

Input/output

Starting the servers in the background and executing the peer1 client.

 ubuntu@ip-172-31-25-36: ~

```
Using username "ubuntu".
Authenticating with public key "imported-openssh-key"
Welcome to Ubuntu 16.04.2 LTS (GNU/Linux 4.4.0-1035-aws x86_64)
```

```
* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:        https://ubuntu.com/advantage
```

```
Get cloud support with Ubuntu Advantage Cloud Guest:
http://www.ubuntu.com/business/services/cloud
```

```
50 packages can be updated.
0 updates are security updates.
```

```
Last login: Fri Sep 29 22:05:07 2017 from 208.59.144.84
```

```
ubuntu@ip-172-31-25-36:~$ python indexserver.py &
```

```
[1] 24069
```

```
ubuntu@ip-172-31-25-36:~$ python peer1s.py &
```

```
[2] 24070
```

```
ubuntu@ip-172-31-25-36:~$ python peer2s.py &
```

```
[3] 24071
```

```
ubuntu@ip-172-31-25-36:~$ python peer3s.py &
```

```
[4] 24072
```

```
ubuntu@ip-172-31-25-36:~$ python peer1c.py
```

```
Welcome Peer1:
```

```
1:Register
```

```
2:Search
```

```
3:Obtain
```



Registering of files from the peer clients (file1.txt has been registered from peer1 and peer2).

```
ubuntu@ip-172-31-25-36: ~  
Welcome Peer1:  
1:Register  
2:Search  
3:Obtain  
1  
Enter file_name and peer_name  
file1.txt peer1  
Welcome Peer1:  
1:Register  
2:Search  
3:Obtain  
1  
Enter file_name and peer_name  
file2.txt peer1  
Welcome Peer1:  
1:Register  
2:Search  
3:Obtain  
1  
Enter file_name and peer_name  
file3.txt peer1  
Welcome Peer1:  
1:Register  
2:Search  
3:Obtain  
1  
Enter file_name and peer_name  
file4.txt peer1  
Welcome Peer1:  
1:Register  
2:Search  
3:Obtain
```

Searching for file1.txt from the peer2 client.

```
ubuntu@ip-172-31-25-36: ~  
file1.txt peer2  
Welcome Peer2:  
1:Register  
2:Search  
3:Obtain  
1  
Enter file_name and peer_name  
file3.txt peer2  
Welcome Peer2:  
1:Register  
2:Search  
3:Obtain  
1  
Enter file_name and peer_name  
file4.txt peer2  
Welcome Peer2:  
1:Register  
2:Search  
3:Obtain  
2  
please enter file name to search  
file1.txt  
<type 'str'>  
('Files are present in:', 'peer1,peer2')  
Welcome Peer2:  
1:Register  
2:Search  
3:Obtain  
█
```

