COMP 7005
Computer Networks & Protocols

Assignment-02

Testing

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Test	Expected	Actual	Screenshot
IP is not proper length	fail	fail	Test 1
IP segment out of range	fail	fail	Test 2
IP have a char in it	fail	fail	Test 3
Port number is put of range	fail	fail	Test 4
Port number have a char in it	fail	fail	Test 5
Port number have 0s in front (eg 0022)	fail	fail	Test 6
Incorrect number of arguments	fail	fail	Test 7
2 consecutive dots in IP (eg 10..0.0.1)	fail	fail	Test 8
Empty file name	fail	fail	Test 9
Empty IP	fail	fail	Test 10
Empty port	fail	fail	Test 11
Empty key	fail	fail	Test 12
IP ending with start or end with dot	fail	fail	Test 13
Numbers in Key	fail	fail	Test 14
Small line with !	pass	pass	Test 15
one line sentence	pass	pass	Test 16
one letter file	pass	pass	Test 17
Sending Numbers to Encrypt (Remained unchanged)	pass	pass	Test 18
Sending Symbols to Encrypt (Remained unchanged)	pass	pass	Test 19
combination of alphabets, number and symbols	pass	pass	Test 20
Upper case alphabets	pass	pass	Test 21
Lower Case alphabets	pass	pass	Test 22
Upper Case + Lower Case	pass	pass	Test 23
Empty File	fail	fail	Test 24
File with Just Spaces	pass	pass	Test 25

ASCII Code (Remain Unchange)	pass	pass	Test 26
Long File	pass	pass	Test 27
Not a Text file but HML	pass	pass	Test 28

Tests

Test 01


```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0 -p 80 -f da
ta.txt -key test
Error: Invalid IP Address format. Expected format: xxx.xxx.xxx.xxx
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0 -p 80
Error: Invalid IP Address format. Expected format: xxx.xxx.xxx.xxx
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$
```

Test 02


```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.300 -p 80
-f data.txt -key test
Error: Invalid IP Address format. Expected format: xxx.xxx.xxx.xxx
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.300 -p 80
Error: Invalid IP Address format. Expected format: xxx.xxx.xxx.xxx
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$
```

Test 03


```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.a -p 80 -
f data.txt -key test
Error: Invalid IP Address format. Expected format: xxx.xxx.xxx.xxx
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.b -p 80
Error: Invalid IP Address format. Expected format: xxx.xxx.xxx.xxx
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$
```

Test 04


```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 700
00 -f data.txt -key test
Error: Invalid Port. Must be a number between 1 and 65535.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 80000
Error: Invalid Port. Must be a number between 1 and 65535.
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$
```

Test 05

```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 7a
-f data.txt -key test
Error: Invalid Port. Must be a number between 1 and 65535.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 8a
Error: Invalid Port. Must be a number between 1 and 65535.
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$
```

Test 06

```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 070
-f data.txt -key test
Error: Invalid Port. Must be a number between 1 and 65535.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 080
Error: Invalid Port. Must be a number between 1 and 65535.
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$
```

Test 07

```
anmol@anmols-x1: ~/Documents/BCIT/UNIX_Network_Sockets/source
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 70
-f data.txt -key test -test
Usage: -ip <IP Address> -p <Port> -f <Filename> -key <Keyword>
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s: ~/BCIT/UNIX_Network_Sockets/source
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 80 -test
Usage: -ip <IP Address> -p <Port>
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$
```

Test 08

```
anmol@anmols-x1: ~/Documents/BCIT/UNIX_Network_Sockets/source
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 70
-f data.txt -key test
Error: Invalid IP Address format. Expected format: xxx.xxx.xxx.xxx
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s: ~/BCIT/UNIX_Network_Sockets/source
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0..30 -p 80 -test
Usage: -ip <IP Address> -p <Port>
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$
```

Test 09

```
anmol@anmols-x1: ~/Documents/BCIT/UNIX_Network_Sockets/source
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0..30 -p 70
-f -key test
Usage: -ip <IP Address> -p <Port> -f <Filename> -key <Keyword>
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s: ~/BCIT/UNIX_Network_Sockets/source
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$
```

Test 10

anmol@anmols-x1: ~/Documents/BCIT/UNIX_Network_Sockets/source

anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip -p 70 -f data.tx
t -key test
Usage: -ip <IP Address> -p <Port> -f <Filename> -key <Keyword>
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$

anmol@Anmol-T470s: ~/BCIT/UNIX_Network_Sockets/source

anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip -p 80
Usage: -ip <IP Address> -p <Port>
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$

