

TDA4vm与Xavier以太网通信测试

目的：对TDA4vm与Xavier设备之间的以太网数据传输性能测试。

测试设备：TDA4vm、Jetson AGX Xavier、笔记本

测试对象：TDA4vm、Xavier、笔记本

测试工具：iperf3

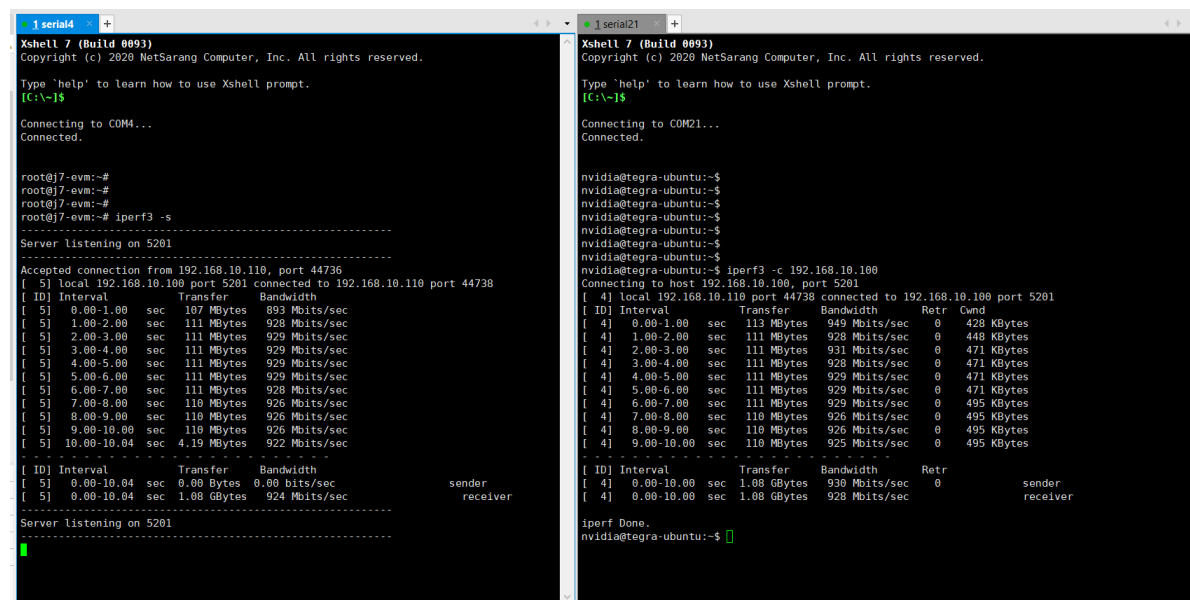
xavier: 使用 `sudo apt-get install iperf3` 安装iperf3工具

tda4: 在github上下载[iperf3源码](#)进行编译安装: `./configure;make;make install`

TDA4x与xavier进行以太网数据传输性能测试

TCP测试

1、tda4x作为iperf3的服务端，xavier作为iperf3的客户端



```
1 serial4
Xshell 7 (Build 0093)
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Type 'help' to learn how to use Xshell prompt.
[C:\~]

Connecting to COM4...
Connected.

root@j7-eva:~#
root@j7-eva:~#
root@j7-eva:~#
root@j7-eva:~# iperf3 -s
-----
Server listening on 5201
-----
Accepted connection from 192.168.10.110, port 44736
[ 5] local 192.168.10.100 port 5201 connected to 192.168.10.110 port 44738
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-1.00 sec  107 MBytes  893 Mbits/sec
[ 5] 1.00-2.00 sec  111 MBytes  928 Mbits/sec
[ 5] 2.00-3.00 sec  111 MBytes  929 Mbits/sec
[ 5] 3.00-4.00 sec  111 MBytes  929 Mbits/sec
[ 5] 4.00-5.00 sec  111 MBytes  929 Mbits/sec
[ 5] 5.00-6.00 sec  111 MBytes  929 Mbits/sec
[ 5] 6.00-7.00 sec  111 MBytes  928 Mbits/sec
[ 5] 7.00-8.00 sec  110 MBytes  926 Mbits/sec
[ 5] 8.00-9.00 sec  110 MBytes  926 Mbits/sec
[ 5] 9.00-10.00 sec 110 MBytes  926 Mbits/sec
[ 5] 10.00-10.04 sec 4.19 MBytes  922 Mbits/sec
-----
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-10.04 sec  0.00 Bytes  0.00 bits/sec
[ 5] 0.00-10.04 sec  1.08 GBytes  924 Mbits/sec
-----
Server listening on 5201
-----

1 serial21
Xshell 7 (Build 0093)
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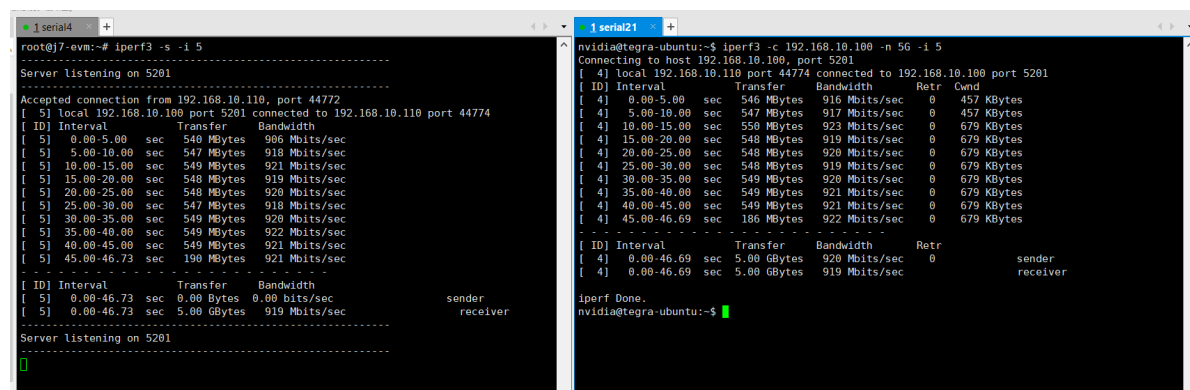
Type 'help' to learn how to use Xshell prompt.
[C:\~]

Connecting to COM21...
Connected.

nvidia@tegra-ubuntu:~$
nvidia@tegra-ubuntu:~$
nvidia@tegra-ubuntu:~$
nvidia@tegra-ubuntu:~$
nvidia@tegra-ubuntu:~$
nvidia@tegra-ubuntu:~$ iperf3 -c 192.168.10.100
Connecting to host 192.168.10.100, port 5201
[ 4] local 192.168.10.110 port 44738 connected to 192.168.10.100 port 5201
[ ID] Interval      Transfer    Bandwidth   Retr  Cwnd
[ 4] 0.00-1.00 sec  113 MBytes  949 Mbits/sec  0    428 KBytes
[ 4] 1.00-2.00 sec  111 MBytes  928 Mbits/sec  0    448 KBytes
[ 4] 2.00-3.00 sec  111 MBytes  931 Mbits/sec  0    471 KBytes
[ 4] 3.00-4.00 sec  111 MBytes  928 Mbits/sec  0    471 KBytes
[ 4] 4.00-5.00 sec  111 MBytes  929 Mbits/sec  0    471 KBytes
[ 4] 5.00-6.00 sec  111 MBytes  929 Mbits/sec  0    471 KBytes
[ 4] 6.00-7.00 sec  111 MBytes  929 Mbits/sec  0    495 KBytes
[ 4] 7.00-8.00 sec  110 MBytes  926 Mbits/sec  0    495 KBytes
[ 4] 8.00-9.00 sec  110 MBytes  926 Mbits/sec  0    495 KBytes
[ 4] 9.00-10.00 sec 110 MBytes  925 Mbits/sec  0    495 KBytes
-----
[ ID] Interval      Transfer    Bandwidth   Retr
[ 4] 0.00-10.00 sec  1.08 GBytes  930 Mbits/sec  0
[ 4] 0.00-10.00 sec  1.08 GBytes  928 Mbits/sec  0
-----
iperf Done.
nvidia@tegra-ubuntu:~$
```

iperf3默认的运行时间是10秒钟，每隔一秒钟输出一一次传输状态，同时还可以看到每秒钟传输的数据量在111MB左右。通过上图可得知：

tda4与xavier的10秒传输1G数据量，带宽为928 Mbits/sec，失败重传次数为0。



```
1 serial4
root@j7-eva:~# iperf3 -s -i 5
-----
Server listening on 5201
-----
Accepted connection from 192.168.10.110, port 44772
[ 5] local 192.168.10.100 port 5201 connected to 192.168.10.110 port 44774
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-5.00 sec  540 MBytes  906 Mbits/sec
[ 5] 5.00-10.00 sec  547 MBytes  918 Mbits/sec
[ 5] 10.00-15.00 sec  549 MBytes  921 Mbits/sec
[ 5] 15.00-20.00 sec  548 MBytes  919 Mbits/sec
[ 5] 20.00-25.00 sec  548 MBytes  928 Mbits/sec
[ 5] 25.00-30.00 sec  547 MBytes  918 Mbits/sec
[ 5] 30.00-35.00 sec  549 MBytes  920 Mbits/sec
[ 5] 35.00-40.00 sec  549 MBytes  922 Mbits/sec
[ 5] 40.00-45.00 sec  549 MBytes  921 Mbits/sec
[ 5] 45.00-46.73 sec 190 MBytes  921 Mbits/sec
-----
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-46.73 sec  0.00 Bytes  0.00 bits/sec
[ 5] 0.00-46.73 sec  5.00 GBytes  919 Mbits/sec
-----
Server listening on 5201
-----

1 serial21
nvidia@tegra-ubuntu:~$ iperf3 -c 192.168.10.100 -n 56 -i 5
Connecting to host 192.168.10.100, port 5201
[ 4] local 192.168.10.110 port 44774 connected to 192.168.10.100 port 5201
[ ID] Interval      Transfer    Bandwidth   Retr  Cwnd
[ 4] 0.00-5.00 sec  546 MBytes  916 Mbits/sec  0    457 KBytes
[ 4] 5.00-10.00 sec  547 MBytes  917 Mbits/sec  0    457 KBytes
[ 4] 10.00-15.00 sec  550 MBytes  923 Mbits/sec  0    679 KBytes
[ 4] 15.00-20.00 sec  548 MBytes  919 Mbits/sec  0    679 KBytes
[ 4] 20.00-25.00 sec  548 MBytes  920 Mbits/sec  0    679 KBytes
[ 4] 25.00-30.00 sec  548 MBytes  919 Mbits/sec  0    679 KBytes
[ 4] 30.00-35.00 sec  549 MBytes  920 Mbits/sec  0    679 KBytes
[ 4] 35.00-40.00 sec  549 MBytes  921 Mbits/sec  0    679 KBytes
[ 4] 40.00-45.00 sec  549 MBytes  921 Mbits/sec  0    679 KBytes
[ 4] 45.00-46.69 sec 186 MBytes  922 Mbits/sec  0    679 KBytes
-----
[ ID] Interval      Transfer    Bandwidth   Retr
[ 4] 0.00-46.69 sec  5.00 GBytes  920 Mbits/sec  0
[ 4] 0.00-46.69 sec  5.00 GBytes  919 Mbits/sec  0
-----
iperf Done.
nvidia@tegra-ubuntu:~$
```

