Docker In Action

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Svelte and Sapper in Action

Run Docker on AWS and build real-world, secure, and scalable container platforms on cloud Key Features Configure Docker for the ECS environment Integrate Docker with different AWS tools Implement container networking and deployment at scale Book Description Over the last few years, Docker has been the gold standard for

building and distributing container applications. Amazon Web Services (AWS) is a leader in public cloud computing, and was the first to offer a managed container platform in the form of the Elastic Container Service (ECS). Docker on Amazon Web Services starts with the basics of containers, Docker, and AWS, before teaching you how to install Docker on your local machine and establish access to your AWS account. You'll then dig deeper into the ECS, a native container management platform provided by AWS that simplifies management and operation of your Docker clusters and applications for no additional cost. Once you have got to grips with the basics, you'll solve key operational challenges, including secrets management and auto-scaling your infrastructure and applications. You'll explore alternative strategies for deploying and running your Docker applications on AWS, including Fargate and ECS Service Discovery, Elastic Beanstalk, Docker Swarm and Elastic Kubernetes Service (EKS). In addition to this, there will be a strong focus on adopting an Infrastructure as Code (IaC) approach using AWS CloudFormation. By the end of this book, you'll not only understand how to run Docker on AWS, but also be able to build real-world, secure, and scalable container platforms in the cloud. What you will learn Build, deploy, and operate Docker applications using AWS Solve key operational challenges, such as secrets management Exploit the powerful capabilities and tight integration of other AWS services Design and operate Docker applications running on ECS Deploy Docker applications quickly, consistently, and reliably using IaC Manage and operate Docker clusters and applications for no additional cost Who this book is for Docker on Amazon Web

Services is for you if you want to build, deploy, and operate applications using the power of containers, Docker, and Amazon Web Services. Basic understanding of containers and Amazon Web Services or any other cloud provider will be helpful, although no previous experience of working with these is required.

Pro Docker

Summary Docker in Action teaches readers how to create, deploy, and manage applications hosted in Docker containers. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology The idea behind Docker is simple. Create a tiny virtual environment, called a container, that holds just your application and its dependencies. The Docker engine uses the host operating system to build and account for these containers. They are easy to install, manage, and remove. Applications running inside containers share resources, making their footprints small. About the Book Docker in Action teaches readers how to create, deploy, and manage applications hosted in Docker containers. After starting with a clear explanation of the Docker model, you will learn how to package applications in containers, including techniques for testing and distributing applications. You will also learn how to run programs securely and how to manage shared resources. Using carefully designed examples, the book teaches you how to orchestrate containers and applications from installation to removal. Along the way, you'll discover techniques for using

Docker on systems ranging from dev-and-test machines to full-scale cloud deployments. What's Inside Packaging containers for deployment Installing, managing, and removing containers Working with Docker images Distributing with DockerHub About the Reader Readers need only have a working knowledge of the Linux OS. No prior knowledge of Docker is assumed. About the Author Jeff Nickoloff, a software engineer, has presented Docker and its applications to hundreds of developers and administrators at Desert Code Camp, Amazon.com, and technology meetups. Table of Contents PART 1 KEEPING A TIDY COMPUTER Welcome to Docker Running software in containers Software installation simplified Persistent storage and shared state with volumes Network exposure Limiting risk with isolation PART 2 PACKAGING SOFTWARE FOR DISTRIBUTION Packaging software in images Build automation and advanced image considerations Public and private software distribution Running customized registries PART 3 MULTI-CONTAINER AND MULTI-HOST ENVIRONMENTS Declarative environments with Docker Clusters with Machine and Swarm

Spring Microservices in Action

As enterprise applications become larger and more distributed, new architectural approaches like reactive designs, microservices, and event streams are required knowledge. Vert.x in Action teaches you to build highly-scalable reactive enterprise applications using the mature, rock-solid Vert.x framework. Vert.x in Action gets

you up to speed in the basics of asynchronous programming as you learn to design and code reactive applications. Using the Vert.x asynchronous APIs, you'll build services including web stack, messaging, authentication, and access control. You'll also dive into deployment of container-native components with Docker, Kubernetes, and OpenShift. Along the way, you'll check your app's health and learn to test its resilience to external service failures. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Docker in Action

Summary Docker in Practice, Second Edition presents over 100 practical techniques, hand-picked to help you get the most out of Docker. Following a Problem/Solution/Discussion format, you'll walk through specific examples that you can use immediately, and you'll get expert guidance on techniques that you can apply to a whole range of scenarios. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Docker's simple idea-wrapping an application and its dependencies into a single deployable container-created a buzz in the software industry. Now, containers are essential to enterprise infrastructure, and Docker is the undisputed industry standard. So what do you do after you've mastered the basics? To really streamline your applications and transform your dev process, you need relevant examples and experts who can walk you through them. You need this book. About

the Book Docker in Practice, Second Edition teaches you rock-solid, tested Docker techniques, such as replacing VMs, enabling microservices architecture, efficient network modeling, offline productivity, and establishing a container-driven continuous delivery process. Following a cookbook-style problem/solution format, you'll explore real-world use cases and learn how to apply the lessons to your own dev projects. What's inside Continuous integration and delivery The Kubernetes orchestration tool Streamlining your cloud workflow Docker in swarm mode Emerging best practices and techniques About the Reader Written for developers and engineers using Docker in production. About the Author Ian Miell and Aidan Hobson Sayers are seasoned infrastructure architects working in the UK. Together, they used Docker to transform DevOps at one of the UK's largest gaming companies. Table of Contents PART 1 - DOCKER FUNDAMENTALS Discovering Docker Understanding Docker: Inside the engine room PART 2 - DOCKER AND DEVELOPMENT Using Docker as a lightweight virtual machine Building images Running containers Day-to-day Docker Configuration management: Getting your house in order PART 3 - DOCKER AND DEVOPS Continuous integration: Speeding up your development pipeline Continuous delivery: A perfect fit for Docker principles Network simulation: Realistic environment testing without the pain PART 4 - ORCHESTRATION FROM A SINGLE MACHINE TO THE CLOUD A primer on container orchestration The data center as an OS with Docker Docker platforms PART 5 - DOCKER IN PRODUCTION Docker and security Plain sailing: Running Docker in production Docker in production: Dealing with challenges

