

## 3210 A1 Report

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1 The client and server are running on the same machine. This can be done at home, or with the client and server running on the same SoCS Linux server.

SSH server to run the server: linux-06.socs.uoguelph.ca

SSH server to run the client: linux-06.socs.uoguelph.ca

1.1. Ping time - let the ping utility do at least 20 pings, record the stats (round-trip min/avg/max/stddev, packet loss rate).

1.1.1. Result:

--- linux-06.socs.uoguelph.ca ping statistics ---

20 packets transmitted, 20 received, 0% packet loss, time 19453ms

rtt min/avg/max/mdev = 0.043/0.077/0.096/0.013 ms

1.1.2. Terminal:

abushaah@linux-06:~/3210/cis3210a1\$ ping linux-06.socs.uoguelph.ca

PING linux-06.socs.uoguelph.ca (127.0.1.1) 56(84) bytes of data.

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=1 ttl=64 time=0.061 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=2 ttl=64 time=0.043 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=3 ttl=64 time=0.074 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=4 ttl=64 time=0.093 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=5 ttl=64 time=0.074 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=6 ttl=64 time=0.089 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=7 ttl=64 time=0.092 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=8 ttl=64 time=0.079 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=9 ttl=64 time=0.087 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=10 ttl=64 time=0.075 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=11 ttl=64 time=0.071 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=12 ttl=64 time=0.095 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=13 ttl=64 time=0.096 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=14 ttl=64 time=0.073 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=15 ttl=64 time=0.080 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=16 ttl=64 time=0.086 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=17 ttl=64 time=0.064 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=18 ttl=64 time=0.063 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=19 ttl=64 time=0.086 ms

64 bytes from linux-06.socs.uoguelph.ca (127.0.1.1): icmp\_seq=20 ttl=64 time=0.076 ms

1.2. The average, minimum, and maximum time that your code took to do the transfer. Do at least 20 file transfers, use the same file each time. A test file will be provided to you.

### 1.2.1. Result:

```
--- linux-06.socs.uoguelph.ca file transfer statistics ---  
20 packets transmitted, 20 received  
rtt min/avg/max = 1.211/2.8737/3.842 ms
```

### 1.2.2. Terminal:

```
abushaah@linux-06:~/3210/cis3210a1$ ./server 50693  
abushaah@linux-06:~/3210/cis3210a1$ ./script.sh  
[Client] elapsed time for file transfer: 3.210000  
[Client] elapsed time for file transfer: 3.574000  
[Client] elapsed time for file transfer: 3.291000  
[Client] elapsed time for file transfer: 2.722000  
[Client] elapsed time for file transfer: 3.505000  
[Client] elapsed time for file transfer: 1.900000  
[Client] elapsed time for file transfer: 3.842000  
[Client] elapsed time for file transfer: 2.561000  
[Client] elapsed time for file transfer: 2.188000  
[Client] elapsed time for file transfer: 2.451000  
[Client] elapsed time for file transfer: 3.273000  
[Client] elapsed time for file transfer: 2.167000  
[Client] elapsed time for file transfer: 3.489000  
[Client] elapsed time for file transfer: 1.211000  
[Client] elapsed time for file transfer: 2.753000  
[Client] elapsed time for file transfer: 2.651000  
[Client] elapsed time for file transfer: 3.327000  
[Client] elapsed time for file transfer: 2.380000  
[Client] elapsed time for file transfer: 3.435000  
[Client] elapsed time for file transfer: 3.544000
```

Note: script.sh contains the command `./sendFile wonderland.txt 127.0.1.1:50693` 20 times

2 The client and the server are running on separate SoCS Linux servers.

SSH server to run the server: linux-06.socs.uoguelph.ca

SSH (different) server to run the client: linux-05.socs.uoguelph.ca

2.1. Ping time - let the ping utility do at least 20 pings, record the stats (round-trip min/avg/max/stddev, packet loss rate).

### 2.1.1. Result:

```
--- linux-06.socs.uoguelph.ca ping statistics ---  
20 packets transmitted, 20 received, 0% packet loss, time 19024ms  
rtt min/avg/max/mdev = 0.150/0.294/0.571/0.096 ms
```

### 2.1.2. Terminal:

```
abushaah@linux-05:~/3210/cis3210a1$ ping linux-06.socs.uoguelph.ca
PING linux-06.socs.uoguelph.ca (131.104.48.87) 56(84) bytes of data.
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=1 ttl=64 time=0.448 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=2 ttl=64 time=0.229 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=3 ttl=64 time=0.309 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=4 ttl=64 time=0.168 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=5 ttl=64 time=0.305 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=6 ttl=64 time=0.233 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=7 ttl=64 time=0.571 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=8 ttl=64 time=0.243 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=9 ttl=64 time=0.269 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=10 ttl=64 time=0.150 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=11 ttl=64 time=0.318 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=12 ttl=64 time=0.306 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=13 ttl=64 time=0.279 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=14 ttl=64 time=0.250 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=15 ttl=64 time=0.295 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=16 ttl=64 time=0.341 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=17 ttl=64 time=0.433 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=18 ttl=64 time=0.188 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=19 ttl=64 time=0.278 ms
64 bytes from linux-06.socs.uoguelph.ca (131.104.48.87): icmp_seq=20 ttl=64 time=0.274 ms
```

2.2. The average, minimum, and maximum time that your code took to do the transfer. Do at least 20 file transfers, use the same file each time. A test file will be provided to you.

### 2.2.1. Result:

```
--- linux-06.socs.uoguelph.ca file transfer statistics ---
20 packets transmitted, 20 received
rtt min/avg/max = 1.303/1.5379/1.923 ms
```

### 2.2.2. Terminal:

```
abushaah@linux-06:~/3210/cis3210a1$ ./server 50693
abushaah@linux-05:~/3210/cis3210a1$ ./scriptRemote.sh
[Client] elapsed time for file transfer: 1.641000
[Client] elapsed time for file transfer: 1.472000
[Client] elapsed time for file transfer: 1.585000
[Client] elapsed time for file transfer: 1.415000
[Client] elapsed time for file transfer: 1.429000
[Client] elapsed time for file transfer: 1.403000
[Client] elapsed time for file transfer: 1.390000
[Client] elapsed time for file transfer: 1.503000
```

[Client] elapsed time for file transfer: 1.768000  
[Client] elapsed time for file transfer: 1.500000  
[Client] elapsed time for file transfer: 1.303000  
[Client] elapsed time for file transfer: 1.471000  
[Client] elapsed time for file transfer: 1.545000  
[Client] elapsed time for file transfer: 1.923000  
[Client] elapsed time for file transfer: 1.613000  
[Client] elapsed time for file transfer: 1.563000  
[Client] elapsed time for file transfer: 1.469000  
[Client] elapsed time for file transfer: 1.575000  
[Client] elapsed time for file transfer: 1.756000  
[Client] elapsed time for file transfer: 1.434000

Note: scriptRemote.sh contains the command [./sendFile wonderland.txt 131.104.48.87:50693] 20  
times