



# 스트리밍 서버 부하 테스트

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## 첫 데이터 받기

1. 10명 유저 → 평균 0.36 초, 최대 0.65 초
2. 100명 유저 → 평균 3.64 초, 최소 0.6 초, 최대 5.09 초

## 모든 데이터 받기

1. 10명 유저 → 7.7초 모든 데이터 전송 완료
2. 100명 유저 → 26.4 초 모든 데이터 전송 완료

- 테스트 도구 : k6
- 스크립트 코드

```
import ws from 'k6/ws'

export default function () {
  let url = 'ws://localhost:22000/streaming'
  let params = { }
  let stream = false;

  let res = ws.connect(url, params, function (socket) {
    socket.on('open', function open() {
      console.log('connected')
      socket.send("1/1")
    })

    socket.on('message', function (event) {
      if (!stream) {
        socket.send("2/1/0")
        stream = true
      } else {
```

```

        console.log(event.data)
    }
})

socket.on('close', function () {
    console.log('disconnected')
})

socket.setTimeout(function () {
    console.log('60 seconds passed, closing the socket')
    socket.close()
}, 60000)
})
}

```

## 첫 데이터 받기

### 1. 10명 유저 → 평균 0.36 초, 최대 0.65 초

최소 설정 1초 → 1초 동안 34개 테스트

```
$ k6 run --vus 10 --duration 1s script.js
```

```

      /\      |__|  /___/  ___/
     /\  /  \      |__|  /___/  ___/
    /  \/    \      |__|  /___/  ___/
   /            \      |__|  /___/  ___/
  / _____ \   |__|  /___/  ___/
 / _____ \   |__|  /___/  ___/

```

```

execution: local
  script: script.js
  output: -

```

```

scenarios: (100.00%) 1 scenario, 10 max VUs, 31s max dur
* default: 10 looping VUs for 1s (gracefulStop:

```

INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	disconnected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	disconnected	SOURCE
INFO[0000]	disconnected	SOURCE
INFO[0000]	connected	SOURCE
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INFO[0000]	disconnected	SOURCE
INFO[0000]	connected	SOURCE
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INFO[0000]	disconnected	SOURCE
INFO[0000]	disconnected	SOURCE
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INFO[0000]	disconnected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	disconnected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	disconnected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	disconnected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	disconnected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	disconnected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	disconnected	SOURCE
INFO[0000]	connected	SOURCE



```
ws_msgs_received.....: 68      45.709338/s
ws_msgs_sent.....: 68      45.709338/s
ws_session_duration...: avg=366.81ms min=191.5ms med=33
ws_sessions.....: 34      22.854669/s
```

```
running (01.5s), 00/10 VUs, 34 complete and 0 interrupted ite
default ✓ [=====] 10 VUs 1s
```

## 2. 100명 유저 → 평균 3.64 초, 최소 0.6 초, 최대 5.09 초

```
$ k6 run --vus 100 --duration 1s script.js
```

```
      /\      |__|  /__/\  /__/\
     /\  /  \      |  | /  /  /  /
    /  \/\      \      |  (  /  \
   /      \      |  | \  \  |  ( )  |
  / _____ \  |__|  \__\  \__\ / .io
```

```
execution: local
  script: script.js
  output: -
```

```
scenarios: (100.00%) 1 scenario, 100 max VUs, 31s max du
* default: 100 looping VUs for 1s (gracefulStop
```

```
INFO[0000] connected                                source
INFO[0000] connected                                source
INFO[0000] connected                                source
INFO[0000] connected                                source
INFO[0000] connected                                source
INFO[0000] connected                                source
INFO[0000] connected                                source
INFO[0000] connected                                source
INFO[0000] connected                                source
INFO[0000] connected                                source
```

[illegible]

[illegible]

INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
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INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	disconnected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0001]	disconnected	SOURCE
INFO[0001]	disconnected	SOURCE
INFO[0001]	connected	SOURCE
INFO[0001]	connected	SOURCE
INFO[0001]	disconnected	SOURCE
INFO[0001]	disconnected	SOURCE
INFO[0001]	disconnected	SOURCE
INFO[0001]	connected	SOURCE
INFO[0001]	connected	SOURCE
INFO[0001]	connected	SOURCE
INFO[0001]	disconnected	SOURCE
INFO[0001]	connected	SOURCE
INFO[0001]	disconnected	SOURCE
INFO[0001]	connected	SOURCE
INFO[0001]	disconnected	SOURCE
INFO[0001]	disconnected	SOURCE
INFO[0001]	disconnected	SOURCE
INFO[0001]	disconnected	SOURCE
INFO[0002]	disconnected	SOURCE
INFO[0002]	disconnected	SOURCE
INFO[0002]	disconnected	SOURCE
INFO[0002]	disconnected	SOURCE



[illegible]

[illegible]

```

INFO[0004] disconnected                                source
INFO[0004] disconnected                                source
INFO[0004] disconnected                                source
INFO[0005] disconnected                                source
INFO[0005] disconnected                                source
INFO[0005] disconnected                                source
INFO[0005] disconnected                                source
INFO[0005] disconnected                                source
INFO[0005] disconnected                                source
INFO[0005] disconnected                                source
INFO[0005] disconnected                                source
INFO[0005] disconnected                                source
INFO[0005] disconnected                                source
INFO[0005] disconnected                                source
INFO[0005] disconnected                                source
INFO[0005] disconnected                                source

