Node Js Real Time Web With Socket Io

This book contains an extensive set of practical examples and an easy-to-follow approach to creating 3D objects.This book is great for anyone who already knows JavaScript and who wants to start creating 3D graphics that run in any browser. You don’t need to know anything about advanced math or WebGL; all that is needed is a general knowledge of JavaScript and HTML. The required materials and examples can be freely downloaded and all tools used in this book are open source.

Provides information on using Node.js to build scalable Web applications, covering such topics as asynchronous programming, data storage, and output templating.

Summary Node.js in Action, Second Edition is a thoroughly revised book based on the best-selling first edition. It starts at square one and guides you through all the features, techniques, and concepts you'll need to build production-quality Node applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology You already know JavaScript. The trick to mastering Node.js is learning how to build applications that fully exploit its powerful asynchronous event handling and non-blocking I/O features. The Node server radically simplifies event-driven real-time apps like chat, games, and live data analytics, and with its incredibly rich ecosystem of modules, tools, and libraries, it's hard to beat! About the Book Based on the bestselling first edition, Node.js in Action, Second Edition is a completely new book. Packed with practical examples, it teaches you how to create high-performance web servers using JavaScript and Node. You'll master key design concepts such as asynchronous programming, state management, and event-driven programming. And you'll learn to put together MVC servers using Express and Connect, design web APIs, and set up the perfect production environment to build, lint, and test. What's Inside Mastering non-blocking I/O The Node event loop Testing and deploying Web application templating About the Reader Written for web developers with intermediate JavaScript skills. About the Authors The Second Edition author team includes Node masters Alex Young, Bradley Meck, Mike Cantelon, and Tim Oxley, along with original authors Marc Harter, T.J. Holowaychuk, and Nathan Rajlich. Table of contents PART 1 - WELCOME TO NODE Welcome to Node.js Node programming fundamentals What is a Node web application? PART 2 - WEB DEVELOPMENT WITH NODE Front-end build systems Server-side frameworks Connect and Express in depth Web application templating Storing application data Testing Node applications Deploying Node applications and maintaining uptime PART 3 - BEYOND WEB DEVELOPMENT Writing command-line applications Conquering the desktop with Electron

Use Flybase and Twilio with Node.js to build real-time solutions and understand how real-time web technologies work.

Written by the founder of Flybase, this book offers you practical solutions for communicating effectively with users on the modern web. Flybase.io is a web platform, used to store and retrieve data in real-time, as well as to send and receive real-time events such as triggers for incoming calls, incoming messages, agents logging off, etc. You will learn to send daily SMS messages, build an SMS call center to provide support to users, and build a call center to handle incoming and outgoing phone calls from the browser. You'll also build a group calling system to let groups send messages to each other: handy for managing events. Real-Time Twilio brings to light using the winning combination of Flybase and Twilio with Node.js for anyone with basic web development skills. What You'll Learn Develop web apps with Flybase and Twilio Build a live blogging tool and a group chat app Create a click-to-call call center and a Salesforce-powered call center Send daily SMS reminders Develop a real-time call tracking dashboard Who This Book Is For Those who want to learn to use Twilio and who wants to learn real-time development.

Takes you through creating your own API, building a full real-time web app, securing your Node systems, and practical applications of the latest Async and Await technologies. It maps out everything in a comprehensive, easy-to-follow package designed to get you up and running quickly. Key Features Entirely project-based and practical Explains the "why" of Node.js features, not just the "how", providing with a deep understanding and enabling you to easily apply concepts in your own applications Covers the full range of technologies around Node.js – npm, MongoDB, version control with Git, and many more Book Description Advanced Node.js Development is a practical, project-based book that provides you with all you need to progress as a Node.js developer. Node is a ubiquitous technology on the modern web, and an essential part of any web developer’s toolkit. If you're looking to create real-world Node applications, or you want to switch careers or launch a side-project to generate some extra income, then you're in the right place. This book was written around a single goal: turning you into a professional Node developer capable of developing, testing, and deploying real-world production applications. There's no better time to dive in. According to the 2018 Stack Overflow Survey, Node is in the top ten for back-end popularity and back-end salary. This book is built from the ground up around the latest version of Node.js (version 9.x.x). You'll be learning all the cutting-edge features available only in the latest software versions. This book delivers advanced skills that you need to become a professional Node developer. Along this journey you'll create your own API, you'll build a full real-time web app and create projects that apply the latest Async and Await technologies. Andrew Mead maps everything out for you in this book so that you can learn how to build powerful Node.js projects in a comprehensive, easy-to-follow package designed to get you up and running quickly. What you will learn Develop, test, and deploy real-world Node.js applications Master Node.js by building practical, working examples Use awesome third-party Node modules such as MongoDB, Mongoose, Socket.io, and Express Create real-time web

applications Explore async and await in ES7 Who this book is for This book is for anyone looking to launch their own Node applications, switch careers, or freelance as a Node developer. You should have a basic understanding of JavaScript in order to follow this book. This book follows directly on from Learning Node.js Development, but more advanced readers can benefit from this book without having read the first part.

