NODEJS CASE STUDY

1. WHAT IS NODEJS?

Node.js is an [open-source](https://en.wikipedia.org/wiki/Open-source_software), [cross-platform](https://en.wikipedia.org/wiki/Cross-platform), [back-end](https://en.wikipedia.org/wiki/Front_end_and_back_end) [JavaScript](https://en.wikipedia.org/wiki/JavaScript) [runtime environment](https://en.wikipedia.org/wiki/Runtime_system) that runs on the [V8 engine](https://en.wikipedia.org/wiki/V8_(JavaScript_engine)) and executes JavaScript code outside a [web browser](https://en.wikipedia.org/wiki/Web_browser). Node.js lets developers use JavaScript to write command line tools and for [server-side scripting](https://en.wikipedia.org/wiki/Server-side_scripting)—running scripts server-side to produce [dynamic web page](https://en.wikipedia.org/wiki/Dynamic_web_page) content before the page is sent to the user's web browser. Consequently, Node.js represents a "JavaScript everywhere" paradigm,[[6]](https://en.wikipedia.org/wiki/Node.js#cite_note-6) unifying [web-application](https://en.wikipedia.org/wiki/Web_application) development around a single programming language, rather than different languages for server-side and client-side scripts.

1. WHAT ARE THE APPLICATIONS OF NODEJS?

*Node allows developers to write JavaScript code that runs directly in a computer process itself instead of in a browser. Node can, therefore, be used to write server-side applications with access to the operating system, file system, and everything else required to build fully-functional applications.*

**Companies that use Node.js know that JavaScript is the go-to language for building dynamic websites.**

But they want to take their dedication to JavaScript just a step further by utilizing the language not only for front-end development, but back-end development too.

**Node.js is a platform many skilled web developers are using today to amp up their back-end development while still using the same tried-and-true language – JavaScript.**

In fact, Node.js is so popular, quite a few major business enterprises are well-acquainted with the software. Companies that use Node.js include the following:

1. LinkedIn
2. Netflix
3. Uber
4. Trello
5. PayPal
6. NASA
7. eBay
8. Medium
9. Groupon
10. Walmart
11. Mozilla
12. GoDaddy
13. *COMPARISON OF NODE JS WITH OTHER SERVERS WITH JPS AND ASP?*

*JavaScript’s rising popularity has brought with it a lot of changes, and the face of web development today is dramatically different. The things that we can do on the web nowadays with JavaScript running on the server, as well as in the browser, were hard to imagine just several years ago, or were encapsulated within sandboxed environments like Flash or Java Applets.Before digging into*[*Node.js solutions*](https://www.toptal.com/nodejs)*, you might want to read up on the benefits of using*[*JavaScript across the stack*](https://www.toptal.com/javascript/guide-to-full-stack-javascript-initjs)*which unifies the language and data format (JSON), allowing you to optimally reuse developer resources. As this is more a benefit of JavaScript than Node.js specifically, we won’t discuss it much here. But it’s a key advantage to incorporating Node in your stack. As Wikipedia states: “Node.js is a packaged compilation of Google’s V8 JavaScript engine, the libuv platform abstraction layer, and a core library, which is itself primarily written in JavaScript.” Beyond that, it’s worth noting that Ryan Dahl, the creator of Node.js, was aiming to create****real-time websites with push capability****, “inspired by applications like Gmail”. In Node.js, he gave developers a tool for working in the non-blocking, event-driven I/O paradigm.*

## What Are the Advantages of Node.js?

Node.js is used by some of the most popular companies today. With that kind of track record, you have to wonder what makes Node.js so desirable. **Below are some advantages of Node.js.**

### *Easy*

Node.js is easy to learn. Though you’ll want professional developers to help you work on the software for your business, accessibility plays a large role in why developers choose to learn Node.js in the first place. Previous mastery of JavaScript and object-oriented programming is a must. And that requires seasoned developers. But after surpassing that threshold, developers will be relieved to know they can start doing what they came here for – programming.

### Simple

Because Node.js is a fan of the ‘JavaScript everywhere’ paradigm, there is no need to switch programming languages between back-end and [front-end development](https://trio.dev/blog/hire-front-end-developer). Most programming projects use [tech stacks](https://trio.dev/blog/tech-stack) that require 2-4 different programming languages, frameworks, libraries, and whatever else to account for a variety of development needs including databases, front-end development, and back-end development. **Node.js allows for only one language to be the primary catalyst for**[**full-stack development**](https://trio.dev/blog/full-stack-development)**. In effect, this leads to fewer files, less code, and overall less complication.**

### Fast

Projects built using Node.js hit the market at a faster rate than otherwise. Node.js is lightweight. As a result, programming in the [Node.js environment is faster and easier](https://trio.dev/blog/node-js-examples). Ultimately, this reduces the time spent in development and the overall time-to-market. Businesses look at faster release times advantageously. This is because they can get immediate feedback and make meaningful updates. Such an advantage is also helpful for developing a [minimum viable product (MVP)](https://www.scnsoft.com/software-development/mvp) to test Node.js project ideas on the market. **Websites that use Node.js tend to be faster as well.**

### Scalable

One of the reasons Node.js was made is to offer a more scalable alternative to Apache.Therefore, scalability is built into the very heart of Node.js. Companies that use Node.js have a need for scalable software in order to plan for business growth. **Node.js can handle several concurrent connections. Another useful feature of Node.js is load balancing which is the process of distributing tasks competently amongst resources.** This occurs when the load balancer receives incoming requests and sends them off to the server most capable of fulfilling them.software often has the largest communities. The benefit of a large community is lots of support and feedback.

This same community takes full advantage of the open-source standing of Node.js, building tools to ease the development process for everybody.

**Node package manager (NPM) the official package ecosystem for Node.js is the**[**largest and fastest-growing**](https://www.businesswire.com/news/home/20180104005052/en/npm-Report-State-JavaScript-Reveals-Popular-Web)**software registry in the world.**

1. Why we use that js?

Nodejs allows Javascript code to run outside the browser. Nodejs comes with a lot of modules and mostly used in web development.