Performance Result

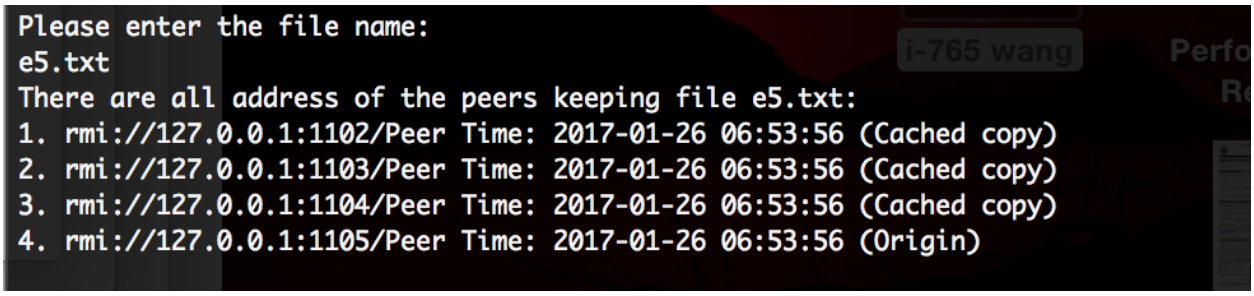
Restart all the Peers before test

Push

Set the model to Push.

	Invalidation Rate(%)
One Peer	0
Two Peers	0
Three Peers	0
Four Peers	0

For example:
Four Peers, all obtained file “e5.txt”.
The query result before modification of master copy:



The query result after modification of master copy:

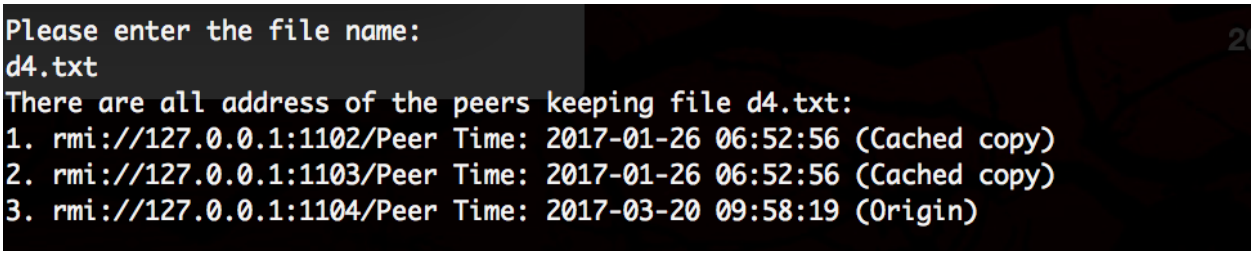
Pull

Set the model to Pull.

TTR = 60 sec	Invalidation Rate(%)
Two Peers	10
Three Peers	20

TTR = 120 sec	Invalidation Rate(%)
Two Peers	40
Three Peers	30

For example:
Three Peers, if we modify the master copy within the TTR time, there will exist incorrect result.



Comparison Between Push & Pull Model

Push

- Advantage:

1. Can rapidly refresh and update the state of file to other peers, since the server will broadcast the invalidation message immediately when its master copy was modified.

- Disadvantage:

1. Mostly depends on the performance of the origin peer.
2. The broadcast message may not be received by every peers due to the network stability.

- Applicability:

1. Can apply to the application which need frequently update.
2. Can apply to the application where users need the newest data of the files instantly.

Pull

- Advantage:

1. The update rely on the customs demands, which may decrease the load of network.
2. In every TTR time, each peer can be certain of the update of the data. Since peers will request the update intentionally.

- Disadvantage:

  May keep the old vision of data before next update request.

- Applicability:

  Can apply to the application where the update will not influence the main performance of the system.