Mesos in Action

A concise, fast-paced guide to orchestrating and deploying scalable services with Docker About This Book Explore the new features added to the core Docker Engine to make multi-container orchestration easy Leverage tools such as Docker Machine, Swarm, Compose, and third-party tools such as Kubernetes, Mesosphere, and CoreOS to orchestrate containers Use Docker Compose with Swarm and apply rolling updates for zero downtime deployments Who This Book Is For This book is aimed at Sysadmins and DevOps engineers who know what Docker does and are now looking to manage multiple containers on multiple hosts using the orchestration feature. What You Will Learn Build scalable, reliable services with Docker See how to manage a service in Docker using Docker Swarm, Kubernetes, and Mesosphere Discover simpler orchestration tools such as CoreOS/Fleet and Rancher Cattle Understand cluster-wide logging, system monitoring, and troubleshooting Build, test, and deploy containers using Continuous Integration Deploy cluster hosts on cloud services and automate your infrastructure In Detail Docker orchestration is what you need when transitioning from deploying containers individually on a single host to deploying complex multi-container apps on many machines. This book covers the new orchestration features of Docker 1.12 and helps you efficiently build, test, and deploy your application using Docker. You will be shown how to build multi-container applications using Docker Compose. You will also be introduced to the building blocks for multi-host Docker clusters

such as registry, overlay networks, and shared storage using practical examples. This book gives an overview of core tools such as Docker Machine, Swarm, and Compose which will enhance your orchestration skills. You'll learn how to set up a swarm using the decentralized building block. Next, you'll be shown how to make the most out of the in-built orchestration feature of Docker engine and you'll use third-party tools such as Kubernetes, Mesosphere, and CoreOS to orchestrate your existing process. Finally, you will learn to deploy cluster hosts on cloud services and automate your infrastructure. Style and approach This comprehensive guide will take you through the orchestration feature of Docker. Using practical examples, you will discover various tools that can be used to manage multiple containers with ease.

Asp.net Core in Action

Even small applications have dozens of components. Large applications may have thousands, which makes them challenging to install, maintain, and remove. Docker bundles all application components into a package called a container that keeps things tidy and helps manage any dependencies on other applications or infrastructure. Docker in Action, Second Edition teaches you the skills and knowledge you need to create, deploy, and manage applications hosted in Docker containers. This bestseller has been fully updated with new examples, best practices, and entirely new chapters. You'll start with a clear explanation of the

Docker model and learn how to package applications in containers, including techniques for testing and distributing applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Getting Started with Docker Enterprise Edition on IBM Z

In this practical guide, four Kubernetes professionals with deep experience in distributed systems, enterprise application development, and open source will guide you through the process of building applications with this container orchestration system. Based on the experiences of companies that are running Kubernetes in production successfully, many of the methods are also backed by concrete code examples. This book is ideal for those already familiar with basic Kubernetes concepts who want to learn common best practices. You'll learn exactly what you need to know to build your best app with Kubernetes the first time. Set up and develop applications in Kubernetes Learn patterns for monitoring, securing your systems, and managing upgrades, rollouts, and rollbacks Understand Kubernetes networking policies and where service mesh fits in Integrate services and legacy applications and develop higher-level platforms on top of Kubernetes Run machine learning workloads in Kubernetes

Go in Action

Master the art of making Docker more extensible, composable, and modular by leveraging plugins and other supporting tools About This Book Get the first book on the market that shows you how to extend the capabilities of Docker using plugins and third-party tools Master the skills of creating various plugins and integrating great tools in order to enhance the functionalities of Docker A practical and learning guide that ensures your investment in Docker becomes more valuable Who This Book Is For This book is for developers and sys admins who are well versed Docker and have knowledge on basic programming languages. If you can't wait to extend Docker and customize it to meet your requirements, this is the book for you! What You Will Learn Find out about Docker plugins and the problems they solve Gain insights into creating your own plugin Use Docker tools to extend the basic functionality of the core Docker engine Get to grips with the installation and configuration of third-party tools available to use with Docker plugins Install, configure, and use a scheduling service to manage the containers in your environment Enhance your day-to-day Docker usage through security, troubleshooting, and best practices In Detail With Docker, it is possible to get a lot of apps running on the same old servers, making it very easy to package and ship programs. The ability to extend Docker using plugins and load third-party plugins is incredible, and organizations can massively benefit from it. In this book, you will read about what first and third party tools are available to extend the functionality of your existing Docker installation and how to approach your next Docker infrastructure deployment. We will show you how to work with Docker plugins,

install it, and cover its lifecycle. We also cover network and volume plugins, and you will find out how to build your own plugin. You'll discover how to integrate it with Puppet, Ansible, Jenkins, Flocker, Rancher, Packer, and more with third-party plugins. Then, you'll see how to use Schedulers such as Kubernetes and Amazon ECS. Finally, we'll delve into security, troubleshooting, and best practices when extending Docker. By the end of this book, you will learn how to extend Docker and customize it based on your business requirements with the help of various tools and plugins. Style and approach An easy to follow guide with plenty of hands-on practical examples which can be executed both on your local machine or externally hosted services.