tda4与xavier传输5G数据量，带宽为919 Mbits/sec，失败重传次数为0

2、xavier作为iperf3的服务端，tda4x作为iperf3的客户端

```
1 serial4 +
root@j7-evm:~# iperf3 -c 192.168.10.110
Connecting to host 192.168.10.110, port 5201
[ 4] local 192.168.10.100 port 48044 connected to 192.168.10.110 port 5201
[ ID] Interval      Transfer    Bandwidth   Retr  Cwnd
[ 4] 0.00-1.00 sec  112 MBytes  941 Mbits/sec  97    325 KBytes
[ 4] 1.00-2.00 sec  109 MBytes  911 Mbits/sec  350   298 KBytes
[ 4] 2.00-3.00 sec  108 MBytes  909 Mbits/sec  366   286 KBytes
[ 4] 3.00-4.00 sec  108 MBytes  902 Mbits/sec  393   279 KBytes
[ 4] 4.00-5.00 sec  108 MBytes  909 Mbits/sec  271   283 KBytes
[ 4] 5.00-6.00 sec  110 MBytes  923 Mbits/sec  149   284 KBytes
[ 4] 6.00-7.00 sec  110 MBytes  925 Mbits/sec  195   337 KBytes
[ 4] 7.00-8.00 sec  108 MBytes  906 Mbits/sec  246   304 KBytes
[ 4] 8.00-9.00 sec  108 MBytes  908 Mbits/sec  321   277 KBytes
[ 4] 9.00-10.00 sec 106 MBytes  889 Mbits/sec  453   276 KBytes
-----
[ ID] Interval      Transfer    Bandwidth   Retr
[ 4] 0.00-10.00 sec 1.06 GBytes  912 Mbits/sec  2841
[ 4] 0.00-10.00 sec 1.06 GBytes  911 Mbits/sec

iperf Done.
root@j7-evm:~#

1 serial21 +
[ 5] local 192.168.10.110 port 5201 connected to 192.168.10.100 port 48044
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-1.00 sec  110 MBytes  925 Mbits/sec
[ 5] 1.00-2.00 sec  109 MBytes  911 Mbits/sec
[ 5] 2.00-3.00 sec  108 MBytes  908 Mbits/sec
[ 5] 3.00-4.00 sec  108 MBytes  902 Mbits/sec
[ 5] 4.00-5.00 sec  108 MBytes  909 Mbits/sec
[ 5] 5.00-6.00 sec  110 MBytes  923 Mbits/sec
[ 5] 6.00-7.00 sec  110 MBytes  925 Mbits/sec
[ 5] 7.00-8.00 sec  108 MBytes  906 Mbits/sec
[ 5] 8.00-9.00 sec  108 MBytes  908 Mbits/sec
[ 5] 9.00-10.00 sec 106 MBytes  889 Mbits/sec
[ 5] 10.00-10.00 sec 99.0 KBytes  913 Mbits/sec
-----
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-10.00 sec 0.00 Bytes  0.00 bits/sec
[ 5] 0.00-10.00 sec 1.06 GBytes  911 Mbits/sec
-----
Server listening on 5201
Accepted connection from 192.168.10.100, port 48046
[ 5] local 192.168.10.110 port 5201 connected to 192.168.10.100 port 48046
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-1.00 sec  109 MBytes  912 Mbits/sec
[ 5] 1.00-2.00 sec  110 MBytes  922 Mbits/sec
[ 5] 2.00-3.00 sec  110 MBytes  926 Mbits/sec
[ 5] 3.00-4.00 sec  109 MBytes  911 Mbits/sec
[ 5] 4.00-5.00 sec  107 MBytes  900 Mbits/sec
[ 5] 5.00-6.00 sec  107 MBytes  900 Mbits/sec
[ 5] 6.00-7.00 sec  108 MBytes  904 Mbits/sec
[ 5] 7.00-8.00 sec  111 MBytes  928 Mbits/sec
[ 5] 8.00-9.00 sec  109 MBytes  915 Mbits/sec
[ 5] 9.00-10.00 sec 108 MBytes  906 Mbits/sec
[ 5] 10.00-10.00 sec 139 KBytes  850 Mbits/sec
-----
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-10.00 sec 0.00 Bytes  0.00 bits/sec
[ 5] 0.00-10.00 sec 1.06 GBytes  913 Mbits/sec
-----
Server listening on 5201
```

iperf3默认的运行时间是10秒钟，每隔一秒钟输出一一次传输状态，同时还可以看到每秒钟传输的数据量在111MB左右。通过上图可得知：

tda4与xavier的10秒传输1G数据量，带宽为913 Mbits/sec，失败重传次数为2000多次。

```
1 serial4 +
root@j7-evm:~# iperf3 -c 192.168.10.110 -n 50 -i 5
Connecting to host 192.168.10.110, port 5201
[ 4] local 192.168.10.100 port 48042 connected to 192.168.10.110 port 5201
[ ID] Interval      Transfer    Bandwidth   Retr  Cwnd
[ 4] 0.00-5.00 sec  544 MBytes  913 Mbits/sec  1532   325 KBytes
[ 4] 5.00-10.00 sec 540 MBytes  905 Mbits/sec  1677  50.9 KBytes
[ 4] 10.00-15.00 sec 540 MBytes  907 Mbits/sec  1623   286 KBytes
[ 4] 15.00-20.00 sec 541 MBytes  908 Mbits/sec  1507   276 KBytes
[ 4] 20.00-25.00 sec 542 MBytes  909 Mbits/sec  1648   279 KBytes
[ 4] 25.00-30.00 sec 540 MBytes  906 Mbits/sec  1409   283 KBytes
[ 4] 30.00-35.00 sec 543 MBytes  912 Mbits/sec  1447   320 KBytes
[ 4] 35.00-40.00 sec 540 MBytes  906 Mbits/sec  1725  49.5 KBytes
[ 4] 40.00-45.00 sec 537 MBytes  902 Mbits/sec  1988   30.2 KBytes
[ 4] 45.00-47.30 sec 252 MBytes  921 Mbits/sec  429   46.7 KBytes
-----
[ ID] Interval      Transfer    Bandwidth   Retr
[ 4] 0.00-47.30 sec 5.00 GBytes  908 Mbits/sec  15065
[ 4] 0.00-47.30 sec 5.00 GBytes  908 Mbits/sec

iperf Done.
root@j7-evm:~#

1 serial21 +
nvidia@tegra-ubuntu:~$ iperf3 -s -i 5
Server listening on 5201
Accepted connection from 192.168.10.100, port 48050
[ 5] local 192.168.10.110 port 5201 connected to 192.168.10.100 port 48052
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-5.00 sec  542 MBytes  909 Mbits/sec
[ 5] 5.00-10.00 sec 540 MBytes  905 Mbits/sec
[ 5] 10.00-15.00 sec 540 MBytes  907 Mbits/sec
[ 5] 15.00-20.00 sec 541 MBytes  908 Mbits/sec
[ 5] 20.00-25.00 sec 542 MBytes  909 Mbits/sec
[ 5] 25.00-30.00 sec 540 MBytes  906 Mbits/sec
[ 5] 30.00-35.00 sec 543 MBytes  912 Mbits/sec
[ 5] 35.00-40.00 sec 540 MBytes  906 Mbits/sec
[ 5] 40.00-45.00 sec 537 MBytes  902 Mbits/sec
[ 5] 45.00-47.30 sec 252 MBytes  921 Mbits/sec
-----
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-47.30 sec 0.00 Bytes  0.00 bits/sec
[ 5] 0.00-47.30 sec 5.00 GBytes  908 Mbits/sec
-----
Server listening on 5201
```

tda4与xavier传输5G数据量，带宽为908 Mbits/sec，失败重传次数为15000多次

3、tda4 环回测试

```
1 serial4 +
root@j7-evm:~# iperf3 -c 127.0.0.1
Connecting to host 127.0.0.1, port 5201
[ 4] local 127.0.0.1 port 34410 connected to 127.0.0.1 port 5201
[ ID] Interval      Transfer    Bandwidth   Retr  Cwnd
[ 4] 0.00-1.00 sec  1.32 GBytes  11.3 Gbits/sec  0    1.06 MBytes
[ 4] 1.00-2.00 sec  1.37 GBytes  11.7 Gbits/sec  0    1.44 MBytes
[ 4] 2.00-3.00 sec  1.46 GBytes  12.5 Gbits/sec  0    1.44 MBytes
[ 4] 3.00-4.00 sec  1.46 GBytes  12.6 Gbits/sec  0    1.62 MBytes
[ 4] 4.00-5.00 sec  1.47 GBytes  12.6 Gbits/sec  0    1.87 MBytes
[ 4] 5.00-6.00 sec  1.49 GBytes  12.8 Gbits/sec  0    2.06 MBytes
[ 4] 6.00-7.00 sec  1.50 GBytes  12.9 Gbits/sec  0    2.19 MBytes
[ 4] 7.00-8.00 sec  1.47 GBytes  12.7 Gbits/sec  0    2.31 MBytes
[ 4] 8.00-9.00 sec  1.46 GBytes  12.6 Gbits/sec  0    2.31 MBytes
[ 4] 9.00-10.00 sec 1.47 GBytes  12.6 Gbits/sec  0    2.31 MBytes
-----
[ ID] Interval      Transfer    Bandwidth   Retr
[ 4] 0.00-10.00 sec 14.5 GBytes  12.4 Gbits/sec  0
[ 4] 0.00-10.00 sec 14.5 GBytes  12.4 Gbits/sec

iperf Done.
root@j7-evm:~#

1 serial21 +
root@j7-evm:~# iperf3 -s
Server listening on 5201
Accepted connection from 127.0.0.1, port 34408
[ 5] local 127.0.0.1 port 5201 connected to 127.0.0.1 port 34410
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-1.00 sec  1.31 GBytes  11.3 Gbits/sec
[ 5] 1.00-2.00 sec  1.37 GBytes  11.7 Gbits/sec
[ 5] 2.00-3.00 sec  1.46 GBytes  12.5 Gbits/sec
[ 5] 3.00-4.00 sec  1.47 GBytes  12.6 Gbits/sec
[ 5] 4.00-5.00 sec  1.47 GBytes  12.6 Gbits/sec
[ 5] 5.00-6.00 sec  1.48 GBytes  12.8 Gbits/sec
[ 5] 6.00-7.00 sec  1.50 GBytes  12.9 Gbits/sec
[ 5] 7.00-8.00 sec  1.47 GBytes  12.6 Gbits/sec
[ 5] 8.00-9.00 sec  1.46 GBytes  12.6 Gbits/sec
[ 5] 9.00-10.00 sec 1.47 GBytes  12.6 Gbits/sec
[ 5] 10.00-10.00 sec 896 KBytes  10.6 Gbits/sec
-----
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-10.00 sec 0.00 Bytes  0.00 bits/sec
[ 5] 0.00-10.00 sec 14.5 GBytes  12.4 Gbits/sec
-----
Server listening on 5201

1 serial4 +
root@j7-evm:~# iperf3 -c 127.0.0.1 -n 50
Connecting to host 127.0.0.1, port 5201
[ 4] local 127.0.0.1 port 34414 connected to 127.0.0.1 port 5201
[ ID] Interval      Transfer    Bandwidth   Retr  Cwnd
[ 4] 0.00-1.00 sec  1.33 GBytes  11.4 Gbits/sec  0    1.19 MBytes
[ 4] 1.00-2.00 sec  1.32 GBytes  11.3 Gbits/sec  0    1.19 MBytes
[ 4] 2.00-3.00 sec  1.35 GBytes  11.6 Gbits/sec  0    1.44 MBytes
[ 4] 3.00-3.75 sec  1.01 GBytes  11.6 Gbits/sec  0    1.62 MBytes
-----
[ ID] Interval      Transfer    Bandwidth   Retr
[ 4] 0.00-3.75 sec 5.00 GBytes  11.5 Gbits/sec  0
[ 4] 0.00-3.75 sec 4.99 GBytes  11.4 Gbits/sec

iperf Done.
root@j7-evm:~#

1 serial21 +
root@j7-evm:~# iperf3 -s
Server listening on 5201
Accepted connection from 127.0.0.1, port 34412
[ 5] local 127.0.0.1 port 5201 connected to 127.0.0.1 port 34414
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-1.00 sec  1.32 GBytes  11.3 Gbits/sec
[ 5] 1.00-2.00 sec  1.32 GBytes  11.3 Gbits/sec
[ 5] 2.00-3.00 sec  1.35 GBytes  11.6 Gbits/sec
[ 5] 3.00-3.75 sec  1.01 GBytes  11.5 Gbits/sec
-----
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-3.75 sec 0.00 Bytes  0.00 bits/sec
[ 5] 0.00-3.75 sec 4.99 GBytes  11.4 Gbits/sec
-----
Server listening on 5201
```

