

ACCESSAGILITY

WiFiPerf for Mac OS X User Guide 1.1



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Introduction

WiFiPerf is a bandwidth performance measurement app for Mac OS X. The app can operate as a client and/or server. WiFiPerf can be used for Mac OS-to-iOS testing or iOS-to-Mac OS testing. WiFiPerf should work with other operating systems that support iPerf3.

Note: iPerf3 is not compatible with iPerf, iPerf2, or jPerf.

WiFiPerf App Features

- Mac OS Snow Leopard and Lion support
- Client Mode
- Server Mode
- Real time results plot
- Duration duration option
- TCP Test
- UDP Test
- Datagram and Bandwidth setting for UDP Test
- Email Results
- Server Mode Log of results
- Client Mode Log of results
- Audio alert of test completion
- WiFi interface info per test

Launching Application

Launch WiFiPerf Application from the dock.



Client Settings

Test Configuration Area

Target Server Address - address of iperf3, iOS or Mac OS server. If localhost / 127.0.0.1 is configured as server address then app will test with itself (loopback test, requires server to be enabled).

Target Server Port - port of iOS or Mac OS server.

Test Duration - How long to run bandwidth test in seconds. Also value of X-axis on plot

Stats Interval - How often to show interval results in seconds.

Transfer Direction - Direction of data transfer per test.

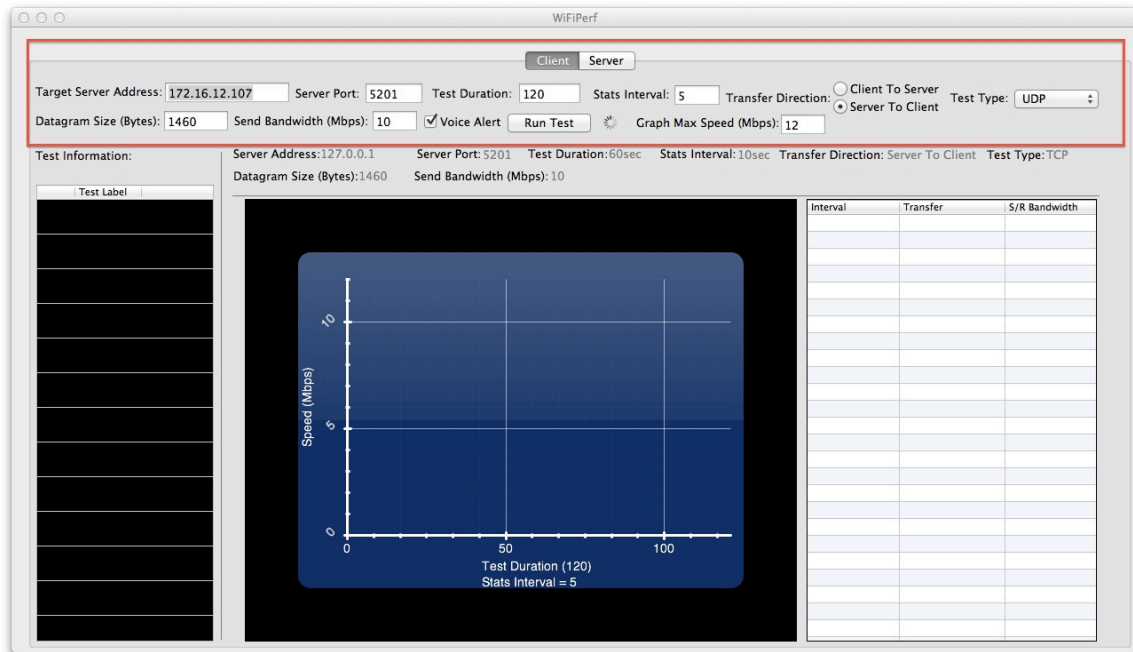
Voice Alert – Enable voice reading of speed after test completion

Graph Max Speed – Max value on Y-axis of plot

Test Type - TCP or UDP test

Datagram Size (Bytes) - Size of datagrams for UDP test

Datagram Send BW (Mbps) - Rate datagrams are transferred for UDP test



Test Results Area

Test results from current and previous tests are in box area. The most recent result is shown by default.