Downloading the file1.txt from peer1 by peer3 client.

```
ubuntu@ip-172-31-25-36: ~
Welcome to Ubuntu 16.04.2 LTS (GNU/Linux 4.4.0-1035-aws x86_64)

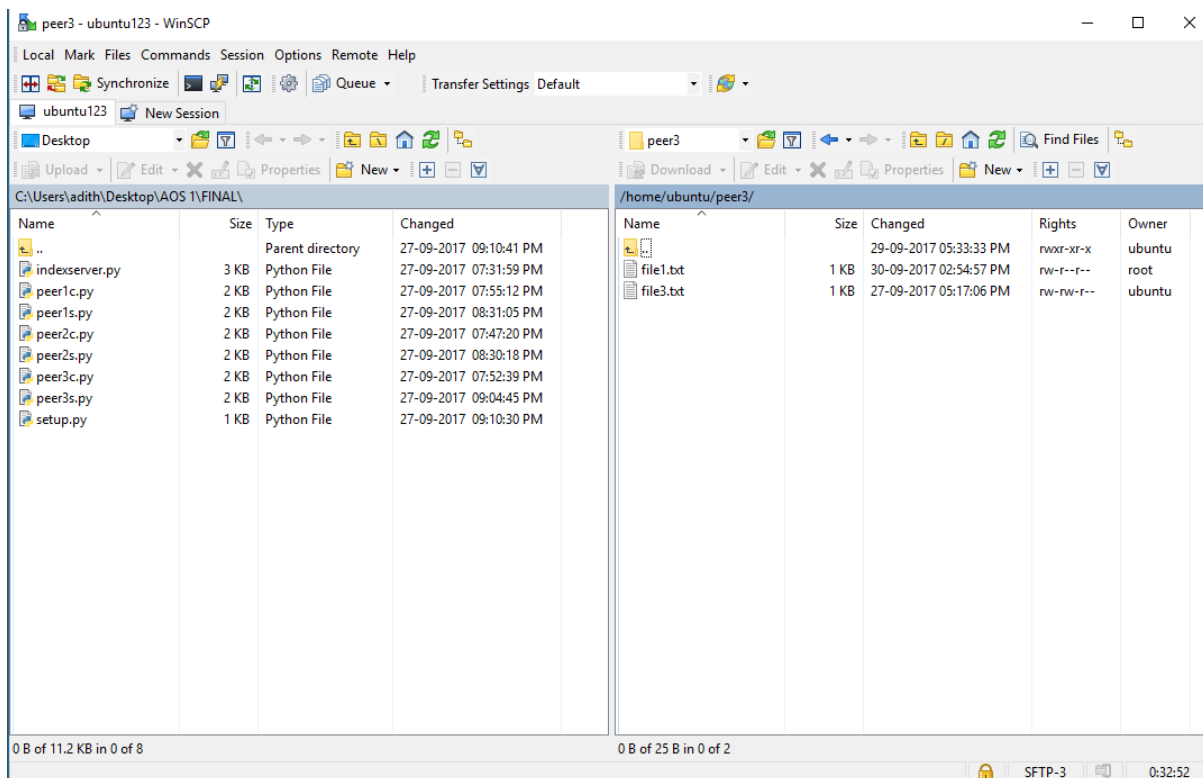
* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:        https://ubuntu.com/advantage

Get cloud support with Ubuntu Advantage Cloud Guest:
http://www.ubuntu.com/business/services/cloud

50 packages can be updated.
0 updates are security updates.

Last login: Sat Sep 30 19:46:24 2017 from 207.237.207.173
ubuntu@ip-172-31-25-36:~$ python peer3c.py
Welcome Peer3:
1:Register
2:Search
3:Obtain
3
Enter the peer_name and file_name
peer1 file1.txt
File has been downloaded to :/home/ubuntu/peer3
Welcome Peer3:
1:Register
2:Search
3:Obtain
```

The file is present in peer3.



The screenshot shows the WinSCP interface with two panes. The left pane displays the local directory structure on the desktop, and the right pane displays the remote directory structure on the peer3 client.

Name	Size	Type	Changed
..		Parent directory	27-09-2017 09:10:41 PM
indexserver.py	3 KB	Python File	27-09-2017 07:31:59 PM
peer1c.py	2 KB	Python File	27-09-2017 07:55:12 PM
peer1s.py	2 KB	Python File	27-09-2017 08:31:05 PM
peer2c.py	2 KB	Python File	27-09-2017 07:47:20 PM
peer2s.py	2 KB	Python File	27-09-2017 08:30:18 PM
peer3c.py	2 KB	Python File	27-09-2017 07:52:39 PM
peer3s.py	2 KB	Python File	27-09-2017 09:04:45 PM
setup.py	1 KB	Python File	27-09-2017 09:10:30 PM

Name	Size	Changed	Rights	Owner
..		29-09-2017 05:33:33 PM	rw-r-xr-x	ubuntu
file1.txt	1 KB	30-09-2017 02:54:57 PM	rw-r--r--	root
file3.txt	1 KB	27-09-2017 05:17:06 PM	rw-rw-r--	ubuntu