

NodeJS

Installing nodejs 16

```
curl -sL https://deb.nodesource.com/setup_16.x | sudo -E bash -  
sudo apt-get install -y nodejs
```

We can verify the installation checking the version

node --version

npm --version

```
bibek@bibek-lfTechnology:~$ node --version  
v16.13.0  
bibek@bibek-lfTechnology:~$ npm --version  
8.1.0
```

To create api

npm init

And **set the variables** (Enter for default value)

package name: (nodejs) api

version: (1.0.0)

description: creating api

entry point: (index.js) main.js

test command: npm test

git repository:

keywords:

author: Bibek Mishra

license: (ISC) We can see package.json file in the current directory.

Create file main.js

vi main.js

And paste the following lines (adjust as per your requirement)

```
var http = require('http');  
http.createServer(function(req,res){  
  res.writeHead(200, { 'Content-Type': 'text/plain' });  
  res.end('Hello Node JS || From DevOps Internship');  
}).listen(6080);  
console.log('Hello Node JS From DevOps Internship');
```

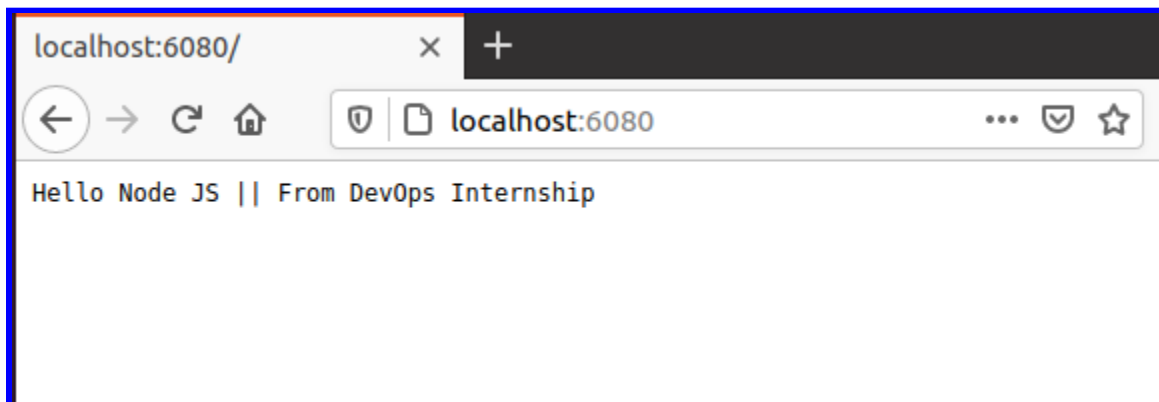
```
var http = require('http');
http.createServer(function(req,res){
  res.writeHead(200, { 'Content-Type': 'text/plain' });
  res.end('Hello Node JS || From DevOps Internship');
}).listen(6080);
console.log('Hello Node JS From DevOps Internship');
```

Save and exit

To serve the application

node main.js

```
bibek@bibek-lfTechnology:~/nodejs$ node main.js
"Hello Node JS From DevOps Internship"
```



For 2nd api

We can create another .js file and make changes in package.json to serve that .js file. **But,**

Followed the same procedure creating another directory

mkdir ../nodejs1

cd ../nodejs1

npm init

Use ``npm install <pkg>`` afterwards to install a package and save it as a dependency in the package.json file.

Press ^C at any time to quit.

package name: (nodejs1) api2

version: (1.0.0)

description: createing 2nd api

entry point: (index.js)

test command: npm test

git repository:

keywords:

author: Bibek Mishra

license: (ISC)

About to write to /home/bibek/nodejs1/package.json:

```
{
  "name": "api2",
  "version": "1.0.0",
  "description": "createing 2nd api",
  "main": "index.js",
  "scripts": {
    "test": "npm test"
  },
  "author": "Bibek Mishra",
  "license": "ISC"
}
```

Is this OK? (yes) yes

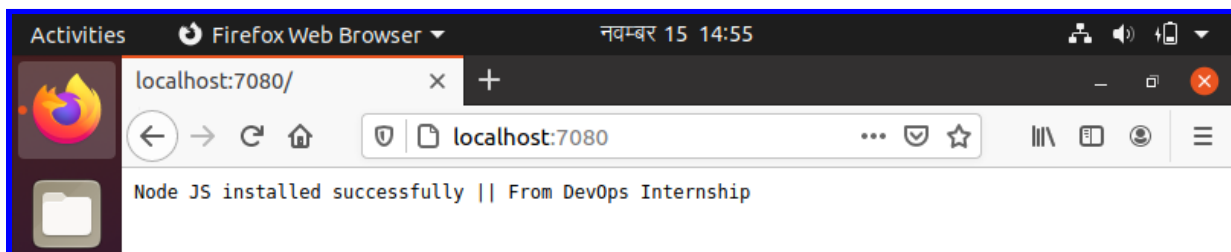
bibek@bibek-lfTechnology:~/nodejs1\$

vi index.js

```
var http = require('http');
http.createServer(function(req,res){
  res.writeHead(200, { 'Content-Type': 'text/plain' });
  res.end('Node JS installed successfully || From DevOps Internship');
}).listen(7080);
console.log('listening...');
```

node index.js

```
bibek@bibek-lfTechnology:~/nodejs1$ node index.js
listening...
```



