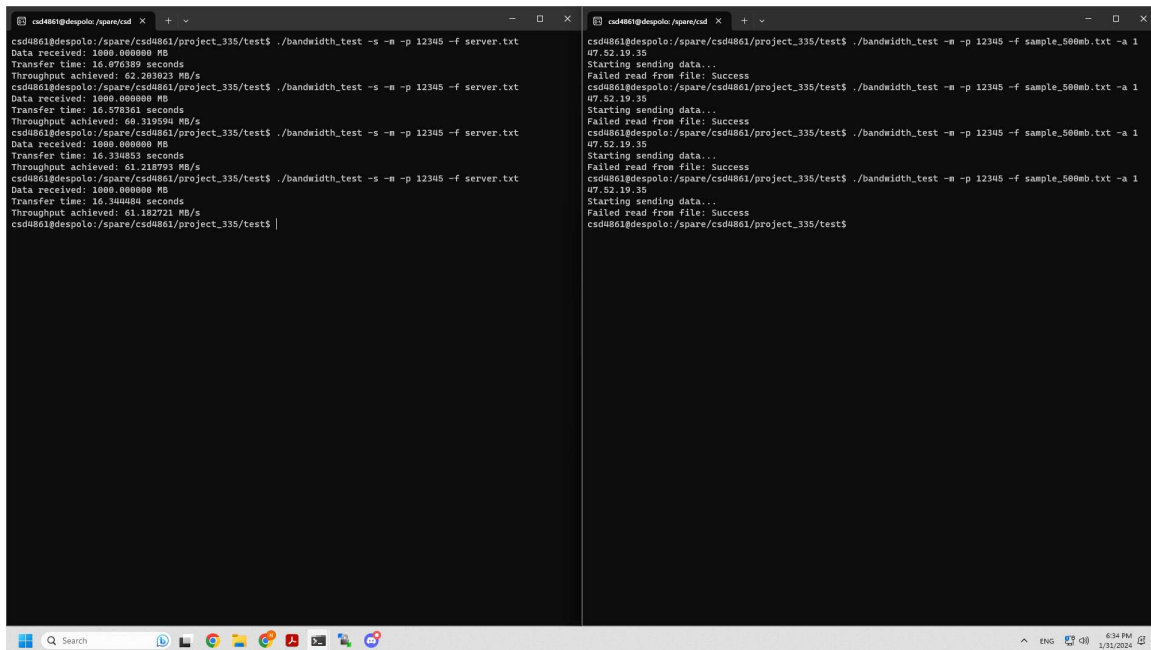


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Screenshot results:Despolo,Portokali 1GB file



