

Traffic Replay System

ATS Summit Fall
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YAHOO!

ILLINOIS

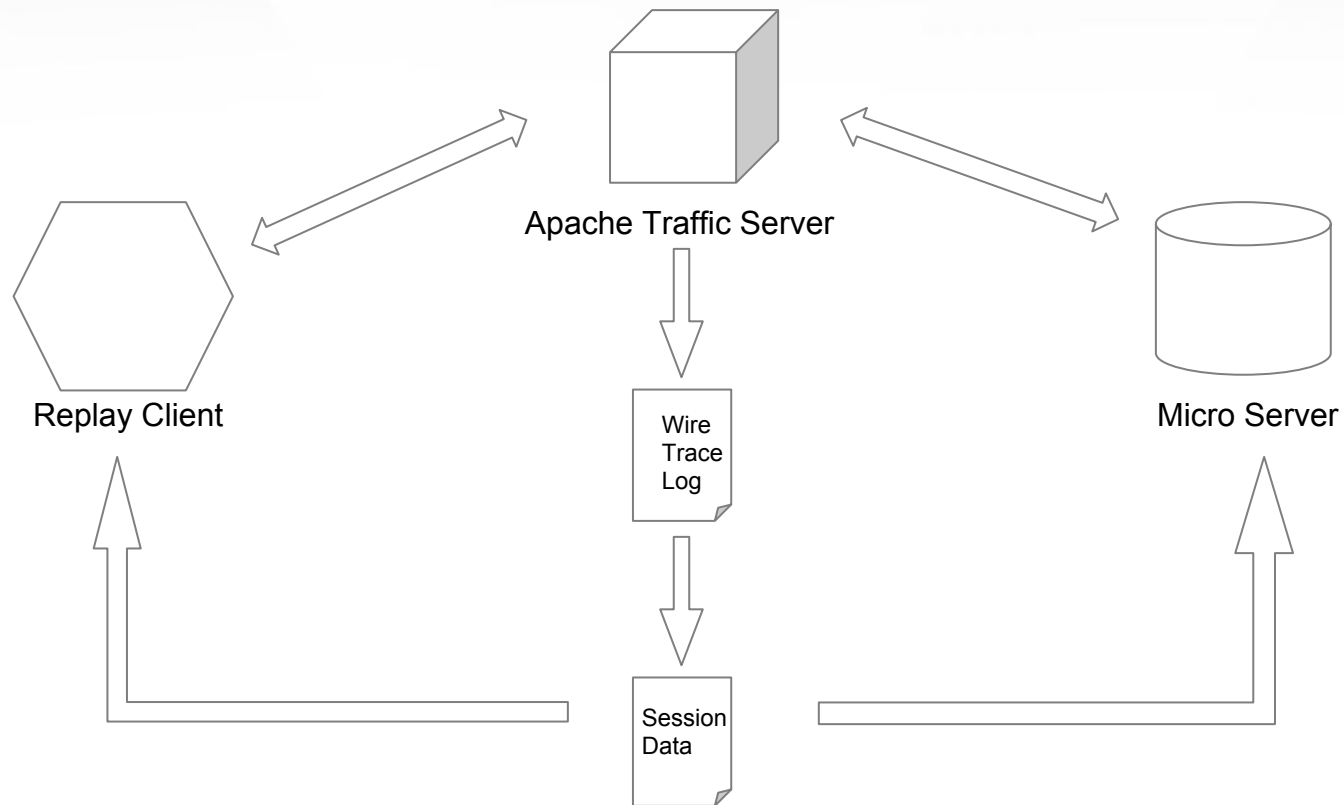


The Quad

<https://climateillinois.wordpress.com/2014/09/22/when-is-fall-astronomical-meteorological-climatological/>

YAHOO!

Traffic Replay System



Traffic Replay

Multiprocess multithreaded program written in Python 3.5

Library: requests, ssl, socket

Supports

- GET ,POST, HEAD
- SSL
- Response header comparison
- Options for number of process and number threads per process

Session Data format

```
{"version": "0.1",  
  "txns": [  
    {"request": {"headers": "POST .....\\r\\n\\r\\n", "timestamp": "..", "body": ".."},  
      "response": {"headers": "HTTP/1.1..\\r\\n\\r\\n", "timestamp": "..", "body": ".."},  
      "uuid": "1"},  
    {"request": {"headers": "POST .....\\r\\n\\r\\n", "timestamp": "..", "body": ".."},  
      "response": {"headers": "HTTP/1.1..\\r\\n\\r\\n", "timestamp": "..", "body": ".."},  
      "uuid": "2"}  
  ],  
  "timestamp": "....",  
  "encoding": "...."}
```

Data Collection

- WireTrace
- Preprocessor
 - Extract session data
 - Dump session data into JSON format
 - Combine split blocks

Micro Server

- Multithreaded program written in Python 3.5
- Extension of BaseHTTPRequestHandler
- Replays response extracted from wire-trace log
- Two modes - test and replay
- Supported methods: GET ,POST, HEAD

Future plan

- Finish Http/2 in traffic replay
- Add timing/delay option to the replay and micro server
- Add wildcard capability in micro Server
- SSL support in micro server
- Fix HTTP/2 in wiretrace
- Integrate with TSQA
- Micro DNS
- Submit to opensource

Requirements

Python3.5

Modules: requests, grequests, gevent, progress, hyper

Demo time