Basics of Bash

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1 Introduction

Here I am trying to connect the server and client in different terminal in the same desktop. And measure the transfer rate and file size.

2 Creating a Server in my Ubuntu Command Prompt

I made this task using Bash Programming language. Creating server in command prompt terminal.

Code :"python3 -m http.server"

Response : "Serving HTTP on 0.0.0.0 port 8000...

```
mahendra@LAPTOP-8K6IS13P:/mnt/c/Users/Lenovo/Desktop/Project$ python3 -m http.server
Serving HTTP on 0.0.0.0 port 8000 (http://0.0.0.0:8000/) ...
```

3 Creating a Separate terminal in another command prompt

code :"dd if=/dev/zero of=./a.dat count=1000 bs=10"
Response :
1000+0 records in
1000+0 records out
10000 bytes (10 kB, 9.8 KiB) copied, 0.0157185 s, 636 kB/s

```
mahendra@LAPTOP-8K6IS13P:/mnt/c/Users/Lenovo/Desktop/Project/m1.dat$ dd if=/dev/zero
1000+0 records in
1000+0 records out
10000 bytes (10 kB, 9.8 KiB) copied, 0.0157185 s, 636 kB/s
```

This code not just created the client but also created a '.dat'file , transfered and received it from the server and calculated the data rate and time for the process. When I change the size of the '.dat' file by changing the bit count and

block size it appears to be getting more time to complete the process. But the data rate seems like it varies randomly .

4 Measuring the transfer rate and different file size

1kb = 0.0018652 s
10kb = 0.0019232 s
100kb = 0.0034289 s
1000kb = 0.0169656 s
10000kb = 0.146192 s

5 Conclusion

If the data rate increases it takes more time for transfer because it depends on the date rate which depends on the computer speed.