To install pm2

`sudo npm i -g pm2`

```
bibek@bibek-lfTechnology:~/nodejs1$ sudo npm i -g pm2
[sudo] password for bibek:
npm WARN deprecated uuid@3.4.0: Please upgrade to version 7 or higher. 0
versions may use Math.random() in certain circumstances, which is known to
be problematic. See https://v8.dev/blog/math-random for details.

added 180 packages, and audited 181 packages in 25s

10 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities
npm notice
npm notice New patch version of npm available! 8.1.0 -> 8.1.3
npm notice Changelog: https://github.com/npm/cli/releases/tag/v8.1.3
npm notice Run npm install -g npm@8.1.3 to update!
npm notice
```

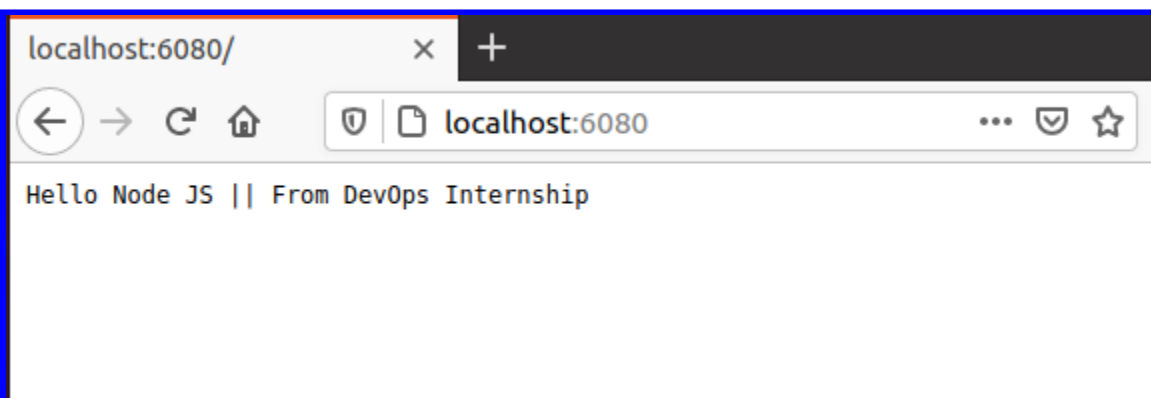
To start through four cluster with PM2 tool

For Main.js

`pm2 start main.js -i 4`

```
bibek@bibek-lfTechnology:~/nodejs$ pm2 start main.js -i 4
[PM2] Starting /home/bibek/nodejs/main.js in cluster_mode (4 instances)
[PM2] Done.
```

id	name	mode	u	status	cpu	memory
0	main	cluster	0	online	0%	43.3mb
1	main	cluster	0	online	0%	39.4mb
2	main	cluster	0	online	0%	36.0mb
3	main	cluster	0	online	0%	30.3mb

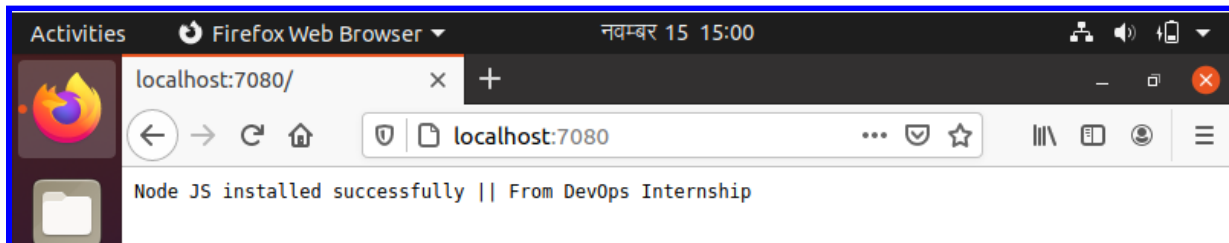


For index.js

pm2 start index.js -i 4

```
bibek@bibek-lfTechnology:~/nodejs$ cd ../nodejs1
bibek@bibek-lfTechnology:~/nodejs1$ pm2 start index.js -i 4
[PM2] Starting /home/bibek/nodejs1/index.js in cluster_mode (4 instances)
[PM2] Done.
```

