

Output of Gnutella P2P transfer

1. Mesh network (3X3)


i) Config properties

```
config.properties x
5 peerid.7.port=5007
6 peerid.8.ip=127.0.0.1
7 peerid.8.port=5008
8 peerid.9.ip=127.0.0.1
9 peerid.9.port=5009
0
1
2 # Neighbor details
3 #3X3 Mesh
4 peerid.1.neighbors=peerid.2,peerid.4
5 peerid.2.neighbors=peerid.1,peerid.3,peerid.5
6 peerid.3.neighbors=peerid.2,peerid.6
7 peerid.4.neighbors=peerid.1,peerid.5,peerid.7
8 peerid.5.neighbors=peerid.2,peerid.4,peerid.6,peerid.8
9 peerid.6.neighbors=peerid.3,peerid.5,peerid.9
0 peerid.7.neighbors=peerid.4,peerid.8
1 peerid.8.neighbors=peerid.5,peerid.7,peerid.9
2 peerid.9.neighbors=peerid.6,peerid.8
3
```


ii) Run 9 peers in separate instances as shown below

```
mkotapat@leaflock: ~  
mkotapat@leaflock:~$ java gnutellaP2P/Peer  
Enter the peerid  
1  
Enter the port  
6000  
Session for peer id: 1 started...  
Enter the shared directory  
/home/TTU/mkotapat/peer1  
Peer 1 acting as server on 127.0.0.1:6000  
***** Main Menu *****  
1. Search File  
2. Exit  
*****  
Select your choice  
█
```


```
mkotapat@leaflock: ~  
mkotapat@leaflock:~$ java gnutellaP2P/Peer  
Enter the peerid  
2  
Enter the port  
7002  
Session for peer id: 2 started...  
Enter the shared directory  
/home/TTU/mkotapat/peer2  
Peer 2 acting as server on 127.0.0.1:7002  
***** Main Menu *****  
1. Search File  
2. Exit  
*****  
Select your choice  
█  
  
mkotapat@leaflock: ~  
mkotapat@leaflock:~$ java gnutellaP2P/Peer  
Enter the peerid  
3  
Enter the port  
7003  
Session for peer id: 3 started...  
Enter the shared directory  
/home/TTU/mkotapat/peer3  
Peer 3 acting as server on 127.0.0.1:7003  
***** Main Menu *****  
1. Search File  
2. Exit  
*****  
Select your choice  
█
```

 mkotapat@leaflock: ~


```
mkotapat@leaflock:~$ java gnutellaP2P/Peer
Enter the peerid
4
Enter the port
7004
Session for peer id: 4 started...
Enter the shared directory
/home/TTU/mkotapat/peer4
Peer 4 acting as server on 127.0.0.1:7004
***** Main Menu *****
1. Search File
2. Exit
*****
Select your choice
█
```

 mkotapat@leaflock: ~


```
mkotapat@leaflock:~$ java gnutellaP2P/Peer
Enter the peerid
5
Enter the port
7005
Session for peer id: 5 started...
Enter the shared directory
/home/TTU/mkotapat/peer5
Peer 5 acting as server on 127.0.0.1:7005
***** Main Menu *****
1. Search File
2. Exit
*****
Select your choice
█
```

 mkotapat@leaflock: ~

```
mkotapat@leaflock:~$ java gnutellaP2P/Peer
Enter the peerid
6
Enter the port
7006
Session for peer id: 6 started...
Enter the shared directory
/home/TTU/mkotapat/peer6
Peer 6 acting as server on 127.0.0.1:7006
***** Main Menu *****
1. Search File
2. Exit
*****
Select your choice
█
```

 mkotapat@leaflock: ~

```
mkotapat@leaflock:~$ java gnutellaP2P/Peer
Enter the peerid
7
Enter the port
7007
Session for peer id: 7 started...
Enter the shared directory
/home/TTU/mkotapat/peer7
Peer 7 acting as server on 127.0.0.1:7007
***** Main Menu *****
1. Search File
2. Exit
*****
Select your choice
█
```

 mkotapat@leaflock: ~

```
mkotapat@leaflock:~$ java gnutellaP2P/Peer
Enter the peerid
8
Enter the port
7008
Session for peer id: 8 started...
Enter the shared directory
/home/TTU/mkotapat/peer8
Peer 8 acting as server on 127.0.0.1:7008
***** Main Menu *****
1. Search File
2. Exit
*****
Select your choice
█
```

 mkotapat@leaflock: ~

```
mkotapat@leaflock:~$ java gnutellaP2P/Peer
Enter the peerid
9
Enter the port
7009
Session for peer id: 9 started...
Enter the shared directory
/home/TTU/mkotapat/peer9
Peer 9 acting as server on 127.0.0.1:7009
***** Main Menu *****
1. Search File
2. Exit
*****
Select your choice
█
```

