实验报告

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1.实验题目: 网络传输实验二

2.实验内容:

• 实现在无丢包环境下的socket 的数据收发

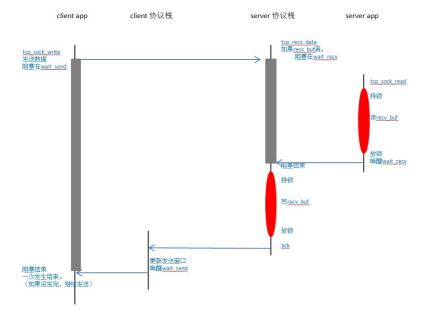
3.实验过程

仿照uml时序图的方式画了示意图(不是标准的uml时序图)

如果read时数据还没发过来:



• 如果发送数据时, recv_buf缓冲区已经满了, 等待read来读取:



4.实验结果

结果截图:

```
root@ubuntu:/home/wang/networking/exp-12_tcp2# ./tcp_stack server 10001
DEBUG: find the following interfaces: h1-eth0.
Routing table of 1 entries has been loaded.
DEBUG: 0.0,0.010001 switch state, from CLOSED to LISTEN.
DEBUG: 0.0,0.0110001 switch state, from CLOSED to SYN_RECV.
DEBUG: 0.0,0.0110001 switch state, from CLOSED to SYN_RECV.
DEBUG: 0.0,0.0110001 switch state, from SYN_RECV to ESTABLISHED.
DEBUG: 10.0,0.110001 switch state, from CLOSE_WAIT to LAST_ACK.
DEBUG: 10.0,0.110001 switch state, from CLOSE_WAIT to LAST_ACK.
DEBUG: 10.0.0.110001 switch state, from SYN_SENT to ESTABLISHED.
DEBUG: 10.0.0.110001 switch state, from CLOSED to SYN_SENT.
DEBUG: 10.0.0.2:12345 switch state, from CLOSED to SYN_SENT.
DEBUG: 10.0.0.2:12345 switch state, from SYN_SENT to ESTABLISHED,
Server echoes: 123456789abcdefghi,jklmnoparstuwwwy.gRECDEFGHIJKLMNOPR server echoes: 123456789abcdefghijklmnoparstuwwwy.gRECDEFGHIJKLMNOPR server echoes: 456769abcdefghijklmnoparstuwwwy.gRECDEFGHIJKLMNOPRSTUW server echoes: 456769abcdefghijklmnoparstuwwwy.gRECDEFGHIJKLMNOPRSTUW server echoes: 6769abcdefghijklmnoparstuwwwy.gRECDEFGHIJKLMNOPRSTUW server echoes: 6769abcdefghijklmnoparstuwwwy.gRECDEFGHIJKLMNOP
```

5.结果分析

- client发送给server的数据,被server正确回显了回来
- 中间加入了数据传输过程后,连接的建立与断开依然正确

结论: 无丢包情况下, 数据传输功能正确