Measure real network speed (between two machines)

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Sometimes you want to measure the real network speed between two machines without the interference of possibly slow storage device reading speeds. The following two tools will help you with that.

But when doing this on a RaspberryPI or similar device keep in mind what Jeff Geerling wrote:

> *However, for many real-world use cases, the Pi's other subsystems (CPU and disk I/O especially, since I/O is on a single, shared USB 2.0 bus) will limit the available bandwidth.*

Contents

Using preinstalled `netcat`

On Linux/Ubuntu you can use `netcat` for that:

1. On one machine open a data sink:
   `nc -v -l PORT > /dev/null`
2. On the other machine send some data:
   `dd if=/dev/zero bs=1M count=10 | nc -v HOST PORT`
3. Results will be displayed on the senders side.

Example results:

```
[18:11] pguth@pc ~ $ dd if=/dev/zero bs=1M count=10 | nc -v proxy 1234
Ncat: Version 6.47 ( http://nmap.org/ncat )
Ncat: Connected to 10.10.10.9:1234.
```

```
10+0 records in
10+0 records out
10485760 bytes (10 MB) copied, 5.12357 s, 2.0 MB/s
Ncat: 10485760 bytes sent, 0 bytes received in 5.19 seconds.
```

Using installable `iperf`

On Linux/Ubuntu you can get `iperf` from the default repositories:

1. On both machines install `iperf`:
   `sudo apt-get install iperf`
2. Make one machine play server:
   `iperf -s`
3. On the other machine start the measurement:
   `iperf -c HOST`
4. Results will be presented on both sided.

Example results:

```
[18:21] pguth@pc ~ $ iperf -c proxy
------------------------------------------------------------
Client connecting to proxy, TCP port 5001
TCP window size: 85.0 KByte (default)
------------------------------------------------------------
[  3] local 10.10.10.192 port 57176 connected with 10.10.10.9 port 5001
[ ID] Interval       Transfer     Bandwidth
[  3]  0.0-10.1 sec  21.1 MBytes  17.6 Mbits/sec
```

References

- Measuring Network Speeds with Netcat and Dd
- Getting Gigabit Networking on a Raspberry Pi 2 and B+