Summary Node.js in Practice is a collection of fully tested examples that offer solutions to the common and not-so-common issues you face when you roll out Node. You'll dig into important topics like the ins and outs of event-based programming, how and why to use closures, how to structure applications to take advantage of end-to-end JavaScript apps, and more. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Book You've decided to use Node.js for your next project and you need the skills to implement Node in production. It would be great to have Node experts Alex Young and Marc Harter at your side to help you tackle those day-to-day challenges. With this book, you can! Node.js in Practice is a collection of 115 thoroughly tested examples and instantly useful techniques guaranteed to make any Node application go more smoothly. Following a common-sense Problem/Solution format, these experience-fueled techniques cover important topics like event-based programming, streams, integrating external applications, and deployment. The abundantly annotated code makes the examples easy to follow, and techniques are organized into logical clusters, so it's a snap to find what you're looking for. Written for readers who have a practical knowledge of JavaScript and the basics of Node.js. What's Inside Common usage examples, from basic to advanced Designing and writing modules Testing and debugging Node apps Integrating Node into existing systems About the Authors Alex Young is a seasoned JavaScript developer who blogs regularly at DailyJS. Marc Harter works daily on large-scale projects including high-availability real-time applications, streaming interfaces, and other data-intensive systems. Table of Contents PART 1 NODE FUNDAMENTALS Getting started Globals: Node's environment Buffers: Working with bits, bytes, and encodings Events: Mastering EventEmitter and beyond Streams: Node's most powerful and misunderstood feature File system: Synchronous and asynchronous approaches Networking: Node's true "Hello, World" Child processes: Integrating external applications with Node PART 2 REAL-WORLD RECIPES The Web: Build leaner and meaner web applications Tests: The key to confident code Debugging: Designing for introspection and resolving issues Node in production: Deploying applications safely PART 3 WRITING MODULES Writing modules: Mastering what Node is all about

Learn how to build a wide range of scalable real-world web applications using a professional development toolkit. If you already know the basics of Node.js, now is the time to discover how to bring it to production level by leveraging its vast ecosystem of packages.With this book, you'll work with a varied collection of standards and frameworks and see how all

those pieces fit together. Practical Node.js takes you from installing all the necessary modules to writing full-stack web applications. You'll harness the power of the Express.js and Hapi frameworks, the MongoDB database with Mongoskin and Mongoose. You'll also work with Pug and Handlebars template engines, Stylus and LESS CSS lanaguages, OAuth and Everyauth libraries, and the Socket.IO and Derby libraries, and everything in between. This exciting second edition is fully updated for ES6/ES2015 and also covers how to deploy to Heroku and AWS, daemonize apps, and write REST APIs. You'll build full-stack real-world Node.js apps from scratch, and also discover how to write your own Node.js modules and publish them on NPM. Fully supported by a continuously updated source code repository on GitHub and with full-color code examples, learn what you can do with Node.js and how far you can take it! What You'll Learn Manipulate data from the mongo console Use the Mongoskin and Mongoose MongoDB libraries Build REST API servers with Express and Hapi Deploy apps to Heroku and AWS Test services with Mocha, Expect and TravisCI Implement a third-party OAuth strategy with Everyauth Web developers who have some familiarity with the basics of Node.js and want to learn how to use it to build apps in a professional environment.

If you're looking for an alternative to the "P" languages (Perl, PHP, and Python), or want to explore a new paradigm of server-side application development, this Node book is for you. You should have at least a rudimentary understanding of JavaScript and web application development.

Learn how to program modern web applications using the full Node.js platform, including Node.js on the server, Express for middleware and routing, and Pug (formerly Jade) to simplify the creation of views. Node.js is the foundation of all full JavaScript apps and plenty of books cover its full usage. This book focuses on how to use it to create server-based, modern web applications. Using Node.js alongside Express and Pug - the brand new version of Jade - you can create modern web applications solely using JavaScript. This book teaches you how to structure and build your app from scratch, and make development easy. What You Will Learn Use NodeJS in general and particularly the features require to create web applications Understand middleware and how to develop using the Express framework Explore the template engine Pug (formerly Jade) and how you can integrate it with Express“/li> Set up a complete development environment on both Linux and Windows Who This Book Is For Developers of web applications who come from Java/J2EE, ASP.NET, PHP, Ruby on Rails and want to explore the capabilities of JavaScript based server apps. It’s suitable for beginners that have a basic understanding of JavaScript already.

Express Web Application Development is a practical introduction to learning about Express. Each chapter introduces you to a different area of Express, using screenshots and examples to get you up and running as quickly as possible.If you are looking to use Express to build your next web application, "Express Web Application Development" will help you get

started and take you right through to Express' advanced features. You will need to have an intermediate knowledge of JavaScript to get the most out of this book.

A straightforward, practical guide containing step-by-step tutorials that will push your Node.js programming skills to the next level. If you are a web developer with experience in writing client-side JavaScript and want to discover the fascinating world of Node.js to develop fast and efficient web and desktop applications, then this book is for you.

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Learning Node.js brings together the knowledge and JavaScript code needed to build master the Node.js platform and build server-side applications with extraordinary speed and scalability. You'll start by installing and running Node.js, understanding the extensions it uses, and quickly writing your first app. Next, building on the basics, you'll write more capable application servers and extend them with today's most powerful Node.js tools and modules. Finally, you'll discover today's best practices for testing, running Node.js code on production servers, and writing command-line utilities. Throughout the book, author Marc Wandschneider teaches by walking the reader line-by-line through carefully crafted examples, demonstrating proven techniques for creating highly efficient applications and servers. The second edition updates coverage of Node.js to reflect changes in the technology and how it is used in the three years since the first edition was published: Explanation of Node's new versioning scheme Updated coverage of Streams New coverage of installation using pre-build installers rather than from source code New coverage of Mongoose in the section on MongoDB New information about deploying Node on Heroku and Azure Expansion of coverage on testing If you're a developer who wants to build server-side web applications with Node.js, Learning Node.js is your fatest route to success. Build Node.js solutions that leverage current JavaScript skills Master Node.js nonblocking IO and async programming Handle more requests and increase an application's flexibility Use and write modules Perform common JSON/web server tasks Use browsers to generate pages on the fly via Ajax calls and template libraries Simplify development with the Express framework Create database back-ends using popular NoSQL and relational databases Deploy and run Node.js apps on Unix/macOS or Windows servers Deploy apps to Heroku and Microsoft Azure Support virtual hosts and SSL/HTTPS security Test Node.js programs that mix synchronous, async, and RESTful server API functionality