id	name	mode	u	status	cpu	memory
4	index	cluster	0	online	0%	41.1mb
5	index	cluster	0	online	0%	40.2mb
6	index	cluster	0	online	0%	39.0mb
7	index	cluster	0	online	0%	31.1mb
0	main	cluster	0	online	2.5%	41.9mb
1	main	cluster	0	online	0%	41.9mb
2	main	cluster	0	online	0%	41.7mb
3	main	cluster	0	online	0%	42.1mb



To delete four cluster one by one

Delete 0th processID of Index

pm2 delete 0

```
bibek@bibek-lfTechnology:~/nodejs1$ pm2 delete 0
[PM2] Applying action deleteProcessId on app [0](ids: [ '0' ])
[PM2] [main](0) ✓
```

id	name	mode	u	status	cpu	memory
4	index	cluster	0	online	0%	42.2mb
5	index	cluster	0	online	7.1%	42.6mb
6	index	cluster	0	online	0%	41.8mb
7	index	cluster	0	online	0%	42.7mb
1	main	cluster	0	online	0%	41.8mb
2	main	cluster	0	online	0%	41.7mb
3	main	cluster	0	online	0%	42.0mb

```
bibek@bibek-lfTechnology:~/nodejs1$
```

Delete **7th processID** of Main

pm2 delete 7 and so on...

```
bibek@bibek-lfTechnology:~/nodejs1$ pm2 delete 7
[PM2] Applying action deleteProcessId on app [7](ids: [ '7' ])
[PM2] [index](7) ✓
```

id	name	mode	u	status	cpu	memory
4	index	cluster	0	online	0%	42.9mb
5	index	cluster	0	online	0%	43.8mb
6	index	cluster	0	online	0%	43.3mb
1	main	cluster	0	online	0%	44.0mb
2	main	cluster	0	online	0%	42.9mb
3	main	cluster	0	online	0%	43.9mb

```
bibek@bibek-lfTechnology:~/nodejs1$ pm2 delete 4
[PM2] Applying action deleteProcessId on app [4](ids: [ '4' ])
[PM2] [index](4) ✓
```

id	name	mode	u	status	cpu	memory
5	index	cluster	0	online	0%	44.0mb
6	index	cluster	0	online	0%	43.8mb
1	main	cluster	0	online	0%	43.4mb
2	main	cluster	0	online	0%	43.4mb
3	main	cluster	0	online	0%	44.0mb

```
bibek@bibek-lfTechnology:~/nodejs1$ pm2 delete 5
[PM2] Applying action deleteProcessId on app [5](ids: [ '5' ])
[PM2] [index](5) ✓
```

id	name	mode	u	status	cpu	memory
6	index	cluster	0	online	0%	43.5mb
1	main	cluster	0	online	0%	44.2mb
2	main	cluster	0	online	0%	43.2mb
3	main	cluster	0	online	0%	44.5mb

To delete remaining all at once

pm2 delete all

```
bibek@bibek-lfTechnology:~/nodejs1$ pm2 delete all
[PM2] Applying action deleteProcessId on app [all](ids: [ 1, 2, 3 ])
[PM2] [main](1) ✓
[PM2] [main](3) ✓
[PM2] [main](2) ✓
```

id	name	mode	u	status	cpu	memory
----	------	------	---	--------	-----	--------

```
bibek@bibek-lfTechnology:~/nodejs1$ █
```

To delete all 4 clusters of main.js at once

pm2 delete main

```
main.js package.json
bibek@bibek-lfTechnology:~/nodejs$ pm2 start main.js -i 4
[PM2] Starting /home/bibek/nodejs/main.js in cluster_mode (4 instances)
[PM2] Done.
```

id	name	mode	u	status	cpu	memory
0	main	cluster	0	online	0%	44.1mb
1	main	cluster	0	online	0%	41.0mb
2	main	cluster	0	online	0%	37.1mb
3	main	cluster	0	online	0%	30.2mb

```

bibek@bibek-lfTechnology:~/nodejs$ pm2 delete main
[PM2] Applying action deleteProcessId on app [main](ids: [ 0, 1, 2, 3 ])
[PM2] [main](2) ✓
[PM2] [main](0) ✓
[PM2] [main](1) ✓
[PM2] [main](3) ✓
```

id	name	mode	u	status	cpu	memory
----	------	------	---	--------	-----	--------

```

bibek@bibek-lfTechnology:~/nodejs$
```