tda4x的10秒传输14.5G数据量，带宽为12.4 Gbits/sec，失败重传次数为0。

tda4x传输5G数据量，带宽为11.4 Gbits/sec，失败重传次数为0。

4、xavier环回测试

```
nvidia@tegra-ubuntu:~$ iperf3 -s
Server listening on 5201
Accepted connection from 127.0.0.1, port 33230
[ 5] local 127.0.0.1 port 5201 connected to 127.0.0.1 port 33232
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-1.00 sec  3.10 GBytes 26.7 Gbits/sec
[ 5] 1.00-2.00 sec  3.88 GBytes 33.4 Gbits/sec
[ 5] 2.00-3.00 sec  3.90 GBytes 33.5 Gbits/sec
[ 5] 3.00-4.00 sec  3.91 GBytes 33.6 Gbits/sec
[ 5] 4.00-5.00 sec  3.08 GBytes 26.5 Gbits/sec
[ 5] 5.00-6.00 sec  3.36 GBytes 28.9 Gbits/sec
[ 5] 6.00-7.00 sec  4.17 GBytes 35.8 Gbits/sec
[ 5] 7.00-8.00 sec  4.16 GBytes 35.8 Gbits/sec
[ 5] 8.00-9.00 sec  4.34 GBytes 37.3 Gbits/sec
[ 5] 9.00-10.00 sec 4.21 GBytes 36.2 Gbits/sec
[ 5] 10.00-10.03 sec 142 MBytes 35.2 Gbits/sec
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-10.03 sec 0.00 Bytes  0.00 bits/sec
[ 5] 0.00-10.03 sec 38.3 GBytes 32.8 Gbits/sec
Server listening on 5201

nvidia@tegra-ubuntu:~$ iperf3 -c 127.0.0.1
Connecting to host 127.0.0.1, port 5201
[ 4] local 127.0.0.1 port 33232 connected to 127.0.0.1 port 5201
[ ID] Interval      Transfer    Bandwidth    Retr    Cwnd
[ 4] 0.00-1.00 sec  3.23 GBytes 27.8 Gbits/sec  0    1.87 MBytes
[ 4] 1.00-2.00 sec  3.89 GBytes 33.4 Gbits/sec  0    2.62 MBytes
[ 4] 2.00-3.00 sec  3.90 GBytes 33.5 Gbits/sec  0    3.06 MBytes
[ 4] 3.00-4.00 sec  3.89 GBytes 33.4 Gbits/sec  0    3.06 MBytes
[ 4] 4.00-5.00 sec  3.10 GBytes 26.6 Gbits/sec  0    3.06 MBytes
[ 4] 5.00-6.00 sec  3.37 GBytes 28.9 Gbits/sec  0    3.06 MBytes
[ 4] 6.00-7.00 sec  4.17 GBytes 35.8 Gbits/sec  0    3.06 MBytes
[ 4] 7.00-8.00 sec  4.17 GBytes 35.8 Gbits/sec  0    3.06 MBytes
[ 4] 8.00-9.00 sec  4.34 GBytes 37.3 Gbits/sec  0    3.06 MBytes
[ 4] 9.00-10.00 sec 4.21 GBytes 36.1 Gbits/sec  0    3.06 MBytes
[ ID] Interval      Transfer    Bandwidth    Retr
[ 4] 0.00-10.00 sec 38.3 GBytes 32.9 Gbits/sec  0
iperf Done.
nvidia@tegra-ubuntu:~$

nvidia@tegra-ubuntu:~$ iperf3 -s
Server listening on 5201
Accepted connection from 127.0.0.1, port 33376
[ 5] local 127.0.0.1 port 5201 connected to 127.0.0.1 port 33378
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-1.28 sec  5.00 GBytes 33.5 Gbits/sec
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-1.28 sec  0.00 Bytes  0.00 bits/sec
[ 5] 0.00-1.28 sec  5.00 GBytes 33.5 Gbits/sec
Server listening on 5201
Accepted connection from 127.0.0.1, port 33400
[ 5] local 127.0.0.1 port 5201 connected to 127.0.0.1 port 33402
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-5.00 sec  19.5 GBytes 33.5 Gbits/sec
[ 5] 5.00-10.00 sec 21.0 GBytes 36.2 Gbits/sec
[ 5] 10.00-12.22 sec 9.47 GBytes 30.6 Gbits/sec
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-12.22 sec 0.00 Bytes  0.00 bits/sec
[ 5] 0.00-12.22 sec 50.0 GBytes 35.1 Gbits/sec
Server listening on 5201

nvidia@tegra-ubuntu:~$ iperf3 -c 127.0.0.1 -n 5G -l 5
Connecting to host 127.0.0.1, port 5201
[ 4] local 127.0.0.1 port 33378 connected to 127.0.0.1 port 5201
[ ID] Interval      Transfer    Bandwidth    Retr    Cwnd
[ 4] 0.00-1.25 sec  5.00 GBytes 34.4 Gbits/sec  0    1.62 MBytes
[ ID] Interval      Transfer    Bandwidth    Retr
[ 4] 0.00-1.25 sec  5.00 GBytes 34.4 Gbits/sec  0
iperf Done.
nvidia@tegra-ubuntu:~$ iperf3 -c 127.0.0.1 -n 50G -l 5
Connecting to host 127.0.0.1, port 5201
[ 4] local 127.0.0.1 port 33402 connected to 127.0.0.1 port 5201
[ ID] Interval      Transfer    Bandwidth    Retr    Cwnd
[ 4] 0.00-5.00 sec  19.6 GBytes 33.8 Gbits/sec  0    2.75 MBytes
[ 4] 5.00-10.00 sec 21.0 GBytes 36.1 Gbits/sec  0    3.68 MBytes
[ 4] 10.00-12.19 sec 9.31 GBytes 36.6 Gbits/sec  0    3.68 MBytes
[ ID] Interval      Transfer    Bandwidth    Retr
[ 4] 0.00-12.19 sec 50.0 GBytes 35.2 Gbits/sec  0
iperf Done.
nvidia@tegra-ubuntu:~$
```

从环回测试结果，得知

xavier的10秒传输38.3G数据量，带宽为32.9 Gbits/sec，失败重传次数为0。

xavier传输5G数据量，带宽为34.4 Gbits/sec，失败重传次数为0。

xavier传输50G数据量，带宽为35.2 Gbits/sec，失败重传次数为0。

UDP测试

1、tda4x作为iperf3的服务端，xavier作为iperf3的客户端

```
1 serial4
Accepted connection from 192.168.10.110, port 54634
[ 5] local 192.168.10.100 port 5201 connected to 192.168.10.110 port 36602
[ ID] Interval      Transfer    Bandwidth    Jitter    Lost/Total Datagrams
[ 5] 0.00-1.00 sec  128 KBytes 963 Kbits/sec  105263972.456 ms  0/15 (0%)
[ 5] 1.00-2.00 sec  128 KBytes 1.05 Mbits/sec  37401777.598 ms  0/16 (0%)
[ 5] 2.00-3.00 sec  128 KBytes 1.05 Mbits/sec  13346291.349 ms  0/16 (0%)
[ 5] 3.00-4.00 sec  128 KBytes 1.05 Mbits/sec  4752269.134 ms  0/16 (0%)
[ 5] 4.00-5.00 sec  128 KBytes 1.05 Mbits/sec  1692169.131 ms  0/16 (0%)
[ 5] 5.00-6.00 sec  128 KBytes 1.05 Mbits/sec  602634.463 ms  0/16 (0%)
[ 5] 6.00-7.00 sec  128 KBytes 1.05 Mbits/sec  214546.952 ms  0/16 (0%)
[ 5] 7.00-8.00 sec  128 KBytes 1.05 Mbits/sec  76394.635 ms  0/16 (0%)
[ 5] 8.00-9.00 sec  128 KBytes 1.05 Mbits/sec  27202.170 ms  0/16 (0%)
[ 5] 9.00-10.00 sec 128 KBytes 1.05 Mbits/sec  9686.002 ms  0/16 (0%)
[ 5] 10.00-10.04 sec 0.00 Bytes  0.00 bits/sec  9686.002 ms  0/0 (0%)
[ ID] Interval      Transfer    Bandwidth    Jitter    Lost/Total Datagrams
[ 5] 0.00-10.04 sec 0.00 Bytes  0.00 bits/sec  9686.002 ms  0/159 (0%)
Server listening on 5201
Accepted connection from 192.168.10.110, port 54638
[ 5] local 192.168.10.100 port 5201 connected to 192.168.10.110 port 52433
[ ID] Interval      Transfer    Bandwidth    Jitter    Lost/Total Datagrams
[ 5] 0.00-1.00 sec  80.0 MBytes 752 Mbits/sec  0.005 ms  0/14608 (0%)
[ 5] 1.00-2.00 sec  114 MBytes 958 Mbits/sec  0.005 ms  2/14623 (0.014%)
[ 5] 2.00-3.00 sec  114 MBytes 958 Mbits/sec  0.007 ms  0/14622 (0%)
[ 5] 3.00-4.00 sec  114 MBytes 958 Mbits/sec  0.006 ms  0/14623 (0%)
[ 5] 4.00-5.00 sec  114 MBytes 958 Mbits/sec  0.005 ms  0/14623 (0%)
[ 5] 5.00-6.00 sec  114 MBytes 958 Mbits/sec  0.005 ms  6/14622 (0.041%)
[ 5] 6.00-7.00 sec  114 MBytes 958 Mbits/sec  0.005 ms  0/14623 (0%)
[ 5] 7.00-8.00 sec  114 MBytes 958 Mbits/sec  0.005 ms  0/14623 (0%)
[ 5] 8.00-9.00 sec  114 MBytes 958 Mbits/sec  0.007 ms  0/14623 (0%)
[ 5] 9.00-10.00 sec 114 MBytes 958 Mbits/sec  0.005 ms  0/14623 (0%)
[ 5] 10.00-10.04 sec 4.71 MBytes 955 Mbits/sec  0.005 ms  0/603 (0%)
[ ID] Interval      Transfer    Bandwidth    Jitter    Lost/Total Datagrams
[ 5] 0.00-10.04 sec 0.00 Bytes  0.00 bits/sec  0.005 ms  8/143675 (0.0056%)
Server listening on 5201

1 serial21
nvidia@tegra-ubuntu:~$ iperf3 -c 192.168.10.100 -u
Connecting to host 192.168.10.100, port 5201
[ 4] local 192.168.10.110 port 36602 connected to 192.168.10.100 port 5201
[ ID] Interval      Transfer    Bandwidth    Total Datagrams
[ 4] 0.00-1.00 sec  128 KBytes 1.05 Mbits/sec  16
[ 4] 1.00-2.00 sec  128 KBytes 1.05 Mbits/sec  16
[ 4] 2.00-3.00 sec  128 KBytes 1.05 Mbits/sec  16
[ 4] 3.00-4.00 sec  128 KBytes 1.05 Mbits/sec  16
[ 4] 4.00-5.00 sec  128 KBytes 1.05 Mbits/sec  16
[ 4] 5.00-6.00 sec  128 KBytes 1.05 Mbits/sec  16
[ 4] 6.00-7.00 sec  128 KBytes 1.05 Mbits/sec  16
[ 4] 7.00-8.00 sec  128 KBytes 1.05 Mbits/sec  16
[ 4] 8.00-9.00 sec  128 KBytes 1.05 Mbits/sec  16
[ 4] 9.00-10.00 sec 128 KBytes 1.05 Mbits/sec  16
[ 4] 0.00-10.00 sec 1.25 MBytes 1.05 Mbits/sec  9686.002 ms  0/159 (0%)
[ 4] Sent 159 datagram
iperf Done.
nvidia@tegra-ubuntu:~$ iperf3 -c 192.168.10.100 -u -b 1000M -f M
Connecting to host 192.168.10.100, port 5201
[ 4] local 192.168.10.110 port 52433 connected to 192.168.10.100 port 5201
[ ID] Interval      Transfer    Bandwidth    Total Datagrams
[ 4] 0.00-1.00 sec  94.3 MBytes 94.3 Mbytes/sec  12608
[ 4] 1.00-2.00 sec  114 MBytes 114 Mbytes/sec  14623
[ 4] 2.00-3.00 sec  114 MBytes 114 Mbytes/sec  14623
[ 4] 3.00-4.00 sec  114 MBytes 114 Mbytes/sec  14623
[ 4] 4.00-5.00 sec  114 MBytes 114 Mbytes/sec  14624
[ 4] 5.00-6.00 sec  114 MBytes 114 Mbytes/sec  14622
[ 4] 6.00-7.00 sec  114 MBytes 114 Mbytes/sec  14623
[ 4] 7.00-8.00 sec  114 MBytes 114 Mbytes/sec  14623
[ 4] 8.00-9.00 sec  114 MBytes 114 Mbytes/sec  14623
[ 4] 9.00-10.00 sec 114 MBytes 114 Mbytes/sec  14624
[ ID] Interval      Transfer    Bandwidth    Jitter    Lost/Total Datagrams
[ 4] 0.00-10.00 sec 1.10 GBytes 112 Mbytes/sec  0.005 ms  8/143675 (0.0056%)
[ 4] Sent 143675 datagrams
iperf Done.
nvidia@tegra-ubuntu:~$
```

