## Web Development with Node.js and MongoDB

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Video 2.2





## In this Video, we are going to take a look at...

- What is npm
- Installing npm
- Fixing permissions
- Managing packages







Q













node pizza maker

find packages

npm On-Site

npm Private Packages

npm Open Source

documentation

sign up or log in

support

## npm is the package manager for jquery



226,573 total packages



142,984,970 downloads in the last day



771,474,930 downloads in the last week



2,614,392,837

downloads in the last month

#### packages people 'npm install' a lot

Fast, unopinionated, minimalist web framework

4.13.1 published 6 months ago by dougwilson



#### browserify

browser-side require() the node way 10.2.6 published 6 months ago by substack



#### grunt-cli

The grunt command line interface. 0.1.13 published 2 years ago by tkellen



express

a package manager for JavaScript



#### pm2

Production process manager for Node.JS appli... 0.14.3 published 6 months ago by jshkurti



#### npm

2.13.0 published 6 months ago by zkat



#### karma

Spectacular Test Runner for JavaScript. 0.13.1 published 6 months ago by dignifiedquire



#### bower

The browser package manager



#### cordova

Cordova command line interface tool



#### coffee-script

Unfancy JavaScript



```
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]
$ npm -v
3.3.10
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]
$ ■
```



ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]

\$ sudo npm install -g npm



02 - Installing Node.js and updating npm



















## These are the docs you're looking for

#### **Getting Started**

01 - What is npm?

07 - Uninstalling local packages

06 - Updating local packages

03 - Fixing npm permissions 08 - Installing npm packages globally

04 - Installing npm packages locally 09 - Updating global packages

05 - Using a `package.json` 10 - Uninstalling global packages 11 - Creating Node.js modules

12 - Publishing npm packages

13 - Semantic versioning and npm

14 - Working with scoped packages

### How npm works

01 - Packages

03 - npm v3

05 - npm v3 Non-determinism

















## These are the docs you're looking for

#### **Getting Started**

npmjs.com

01 - What is npm?

02 - Installing Node.js and updating npm

03 - Fixing npm permissions

04 - Installing npm packages locally

05 - Using a `package.json`

06 - Updating local packages

07 - Uninstalling local packages

08 - Installing npm packages globally

09 - Updating global packages

10 - Uninstalling global packages

11 - Creating Node.js modules

12 - Publishing npm packages

13 - Semantic versioning and npm

14 - Working with scoped packages

#### How npm works

01 - Packages

03 - npm v3

05 - npm v3 Non-determinism





#### **Getting Started**

01 - What is npm?

02 - Installing Node.js and updating npm

03 - Fixing npm permissions

04 - Installing npm packages locally

05 - Using a 'package.json'

06 - Updating local packages

07 - Uninstalling local packages

08 - Installing npm packages

globally

09 - Updating global

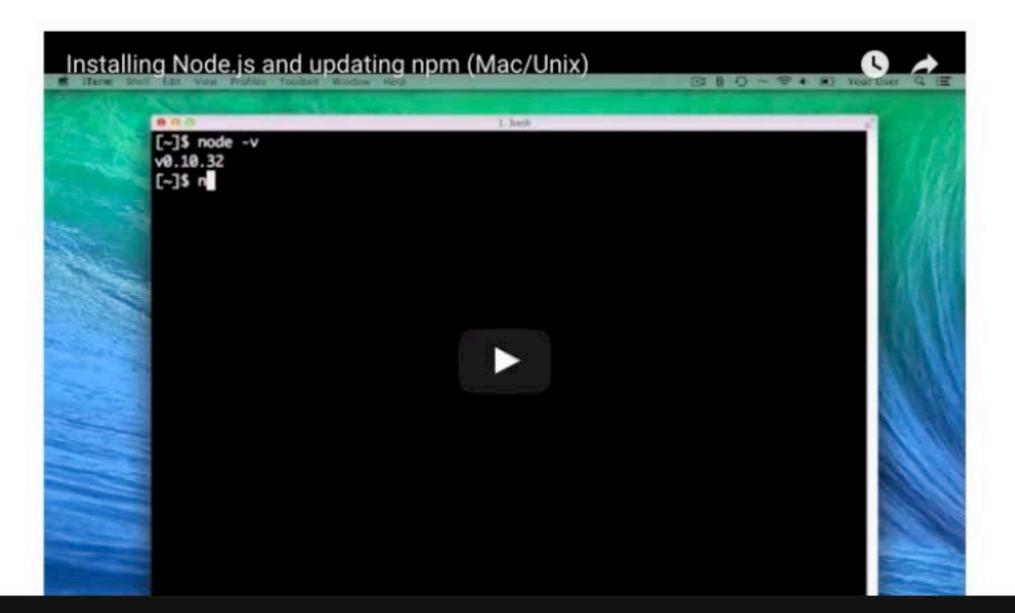
packages

10 - Uninstalling global

packages

11 - Creating Node.js modules

# Installing Node.js and updating npm

















#### npm config set prefix '~/.npm-global'

Open or create a ~/.profile file and add this line:

4. Back on the command line, update your system variables:

Test: Download a package globally without using sudo.

