

Last login: Fri Aug 4 13:02:37 on ttys003

```
The default interactive shell is now zsh.
To update your account to use zsh, please run `chsh -s /bin/zsh`.
For more details, please visit https://support.apple.com/kb/HT208050.
Ankits-MacBook-Air:Program1 ankit$ ls
client1.c      readme copy.txt server1.c
Ankits-MacBook-Air:Program1 ankit$ gcc -o s server1.c
Ankits-MacBook-Air:Program1 ankit$ ./s 1
Server deployed and running without any errors
```

```
Received packet from client:
Packet number: 1
Packet size: 18
Content: Payload
```

```
-----Packet Number 1-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
DATA                   : "0XFFF1"
Segment Number         : "1"
Length of payload      : "0X8"
End of Packet ID       : "0XFFFF"
=====
```

## Packet 1 and its ACK

```
Server: Packet accepted. Sending an ack.
Size of ACK: 10 Bytes
```

```
----ACK from Server 1----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
ACK                     : "0XFFF2"
Received Segment Number : "1"
End of Packet ID       : "0XFFFF"
=====
```

```
Received packet from client:
Packet number: 2
Packet size: 18
Content: Payload
```

```
-----Packet Number 2-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
DATA                   : "0XFFF1"
Segment Number         : "2"
Length of payload      : "0X8"
End of Packet ID       : "0XFFFF"
=====
```

Server: Packet accepted. Sending an ack.  
Size of ACK: 10 Bytes

## Packet 2 and its ACK

```
-----ACK from Server 2-----  
Start of Packet ID      : "0XFFFF"  
Client ID               : "0XFF"  
ACK                     : "0XFFF2"  
Received Segment Number : "2"  
End of Packet ID       : "0XFFFF"  
-----
```

~/Desktop/Program1 — s 1

Received packet from client:  
Packet number: 3  
Packet size: 18  
Content: Payload

```
-----Packet Number 3-----  
Start of Packet ID      : "0XFFFF"  
Client ID               : "0XFF"  
DATA                    : "0XFFF1"  
Segment Number         : "3"  
Length of payload       : "0X8"  
End of Packet ID       : "0XFFFF"  
-----
```

## Packet 3 and its ACK

Server: Packet accepted. Sending an ack.  
Size of ACK: 10 Bytes

```
-----ACK from Server 3-----  
Start of Packet ID      : "0XFFFF"  
Client ID               : "0XFF"  
ACK                     : "0XFFF2"  
Received Segment Number : "3"  
End of Packet ID       : "0XFFFF"  
-----
```

Received packet from client:  
Packet number: 4  
Packet size: 18  
Content: Payload

```
-----Packet Number 4-----  
Start of Packet ID      : "0XFFFF"  
Client ID               : "0XFF"  
DATA                    : "0XFFF1"  
Segment Number         : "4"  
Length of payload       : "0X8"  
End of Packet ID       : "0XFFFF"  
-----
```

## Packet 4 and its ACK

Server: Packet accepted. Sending an ack.  
Size of ACK: 10 Bytes

```
-----ACK from Server 4-----  
Start of Packet ID      : "0XFFFF"  
Client ID               : "0XFF"  
ACK                     : "0XFFF2"  
Received Segment Number : "4"  
End of Packet ID       : "0XFFFF"  
-----
```

Received packet from client:  
Packet number: 5  
Packet size: 18  
Content: Payload

```
-----Packet Number 5-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
DATA                   : "0XFFF1"
Segment Number         : "5"
Length of payload      : "0X8"
End of Packet ID       : "0XFFFF"
=====
```

Server: Packet accepted. Sending an ack.  
Size of ACK: 10 Bytes

```
-----ACK from Server 5-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
ACK                    : "0XFFF2"
Received Segment Number : "5"
End of Packet ID       : "0XFFFF"
=====
```

## Packet 5 and its ACK

Resetting the counter to test other cases

Received packet from client:  
Packet number: 1  
Packet size: 18  
Content: Payload

```
-----Packet Number 1-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
DATA                   : "0XFFF1"
Segment Number         : "1"
Length of payload      : "0X8"
End of Packet ID       : "0XFFFF"
=====
```

Server: Packet accepted. Sending an ack.  
Size of ACK: 10 Bytes

```
-----ACK from Server 1-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
ACK                    : "0XFFF2"
Received Segment Number : "1"
End of Packet ID       : "0XFFFF"
=====
```

## Test case 1: Packet accepted

```
Received packet from client:
Packet number: 1
Packet size: 18
Content: Payload
```

```
-----Packet Number 1-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
DATA                   : "0XFFF1"
Segment Number          : "1"
Length of payload       : "0X8"
End of Packet ID        : "0XFFFF"
-----
```

```
Server: Packet Rejected.
Error: Duplicate Packet
```

## Test case 2: Error - Duplicate packet

```
-----Reject Packet 1-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
REJECT                  : "0XFFF3"
Reject sub code          : "0XFFF7"
Received Segment Number : "1"
End of Packet ID        : "0XFFFF"
-----
```

```
Received packet from client:
Packet number: 3
Packet size: 18
Content: Payload
```

```
-----Packet Number 3-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
DATA                   : "0XFFF1"
Segment Number          : "3"
Length of payload       : "0X8"
End of Packet ID        : "0XFFFF"
-----
```

```
Server: Packet Rejected.
Error: Packet out of sequence
```

## Test case 3: Error - Packet out of sequence

```
-----Reject Packet 3-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
REJECT                  : "0XFFF3"
Reject sub code          : "0XFFF4"
Received Segment Number : "3"
End of Packet ID        : "0XFFFF"
-----
```

```
Received packet from client:
Packet number: 2
Packet size: 18
Content: Payload

-----Packet Number 2-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
DATA                   : "0XFFF1"
Segment Number         : "2"
Length of payload       : "0X44"
End of Packet ID       : "0XFFFF"
=====
```

```
Server: Packet Rejected.
Error: Length mismatch
```

Test case 4: Error - Packet length mismatch

```
-----Reject Packet 2-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
REJECT                  : "0XFFF3"
Reject sub code         : "0XFFF5"
Received Segment Number : "2"
End of Packet ID       : "0XFFFF"
=====
```

```
Received packet from client:
Packet number: 2
Packet size: 18
Content: Payload
```

```
-----Packet Number 2-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
DATA                   : "0XFFF1"
Segment Number         : "2"
Length of payload       : "0X8"
End of Packet ID       : "0XFFF0"
=====
```

```
Server: Packet Rejected.
Error: End of packet missing
```

Test case 5: Error - End of packet missing

```
-----Reject Packet 2-----
Start of Packet ID      : "0XFFFF"
Client ID               : "0XFF"
REJECT                  : "0XFFF3"
Reject sub code         : "0XFFF6"
Received Segment Number : "2"
End of Packet ID       : "0XFFFF"
=====
```

