



# BASIC OF LONG POLLING SERVER

Cookie Tsai @ 2016.08.23

<https://github.com/CookieTsai/LongPolling/doc/LongPolling.pdf>

# ABOUT ME

## ✧ Expertise

- Java NIO

## ✧ Experience

- Mitake
- JC Software Services

## ✧ Honors & Awards

- The Winner of Etu Hadoop Competition 2015
- 2011 電信創新應用大賽 智慧家庭組 優選
- 2010 電信奧斯卡 MOD應用組 佳作



# WHAT IS HTTP

- HTTP is HyperText Transfer Protocol
- HTTP is an application protocol
- HTTP is the foundation of data communication for the World Wide Web

```
POST /2016/06/extract-transform-load.html HTTP/1.1
```

```
Host: tsai-cookie.blogspot.tw
```

```
User-Agent: User Defient/1.0
```

```
Content-Type: text/plain; charset=utf-8
```

```
<.... Your Data ....>
```

紅 : Method

綠 : Path

藍 : HTTP Version

橘 : Head

紫 : Body (許多地方文章稱為 Entity)

# CLIENT AND SERVER

## ( DEMO 1 )

### ✧ Linux Command

- cat -- concatenate and print files
- nc -- arbitrary TCP and UDP connections and listens
- curl - transfer a URL

### ✧ What will we do

1. Using nc make a fake HTTP Server
2. Using curl connect fake server and send request
3. Using any type of browser connect fake server

[https://en.wikipedia.org/wiki/Hypertext\\_Transfer\\_Protocol](https://en.wikipedia.org/wiki/Hypertext_Transfer_Protocol)

# LET'S TALKING ABOUT PUSH

✧ What you should know?

- Understanding what are Comet, Polling, Long Polling and WebSocket... etc

✧ Why we need using Long Polling?

- You can use anything you think is the best solution in your project

✧ Long Polling is the best solution?

- Really not always

# LONG POLLING SERVER

## ( DEMO 2)

### ✧ Linux Command

- npm - npm is the package manager for JavaScript
- node - Server-side JavaScript

### ✧ Dependency Package

- random-js

### ✧ What will we do

- Using nodejs to run a Long Polling Server
- Using client to connect the Long Polling Server

<https://github.com/CookieTsai/LongPolling>

# BASIC OF FILE DESCRIPTOR

## ✧ What is File Descriptor?

- In Unix and related computer operating systems, a file descriptor is an abstract indicator (handle) used to access a file or other input/output resource, such as a pipe or network socket.

## ✧ What's the relationship between File Descriptor and Standard streams (stdin, stdout, stderr)?

- Each Unix process should expect to have three standard POSIX file descriptors. The File Descriptor number 0 is stdin, 1 is stdout and 2 is stderr.

# LIST OPEN FILES

## ( DEMO 3)

### ✧ Linux Command

- ab - Apache HTTP server benchmarking tool
- lsof - list open files

### ✧ What will we do

1. Using ab to connect Long Polling Server
2. Using lsof to watch socket connections





Thanks for your listening