Node.js is changing the way web apps are built. As Node.js apps are written in JavaScript, you can quickly and simply use your front-end skills to develop staggeringly fast, scalable real-time web applications. Read this book and, in a weekend, you'll learn how to: Develop a complete working Node.js application - from start-to-finish Deploy your new application to a production server Scale your projects quickly and cheaply PLUS discover how to use Twitter Bootstrap,

MongoDB and Back-bone.js to create fancy web apps, extend their storage, and dy-namically update them.
Node.js Web DevelopmentPackt Publishing Ltd
Build scalable, high-traffic websites and web applications with Node.js For many .NET programmers, Node.js represents a new way to build high-traffic websites and applications. Now there’s a practical, concise introduction to Node.js specifically for Microsoft developers. David Gaynes guides you through the entire Node.js development process. Using Microsoft Visual Studio examples, he addresses everything from setting up servers and authorization through delivering rich CSS pages packed with graphics and data-driven content. Gaynes clearly explains Node.js’s async model, coding approach, request/response paradigm, site structure, data management, security, and more. This quick guide will help you apply your hard-won .NET skills to Node.js. Expert guidance showing you how to: Choose, organize, and configure the tools you need to build Node.js solutions in Visual Studio Apply JavaScript coding practices that help you avoid problems in Node.js Work with callback functions and the Node.js asynchronous programming model Set up a Node.js project and use what you know about MVVM and MVC patterns Control the entire Node.js request/response life cycle Establish site structure, routes, and access to static resources Manage data through caching, forms, IO techniques, and file uploads Integrate data from Microsoft SQL Server and other databases Use Passport to integrate simple, flexible authentication
Summary Cross-Platform Desktop Applications guides you step-by-step through creating Node.js desktop applications with NW.js and Electron from GitHub. Foreword by Cheng Zhao, creator of Electron. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Desktop application development has traditionally required high-level programming languages and specialized frameworks. With Electron and NW.js, you can apply your existing web dev skills to create desktop applications using only HTML, CSS, and JavaScript. And those applications will work across Windows, Mac, and Linux, radically reducing development and training time. About the Book Cross-Platform Desktop Applications guides you step by step through the development of desktop applications using Electron and NW.js. This example-filled guide shows you how to create your own file explorer, and then steps through some of the APIs provided by the frameworks to work with the camera, access the clipboard, make a game with keyboard controls, and build a Twitter desktop notification tool. You'll then learn how to test your applications, and debug and package them as binaries for various OSs. What's Inside Create a selfie app with the desktop camera Learn how to test Electron apps with Devtron Learn how to use Node.js with your application About the Reader Written for developers familiar with HTML, CSS, and JavaScript. About the Author Paul Jensen works at Starcount and lives in London, UK. Table of Contents PART 1 - WELCOME TO NODE.JS DESKTOP APPLICATION DEVELOPMENT

Introducing Electron and NW.js Laying the foundation for your first desktop application Building your first desktop application Shipping your first desktop application PART 2 - DIVING DEEPER Using Node.js within NW.js and Electron Exploring NW.js and Electron's internals PART 3 - MASTERING NODE.JS DESKTOP APPLICATION DEVELOPMENT Controlling how your desktop app is displayed Creating tray applications Creating application and context menus Dragging and dropping files and crafting the UI Using a webcam in your application Storing app data Copying and pasting contents from the clipboard Binding on keyboard shortcuts Making desktop notifications PART 4 - GETTING READY TO RELEASE Testing desktop apps Improving app performance with debugging Packaging the application for the wider world

Create real-time server-side applications with this practical, step-by-step guide About This Book Learn about server-side JavaScript with Node.js and Node modules through the most up-to-date book on Node.js web development Understand website development both with and without the Connect/Express web application framework Develop both HTTP server and client applications Who This Book Is For This book is for anybody looking for an alternative to the "P" languages (Perl, PHP, and Python), or anyone looking for a new paradigm of server-side application development. You should have at least a rudimentary understanding of JavaScript and web application development. What You Will Learn Install and use Node.js for both development and deployment Use the Express application framework Configure Bootstrap for mobile-first theming Use data storage engines such as MySQL, SQLITE3, and MongoDB Understand user authentication methods, including OAuth, with third-party services Deploy Node.js to live servers, including microservice development with Docker Perform unit testing with Mocha Perform functional testing of the web application with CasperJS In Detail Node.js is a server-side JavaScript platform using an event driven, non-blocking I/O model allowing users to build fast and scalable data-intensive applications running in real time. Node.js Web Development shows JavaScript is not just for browser-side applications. It can be used for server-side web application development, real-time applications, microservices, and much more. This book gives you an excellent starting point, bringing you straight to the heart of developing web applications with Node.js. You will progress from a rudimentary knowledge of JavaScript and server-side development to being able to create and maintain your own Node.js application. With this book you'll learn how to use the HTTP Server and Client objects, data storage with both SQL and MongoDB databases, real-time applications with Socket.IO, mobile-first theming with Bootstrap, microservice deployment with Docker, authenticating against third-party services using OAuth, and much more. Style and Approach This book is a practical guide for anyone looking to develop striking and robust web applications using Node.js.

Learn the basics of Socket.IO, and discover how to use this real-time web library to set up a chat application with multiple rooms. Socket.io Real-time Web Application Development.

