

OpenJS Node.js Services Developer (JSNSD)

This OpenJS Node.js Services Developer (JSNSD) training covers how to design, build and deploy scalable web services including RESTful APIs, integrate databases, and optimize performance. This course is great for full-stack developers, backend engineers, and aspiring coders who'd like to have a job in development. JSNSD features lots of opportunities to practice and get first-hand experience actually developing, connecting and troubleshooting them.

[CBT Nuggets course material](#) →

WEEK 1

Get Started with Node.js Service Development 157 min.

Using the Node Version Manager (NVM)	10
Working with Node.js in the Terminal	12
Creating a Simple Web Server	14
Challenge & Solution: Date and Time Server	12

Build Services with Frameworks

Meet the Frameworks - Express	14
Meet the Frameworks - Fastify	9
Working with Pathnames in Express and Fastify	12
Working with Pathnames in a Node Core Server	7
Challenge & Solution: Counter Service	9

Understand and Utilize Request Methods

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Additional Request Expectations	14
Handling Request Methods in Node.js	14
Challenge & Solution: Request Methods in Node Core	17

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Understand Route Parameters 151 min.

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Route Parameters with Node.js Core	9
Route Parameters with Regex	8
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Understand Query Parameters

Query Parameter Basics	13
Handling Query Parameters in Express and Fastify	17
Handling Query Parameters with Node.js Core	8
Challenge & Solution: Filtering with Query Parameters	12

Understand Request Bodies

Request Body Basics	5
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Handling Request Bodies in Fastify	5
Handling Request Bodies with Node.js Core	17
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Understand Status Codes

What Are Status Codes?	4
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153 min.

The Most Common Status Codes	17
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Working with Status Codes in Fastify and Node.js Core	11
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Understand HTTP Headers

What are HTTP Headers?	6
A Look At The Most Common Headers	17
Working with Headers in Node.js Core	14

Working with Headers in Express and Fastify	10
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Test Node.js Servers Manually

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Restarting Servers Automatically with Nodemon	14
Manual Testing with cURL	14
Manual Testing with Postman	12

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166 min.

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Work with Cookies Effectively

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Parsing Request Cookies in Vanilla Node	17
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Serve Static Web Content

Reading Files in Node.js	19
Serving Static Content in Vanilla Node	13
Serving Static Content in Express and Fastify	13
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Understand REST API Basics

Introduction to RESTful Conventions	6
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Conventions for Create Endpoints	16

WEEK 5

152 min.

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Understand Update, Delete, and Search Endpoints

Search Endpoints	20
A Better Way to Implement Search Endpoints	10
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Learn Less Common REST Endpoints

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Batch Endpoint Basics	9
Reorganizing Apps for Batching	7
Creating a Batch Endpoint	14
Challenge & Solution: Metadata Endpoints	6

Learn the Basics of Templating

What is Templating?	7
Basic Templating in Vanilla Node	1
Basic Templating in Express	1
Basic Templating in Fastify	1
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Create Templates with Handlebars

The Handlebars "If" Helper	14
Handlebars Loops	10
Reduce Repetitive Code with Layouts	7
Creating Reusable Pieces with Partials	7

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153 min.

How to Do Layouts and Partials in Express	4
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Create Templates with EJS

What is EJS Exactly?	12
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Serving EJS in Vanilla Node, Express, and Fastify	1
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Create Templates with Pug

Basic Pug Syntax	13
Serving Pug in Vanilla Node, Express, and Fastify	11
Inserting Data into Pug Templates	7
Pug If-Statements and Loops	8
Challenge & Solution: Translating from Handlebars to Pug	10

Write and Run Unit Tests

Basic Testing Concepts	8
Writing and Running Tests without a Library	1
Splitting up Server Code for Testing	1
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Test Node.js Server Code with Mocha and Chai

Test Runners vs. Assertion Libraries	16
Using Chai for Assertions	8
Chai Assertions in Depth	11
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Test Node.js Server Code with Jest

What Is Jest, And How Is It Different?	9
How to Write Jest Tests and Assertions	12

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158 min.

The Jest Config File	7
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Test Server Endpoints with Supertest

Basics of the Supertest Library	17
Working with Headers and Payloads	10
Working with Query Parameters and Cookies	1
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Learn the Basics of Node.js Streams

Basics of Streaming	14
Working with Duplex and Transform Streams	1
Streaming Files	1
Challenge & Solution: Reversing Words	3

Use Streams in Node.js Servers

How are Streams Used in Node.js Servers?	6
Streaming Uploads and Downloads	16
Proxying with Streams	12
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Learn Intermediate Streaming Concepts

Fanning-Out Streams	10
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159 min.

Fanning-Out with Transformations	12
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Mapping with Streams	16
Filtering with Streams	4
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Learn the Basics of Handling User Input

What Do We Need Validation For?	13
Basic Data Validation and Sanitization	15
A Better Way to Validate	12
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Learn Intermediate User Input Handling

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The Express Validator Library

Validating with Express Middleware	15
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161 min.

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Handle User Input in Fastify

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Master Other Useful Stream Operations

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Node.js Server Middleware and Plugins

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Middleware in Express	12
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Learn the Basics of Inter-Service Communication

Basics of Inter-Service Communication	5
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Making Inter-Service Requests	1
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Intermediate Inter-Service Communication Concepts

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152 min.

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Starting Services with Scripts	10
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Learn the Basic Strategies for Service Discovery

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Using Environment Variables in Requests	1
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Implement Service Discovery with a Config Server

Service Discovery with a Config Server	11
Incorporating a Config Server into Service Start-Up	9
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Service Discovery with a Service Registry

Basics of Service Registries	10
Implementing a Simple Service Registry	11

Rewriting Services to Use the Registry	13
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WEEK 11

Handle Upstream Service Errors Effectively **107 min.**

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Learn the Basics of Service-to-Service Auth

Basics of Service-to-Service Authentication	6
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Using Middleware for Service-to-Service Auth	12
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Intermediate Service-to-Service Auth

Giving Different Privileges to Different Services	7
Implementing Basic Privileges with Keys	7
Using Middleware to Control Privileges	12
Incorporating the New Keys Into Requests	11
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