Node.js Async

Node.js is a server-side platform built on Google Chrome's JavaScript Engine (V8 Engine) and its latest version is v0.10.36.

Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient, perfect for data-intensive real-time applications that run across distributed devices.

Node.js is an open source, cross-platform runtime environment for developing server-side and networking applications.

Node.js applications are written in JavaScript, and can be run within the Node.js runtime on OS X, Microsoft Windows, and Linux.

## Features of Node.js:

The following are some of the important features that make Node.js the first choice of software architects;

> Asynchronous and Event Driven − All APIs of Node.js library are asynchronous, that is, non-blocking. It essentially means a Node.js based server never waits for an API to return data. The server moves to the next API after calling it and a notification mechanism of Events of Node.js helps the server to get a response from the previous API call.

> Very Fast − Being built on Google Chrome's V8 JavaScript Engine, Node.js library is very fast in code execution.

> Single Threaded but Highly Scalable − Node.js uses a single threaded model with event looping. Event mechanism helps the server to respond in a non-blocking way and makes the server highly scalable as opposed to traditional servers which create limited threads to handle requests. Node.js uses a single threaded program and the same program can provide service to a much larger number of requests than traditional servers like Apache HTTP Server.

> No Buffering − Node.js applications never buffer any data. These applications simply output the data in chunks.

## Topics explored in this script include;

> Buffering using Buffers

> App Scaling using Child Processing techniques

> Express Frameworks

> Events Emitters

> File System IO

> RESTful APIs

> Application Scaling Using

> Piping Streams

> Web Modules (Client and Server)

> REPL Commands

> Node Package Manager (NPM)

## The following are the areas where Node.js is proving itself as a perfect technology partner;

> I/O bound Applications

> Data Streaming Applications

> Data Intensive Real-time Applications (DIRT)

> JSON APIs based Applications

> Single Page Applications

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