Docker Orchestration

ASP.NET Core is a re-imagining of the .NET Framework that frees developers from Visual Studio and Windows. ASP.NET Core in Action is for C# developers without any web development experience who want to get started and productive using ASP.NET Core to build web applications. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

The Docker Book

It can be tough to roll out a pre-configured environment if you don't know what you're doing. We'll show you how to streamline your service options with Docker, so that you can scale in an agile, responsive manner. Key Features Learn how to structure your own Docker containers Create and manage multiple configuration images Understand how to scale and deploy bespoke environments Book Description Making sure that your application runs across different systems as intended is quickly becoming a standard development requirement. With Docker, you can ensure that what you build will behave the way you expect it to, regardless of where it's deployed. By guiding you through Docker from start to finish (from installation, to the Docker Registry, all the way through to working with Docker Swarms), we'll equip you with the skills you need to migrate your workflow to Docker with complete confidence. What you will learn Learn to design and build containers for different kinds of applications Create a testing environment to identify issues that may cause production deployments to fail Discover how you can correctly structure and manage a multi-tier environment Run, debug, and experiment with example applications in Docker containers Who this book is for This book is ideal for developers, system architects and site reliability engineers (SREs) who wish to adopt a Docker-based workflow for consistency, speed and isolation of system resources within their applications. You'll need to be comfortable working with the command line.

Docker Deep Dive

The modern "data center" is a complex arena, with physical and virtual servers, multiple OS environments, and complex networking that frequently spans multiple locations. The need to simplify has never been greater. Mesos, an innovative open-source cluster management platform, transforms the whole data center into a single pool of compute, memory, and storage resources that can be allocated, automated, and scaled as if working with a single super-computer. Mesos is an ideal environment for deploying containerized applications at scale, and it's generating a huge buzz in the big data world as a saner environment for running Spark and Hadoop. Mesos in Action introduces the Apache Mesos cluster manager and the concept of application-centric infrastructure. It guides readers from their first steps in deploying a highly-available Mesos cluster through deploying applications in production and writing native Mesos frameworks. It will show how to scale to thousands of nodes, while providing resource isolation between processes using Linux and Docker containers. It contains practical techniques for deploying applications using popular key frameworks, including Marathon, Chronos, and Aurora. Along the way, the book dives into Mesos internals, including fault tolerance, slave attributes, and resource scheduling and Mesos administration, including logging, monitoring, framework authorization, and slave recovery. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Kubernetes: Up and Running

Learn how to run new and old Windows applications in Docker containers. About This Book Package traditional .NET Frameworks apps and new .NET Core apps as Docker images, and run them in containers for increased efficiency, portability, and security Design and implement distributed applications that run across connected containers, using enterprise-grade open source software from public Docker images Build a full Continuous Deployment pipeline for a .NET Framework application, and deploy it to a highly-available Docker swarm running in the cloud Who This Book Is For If you want to modernize an old monolithic application without rewriting it, smooth the deployment to production, or move to DevOps or the cloud, then Docker is the enabler for you. This book gives you a solid grounding in Docker so you can confidently approach all of these scenarios. What You Will Learn Comprehend key Docker concepts: images, containers, registries, and swarms Run Docker on Windows 10, Windows Server 2016, and in the cloud Deploy and monitor distributed solutions across multiple Docker containers Run containers with high availability and fail-over with Docker Swarm Master security in-depth with the Docker platform, making your apps more secure Build a Continuous Deployment pipeline by running Jenkins in Docker Debug applications running in Docker containers using Visual Studio Plan the adoption of Docker in your own organization In Detail Docker is a platform for running server applications in lightweight units called containers. You can run Docker on Windows Server 2016

and Windows 10, and run your existing apps in containers to get significant improvements in efficiency, security, and portability. This book teaches you all you need to know about Docker on Windows, from 101 to deploying highly-available workloads in production. This book takes you on a Docker journey, starting with the key concepts and simple examples of how to run .NET Framework and .NET Core apps in Windows Docker containers. Then it moves on to more complex examples—using Docker to modernize the architecture and development of traditional ASP.NET and SQL Server apps. The examples show you how to break up monoliths into distributed apps and deploy them to a clustered environment in the cloud, using the exact same artifacts you use to run them locally. To help you move confidently to production, it then explains Docker security, and the management and support options. The book finishes with guidance on getting started with Docker in your own projects, together with some real-world case studies for Docker implementations, from small-scale on-premises apps to very large-scale apps running on Azure. Style and approach Using a step-by-step approach, this book shows you how to use Docker on Windows. It includes practical examples and real-world technical and business scenarios that will help you effectively implement Docker in your environment.There are over 50 examples of Dockerized applications, using C# .NET projects as the source and packaging them into Docker images.

Deployment with Docker

If you are a competent developer or DevOps with a good understanding of Linux filesystems but want to manage and orchestrate Docker services, images, and products using a multitude of techniques, then this book is for you. No prior knowledge of Docker or container virtualization is required.

Monitoring Docker

Explore the core functionality of containerizing your applications and making them production-ready Key Features Grasp basic to advanced Docker concepts with this comprehensive guide Get acquainted with Docker containers, Docker images, orchestrators, cloud integration, and networking Learn to simplify dependencies and deploy and test containers in production Book Description Containers enable you to package an application with all the components it needs, such as libraries and other dependencies, and ship it as one package. Docker containers have revolutionized the software supply chain in both small and large enterprises. Starting with an introduction to Docker fundamentals and setting up an environment to work with it, you'll delve into concepts such as Docker containers, Docker images, and Docker Compose. As you progress, the book will help you explore deployment, orchestration, networking, and security. Finally, you'll get to grips with Docker functionalities on public clouds such as Amazon Web Services (AWS), Azure, and Google Cloud Platform (GCP), and learn about Docker Enterprise

Edition features. Additionally, you'll also discover the benefits of increased security with the use of containers. By the end of this Docker book, you'll be able to build, ship, and run a containerized, highly distributed application on Docker Swarm or Kubernetes, running on-premises or in the cloud. What you will learn Containerize your traditional or microservice-based applications Develop, modify, debug, and test an application running inside a container Share or ship your application as an immutable container image Build a Docker Swarm and a Kubernetes cluster in the cloud Run a highly distributed application using Docker Swarm or Kubernetes Update or rollback a distributed application with zero downtime Secure your applications with encapsulation, networks, and secrets Troubleshoot a containerized, highly distributed application in the cloud Who this book is for This book is for Linux professionals, system administrators, operations engineers, DevOps engineers, and developers or stakeholders who are interested in getting started with Docker from scratch. No prior experience with Docker containers is required. Users with a Linux system would be able to take full advantage of this book.

