

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

This is the output of two super-peers and two leaf-nodes 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.

Notes:

- When peers stream data to each other, they both print information about it
- Files are deleted, added, or modified by interacting with them directly in their respective directory
- Propagated requests print their unique message id alongside the log message to help keep track of each request
- This is the output when running the same setup and commands as in the Manual document

Super-peer 0

```
$ .\Client.exe -i 0 -s
[Indexer] INFO    : Running Server
[Indexer] INFO    : Running Client
[Indexer] DEBUG   : Connecting to index server at: 127.0.0.1:47900
[Indexer] INFO    : Server pinged! 0.137000ms
[Exchanger] DEBUG : Listening to port: 48900
[Console]         : Console start!
[File] DEBUG      : Hashing file: file0.txt
Client-0 > [Folder] DEBUG : File created: file0.txt
[Registry] INFO    : New Origin
                  ID: 0
                  name: file0.txt
                  hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[Registry]         : New
                  ID: 0
                  name: file0.txt
                  hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[Peer] INFO        : Registered hash: file0.txt
[Registry] INFO    : New Origin
                  ID: 2
                  name: file2.txt
                  hash: 3377870DFEAAA7ADF79A374D2702A3FDB13E5E5EA0DD8AA95A802AD39044A92F

[Registry]         : New
                  ID: 2
                  name: file2.txt
```

hash: 3377870DFEAAA7ADF79A374D2702A3FDB13E5E5EA0DD8AA95A802AD39044A92F

```
Client-0 > [Indexer] DEBUG : Request Listing 1
[List]      : Listing all files entries
[Indexer] INFO    : TTL finished 797849837586022540
[Indexer] DEBUG   : Returning results
[Indexer] DEBUG   : Request File 1
[Request]      : Searching for hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90E
[Request] INFO    : Entry found
                name: file0.txt
                hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7
[Exchanger] DEBUG : p2p conn: 127.0.0.1:58177
[Exchanger Server] DEBUG : P2PFile
[Exchanger Server] DEBUG : Sending ID
[Exchanger Server] DEBUG : Hash size get: 64
[Exchanger Server] DEBUG : Hash get: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90E
[Exchanger Server] DEBUG : File found, sending size: 5
[Exchanger Server] DEBUG : Waiting to stream
[Exchanger Server] DEBUG : Streaming
[Exchanger Server] DEBUG : Written 100%
[Exchanger Server] INFO   : Finished streaming
[Indexer] DEBUG   : Request Search -1
[Search]      : Searching for query: file
[Indexer] INFO    : Propagating query search 12328414912905561117 1
[Indexer] DEBUG   : Returning results
[File] DEBUG    : Hashing file: file0.txt
[Folder] DEBUG   : File modified: file0.txt : 15
[Deregister]    : Erase entry
                name: file0.txt
                hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7
[Deregister]    : Erase peer
                ID: 0
[Deregister]    : New
                ID: 0
                name: file0.txt
                hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[Peer] INFO     : Deregistered hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE59
[Registry] INFO  : New Origin
                ID: 0
                name: file0.txt
                hash: 6AAA22848C60483715FA71B87BFB3DE4A9C2C14A6DD8CAECDE650D386AEBD051

[Registry]      : New
                ID: 0
                name: file0.txt
                hash: 6AAA22848C60483715FA71B87BFB3DE4A9C2C14A6DD8CAECDE650D386AEBD051
```

```

[Peer] INFO    : Registered hash: file0.txt
[originFolderListener] DEBUG  : Propagating invalidation
[Indexer] DEBUG  : Request Invalidation -1
[Invalidate] WARNING: Entry not found: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90
[Invalidate] ERROR   : Entry was not found or is invalid
                hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7
[Indexer] INFO    : Pushing invalidation: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE
[Indexer] INFO    : Propagating query invalidate 7721487775885090099 1
[Peer] WARNING: Unable to invalidate hash or no peers to locally invalidate: 56F3FD843F7AE959A
[Exchanger] DEBUG  : p2p conn: 127.0.0.1:58202
[Exchanger Server] DEBUG  : P2PFileUpdate
[Exchanger Server] DEBUG  : Sending ID
[Exchanger Server] DEBUG  : Hash size get: 64
[Exchanger Server] DEBUG  : Hash get: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90E
[Exchanger Server] DEBUG  : Name get: file0.txt
[Exchanger Server] DEBUG  : File found, sending size: 15
[Exchanger Server] DEBUG  : Waiting to stream
[Exchanger Server] DEBUG  : Streaming
[Exchanger Server] DEBUG  : Written 100%
[Exchanger Server] INFO    : Finished streaming
[Indexer] DEBUG  : Request Search 1
[Search]         : Searching for query: file0
[Indexer] INFO    : TTL finished 14638757213955201442
[Indexer] DEBUG  : Returning results

```

Client-0 > q

```

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

```

Super-peer 1

\$.\Client.exe -i 1 -s

```

[Indexer] INFO    : Running Server
[Indexer] INFO    : Running Client
[Indexer] DEBUG  : Connecting to index server at: 127.0.0.1:47901
[Indexer] INFO    : Server pinged! 0.129000ms
[Exchanger] DEBUG  : Listening to port: 48901
[Console]         : Console start!

