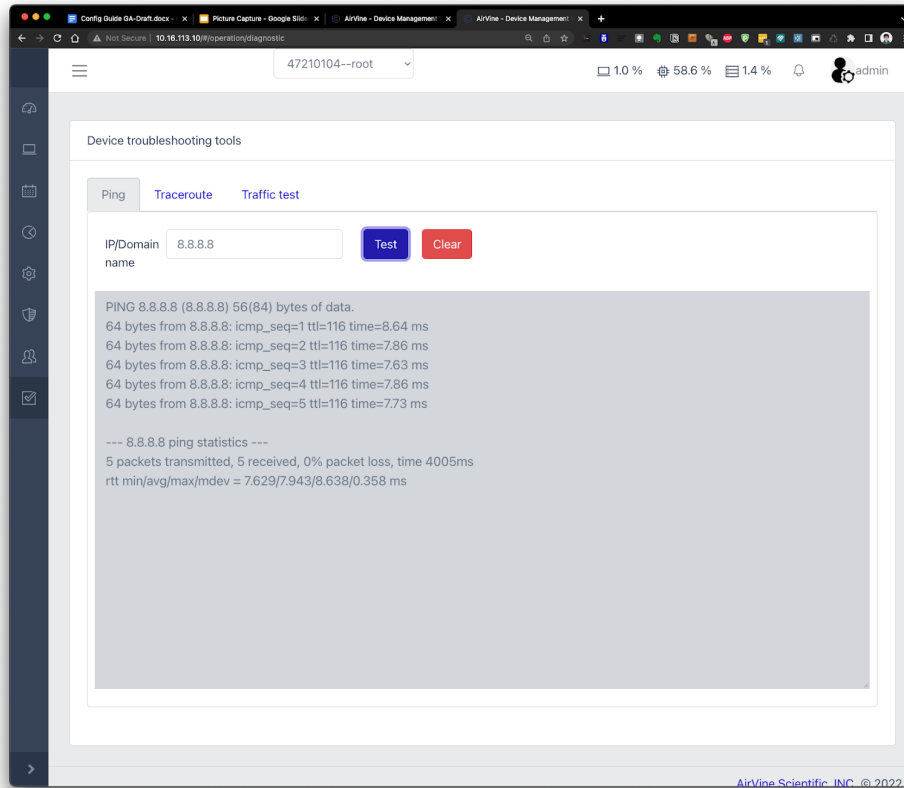
AVS#
```

Ping Test

You can run a “Ping” test to check if the traffic can be sent to the destination.

[WEB GUI]

System > Operations > Diagnostic > Ping



[CLI]

```
allen@allen-unc: ~
AVS>
Help:
  deviceinfo - Show the device general information
  enable - Enter 'enable' for enable mode; 'enable password' to change the password
  ping - Ping destination ip. Ex: ping 8.8.8.8
  traceroute - Trace route to destination ip. Ex: traceroute 8.8.8.8
  .. - Navigate up one category
  exit - Exit Command line interface

AVS> ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data:
64 bytes from 8.8.8.8: icmp_seq=1 ttl=116 time=8.34 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=116 time=7.49 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=116 time=7.80 ms
64 bytes from 8.8.8.8: icmp_seq=4 ttl=116 time=7.75 ms
64 bytes from 8.8.8.8: icmp_seq=5 ttl=116 time=7.76 ms

--- 8.8.8.8 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4007ms
rtt min/avg/max/mdev = 7.489/7.827/8.340/0.278 ms
AVS> █
```

Traceroute Test

You can run a “Traceroute” test to check how the packets are routed to the destination.

[WEB GUI]

[CLI]

```
allen@allen-unc: ~  
AVS>  
Help:  
deviceinfo - Show the device general information  
enable - Enter 'enable' for enable mode; 'enable password' to change the password  
ping - Ping destination ip. Ex: ping 8.8.8.8  
traceroute - Trace route to destination ip. Ex: traceroute 8.8.8.8  
.. - Navigate up one category  
exit - Exit Command line interface  
  