Test 11

anmol@anmols-x1: ~/Documents/BCIT/UNIX_Network_Sockets/source

anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p -f
data.txt -key test
Usage: -ip <IP Address> -p <Port> -f <Filename> -key <Keyword>
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$

anmol@Anmol-T470s: ~/BCIT/UNIX_Network_Sockets/source

anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p
Usage: -ip <IP Address> -p <Port>
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$

Test 12

anmol@anmols-x1: ~/Documents/BCIT/UNIX_Network_Sockets/source

anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 80
-f data.txt -key
Usage: -ip <IP Address> -p <Port> -f <Filename> -key <Keyword>
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$

anmol@Anmol-T470s: ~/BCIT/UNIX_Network_Sockets/source

anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$

Test 13

```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30. -p 80
-f data.txt -key test
Error: Invalid IP Address format. Expected format: xxx.xxx.xxx.xxx
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip .10.0.0.30 -p 80
Error: Invalid IP Address format. Expected format: xxx.xxx.xxx.xxx
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$
```

Test 14

```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f data.txt -key 123
Error: Keyword can't have numeric value.
Error: Keyword cannot be empty.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
```

Test 15

```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f ../data/test01.txt -key hello
Creating socket...
Socket Created
Connected to the server...
Message sent to the server.

Encrypted message received from the server:
Oiwwc Dscwr!
Disconnected from the server.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
Client connected.
Message received from client.
Key received from client: hello
Encrypted message sent back to client.
Client disconnected.

Waiting for a client...
```

Test 16


```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f ../data/test02.txt -key hello
Creating socket...
Socket Created
Connected to the server...
Message sent to the server.

Encrypted message received from the server:
Alp bipgv mfvay qce nfxdz sgpf alp wogc ozu.
Disconnected from the server.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
Client connected.
Message received from client.
Key received from client: hello
Encrypted message sent back to client.
Client disconnected.

Waiting for a client...
```

Test 17


```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f ../data/test03.txt -key hello
Creating socket...
Socket Created
Connected to the server...
Message sent to the server.

Encrypted message received from the server:
H
Disconnected from the server.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
Client connected.
Message received from client.
Key received from client: hello
Encrypted message sent back to client.
Client disconnected.

Waiting for a client...
```

Test 18


```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f ../data/test04.txt -key hello
Creating socket...
Socket Created
Connected to the server...
Message sent to the server.

Encrypted message received from the server:
1234567890
Disconnected from the server.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
Client connected.
Message received from client.
Key received from client: hello
Encrypted message sent back to client.
Client disconnected.

Waiting for a client...
```

Test 19


```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f ../data/test05.txt -key hello
Creating socket...
Socket Created
Connected to the server...
Message sent to the server.

Encrypted message received from the server:
@#$%^&*()_+{}|:<>?
Disconnected from the server.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
Client connected.
Message received from client.
Key received from client: hello
Encrypted message sent back to client.
Client disconnected.

Waiting for a client...
```

Test 20


```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f ../data/test06.txt -key hello
Creating socket...
Socket Created
Connected to the server...
Message sent to the server.

Encrypted message received from the server:
Weddk0yh123!
Disconnected from the server.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
Client connected.
Message received from client.
Key received from client: hello
Encrypted message sent back to client.
Client disconnected.

Waiting for a client...
```

Test 21


```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f ../data/test07.txt -key hello
Creating socket...
Socket Created
Connected to the server...
Message sent to the server.

Encrypted message received from the server:
HFNOSMKSTXRPXYCWUCDHBZHIMG
Disconnected from the server.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
Client connected.
Message received from client.
Key received from client: hello
Encrypted message sent back to client.
Client disconnected.

Waiting for a client...
```

