**PHP Socket.IO**

Client-side code:

**function** *emitMessage*(socket){  
 **return function**(){  
 socket.emit(**'testEvent'**);  
 setTimeout(*emitMessage*(socket), 1000);  
 }  
}  
  
**var *totalUserCnt*** = 0;  
**var *maxUsers*** = 200;  
**var *cutOffEvent*** = 400;  
**var *avgTime*** = [];  
**function** *newConnection*(){  
 **if**(***totalUserCnt*** < ***maxUsers***){  
 ***totalUserCnt***++;  
 **console**.log(***totalUserCnt***);  
 **var** socket = **io**(**'http://127.0.0.1:80'**);  
 setTimeout(*emitMessage*(socket), 1000);  
 setTimeout(*newConnection*, 100);  
 }  
}  
  
*newConnection*();

Server-side code:   
$io->on(**'connection'**, **function**($socket)**use**($io, &$userCnt, $maxUserCnt, $cutOffEvent, $lastRecordedTime, &$eventCnt){  
 $userCnt++;  
 **if**($userCnt == $maxUserCnt){  
 **echo "Reached max user count!\n"**;  
 }  
 $socket->on(**'testEvent'**, **function**()**use**($socket, $cutOffEvent, &$eventCnt, &$lastRecordedTime, $userCnt, $maxUserCnt){  
 $eventCnt++;  
 **if**($eventCnt == $maxUserCnt){  
 $eventCnt = 0;  
 $responseTime = (*microtime*(**true**) - $lastRecordedTime) - 1;  
 $lastRecordedTime = *microtime*(**true**);  
 *file\_put\_contents*(**'200connections.txt'**, $responseTime . **"\n"**, ***FILE\_APPEND***);  
 **echo** $responseTime . **"\n"**;  
 }  
 });  
})

Each connection in client-side emits a message every 1 second. On the server-side, socket keeps count of number of events received, once the number of events received reaches 200, a time is calculated and recorded as the response time for receiving 200 messages from client, subtract 1 second from that and we obtain the time it took for events to travel from client-side to server-side.

**100 connections:**

10 continuous samples are randomly selected from the data log to calculate the average time it takes for 100 messages to travel from client-side to server-side.

0.00093197822570801

0.0011739730834961

0.001338005065918

0.00062012672424316

0.00093197822570801

0.00073003768920898

0.0011758804321289

0.002331018447876

0.0011031627655029

0.0011630058288574

Average: 0.0011499166488647

**200 connections:**

0.0010750293731689

0.0017008781433105

0.00094318389892578

0.00076889991760254

0.0012638568878174

0.00094008445739746

0.0016899108886719

0.00056219100952148

0.0015499591827393

0.0014479160308838

Average: 0.0011941909790039

**Node.js Socket.IO**

Client-side code:

**function** *emitMessage*(socket){  
 **return function**(){  
 socket.emit(**'testEvent'**);  
 setTimeout(*emitMessage*(socket), 1000);  
 }  
}  
  
**var *totalUserCnt*** = 0;  
**var *maxUsers*** = 200;  
**var *cutOffEvent*** = 400;  
**var *avgTime*** = [];  
**function** *newConnection*(){  
 **if**(***totalUserCnt*** < ***maxUsers***){  
 ***totalUserCnt***++;  
 **console**.log(***totalUserCnt***);  
 **var** socket = io(**"http://localhost:3000"**, {**multipliex**: **false**});  
 setTimeout(*emitMessage*(socket), 1000);  
 setTimeout(*newConnection*, 100);  
 }  
}  
  
*newConnection*();

Server-side code:

io.on(**'connection'**, **function**(socket){  
 userCnt++;  
 **if**(userCnt == maxUserCnt){  
 **console**.log(**"Reached max user count!"**);  
 }  
 socket.on(**'testEvent'**, **function**(){  
 eventCnt++;  
 **if**(eventCnt == maxUserCnt){  
 eventCnt = 0;  
 **var** responseTime = ((Date.now() - lastRecordedTime) \* 0.001) - 1;  
 lastRecordedTime = Date.now();  
 fs.appendFile(**"200connections.txt"**, responseTime + **"\n"**, **function**(err){  
 **if**(err) **console**.log(err);  
 });  
 **console**.log(responseTime);  
 }  
 })  
});

**100 connections:**

0.017000000000000126

0.008000000000000007

0.0030000000000001137

0.001000000000000112

0.001000000000000112

0.001000000000000112

0.014000000000000012

0.013000000000000123

0.010000000000000009

0.006000000000000005

Average: 0.0074000000000001

**200 connections:**

1.017

0.9950000000000001

0.9790000000000001

0.9930000000000001

1.024

0.9770000000000001

1.033

0.9950000000000001

1.0140000000000002

0.976

Average: 1.0003

**Summary**

|  |  |  |
| --- | --- | --- |
|  | 100 connections average time | 200 connections average time |
| PHP Socket.IO | 0.0011499166488647 | 0.0011941909790039 |
| Node.js Socket.IO | 0.0074000000000001 | 1.0003 |