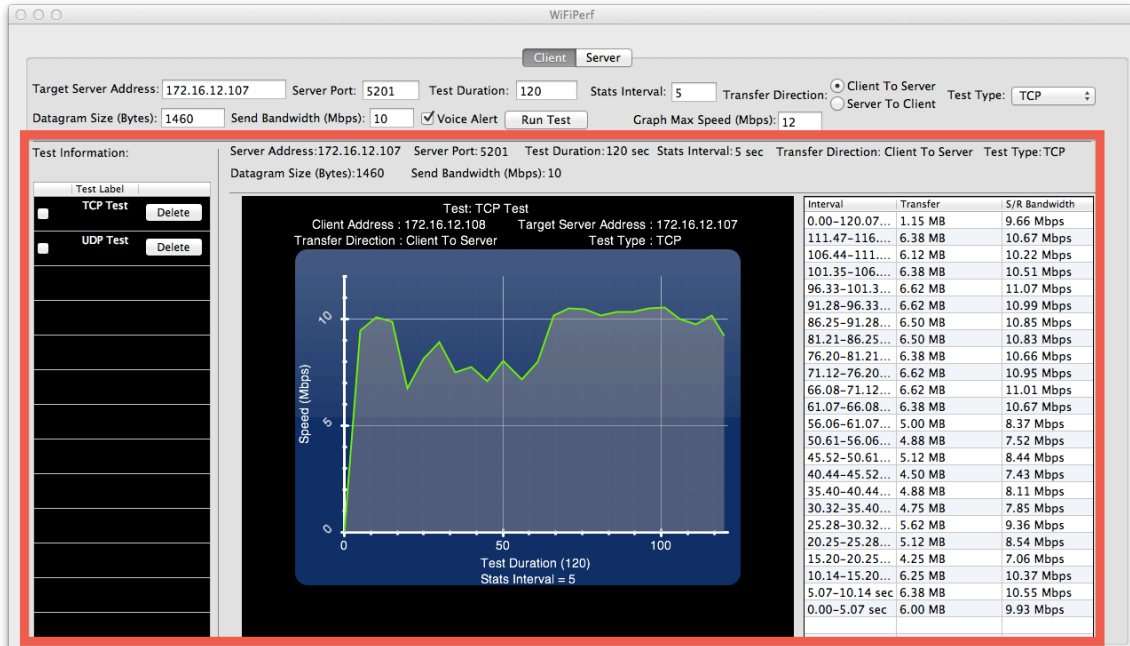
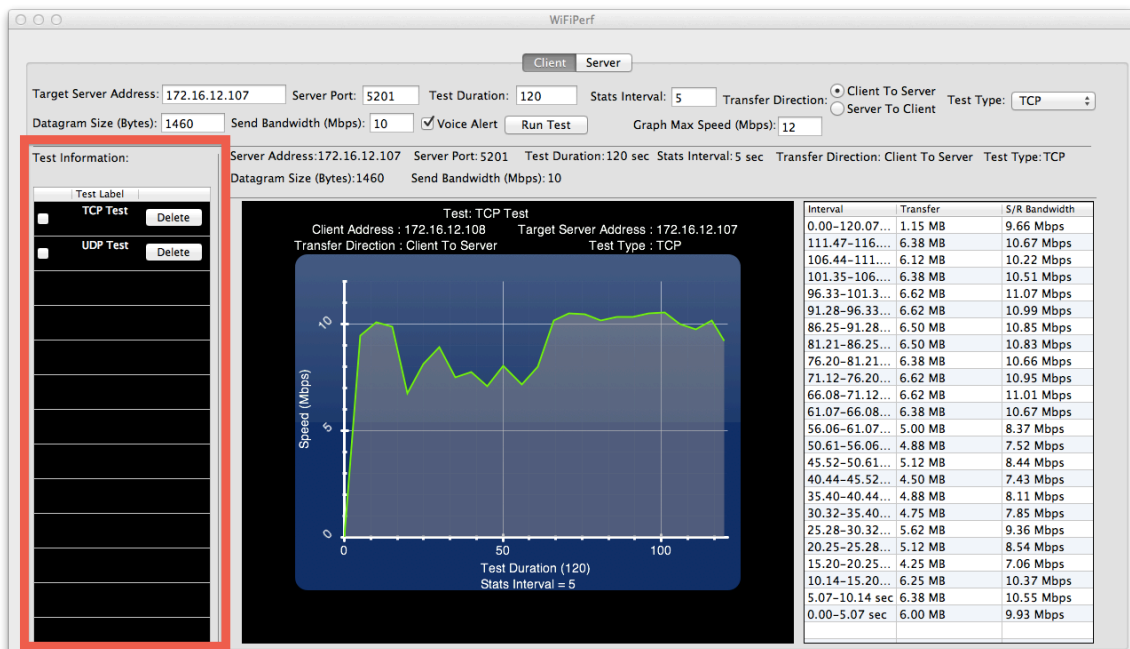


