

NODEMON CLUSTER:

nodemon index -m=1 (modo cluster, por defecto)

The image shows a VS Code editor with a Node.js script running in cluster mode. The code defines a master process that spawns worker processes. The terminal output shows the master process starting and spawning workers. The Windows Task Manager window shows multiple node.exe processes running, indicating the cluster mode is active.

```
11 const numCPUs = require('os').cpus().length
12 const chalk = require('chalk')
13 const log = console.log
14
15 if (cluster.isMaster && (MODE === RunningMode.Cluster)) {
16   log(chalk.bgHex('#DEADED').i('Master is running with PID: 6668'))
17   log(chalk.bgHex('#DEADED').i('Worker is running with PID: 5620'))
18   for (let i = 0; i < numCPUs; i++) {
19     cluster.fork(index.js)
20   }
21 } else if (!cluster.isMaster || (MODE === RunningMode.Fork)) {
22   if (MODE === RunningMode.Fork) {
23     log(chalk.bgHex('#DEADED').i('Fork mode running'))
24   }
25   log(chalk.bgHex('#DEADED').i('Server running on port: 8090'))
26   Connecting to MongoDB...
```

Task Manager window showing running processes:

Name	PID	Status	User name	CPU	Memory (a...)	UAC virtualizat...
node.exe	3744	Running	sarav	00	11,240 K	Disabled
node.exe	6668	Running	sarav	00	54,092 K	Disabled
node.exe	1476	Running	sarav	00	55,692 K	Disabled
node.exe	3604	Running	sarav	00	56,472 K	Disabled
node.exe	17992	Running	sarav	00	56,556 K	Disabled
node.exe	9368	Running	sarav	00	56,756 K	Disabled
node.exe	11772	Running	sarav	00	56,536 K	Disabled
node.exe	5620	Running	sarav	00	57,132 K	Disabled
node.exe	10752	Running	sarav	00	54,948 K	Disabled
node.exe	11848	Running	sarav	00	55,860 K	Disabled
node.exe	10316	Running	sarav	00	56,204 K	Disabled
node.exe	8552	Running	sarav	00	56,972 K	Disabled
node.exe	10400	Running	sarav	00	55,888 K	Disabled
node.exe	19300	Running	sarav	00	56,096 K	Disabled
nvcontainer.exe	5448	Running	SYSTEM	00	3,424 K	Not allowed
nvcontainer.exe	8136	Running	sarav	00	1,464 K	Disabled
nvcontainer.exe	8176	Running	sarav	00	16,924 K	Disabled
nvclui.exe	19436	Running	sarav	00	26,680 K	Disabled
NVDisplay.Container...	2632	Running	SYSTEM	00	1,780 K	Not allowed
NVDisplay.Container...	3340	Running	SYSTEM	00	10,036 K	Not allowed
NVIDIA Share.exe	13232	Running	sarav	00	5,412 K	Disabled
NVIDIA Share.exe	1652	Running	sarav	00	2,000 K	Disabled
NVIDIA Share.exe	12448	Running	sarav	00	27,752 K	Disabled

NODEMON FORK:

nodemon index -m=2 (modo fork)

The image shows a VS Code editor with a Node.js script running in fork mode. The code defines a master process that forks a single worker process. The terminal output shows the master process starting and forking a worker. The Windows Task Manager window shows a single node.exe process running, indicating the fork mode is active.

```
11 const numCPUs = require('os').cpus().length
12 const chalk = require('chalk')
13 const log = console.log
14
15 if (cluster.isMaster && (MODE === RunningMode.Cluster)) {
16   log(chalk.bgHex('#DEADED').i('Master is running with PID: 6668'))
17   log(chalk.bgHex('#DEADED').i('Worker is running with PID: 5620'))
18   for (let i = 0; i < numCPUs; i++) {
19     cluster.fork(index.js)
20   }
21 } else if (!cluster.isMaster || (MODE === RunningMode.Fork)) {
22   if (MODE === RunningMode.Fork) {
23     log(chalk.bgHex('#DEADED').i('Fork mode running'))
24   }
25   log(chalk.bgHex('#DEADED').i('Server running on port: 8090'))
26   Connecting to MongoDB...
```

Task Manager window showing running processes:

Name	PID	Status	User name	CPU	Memory (a...)	UAC virtualizat...
NLClientApp.exe	11496	Running	sarav	00	9,968 K	Disabled
NLSvc.exe	5316	Running	SYSTEM	00	15,140 K	Not allowed
node.exe	17704	Running	sarav	00	12,356 K	Disabled
node.exe	19052	Running	sarav	00	55,940 K	Disabled
nvcontainer.exe	5448	Running	SYSTEM	00	2,280 K	Not allowed
nvcontainer.exe	8136	Running	sarav	00	1,420 K	Disabled
nvcontainer.exe	8176	Running	sarav	00	17,344 K	Disabled
nvclui.exe	19436	Running	sarav	00	26,696 K	Disabled
NVDisplay.Container...	2632	Running	SYSTEM	00	1,780 K	Not allowed
NVDisplay.Container...	3340	Running	SYSTEM	00	10,020 K	Not allowed
NVIDIA Share.exe	13232	Running	sarav	00	4,360 K	Disabled
NVIDIA Share.exe	1652	Running	sarav	00	1,872 K	Disabled
NVIDIA Share.exe	12448	Running	sarav	00	26,504 K	Disabled
NVIDIA Web Helper...	5132	Running	sarav	00	7,168 K	Disabled
nvsphelper64.exe	13256	Running	sarav	00	444 K	Disabled
OfficeClickToRun.exe	5708	Running	SYSTEM	00	3,784 K	Not allowed
OneApp.IGCC.WinSe...	5308	Running	SYSTEM	00	2,888 K	Not allowed
OneDrive.exe	14064	Running	sarav	00	9,068 K	Disabled
openvpnserver.exe	5424	Running	SYSTEM	00	16 K	Not allowed
OriginWebHelperSer...	5684	Running	LOCAL SE...	00	1,628 K	Not allowed
POWERPNT.EXE	18268	Running	sarav	00	86,636 K	Disabled
powershell.exe	15108	Running	sarav	00	2,392 K	Disabled
powershell.exe	3828	Running	sarav	00	31,024 K	Disabled

