



哈爾濱工業大學
HARBIN INSTITUTE OF TECHNOLOGY

立足航天，服务国防，面向国民经济主战场



计算机网络之探赜索隐

主讲人：聂兰顺

本讲主题

TCP连接管理



TCP连接管理

❖ TCP sender和receiver在传输数据前需要建立连接

❖ 初始化TCP变量

- Seq. #
- Buffer和流量控制信息

❖ Client: 连接发起者

```
Socket clientSocket = new  
Socket("hostname", "port number");
```

❖ Server: 等待客户连接请求

```
Socket connectionSocket =  
welcomeSocket.accept();
```

Three way handshake:

Step 1: client host sends TCP SYN segment to server

- specifies initial seq #
- no data

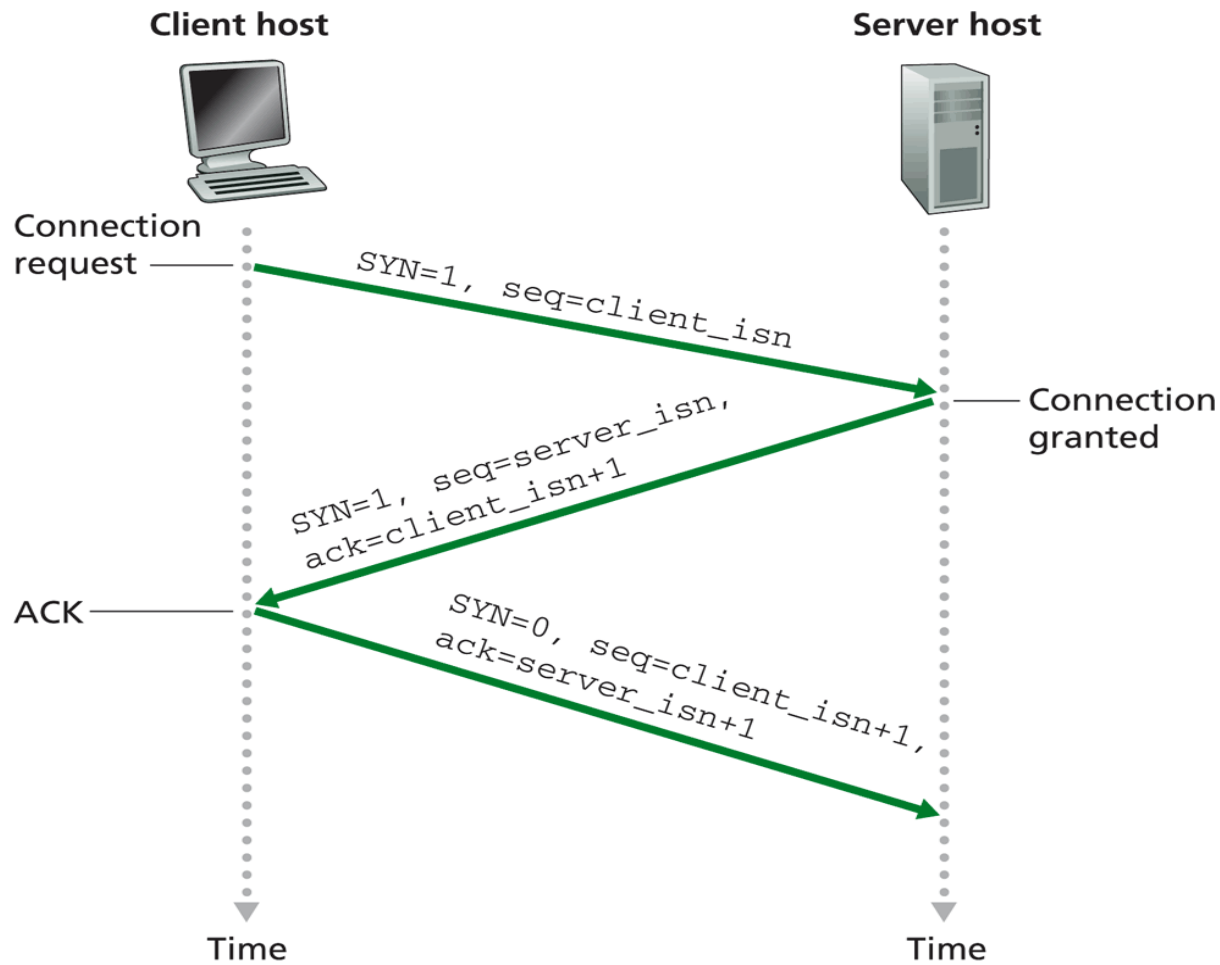
Step 2: server host receives SYN, replies with SYNACK segment

- server allocates buffers
- specifies server initial seq. #

Step 3: client receives SYNACK, replies with ACK segment, which may contain data



TCP连接管理：建立



TCP连接管理：关闭

Closing a connection:

client closes socket: `clientSocket.close()`;