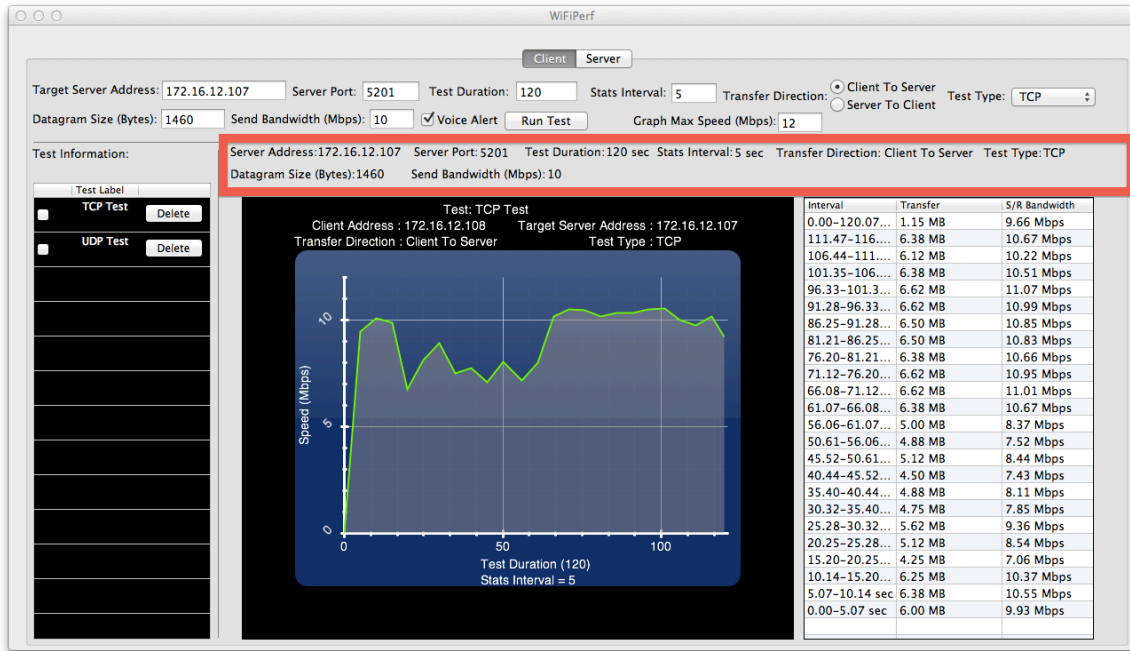
Table of All Tests

Left column shows all tests that have been run. Click test label to change name.



Config Information for Displayed Test Results

Configuration settings from last test or selected test from left column is shown area above graph.



Plot of Displayed Test Results

Plot for last test or selected test from left column is shown in chart area.

