comandos

```
node index.js -m FORK
node index.js -m CLUSTER
nodemon index.js -p 8080 -m FORK
nodemon index.js -p 8080 -m CLUSTER
forever start index.js -m FORK
forever start index.js -m CLUSTER
pm2 start  indexPm2.js --name="FORK" --watch
pm2 start  indexPm2.js --name="CLUSTER" --watch -i max
```

fork

```
FORK - PDI:  25032
Server is up and running on port 8080
Connected to MongoDb
```

| node.exe | 25032 | Running | lemos | 00 | 41.948 K | x64 | Node.js JavaScript Runtime |

cluster

```
CLUSTER - PDI:  3432
FORK - PDI:  24460
FORK - PDI:  15928
FORK - PDI:  25400
FORK - PDI:  9264
FORK - PDI:  14584
FORK - PDI:  18644
FORK - PDI:  17056
FORK - PDI:  28380
```

node.exe	9264	Running	lemos	00	41.940 K	x64	Node.js JavaScript Runtime
node.exe	24460	Running	lemos	00	41.676 K	x64	Node.js JavaScript Runtime
node.exe	14584	Running	lemos	00	42.080 K	x64	Node.js JavaScript Runtime
node.exe	18644	Running	lemos	00	41.332 K	x64	Node.js JavaScript Runtime
node.exe	25400	Running	lemos	00	41.700 K	x64	Node.js JavaScript Runtime
node.exe	15928	Running	lemos	00	41.788 K	x64	Node.js JavaScript Runtime
node.exe	17056	Running	lemos	00	41.496 K	x64	Node.js JavaScript Runtime
node.exe	28380	Running	lemos	00	41.572 K	x64	Node.js JavaScript Runtime
node.exe	3432	Running	lemos	00	39.828 K	x64	Node.js JavaScript Runtime

forever fork

```
data:        uid  command                      script                                                                            forever pid  id logfile                                  uptime
data:    [0] JYKs "C:\Program Files\nodejs\node.exe" C:\Users\lemos\OneDrive\Escritorio\Backend 13\index.js 15168   29912   C:\Users\lemos\.forever\JYKs.log 0:0:0:9.754
PS C:\Users\lemos\OneDrive\Escritorio\Backend 13> []
```

| node.exe | 15168 | Running | lemos | 00 | 16.076 K | x64 | Node.js JavaScript Runtime |
| node.exe | 29912 | Running | lemos | 00 | 41.784 K | x64 | Node.js JavaScript Runtime |

forever cluster

```
info:    Forever processes running
data:       uid  command                          script                                                              forever pid  id logfile                          uptime
data:    [0] hQP4 "C:\Program Files\nodejs\node.exe" C:\Users\lemos\OneDrive\Escritorio\Backend 13\index.js -m CLUSTER 26224    8728   C:\Users\lemos\.forever\hQP4.log 0:0:0:38.276
```

node.exe	8732	Running	lemos	00	41.772 K	x64	Node.js JavaScript Runtime
node.exe	8880	Running	lemos	00	42.220 K	x64	Node.js JavaScript Runtime
node.exe	8244	Running	lemos	00	42.584 K	x64	Node.js JavaScript Runtime
node.exe	29688	Running	lemos	00	41.524 K	x64	Node.js JavaScript Runtime
node.exe	11860	Running	lemos	00	42.620 K	x64	Node.js JavaScript Runtime
node.exe	28888	Running	lemos	00	41.920 K	x64	Node.js JavaScript Runtime
node.exe	24812	Running	lemos	00	42.472 K	x64	Node.js JavaScript Runtime
node.exe	28052	Running	lemos	00	41.652 K	x64	Node.js JavaScript Runtime
node.exe	8728	Running	lemos	00	40.340 K	x64	Node.js JavaScript Runtime
node.exe	26224	Running	lemos	00	16.140 K	x64	Node.js JavaScript Runtime

nodemon fork

```
FORK - PDI:  4092
```

node.exe	19400	Running	lemos	00	11.068 K	x64	Node.js JavaScript Runtime
node.exe	4092	Running	lemos	00	41.508 K	x64	Node.js JavaScript Runtime

nodemon cluster

```
CLUSTER - PDI:  16888
FORK - PDI:  7648
FORK - PDI:  24060
FORK - PDI:  27664
FORK - PDI:  24880
FORK - PDI:  23756
FORK - PDI:  7836
FORK - PDI:  30292
FORK - PDI:  12780
```

node.exe	24060	Running	lemos	00	41.536 K	x64	Node.js JavaScript Runtime
node.exe	7836	Running	lemos	00	41.836 K	x64	Node.js JavaScript Runtime
node.exe	27664	Running	lemos	00	65.624 K	x64	Node.js JavaScript Runtime
node.exe	30292	Running	lemos	00	41.884 K	x64	Node.js JavaScript Runtime
node.exe	7648	Running	lemos	00	40.800 K	x64	Node.js JavaScript Runtime
node.exe	23756	Running	lemos	00	41.424 K	x64	Node.js JavaScript Runtime
node.exe	12780	Running	lemos	00	42.024 K	x64	Node.js JavaScript Runtime
node.exe	24880	Running	lemos	00	41.544 K	x64	Node.js JavaScript Runtime
node.exe	27508	Running	lemos	00	11.020 K	x64	Node.js JavaScript Runtime
node.exe	16888	Running	lemos	00	40.128 K	x64	Node.js JavaScript Runtime

pm2 fork

id	name	namespace	version	mode	pid	uptime	↺	status	cpu	mem	user	watching
0	FORK	default	1.0.0	fork	22704	0s	0	online	0%	35.7mb	lemos	enabled

