NODE JS

Introduction on Node JS

Presentation BY RAJ PRUDHVI

Contact us:https://training.uplatz.com
Email: info@uplatz.com
Phone: +44 7836 212635

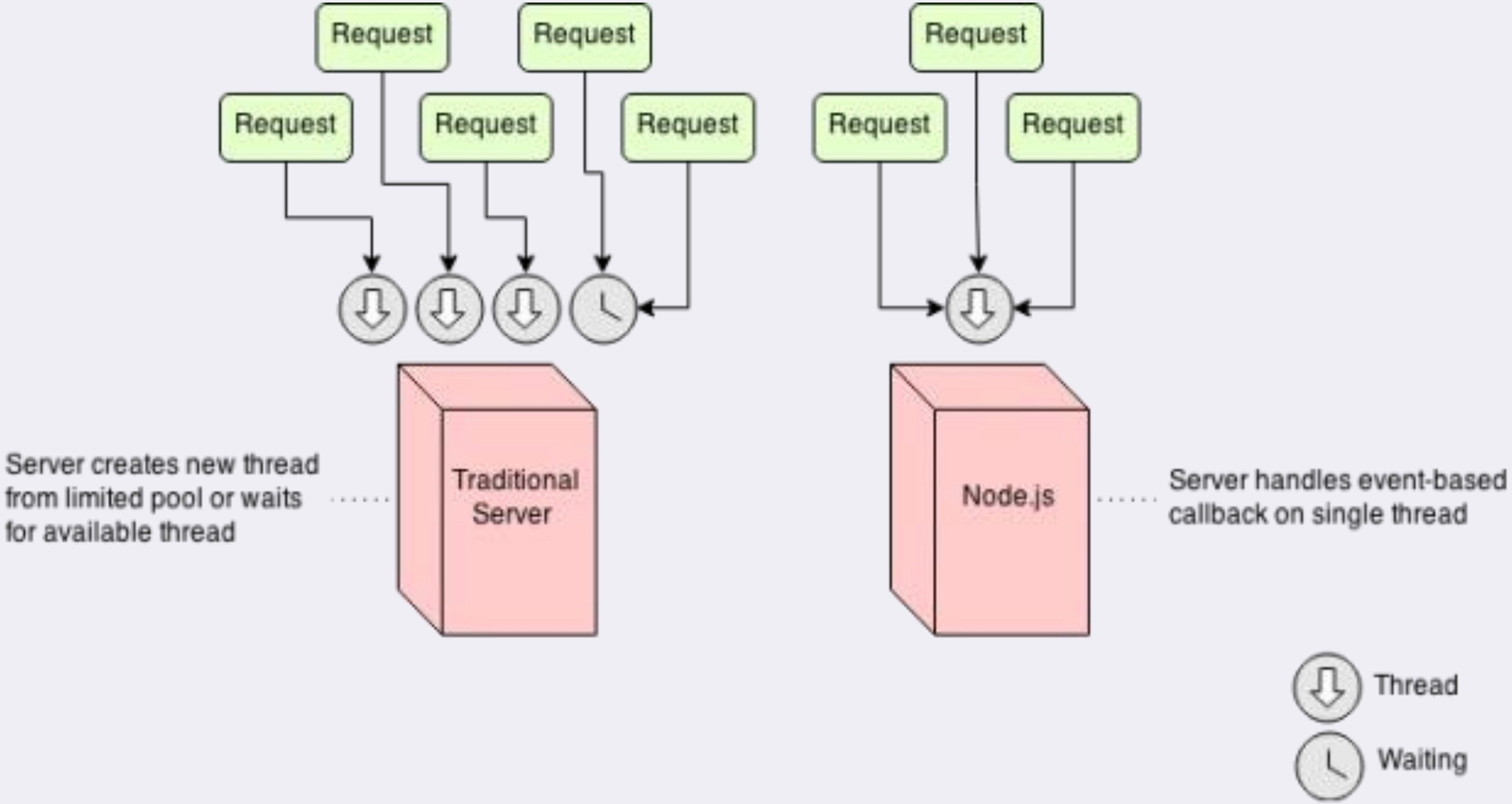
Need of Node JS

- Before Node.js web apps were written in a client/server model, in which the client would demand certain resources from the server, and get those resources in response. The server only reacted when the client made a request, and then closed the connection right after each response.