#### npm install -g jshint

Instead of steps 2-4 you can also use the corresponding ENV variable (e.g. if you don't want to modify ~/.profile):

NPM\_CONFIG\_PREFIX=~/.npm-global npm install -g jshint

Last modified December 29, 2015

Found a typo? Send a pull request!





```
▶ □ 1
V 32

▶ □ 2.1
 ▶ □ 2.2

▶ □ 2.3

 ▶ □ 2.4
 ▶ □ 2.5

▶ □ 3
▶ □ 4

□ 5
▶ □ 6
▶ □ 7
▶ □ 8
```

a export-environment-variables.sh

▶ □ scripts

6

```
export PATH=./bin:./vendor/bin:$PATH
export PATH="$HOME/.composer/vendor/bin:$PATH"
export PATH="$(brew --prefix coreutils)/libexec/gnubin:$PATH"
export PATH="/usr/local/bin:$PATH"
export PATH="$HOME/.npm-global/bin:$PATH"
```



BIONE -

export PATH=./bin:./vendor/bin:\$PATH ▶ □ 1 export PATH="\$HOME/.composer/vendor/bin:\$PATH" V 32 export PATH="\$(brew --prefix coreutils)/libexec/gnubin:\$PATH" ▶ □ 2.1 ▶ □ 2.2 export PATH="/usr/local/bin:\$PATH" ▶ □ 2.3 export PATH="\$HOME/.npm-global/bin:\$PATH" ▶ □ 2.4 ▶ □ 2.5 ► □ 3 ▶ 7 4 □ 5 ▶ □ 6 ▶ 7 ▶ □ 8 export-environment-variables.sh Scripts

## Update."profile", ".bash\_profile" or similar file depending on your OS



BIOLET -

```
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]
$ npm -v
3.3.12
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]
$ ||
```



ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]



## Managing Packages

- Learn later about package.json and publishing
- Few commands for developing applications
- Install globally or locally
- Command line tools => globally
- Dependencies => locally







ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]
\$ npm install -g nodemon



ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]
\$ npm install --gl





ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]





```
/Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2
--- lodash@4.0.0

npm WARN encent ENOENT: no such file or directory, open '/Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2/package.json'
npm WARN 2.2 No description
npm WARN 2.2 No repository field.
npm WARN 2.2 No README data
npm WARN 2.2 No license field.

ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]

$ ls
node_modules
```

ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]

ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]

\$ npm install lodash

\$ ls



```
$ npm install lodash
/Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2
--- lodash@4.0.0
npm WARN encent ENOENT: no such file or directory, open '/Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2/packag
e.json'
npm WARN 2.2 No description
npm WARN 2.2 No repository field.
npm WARN 2.2 No README data
npm WARN 2.2 No license field.
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]
$ 1s
node_modules
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]
$ ls node_modules/
lodash
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]
$
```

ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]



```
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!]
$ echo '{}' > package.json
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$ [
```





```
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$ npm install --save commander
/Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2
|-- commander@2.9.0
| -- graceful-readlink@1.0.1
|-- lodash@4.0.0 extraneous

npm WARN 2.2 No description
npm WARN 2.2 No repository field.
npm WARN 2.2 No license field.

ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
```





```
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$ npm install --save commander
/Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2
t-r commander@2.9.0
--- graceful-readlink@1.0.1
--- lodash@4.0.0 extraneous
npm WARN 2.2 No description
npm WARN 2.2 No repository field.
npm WARN 2.2 No license field.
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$ cat package.json
 "dependencies": {
   "commander": "^2.9.0"
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
s 📗
```



```
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$ npm install --save-dev sinon
```





## Versions

- ^version Until major
  - ^1.3.2 will install higher than 1.3.1 but less than 2.0.0
- version Match exactly
  - 1.3.2 will install 1.3.2
- ~version Approximately
  - ~1.3 will install incrementing right most digit (For example, 1.3.2)
- 1.3.x Increment x digit (For example, 1.3.2)



## Versions

- >version Greater than
  - >1.3.2 will install 1.3.3 or greater
- >=version Greater than or equal
  - >=1.3.2 will install 1.3.2 or greater
- <version Less than; <=version Less than or equal</li>
- \* Any version
- tag Version tagged as (For Example, latest)





ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
\$ n





```
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$ npm install --save commander@1.3.1

    graceful-readlink@1.0.1 node_modules/graceful-readlink

/Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2
-- commander@1.3.1
L-- keypress@0.1.0
--- lodash@4.0.0 extraneous
npm WARN 2.2 No description
npm WARN 2.2 No repository field.
npm WARN 2.2 No license field.
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$ cat package.json
 "dependencies": {
   "commander": "^1.3.1"
 "devDependencies": {
   "sinon": "^1.17.2"
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
```





```
$ npm update --save
/Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2
-- commander@1.3.2
-- lodash@4.0.0 extraneous

npm WARN 2.2 No description
npm WARN 2.2 No repository field.
npm WARN 2.2 No license field.

ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$ c
```

ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]



```
$ npm update --save
/Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2
--- commander@1.3.2
--- lodash@4.0.0 extraneous
npm WARN 2.2 No description
npm WARN 2.2 No repository field.
npm WARN 2.2 No license field.
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$ cat package.json
 "dependencies": {
   "commander": "^1.3.2"
 "devDependencies": {
   "sinon": "^1.17.2"
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$
```

ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]



```
$ npm ls
/Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2
H-→ commander@1.3.2
keypress@0.1.0
--- lodash@4.0.0 extraneous
-- sinon@1.17.2
 +-- formatio@1.1.1
 ⊦-- lolex@1.3.2
 ⊦-- samsam@1.1.2
 --- util@0.10.3
   --- inherits@2.0.1
npm ERR! extraneous: lodash@4.0.0 /Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2/node_modules/lodash
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$
```

ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]



```
$ npm ls --depth=0
/Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2
|-- commander@1.3.2
|-- lodash@4.0.0 extraneous
|-- sinon@1.17.2
|-- sinon@1.17.2
|-- sinon@1.17.2 |
|-- inpm ERR! extraneous: lodash@4.0.0 /Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2/node_modules/lodash
| ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
```

ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]



ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?] \$ npm ls --depth=0 -g









ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]

\$ cat packa

- --save
- --save-dev
- --save-optional



```
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
cat package.json
{
   "dependencies": {
        "commander": "^1.3.2"
},
   "devDependencies": {
        "sinon": "^1.17.2"
}
}
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
s np
```

--save

--save-dev

--save-optional



```
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$ cat package.json
 "dependencies": {
   "commander": "^1.3.2"
 "devDependencies": {
   "sinon": "^1.17.2"
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$ npm uninstall --save-dev sinon
sinon@1.17.2 node_modules/sinon

    formatio@1.1.1 node_modules/formatio

inherits@2.0.1 node_modules/inherits

    lolex@1.3.2 node_modules/lolex

samsam@1.1.2 node_modules/samsam
util@0.10.3 node_modules/util
/Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2
--- lodash@4.0.0 extraneous
npm WARN 2.2 No description
npm WARN 2.2 No repository field.
npm WARN 2.2 No license field.
                                                 --save
```

--save-dev

--save-optional

udemy

```
"devDependencies": {
   "sinon": "^1.17.2"
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$ npm uninstall --save-dev sinon
sinon@1.17.2 node_modules/sinon

    formatio@1.1.1 node_modules/formatio

inherits@2.0.1 node_modules/inherits
lolex@1.3.2 node_modules/lolex
samsam@1.1.2 node_modules/samsam
util@0.10.3 node_modules/util
/Users/ifdattic/projects/nodejs-mongodb-video-course/code/2/2.2
--- lodash@4.0.0 extraneous
npm WARN 2.2 No description
npm WARN 2.2 No repository field.
npm WARN 2.2 No license field.
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
$ cat package.json
 "dependencies": {
   "commander": "^1.3.2"
 },
 "devDependencies": {}
ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
```

[hqen]

ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
\$ npm view commander



ifdattic at ifdattic-mbp13 in ~/projects/nodejs-mongodb-video-course/code/2/2.2 on master [!?]
\$ npm view commander versions



```
'0.6.0',
'0.6.1',
'1.0.0',
'1.0.1',
11.0.21,
'1.0.3',
11.0.41,
'1.0.5',
'1.1.0',
'1.1.1',
11.2.01,
1.3.0
'1.3.1',
'1.3.2',
'2.0.0',
'2.1.0',
'2.2.0',
'2.3.0',
'2.4.0',
'2.5.0',
'2.5.1',
'2.6.0',
'2.7.0',
'2.7.1',
'2.8.0',
'2.8.1',
'2.9.0']
```



## Next Video

The Event Loop

