Application note on Jperf 2.0 software for throughput verification in data links.

JPERF_AN_ENB01W

This document explains in a simple way how to verify with a test the data throughput between two connections, the application is **Jperf 2.0.**

1

The first step is to establish communication between both communication sites in the connection, please see the example shown in the following **figure 1.** In this case, a PtP link is shown and we'll measure the throughput between IP 192.168.1.3 and IP 192.168.1.4.

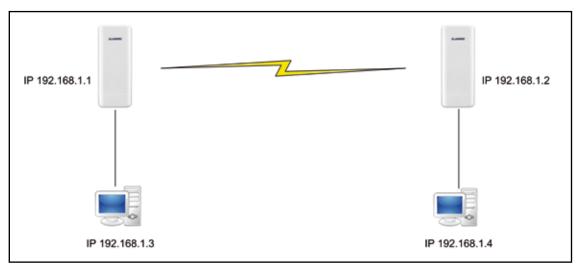


Figure 1

2

Download the **Jperf 2.0** application from the Internet, decompress the file and place it in the root directory of your disc unit, as shown in the group of images of **figure 2**





Figure 2

2 X

3

Remember to verify the IP addresses of the Computer interface cards shown in the **figure 1**, and remember they must be in the same segment and different.

In this example they are: 192.168.1.3 and 192.168.1.4, as shown in the images of **figure 3**.

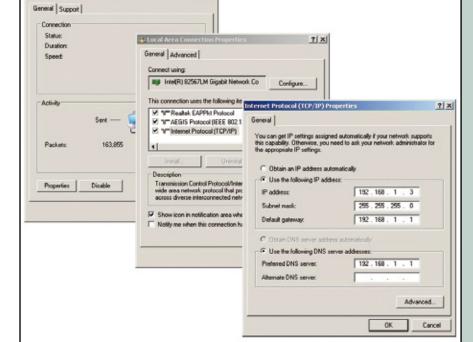


Figure 3

Local Area Connection St

4

Please verify that pings can be sent between both equipment as shown in the images of **figure 4**

```
C:\>ping 192.168.1.4 _
```

```
C:\>ping 192.168.1.4

Pinging 192.168.1.4 with 32 bytes of data:

Reply from 192.168.1.4: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.4:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>_
```

Figure 4

5

In case you have a Firewall installed, please check that the corresponding ports are open or deactivate the firewall in order to execute the test.



Proceed to execute the Jperf application (Jperf.bat) as shown in **figure 5.**

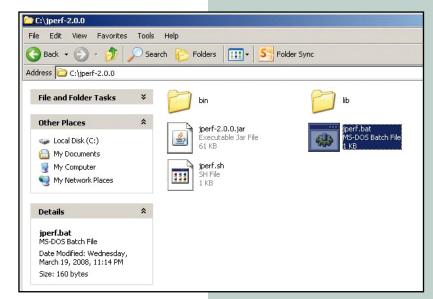


Figure 5

7

In this example, we will configure the server Mode on the IP 192.168.1.4 side and the configuration as a Client in the IP 192.168.1.3

8

In the **figure 6** you can watch the data you must input in the PC that will be used as server (192.168.1.4).

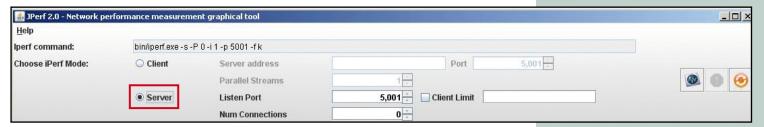


Figure 6

9

You can proceed now to stablish the units of measure of throughput that will be used in the graphics, as shown in **figure 7.**

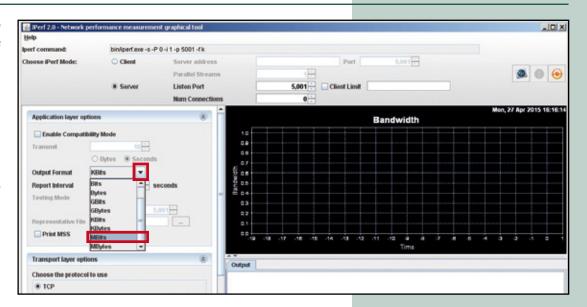


Figure 7

Once configured, proceed to initiate the capture of the traffic, select the corresponding Icon, as shown in **figure 8.**

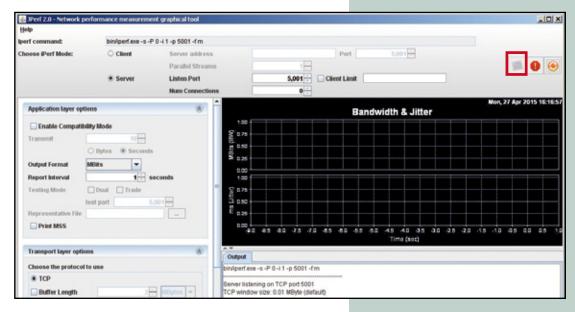


Figure 8

111

Move yourself to the other PC and execute the Jperf application in it, select it to work as a Client, as shown in figure 9.