- In 2009, Ryan Dahl introduced a new approach to server-side runtime written in JavaScript. It enables requesting in and out of the web server (I/O) to be processed concurrently and asynchronously using a concept called non-blocking, or asynchronous I/O. That’s how Node.js has started.

- Basically, a Node.js app runs in a single process, without creating a new thread for every request. It makes such apps very efficient, mostly thanks to the V8 JavaScript engine which powers Node.js (and also happens to be the core of Google Chrome). The engine takes the JavaScript code and converts it into lower level or machine code - which don’t need to be interpreted first in order to be run. Then, running code on the server this way actually increases the processing speed.

Difference Between Traditional and Node Server



Server creates new thread from limited pool or waits for available thread

Server handles event-based callback on single thread

Uplatz

Node JS

Node.js is a runtime environment that allows software developers to launch both the frontend and backend of web apps using JavaScript.

Although JS underpins all the processes for app assembly, as a backend development environment, Node.js, differs from the frontend environment.

It has unique APIs that support HTTP requests, file systems and other server-side features for which frontend APIs provide limited support.

Features of Node JS

- Node JS is an Open Source
- Node JS runs on various machines like Windows , Mac , Linux etc
- Node JS allows use to use Java Script as Server Side Language
- Node JS allows us to Create , Read , Update , Delete files and folders on Server
- Easy to communicate with database
- Asynchronous and Event Driven
- Very Fast
- Single Threaded but Highly Scalable

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

Latest Version : 14

Why Use NODE JS

- An I/O non-blocking model allows for serving multiple simultaneous requests, ensuring easy scaling and prompt execution of client requests on high-load platforms.

- With a growing number of online users demanding the most relevant information and services at their fingertips, the Node.js runtime environment’s flexibility and responsiveness are key merits required by modern web apps.

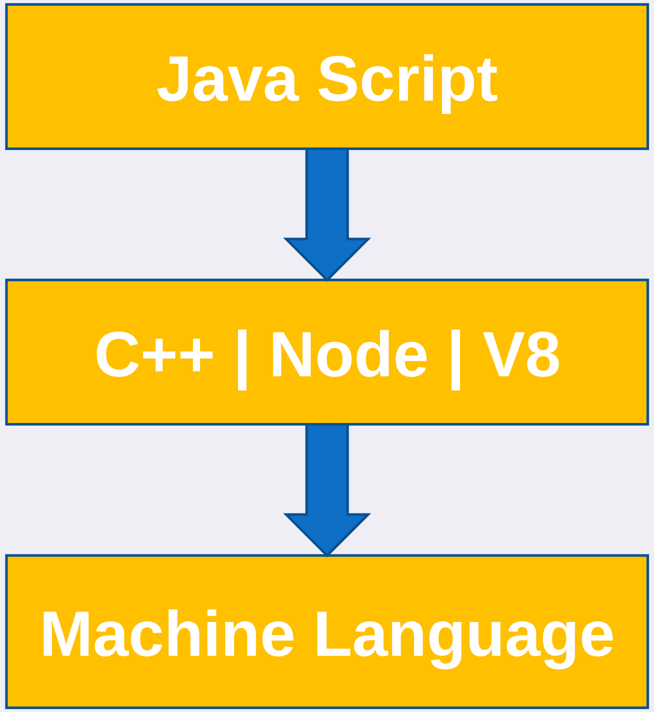
- Node.js language is spoken by both frontend and backend developers, which makes for a more effective and better-coordinated working environment, and eliminates the need to explain how certain features work or what certain code means. Small projects can be handled by a single full-stack team, saving time and money.

Chrome V8 Java Script Engine

- V8 is Google’s open source high-performance JavaScript and Web Assembly engine, written in C++.
- It is used in Chrome and in Node.js, among others. It implements ECMAScript and Web Assembly , and runs on Windows 7 or later and other operating systems
- Chrome V8 engine is a high performance JavaScript Engine , Written in C++ and used in Google Chrome
- Computers can only understand Machine Language Not Java script objects or HTML
- V8 Engine can also be embedded into C++
- Node JS is written in C++

Chrome V8 Java Script Engine

- A Java Script (**V8**) converts Java Script into Machine understandable language



Java Script

C++ | Node | V8

Machine Language

Top Node.JS Apps

- PayPal
- Netflix
- Uber
- LinkedIn
- Ebay
- Mozilla
- Microsoft
- IBM

Thank You

Contact us:https://training.uplatz.com

Email: info@uplatz.com

Phone: +44 7836 212635