Build an interactive and full-featured web application from scratch using Node.js and MongoDB About This Book Configure your development environment to use Node.js and MongoDB Use Node.js to connect to a MongoDB database and perform data manipulations A practical guide with clear instructions to design and develop a complete web application from start to finish Who This Book Is For This book is designed for JavaScript developers of any skill level that want to get up and running using Node.js and MongoDB to build full-featured web applications. A basic understanding of JavaScript and HTML is the only requirement for this book. What You Will Learn Configure your development

environment to use Node.js and MongoDB Write and configure a web server using Node.js powered by the Express.js framework Build dynamic HTML pages using the Handlebars template engine Persist application data using MongoDB and Mongoose ODM Test your code using automated testing tools such as the Mocha framework Deploy the development environment to the cloud using services such as Heroku, Amazon Web Services, and Microsoft Azure Explore Single-Page application frameworks to take your web applications to the next level In Detail Node.js and MongoDB are quickly becoming one of the most popular tech stacks for the web. Powered by Google's V8 engine, Node.js caters to easily building fast, scalable network applications while MongoDB is the perfect fit as a scalable, high-performance, open source NoSQL database solution. Using these two technologies together, web applications can be built quickly and easily and deployed to the cloud with very little difficulty. The book will begin by introducing you to the groundwork needed to set up the development environment. Here, you will quickly run through the steps necessary to get the main application server up and running. Then you will see how to use Node.js to connect to a MongoDB database and perform data manipulations. From here on, the book will take you through integration with third-party tools for interaction with web apps. It then moves on to show you how to use controllers and view models to generate reusable code that will reduce development time. Toward the end of the book, we will cover tests to properly execute the code and some popular frameworks for developing web applications. By the end of the book, you will have a running web application developed with MongoDB and Node.js along with it's popular frameworks. Style and approach An easy guide to Node.js and MongoDB, which will quickly introduce you to the relevant concepts by taking you through the different steps involved in building a full-fledged web application.

Build an application from backend to browser with Node.js, and kick open the doors to real-time event programming. With this hands-on book, you'll learn how to create a social network application similar to LinkedIn and Facebook, but with a real-time twist. And you'll build it with just one programming language: JavaScript. If you're an experienced web developer unfamiliar with JavaScript, the book's first section introduces you to the project's core technologies: Node.js, Backbone.js, and the MongoDB data store. You'll then launch into the project—a highly responsive, highly scalable application—guided by clear explanations and lots of code examples. Learn about key modules in Node.js for building real-time apps Use the Backbone.js framework to write clean browser code, and maintain better data integration with MongoDB Structure project files as a foundation for code that will arrive later Create user accounts and learn how to secure the data Use Backbone.js templates to build the application's UIs, and integrate access control with Node.js Develop a contact list to help users link to and track other accounts Use Socket.io to create real-time chat functionality Extend your UIs to give users up-to-the-minute information

Build real-world robust web applications and APIs using the modern and expressive Koa Node.js framework. Key Features Get up and running with Koa.js and leverage its power with node.js Get the most out of Koa Async functions and generators Create real time dynamic serverside apps efficiently with Koa.js Book Description Every developer wants to build modular and scalable web applications. Modern versions of JavaScript have made this possible in Node.js, and Koa is a Node.js framework that makes it easy. This book is the ideal introduction for JavaScript developers who want to create scalable server side applications using Node.js and Koa.js. The book shows you how Koa can be used to start projects from scratch, register custom and existing middleware, read requests, and send responses to users. We will explore the core concepts in Koa, such as error handling, logging, and request and response handling. We will dive into new concepts in JavaScript development, and see how paradigms such as async/await help with modern Node.js application development. By the end of this book, you will be building robust web applications in Koa using modern development paradigms and techniques of Node.js development. What you will learn Create a simple server in Node.js and Koa Work with custom middleware in Koa Handle errors in Koa Create routes,

handle requests, and send responses from APIs Build views and use templates in Koa Authenticate your application and structure it properly in Koa Who this book is for This book is for serverside developers and JavaScript developers who want to use Koa.js and Node.js to create fast and real time back end applications.

Deliver rich audio and video real-time communication and peer-to-peer data exchange right in the browser, without the need for proprietary plug-ins. This concise hands-on guide shows you how to use the emerging Web Real-Time Communication (WebRTC) technology to build a browser-to-browser application, piece by piece. The authors' learn-by-example approach is perfect for web programmers looking to understand real-time communication, and telecommunications architects unfamiliar with HTML5 and JavaScript-based client-server web programming. You'll use a ten-step recipe to create a complete WebRTC system, with exercises that you can apply to your own projects. Tour the WebRTC development cycle and trapezoid architectural model Understand how and why VoIP is shifting from standalone functionality to a browser component Use mechanisms that let client-side web apps interact with browsers through the WebRTC API Transfer streaming data between browser peers with the RTCPeerConnection API Create a signaling channel between peers for setting up a WebRTC session Put everything together to create a basic WebRTC system from scratch Learn about conferencing, authorization, and other advanced WebRTC features

Learn everything you need to get up and running with cutting-edge API development using JavaScript and Node.js; ideal for data-intensive real-time applications that run across multiple platforms. Key Features Build web APIs from start to finish using JavaScript across the development stack Explore advanced concepts such as authentication with JWT, and running tests against your APIs Implement over 20 practical activities and exercises across 9 topics to reinforce your learning Book Description Using the same framework to build both server and client-side applications saves you time and money. This book teaches you how you can use JavaScript and Node.js to build highly scalable APIs that work well with lightweight cross-platform client applications. It begins with the basics of Node.js in the context of backend development, and quickly leads you through the creation of an example client that pairs up with a fully authenticated API implementation. By the end of the book, you'll have the skills and exposure required to get hands-on with your own API development project. What you will learn Understand how Node.js works, its trends, and where it is being used now Learn about application modularization and built-in Node.js modules Use the npm third-party module registry to extend your application Gain an understanding of asynchronous programming with Node.js Develop scalable and high-performing APIs using hapi.js and Knex.js Write unit tests for your APIs to ensure reliability and maintainability Who this book is for This book is ideal for developers who already understand JavaScript and are looking for a quick no-frills introduction to API development with Node.js. Though prior experience with other server-side technologies such as Python, PHP, ASP.NET, Ruby will help, it's not essential to have a background in backend development before getting started.

