Project 1 Report

Q1. How does the performance of HTTP with non-persistent connections and HTTP with persistent connections compare?

Persistent connections is better than non-persistent connections, because it saves time for not create connection between client and server.

Q2. How does the performance of HTTP with 1 connection and HTTP with 5 parallel connections compare?

5 parallel connections is better than 1 connection, as multiple files can send at the same time. But server will need more resources which will restrict the performance.

Q3. How does page load time degrade for increasing delay and loss?

For my client and server mode, both delay and loss have a huge impact on my page load time. Increase delay will result in long page load time and increase loss will result in long page load time

Below is the sample output

hejianshen@hejianshen-virtual-machine:~/Desktop/network$ sudo tc qdisc change dev lo root netem loss 3%

[sudo] password for hejianshen:

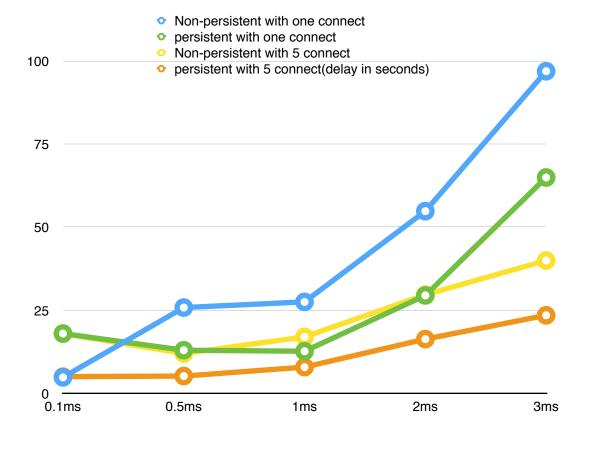hejianshen@hejianshen-virtual-machine:~/Desktop/network$ python pSer*
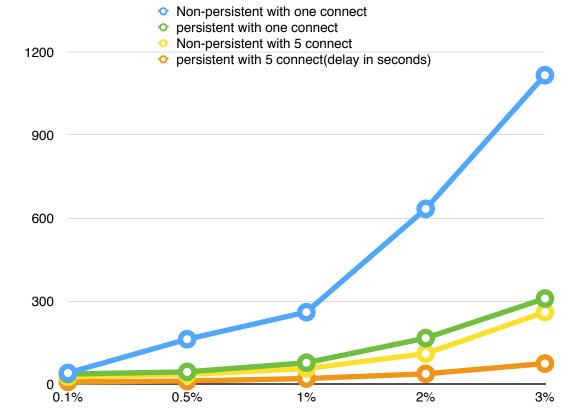
The server is ready to receive

hejianshen@hejianshen-virtual-machine:~/Desktop/network/client$ python cli*

receive all img

309.615973949

Legend:
- Non-persistent with one connect
- persistent with one connect
- Non-persistent with 5 connect
- persistent with 5 connect(delay in seconds)

X-axis (top chart): 0.1ms, 0.5ms, 1ms, 2ms, 3ms
Y-axis (top chart): 0, 25, 50, 75, 100

Legend:
- Non-persistent with one connect
- persistent with one connect
- Non-persistent with 5 connect
- persistent with 5 connect(delay in seconds)

X-axis (bottom chart): 0.1%, 0.5%, 1%, 2%, 3%
Y-axis (bottom chart): 0, 300, 600, 900, 1200