🕌 JPerf 2.0 - Network pe	rformance measuremo	ent graphical tool		X	
<u>H</u> elp					
lperf command:	Fease enter the host to connect to				
Choose iPerf Mode:	Client	Server address	Port 5,001 -		
		Parallel Streams	1	1 0 0	
	○ Server	Listen Port	5,001 Client Limit		
		Num Connections	0 -		

Figure 9

12,

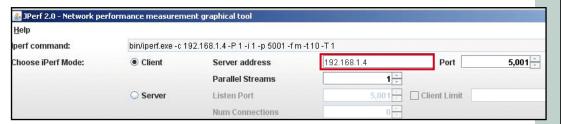
Input the Server IP in the corresponding field, as shown in figure 10

🚣 JPerf 2.0 - Network pe	rformance measurem	ent graphical tool							NO X
<u>H</u> elp									
lperf command:	bin/iperf.exe - c 192.168.1.4 - P 1 - i 1 - p 5001 - f m - t 10 - T 1								
Choose iPerf Mode:	Client	Server address	192.168.1.4	Port	5,001				
		Parallel Streams	1				0	0	0
	○ Server	Listen Port	5,001	Client Limit					
		Num Connections	0						

Figure 10



If you watch this example, we are sending the traffic equivalent of only one sesion of **figure 11a**, remember to select the units of measure of throughput like you did in the Server, as shown in **figure 11b**



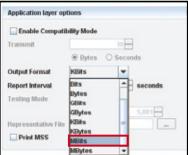


Figure 11a

Figure 11b

14

To start the test, select the start option (button inside the red rectangle), as shown in **figure 12.**

🚣 JPerf 2.0 - Network pe	rformance measurem	ent graphical tool				X
<u>H</u> elp						
lperf command:	bin/iperf.exe -c 192.168.1.4 -P 1 -i 1 -p 5001 -f m -t 10 -T 1					
Choose iPerf Mode:	Client	Server address	192.168.1.4	Port	5,001	
		Parallel Streams	1			® 0 0
	○ Server	Listen Port	5,001	Client Limit		
		Num Connections	0 +			

Figure 12

15

The program will start sending traffic and perform the test, and will show the results when finished, as shown in **figure 13**.

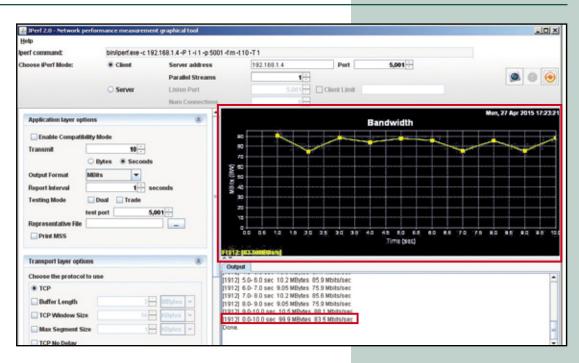
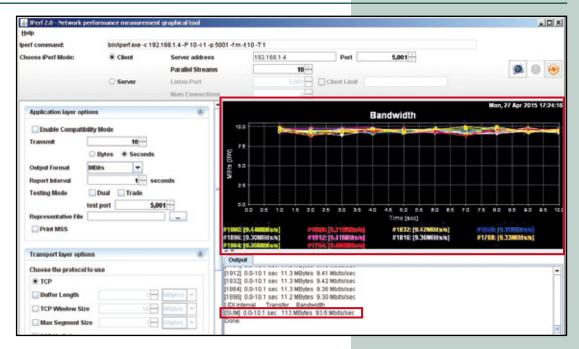


Figure 13

If you select more sessions, they will be represented and each will produce results plus the general traffic sum, as shown in **figure 14**. Please remember that in each test you will have to select the start button mentioned in the **Step 14**, and the destination server should be active.

Figure 14



17

You can play with the different parameters if needed.

www.lanpro.com