OpenShift in Action

Learn how to secure your Docker environment and keep your environments secure irrespective of the threats out there About This Book Gain confidence in using Docker for containerization without compromising on security This book covers

different techniques to help you develop your container security skills It is loaded with practical examples and real-world scenarios to secure your container-based applications Who This Book Is For This book is for developers who wish to use Docker as their testing platform as well as security professionals who are interested in securing Docker containers. You must be familiar with the basics of Docker. What You Will Learn Find out how to secure your Docker hosts and nodes Secure your Docker components Explore different security measures/methods for Linux kernels Install and run the Docker Bench security application Monitor and report security issues Familiarize yourself with third-party tools such as Traffic Authorization, Summon, sVirt, and SELinux to secure your Docker environment In Detail With the rising integration and adoption of Docker containers, there is a growing need to ensure their security. The purpose of this book is to provide techniques and enhance your skills to secure Docker containers easily and efficiently. The book starts by sharing the techniques to configure Docker components securely and explore the different security measures/methods one can use to secure the kernel. Furthermore, we will cover the best practices to report Docker security findings and will show you how you can safely report any security findings you come across. Toward the end, we list the internal and third-party tools that can help you immunize your Docker environment. By the end of this book, you will have a complete understanding of Docker security so you are able to protect your container-based applications. Style and approach This book is your one-stop solution to resolve all your Docker security concerns. It will

familiarize you with techniques to safeguard your applications that run on Docker containers.

Extending Docker

"Camel in Action" is for developers working with integration of any kind. This highly practical book introduces Camel and shows examples of how to use it with the more than 45 supported enterprise integration patterns.

Camel in Action

What is the difference between a virtual machine and a Docker container? A virtual machine (VM) is like a house. It is fully contained with its own plumbing and heating and cooling system. If you want another house, you build a new foundation, with new walls, new plumbing, and its own heating and cooling system. VMs are large. They start their own operating systems. Containers are like apartments in an apartment building. They share infrastructure. They can be many different sizes. You can have different sizes depending on the needs. Containers "live" in a Docker host. If you build a house, you need many resources. If you build an apartment building, each unit shares resources. Like an apartment, Docker is smaller and satisfies specific needs, is more agile, and more easily changed. This

IBM® Redbooks® publication examines the installation and operation of Docker Enterprise Edition on the IBM Z® platform.

Vert.x in Action

To facilitate scalability and resilience, many organizations now run applications in cloud native environments using containers and orchestration. But how do you know if the deployment is secure? This practical book examines key underlying technologies to help developers, operators, and security professionals assess security risks and determine appropriate solutions. Author Liz Rice, VP of open source engineering at Aqua Security, looks at how the building blocks commonly used in container-based systems are constructed in Linux. You'll understand what's happening when you deploy containers and learn how to assess potential security risks that could affect your deployments. If you run container applications with kubectl or docker and use Linux command-line tools such as ps and grep, you're ready to get started. Explore attack vectors that affect container deployments Dive into the Linux constructs that underpin containers Examine measures for hardening containers Understand how misconfigurations can compromise container isolation Learn best practices for building container images Identify container images that have known software vulnerabilities Leverage secure connections between containers Use security tooling to prevent attacks on your deployment

Orchestrating Docker

Summary Spring Microservices in Action teaches you how to build microservice-based applications using Java and the Spring platform. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Microservices break up your code into small, distributed, and independent services that require careful forethought and design. Fortunately, Spring Boot and Spring Cloud simplify your microservice applications, just as the Spring Framework simplifies enterprise Java development. Spring Boot removes the boilerplate code involved with writing a REST-based service. Spring Cloud provides a suite of tools for the discovery, routing, and deployment of microservices to the enterprise and the cloud. About the Book Spring Microservices in Action teaches you how to build microservice-based applications using Java and the Spring platform. You'll learn to do microservice design as you build and deploy your first Spring Cloud application. Throughout the book, carefully selected real-life examples expose microservice-based patterns for configuring, routing, scaling, and deploying your services. You'll see how Spring's intuitive tooling can help augment and refactor existing applications with micro services. What's Inside Core microservice design principles Managing configuration with Spring Cloud Config Client-side resiliency with Spring, Hystrix, and Ribbon Intelligent routing using Netflix Zuul Deploying Spring Cloud applications About the Reader This book is written for developers with Java and Spring experience. About the Author John

Carnell is a senior cloud engineer with twenty years of experience in Java. Table of contents Welcome to the cloud, Spring Building microservices with Spring Boot Controlling your configuration with Spring Cloud configuration server On service discovery When bad things happen: client resiliency patterns with Spring Cloud and Netflix Hystrix Service routing with Spring Cloud and Zuul Securing your microservices Event-driven architecture with Spring Cloud Stream Distributed tracing with Spring Cloud Sleuth and Zipkin Deploying your microservices

Coreos in Action

Many of the normal concerns faced by application developers are amplified by the challenges of web-scale concurrency, real-time performance expectations, multi-core support, and efficiently consuming services without constantly managing I/O blocks. Although it's possible to solve most of these issues with existing languages and frameworks, Go is designed to handle them right out of the box, making for a more natural and productive coding experience. Developed at Google for its own internal use, Go now powers dozens of nimble startups, along with name brands like Canonical, Heroku, SoundCloud, and Mozilla, who rely on highly performant services for their infrastructure. Go in Action introduces the unique features and concepts of the Go language, guiding readers from inquisitive developers to Go gurus. It provides hands-on experience with writing real-world applications including web sites and network servers, as well as techniques to manipulate and

convert data at incredibly high speeds. It also goes in-depth with the language and explains the tricks and secrets that the Go masters are using to make their applications perform. For example, it looks at Go's powerful reflection libraries and uses real-world examples of integration with C code. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Linux in Action