从测试结果得知：

UDP默认带宽1Mbit/sec 传输10秒时间1.25M数据量，传输延迟为9686.002，丢包率为0

UDP带宽为1000Mbit/sec 传输10秒时间1.10G数据量, 传输延迟为0.005, 丢包率为0.0056%

```
10.00-10.04 sec 4.98 Mbytes 955 Mbits/sec 0.007 ms 0/638 (0%)
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-10.04 sec 0.00 Bytes 0.00 bits/sec 0.007 ms 0/7780 (0%)
Server listening on 5201

Accepted connection from 192.168.10.110, port 42056
[ S] local 192.168.10.100 port 5201 connected to 192.168.10.110 port 34548
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-1.00 sec 56.5 Mbytes 474 Mbits/sec 0.000 ms 0/7227 (0%)
[ S] 1.00-2.00 sec 63.1 Mbytes 530 Mbits/sec 0.000 ms 0/8080 (0%)
[ S] 2.00-3.00 sec 61.4 Mbytes 515 Mbits/sec 0.000 ms 0/7860 (0%)
[ S] 3.00-4.00 sec 61.4 Mbytes 515 Mbits/sec 0.007 ms 0/7790 (0%)
[ S] 4.00-5.00 sec 63.5 Mbytes 532 Mbits/sec 0.011 ms 0/8123 (0%)
[ S] 5.00-6.00 sec 62.9 Mbytes 528 Mbits/sec 0.000 ms 0/7790 (0%)
[ S] 6.00-7.00 sec 61.2 Mbytes 514 Mbits/sec 0.008 ms 0/7830 (0%)
[ S] 7.00-8.00 sec 62.9 Mbytes 528 Mbits/sec 0.010 ms 0/8050 (0%)
[ S] 8.00-9.00 sec 62.4 Mbytes 523 Mbits/sec 0.022 ms 0/7860 (0%)
[ S] 9.00-10.00 sec 61.2 Mbytes 514 Mbits/sec 0.006 ms 0/7840 (0%)
[ S] 10.00-10.04 sec 4.55 Mbytes 956 Mbits/sec 0.000 ms 0/593 (0%)
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-10.04 sec 0.00 Bytes 0.00 bits/sec 0.008 ms 0/79234 (0%)
Server listening on 5201

Accepted connection from 192.168.10.110, port 42056
[ S] local 192.168.10.100 port 5201 connected to 192.168.10.110 port 56837
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-1.00 sec 57.2 Mbytes 480 Mbits/sec 0.000 ms 0/7200 (0%)
[ S] 1.00-2.00 sec 63.6 Mbytes 534 Mbits/sec 0.005 ms 0/8141 (0%)
[ S] 2.00-3.00 sec 61.8 Mbytes 516 Mbits/sec 0.000 ms 0/8052 (0%)
[ S] 3.00-4.00 sec 62.9 Mbytes 528 Mbits/sec 0.005 ms 0/8052 (0%)
[ S] 4.00-5.00 sec 63.5 Mbytes 538 Mbits/sec 0.004 ms 0/8130 (0%)
[ S] 5.00-6.00 sec 61.7 Mbytes 517 Mbits/sec 0.004 ms 43/7935 (0.54%)
[ S] 6.00-7.00 sec 62.4 Mbytes 522 Mbits/sec 0.005 ms 92/7818 (1.18%)
[ S] 7.00-8.00 sec 63.7 Mbytes 532 Mbits/sec 0.009 ms 0/8157 (0%)
[ S] 8.00-9.00 sec 62.1 Mbytes 521 Mbits/sec 0.009 ms 0/7655 (0%)
[ S] 9.00-10.00 sec 62.4 Mbytes 521 Mbits/sec 0.006 ms 0/592 (0%)
[ S] 10.00-10.04 sec 4.62 Mbytes 955 Mbits/sec 0.006 ms 135/80718 (0.17%)
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-10.04 sec 0.00 Bytes 0.00 bits/sec 0.006 ms 135/80718 (0.17%)
Server listening on 5201
```

从测试得知

UDP为保证丢包率为0%时, 实际传输带宽为520M

2、xavier作为iperf3的服务端, tda4x作为iperf3的客户端

```
root@7-evm:~# iperf3 -c 192.168.10.110 -u
Connecting to host 192.168.10.110, port 5201
[ 4] local 192.168.10.100 port 41410 connected to 192.168.10.110 port 5201
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-1.00 sec 128 KBytes 1.05 Mbits/sec 16
[ S] 1.00-2.00 sec 128 KBytes 1.05 Mbits/sec 16
[ S] 2.00-3.00 sec 128 KBytes 1.05 Mbits/sec 16
[ S] 3.00-4.00 sec 128 KBytes 1.05 Mbits/sec 16
[ S] 4.00-5.00 sec 128 KBytes 1.05 Mbits/sec 16
[ S] 5.00-6.00 sec 128 KBytes 1.05 Mbits/sec 16
[ S] 6.00-7.00 sec 128 KBytes 1.05 Mbits/sec 16
[ S] 7.00-8.00 sec 128 KBytes 1.05 Mbits/sec 16
[ S] 8.00-9.00 sec 128 KBytes 1.05 Mbits/sec 16
[ S] 9.00-10.00 sec 128 KBytes 1.05 Mbits/sec 16
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-10.00 sec 1.25 Mbytes 1.05 Mbits/sec 9686.049 ms 0/159 (0%)
[ S] Sent 159 datagrams

iperf Done.
root@7-evm:~# iperf3 -c 192.168.10.110 -u -b 1000M -f M
Connecting to host 192.168.10.110, port 5201
[ 4] local 192.168.10.100 port 36939 connected to 192.168.10.110 port 5201
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-1.00 sec 103 Mbytes 103 Mbytes/sec 13170
[ S] 1.00-2.00 sec 114 Mbytes 114 Mbytes/sec 14624
[ S] 2.00-3.00 sec 114 Mbytes 114 Mbytes/sec 14620
[ S] 3.00-4.00 sec 114 Mbytes 114 Mbytes/sec 14623
[ S] 4.00-5.00 sec 114 Mbytes 114 Mbytes/sec 14623
[ S] 5.00-6.00 sec 114 Mbytes 114 Mbytes/sec 14624
[ S] 6.00-7.00 sec 114 Mbytes 114 Mbytes/sec 14623
[ S] 7.00-8.00 sec 114 Mbytes 114 Mbytes/sec 14623
[ S] 8.00-9.00 sec 114 Mbytes 114 Mbytes/sec 14594
[ S] 9.00-10.00 sec 114 Mbytes 114 Mbytes/sec 14622
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-10.00 sec 1.10 Gbytes 113 Mbytes/sec 0.036 ms 126414/144740 (87%)
[ S] Sent 144740 datagrams

iperf Done.
root@7-evm:~#
```

从测试结果得知:

UDP默认带宽1Mbit/sec 传输10秒时间1.25M数据量, 传输延迟为9686.049, 丢包率为0

UDP带宽为1000Mbit/sec 传输10秒时间1.10G数据量, 传输延迟为0.036, 丢包率为87%

```
1.00-2.00 sec 616 Kbytes 0.60 Mbytes/sec 77
[ 4] 3.00-4.00 sec 608 Kbytes 0.59 Mbytes/sec 76
[ 4] 4.00-5.00 sec 608 Kbytes 0.59 Mbytes/sec 76
[ 4] 5.00-6.00 sec 616 Kbytes 0.60 Mbytes/sec 77
[ 4] 6.00-7.00 sec 608 Kbytes 0.59 Mbytes/sec 76
[ 4] 7.00-8.00 sec 608 Kbytes 0.59 Mbytes/sec 76
[ 4] 8.00-9.00 sec 616 Kbytes 0.60 Mbytes/sec 77
[ 4] 9.00-10.00 sec 608 Kbytes 0.59 Mbytes/sec 76
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-10.00 sec 5.91 Mbytes 0.59 Mbytes/sec 0.623 ms 0/750 (0%)
[ S] Sent 750 datagrams

iperf Done.
root@7-evm:~# iperf3 -c 192.168.10.110 -u -b 1M -f M
Connecting to host 192.168.10.110, port 5201
[ 4] local 192.168.10.100 port 55370 connected to 192.168.10.110 port 5201
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-1.00 sec 888 Kbytes 0.87 Mbytes/sec 111
[ S] 1.00-2.00 sec 976 Kbytes 0.95 Mbytes/sec 122
[ S] 2.00-3.00 sec 984 Kbytes 0.96 Mbytes/sec 123
[ S] 3.00-4.00 sec 976 Kbytes 0.95 Mbytes/sec 122
[ S] 4.00-5.00 sec 976 Kbytes 0.95 Mbytes/sec 122
[ S] 5.00-6.00 sec 976 Kbytes 0.95 Mbytes/sec 122
[ S] 6.00-7.00 sec 976 Kbytes 0.95 Mbytes/sec 122
[ S] 7.00-8.00 sec 976 Kbytes 0.95 Mbytes/sec 122
[ S] 8.00-9.00 sec 976 Kbytes 0.95 Mbytes/sec 122
[ S] 9.00-10.00 sec 976 Kbytes 0.95 Mbytes/sec 122
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-10.00 sec 9.45 Mbytes 0.95 Mbytes/sec 0.632 ms 18/1209 (1.5%)
[ S] Sent 1209 datagrams

iperf Done.
root@7-evm:~# iperf3 -c 192.168.10.110 -u -b 7M -f M
Connecting to host 192.168.10.110, port 5201
[ 4] local 192.168.10.100 port 41950 connected to 192.168.10.110 port 5201
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-1.00 sec 784 Kbytes 0.77 Mbytes/sec 98
[ S] 1.00-2.00 sec 848 Kbytes 0.83 Mbytes/sec 107
[ S] 2.00-3.00 sec 850 Kbytes 0.84 Mbytes/sec 107
[ S] 3.00-4.00 sec 850 Kbytes 0.84 Mbytes/sec 107
[ S] 4.00-5.00 sec 850 Kbytes 0.84 Mbytes/sec 107
[ S] 5.00-6.00 sec 850 Kbytes 0.84 Mbytes/sec 107
[ S] 6.00-7.00 sec 848 Kbytes 0.83 Mbytes/sec 107
[ S] 7.00-8.00 sec 848 Kbytes 0.83 Mbytes/sec 107
[ S] 8.00-9.00 sec 850 Kbytes 0.84 Mbytes/sec 107
[ S] 9.00-10.00 sec 848 Kbytes 0.84 Mbytes/sec 107
[ ID] Interval Transfer Bandwidth Jitter Lost/Total Datagrams
[ S] 0.00-10.00 sec 8.27 Mbytes 0.83 Mbytes/sec 0.639 ms 0/1058 (0%)
[ S] Sent 1058 datagrams

iperf Done.
root@7-evm:~#
```