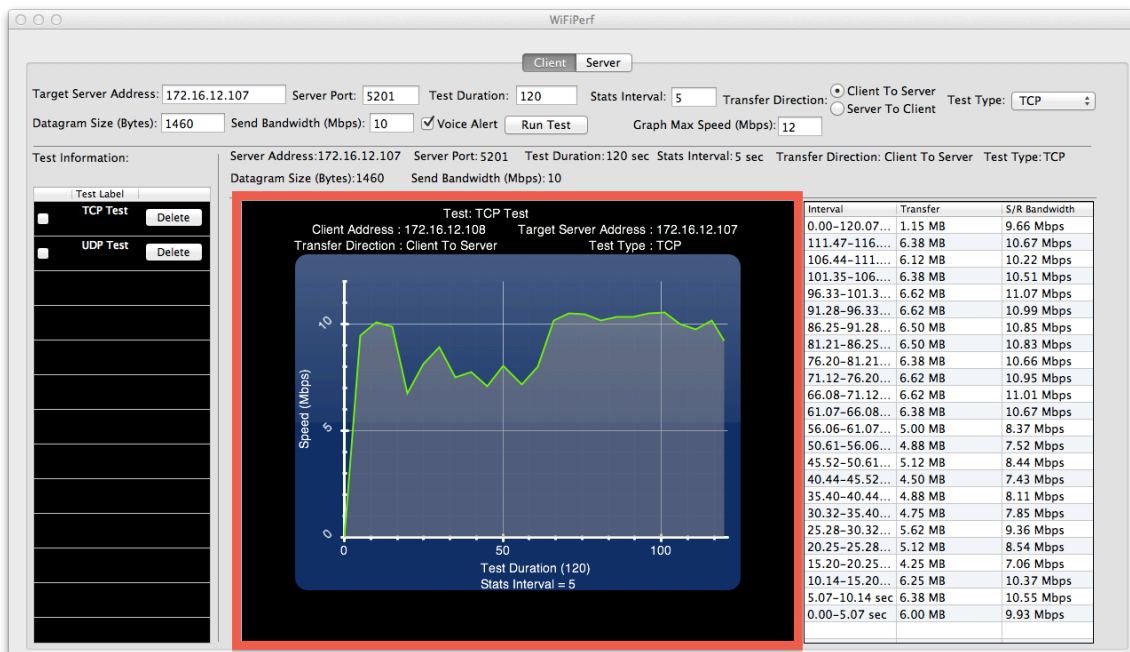
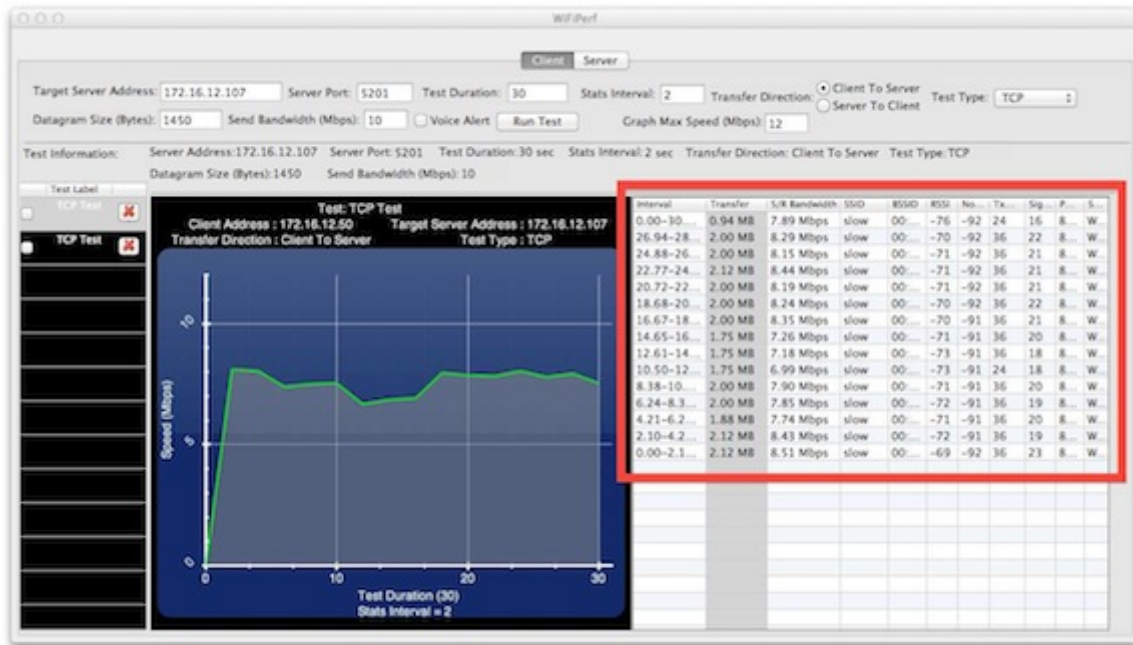


Table of Displayed Test Results

Table of results for last test or selected test from left column is shown in chart area.



View/Hide Test and WiFi Interface Info

Two finger click the results table header to view options for viewing/hiding results.