Design and implement efficient RESTful solutions with this practical hands-on guide About This Book Create a fully featured RESTful API solution from scratch. Learn how to leverage Node.JS, Express, MongoDB and NoSQL datastores to give an extra edge to your REST API design. Use this practical guide to integrate MongoDB in your Node.js application. Who This Book Is For The ideal target audience for this book is web developers who have some experience with RESTful services. Familiarity with basic JavaScript programming techniques is required. No prior experience with Node.JS or Express.js is required. What You Will Learn Install, develop, and test your own Node.js user modules Comprehend the differences between an HTTP and a RESTful

application Optimize RESTful service URI routing with best practices Eliminate third-party dependencies in your tests with mocking Learn about NoSQL data stores and integrate MongoDB in your Node.js application with Mongoose Secure your services with NoSQL database integration within Node.js applications Enrich your development skills to create scalable, server-side, RESTful applications based on the Node.js platform In Detail In this era of cloud computing, every data provisioning solution is built in a scalable and fail-safe way. Thus, when building RESTful services, the right choice for the underlying platform is vital. Node.js, with its asynchronous, event-driven architecture, is exactly the right choice to build RESTful APIs. This book will help you enrich your development skills to create scalable, server-side, RESTful applications based on the Node.js platform. Starting with the fundamentals of REST, you will understand why RESTful web services are better data provisioning solution than other technologies. You will start setting up a development environment by installing Node.js, Express.js, and other modules. Next, you will write a simple HTTP request handler and create and test Node.js modules using automated tests and mock objects. You will then have to choose the most appropriate data storage type, having options between a key/value or document data store, and also you will implement automated tests for it. This module will evolve chapter by chapter until it turns into a full-fledged and secure Restful service. Style and approach Create state of the art RESTful API solutions leveraging Node.JS 4.x.

Get the best out of Node.js by mastering its most powerful components and patterns to create modular and scalable applications with ease About This Book Create reusable patterns and modules by leveraging the new features of Node.js . Understand the asynchronous single thread design of node and grasp all its features and patterns to take advantage of various functions. This unique guide will help you get the most out of Node.js and its ecosystem. Who This Book Is For The book is meant for developers and software architects with a basic working knowledge of JavaScript who are interested in acquiring a deeper understanding of how to design and develop enterprise-level Node.js applications. Basic knowledge of Node.js is also helpful to get the most out of this book. What You Will Learn Design and implement a series of server-side JavaScript patterns so you understand why and when to apply them in different use case scenarios Become comfortable with writing asynchronous code by leveraging constructs such as callbacks, promises, generators and the async-await syntax Identify the most important concerns and apply unique tricks to achieve higher scalability and modularity in your Node.js application Untangle your modules by organizing and connecting them coherently Reuse well-known techniques to solve common design and coding issues Explore the latest trends in Universal JavaScript, learn how to write code that runs on both Node.js and the browser and leverage React and its ecosystem to implement universal applications In Detail Node.js is a massively popular software platform that lets you use JavaScript to easily create scalable server-side applications. It allows you to create efficient code, enabling a more sustainable way of writing software made of only one language across the full stack, along with extreme levels of reusability, pragmatism, simplicity, and collaboration. Node.js is revolutionizing the web and the way people and companies create their software. In this book, we will take you on a journey across various ideas and components, and the challenges you would commonly encounter while designing and developing software using the Node.js platform. You will also discover the "Node.js way" of dealing with design and coding

decisions. The book kicks off by exploring the basics of Node.js describing it's asynchronous single-threaded architecture and the main design patterns. It then shows you how to master the asynchronous control flow patterns,and the stream component and it culminates into a detailed list of Node.js implementations of the most common design patterns as well as some specific design patterns that are exclusive to the Node.js world.Lastly, it dives into more advanced concepts such as Universal Javascript, and scalability' and it's meant to conclude the journey by giving the reader all the necessary concepts to be able to build an enterprise grade application using Node.js. Style and approach This book takes its intended readers through a comprehensive explanation to create a scalable and efficient real-time server-side apps.

