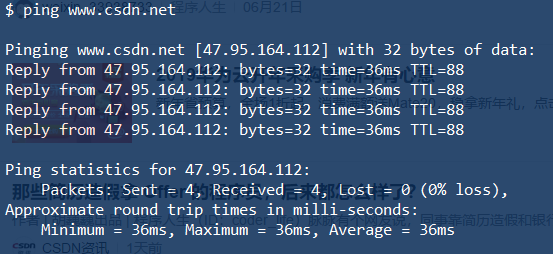
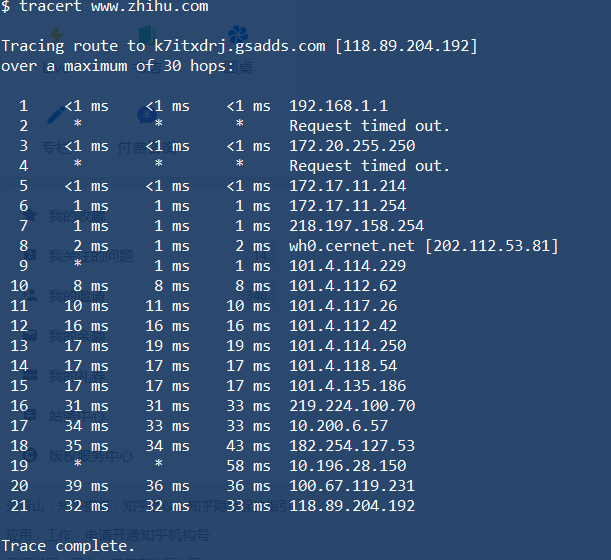
1.ping另外一台计算机



2.tracert一个服务器



**P2. Solution:**

The delay is the time interval between when the first packet has just started to be transmitted and when the last (P) packet arrives at the destination.

**d1**

**d2**

d1

d1

d1

d1

**……**





……

Therefore, dend-to-end = d1+d2 = (P - 1) \* + N \*

= (N+P-1)\*

**P8.Solution:**

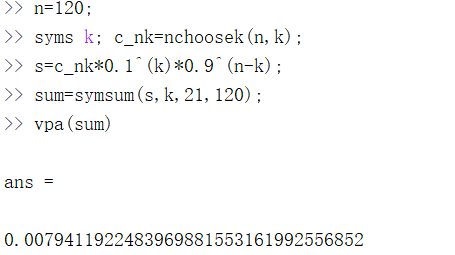
a. N = 3Mbps/150kbps = 20

b. p=0.1

c. P(n users are transmitting) =

d .P(X>=21) =

= 0.079



**P13.Solution:**

a.

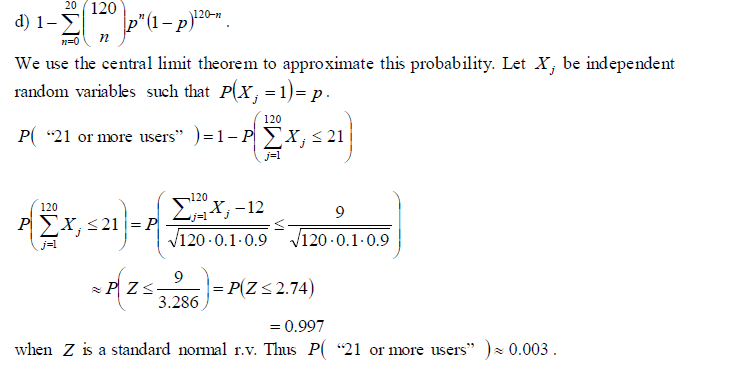
Thus,

=

b. Since N packets can be transmitted in N\*L/R seconds, there is no need for the next batch to queue after the prior one.

Thus, = .

**The reference answer of P8 is incorrect.**



P(“21 or more users”) = 1-P()

Then, P()

P(“21 or more users”) =0.0075 , which is approximately equal to the answer calculated by series.