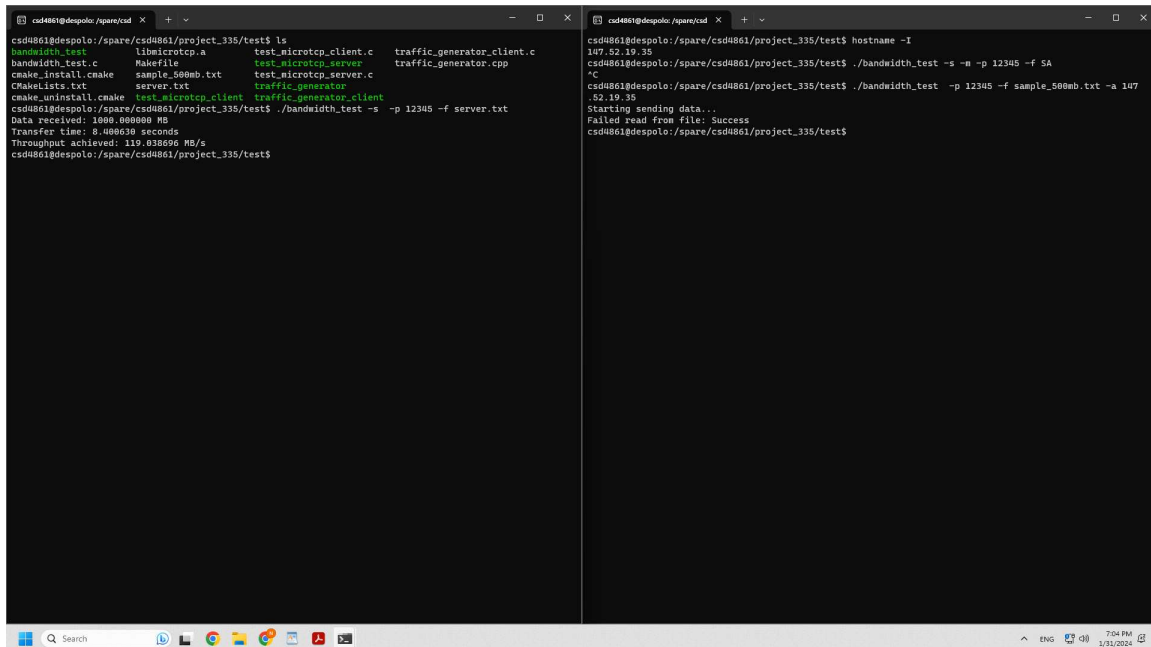
The image shows two side-by-side terminal windows from a Windows desktop. Both windows are titled 'csd4861@despolo: /spare/csd4861/project_335/test\$'. The left window displays the output of the command './bandwidth_test -s -n -p 12345 -f server.txt', showing three successful data transfers of 1000 MB each with varying times and throughput. The right window displays the output of './bandwidth_test -n -p 12345 -f sample_500mb.txt -a 1', showing three failed read attempts from the file, each preceded by a 'Starting sending data...' message. The Windows taskbar at the bottom shows the search bar, several application icons, and the system clock indicating 6:34 PM on 1/31/2024.

```
csd4861@despolo: /spare/csd4861/project_335/test$ ./bandwidth_test -s -n -p 12345 -f server.txt
Data received: 1000.000000 MB
Transfer time: 16.076389 seconds
Throughput achieved: 62.283923 MB/s
csd4861@despolo: /spare/csd4861/project_335/test$ ./bandwidth_test -s -n -p 12345 -f server.txt
Data received: 1000.000000 MB
Transfer time: 16.578361 seconds
Throughput achieved: 60.319594 MB/s
csd4861@despolo: /spare/csd4861/project_335/test$ ./bandwidth_test -s -n -p 12345 -f server.txt
Data received: 1000.000000 MB
Transfer time: 16.334853 seconds
Throughput achieved: 61.218793 MB/s
csd4861@despolo: /spare/csd4861/project_335/test$ ./bandwidth_test -s -n -p 12345 -f server.txt
Data received: 1000.000000 MB
Transfer time: 16.344454 seconds
Throughput achieved: 61.182721 MB/s
csd4861@despolo: /spare/csd4861/project_335/test$ |

csd4861@despolo: /spare/csd4861/project_335/test$ ./bandwidth_test -n -p 12345 -f sample_500mb.txt -a 1
47.52.19.35
Starting sending data...
Failed read from file: Success
csd4861@despolo: /spare/csd4861/project_335/test$ ./bandwidth_test -n -p 12345 -f sample_500mb.txt -a 1
47.52.19.35
Starting sending data...
Failed read from file: Success
csd4861@despolo: /spare/csd4861/project_335/test$ ./bandwidth_test -n -p 12345 -f sample_500mb.txt -a 1
47.52.19.35
Starting sending data...
Failed read from file: Success
csd4861@despolo: /spare/csd4861/project_335/test$ ./bandwidth_test -n -p 12345 -f sample_500mb.txt -a 1
47.52.19.35
Starting sending data...
Failed read from file: Success
csd4861@despolo: /spare/csd4861/project_335/test$
```

```
csd4861@portokali: /spare/csc x csd4861@portokali: /spare/csc x + v
csd4861@portokali: /spare/csd4861/project_335/test$ ./bandwidth_test -n -p 12345 -f sample_500mb.txt -a 147.52.19.35
^C
csd4861@portokali: /spare/csd4861/project_335/test$ ./bandwidth_test -n -p 12345 -f sample_500mb.txt -a 147.52.19.35
^C
csd4861@portokali: /spare/csd4861/project_335/test$ hostname -I
147.52.19.18
csd4861@portokali: /spare/csd4861/project_335/test$ ./bandwidth_test -n -p 12345 -f sample_500mb.txt -a ^C
csd4861@portokali: /spare/csd4861/project_335/test$ ./bandwidth_test -n -p 12345 -f sample_500mb.txt -a 147.52.19.18
Starting sending data...
Failed read from file: Success
csd4861@portokali: /spare/csd4861/project_335/test$ ./bandwidth_test -n -p 12345 -f sample_500mb.txt -a 147.52.19.18
Starting sending data...
Failed read from file: Success
csd4861@portokali: /spare/csd4861/project_335/test$
```

```
csd4861@portokali: /spare/csc x csd4861@portokali: /spare/csc x + v
csd4861@portokali: /spare/csd4861/project_335/test$ ./bandwidth_test -s -n -p 12345 -f server.txt
^C
csd4861@portokali: /spare/csd4861/project_335/test$ ./bandwidth_test -s -n -p 12345 -f server.txt
Data received: 1000.000000 MB
Transfer time: 25.215958 seconds
Throughput achieved: 39.657927 MB/s
csd4861@portokali: /spare/csd4861/project_335/test$ ./bandwidth_test -s -n -p 12345 -f server.txt
Data received: 1000.000000 MB
Transfer time: 25.304967 seconds
Throughput achieved: 39.5317938 MB/s
csd4861@portokali: /spare/csd4861/project_335/test$ |
```



```
csd4861@despolo:/spare/cud$ cd /project_335/test$ ls
bandwidth_test  libmicrotcp.a  test_microtcp_client.c  traffic_generator_client.c
bandwidth_test.c  Makefile  test_microtcp_server.c  traffic_generator.cpp
cmake_install.cmake  sample_500mb.txt  test_microtcp_server.c
CMakeLists.txt  server.txt  traffic_generator
cmake_uninstall.cmake  test_microtcp_client  traffic_generator_client
csd4861@despolo:/spare/csd4861/project_335/test$ ./bandwidth_test -s -p 12345 -f server.txt
Data received: 1000.000000 MB
Transfer time: 0.484630 seconds
Throughput achieved: 119.838696 MB/s
csd4861@despolo:/spare/csd4861/project_335/test$

csd4861@despolo:/spare/csd4861/project_335/test$ hostname -I
147.52.19.35
csd4861@despolo:/spare/csd4861/project_335/test$ ./bandwidth_test -s -n -p 12345 -f SA
"C
csd4861@despolo:/spare/csd4861/project_335/test$ ./bandwidth_test -p 12345 -f sample_500mb.txt -a 147
.52.19.35
Starting sending data...
Failed read from file: Success
csd4861@despolo:/spare/csd4861/project_335/test$
```

performance(despolo) =62/119=(0.52)

performance(portokali)=32/119=(0.27)

How to run:

Project_335/test:delete(CMakeFiles,CmakeCache.txt)

cmake .

mkdir build

cd build

cmake ..

cd ..

make a file of x

mb:dd if=/dev/urandom of=sample_Xmb.txt bs=1M count=X

run ./bandwidth_test