NODEMON CLUSTER:

forever start index.js -- -m=1

The screenshot shows a Notepad window with logs for 'GoP-.log'. The logs indicate that a Node.js cluster is running with a master process (PID: 11268) and multiple worker processes (PIDs: 748, 4424, 11796). The workers are connected to MongoDB servers. A warning message is visible: '(node:11796) Warning: Accessing non-existent property 'padLevels' of module exports inside circular dependency (Use 'node --trace-warnings ...' to show where the warning was created)'. The task manager window shows several 'node.exe' processes running, with the master process (PID: 11268) and worker processes (PIDs: 748, 4424, 11796) highlighted. The status bar at the bottom shows the command: 'forever pid id logFile data: [0] GoP- "C:\Program Files\nodejs\node.exe" C:\Users\sarav\Downloads\BackendCH\BackendJS\index.js -m=1 11796 11268 C:\Users\sarav\.forever\GoP-.log 0:0:1:6.6970000000000003 PS C:\Users\sarav\Downloads\BackendCH\BackendJS>'

NODEMON FORK:

forever start index.js -- -m=2

The screenshot shows a Notepad window with logs for 'VZRW.log'. The logs indicate that a Node.js fork mode is running with a master process (PID: 19088) and multiple worker processes (PIDs: 1208, 19088). The workers are connected to MongoDB servers. A warning message is visible: '(node:1208) Warning: Accessing non-existent property 'padLevels' of module exports inside circular dependency (Use 'node --trace-warnings ...' to show where the warning was created)'. The task manager window shows several 'node.exe' processes running, with the master process (PID: 19088) and worker processes (PIDs: 1208, 19088) highlighted. The status bar at the bottom shows the command: 'forever pid id logFile data: [0] VZRW "C:\Program Files\nodejs\node.exe" C:\Users\sarav\Downloads\BackendCH\BackendJS\index.js -m=2 1208 19088 C:\Users\sarav\.forever\VZRW.log 0:0:1:9.8919999999999996 PS C:\Users\sarav\Downloads\BackendCH\BackendJS>'

PM2 CLUSTER:

pm2 start index.js --watch -i max

```
34 MONGO_ATLAS: {
35   options: null,
36   uri: process.env.MONGO_ATLAS_URI || '
37 }
38 },
39 MODE: args.mode,
40 PASSPORT_SECRET: process.env.PASSPORT_SEC
41 PERS: process.env.PERS || 'MONGO',
42 PORT: args.port || process.env.PORT || 80
43 RunningMode
44 }
45
```

id	name	namespace	version	mode	pid	uptime	cpu	status	cpu	mem	user	watching
0	index	default	1.0.0	cluster	7684	13s	0	online	0%	110.7mb	sarav	enabled
1	index	default	1.0.0	cluster	12048	13s	0	online	0%	109.0mb	sarav	enabled
2	index	default	1.0.0	cluster	18988	12s	0	online	0%	110.4mb	sarav	enabled
3	index	default	1.0.0	cluster	20040	11s	0	online	0%	108.7mb	sarav	enabled
4	index	default	1.0.0	cluster	6452	10s	0	online	0%	110.3mb	sarav	enabled
5	index	default	1.0.0	cluster	17980	9s	0	online	0%	110.3mb	sarav	enabled
6	index	default	1.0.0	cluster	18828	7s	0	online	0%	110.4mb	sarav	enabled
7	index	default	1.0.0	cluster	2840	6s	0	online	0%	108.6mb	sarav	enabled
8	index	default	1.0.0	cluster	3816	5s	0	online	0%	108.4mb	sarav	enabled
9	index	default	1.0.0	cluster	7184	4s	0	online	1.6%	110.0mb	sarav	enabled
10	index	default	1.0.0	cluster	20192	3s	0	online	60.9%	104.7mb	sarav	enabled
11	index	default	1.0.0	cluster	16844	2s	0	online	68.7%	79.0mb	sarav	enabled

PM2 FORK:

pm2 start index.js -- dev --port=6000

```
10 Worker is running with PID: 17888
11 Server running on port: 6000
12 Connecting to MongoDB ...
13 Connecting to MongoDB ...
14 Connecting to MongoDB ...
15 Connecting to MongoDB ...
16 Mongoose connected to MongoDB server!
17 Mongoose connected to MongoDB server!
18 Mongoose connected to MongoDB server!
19 Mongoose connected to MongoDB server!
```

Divergent env variables from local env

Add your own code metrics: <http://bit.ly/code-metrics>
Use 'pm2 logs index [--lines 1000]' to display logs
Use 'pm2 env 0' to display environment variables
Use 'pm2 monit' to monitor CPU and Memory usage index

C:\Users\sarav\Downloads\BackendCH\BackendJS>pm2 list

id	name	namespace	version	mode	pid	uptime	cpu	status	cpu	mem	user	watching
0	index	default	1.0.0	fork	17888	47s	0	online	0%	78.0mb	sarav	disabled