node.exe	22704	Running	lemos	00	43.976 K	x64	Node.js JavaScript Runtime
node.exe	28244	Running	lemos	00	23.020 K	x64	Node.js JavaScript Runtime

pm2 cluster

id	name	namespace	version	mode	pid	uptime	↺	status	cpu	mem	user	watching
0	CLUSTER	default	1.0.0	cluster	8300	3s	0	online	0%	94.7mb	lemos	enabled
1	CLUSTER	default	1.0.0	cluster	13972	3s	0	online	0%	95.4mb	lemos	enabled
2	CLUSTER	default	1.0.0	cluster	24020	3s	0	online	0%	94.7mb	lemos	enabled
3	CLUSTER	default	1.0.0	cluster	18708	3s	0	online	0%	93.8mb	lemos	enabled
4	CLUSTER	default	1.0.0	cluster	10340	2s	0	online	0%	94.1mb	lemos	enabled
5	CLUSTER	default	1.0.0	cluster	24428	2s	0	online	0%	81.5mb	lemos	enabled
6	CLUSTER	default	1.0.0	cluster	28448	2s	0	online	0%	75.9mb	lemos	enabled
7	CLUSTER	default	1.0.0	cluster	26024	2s	0	online	0%	58.6mb	lemos	enabled

node.exe	28448	Running	lemos	00	44.040 K	x64	Node.js JavaScript Runtime
node.exe	26024	Running	lemos	00	44.092 K	x64	Node.js JavaScript Runtime
node.exe	8300	Running	lemos	00	44.176 K	x64	Node.js JavaScript Runtime
node.exe	13972	Running	lemos	00	43.908 K	x64	Node.js JavaScript Runtime
node.exe	24020	Running	lemos	00	73.880 K	x64	Node.js JavaScript Runtime
node.exe	18708	Running	lemos	00	44.100 K	x64	Node.js JavaScript Runtime
node.exe	10340	Running	lemos	00	44.224 K	x64	Node.js JavaScript Runtime
node.exe	24428	Running	lemos	00	73.904 K	x64	Node.js JavaScript Runtime
node.exe	28244	Running	lemos	00	28.904 K	x64	Node.js JavaScript Runtime
NueSoftwareStudioS	4856	Running	SYSTEM	00	58.472 K	x64	NueSoftwareStudioService

respecto al ejercicio de nginx no puedo balancear las cargas, nginx parece que funciona por que funciona porque cuando hago una petición al puerto 80 funciona pero cuando hago la petición a /api/randoms me sale un error 502

502 Bad Gateway

nginx/1.23.3
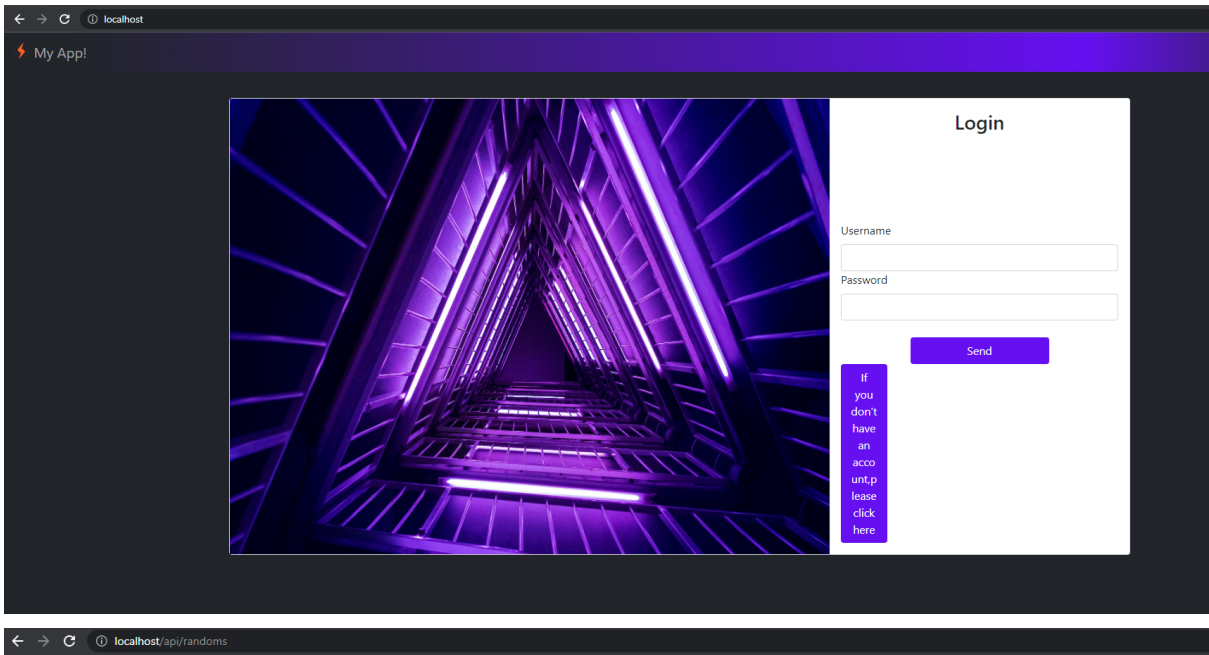
```nginx
worker_processes  1;

events {
    worker_connections  1024;
}

http {
    include       mime.types;
    default_type  application/octet-stream;

    upstream my_app {
        server 127.0.0.1:8082;
        server 127.0.0.1:8083;
        server 127.0.0.1:8084;
        server 127.0.0.1:8085;
    }

    server {
        listen       80;
        server_name  proxy-server;

        location / {
            proxy_pass http://127.0.0.1:8080;
        }

        location /api/randoms {
            proxy_pass http://my_app;
        }
    }
}
```