Daniel Wojtowicz A20349975 CS 550: Advanced Operating Systems March 26th, 2018

Danutella Output

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I. Push Based Output

get p9-1k.txt

```
$ java -jar Peer.jar push
Please enter a command: get {filename}, files, edit {filename}, refresh, ? for help
 danutella-2000> get p9-1k.txt
danutella-2000> Received hitQuery from localhost:2009 meant for localhost:2000. Successfully downloaded p9-1k.txt from localhost:2009.
 File size: 1020 bytes.
<==|== Start of File Contents ==||==>
This is peer 9's file of size 1K. This is peer 9's file of size 1K. This is peer 9's
file of size 1K. This is peer 9's file of size 1K. This is peer 9's file of size 1K.
 This is peer 9's file of size 1K. This is peer 9's file of size 1K. This is peer 9's
file of size 1K. This is peer 9's file of size 1K. This is peer 9's file of size 1K. This is peer 9's file of size 1K. This is peer 9's file of size 1K. This is peer 9's file of size 1K. This is peer 9's
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 <==|== End of File Contents ==||==>
             MINGW64:/c/Users/Daniel/Projects/danutella/peer0
                                                                                                                                                                                                                 MINGW64:/c/Users/Daniel/Projects/danutella/peer1
                 file of size 1K. This is peer 9's file of size 1K. This is pee
                    ile of size 1K. This is peer 9's file of size 1K. This is peer 9's of size 1K. This is peer 9's file of size 1K. This is peer 9's for size 1K. This is peer 9's file of size 1K. This is peer 9
                                                                                                                                                                                                                      nielBDESKTOP-V9MS311 MINGW64 ~/Projects/danutella/peer1 (master)
java -jar Peer.jar push
ease enter a command: get {filename}, files, edit {filename}, refre
? for help
nutella-2001> Query from localhost:2000 for p9-1k.txt.
ceived hitQuery from localhost:2009 meant for localhost:2000.
                                                                                                                                                                                        ase gar reer.jar push
ase enter a command: get {filename}, files, edit {filename}, refre
ptella-2005, Oueny for a l
                                                                                                                                                                                                                         S3I1 MINGW64 ~/Projects/danutella/peer5 (master)
                                                                                                                                                                                                      help
-2005> Query from localhost:2001 for p9-1k.txt.
hitQuery from localhost:2009 meant for localhost:2000.
       TOP-V9MS3I1 MINGW64 ~/Projects/danutella/peer4 (master)
Peer.jar push
a command: get {filename}, files, edit {filename}, refres
                                                                                                                                                                                                                                MINGW64:/c/Users/Daniel/Projects/danutella/peer6
            > Query from localhost:2000 for p9-1k.txt.
                                                                                                                                                                                                                                   miel@DESKTOP-V9MS3I1 MINGW64 ~/Projects/danutella/peer6 (master)
java -jar Peer.jar push
ease enter a command: get {filename}, files, edit {filename}, refre:
? for help
nutella-2006> Query from localhost:2005 for p9-1k.txt.
ceived hitQuery from localhost:2009 meant for localhost:2000.
                                                                                                                                                                                                                                      MINGW64:/c/Users/Daniel/Projects/danutella/peer9
                                                             iiel0DESKTOP-V9M53II MINGW64 ~/Projects/danutella/peer8 (master)
java -jar Peer.jar push
aase enter a command: get {filename}, files, edit {filename}, refres
? for help
nutella-2008> Query from localhost:2004 for p9-1k.txt.
                                                                                                                                                                                                                                      naniel@blsKtOp-vymS311 kINom64 ~/Projects/damutelia/peer9 (mmster)
java -jar Peer.jar pub.
lease enter a command: get {filename}, files, edit {filename}, refres
, ? for help
lanutella-2009> Query from localhost:2006 for p9-1k.txt.
jound it! Sending hitQuery to localhost:2006
lending file p9-1k.txt directly over the network.
```

Figure 1: Shows the flow of queries and the resulting flow of hitQueries that goes backwards.

files (displaying list of files)

```
danutella-2000> files
List of Files:
 +++ p0-10k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
 +++ p0-1k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
 +++ p0-2k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
 +++ p0-3k.txt : { version: 0;
  state: VALÍD;
lastModified: 21:51:10;
  lastPolled: NOW
 +++ p0-4k.txt : {
  version: 0;
  state: VALÍD;
  lastModified: 21:51:10;
  lastPolled: NOW
}
 +++ p0-5k.txt : {
  version: 0;
  state: VALÍD;
lastModified: 21:51:10;
  lastPolled: NOW
}
 +++ p0-6k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
}
 +++ p0-7k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
 +++ p0-8k.txt : {
  version: 0;
  state: VALÍD;
  lastModified: 21:51:10;
  lastPolled: NOW
 +++ p0-9k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
   - p9-1k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:07;
lastPolled: 21:51:33
danutella-2000>
```

edit p9-1k.txt

peer9:

danutella-2009>edit p9-1k.txt
Invalidating p9-1k.txt; new version: 1
danutella-2009>

peer0:

danutella-2000> Invalidation received! p9-1k.txt version is now 1 Invalidation successful.