```

```

Client-1 > [File] DEBUG  : Hashing file: file1.txt
[Folder] DEBUG  : File created: file1.txt
[Registry] INFO    : New Origin

```

ID: 1

name: file1.txt

hash: C147EFCFC2D7EA666A9E4F5187B115C90903F0FC896A56DF9A6EF5D8F3FC9F31

[Registry] : New
ID: 1
name: file1.txt
hash: C147EFCFC2D7EA666A9E4F5187B115C90903F0FC896A56DF9A6EF5D8F3FC9F31

[Peer] INFO : Registered hash: file1.txt
[Registry] INFO : New Origin
ID: 3
name: file3.txt
hash: 6F3FEF6DC51C7996A74992B70D0C35F328ED909A5E07646CF0BAB3383C95BB02

[Registry] : New
ID: 3
name: file3.txt
hash: 6F3FEF6DC51C7996A74992B70D0C35F328ED909A5E07646CF0BAB3383C95BB02

Client-1 > [Indexer] DEBUG : Request Listing -1
[List] : Listing all files entries
[Indexer] INFO : Propagating query list 797849837586022540 1
[Indexer] DEBUG : Returning results
[Indexer] DEBUG : Request File -1
[Request] : Searching for hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90
[Request] WARNING: No entries found with hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90
[Indexer] INFO : Propagating query request 3498333107492499847 1
[Registry] : New
ID: 3
name: file0.txt
hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[Entry] DEBUG : TTR Updated: file0.txt:1648694786
[Indexer] DEBUG : Request Search 1
[Search] : Searching for query: file
[Indexer] INFO : TTL finished 12328414912905561117
[Indexer] DEBUG : Returning results
[Indexer] DEBUG : Request Invalidation 1
[Invalidate] : Invalidate
name: file0.txt
hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[Indexer] INFO : Pushing invalidation: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90
[Exchanger Invalidation] DEBUG : Connecting to peer: 3
[Exchanger Invalidation] DEBUG : Sending mode
[Exchanger Invalidation] DEBUG : sending hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90
[Indexer] INFO : TTL finished 7721487775885090099
[Registry] : New
ID: 3

```

    name: file0.txt
    hash: 6AAA22848C60483715FA71B87BFB3DE4A9C2C14A6DD8CAECDE650D386AEBD051

[Entry] DEBUG   : TTR Updated: file0.txt:-1
[Deregister]    : Erase entry
    name: file0.txt
    hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7
[Deregister]    : New
    ID: 3
    name: file0.txt
    hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[Registry] WARNING: Peer and Entry already refrence each other
    ID: 3
    hash: 6AAA22848C60483715FA71B87BFB3DE4A9C2C14A6DD8CAECDE650D386AEBD051

Client-1 > search file0
[indexRPCParse] INFO    : Searching server file index for: file0
[Indexer] DEBUG   : Request Search -1
[Search]          : Searching for query: file0
[Indexer] INFO    : Propagating query search 14638757213955201442 1
[Indexer] DEBUG   : Returning results
Hash: 6AAA22848C60483715FA71B87BFB3DE4A9C2C14A6DD8CAECDE650D386AEBD051
Added on 30/03/2022 21:50:29
    Name: file0.txt
    Peers: 2

Client-1 > q
[Console] INFO    : Exiting
[Folder] DEBUG   : Stopped watching path for changes
[Folder] DEBUG   : Stopped watching path for changes
[Exchanger] DEBUG : stopped receiving peer requests
[Indexer] INFO    : Stopping Client

```

Leaf-node 2

```

$ .\Client.exe -i 2 -s
[Indexer] INFO    : Running Client
[Indexer] DEBUG   : Connecting to index server at: 127.0.0.1:47900
[Indexer] INFO    : Server pinged! 0.156000ms
[Exchanger] DEBUG : Listening to port: 48902
[Console]          : Console start!
Client-2[File > ] DEBUG : Hashing file: file2.txt
[Folder] DEBUG   : File created: file2.txt
[Peer] INFO     : Registered hash: file2.txt

Client-2 > search file
[indexRPCParse] INFO    : Searching server file index for: file
Hash: 6F3FEF6DC51C7996A74992B70DOC35F328ED909A5E07646CF0BAB3383C95BB02