Create real-time applications using Node.js 10, Docker, MySQL, MongoDB, and Socket.IO with this practical guide and go beyond the developer's laptop to cover live deployment, including HTTPS and hardened security. Key Features Learn server-side JavaScript coding through the most up-to-date book on Node.js Explore the latest JavaScript features, and EcmaScript modules Walk through different stages of developing robust applications using Node.js 10 Book Description Node.js is a server-side JavaScript platform using an event-driven, non-blocking I/O model allowing users to build fast and scalable data-intensive applications running in real time. This book gives you an excellent starting point, bringing you straight to the heart of developing web applications with Node.js. You will progress from a rudimentary knowledge of JavaScript and server-side development to being able to create, maintain, deploy and test your own Node.js application.You will understand the importance of transitioning to functions that return Promise objects, and the difference between fs, fs/promises and fs-extra. With this book you'll learn how to use the HTTP Server and Client objects, data storage with both SQL and MongoDB databases, real-time applications with Socket.IO, mobile-first theming with Bootstrap, microservice deployment with Docker, authenticating against third-party services using OAuth, and use some well known tools to beef up security of Express 4.16 applications. What you will learn Install and use Node.js 10 for both development and deployment Use the Express 4.16 application framework Work with REST service development using the Restify framework Use data storage engines such as MySQL, SQLITE3, and MongoDB Use User authentication methods with OAuth2 Perform Real-time communication with the front-end using Socket.IO Implement Docker microservices in development, testing and deployment Perform unit testing with Mocha 5.x, and functional testing with Puppeteer 1.1.x Work with HTTPS using Let’s Encrypt, and application security with Helmet Who this book is for This book is for anybody looking for an alternative to the "P" languages (Perl, PHP, and Python), or anyone looking for a new paradigm of server-side application development. You should have at least a rudimentary understanding of JavaScript and web application development.

Summary A hands-on guide that will teach how to design and implement scalable, flexible, and open IoT solutions using web technologies. This book focuses on providing the right balance of theory, code samples, and practical examples to enable you to successfully connect all sorts of devices to the web and to expose their services and data over REST APIs. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Because the Internet of Things is still new, there is no universal application protocol. Fortunately, the IoT can take advantage of the web, where

IoT protocols connect applications thanks to universal and open APIs. About the Book Building the Web of Things is a guide to using cutting-edge web technologies to build the IoT. This step-by-step book teaches you how to use web protocols to connect real-world devices to the web, including the Semantic and Social Webs. Along the way you'll gain vital concepts as you follow instructions for making Web of Things devices. By the end, you'll have the practical skills you need to implement your own web-connected products and services. What's Inside Introduction to IoT protocols and devices Connect electronic actuators and sensors (GPIO) to a Raspberry Pi Implement standard REST and Pub/Sub APIs with Node.js on embedded systems Learn about IoT protocols like MQTT and CoAP and integrate them to the Web of Things Use the Semantic Web (JSON-LD, RDFa, etc.) to discover and find Web Things Share Things via Social Networks to create the Social Web of Things Build a web-based smart home with HTTP and WebSocket Compose physical mashups with EVRYTHNG, Node-RED, and IFTTT About the Reader For both seasoned programmers and those with only basic programming skills. About the Authors Dominique Guinard and Vlad Trifa pioneered the Web of Things and cofounded EVRYTHNG, a large-scale IoT cloud powering billions of Web Things. Table of Contents PART 1 BASICS OF THE IOT AND THE WOT From the Internet of Things to the Web of Things Hello, World Wide Web of Things Node.js for the Web of Things Getting started with embedded systems Building networks of Things PART 2 BUILDING THE WOT Access: Web APIs for Things Implementing Web Things Find: Describe and discover Web Things Share: Securing and sharing Web Things

Solve practical real-world problems using JavaScript and Node.js About This Book Learn the concepts of Node.js to gain a high-level understanding of the Node.js execution model Build an interactive web application with MongoDB and Redis and create your own JavaScript modules that work both on the client side and server side Familiarize yourself with the new features of Node.js and JavaScript with this exclusive step-by-step guide Who This Book Is For This book is for developers who want to learn JavaScript and Node.js. Previous experience with programming is desired, but no JavaScript or Node.js knowledge is required. The book focuses mostly on web development, such as networking, serving dynamic pages, and real-time client-server communication. What You Will Learn Understand which problems Node.js best solves Write idiomatic JavaScript and Node.js code Build web applications and command-line tools Minimise complexity and efficiently solve difficult problems Test and deploy Node.js applications Work with persistent data Implement real-time client-server applications Integrate .NET and Node.js code In Detail Node.js is an open source, cross-platform runtime environment that allows you to use JavaScript to develop server-side web applications. This short guide will help you develop applications using JavaScript and Node.js, leverage your existing programming skills from .NET or Java, and make the most of these other platforms through understanding the Node.js programming model. You will learn how to build web applications and APIs in Node, discover packages in the Node.js ecosystem, test and deploy your Node.js code, and more. Finally, you will discover how to integrate Node.js and .NET code. Style and approach This is a step-by-step and practical guide to Node.js for .Net developers. It covers the fundamentals relating to typical applications. The focus is on providing the practical skills required to develop applications, with a summary of the key concepts covered.

Absorb the knowledge required to utilize, manage, and deploy RethinkDB using Node.js About This Book Make the most of this open source, scalable database—RethinkDB —to ease the construction of web applications Run powerful queries using ReQL, which is the most convenient language to manipulate JSON documents with Develop fully-fledged real-time web apps using Node.js and RethinkDB Who This Book Is For Getting Started with RethinkDB is ideal for developers who are new to RethinkDB and need a practical understanding to start working with it. No previous knowledge of database programming is required, although a basic knowledge of JavaScript or Node.js would be helpful. What You Will Learn Download and install the database on your system Configure RethinkDB's settings and start using the web interface Import data into RethinkDB Run queries using the ReQL language Create shards, replicas, and RethinkDB clusters Use an index to improve database performance Get to know all the RethinkDB deployment techniques In Detail RethinkDB is a high-performance document-oriented database with a unique set of features. This increasingly popular NoSQL database is used to develop real-time web applications and, together with Node.js, it can be used to easily deploy them to the cloud with very little difficulty. Getting Started with RethinkDB is designed to get you working with RethinkDB as quickly as possible. Starting with the installation and configuration process, you will learn how to start importing data into the database and run simple queries using the intuitive ReQL query language. After successfully running a few simple queries, you will be introduced to other topics such as clustering and sharding. You will get to know how to set up a cluster of RethinkDB nodes and spread database load across multiple machines. We will then move on to advanced queries and optimization techniques. You will discover how to work with RethinkDB from a Node.js environment and find out all about deployment techniques. Finally, we'll finish by working on a fully-fledged example that uses the Node.js framework and advanced features such as Changefeeds to develop a real-time web application. Style and approach This is a step-by-step book that provides a practical approach to RethinkDB programming, and is explained in a conversational, easy-to-follow style.