从测试结果得知

UDP为保证丢包率为0%，实际传输带宽为7M

3、tda4 环回测试

```
root@7-vm:~# iperf3 -c 127.0.0.1 -u
Connecting to host 127.0.0.1, port 5201
[ ID] Interval      Transfer     Bandwidth   Total Datagrams
[ 4] 0.00-1.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 1.00-2.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 2.00-3.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 3.00-4.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 4.00-5.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 5.00-6.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 6.00-7.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 7.00-8.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 8.00-9.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 9.00-10.00 sec 128 KBytes  1.05 Mbits/sec  16
[ ID] Interval      Transfer     Bandwidth   Jitter    Lost/Total Datagrams
[ 4] 0.00-10.00 sec 1.25 MBytes  1.05 Mbits/sec  0.025 ms  0/159 (0%)
[ 4] Sent 159 datagrams

iperf Done.
root@7-vm:~# iperf3 -c 127.0.0.1 -u -b 12G -f M
Connecting to host 127.0.0.1, port 5201
[ ID] Interval      Transfer     Bandwidth   Total Datagrams
[ 4] 0.00-1.00 sec  575 MBytes  575 Mbytes/sec  73599
[ 4] 1.00-2.00 sec  575 MBytes  575 Mbytes/sec  73587
[ 4] 2.00-3.00 sec  583 MBytes  583 Mbytes/sec  74672
[ 4] 3.00-4.00 sec  586 MBytes  586 Mbytes/sec  74991
[ 4] 4.00-5.00 sec  577 MBytes  577 Mbytes/sec  73872
[ 4] 5.00-6.00 sec  578 MBytes  578 Mbytes/sec  74045
[ 4] 6.00-7.00 sec  585 MBytes  585 Mbytes/sec  74828
[ 4] 7.00-8.00 sec  586 MBytes  586 Mbytes/sec  74986
[ 4] 8.00-9.00 sec  586 MBytes  585 Mbytes/sec  74944
[ 4] 9.00-10.00 sec 586 MBytes  586 Mbytes/sec  74953
[ ID] Interval      Transfer     Bandwidth   Jitter    Lost/Total Datagrams
[ 4] 0.00-10.00 sec 5.68 GBytes  582 Mbytes/sec  0.001 ms  2259/744477 (0.3%)
[ 4] Sent 744477 datagrams

iperf Done.
root@7-vm:~#
```

```
Accepted connection from 127.0.0.1, port 34456
[ ID] Interval      Transfer     Bandwidth   Jitter    Lost/Total Datagrams
[ 5] 0.00-1.00 sec  128 KBytes  983 Kbits/sec  0.014 ms  0/15 (0%)
[ 5] 1.00-2.00 sec  128 KBytes  1.05 Mbits/sec  0.021 ms  0/16 (0%)
[ 5] 2.00-3.00 sec  128 KBytes  1.05 Mbits/sec  0.025 ms  0/16 (0%)
[ 5] 3.00-4.00 sec  128 KBytes  1.05 Mbits/sec  0.027 ms  0/16 (0%)
[ 5] 4.00-5.00 sec  128 KBytes  1.05 Mbits/sec  0.022 ms  0/16 (0%)
[ 5] 5.00-6.00 sec  128 KBytes  1.05 Mbits/sec  0.025 ms  0/16 (0%)
[ 5] 6.00-7.00 sec  128 KBytes  1.05 Mbits/sec  0.025 ms  0/16 (0%)
[ 5] 7.00-8.00 sec  128 KBytes  1.05 Mbits/sec  0.026 ms  0/16 (0%)
[ 5] 8.00-9.00 sec  128 KBytes  1.05 Mbits/sec  0.021 ms  0/16 (0%)
[ 5] 9.00-10.00 sec 128 KBytes  1.05 Mbits/sec  0.025 ms  0/16 (0%)
[ 5] 10.00-10.00 sec 0.00 Bytes  0.00 bits/sec  0.025 ms  0/0 (0%)
[ ID] Interval      Transfer     Bandwidth   Jitter    Lost/Total Datagrams
[ 5] 0.00-10.00 sec 0.00 Bytes  0.00 bits/sec  0.025 ms  0/159 (0%)

Server listening on 5201
Accepted connection from 127.0.0.1, port 34458
[ ID] Interval      Transfer     Bandwidth   Jitter    Lost/Total Datagrams
[ 5] 0.00-1.00 sec  574 MBytes  4.82 Gbits/sec  0.001 ms  97/73598 (0.13%)
[ 5] 1.00-2.00 sec  573 MBytes  4.81 Gbits/sec  0.000 ms  216/73588 (0.29%)
[ 5] 2.00-3.00 sec  580 MBytes  4.87 Gbits/sec  0.001 ms  380/74671 (0.51%)
[ 5] 3.00-4.00 sec  584 MBytes  4.90 Gbits/sec  0.001 ms  176/74991 (0.23%)
[ 5] 4.00-5.00 sec  575 MBytes  4.82 Gbits/sec  0.001 ms  313/73873 (0.42%)
[ 5] 5.00-6.00 sec  577 MBytes  4.84 Gbits/sec  0.001 ms  193/74045 (0.26%)
[ 5] 6.00-7.00 sec  583 MBytes  4.89 Gbits/sec  0.001 ms  195/74828 (0.26%)
[ 5] 7.00-8.00 sec  583 MBytes  4.89 Gbits/sec  0.001 ms  317/74986 (0.42%)
[ 5] 8.00-9.00 sec  584 MBytes  4.90 Gbits/sec  0.000 ms  196/74943 (0.26%)
[ 5] 9.00-10.00 sec 584 MBytes  4.90 Gbits/sec  0.001 ms  176/74954 (0.23%)
[ 5] 10.00-10.00 sec 0.00 Bytes  0.00 bits/sec  0.001 ms  0/0 (0%)
[ ID] Interval      Transfer     Bandwidth   Jitter    Lost/Total Datagrams
[ 5] 0.00-10.00 sec 8.80 Bytes  0.80 bits/sec  0.001 ms  2259/744477 (0.3%)

Server listening on 5201
```

UDP默认带宽1Mbit/sec 传输10秒时间1.25M数据量，传输延迟为0.025，丢包率为0

UDP带宽为12Gbit/sec 传输10秒时间5.68G数据量，传输延迟为0.001，丢包率为0.3%

4、xavier环回测试

```
nvidia@tegra-ubuntu:~$ iperf3 -s
Server listening on 5201
Accepted connection from 127.0.0.1, port 37978
[ ID] Interval      Transfer     Bandwidth   Jitter    Lost/Total Datagrams
[ 5] 0.00-1.00 sec  120 KBytes  983 Kbits/sec  0.031 ms  0/15 (0%)
[ 5] 1.00-2.00 sec  128 KBytes  1.05 Mbits/sec  0.048 ms  0/16 (0%)
[ 5] 2.00-3.00 sec  128 KBytes  1.05 Mbits/sec  0.045 ms  0/16 (0%)
[ 5] 3.00-4.00 sec  128 KBytes  1.05 Mbits/sec  0.050 ms  0/16 (0%)
[ 5] 4.00-5.00 sec  128 KBytes  1.05 Mbits/sec  0.069 ms  0/16 (0%)
[ 5] 5.00-6.00 sec  128 KBytes  1.05 Mbits/sec  0.064 ms  0/16 (0%)
[ 5] 6.00-7.00 sec  128 KBytes  1.05 Mbits/sec  0.049 ms  0/16 (0%)
[ 5] 7.00-8.00 sec  128 KBytes  1.05 Mbits/sec  0.054 ms  0/16 (0%)
[ 5] 8.00-9.00 sec  128 KBytes  1.05 Mbits/sec  0.041 ms  0/16 (0%)
[ 5] 9.00-10.00 sec 128 KBytes  1.05 Mbits/sec  0.058 ms  0/16 (0%)
[ 5] 10.00-10.04 sec 8.00 KBytes  1.60 Mbits/sec  0.002 ms  0/1 (0%)
[ ID] Interval      Transfer     Bandwidth   Jitter    Lost/Total Datagrams
[ 5] 0.00-10.04 sec 0.00 Bytes  0.00 bits/sec  0.062 ms  0/160 (0%)

Server listening on 5201
Accepted connection from 127.0.0.1, port 38066
[ ID] Interval      Transfer     Bandwidth   Jitter    Lost/Total Datagrams
[ 5] 0.00-1.00 sec  513 MBytes  4.30 Gbits/sec  0.002 ms  510/66189 (0.77%)
[ 5] 1.00-2.00 sec  764 MBytes  6.41 Gbits/sec  0.006 ms  257/80801 (0.32%)
[ 5] 2.00-3.00 sec  868 MBytes  7.26 Gbits/sec  0.005 ms  101/113300 (0.14%)
[ 5] 3.00-4.00 sec  866 MBytes  7.26 Gbits/sec  0.006 ms  121/110862 (0.011%)
[ 5] 4.00-5.00 sec  847 MBytes  7.11 Gbits/sec  0.005 ms  629/109856 (0.58%)
[ 5] 5.00-6.00 sec  863 MBytes  7.24 Gbits/sec  0.012 ms  1412/111925 (1.3%)
[ 5] 6.00-7.00 sec  850 MBytes  7.13 Gbits/sec  0.006 ms  1364/110211 (1.2%)
[ 5] 7.00-8.00 sec  853 MBytes  7.16 Gbits/sec  0.007 ms  1019/110236 (0.92%)
[ 5] 8.00-9.00 sec  840 MBytes  7.11 Gbits/sec  0.005 ms  319/108866 (0.29%)
[ 5] 9.00-10.00 sec 861 MBytes  7.23 Gbits/sec  0.006 ms  213/110462 (0.19%)
[ 5] 10.00-10.04 sec 39.5 MBytes  7.52 Gbits/sec  0.006 ms  1/5061 (0.02%)
[ ID] Interval      Transfer     Bandwidth   Jitter    Lost/Total Datagrams
[ 5] 0.00-10.04 sec 8.03 GBytes  822 Mbytes/sec  0.006 ms  5897/1052169 (0.56%)

Server listening on 5201
```

```
nvidia@tegra-ubuntu:~$ iperf3 -c 127.0.0.1 -u
Connecting to host 127.0.0.1, port 5201
[ ID] Interval      Transfer     Bandwidth   Total Datagrams
[ 4] 0.00-1.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 1.00-2.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 2.00-3.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 3.00-4.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 4.00-5.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 5.00-6.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 6.00-7.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 7.00-8.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 8.00-9.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 9.00-10.00 sec 128 KBytes  1.05 Mbits/sec  16
[ ID] Interval      Transfer     Bandwidth   Jitter    Lost/Total Datagrams
[ 4] 0.00-10.00 sec 1.25 MBytes  1.05 Mbits/sec  0.062 ms  0/160 (0%)
[ 4] Sent 160 datagrams

iperf Done.
nvidia@tegra-ubuntu:~$ iperf3 -c 127.0.0.1 -u -b 32G -f M
Connecting to host 127.0.0.1, port 5201
[ ID] Interval      Transfer     Bandwidth   Total Datagrams
[ 4] 0.00-1.00 sec  533 MBytes  533 Mbytes/sec  68237
[ 4] 1.00-2.00 sec  789 MBytes  789 Mbytes/sec  100947
[ 4] 2.00-3.00 sec  869 MBytes  869 Mbytes/sec  111188
[ 4] 3.00-4.00 sec  866 MBytes  866 Mbytes/sec  110893
[ 4] 4.00-5.00 sec  852 MBytes  852 Mbytes/sec  109029
[ 4] 5.00-6.00 sec  875 MBytes  875 Mbytes/sec  112052
[ 4] 6.00-7.00 sec  862 MBytes  862 Mbytes/sec  110336
[ 4] 7.00-8.00 sec  858 MBytes  858 Mbytes/sec  109802
[ 4] 8.00-9.00 sec  851 MBytes  851 Mbytes/sec  108974
[ 4] 9.00-10.00 sec 864 MBytes  864 Mbytes/sec  110631
[ ID] Interval      Transfer     Bandwidth   Jitter    Lost/Total Datagrams
[ 4] 0.00-10.00 sec 8.03 GBytes  822 Mbytes/sec  0.006 ms  5897/1052169 (0.56%)
[ 4] Sent 1052169 datagrams

iperf Done.
nvidia@tegra-ubuntu:~$
```