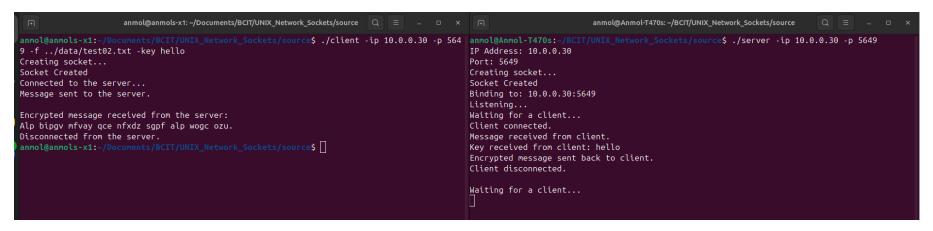## Test 22


```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f ../data/test08.txt -key hello
Creating socket...
Socket Created
Connected to the server...
Message sent to the server.

Encrypted message received from the server:
hfnosmkstxrpxycwucdhbzhimg
Disconnected from the server.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
Client connected.
Message received from client.
Key received from client: hello
Encrypted message sent back to client.
Client disconnected.

Waiting for a client...
```

Test 23


```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f ../data/test09.txt -key hello
Creating socket...
Socket Created
Connected to the server...
Message sent to the server.

Encrypted message received from the server:
eck IMG
Disconnected from the server.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
Client connected.
Message received from client.
Key received from client: hello
Encrypted message sent back to client.
Client disconnected.

Waiting for a client...
```

Test 24

Left terminal:
```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f ../data/test10.txt -key hello
Error: File '../data/test10.txt' is empty.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

Right terminal:
```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
```

Test 25

Left terminal:
```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f ../data/test11.txt -key hello
Creating socket...
Socket Created
Connected to the server...
Message sent to the server.

Encrypted message received from the server:


Disconnected from the server.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

Right terminal:
```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
Client connected.
Message received from client.
Key received from client: hello
Encrypted message sent back to client.
Client disconnected.

Waiting for a client...
```

Test 26

anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f ../data/test12.txt -key hello
Creating socket...
Socket Created
Connected to the server...
Message sent to the server.

Encrypted message received from the server:
你好，世界！ Привет, мир!
Disconnected from the server.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$

anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
Client connected.
Message received from client.
Key received from client: hello
Encrypted message sent back to client.
Client disconnected.

Waiting for a client...

Test 27

anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 5649 -f ../data/test13.txt -key hello
Creating socket...
Socket Created
Connected to the server...
Message sent to the server.

Encrypted message received from the server:
Alp Tawene cm Ecewmmntos Myessptrsugp zb Zsntsac

Tyhysofqamzy
Oyxtqwjmlw Wuxpwzpkpyql (ET) soz vlawkpj pjvpgpr mvzx o myeffpwetq jsynswx ez o myyootiyeos tlch vj zff ketwm smgpg. Mvzx jvmnp ozwtdhhred zpop Dwym lyr Hppio as nzawppi ahgstbl pplfumyr oskzcwalxd rymgtbn efecusxziz zpswjppd, OP lld dlrpefhxpo jhvtzlz wpnhvvd, cscswfhpsytnprr scd ap hcyo, nzatyytqhxp, lbk ptgs. Hw LT qvretbbld ec hhglbji, te pymyrg lses dysxtgprr zdwscelumetsz eyo gpkyttpglyh jllwzlrrpg alle gvgtphf qfdh uegtuhxp noylqfzsc.

Ess Lzzwlamzy cm ET
LW oed l fpgs swzxzcm keetbn flny as ess 1950z aspb yidpoygspfz fprou hpgsssatbn ewrcymesaz glaoipp zt tmxtqrnyr vbqly wuxpwzpkpyql. Sgpf alp osjeopg, H M slg lzzwjlh qcct wtxdsi cfzl-fldsk wjdhlqd ec zsaswzxtnoaio ysbvlw blxhzfrw esoa gly dysnpgz zldh hqzfbaw zq rhxl lbk pplfu jcza px. Htho fcporxsccbks d wu hppd silcbprr, yoayclz seyrihkp afvgpdgprr, lbk vzmcamnd, OP wjdhlqd ycd wfcdhwd sitey nowemtzpxtpg pr dpjlvlw rvqltbz, mynzbhtyu tiotqhp otonrzdwz, klxwuk, lyr mmylbjmlw tvvpnozxtyu.

