

CS 550 - Spring 2022  
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## P2P File Sharing - Output

This is the output of the server and two clients running locally on a Windows machine. Some of the hashes get cutoff in this document but they are unique enough that the first part of each hash is sufficient.

Note: when peers stream data to each other, they both print information about it.

Note 2: Files are deleted, added, or modified by interacting with them directly.

### Server

```
$ .\Server.exe
[Indexer] INFO    : Running Server
[Registry]       : New
                  ID: 0
                  name: Copy.txt
                  hash: EE0F2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA908084BC86

[Registry]       : New
                  ID: 1
                  name: Copy.txt
                  hash: EE0F2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA908084BC86

[Registry]       : New
                  ID: 1
                  name: New Text File.txt
                  hash: D32E5192C14009C6BDBF44D866CF7C43255877DCDAA1739F43F80A7E0ABC1184

[Registry]       : New
                  ID: 1
                  name: Test.txt
                  hash: 70D50811CAF34BC24F9FB2698B64B2FC6EF880537F3A27D5DE937DD065E8F5AB

[Registry]       : New
                  ID: 1
                  name: Test2.txt
                  hash: A8776257F59232070E9930744B0AE890D40B8BB81D2E9237F8980E8C7409EDD0

[Deregister]     : Erase entry
                  name: New Text File.txt
                  hash: D32E5192C14009C6BDBF44D866CF7C43255877DCDAA1739F43F80A7E0ABC1184
[Deregister]     : New
                  ID: 1
                  name: New Text File.txt
```

```

hash: D32E5192C14009C6BDBF44D866CF7C43255877DCDAA1739F43F80A7E0ABC1184

[Registry]          : New
ID: 1
name: New Text File.txt
hash: 25349FB263E07COD107837A2CB661E79D18F0F88B9DEB7C67254C9C96C52450D

[Search]            : Searching for query: copy
[Request]           : Searching for hash: EE0F2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA908084BC86
[Request] INFO      : Entry found
name: Copy.txt
hash: EE0F2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA908084BC86
[Deregister]        : New
ID: 1
name: Copy.txt
hash: EE0F2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA908084BC86

[Request]           : Searching for hash: EE0F2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA908084BC86
[Request] INFO      : Entry found
name: Copy.txt
hash: EE0F2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA908084BC86
[Registry]          : New
ID: 1
name: Copy.txt
hash: EE0F2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA908084BC86

[List]              : Listing all files entries
[Search]            : Searching for query: i
[Request]           : Searching for hash: 25349FB263E07COD107837A2CB661E79D18F0F88B9DEB7C67254C9C96C52450D
[Request] INFO      : Entry found
name: New Text File.txt
hash: 25349FB263E07COD107837A2CB661E79D18F0F88B9DEB7C67254C9C96C52450D
[Registry]          : New
ID: 0
name: New Text File.txt
hash: 25349FB263E07COD107837A2CB661E79D18F0F88B9DEB7C67254C9C96C52450D

```

## Client 1

```

$ .\Client.exe -i 1 -f 1
[Indexer] INFO      : Running Client
[Indexer] DEBUG     : Connecting to index server at: localhost:55555
[Indexer] INFO      : Server pinged! 0.092000ms
[Exchanger] DEBUG   : Listening to port: 44001
[Console]           : Console start!
Client > [File] DEBUG : Hashing file: Copy.txt
[Folder] DEBUG      : File created: Copy.txt
[Peer] INFO         : Registered hash: Copy.txt

```

```

[File] DEBUG : Hashing file: New Text File.txt
[Folder] DEBUG : File created: New Text File.txt
[Peer] INFO : Registered hash: New Text File.txt
[File] DEBUG : Hashing file: Test.txt
[Folder] DEBUG : File created: Test.txt
[Peer] INFO : Registered hash: Test.txt
[File] DEBUG : Hashing file: Test2.txt
[Folder] DEBUG : File created: Test2.txt
[Peer] INFO : Registered hash: Test2.txt
[File] DEBUG : Hashing file: New Text File.txt
[Folder] DEBUG : File modified: New Text File.txt
[Peer] INFO : Deregistered hash: D32E5192C14009C6BDBF44D866CF7C43255877DCDAA1739F43F80A7E0AB
[Peer] INFO : Registered hash: New Text File.txt

```

Client > search copy

```

[indexRPCParse] INFO : Searching server file index for: copy
Hash: EEOF2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA908084BC86
Added on 20/02/2022 01:24:49
    Name: Copy.txt
    Peers: 2

```

```

Client > request EEOF2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA908084BC86
[indexRPCParse] INFO : Searching server peer index for: EEOF2CE65776190342FE013D46032A9D3BF7
[0] 127.0.0.1:44000
[1] 127.0.0.1:44001
[Exchanger] ERROR : File already exists locally, not downloading: Copy.txt
Client > [Folder] DEBUG : File deleted: Copy.txt
[Peer] INFO : Deregistered hash: EEOF2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA908084BC86

