Updated 12/12/2023

Sign up

Node.JS Optimization Training
3 days (21 hours)

Presentation

Nodejs lets you develop back-end applications using JavaScript. This open-source environment has the advantage of being compatible with the latest versions of JavaScript and of being easily scalable (a lightweight, low-latency system supporting vertical and horizontal scaling).

The project has a large and active community, so you can find projects already built in Node and get help if you run into difficulties. What's more, this tool is relatively easy to use once you've mastered JavaScript. Using the same language for both front and back ends will simplify your product development.

This Node.js Optimization course is designed for experienced JavaScript developers. In this course, you'll learn how to optimize Nodejs with Express, routing, security, caching with Redis, streaming, continuous integration, test design and debugging.

This Node.js Optimization course will teach you the latest version of the program, Node.js 18.

Objectives

- Knowledge of the inner workings of Nodejs
- Monitor and debug a Node application
- Know and apply good safety practices
- Master testing, streaming and continuous integration
- Improve application performance with Redis and Express

Target audience

Web developers

Prerequisites

- Knowledge of JavaScript and a client-side framework
- Knowledge of a typed language
- Basic knowledge of Node or have attended our Nodejs training course

Node.JS Optimization training program

Optimizing Nodejs

- Clustering
- Using a framework like Express
- Using template engines like EJS
- Securing your application with Typescript
- Using the process manager as PM2 in prod
- PM2 installation
- PM2 configuration

Express

- Routing
- Guard
- Security via authentication strategies
- Error handling

Sockets with Node

- What is a socket?
- Benefits of use
- Setting up a socket with the Socket.io lib

Streaming with Node

- What is a stream?
- Writable streams
- Readable streams
- Duplex and transform streams
- Implementing streams

Scraper with Node

- What is scrapping?

- Which library is best for scrapping a site in Node.JS?

Handling CSV files with Node

Use streams to manipulate and modify large CSV files on the fly

Pattern & Genericity

- Factory VS Singleton
- Architecture of an Express API application
- Automatic module loading using singletons
- Creation of a generic CRUD that can be easily overloaded

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire which enables us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives for the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.