UDP默认带宽1Mbit/sec 传输10秒时间1.25M数据量，传输延迟为0.062，丢包率为0

UDP带宽为32Gbit/sec 传输10秒时间8.03G数据量，传输延迟为0.006，丢包率为0.56%

TDA4x与笔记本进行以太网数据传输性能测试

TCP测试

1、tda4x为iperf3的服务端，笔记本为客户端

```
serial4 - Xshell 7 (Free for Home/School)
文件(F) 编辑(E) 查看(V) 工具(T) 选项卡(B) 窗口(W) 帮助(H)
主机的IP地址或会话名称
要添加当前会话，点击左侧的箭头按钮。
1 serial4
root@j7-eva:~# iperf3 -s
Server listening on 5201
Accepted connection from 192.168.10.1, port 49928
[ 5] local 192.168.10.100 port 5201 connected to 192.168.10.1 port 49929
[ ID] Interval      Transfer      Bandwidth
[ 5] 0.00-1.00 sec  108 MBytes  949 Mbits/sec
[ 5] 1.00-2.00 sec  113 MBytes  949 Mbits/sec
[ 5] 2.00-3.00 sec  113 MBytes  949 Mbits/sec
[ 5] 3.00-4.00 sec  113 MBytes  949 Mbits/sec
[ 5] 4.00-5.00 sec  113 MBytes  949 Mbits/sec
[ 5] 5.00-6.00 sec  113 MBytes  949 Mbits/sec
[ 5] 6.00-7.00 sec  113 MBytes  949 Mbits/sec
[ 5] 7.00-8.00 sec  113 MBytes  949 Mbits/sec
[ 5] 8.00-9.00 sec  113 MBytes  949 Mbits/sec
[ 5] 9.00-10.00 sec 113 MBytes  949 Mbits/sec
[ 5] 10.00-10.05 sec 5.12 MBytes  949 Mbits/sec
[ ID] Interval      Transfer      Bandwidth
[ 5] 0.00-10.05 sec 0.00 Bytes    0.00 bits/sec
[ 5] 0.00-10.05 sec 1.10 GBytes   949 Mbits/sec
sender receiver
Server listening on 5201
[ ]

C:\Windows\system32\cmd.exe
Microsoft Windows [版本 10.0.19044.1889]
(c) Microsoft Corporation. 保留所有权利。
C:\Users\shik>D:
D:\>cd iperf-3.1.3-win64
D:\iperf-3.1.3-win64>iperf3.exe -c 192.168.10.100
Connecting to host 192.168.10.100, port 5201
[ 4] local 192.168.10.1 port 49929 connected to 192.168.10.100 port 5201
[ ID] Interval      Transfer      Bandwidth
[ 4] 0.00-1.00 sec  113 MBytes  948 Mbits/sec
[ 4] 1.00-2.00 sec  113 MBytes  949 Mbits/sec
[ 4] 2.00-3.00 sec  113 MBytes  949 Mbits/sec
[ 4] 3.00-4.00 sec  113 MBytes  949 Mbits/sec
[ 4] 4.00-5.00 sec  113 MBytes  949 Mbits/sec
[ 4] 5.00-6.00 sec  113 MBytes  949 Mbits/sec
[ 4] 6.00-7.00 sec  113 MBytes  949 Mbits/sec
[ 4] 7.00-8.00 sec  113 MBytes  949 Mbits/sec
[ 4] 8.00-9.00 sec  113 MBytes  949 Mbits/sec
[ 4] 9.00-10.00 sec 113 MBytes  949 Mbits/sec
[ ID] Interval      Transfer      Bandwidth
[ 4] 0.00-10.00 sec 1.10 GBytes  949 Mbits/sec
[ 4] 0.00-10.00 sec 1.10 GBytes  949 Mbits/sec
sender receiver
iperf Done.
D:\iperf-3.1.3-win64>
```

tda4与笔记本的10秒传输1G数据量，带宽为949 Mbits/sec，失败重传次数为0。

```
serial4 - Xshell 7 (Free for Home/School)
文件(F) 编辑(E) 查看(V) 工具(T) 选项卡(B) 窗口(W) 帮助(H)
主机的IP地址或会话名称
要添加当前会话，点击左侧的箭头按钮。
1 serial4
root@j7-eva:~# iperf3 -s -i 5
Server listening on 5201
Accepted connection from 192.168.10.1, port 61270
[ 5] local 192.168.10.100 port 5201 connected to 192.168.10.1 port 61271
[ ID] Interval      Transfer      Bandwidth
[ 5] 0.00-5.00 sec  566 MBytes  939 Mbits/sec
[ 5] 5.00-10.00 sec 566 MBytes  949 Mbits/sec
[ 5] 10.00-15.00 sec 566 MBytes  949 Mbits/sec
[ 5] 15.00-20.00 sec 566 MBytes  949 Mbits/sec
[ 5] 20.00-25.00 sec 566 MBytes  949 Mbits/sec
[ 5] 25.00-30.00 sec 566 MBytes  949 Mbits/sec
[ 5] 30.00-35.00 sec 566 MBytes  949 Mbits/sec
[ 5] 35.00-40.00 sec 566 MBytes  949 Mbits/sec
[ 5] 40.00-45.00 sec 566 MBytes  949 Mbits/sec
[ 5] 45.00-45.30 sec 34.1 MBytes  949 Mbits/sec
[ ID] Interval      Transfer      Bandwidth
[ 5] 0.00-45.30 sec 0.00 Bytes    0.00 bits/sec
[ 5] 0.00-45.30 sec 5.00 GBytes  948 Mbits/sec
sender receiver
Server listening on 5201
[ ]

C:\Windows\system32\cmd.exe
或批处理文件。
D:\iperf-3.1.3-win64>iperf3.exe -c 192.168.10.100 -n 5G -i 5
Connecting to host 192.168.10.100, port 5201
[ 4] local 192.168.10.1 port 61271 connected to 192.168.10.100 port 5201
[ ID] Interval      Transfer      Bandwidth
[ 4] 0.00-5.00 sec  566 MBytes  949 Mbits/sec
[ 4] 5.00-10.00 sec 566 MBytes  949 Mbits/sec
[ 4] 10.00-15.00 sec 566 MBytes  949 Mbits/sec
[ 4] 15.00-20.00 sec 566 MBytes  949 Mbits/sec
[ 4] 20.00-25.00 sec 566 MBytes  949 Mbits/sec
[ 4] 25.00-30.00 sec 566 MBytes  949 Mbits/sec
[ 4] 30.00-35.00 sec 566 MBytes  949 Mbits/sec
[ 4] 35.00-40.00 sec 566 MBytes  949 Mbits/sec
[ 4] 40.00-45.00 sec 566 MBytes  949 Mbits/sec
[ 4] 45.00-45.26 sec 28.9 MBytes  949 Mbits/sec
[ ID] Interval      Transfer      Bandwidth
[ 4] 0.00-45.26 sec 5.00 GBytes  949 Mbits/sec
[ 4] 0.00-45.26 sec 5.00 GBytes  949 Mbits/sec
sender receiver
iperf Done.
D:\iperf-3.1.3-win64>
```

tda4与笔记本传输5G数据量，带宽为949 Mbits/sec，失败重传次数为0

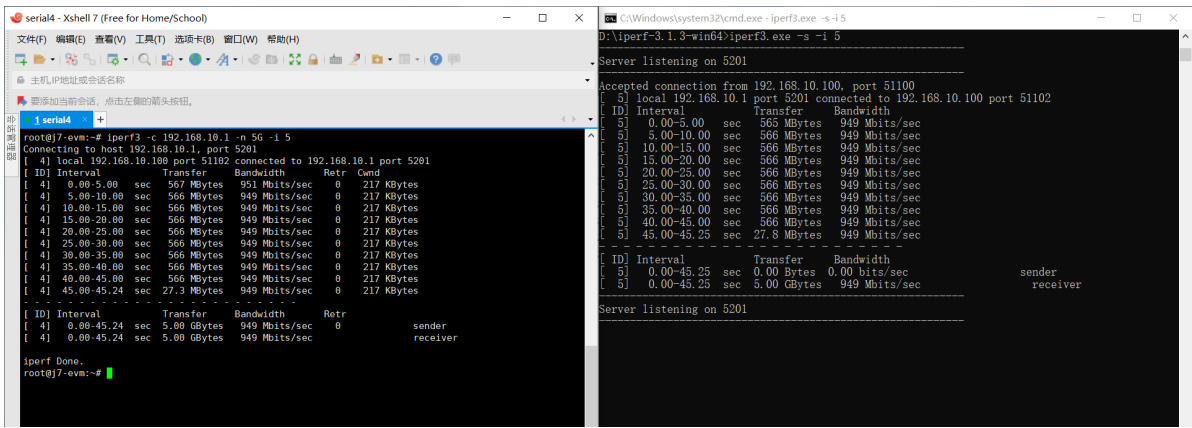
2、笔记本为iperf3的服务端，tda4x为客户端

```
serial4 - Xshell 7 (Free for Home/School)
文件(F) 编辑(E) 查看(V) 工具(T) 选项卡(B) 窗口(W) 帮助(H)
主机的IP地址或会话名称
要添加当前会话，点击左侧的箭头按钮。
1 serial4
Xshell 7 (Build 0093)
Copyright (c) 2020 NetSarang Computer, Inc. All rights reserved.
Type 'help' to learn how to use Xshell prompt.
[C:\>]
Connecting to COM4...
Connected.

root@j7-eva:~# iperf3 -c 192.168.10.1
Connecting to host 192.168.10.1, port 5201
[ 4] local 192.168.10.100 port 51098 connected to 192.168.10.1 port 5201
[ ID] Interval      Transfer      Bandwidth      Retr      Cwnd
[ 4] 0.00-1.00 sec  114 MBytes  959 Mbits/sec    0      210 KBytes
[ 4] 1.00-2.00 sec  113 MBytes  950 Mbits/sec    0      210 KBytes
[ 4] 2.00-3.00 sec  113 MBytes  949 Mbits/sec    0      210 KBytes
[ 4] 3.00-4.00 sec  113 MBytes  949 Mbits/sec    0      210 KBytes
[ 4] 4.00-5.00 sec  113 MBytes  949 Mbits/sec    0      210 KBytes
[ 4] 5.00-6.00 sec  113 MBytes  949 Mbits/sec    0      210 KBytes
[ 4] 6.00-7.00 sec  113 MBytes  949 Mbits/sec    0      210 KBytes
[ 4] 7.00-8.00 sec  113 MBytes  949 Mbits/sec    0      210 KBytes
[ 4] 8.00-9.00 sec  113 MBytes  949 Mbits/sec    0      210 KBytes
[ 4] 9.00-10.00 sec 113 MBytes  949 Mbits/sec    0      210 KBytes
[ ID] Interval      Transfer      Bandwidth      Retr
[ 4] 0.00-10.00 sec 1.11 GBytes  950 Mbits/sec    0      sender
[ 4] 0.00-10.00 sec 1.11 GBytes  949 Mbits/sec    0      receiver
iperf Done.
root@j7-eva:~#

C:\Windows\system32\cmd.exe
D:\iperf-3.1.3-win64>iperf3.exe -s
Server listening on 5201
Accepted connection from 192.168.10.100, port 51096
[ 5] local 192.168.10.1 port 5201 connected to 192.168.10.100 port 51098
[ ID] Interval      Transfer      Bandwidth
[ 5] 0.00-1.00 sec  113 MBytes  946 Mbits/sec
[ 5] 1.00-2.00 sec  113 MBytes  949 Mbits/sec
[ 5] 2.00-3.00 sec  113 MBytes  949 Mbits/sec
[ 5] 3.00-4.00 sec  113 MBytes  949 Mbits/sec
[ 5] 4.00-5.00 sec  113 MBytes  949 Mbits/sec
[ 5] 5.00-6.00 sec  113 MBytes  949 Mbits/sec
[ 5] 6.00-7.00 sec  113 MBytes  949 Mbits/sec
[ 5] 7.00-8.00 sec  113 MBytes  948 Mbits/sec
[ 5] 8.00-9.00 sec  113 MBytes  949 Mbits/sec
[ 5] 9.00-10.00 sec 113 MBytes  949 Mbits/sec
[ 5] 10.00-10.00 sec 433 KBytes  904 Mbits/sec
[ ID] Interval      Transfer      Bandwidth
[ 5] 0.00-10.00 sec 0.00 Bytes    0.00 bits/sec
[ 5] 0.00-10.00 sec 1.11 GBytes  949 Mbits/sec
sender receiver
Server listening on 5201
```