HM ty Scicjrhc Wttl
ET soz wplasiddzf myesnvlesk myec cectcbw lddlged cm lfxou ptqs, lrslbjmyr qvrgpbpiyns hro ptmmntsugj. Dcti vpm hvplg dlpcs HM awofw l gwaew ccsi tyqsyo p:

1. Vlewevjecp
OP-hctjlr ezcsw ldgpwe ocjxzcg pr otonrzdwuk otgledpg, wwpowjxtyu weetsux zfhjsxpg, hro csjsxxsuhtyu wicdcuewtnlh ecshxxpbaw. Xlqomyp zlecywuk xzrlpd lb hpjks tiotqhp txonid hwal cpahvvlpsi lnqbvlnm, lrlmzprr poypj osainewwr zq qvrothpsyd zpop nougpc ouh spoyx otgledp. OP-tzhsyio nvhxmzhz eyo jpvefos edd wzxlyhz ewdc wvzgwki xprpglw okztns, pqacccmyr ojgpdgpftwwac ez vlewevjecp glvgtqlw.

2. Mfgprpdg hro Qwueyns
Jsxaoumpd zlzpconi LT hv saewtmkp cwiclhpsyd, obxzxoai cpdlxtewci elgrw, lyr lrslbji nfgasxpf lbapfpiyns. HM-ocwciy lbhpjewjw spzw ffdwuiddsz qlvs keel-rymgpb kintgpsyd, rlxpnh mvlfrbppyh avlyghgetcuw, lyr zxcpotptys zyaazf gslwuw. Qtbhrntos mydhpxfewvrd fgl ET-acdicpr avlowuk lwuvvtevtw ez dylotqa qlcy lx ecsuhd lbk qliwtmkp wuzpdhtiye flxfcbz.

3. Iofqhxtzb
HM td hyeydtvvxtbn iofqhxtzb ic acccmotbn tpcgvrlwwglo wshvytbn liasympyqlw elwsscpr as tyrpztoihp deikiye bliod. Wuxpwzpkpyh ayezfprr dnzxpxg, cmceihp nwozwczctw, lyr HM-ocwciy lgziddalred vlpa prbglecyw tosuxtqm silcbprr roww lyr wvzgwki elfniepr zyaacyx. LT oswz liasxlhlw loaprtdhyeetjl xldyz, ewwcdm yr hlenssyw ez tvgfd avvp zb prdefbgetcu eyo alrezfzlta.

4. Hyeyddvvelhpsy
Evl vtds vj lfhvrzxcbw gpvpgwpg zlzhqhwpd OP'w azhlretos xz cscswfhpsytnl xclbztzchhxtzb. Ziwq-rymgtbn glcg bwp LW hprzfpxsxg as yljpkles avlqtpg, ophlg e zpzxlnzlw, lyr vtetapdp ccbxpd, flhfnwuk lnqphpyhz glfglh mj vbqly syvzc. OP ewdc pqacccid efhjqtq teylulqpyh, lrslbjid aliptn hyeyddvvelhpsy dnzxpxg, hro ncuxctpbxpd hv xsp rlzpwcwqpyh vj dxoyx nthpid.

5. Pbalceoprxpba eyo Alhtl
OP myqzbiynsz xsp suxpchhnyxsux tyrbwecm ic cpqvqxpbkmyr qvrepba fldsk sy fglv acsmicpbjid. Dhyilxwuk dpfcmnpg smvp Blxqwwe eyo Gwsettf yetzpdp LW hprzf pxsxg as dfunide avztpg, tydtq, hro EJ zlzhg. HM-ocwciy ecvpd lzzs rpblvles yllwwzxtn uyeaswjw, lfhvqles cmopc lhtewuk, lyr jvplhl myesyenewci rlaprr pl wictsugpd.

Saltnos eyo Gvgtlz Pqawwjeetcuw
Hswsi LT dyldpbaw txalrdp plrpqwaw, te oswz copwpd saltnos eyo gvgtphhp nzbjicyg alle abwe ms hhocszwpo hv iydiyi cpgwsydwipp lbk ibfwaemws bwp.

1. Uci Htddsenpalre
LW-kvtgsu efecteetcu xscshxpyg as cpdsenp xvfd lqysdd jhvtziz myoizxctsz, tlchpgfwoypj tb teyfthgeffprr, nizxzxsy wpcjpgp, lbk hleo lrecm. Dltws HM ncsh xpd bla uzp vtazfayythpid tb ains-flplesk jtpzkw, te wz gcfqpew ec yidvwsp lyr btdvwsp ess dscvtvvnp hv eolda xz evl igzzcmyr xvf wlbkwnldl.

