General Description

The programs are coded in python and tested in Python 3.5.0 (v3.5.0:374f501f4567, Sep 12 2015, 11:00:19).

Files

- **Server.py**: The code of regular server, with fixed window size and static timeout setting, including certain statistical function to log packet delays
- **Server-Dyno.py**: Another version of server, supporting dynamic window size and dynamic timeout, including certain statistical function to log packet delays
- **Client.py**: Client adapt to servers of both versions, including the statistical function to log the throughput every set time interval (by default, it's 1 second)
- **Server.cfg**: Config file for the servers. Description of its properties are listed below

Section	Properties	Description
Server	port	The number of port at which the server listens
	timeout	Static timeout, in seconds
	filepath	Path of the files to be severed
	logpath	Path to the log file
	log	Name of the log file
	pktsize	Size of each packet
	winsize	Size of the fixed window
	alpha	The factor involved in estimated RTT calculation

- **Client.cfg**: Config file for the client. Description of its properties are listed below

Section	Properties	Description
Client	file	Name of the file to be requested from the server
	filepath	The path to save the file sent from the server
	log	Name of the log file
	logpath	Path to the log file
	pktsize	Size of each packet
	loginterval	The time interval between every two logs of throughput.
Server	port	The number of port at which the server listens
	IP	The IP address of the server

How to Run the Program

1. Make proper config for both server and client according to the test environment. The path of file and log might be tricky, and I would suggest using absolute path rather than relative path.
2. Start the server first, and update the server IP setting in Client.cfg.
3. Run the client code.
4. Check the log files for throughput and packet delays.