```

```

Added on 30/03/2022 21:43:41
    Name: file3.txt
    Peers: 1
Hash: C147EFCFC2D7EA666A9E4F5187B115C90903F0FC896A56DF9A6EF5D8F3FC9F31
Added on 30/03/2022 21:43:40
    Name: file1.txt
    Peers: 1
Hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7
Added on 30/03/2022 21:43:40
    Name: file0.txt
    Peers: 2
Hash: 3377870DFEAAA7ADF79A374D2702A3FDB13E5E5EA0DD8AA95A802AD39044A92F
Added on 30/03/2022 21:43:40
    Name: file2.txt
    Peers: 1
Client-2 > q
[Console] INFO    : Exiting
[Folder] DEBUG   : Stopped watching path for changes
[Folder] DEBUG   : Stopped watching path for changes
[Exchanger] DEBUG : stopped receiving peer requests
[Indexer] INFO    : Stopping Client

```

Leaf-node 3

```

$ .\Client.exe -i 3 -s
[Indexer] INFO    : Running Client
[Indexer] DEBUG   : Connecting to index server at: 127.0.0.1:47901
[Indexer] INFO    : Server pinged! 0.136000ms
[Exchanger] DEBUG : Listening to port: 48903
[Console]         : Console start!
Client-3[ > File] DEBUG : Hashing file: file3.txt
[Folder] DEBUG   : File created: file3.txt
[Peer] INFO      : Registered hash: file3.txt

Client-3 > list
[indexRPCParse] INFO    : Listing server file index
Hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7
Added on 30/03/2022 21:43:40
    Name: file0.txt
    Peers: 1
Hash: 3377870DFEAAA7ADF79A374D2702A3FDB13E5E5EA0DD8AA95A802AD39044A92F
Added on 30/03/2022 21:43:40
    Name: file2.txt
    Peers: 1
Hash: 6F3FEF6DC51C7996A74992B70DOC35F328ED909A5E07646CF0BAB3383C95BB02
Added on 30/03/2022 21:43:41
    Name: file3.txt
    Peers: 1

```

Hash: C147EFCFC2D7EA666A9E4F5187B115C90903F0FC896A56DF9A6EF5D8F3FC9F31

Added on 30/03/2022 21:43:40

Name: file1.txt

Peers: 1

Client-3 > request 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[indexRPCParse] INFO : Searching server peer index for: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[0] 127.0.0.1:48900

Client-3 > [Exchanger] DEBUG : Connecting to peer: 0:127.0.0.1:48900

[Exchanger Client] DEBUG : Sending mode

[Exchanger Client] DEBUG : Receiving server ID

[Exchanger Client] DEBUG : ID match, sending hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[Exchanger Client] DEBUG : Receiving file size and origin

[Exchanger Client] DEBUG : Origin get: 0:127.0.0.1:48900:0

[Exchanger Client] DEBUG : Valid filesize, notifying server: 5

[Exchanger Client] DEBUG : Streaming

[Exchanger Client] INFO : Finished streaming, storing local file

[File] DEBUG : Hashing file: file0.txt

[Exchanger Client] DEBUG : Running finished listener for hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[Peer] INFO : Registered hash: file0.txt

[File] DEBUG : Hashing file: file0.txt

[Folder] DEBUG : File created: file0.txt

[Exchanger] DEBUG : p2p conn: 127.0.0.1:58201

[Exchanger Server] DEBUG : InvalidateFile

[Exchanger Server] DEBUG : Hash size get: 64

[Exchanger Server] DEBUG : Hash get: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[Exchanger Server] DEBUG : Running invalidation listener for hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[Invalidator] DEBUG : Origin server to connect: 127.0.0.1:48900

[Exchanger] DEBUG : Connecting to peer: 0:127.0.0.1:48900

[Exchanger Client] DEBUG : Sending mode

[Exchanger Client] DEBUG : Receiving server ID

[Exchanger Client] DEBUG : ID match, sending hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[Exchanger Client] DEBUG : Receiving file size and origin

[Exchanger Client] DEBUG : Origin get: 0:127.0.0.1:48900:0

[Exchanger Client] DEBUG : Valid filesize, notifying server: 15

[Exchanger Client] DEBUG : Streaming

[Exchanger Client] INFO : Finished streaming, storing local file

[File] DEBUG : Hashing file: file0.txt

[Exchanger Client] DEBUG : Running finished listener for hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[Peer] INFO : Registered hash: file0.txt

[File] DEBUG : Hashing file: file0.txt

[Folder] DEBUG : File modified: file0.txt : 15

[Peer] INFO : Deregistered hash: 56F3FD843F7AE959A8409E0AE7C067A0E862A6FAA7A22BAD147EE90EE5992BD7

[Peer] INFO : Registered hash: file0.txt

Client-3 > q

[Console] INFO : Exiting

[Folder] DEBUG : Stopped watching path for changes

[Folder] DEBUG : Stopped watching path for changes

[Exchanger] DEBUG : stopped receiving peer requests
[Indexer] INFO : Stopping Client