2. Ftlg hro Qopvypgz
ET xckiwd zlecy tysx plpwetbn hleo, dltnv tej ncuxltb imldsz xslh jey wshh er rpwncwtmylhvvj ziagzxsz. Ftlglh LT gfwepaz gly dlvaphbeep gvgtlz prpbihpte wlw ty vpvtyu, seh pbmscnstiye, ouh wpbkmyr. Suwfcwuk qlwyrpdg pr LT rlgtdwvr-xlyprr csxytcsz htgsywp lbk vpaflwpyhhxtgs keelglxd, cwnscziz xpdhprr, lbk xclbztlcsugj tb hprzfpxsxwj tczqlwdpg.

3. Wvtgojc lyr Zlnffpxj
LW'z emtzpxj ec wvznszw glga exziuxd zt wicdcuew ooae clwzid ncugpcbz emzia tctjhgj lbk wpniymej. Thgtlz yinzuumetcu xpnvuswzuf, wznwhp xprpe lwuvvtevtw, lyr zycgsppwlbji djgaixd qhr tytynyrs vr tyrpztoihpd' cwnled wm rze flkfwoaio afvtpczf. Mxazlqpyhprr dhymne rhxl afvxpnhpsy wodw lyr lxstqhp LT tyexpk vvvd wz iddsuxtlz as dltlkflfk tctjhgj.

4. Phomnlz Kintgpsy-Xormyr
OP-tzhsyio dnzxpxg hvp tbjvplgprrwm bwpo wu gcthpglw rlgtdwvr-xlyprr afvgpdglw, dfqo ed nfpqtyos nfdhpgp lbk lplzalnlfl. Lzhscic, LW senvg oyxlb qyoralr e lbk ieswjew cshwzywuk, hswjl nlb silo hv yytbaiyosk gzyglufpbjid. Pgaemwwzltyu nytossmypg msc phomnlz HM opdssjxsux lyr lrdffprr sitey zjlvdtuox ty qy metqhp ladsmnlhpsyd wz zteos.

Xsp Tbxfcs vj LT
Oz ET ncuxtyllw ez scswgs, pxd tawene cu wznwlxj hwsp zyzf kczk. Myeffl eogougpxsuxd xof pplr as mcshoesfvyrsg pr lcshw dfqo ed bihrefa jsxaiamyr, pyety -qvqafhlv tyhlvqlqlw, lyr niypfhp LT—ou ET dmzxpx hoee aczwpdglw sfahr-wtyl vplgvrtyu hftwwampd. Hv qliwtmkp OP'w azhlretos astzl qtewneetbn vtdyz, gzwz hfzcoamzy plxhpsu kzgsyrxpbaw, tyrbwecwlw, lyr yidpoygspfz md ysjiddoyc.

Nzbjpfdwvr
Lchpjtnwhp Tyhlpwtulrnp wz e azklvqfz mscns zllawuk ess myeffl sq dcjnpem. Dltws px zqtlvd efhrdqcyqlewci mpbljteg pr sposxsnoyi, mfgprpdg, lhfnoamzy, h yeyddvvelhpsy, lbk iyesyxltbtiye, wa ewdc wsdpg zmrywmmnlba gslzslyrsz vpwoaio ec lxstqz, tctjhgj, lbk ixazvcxpba. Fj qczxpcwuk cpgwsydwipp LW kigpzvtxp ba eyo wttwpalrelhpsy, dcjnpem jey soyrpdg HM'd acaiyewhp qzf alp rfleepf nszo komwp suwfcwuk qlwyrpdg, avlygwecpbjc, lyr prnwizmgthf my thz eaazpglewvr d.
PBK9999

---

anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
Client connected.
Message received from client.
Key received from client: hello
Encrypted message sent back to client.
Client disconnected.

Waiting for a client...

Test 28

Left terminal:
```
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$ ./client -ip 10.0.0.30 -p 564
9 -f ../data/test14.HTML -key hello
Creating socket...
Socket Created
Connected to the server...
Message sent to the server.

Encrypted message received from the server:
Oiwwc Dscwr!!!

Disconnected from the server.
anmol@anmols-x1:~/Documents/BCIT/UNIX_Network_Sockets/source$
```

Right terminal:
```
anmol@Anmol-T470s:~/BCIT/UNIX_Network_Sockets/source$ ./server -ip 10.0.0.30 -p 5649
IP Address: 10.0.0.30
Port: 5649
Creating socket...
Socket Created
Binding to: 10.0.0.30:5649
Listening...
Waiting for a client...
Client connected.
Message received from client.
Key received from client: hello
Encrypted message sent back to client.
Client disconnected.

Waiting for a client...
```