|  |  |  |
| --- | --- | --- |
|  | NodeJS (v 14.15.0) | Java (v SE14) |
| Creation | Primarily a functional scripting framework derived from C/C++ | Class-based, Object Oriented language derived from C++ |
| Application | Fast, scalable server-side application | Complex web-based, highly concurrent application |
| Project | Flexible, multipurpose framework | Best suited for complex web-based concurrency project |
| Usage | Business Case: Application Row | Messaging, web application, highly concurrent application |
| Scope | Full-Stack | Server-Side |
| Frameworks | Express, Sails, Partial, Fast, et al | Spring, Struts, JSF, Tapestry, et al |
| Application | Leverage Asynchronous Functionality | Simplify development with inherent Object Oriented approach |
| Recommendation[1](https://www.educba.com/java-vs-node-js/)[2](https://www.educba.com/java-vs-javascript/) | X |  |



**The Argument for NodeJS Versus Java**

**What is NodeJS?**

Node.js is a framework for writing server-side JavaScript applications. It is built on top of Google Chrome’s V8 JavaScript runtime and uses an event-driven, non-blocking I/O model that makes it perfect for data-intensive, real-time applications. Some of the companies using Node in production: Netflix, PayPal, Walmart, Uber, et al.

**Technical Rationale**

1. Existing application functionality would demonstrably benefit from the innately asynchronous functionality NodeJS offers.
2. Open-source technology communities mature frameworks, services, packages, libraries, plugins and codebases substantially quicker than private service offerings.
3. Better documentation support, and subject discussion in open-source technology communities.

**Business Rationale**

1. Adopting NodeJS for the server-side architecture allows full-stack development for the application under 1 programming language umbrella: JavaScript; reducing hiring requirements.
2. JavaScript Developers are, on average, less expensive assets than Java Developers ($35 per hour[3](https://www.daxx.com/blog/development-trends/javascript-market-trends-average-salaries#:~:text=According%20to%20Payscale%2C%20the%20average%20Javascript%20developer%20salary%20in%20the,to%20%2493K%20per%20year.) versus $50 per hour[4](https://www.indeed.com/career/java-developer/salaries)).
3. Web Service costs are benchmarked as *slightly* cheaper (typically 2-3% at minimum).
4. Web Services are *slightly* more performant when using NodeJS[5](https://blog.jayway.com/2015/04/13/600k-concurrent-websocket-connections-on-aws-using-node-js/) versus Java.

**Additional Reading Material**

1. [Java versus NodeJS](https://www.educba.com/java-vs-node-js/)
2. [Java versus JavaScript](https://www.educba.com/java-vs-javascript/)
3. [Average JavaScript Developer Salary](https://www.daxx.com/blog/development-trends/javascript-market-trends-average-salaries#:~:text=According%20to%20Payscale%2C%20the%20average%20Javascript%20developer%20salary%20in%20the,to%20%2493K%20per%20year.)
4. [Average Java Developer Salary](https://www.indeed.com/career/java-developer/salaries)
5. [NodeJS Web Service Concurrency](https://blog.jayway.com/2015/04/13/600k-concurrent-websocket-connections-on-aws-using-node-js/)