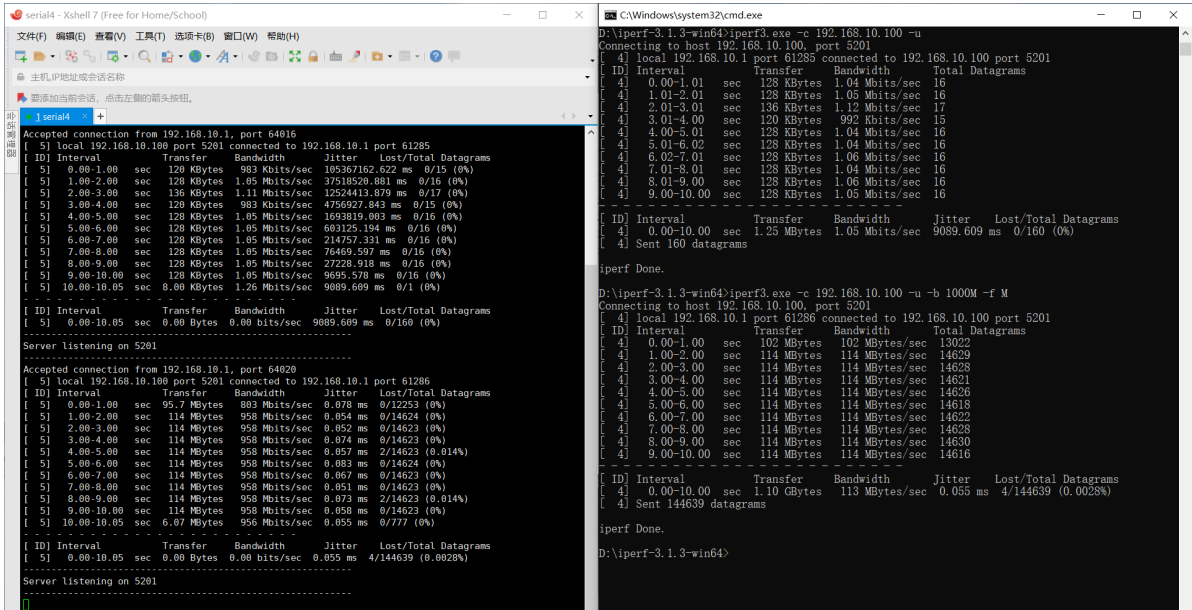
tda4与笔记本的10秒传输1G数据量，带宽为949 Mbits/sec，失败重传次数为0。



tda4与笔记本传输5G数据量，带宽为949 Mbits/sec，失败重传次数为0

UDP测试

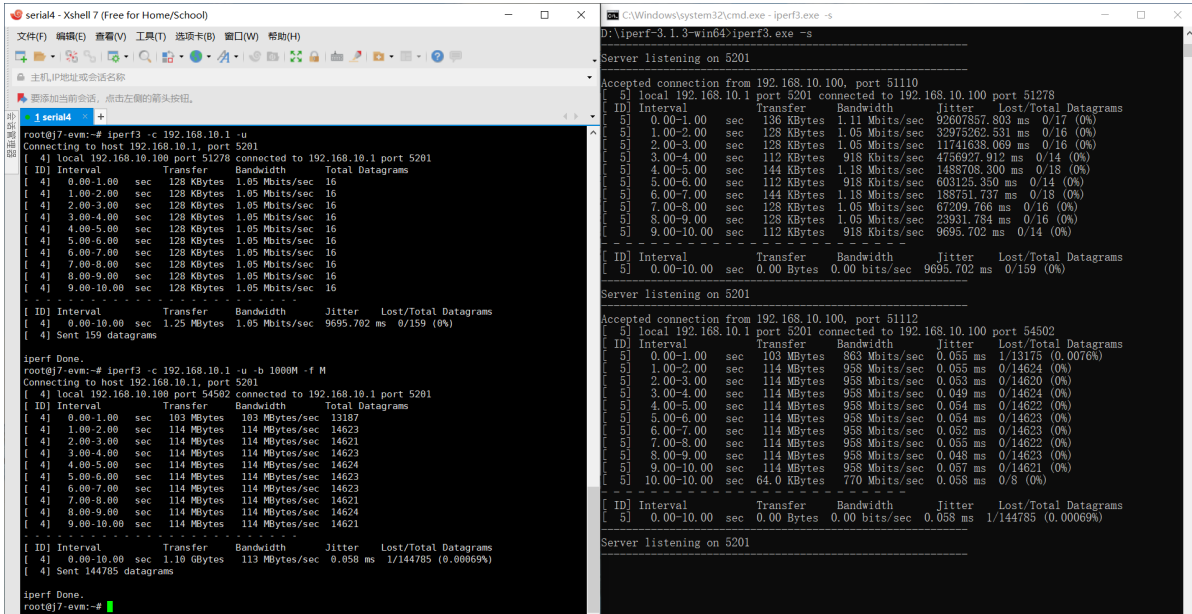
1、tda4x为iperf3的服务端，笔记本为客户端



UDP默认带宽1Mbit/sec 传输10秒时间1.25M数据量，传输延迟为9089，丢包率为0

UDP带宽为1000Mbit/sec 传输10秒时间1.10G数据量，传输延迟为0.055，丢包率为0.0028%

2、笔记本为iperf3的服务端，tda4x为客户端



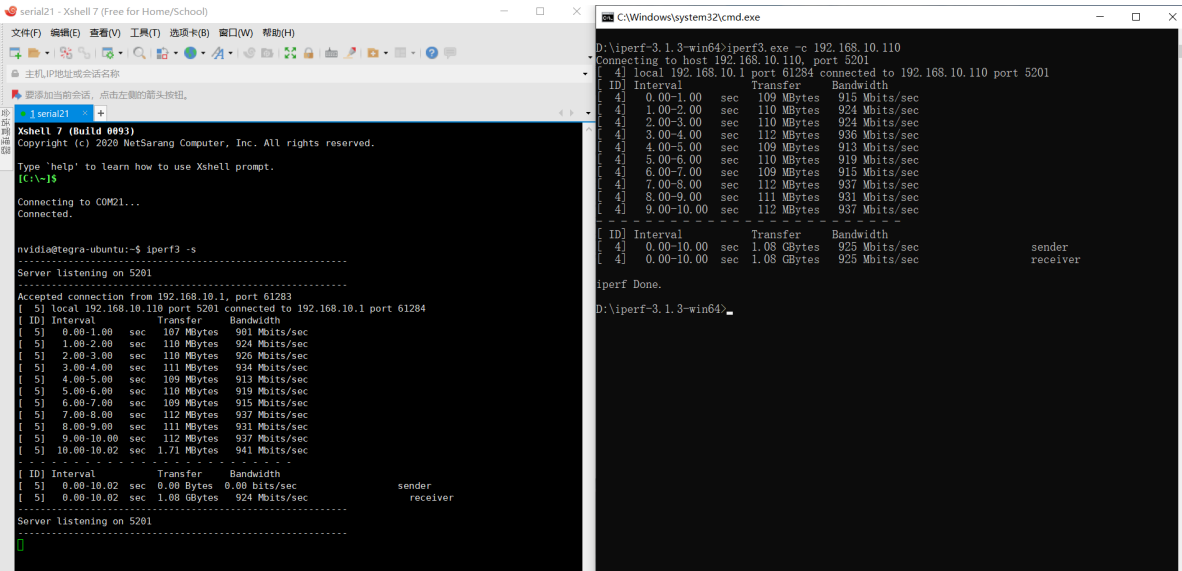
UDP默认带宽1Mbit/sec 传输10秒时间1.25M数据量，传输延迟为9695，丢包率为0