Microservices Security in Action teaches you how to address microservices-specific security challenges throughout the system. This practical guide includes plentiful hands-on exercises using industry-leading open-source tools and examples using Java and Spring Boot. Summary Unlike traditional enterprise applications, Microservices applications are collections of independent components that function as a system. Securing the messages, queues, and API endpoints requires new approaches to security both in the infrastructure and the code. Microservices Security in Action teaches you how to address microservices-specific security challenges throughout the system. This practical guide includes plentiful hands-on exercises using industry-leading open-source tools and examples using Java and Spring Boot. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Integrating independent services into a single system presents special security challenges in a microservices deployment. With proper planning, however, you can build in

security from the start. Learn to create secure services and protect application data throughout development and deployment. As microservices continue to change enterprise application systems, developers and architects must learn to integrate security into their design and implementation. Because microservices are created as a system of independent components, each a possible point of failure, they can multiply the security risk. With proper planning, design, and implementation, you can reap the benefits of microservices while keeping your application data—and your company's reputation—safe! About the book Microservices Security in Action is filled with solutions, teaching best practices for throttling and monitoring, access control, and microservice-to-microservice communications. Detailed code samples, exercises, and real-world use cases help you put what you've learned into production. Along the way, authors and software security experts Prabath Siriwardena and Nuwan Dias shine a light on important concepts like throttling, analytics gathering, access control at the API gateway, and microservice-to-microservice communication. You'll also discover how to securely deploy microservices using state-of-the-art technologies including Kubernetes, Docker, and the Istio service mesh. Lots of hands-on exercises secure your learning as you go, and this straightforward guide wraps up with a security process review and best practices. When you're finished reading, you'll be planning, designing, and implementing microservices applications with the priceless confidence that comes with knowing they're secure! What's inside Microservice security concepts Edge services with an API gateway Deployments with Docker, Kubernetes, and Istio

Security testing at the code level Communications with HTTP, gRPC, and Kafka About the reader For experienced microservices developers with intermediate Java skills. About the author Prabath Siriwardena is the vice president of security architecture at WSO2. Nuwan Dias is the director of API architecture at WSO2. They have designed secure systems for many Fortune 500 companies. Table of Contents PART 1 OVERVIEW 1 Microservices security landscape 2 First steps in securing microservices PART 2 EDGE SECURITY 3 Securing north/south traffic with an API gateway 4 Accessing a secured microservice via a single-page application 5 Engaging throttling, monitoring, and access control PART 3 SERVICE-TO-SERVICE COMMUNICATIONS 6 Securing east/west traffic with certificates 7 Securing east/west traffic with JWT 8 Securing east/west traffic over gRPC 9 Securing reactive microservices PART 4 SECURE DEPLOYMENT 10 Conquering container security with Docker 11 Securing microservices on Kubernetes 12 Securing microservices with Istio service mesh PART 5 SECURE DEVELOPMENT 13 Secure coding practices and automation

Spark in Action, Second Edition

Summary Go from zero to production readiness with Docker in 22 bite-sized lessons! Learn Docker in a Month of Lunches is an accessible task-focused guide to Docker on Linux, Windows, or Mac systems. In it, you'll learn practical Docker skills to help you tackle the challenges of modern IT, from cloud migration and

microservices to handling legacy systems. There's no excessive theory or niche-use cases—just a quick-and-easy guide to the essentials of Docker you'll use every day. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology The idea behind Docker is simple: package applications in lightweight virtual containers that can be easily installed. The results of this simple idea are huge! Docker makes it possible to manage applications without creating custom infrastructures. Free, open source, and battle-tested, Docker has quickly become must-know technology for developers and administrators. About the book Learn Docker in a Month of Lunches introduces Docker concepts through a series of brief hands-on lessons. Following a learning path perfected by author Elton Stoneman, you'll run containers by chapter 2 and package applications by chapter 3. Each lesson teaches a practical skill you can practice on Windows, macOS, and Linux systems. By the end of the month you'll know how to containerize and run any kind of application with Docker. What's inside Package applications to run in containers Put containers into production Build optimized Docker images Run containerized apps at scale About the reader For IT professionals. No previous Docker experience required. About the author Elton Stoneman is a consultant, a former architect at Docker, a Microsoft MVP, and a Pluralsight author. Table of Contents PART 1 - UNDERSTANDING DOCKER CONTAINERS AND IMAGES 1. Before you begin 2. Understanding Docker and running Hello World 3. Building your own Docker images 4. Packaging applications from source code into Docker Images 5. Sharing images with Docker

Hub and other registries 6. Using Docker volumes for persistent storage PART 2 - RUNNING DISTRIBUTED APPLICATIONS IN CONTAINERS 7. Running multi-container apps with Docker Compose 8. Supporting reliability with health checks and dependency checks 9. Adding observability with containerized monitoring 10. Running multiple environments with Docker Compose 11. Building and testing applications with Docker and Docker Compose PART 3 - RUNNING AT SCALE WITH A CONTAINER ORCHESTRATOR 12. Understanding orchestration: Docker Swarm and Kubernetes 13. Deploying distributed applications as stacks in Docker Swarm 14. Automating releases with upgrades and rollbacks 15. Configuring Docker for secure remote access and CI/CD 16. Building Docker images that run anywhere: Linux, Windows, Intel, and Arm PART 4 - GETTING YOUR CONTAINERS READY FOR PRODUCTION 17. Optimizing your Docker images for size, speed, and security 18. Application configuration management in containers 19. Writing and managing application logs with Docker 20. Controlling HTTP traffic to containers with a reverse proxy 21. Asynchronous communication with a message queue 22. Never the end