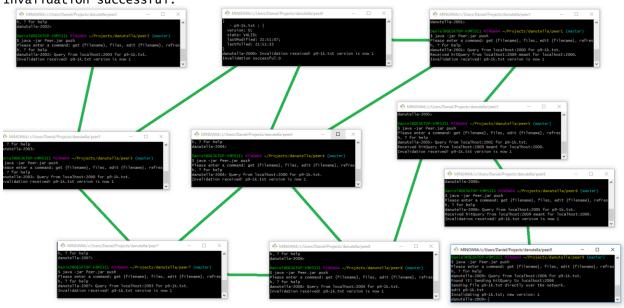


Figure 2: Shows invalidation message propagation.

Files

```
danutella-2000>files
List of Files:
 +++ p0-10k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
}
 +++ p0-1k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
 +++ p0-2k.txt : { version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
}
 +++ p0-3k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
 +++ p0-4k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
 +++ p0-5k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
 +++ p0-6k.txt : { version: 0;
  state: VALID;
lastModified: 21:51:10;
lastPolled: NOW
}
 +++ p0-7k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
}
 +++ p0-8k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
}
 +++ p0-9k.txt : {
  version: 0;
  state: VALID;
lastModified: 21:51:10;
  lastPolled: NOW
}
    - p9-1k.txt : {
  version: 0;

state: INVALID;

lastModified: 21:51:07;

lastPolled: 21:51:33
```

refresh

```
danutella-2000> refresh
Successfully refreshed p9-1k.txt
File size: 1020 bytes.
<==|== Start of File Contents ==||==>
This is peer 9's file of size 1K. This is peer 9's file of size 1K.
```

II. Pull Based Output

02-22-2018-20-00-41: Registering localhost: 2018 with file p1-1k.txt.

02-22-2018-20-13-04: Searching for p2-3k.txt: 1 peers found.

(Same as Push based with these small changes):

Polls every so often (configurable in code)

```
danutella-2000> Automatically polling...
get p9-1k.txt
danutella-2000> Automatically polling...
Received hitQuery from localhost:2009 meant for localhost:2000.
Successfully downloaded p9-1k.txt from localhost:2009.
File size: 1020 bytes.
<==|== Start of File Contents ==||==>
This is peer 9's file of size 1k. Th
```

File TTR expires after some pre-set amount of time:

```
danutella-2000> files
List of Files:
 +++ p0-10k.txt : {
  version: 0;
  state: VALÍD;
  lastModified: 22:01:23;
  lastPolled: NOW
 +++ p0-1k.txt : {
  version: 0;
  state: VALID;
lastModified: 22:01:23;
  lastPolled: NOW
 +++ p0-2k.txt : {
  version: 0;
  state: VALÍD;
lastModified: 22:01:23;
  lastPolled: NOW
 +++ p0-3k.txt : {
  version: 0;
  state: VALID;
  lastModified: 22:01:23;
  lastPolled: NOW
 +++ p0-4k.txt : {
  version: 0;
  state: VALÍD:
  lastModified: 22:01:23;
  lastPolled: NOW
```

```
+++ p0-5k.txt : {
  version: 0;
  state: VALID;
lastModified: 22:01:23;
  lastPolled: NOW
}
 +++ p0-6k.txt : {
  version: 0;
  state: VALID;
lastModified: 22:01:23;
  lastPolled: NOW
 +++ p0-7k.txt : {
  version: 0;
  state: VALID;
lastModified: 22:01:23;
  lastPolled: NOW
 +++ p0-8k.txt : {
  version: 0;
  state: VALID;
lastModified: 22:01:23;
  lastPolled: NOW
 +++ p0-9k.txt : { version: 0;
  state: VALID;
lastModified: 22:01:23;
   lastPolled: NOW
    - p9-1k.txt : {
  version: 0;

state: TTR_EXPIRED;

lastModified: 22:01:25;

lastPolled: 22:02:19
danutella-2000> Automatically polling...
After simulating edit on p9-1k.txt:
Automatically polling...
Invalidating p9-1k.txt. The poll gave back a newer version.
File after this auto-poll:
    - p9-1k.txt : {
  version: 0;
  state: INVALID;
lastModified: 22:01:25;
lastPolled: 22:04:23
```