AVS> traceroute www.google.com  
traceroute to www.google.com (142.251.32.228), 64 hops max  
 1  10.16.113.1  1.206ms  0.390ms  0.463ms  
 2  192.168.1.254  1.831ms  1.053ms  0.425ms  
 3  104.7.64.1  3.482ms  2.225ms  1.821ms  
 4  71.148.149.226  5.486ms  3.389ms  3.741ms  
 5  12.242.105.110  12.346ms  7.384ms  7.811ms  
 6  * * *  
 7  32.130.26.233  6.104ms  4.197ms  3.875ms  
 8  12.255.10.242  8.450ms  6.320ms  6.860ms  
 9  * * *  
10  108.170.242.241  9.389ms  7.320ms  7.902ms  
11  108.170.242.237  9.910ms  7.741ms  7.912ms  
12  72.14.237.160  8.400ms  *  9.704ms  
13  142.250.237.174  15.328ms  13.226ms  16.866ms  
14  142.250.238.28  23.667ms  22.088ms  21.896ms  
15  142.250.208.140  47.549ms  46.258ms  45.829ms  
16  108.170.231.6  48.558ms  46.116ms  47.112ms  
17  108.170.228.85  48.232ms  45.126ms  44.950ms  
18  108.170.240.193  46.362ms  44.206ms  44.952ms  
19  142.251.60.135  46.586ms  44.076ms  43.829ms  
20  142.251.32.228  47.331ms  46.357ms  45.840ms  
AVS>
```

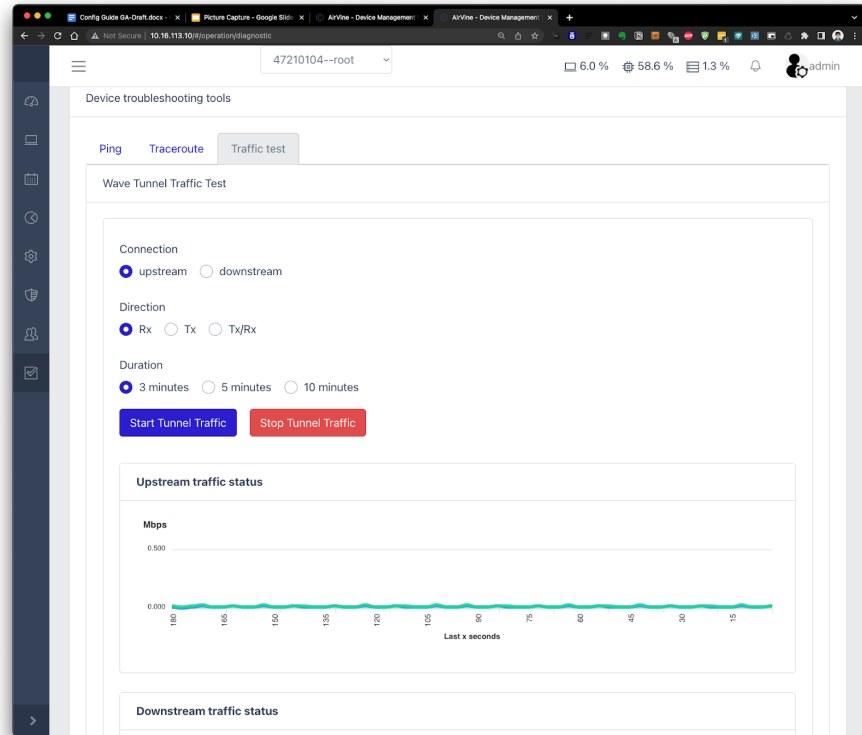
Traffic Test

There is an internal tool in the WaveTunnel we can use to generate the traffic on the WaveTunnel connections.

[WEB GUI]

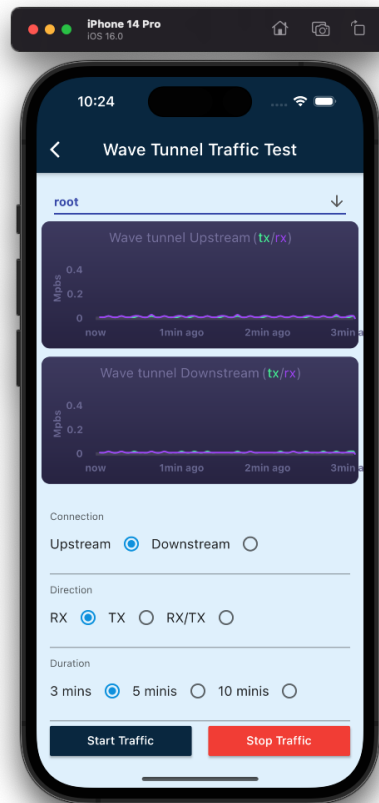
System > Operations > Diagnostic > Traffic Test

Specify the criteria before generating the traffic and monitor the result on the widgets.



[Mobile App] Monitoring > Link Traffic

Specify the criteria before generating the traffic and monitor the result on the widgets.