As the newfangled technology continues to invade the industry, more and more startups are joining the league and trying their ways with the latest innovations. Now a cutting-edge entry is Node.js which has not only pulled the startups but even carved its niche in the giant enterprises. It is seen that whenever there is a new wave in technology, the IT market raves about it for the first few months only to find it lost later, but let me tell you, Node.js stands fresh as an exception. Before we explain how Node.js is a game changer, let us understand what it is and how it works as best amongst its competitors.The Basics of Node.jsNode.js is an open source, cross-platform built on Chrome's JavaScript runtime for fast and scalable server-side and networking applications. Being an interface to the V8 JavaScript runtime, it enables event-driven programming to the web servers through super-fast JavaScript interpreter that runs in the Chrome browser.Non-Blocking I/O ModelNode.js works on a non-blocking I/O model that makes it clean and usable, ideal for the data-intensive real-time applications that have to perform in varied environments. Beating the conventional pattern, Node.js has bought a revolution in the development circle and has become the sought after option for brands like Yahoo, eBay, Walmart etc.The IoT phenomenon is also resorting to this platform for embedded devices and robotics like Cylon and Nodebots. Node.js empowers real-time web application by adopting push technology as against web sockets to

build server-side web applications with two-way channel i.e. client and server. It operates on open web stack technologies like JavaScript, CSS, and HTML that work over the standard port 80. This tool is also lightweight both for in-memory usage and data-dense real-time web applications that work on multiple devices.Node.js Blessing For DeveloperUndoubtedly, Node.js is truly a blessing for a developer and must be taken to use by every enterprise. Take, for instance, chat applications which rule the market run on a lightweight, a speedy and high traffic model and should adopt Node.js to develop a data-friendly real-time application that works in various environments. Experts might object that the two-way channel has been present since long in the form of Java Applets or Flash, but in reality, they were redundant platforms using web transport protocol just to be circulated at the client side.Further, they were employed in non-standard ports and worked in isolation with the help of additional permissions. Node.js has proved to be a great milestone in IT market and has become a sure shot savior for heavy load web applications. Developers have got a swift move towards huge performance gains by giving the users advantage of end-to-end JavaScript experience and thus developing class apart real-time web applications.Still far from Node.js? If high performance and scalability, as well as short web development cycles, tempt you enough, it is high time you adopt Node.js. Here are some reasons that will convince you further-The Benefits1. The Fast SuiteCompanies are in awe of the speed at which Node.js functions. It runs on the V8 engine developed by Google that uses JavaScript into native machine code and operates at super speed. Node.js spares all the trouble involved with forming separate threads and instead uses a single thread, that is, the event loop that takes care of all the asynchronous I/O operations. Major actions in web applications including reading or writing to the database, network connections or file system can be performed quickly with this suite.Node.js empowers the organizations to create quick, robust network applications that can tackle parallel connections with increased throughput. It does not slow the working by any chance, but the developers need to be careful while writing the codes and the applications will get onto the right track....

Presented in a simple, step-by-step format, this book is an introduction to web development with Node.This book is for anybody looking for an alternative to the "P" languages (Perl, PHP, Python), or anyone looking for a new paradigm of server-side application development.The reader should have at least a rudimentary understanding of JavaScript and web application development.

Learn to build fast and scalable software in JavaScript with Node.js Node.js is a powerful and popular new framework for writing scalable network programs using JavaScript. This no nonsense book begins with an overview of Node.js and then quickly dives into the code, core concepts, and APIs. In-depth coverage pares down the essentials to cover debugging, unit testing, and flow control so that you can start building and testing your own modules right away. Covers node and asynchronous programming main concepts Addresses the basics: modules, buffers, events, and timers Explores streams, file systems, networking, and automated unit testing Goes beyond the basics, and shares techniques and tools for debugging, unit testing, and flow control If you already know JavaScript and are curious about the power of Node.js,

then this is the ideal book for you.
Learn to make more efficient apps, with just one language! Smashing Node.js: JavaScript Everywhere equips you with the necessary tools to understand Node.js and its uses in developing efficient web apps. With more traditional web servers becoming obsolete, having knowledge on servers that achieve high scalability and optimal resource consumption using Node.js is the key to your app development success. Teaching you the essentials to making event-driven server-side apps, this book demonstrates how you can use less space and take less time for communication between web client and server. Contains numerous hands-on examples Explains implementation of real-time apps including Socket.IO and HTML5, and WebSockets Addresses practical Node.js advantages from specific design choices Demonstrates why knowledge and use of JavaScript is beneficial Includes an interactive online component with sample chapters Explains components of stand out apps including brevity and benchmarks Looking to enhance your abilities even further? Smashing Node.js: JavaScript Everywhere makes developing server-side apps accessible with its focus on JavaScript, open source, and easy-to-use language.
Use the two popular web development stacks, Node.js and MongoDB, to build full-featured web applications About This Book Learn the new ECMAScript along with Node 8 and MongoDB to make your application more effective. Get the up-to-date information required to launch your first application prototype using the latest versions of Node.js and MongoDB. A practical guide with clear instructions to designing and developing a complete web application from start to finish using trending frameworks such as angular4 and hapi Who This Book Is For The book is designed for JavaScript developers of any skill level who want to get up-and-running using Node.js and MongoDB to build full-featured web applications. A basic understanding of JavaScript and HTML is the only prerequisite for this book. What You Will Learn Work with Node.js building blocks Write and configure a web server using Node.js powered by the Express.js framework Build dynamic HTML pages using the Handlebars template engine Persist application data using MongoDB and Mongoose ODM Test your code using automated testing tools such as the Mocha framework Automate test cases using Gulp Reduce your web development time by integrating third-party tools for web interaction. Deploy a development environment to the cloud using services such as Heroku, Amazon Web Services, and Microsoft Azure Explore single-page application frameworks to take your web applications to the next level In Detail Node.js builds fast, scalable network applications while MongoDB is the perfect fit as a high-performance, open source NoSQL database solution. The combination of these two technologies offers high performance and scalability and helps in building fast, scalable network applications. Together they provide the power for manage any form of data as well as speed of delivery. This book will help you to get these two technologies working together to build web applications quickly and easily, with effortless