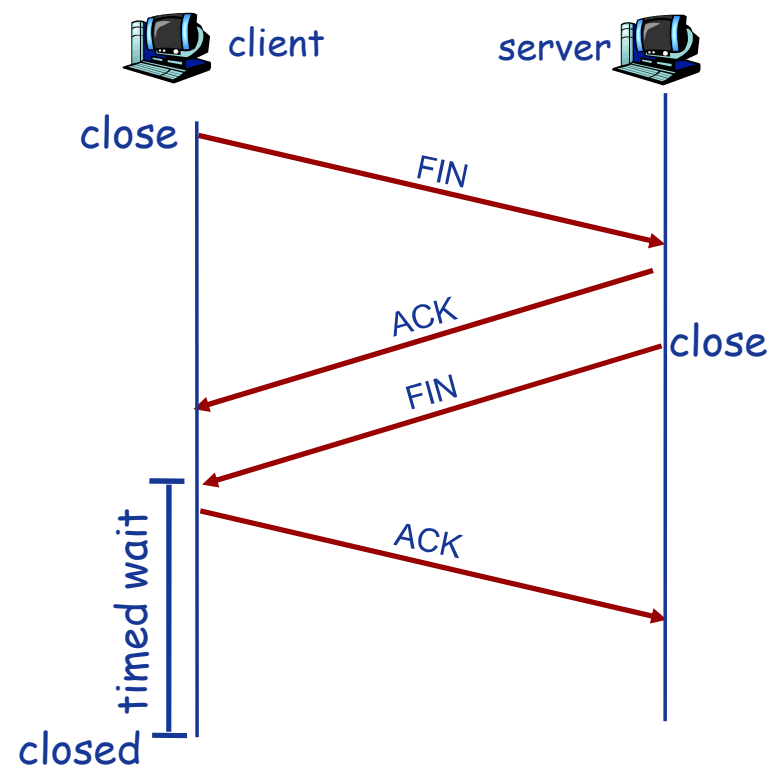
Step 1: client向server发送TCP FIN 控制segment

Step 2: server 收到FIN, 回复ACK. 关闭连接, 发送FIN.

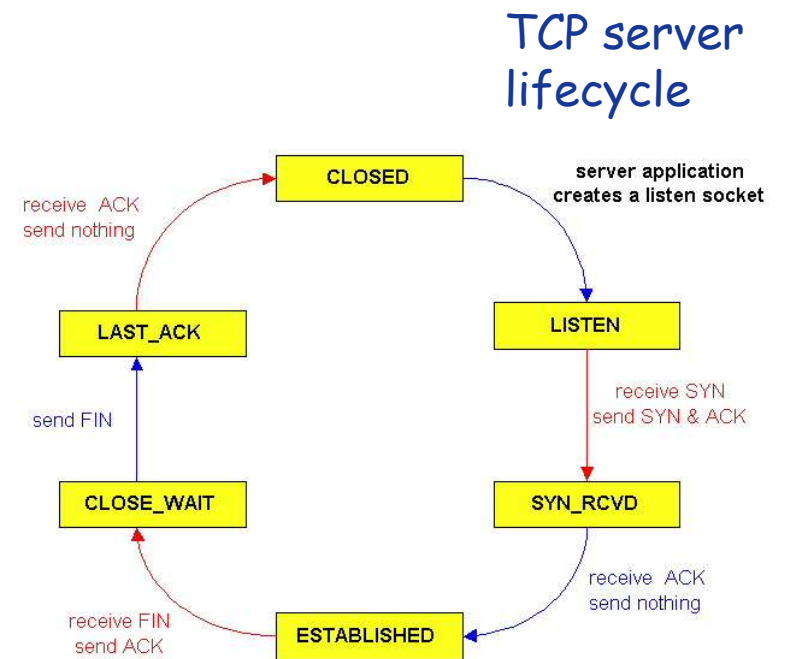
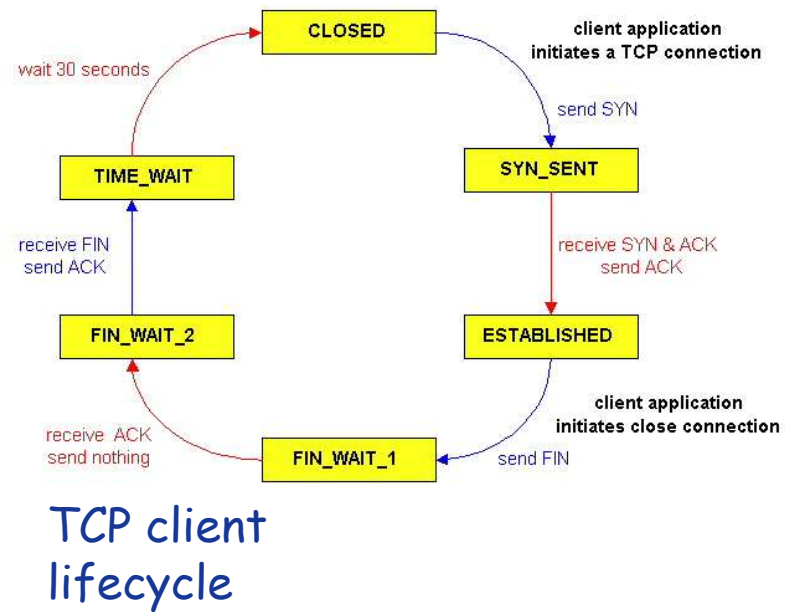
Step 3: client 收到FIN, 回复ACK.

- 进入“等待”-如果收到FIN, 会重新发送ACK

Step 4: server收到ACK. 连接关闭.



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谢谢!