Mirroring the Ethernet Port traffic

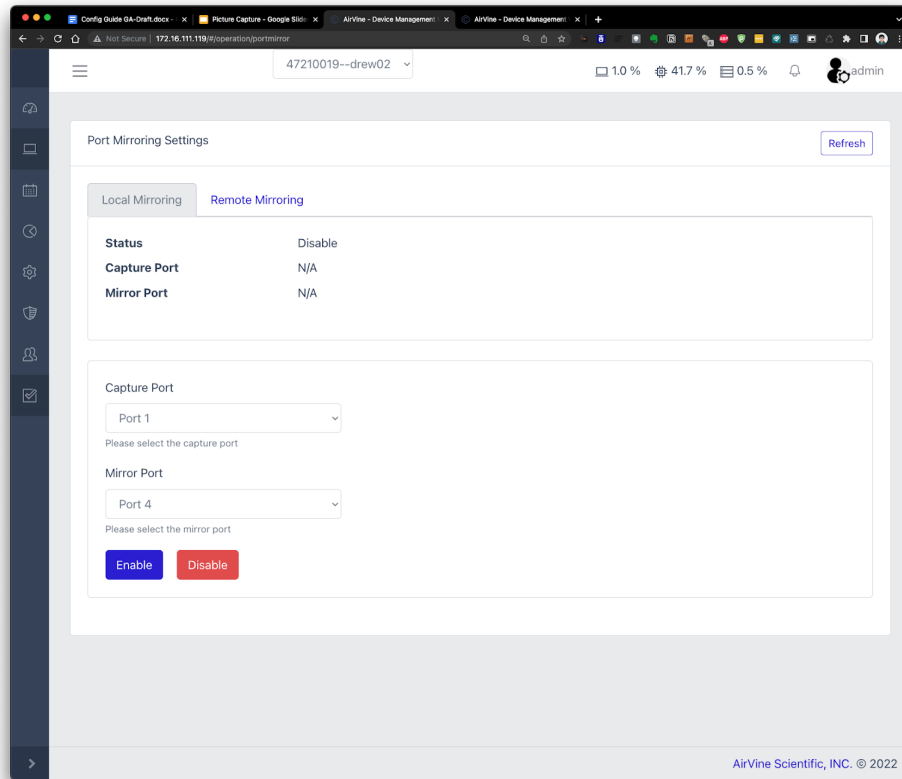
For the troubleshooting purposes, this function provides the capability to mirror the packets on a specific port to another port in the local or neighboring device. To be aware, the settings are not persisted which are cleaned up after system reboot.

[WEB GUI]

System > Operations > Port Mirroring

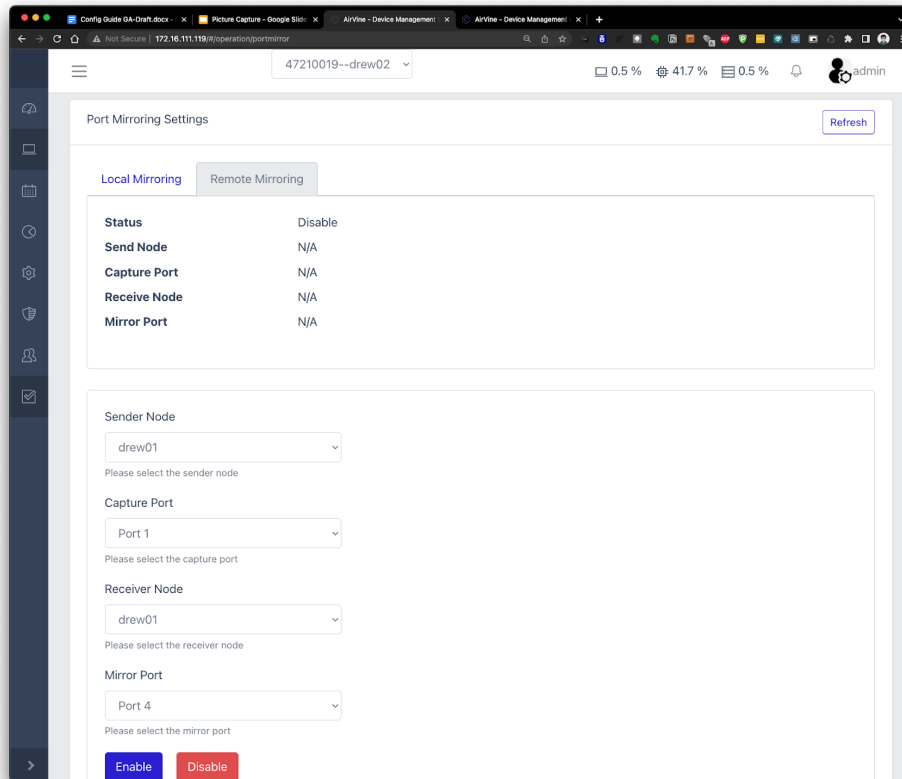
Local Port Mirroring

Operations-> Port Mirroring-> Local



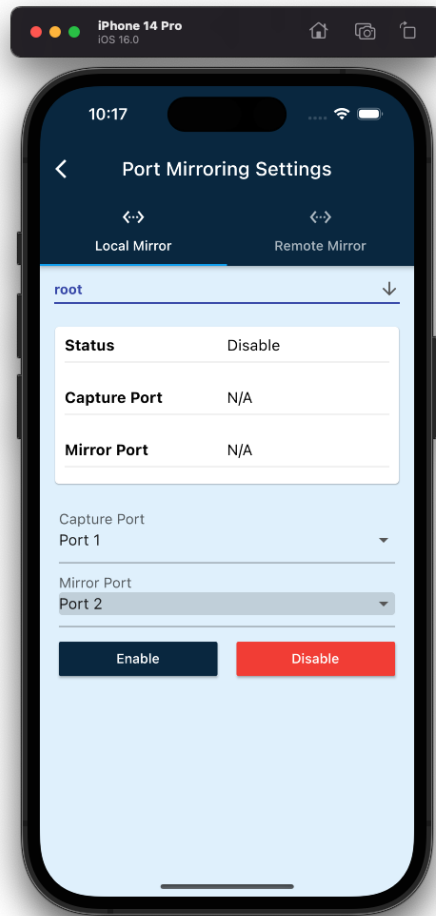
Remote Port Mirroring

Operations-> Port Mirroring-> Remote

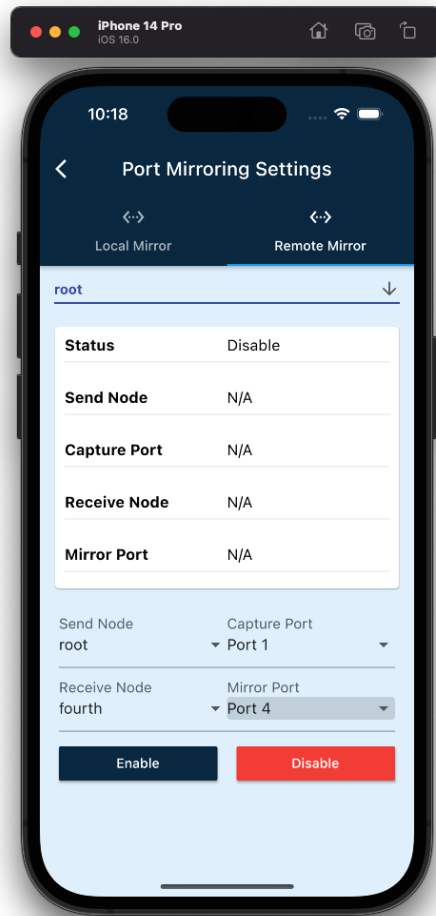


[Mobile App]

Settings > Mirroring > Local Mirroring



Settings > Mirroring > Remote Mirroring



[CLI]

AVS(operation-mirror-local)#