Microservices in Action

Summary Kubernetes in Action is a comprehensive guide to effectively developing and running applications in a Kubernetes environment. Before diving into Kubernetes, the book gives an overview of container technologies like Docker,

including how to build containers, so that even readers who haven't used these technologies before can get up and running. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Kubernetes is Greek for "helmsman," your guide through unknown waters. The Kubernetes container orchestration system safely manages the structure and flow of a distributed application, organizing containers and services for maximum efficiency. Kubernetes serves as an operating system for your clusters, eliminating the need to factor the underlying network and server infrastructure into your designs. About the Book Kubernetes in Action teaches you to use Kubernetes to deploy container-based distributed applications. You'll start with an overview of Docker and Kubernetes before building your first Kubernetes cluster. You'll gradually expand your initial application, adding features and deepening your knowledge of Kubernetes architecture and operation. As you navigate this comprehensive guide, you'll explore high-value topics like monitoring, tuning, and scaling. What's Inside Kubernetes' internals Deploying containers across a cluster Securing clusters Updating applications with zero downtime About the Reader Written for intermediate software developers with little or no familiarity with Docker or container orchestration systems. About the Author Marko Luksa is an engineer at Red Hat working on Kubernetes and OpenShift. Table of Contents PART 1 - OVERVIEW Introducing Kubernetes First steps with Docker and Kubernetes PART 2 - CORE CONCEPTS Pods: running containers in Kubernetes Replication and other controllers: deploying managed

pods Services: enabling clients to discover and talk to pods Volumes: attaching disk storage to containers ConfigMaps and Secrets: configuring applications Accessing pod metadata and other resources from applications Deployments: updating applications declaratively StatefulSets: deploying replicated stateful applications PART 3 - BEYOND THE BASICS Understanding Kubernetes internals Securing the Kubernetes API server Securing cluster nodes and the network Managing pods' computational resources Automatic scaling of pods and cluster nodes Advanced scheduling Best practices for developing apps Extending Kubernetes

Learn Docker – Fundamentals of Docker 19.x

Summary The Spark distributed data processing platform provides an easy-to-implement tool for ingesting, streaming, and processing data from any source. In Spark in Action, Second Edition, you'll learn to take advantage of Spark's core features and incredible processing speed, with applications including real-time computation, delayed evaluation, and machine learning. Spark skills are a hot commodity in enterprises worldwide, and with Spark's powerful and flexible Java APIs, you can reap all the benefits without first learning Scala or Hadoop. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Analyzing enterprise data starts by reading, filtering, and merging files and streams from many sources. The Spark

data processing engine handles this varied volume like a champ, delivering speeds 100 times faster than Hadoop systems. Thanks to SQL support, an intuitive interface, and a straightforward multilanguage API, you can use Spark without learning a complex new ecosystem. About the book Spark in Action, Second Edition, teaches you to create end-to-end analytics applications. In this entirely new book, you'll learn from interesting Java-based examples, including a complete data pipeline for processing NASA satellite data. And you'll discover Java, Python, and Scala code samples hosted on GitHub that you can explore and adapt, plus appendixes that give you a cheat sheet for installing tools and understanding Spark-specific terms. What's inside Writing Spark applications in Java Spark application architecture Ingestion through files, databases, streaming, and Elasticsearch Querying distributed datasets with Spark SQL About the reader This book does not assume previous experience with Spark, Scala, or Hadoop. About the author Jean-Georges Perrin is an experienced data and software architect. He is France's first IBM Champion and has been honored for 12 consecutive years. Table of Contents PART 1 - THE THEORY CRIPPLED BY AWESOME EXAMPLES 1 So, what is Spark, anyway? 2 Architecture and flow 3 The majestic role of the dataframe 4 Fundamentally lazy 5 Building a simple app for deployment 6 Deploying your simple app PART 2 - INGESTION 7 Ingestion from files 8 Ingestion from databases 9 Advanced ingestion: finding data sources and building your own 10 Ingestion through structured streaming PART 3 - TRANSFORMING YOUR DATA 11 Working with SQL 12 Transforming your data 13 Transforming entire documents 14

Extending transformations with user-defined functions 15 Aggregating your data PART 4 - GOING FURTHER 16 Cache and checkpoint: Enhancing Spark's performances 17 Exporting data and building full data pipelines 18 Exploring deployment

Securing Docker

Monitor your Docker containers and their apps using various native and third-party tools with the help of this exclusive guide! About This Book Get the only book that covers multiple methods to monitoring Docker Containers -your one-stop solution to all your Docker monitoring needs Learn how to implement third-party tools such as Datalog, cAdvisor, and more with this example-rich, hands-on guide Learn how to efficiently monitor Docker containers and get an edge over other administrators while maintaining apps on these containers Who This Book Is For This book is for DevOps engineers and system administrators who manage Docker containers and want to better manage these containers using expert techniques and methods and better maintain applications built on Docker. What You Will Learn Discover the tools built into Docker to gain an insight into your containers' performance Augment Docker's built-in tools with modern tools such as cAdvisor from Google, SysDig by Draios, and Soundcloud's Prometheus Integrate the monitoring of your containers with more traditional monitoring solutions such as Zabbix Take advantage of the various SaaS offerings from third parties to move monitoring

away from your local infrastructure and into the cloud Discover the various ways to ship your applications' logs from the container to a central logging service Get the most out of your application and resources with the right implementation of your monitoring method In Detail This book will show you how monitoring containers and keeping a keen eye on the working of applications helps improve the overall performance of the applications that run on Docker. With the increased adoption of Docker containers, the need to monitor which containers are running, what resources they are consuming, and how these factors affect the overall performance of the system has become the need of the moment. This book covers monitoring containers using Docker's native monitoring functions, various plugins, as well as third-party tools that help in monitoring. Well start with how to obtain detailed stats for active containers, resources consumed, and container behavior. We also show you how to use these stats to improve the overall performance of the system. Next, you will learn how to use SysDig to both view your containers performance metrics in real time and record sessions to query later. By the end of this book, you will have a complete knowledge of how to implement monitoring for your containerized applications and make the most of the metrics you are collecting Style and approach This is an easy-to-follow guide with plenty of hands-on examples that can be executed both on your local machine and externally hosted services.

Docker on Amazon Web Services

Feb 2018.This is the ultimate book for learning Docker, brought to you by Docker Captain and leading educator in the container ecosystem Nigel Poulton.