```

```

Client > request EEOF2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA908084BC86
[indexRPCParse] INFO : Searching server peer index for: EEOF2CE65776190342FE013D46032A9D3BF7
[0] 127.0.0.1:44000
Client > [Exchanger] DEBUG : Connecting to peer: 0
[Exchanger Client] DEBUG : Receiving server ID
[Exchanger Client] DEBUG : ID match, sending hash: EEOF2CE65776190342FE013D46032A9D3BF7A23466
[Exchanger Client] DEBUG : Receiving file size
[Exchanger Client] DEBUG : Valid filesize, notifying server: 9
[Exchanger Client] DEBUG : Streaming
[Exchanger Client] INFO : Finished streaming
[File] DEBUG : Hashing file: Copy.txt
[Folder] DEBUG : File created: Copy.txt
[Peer] INFO : Registered hash: Copy.txt

```

```

Client > list
[indexRPCParse] INFO : Listing server file index
Hash: EEOF2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA908084BC86
Added on 20/02/2022 01:24:49
    Name: Copy.txt
    Peers: 2

```

Hash: A8776257F59232070E9930744B0AE890D40B8BB81D2E9237F8980E8C7409EDD0

Added on 20/02/2022 01:24:50

Name: Test2.txt

Peers: 1

Hash: 70D50811CAF34BC24F9FB2698B64B2FC6EF880537F3A27D5DE937DD065E8F5AB

Added on 20/02/2022 01:24:50

Name: Test.txt

Peers: 1

Hash: 25349FB263E07C0D107837A2CB661E79D18F0F88B9DEB7C67254C9C96C52450D

Added on 20/02/2022 01:25:02

Name: New Text File.txt

Peers: 1

Client > [Exchanger] DEBUG : p2p conn: 127.0.0.1:57101

[Exchanger Server] DEBUG : Sending ID

[Exchanger Server] DEBUG : Reading hash size

[Exchanger Server] DEBUG : Hash get: 25349FB263E07C0D107837A2CB661E79D18F0F88B9DEB7C67254C9C9

[Exchanger Server] DEBUG : File found, sending size: 47

[Exchanger Server] DEBUG : Waiting to stream

[Exchanger Server] DEBUG : Streaming

[Exchanger Server] DEBUG : Written 100%

[Exchanger Server] INFO : Finished streaming

Client > q

[Console] INFO : Exiting

[Folder] DEBUG : Stopped watching path for changes

[Exchanger] DEBUG : stopped receiving peer requests

[Indexer] INFO : Stopping Client

## Client 0

.\Client.exe -i 0 -f 0

[Indexer] INFO : Running Client

[Indexer] DEBUG : Connecting to index server at: localhost:55555

[Indexer] INFO : Server pinged! 0.112000ms

[Exchanger] DEBUG : Listening to port: 44000

[Console] : Console start!

Client > [File] DEBUG : Hashing file: Copy.txt

[Folder] DEBUG : File created: Copy.txt

[Peer] INFO : Registered hash: Copy.txt

[Exchanger] DEBUG : p2p conn: 127.0.0.1:57100

[Exchanger Server] DEBUG : Sending ID

[Exchanger Server] DEBUG : Reading hash size

[Exchanger Server] DEBUG : Hash get: EE0F2CE65776190342FE013D46032A9D3BF7A23466CA808B42CCEA90

[Exchanger Server] DEBUG : File found, sending size: 9

[Exchanger Server] DEBUG : Waiting to stream

[Exchanger Server] DEBUG : Streaming

[Exchanger Server] DEBUG : Written 100%

[Exchanger Server] INFO : Finished streaming

```

Client > search i
[indexRPCParse] INFO    : Searching server file index for: i
Hash: 25349FB263E07COD107837A2CB661E79D18F0F88B9DEB7C67254C9C96C52450D
Added on 20/02/2022 01:25:02
      Name: New Text File.txt
      Peers: 1
Client > request 25349FB263E07COD107837A2CB661E79D18F0F88B9DEB7C67254C9C96C52450D
[indexRPCParse] INFO    : Searching server peer index for: 25349FB263E07COD107837A2CB661E79D18F0F88B9
[1] 127.0.0.1:44001
Client > [Exchanger] DEBUG  : Connecting to peer: 1
[Exchanger Client] DEBUG  : Receiving server ID
[Exchanger Client] DEBUG  : ID match, sending hash: 25349FB263E07COD107837A2CB661E79D18F0F88B9
[Exchanger Client] DEBUG  : Receiving file size
[Exchanger Client] DEBUG  : Valid filesize, notifying server: 47
[Exchanger Client] DEBUG  : Streaming
[Exchanger Client] INFO    : Finished streaming
[File] DEBUG   : Hashing file: New Text File.txt
[Folder] DEBUG  : File created: New Text File.txt
[Peer] INFO     : Registered hash: New Text File.txt

Client > q
[Console] INFO    : Exiting
[Folder] DEBUG    : Stopped watching path for changes
[Exchanger] DEBUG  : stopped receiving peer requests
[Indexer] INFO     : Stopping Client

```