iii) Perform search in peer 1: Search for CommonFile1.txt

```
mkotapat@leaflock: ~  
Enter the port  
6000  
Session for peer id: 1 started...  
Enter the shared directory  
/home/TTU/mkotapat/peer1  
Peer 1 acting as server on 127.0.0.1:6000  
***** Main Menu *****  
1. Search File  
2. Exit  
*****  
Select your choice  
1  
Enter file name to search:  
CommonFile1.txt  
Message id for search: Peer1.Search1  
Sending request to peerid.2 7002  
Sending request to peerid.4 7004  
*** Search Paths ***  
Search Path: 12369  
Search Path: 145  
Search Path: 1478  
*****  
CommonFile1.txt File found in the network at below peers  
--Found at Peer3 , running on 127.0.0.1:7003  
--Found at Peer9 , running on 127.0.0.1:7009  
--Found at Peer5 , running on 127.0.0.1:7005  
--Found at Peer7 , running on 127.0.0.1:7007  
***Download Menu***  
1.Download file  
2.Exit  
*****  
Select operaion  
1  
Enter peer id to connect and download the file  
5  
Downloading from localhost:7005  
"CommonFile1.txt" downloaded to path: /home/TTU/mkotapat/peer1  
***** Main Menu *****
```

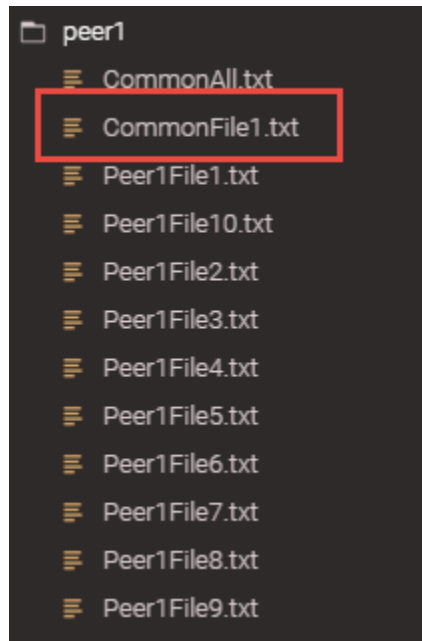
Observe the search paths which are done in Mesh network

Search Path: 12369

Search Path: 145

Search Path: 1478

File downloaded to peer1 directory



2. Star network (9 peers)

i) Config properties

```
34 #6 star network
35 peerid.1.neighbors=peerid.2,peerid.3,peerid.4,peerid.5,peerid.6,peerid.7,peerid.8,peerid.9
36 peerid.2.neighbors=peerid.1
37 peerid.3.neighbors=peerid.1
38 peerid.4.neighbors=peerid.1
39 peerid.5.neighbors=peerid.1
40 peerid.6.neighbors=peerid.1
41 peerid.7.neighbors=peerid.1
42 peerid.8.neighbors=peerid.1
43 peerid.9.neighbors=peerid.1
44
45
```

ii) Run 9 peers as shown above

iii) Perform search in peer 1 for CommonFile1.txt

```
***** Main Menu *****
1. Search File
2. Exit
*****
Select your choice
1
Enter file name to search:
CommonFile1.txt
Message id for search: Peer1.Search2
Sending request to peerid.2 7002
Sending request to peerid.3 7003
Sending request to peerid.4 7004
Sending request to peerid.5 7005
Sending request to peerid.6 7006
Sending request to peerid.7 7007
Sending request to peerid.8 7008
Sending request to peerid.9 7009
*** Search Paths ***
Search Path: 12
Search Path: 13
Search Path: 14
Search Path: 15
Search Path: 16
Search Path: 17
Search Path: 18
Search Path: 19
*****
CommonFile1.txt File found in the network at below peers
--Found at Peer3 , running on 127.0.0.1:7003
--Found at Peer5 , running on 127.0.0.1:7005
--Found at Peer7 , running on 127.0.0.1:7007
--Found at Peer9 , running on 127.0.0.1:7009
***Download Menu***
1.Download file
2.Exit
*****
Select operaion
1
Enter peer id to connect and download the file
7
Downloading from localhost:7007
"CommonFile1.txt" downloaded to path: /home/TTU/mkotapat/peer1
```

Observe the search paths which are done in star network

Search Path: 12
Search Path: 13
Search Path: 14
Search Path: 15
Search Path: 16
Search Path: 17
Search Path: 18
Search Path: 19

File downloaded to peer1 from peer 7 to folder /home/TTU/mkotapat/peer1