```
allen@allen-unc: ~  
disable - Disable the local port mirroring  
.. - Navigate up one category  
exit - Exit Command line interface  
  
AVS(operation-mirror-local)#  
AVS(operation-mirror-local)#  
  
Help:  
    list - Show the local port mirroring settings  
    enable - Enable the local port mirroring  
    disable - Disable the local port mirroring  
    .. - Navigate up one category  
    exit - Exit Command line interface  
  
AVS(operation-mirror-local)# enable  
  
Which port for captureing packets?  
1 (Port 1) 2 (Port 2) 3 (Port 3) 4 (Port 4) [0 to exit]1  
  
Which port for mirroring packets?  
1 (Port 1) 2 (Port 2) 3 (Port 3) 4 (Port 4) [0 to exit]4  
  
The local port mirroring has been enabled  
  
Local Port Mirroring:  
Status: Enabled  


| Capture Port | Mirror Port |
|--------------|-------------|
| Port 1       | Port 4      |

  
AVS(operation-mirror-local)#
```

```
AVS(operation-mirror-local)#  
  
Help:  
    list - Show the local port mirroring settings  
    enable - Enable the local port mirroring  
    disable - Disable the local port mirroring  
    .. - Navigate up one category  
    exit - Exit Command line interface  
  
AVS(operation-mirror-local)# list  
  
Local Port Mirroring:  
Status: Enabled  


| Capture Port | Mirror Port |
|--------------|-------------|
| Port 1       | Port 2      |

  
AVS(operation-mirror-local)# disable  
Disable the local port mirroring? (y/n): y  
  
The local port mirroring has been disable  
  
Local Port Mirroring:  
Status: Disable  


| Capture Port | Mirror Port |
|--------------|-------------|
| N/A          | N/A         |

  
AVS(operation-mirror-local)#
```

AVS(operation-mirror-remote)#

```
AVS(operation-mirror)# remote
AVS(operation-mirror-remote)#

Help:
    list - Show the remote port mirroring settings
    enable - Enable the remote port mirroring
    disable - Disable the remote port mirroring
    .. - Navigate up one category
    exit - Exit Command line interface

AVS(operation-mirror-remote)# enable

Which node for captureing packets?
1 (root) 2 (second) 3 (third) 4 (fourth) 5 (fifth) 6 (sixth) [0 to exit]1

Which port for captureing packets?
1 (Port 1) 2 (Port 2) 3 (Port 3) 4 (Port 4) [0 to exit]1

Which node for mirroring packets?
1 (root) 2 (second) 3 (third) 4 (fourth) 5 (fifth) 6 (sixth) [0 to exit]3

Which port for mirroring packets?
1 (Port 1) 2 (Port 2) 3 (Port 3) 4 (Port 4) [0 to exit]3

The remote port mirroring has been enabled

Remote Port Mirroring:
Status: Enabled



| Send Node | Capture Port | Recv Node | Mirror Port |
|-----------|--------------|-----------|-------------|
| root      | Port 1       | third     | Port 3      |



AVS(operation-mirror-remote)#
```