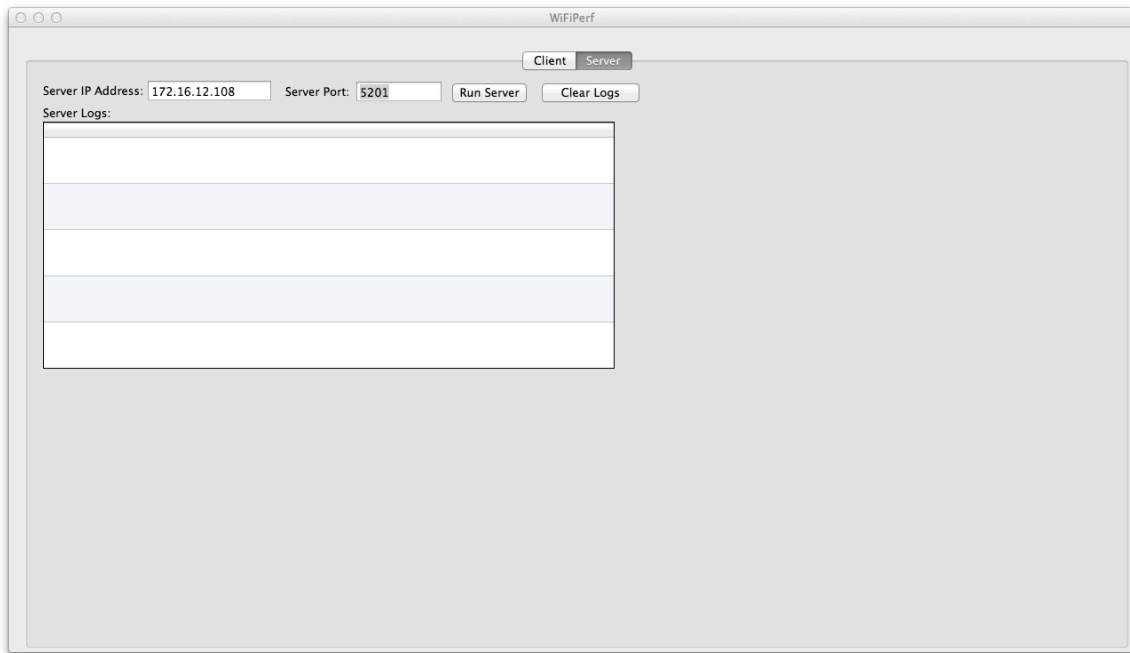
Interval, Transfer, S/R Bandwidth, SSID, BSSID, RSSI, Noise, Tx Rate, Signal/Noise, PHY Mode, Security can be toggle on/off to reduce crowding on results table.

Interval	Transfer	S/R Bandwidth	SSID	BSSID	RSSI	No.	Tx	Sig.	P.	S.
0.00-30...	0.94 MB	7.89 Mbps	slow	00:...	-76	-92	24	16	8...	W...
26.94-28...	2.00 MB	8.29 Mbps	slow	00:...	-70	-92	36	22	8...	W...
24.88-26...	2.00 MB	8.15 Mbps	slow	00:...	-71	-92	36	21	8...	W...
22.77-24...	2.12 MB	8.44 Mbps	slow	00:...	-71	-92	36	21	8...	W...
20.72-22...	2.00 MB	8.19 Mbps	slow	00:...	-71	-92	36	21	8...	W...
18.68-20...	2.00 MB	8.24 Mbps	slow	00:...	-70	-92	36	22	8...	W...
16.67-18...	2.00 MB	8.35 Mbps	slow	00:...	-70	-91	36	21	8...	W...
14.65-16...	1.75 MB	7.26 Mbps	slow	00:...	-71	-91	36	20	8...	W...
12.61-14...	1.75 MB	7.18 Mbps	slow	00:...	-73	-91	36	18	8...	W...
10.50-12...	1.75 MB	6.99 Mbps	slow	00:...	-73	-91	24	18	8...	W...
8.38-10...	2.00 MB	7.90 Mbps	slow	00:...	-71	-91	36	20	8...	W...
6.24-8.3...	2.00 MB	7.85 Mbps	slow	00:...	-72	-91	36	19	8...	W...
4.21-6.2...	1.88 MB	7.74 Mbps	slow	00:...	-71	-91	36	20	8...	W...
2.10-4.2...	2.12 MB	8.43 Mbps	slow	00:...	-72	-91	36	19	8...	W...
0.00-2.1...	2.12 MB	8.51 Mbps	slow	00:...	-69	-92	36	23	8...	W...