Docker Cookbook

To be competitive, an organization needs to reach modern standards of scalability and high availability. While Linux is an option, it's painful to deal with the frequent operating system updates and complex configuration management. Docker, a popular container system, can reduce these manual system administration tasks. While plenty of Linux distributions support Docker, they do not handle large scale production. This is where CoreOS can help. CoreOS is an operating system designed from the ground up to facilitate container use at any scale. CoreOS in Action begins by introducing the core components, how services run in CoreOS, and the big picture of how the parts fits together. Next, readers learn how to fire up their own CoreOS cluster. Readers learn how to configure their local environment, the basics of CoreOS system administration, and follow an application deployment example. It covers how to take advantage of CoreOS's high availability and fault tolerance as well as how to plan application architecture. The book also covers operational planning for CoreOS, deployment options, and how to deal with mass storage. Readers will discover end-to-end deployment of CoreOS in Amazon Web Services, and learn from real-world examples of application stacks.

Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Docker in Practice

Change the way your organization deploys software at scale with this fast-paced guide to the world of Docker About This Book Cut through the noise and in simple terms learn to package your applications and test, ship, and scale your containers Find and build images and successfully run your programs within containers Build, deploy, and test your Docker containers and put them to work in production Who This Book Is For This book is for IT professionals, system administrators, and DevOps professionals or anyone looking to quickly develop and deploy software to production at scale. If you are interested in Docker, DevOps, or containers in general, don't look any further. What You Will Learn Understand Docker's architecture Build, ship, and run distributed applications Deploy, automate, and manage the execution of applications within Docker Scale and virtualize images and containers Utilize the networking features that Docker offers Use repositories to store and retrieve images In Detail This fast-paced practical guide will get you up and running with Docker. Using Docker, you will be able to build, ship, and run many distributed applications in real time. You will start with quickly installing Docker and start working with images and containers. We will present different types of containers and their applications, and show you how to find and build

images. You will learn how you can contribute to the image repository by publishing different images. This will familiarize you with the image building process and you will be able to successfully run your programs within containers. By finishing this book, you will be well equipped in deploying your applications using Docker and will have a clear understanding of concepts, techniques, and practical methods to get it running in production systems. Style and approach This book takes a fast-paced practical approach that quickly gets you up and running with Docker so that you spend less time learning and more time deploying Docker containers effectively. This book contains a mix of concepts, practical examples, techniques, and the most up-to-date content to run things effectively in production. We'll show you the easiest way to speed up your development and deployment with Docker.

Container Security

A practical guide to rapidly and efficiently mastering Docker containers, along with tips and tricks learned in the field. About This Book Use Docker containers, horizontal node scaling, modern orchestration tools (Docker Swarm, Kubernetes, and Mesos) and Continuous Integration/Continuous Delivery to manage your infrastructure. Increase service density by turning often-idle machines into hosts for numerous Docker services. Learn what it takes to build a true container infrastructure that is scalable, reliable, and resilient in the face of increased

complexities from using container infrastructures. Find out how to identify, debug, and mitigate most real-world, undocumented issues when deploying your own Docker infrastructure. Learn tips and tricks of the trade from existing Docker infrastructures running in production environments. Who This Book Is For This book is aimed at system administrators, developers, DevOps engineers, and software engineers who want to get concrete, hands-on experience deploying multi-tier web applications and containerized microservices using Docker. This book is also for anyone who has worked on deploying services in some fashion and wants to take their small-scale setups to the next level (or simply to learn more about the process). What You Will Learn Set up a working development environment and create a simple web service to demonstrate the basics Learn how to make your service more usable by adding a database and an app server to process logic Add resilience to your services by learning how to horizontally scale with a few containers on a single node Master layering isolation and messaging to simplify and harden the connectivity between containers Learn about numerous issues encountered at scale and their workarounds, from the kernel up to code versioning Automate the most important parts of your infrastructure with continuous integration In Detail Deploying Docker into production is considered to be one of the major pain points in developing large-scale infrastructures, and the documentation available online leaves a lot to be desired. With this book, you will learn everything you wanted to know to effectively scale your deployments globally and build a resilient, scalable, and containerized cloud platform for your

own use. The book starts by introducing you to the containerization ecosystem with some concrete and easy-to-digest examples; after that, you will delve into examples of launching multiple instances of the same container. From there, you will cover orchestration, multi-node setups, volumes, and almost every relevant component of this new approach to deploying services. Using intertwined approaches, the book will cover battle-tested tooling, or issues likely to be encountered in real-world scenarios, in detail. You will also learn about the other supporting components required for a true PaaS deployment and discover common options to tie the whole infrastructure together. At the end of the book, you learn to build a small, but functional, PaaS (to appreciate the power of the containerized service approach) and continue to explore real-world approaches to implementing even larger global-scale services. Style and approach This in-depth learning guide shows you how to deploy your applications in production using Docker (from the basic steps to advanced concepts) and how to overcome challenges in Docker-based infrastructures. The book also covers practical use-cases in real-world examples, and provides tips and tricks on the various topics.

Microservices Security in Action

Docker is a next-generation platform for simplifying application containerization life-cycle. Docker allows you to create a robust and resilient environment in which you can generate portable, composable, scalable, and stable application

containers. This book is a step-by-step guide that will walk you through the various features of Docker from Docker software installation to the impenetrable security of containers. The book starts off by elucidating the installation procedure for Docker and a few troubleshooting techniques. You will be introduced to the process of downloading Docker images and running them as containers. You'll learn how to run containers as a service (CaaS) and also discover how to share data among containers. Later on, you'll explore how to establish the link between containers and orchestrate containers using Docker Compose. You will also come across relevant details about application testing inside a container. You will discover how to debug a container using the docker exec command and the nsenter tool. Finally, you will learn how to secure your containers with SELinux and other proven methods.