UDP带宽为1000Mbit/sec 传输10秒时间1.10G数据量，传输延迟为0.058，丢包率为0.00069%

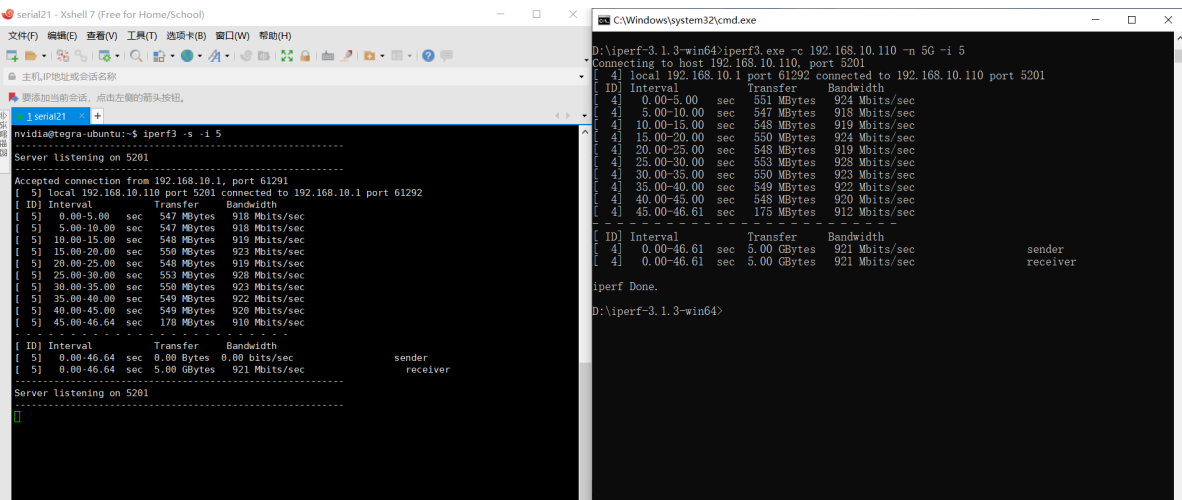
xavier与笔记本进行以太网数据传输性能测试

TCP测试

1、Xavier为iperf3的服务端，笔记本为客户端

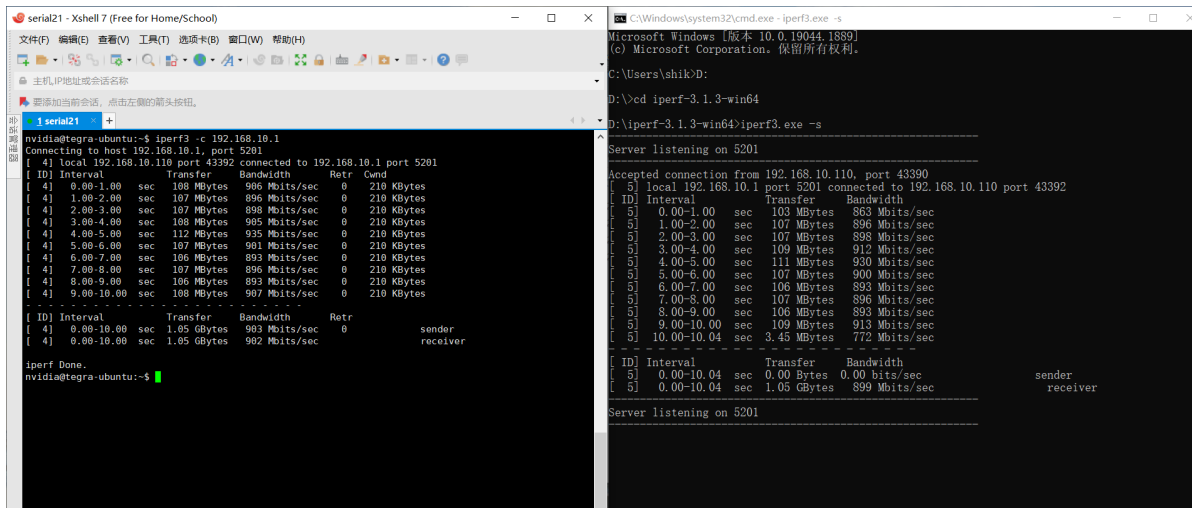


Xavier与笔记本的10秒传输1G数据量，带宽为925 Mbits/sec，失败重传次数为0。

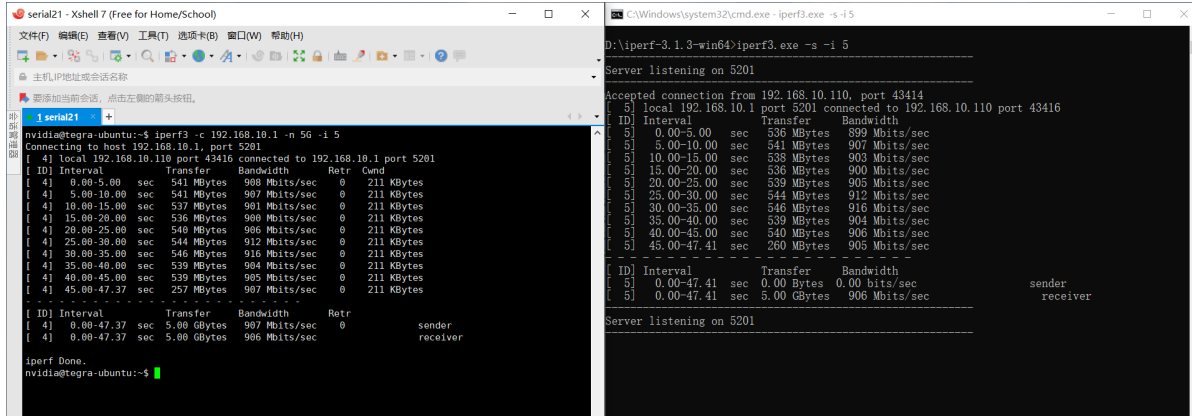


Xavier与笔记本传输5G数据量，带宽为921 Mbits/sec，失败重传次数为0

2、笔记本为iperf3的服务端，Xavier为客户端



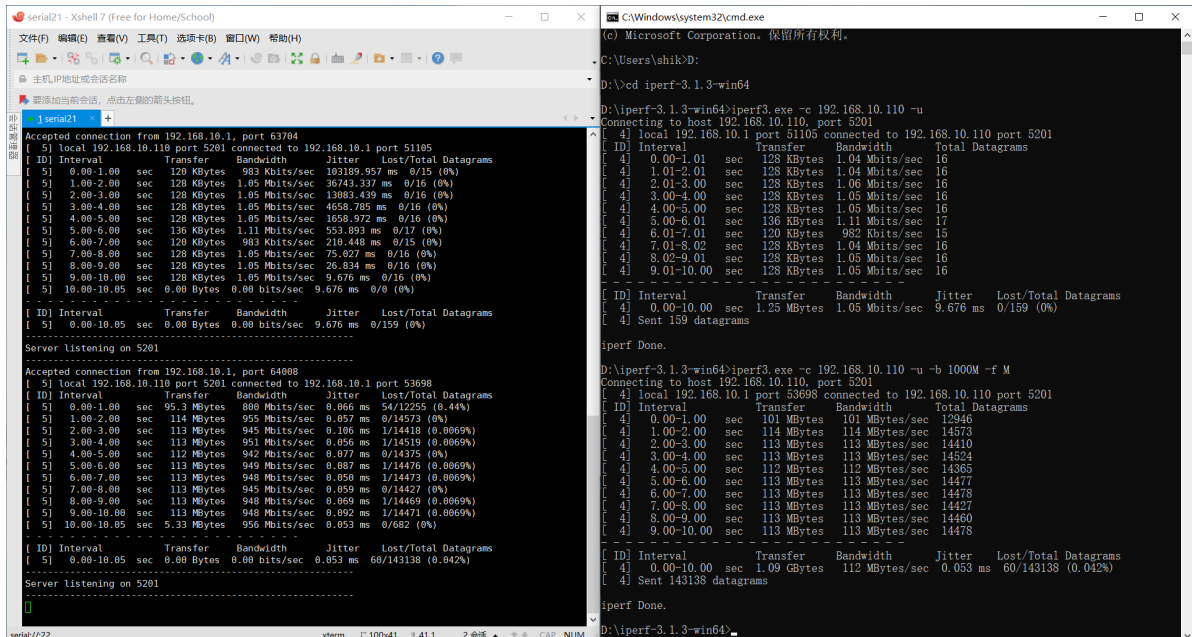
Xavier与笔记本的10秒传输1G数据量，带宽为899 Mbits/sec，失败重传次数为0。



Xavier与笔记本传输5G数据量，带宽为906 Mbits/sec，失败重传次数为0

UDP测试

1、Xavier为iperf3的服务端，笔记本为客户端



UDP默认带宽1Mbit/sec 传输10秒时间1.25M数据量，传输延迟为9.676，丢包率为0

UDP带宽为1000Mbit/sec 传输10秒时间1.09G数据量，传输延迟为0.053，丢包率为0.042%

2、笔记本为iperf3的服务端，Xavier为客户端

```
serial21 - Xshell 7 (Free for Home/School)
文件(F) 编辑(E) 查看(V) 工具(T) 连接(C) 窗口(W) 帮助(H)
主机,IP地址或会话名称
要添加新会话, 点击左侧的箭头按钮。
1 serial21
nvidia@tegra-ubuntu:~$ iperf3 -c 192.168.10.1 -u
Connecting to host 192.168.10.1, port 5201
[ 4] local 192.168.10.110 port 49283 connected to 192.168.10.1 port 5201
[ ID] Interval      Transfer    Bandwidth  Total Datagrams
[ 4] 0.00-1.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 1.00-2.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 2.00-3.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 3.00-4.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 4.00-5.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 5.00-6.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 6.00-7.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 7.00-8.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 8.00-9.00 sec  128 KBytes  1.05 Mbits/sec  16
[ 4] 9.00-10.00 sec 128 KBytes  1.05 Mbits/sec  16
[ ID] Interval      Transfer    Bandwidth  Jitter    Lost/Total Datagrams
[ 4] 0.00-10.00 sec 1.25 MBytes 1.05 Mbits/sec  9.651 ms  0/159 (0%)
[ 4] Sent 159 datagrams

iperf Done.
nvidia@tegra-ubuntu:~$ iperf3 -c 192.168.10.1 -u -b 1000M -f M
Connecting to host 192.168.10.1, port 5201
[ 4] local 192.168.10.110 port 35346 connected to 192.168.10.1 port 5201
[ ID] Interval      Transfer    Bandwidth  Total Datagrams
[ 4] 0.00-1.00 sec  94.1 MBytes  94.1 Mbytes/sec  12048
[ 4] 1.00-2.00 sec  114 MBytes  114 Mbytes/sec  14623
[ 4] 2.00-3.00 sec  114 MBytes  114 Mbytes/sec  14623
[ 4] 3.00-4.00 sec  114 MBytes  114 Mbytes/sec  14615
[ 4] 4.00-5.00 sec  114 MBytes  114 Mbytes/sec  14615
[ 4] 5.00-6.00 sec  114 MBytes  114 Mbytes/sec  14623
[ 4] 6.00-7.00 sec  114 MBytes  114 Mbytes/sec  14623
[ 4] 7.00-8.00 sec  114 MBytes  114 Mbytes/sec  14624
[ 4] 8.00-9.00 sec  114 MBytes  114 Mbytes/sec  14623
[ 4] 9.00-10.00 sec 114 MBytes  114 Mbytes/sec  14623
[ ID] Interval      Transfer    Bandwidth  Jitter    Lost/Total Datagrams
[ 4] 0.00-10.00 sec 1.10 GBytes 112 Mbytes/sec  0.045 ms  0/143639 (0%)
[ 4] Sent 143639 datagrams

iperf Done.
nvidia@tegra-ubuntu:~$

C:\Windows\system32\cmd.exe - iperf3.exe -s
Accepted connection from 192.168.10.110, port 43514
[ 5] local 192.168.10.1 port 5201 connected to 192.168.10.110 port 49283
[ ID] Interval      Transfer    Bandwidth  Jitter    Lost/Total Datagrams
[ 5] 0.00-1.00 sec  120 KBytes  983 Kbits/sec  103189.904 ms  0/15 (0%)
[ 5] 1.00-2.00 sec  128 KBytes  1.05 Mbits/sec  36743.388 ms  0/16 (0%)
[ 5] 2.00-3.01 sec  128 KBytes  1.04 Mbits/sec  13083.472 ms  0/16 (0%)
[ 5] 3.01-4.00 sec  128 KBytes  1.05 Mbits/sec  4658.872 ms  0/16 (0%)
[ 5] 4.00-5.01 sec  128 KBytes  1.04 Mbits/sec  1658.989 ms  0/16 (0%)
[ 5] 5.01-6.00 sec  128 KBytes  1.06 Mbits/sec  590.843 ms  0/16 (0%)
[ 5] 6.00-7.01 sec  128 KBytes  1.04 Mbits/sec  210.484 ms  0/16 (0%)
[ 5] 7.01-8.01 sec  128 KBytes  1.06 Mbits/sec  75.046 ms  0/16 (0%)
[ 5] 8.01-9.01 sec  128 KBytes  1.04 Mbits/sec  26.879 ms  0/16 (0%)
[ 5] 9.01-10.01 sec 128 KBytes  1.06 Mbits/sec  9.651 ms  0/16 (0%)
[ 5] 10.01-10.04 sec 0.00 Bytes  0.00 bits/sec  9.651 ms  0/0 (0%)
[ ID] Interval      Transfer    Bandwidth  Jitter    Lost/Total Datagrams
[ 5] 0.00-10.04 sec 0.00 Bytes  0.00 bits/sec  9.651 ms  0/159 (0%)
Server listening on 5201

Accepted connection from 192.168.10.110, port 43520
[ 5] local 192.168.10.1 port 5201 connected to 192.168.10.110 port 35346
[ ID] Interval      Transfer    Bandwidth  Jitter    Lost/Total Datagrams
[ 5] 0.00-1.00 sec  89.6 MBytes  752 Mbits/sec  0.056 ms  0/11468 (0%)
[ 5] 1.00-2.00 sec  114 MBytes  958 Mbits/sec  0.054 ms  0/14623 (0%)
[ 5] 2.00-3.00 sec  114 MBytes  958 Mbits/sec  0.053 ms  0/14622 (0%)
[ 5] 3.00-4.00 sec  114 MBytes  958 Mbits/sec  0.051 ms  0/14616 (0%)
[ 5] 4.00-5.00 sec  114 MBytes  958 Mbits/sec  0.054 ms  0/14614 (0%)
[ 5] 5.00-6.00 sec  114 MBytes  958 Mbits/sec  0.051 ms  0/14621 (0%)
[ 5] 6.00-7.00 sec  114 MBytes  958 Mbits/sec  0.045 ms  0/14623 (0%)
[ 5] 7.00-8.00 sec  114 MBytes  958 Mbits/sec  0.044 ms  0/14622 (0%)
[ 5] 8.00-9.00 sec  114 MBytes  958 Mbits/sec  0.056 ms  0/14622 (0%)
[ 5] 9.00-10.00 sec 114 MBytes  958 Mbits/sec  0.052 ms  0/14623 (0%)
[ 5] 10.00-10.04 sec 4.57 MBytes  954 Mbits/sec  0.045 ms  0/585 (0%)
[ ID] Interval      Transfer    Bandwidth  Jitter    Lost/Total Datagrams
[ 5] 0.00-10.04 sec 0.00 Bytes  0.00 bits/sec  0.045 ms  0/143639 (0%)
Server listening on 5201
```

UDP默认带宽1Mbit/sec 传输10秒时间1.25M数据量, 传输延迟为9.651, 丢包率为0

UDP带宽为1000Mbit/sec 传输10秒时间1.10G数据量, 传输延迟为0.045, 丢包率为0