Server Settings

Server enable/disable and port can be configured. The Server address is taken from the device interface address. If the interface is disabled, no info will be shown for server address value.

Server Logs - This area shows results from bandwidth tests. The log screen displays completed results



Appendix A: Compatible Speed Test Apps

WiFiPerf for iOS



WiFiPerf for Mac OS is a bandwidth performance measurement app for Mac OS X. The app can operate as a client and/or server. WiFiPerf can be used for Mac OS-to-Mac OS testing or iOS-to-Mac OS testing. WiFiPerf should work with other operating systems that support iPerf3 but has only been tested with our [WiFiPerf iOS app](#).

Appendix B: iPerf3 Options Supported / Tested with WiFiPerf

iPerf3 Options Supported / Tested with WiFiPerf

```
new-host-2:~ aa140$ ./iperf3 --help
```

```
Usage: iperf [-s|-c host] [options]
       iperf [-h|--help] [-v|--version]
```

Client/Server:

```
-f, --format [kmgKMG] format to report: Kbits, Mbits, KBytes, MBytes
-i, --interval # seconds between periodic bandwidth reports
-l, --len #[KMG] length of buffer to read or write (default 8 KB)
-m, --print_mss print TCP maximum segment size (MTU - TCP/IP header)
-p, --port # server port to listen on/connect to
-u, --udp use UDP rather than TCP
-w, --window #[KMG] TCP window size (socket buffer size)
-M, --mss # set TCP maximum segment size (MTU - 40 bytes)
-N, --nodelay set TCP no delay, disabling Nagle's Algorithm
-T, --tcpinfo Output detailed TCP info
-v, --version print version information and quit
-V, --verbose more verbose output
-d, --debug debug mode
```

Server specific:

```
-s, --server run in server mode
```

Client specific:

```
-b, --bandwidth #[KMG] for UDP, bandwidth to send at in bits/sec
                        (default 1 Mbit/sec, implies -u)
-c, --client run in client mode, connecting to
-n, --num #[KMG] number of bytes to transmit (instead of -t)
-t, --time # time in seconds to transmit for (default 10 secs)
-P, --parallel # number of parallel client threads to run
-T, --tcpinfo Output detailed TCP info (Linux and FreeBSD only)
-R, --reverse test instructs server to send data to client (can be used with all
other client options)
```

Miscellaneous:

```
-h, --help print this message and quit
```

[KMG] Indicates options that support a K,M, or G suffix for kilo-, mega-, or giga-

Sample Test With iOS App in Server Mode and Mac OS iPerf3 as Client

Following command on Mac OS was executed **./iperf3 -c 172.16.12.104 -t 60 -i 10**

-c = iperf3 in client mode on Mac OS

-t = 60 second test

-i = results shown every 10 seconds

```
new-host-2:~ aa140$ ./iperf3 -c 172.16.12.104 -t 60 -i 10
Connecting to host 172.16.12.104, port 5201
[ 4] local 172.16.12.108 port 51837 connected to 172.16.12.104 port 5201
[ ID] Interval      Transfer      Bandwidth
[ 4] 0.00-10.03 sec  12.9 MBytes   10.8 Mbits/sec
[ ID] Interval      Transfer      Bandwidth
[ 4] 10.03-20.06 sec  13.1 MBytes   11.0 Mbits/sec
[ ID] Interval      Transfer      Bandwidth
[ 4] 20.06-30.11 sec  13.8 MBytes   11.5 Mbits/sec
[ ID] Interval      Transfer      Bandwidth
[ 4] 30.11-40.14 sec  12.9 MBytes   10.8 Mbits/sec
[ ID] Interval      Transfer      Bandwidth
[ 4] 40.14-50.21 sec  13.4 MBytes   11.1 Mbits/sec
[ ID] Interval      Transfer      Bandwidth
      Sent
[ 4] 0.00-60.08 sec  78.5 MBytes   11.0 Mbits/sec
      Received
[ 4] 0.00-60.08 sec  78.5 MBytes   11.0 Mbits/sec
```