

Readme.txt

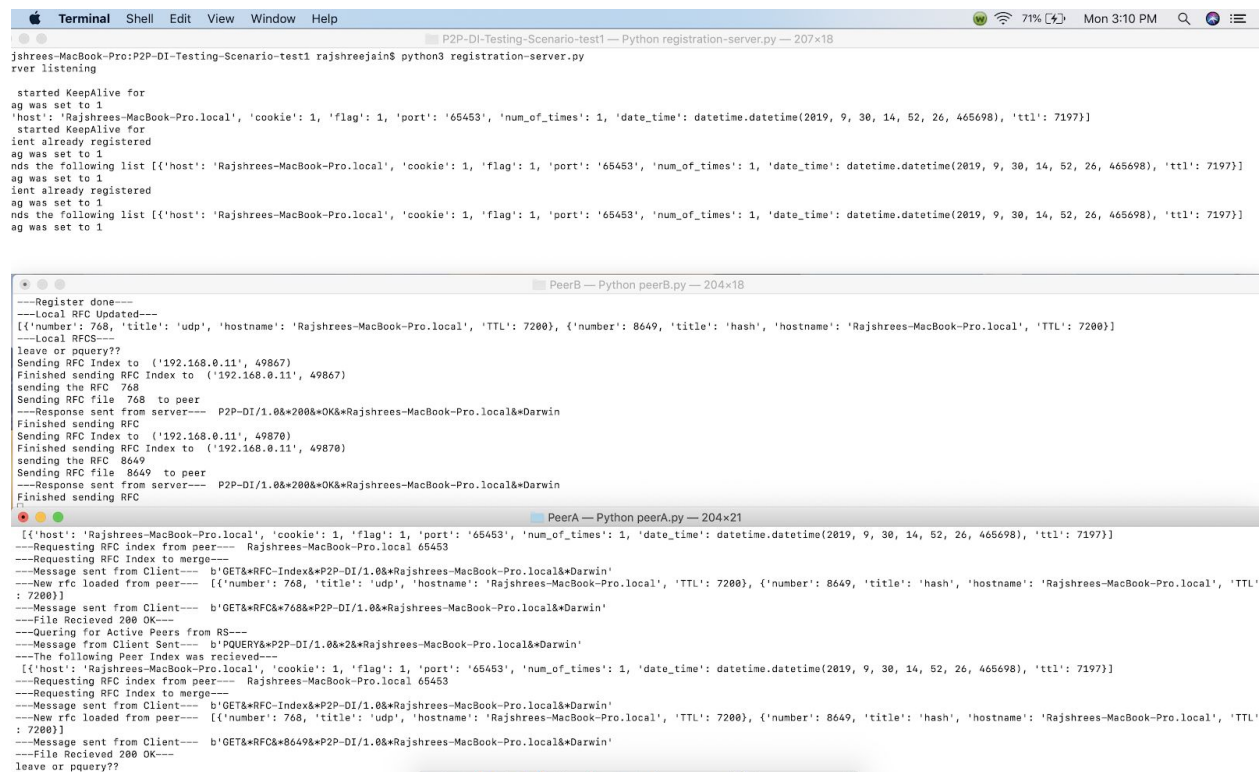
The exact running scenario has been recorded in video with the link below:

[TestScenario](#)

<<https://drive.google.com/file/d/1BnJbS2XYQwIPV5YPc2ttRCYosMyQNGOC/view?usp=sharing>>

1. The code runs with python3.7
2. Create 2 folders, PeerA and PeerB
3. Inside PeerA, paste the peer code (In ours we named it as peerA.py)
4. Inside PeerB, paste the peer code again (In ours we named it as peerB.py)
5. Inside PeerB, add the following 2 files
  1. We named the files accordingly for ease of use, rfc<number>-<title>.txt
  2. Rfc768-udp.txt
  3. Rfc8649-hash.txt
6. Change the need\_RFC\_list as follows : need\_RFC\_list = [768]
7. Since we ran in the same machine, we compared the ports to be different hosts
  1. Line 280 in PeerA and PeerB
8. Open up three terminals (since we did in the same machine)
  1. The first terminal, Run the registration server first: python3 registration-server.py
  2. A second terminal, cd PeerB, python3 peerB.py
  3. A third terminal, cd PeerA, python3 peerA.py
9. You will see A requesting the file 768 from B and downloading and saving it into its folder.
10. Type 'leave' in PeerB terminal, you can see changes done on terminal containing registration-server
11. Type 'pquery' in PeerA terminal, you can 'No active Peer' message in A's terminal

