

NODE.JS

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Web Development Languages

- ***HTML*** - for building Web pages, front end development, main content, formatting, laying out and structure
- ***CSS*** - for styling Web pages, to make them look presentable, look and feel
- ***JavaScript*** - for controlling the browser, and generating dynamic content. Now, also for back end development
- ***Other languages*** - C#, Python, PHP, Java, Visual Basic

JavaScript and Node.js

- Considered the programming *language* for the *Web*
- Originally just executing by *Browsers*, for controlling the Browser and creating dynamic content
- *Now* also for back end development, *like other*, more mature *languages*: C#, Python, Java, etc.
- But need infrastructure to execute on backend, on desktops: *Node.js*
- Node.js - *JavaScript runtime* to execute outside browser

Download Node.js

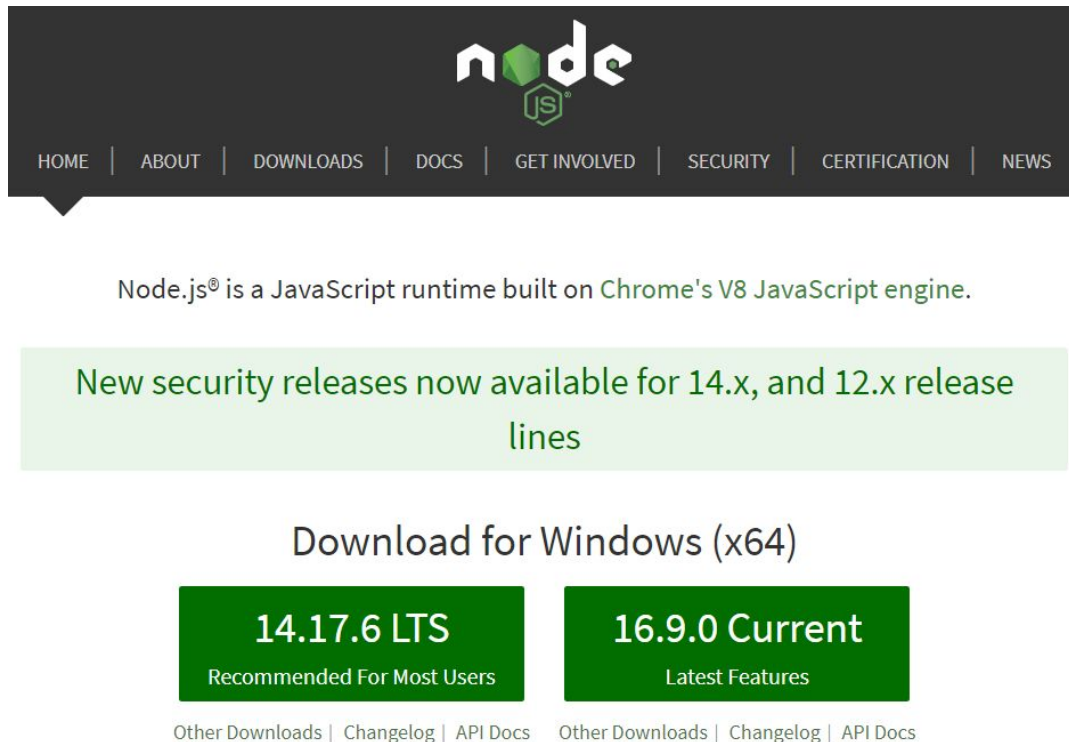
Navigate to <https://nodejs.org/en/>

Download recommended
version for your OS

Windows downloads MSI

MacOS downloads DMG

Follow instructions



The screenshot shows the Node.js website's download page. At the top is the Node.js logo and a navigation bar with links: HOME, ABOUT, DOWNLOADS, DOCS, GET INVOLVED, SECURITY, CERTIFICATION, and NEWS. Below the navigation bar is a text block stating "Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine." followed by a green banner announcing "New security releases now available for 14.x, and 12.x release lines". The main section is titled "Download for Windows (x64)" and features two green buttons: "14.17.6 LTS" with the subtext "Recommended For Most Users" and "16.9.0 Current" with the subtext "Latest Features". At the bottom, there are links for "Other Downloads", "Changelog", and "API Docs" for both versions.

node

HOME | ABOUT | DOWNLOADS | DOCS | GET INVOLVED | SECURITY | CERTIFICATION | NEWS

Node.js® is a JavaScript runtime built on Chrome's V8 JavaScript engine.

New security releases now available for 14.x, and 12.x release lines

Download for Windows (x64)

14.17.6 LTS
Recommended For Most Users

16.9.0 Current
Latest Features

Other Downloads | Changelog | API Docs Other Downloads | Changelog | API Docs

Test Installation

- Once installed, test by typing the following at the command line. Use CMD on Windows or Terminal on macOS

node --version

v14.16.0

node above is the new command installed

--version is the option to display the version, e.g., 14.16

Creating a Node Project

- To create a Node project, create a directory

```
mkdir my-node-project
```

- and then initialize it from within the new directory

```
cd my-node-project
```

```
npm init
```

- Answer questions and then confirm new package.json file

Hello World

- Create file called `hello.js` with following content. Use any text editor

```
console.log('hello world!');
```

- Save the file and then run the new file with the following command on the console. Confirm the message is displayed

```
node hello.js  
hello world!
```

Creating a Simple Server

- Install [expressjs](#)

```
npm install express
```

- Create a JavaScript file to implement server, e.g., server.js

```
var express = require('express');  
var app = express();  
app.get('/hello', (req, res) =>  
  res.send('Hello World!'));  
app.listen(4000);
```


Using the Server

- Start the server by running server.js with node

`node server.js`

- The server will start and listen at port 4000

- Test by pointing your browser to

<http://localhost:4000/hello>

- The server will respond with

Hello World!