deployment to the cloud. You will also learn about angular 4, which consumes pure JSON APOIs from a hapi server. The book begins by setting up your development environment, running you through the steps necessary to get the main application server up-and-running. Then you will see how to use Node.js to connect to a MongoDB database and perform data manipulations. From here on, the book will take you through integration with third-party tools to interact with web apps. You will see how to use controllers and view models to generate reusable code that will reduce development time. Toward the end, the book supplies tests to properly execute your code and take your skills to the next level with the most popular frameworks for developing web applications. By the end of the book, you will have a running web application developed with MongoDB, Node.js, and some of the most powerful and popular frameworks. Style and approach A practical guide with clear instructions to designing and developing a complete web application from start to finish

How can you take advantage of the Django framework to integrate complex client-side interactions and real-time features into your web applications? Through a series of rapid application development projects, this hands-on book shows experienced Django developers how to include REST APIs, WebSockets, and client-side MVC frameworks such as Backbone.js into new or existing projects. Learn how to make the most of Django's decoupled design by choosing the components you need to build the lightweight applications you want. Once you finish this book, you'll know how to build single-page applications that respond to interactions in real time. If you're familiar with Python and JavaScript, you're good to go. Learn a lightweight approach for starting a new Django project Break reusable applications into smaller services that communicate with one another Create a static, rapid prototyping site as a scaffold for websites and applications Build a REST API with django-rest-framework Learn how to use Django with the Backbone.js MVC framework Create a single-page web application on top of your REST API Integrate real-time features with WebSockets and the Tornado networking library Use the book's code-driven examples in your own projects

Node.js is the platform of choice for creating modern web services. This fast-paced book gets you up to speed on server-side programming with Node.js 8, as you develop real programs that are small, fast, low-profile, and useful. Take JavaScript beyond the browser, explore dynamic language features, and embrace evented programming.Harness the power of the event loop and non-blocking I/O to create highly parallel microservices and applications. This expanded and updated second edition showcases the latest ECMAScript features, current best practices, and modern development techniques. JavaScript is the backbone of the modern web, powering nearly every web app's user interface. Node.js is JavaScript for the server. This greatly expanded second edition introduces new language features while dramatically increasing coverage of core topics. Each hands-on chapter offers progressively more challenging topics and techniques, broadening your skill set and enabling you to think in Node.js. Write asynchronous, non-blocking code using Node.js's

style and patterns. Cluster and load balance services with Node.js core features and third-party tools. Harness the power of databases such as Elasticsearch and Redis. Work with many protocols, create RESTful web services, TCP socket clients and servers, and more. Test your code's functionality with Mocha, and manage its life cycle with npm. Discover how Node.js pairs a server-side event loop with a JavaScript runtime to produce screaming fast, non-blocking concurrency. Through a series of practical programming domains, use the latest available ECMAScript features and harness key Node.js classes and popular modules. Create rich command-line tools and a web-based UI using modern web development techniques. Join the smart and diverse community that's rapidly advancing the state of the art in JavaScript development. What You Need: Node.js 8.x Operating system with bash-like shell OMQ (pronounced "Zero-M-Q") library, version 3.2 or higher Elasticsearch version 5.0 or higher jq version 1.5 or higher Redis version 3.2 or higher Cyber-criminals have your web applications in their crosshairs. They search for and exploit common security mistakes in your web application to steal user data. Learn how you can secure your Node.js applications, database and web server to avoid these security holes. Discover the primary attack vectors against web applications, and implement security best practices and effective countermeasures. Coding securely will make you a stronger web developer and analyst, and you'll protect your users. Bake security into your code from the start. See how to protect your Node.js applications at every point in the software development life cycle, from setting up the application environment to configuring the database and adding new functionality. You'll follow application security best practices and analyze common coding errors in applications as you work through the real-world scenarios in this book. Protect your database calls from database injection attacks and learn how to securely handle user authentication within your application. Configure your servers securely and build in proper access controls to protect both the web application and all the users using the service. Defend your application from denial of service attacks. Understand how malicious actors target coding flaws and lapses in programming logic to break in to web applications to steal information and disrupt operations. Work through examples illustrating security methods in Node.js. Learn defenses to protect user data flowing in and out of the application. By the end of the book, you'll understand the world of web application security, how to avoid building web applications that attackers consider an easy target, and how to increase your value as a programmer. What You Need: In this book we will be using mainly Node.js. The book covers the basics of JavaScript and Node.js. Since most Web applications have some kind of a database backend, examples in this book work with some of the more popular databases, including MySQL, MongoDB, and Redis.