Screenshot attached for the entire scenario and message exchanged :



```
Terminal Shell Edit View Window Help
P2P-DI-Testing-Scenario-test1 — Python registration-server.py — 207x18
Rajshrees-MacBook-Pro:~$ python3 registration-server.py
rver listening

started KeepAlive for
ag was set to 1
'host': 'Rajshrees-MacBook-Pro.local', 'cookie': 1, 'flag': 1, 'port': '65453', 'num_of_times': 1, 'date_time': datetime.datetime(2019, 9, 30, 14, 52, 26, 465698), 'ttl': 7197}}
started KeepAlive for
ient already registered
ag was set to 1
nds the following list [{'host': 'Rajshrees-MacBook-Pro.local', 'cookie': 1, 'flag': 1, 'port': '65453', 'num_of_times': 1, 'date_time': datetime.datetime(2019, 9, 30, 14, 52, 26, 465698), 'ttl': 7197}}]
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ag was set to 1

PeerB — Python peerB.py — 204x18
---Register done---
---Local RFC Updated---
[{'number': 768, 'title': 'udp', 'hostname': 'Rajshrees-MacBook-Pro.local', 'TTL': 7200}, {'number': 8649, 'title': 'hash', 'hostname': 'Rajshrees-MacBook-Pro.local', 'TTL': 7200}]
---Local RFCs---
leave or pquery??
Sending RFC Index to ('192.168.0.11', 49867)
Finished sending RFC Index to ('192.168.0.11', 49867)
sending the RFC 768
Sending RFC file 768 to peer
---Response sent from server--- P2P-DI/1.0&200&OK&Rajshrees-MacBook-Pro.local&Darwin
Finished sending RFC
Sending RFC Index to ('192.168.0.11', 49870)
Finished sending RFC Index to ('192.168.0.11', 49870)
sending the RFC 8649
Sending RFC file 8649 to peer
---Response sent from server--- P2P-DI/1.0&200&OK&Rajshrees-MacBook-Pro.local&Darwin
Finished sending RFC

PeerA — Python peerA.py — 204x21
[{'host': 'Rajshrees-MacBook-Pro.local', 'cookie': 1, 'flag': 1, 'port': '65453', 'num_of_times': 1, 'date_time': datetime.datetime(2019, 9, 30, 14, 52, 26, 465698), 'ttl': 7197}}]
---Requesting RFC index from peer--- Rajshrees-MacBook-Pro.local 65453
---Requesting RFC Index to merge---
---Message sent from Client--- b'GET&RFC-Index&P2P-DI/1.0&Rajshrees-MacBook-Pro.local&Darwin'
---New rfc loaded from peer--- [({'number': 768, 'title': 'udp', 'hostname': 'Rajshrees-MacBook-Pro.local', 'TTL': 7200}, {'number': 8649, 'title': 'hash', 'hostname': 'Rajshrees-MacBook-Pro.local', 'TTL': 7200})]
---Message sent from Client--- b'GET&RFC&768&P2P-DI/1.0&Rajshrees-MacBook-Pro.local&Darwin'
---File Recieved 200 OK---
---Querying for Active Peers from RS---
---Message from Client Sent--- b'QUERY&P2P-DI/1.0&2&Rajshrees-MacBook-Pro.local&Darwin'
---The following Peer Index was recieved---
[{'host': 'Rajshrees-MacBook-Pro.local', 'cookie': 1, 'flag': 1, 'port': '65453', 'num_of_times': 1, 'date_time': datetime.datetime(2019, 9, 30, 14, 52, 26, 465698), 'ttl': 7197}}]
---Requesting RFC index from peer--- Rajshrees-MacBook-Pro.local 65453
---Requesting RFC Index to merge---
---Message sent from Client--- b'GET&RFC-Index&P2P-DI/1.0&Rajshrees-MacBook-Pro.local&Darwin'
---New rfc loaded from peer--- [({'number': 768, 'title': 'udp', 'hostname': 'Rajshrees-MacBook-Pro.local', 'TTL': 7200}, {'number': 8649, 'title': 'hash', 'hostname': 'Rajshrees-MacBook-Pro.local', 'TTL': 7200})]
---Message sent from Client--- b'GET&RFC&8649&P2P-DI/1.0&Rajshrees-MacBook-Pro.local&Darwin'
---File Recieved 200 OK---
leave or pquery??
```

For the experiments,

Almost same as above,

- 1) Create 6 folders as peer0, peer1, peer2, peer3, peer4, peer5
- 2) For centralised, put all the files into peer0. Update the need\_RFC\_list in the codes of peer1, peer2, peer3, peer4, peer5.
- 3) Start the registration-server.py , peer0.py first and then the other peers.
- 4) You can see the files getting transferred. Apart from that there are 2 other folders created in each peer index - index.txt and time.txt which contains the local index for each peer and the cumulative time for each peer. This was done for our ease in calculating the test cases.
- 5) Repeat the same for distributed. This time 10 files in each folder and update the need\_RFC\_list accordingly.