```

```

data_received.....: 65 MB 13 MB/s
data_sent.....: 25 kB 4.9 kB/s
iteration_duration....: avg=3.64s   min=687.28ms med=4.0
iterations.....: 108    21.214328/s
vus.....: 7      min=7      max=100
vus_max.....: 100    min=100    max=100
ws_connecting.....: avg=24.97ms min=6.07ms  med=25.1
ws_msgs_received.....: 216    42.428656/s
ws_msgs_sent.....: 216    42.428656/s
ws_session_duration...: avg=3.64s   min=687.2ms  med=4.0
ws_sessions.....: 108    21.214328/s

```

```

running (05.1s), 000/100 VUs, 108 complete and 0 interrupted
default ✓ [=====] 100 VUs 1

```

## 모든 데이터 받기

### 1. 10명 유저 → 7.7초 모든 데이터 전송 완료

```
$ k6 run --vus 10 --duration 5s script.js
```

```
      /\      |__| /__ /  /__ /
    /\ /  \    |  | /  /  /  /
  /  \  \    |  (  /  __\
 /      \    |  | \  \  |  (  )  |
/_____\  \  |__| \__\ \__\ / .io
```

```
execution: local
  script: script.js
  output: -
```

```
scenarios: (100.00%) 1 scenario, 10 max VUs, 35s max dur
  * default: 10 looping VUs for 5s (gracefulStop:
```

```
INFO[0000] connected      source
INFO[0000] connected      source
INFO[0000] connected      source
INFO[0000] connected      source
INFO[0000] connected      source
INFO[0000] connected      source
INFO[0000] connected      source
INFO[0000] connected      source
INFO[0000] connected      source
INFO[0000] connected      source
INFO[0007] disconnected     source
INFO[0007] disconnected     source
INFO[0008] disconnected     source
INFO[0008] disconnected     source
INFO[0008] disconnected     source
INFO[0008] disconnected     source
INFO[0008] disconnected     source
INFO[0008] disconnected     source
INFO[0008] disconnected     source
INFO[0008] disconnected     source
INFO[0008] disconnected     source
```

```

data_received.....: 428 MB 55 MB/s
data_sent.....: 2.3 kB 299 B/s
iteration_duration....: avg=7.71s   min=7.65s   med=7.73s
iterations.....: 10      1.293156/s
vus.....: 10      min=10      max=10
vus_max.....: 10      min=10      max=10
ws_connecting.....: avg=14.73ms min=6.72ms med=16.4m
ws_msgs_received.....: 710     91.814065/s
ws_msgs_sent.....: 20      2.586312/s
ws_session_duration...: avg=7.71s   min=7.65s   med=7.73s
ws_sessions.....: 10      1.293156/s

```

```

running (07.7s), 00/10 VUs, 10 complete and 0 interrupted ite
default ✓ [=====] 10 VUs 5s

```

## 2. 100명 유저 → 26.4 초 모든 데이터 전송 완료

```
$ k6 run --vus 100 --duration 5s script.js
```

```

      /\      |____| /___/  ___/
     /\  /  \      |____| /___/  ___/
    /  \/    \      |____| (___/  ___/
   /             \      |____| (___/  ___/
  / _____ \   |____| \___/  ___/ .io

```

```

execution: local
  script: script.js
  output: -

```

```

scenarios: (100.00%) 1 scenario, 100 max VUs, 35s max du
* default: 100 looping VUs for 5s (gracefulStop)

```

```

INFO[0000] connected                                source
INFO[0000] connected                                source
INFO[0000] connected                                source

```

[illegible]

[illegible]

INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
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INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0000]	connected	SOURCE
INFO[0019]	disconnected	SOURCE
INFO[0020]	disconnected	SOURCE
INFO[0020]	disconnected	SOURCE
INFO[0021]	disconnected	SOURCE
INFO[0022]	disconnected	SOURCE
INFO[0022]	disconnected	SOURCE
INFO[0022]	disconnected	SOURCE
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INFO[0023]	disconnected	SOURCE
INFO[0023]	disconnected	SOURCE
INFO[0023]	disconnected	SOURCE
INFO[0023]	disconnected	SOURCE
INFO[0023]	disconnected	SOURCE



[illegible]

[illegible]

```
INFO[0026] disconnected                                source
INFO[0026] disconnected                                source
INFO[0026] disconnected                                source
INFO[0026] disconnected                                source
INFO[0026] disconnected                                source
INFO[0026] disconnected                                source
INFO[0026] disconnected                                source
```

```
data_received.....: 4.3 GB 162 MB/s
data_sent.....: 23 kB 877 B/s
iteration_duration....: avg=24.69s min=19.39s med=25.17
iterations.....: 100 3.794942/s
vus.....: 9 min=9 max=100
vus_max.....: 100 min=100 max=100
ws_connecting.....: avg=31.58ms min=8.82ms med=27.06
ws_msgs_received.....: 7100 269.440891/s
ws_msgs_sent.....: 200 7.589884/s
ws_session_duration...: avg=24.69s min=19.39s med=25.17
ws_sessions.....: 100 3.794942/s
```

```
running (26.4s), 000/100 VUs, 100 complete and 0 interrupted
default ✓ [=====] 100 VUs 5
```