Developing with Docker

Updated for Docker Community Edition v18.09! Docker book designed for SysAdmins, SREs, Operations staff, Developers and DevOps who are interested in deploying the open source container service Docker. In this book, we'll walk you through installing, deploying, managing, and extending Docker. We're going to do that by first introducing you to the basics of Docker and its components. Then we'll start to use Docker to build containers and services to perform a variety of tasks. We're going to take you through the development lifecycle, from testing to

production, and see where Docker fits in and how it can make your life easier. We'll make use of Docker to build test environments for new projects, demonstrate how to integrate Docker with continuous integration workflow, and then how to build application services and platforms. Finally, we'll show you how to use Docker's API and how to extend Docker yourself. We'll teach you how to: * Install Docker. * Take your first steps with a Docker container. * Build Docker images. * Manage and share Docker images. * Run and manage more complex Docker containers. * Deploy Docker containers as part of your testing pipeline. * Build multi-container applications and environments. * Learn about orchestration using Compose and Swarm for the orchestration of Docker containers and Consul for service discovery. * Explore the Docker API. * Getting Help and Extending Docker.

Learn Docker in a Month of Lunches

Summary Microservices in Action is a practical book about building and deploying microservice-based applications. Written for developers and architects with a solid grasp of service-oriented development, it tackles the challenge of putting microservices into production. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Invest your time in designing great applications, improving infrastructure, and making the most out of your dev teams. Microservices are easier to write, scale, and maintain than traditional enterprise applications because they're built as a

system of independent components. Master a few important new patterns and processes, and you'll be ready to develop, deploy, and run production-quality microservices. About the Book Microservices in Action teaches you how to write and maintain microservice-based applications. Created with day-to-day development in mind, this informative guide immerses you in real-world use cases from design to deployment. You'll discover how microservices enable an efficient continuous delivery pipeline, and explore examples using Kubernetes, Docker, and Google Container Engine. What's inside An overview of microservice architecture Building a delivery pipeline Best practices for designing multi-service transactions and queries Deploying with containers Monitoring your microservices About the Reader Written for intermediate developers familiar with enterprise architecture and cloud platforms like AWS and GCP. About the Author Morgan Bruce and Paulo A. Pereira are experienced engineering leaders. They work daily with microservices in a production environment, using the techniques detailed in this book. Table of Contents PART 1 - The lay of the land Designing and running microservices Microservices at SimpleBank PART 2 - Design Architecture of a microservice application Designing new features Transactions and queries in microservices Designing reliable services Building a reusable microservice framework PART 3 - Deployment Deploying microservices Deployment with containers and schedulers Building a delivery pipeline for microservices PART 4 - Observability and ownership Building a monitoring system Using logs and traces to understand behavior Building microservice teams

Docker on Windows

Docker containers offer simpler, faster, and more robust methods for developing, distributing, and running software than previously available. With this hands-on guide, you'll learn why containers are so important, what you'll gain by adopting Docker, and how to make it part of your development process. Ideal for developers, operations engineers, and system administrators—especially those keen to embrace a DevOps approach—Using Docker will take you from Docker and container basics to running dozens of containers on a multi-host system with networking and scheduling. The core of the book walks you through the steps needed to develop, test, and deploy a web application with Docker. Get started with Docker by building and deploying a simple web application Use Continuous Deployment techniques to push your application to production multiple times a day Learn various options and techniques for logging and monitoring multiple containers Examine networking and service discovery: how do containers find each other and how do you connect them? Orchestrate and cluster containers to address load-balancing, scaling, failover, and scheduling Secure your system by following the principles of defense-in-depth and least privilege

Kubernetes in Action

In this fast-paced book on the Docker open standards platform for developing, packaging and running portable distributed applications, Deepak Vorhadiscusses how to build, ship and run applications on any platform such as a PC, the cloud, data center or a virtual machine. He describes how to install and create Docker images. and the advantages off Docker containers.The remainder of the book is devoted to discussing using Docker with important software solutions. He begins by discussing using Docker with a traditional RDBMS using Oracle and MySQL. Next he moves on to NoSQL with chapter on MongoDB Cassandra, and Couchbase. Then he addresses the use of Docker in the Hadoop ecosystem with complete chapters on utilizing not only Hadoop, but Hive, HBase, Sqoop, Kafka, Solr and Spark. What You Will Learn How to install a Docker image How to create a Docker container How to run an Application in a Docker Container Use Docker with Apache Hadoop Ecosystem Use Docker with NoSQL Databases Use Docker with RDBMS Who This Book Is ForApache Hadoop Developers. Database developers. NoSQL Developers.

Docker in Action

Whether you're deploying applications on-premise or in the cloud, this cookbook is for developers, operators, and IT professionals who need practical solutions for using Docker. The recipes in this book will help developers go from zero knowledge to distributed applications packaged and deployed within a couple of chapters. IT professionals will be able to use this cookbook to solve everyday problems, as well

as create, run, share, and deploy Docker images quickly. Operators will learn and understand what developers are excited about and start to adopt the tools that will change the way they work.--

Kubernetes Best Practices

Summary OpenShift in Action is a full reference to Red Hat OpenShift that breaks down this robust container platform so you can use it day-to-day. Combining Docker and Kubernetes, OpenShift is a powerful platform for cluster management, scaling, and upgrading your enterprise apps. It doesn't matter why you use OpenShift--by the end of this book you'll be able to handle every aspect of it, inside and out! Foreword by Jim Whitehurst, Red Hat. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Containers let you package everything into one neat place, and with Red Hat OpenShift you can build, deploy, and run those packages all in one place! Combining Docker and Kubernetes, OpenShift is a powerful platform for cluster management, scaling, and upgrading your enterprise apps. About the Book OpenShift in Action is a full reference to Red Hat OpenShift that breaks down this robust container platform so you can use it day-to-day. Starting with how to deploy and run your first application, you'll go deep into OpenShift. You'll discover crystal-clear explanations of namespaces, cgroups, and SELinux, learn to prepare a cluster, and even tackle advanced details like software-defined networks and

security, with real-world examples you can take to your own work. It doesn't matter why you use OpenShift--by the end of this book you'll be able to handle every aspect of it, inside and out! What's Inside Written by lead OpenShift architects Rock-solid fundamentals of Docker and Kubernetes Keep mission-critical applications up and running Manage persistent storage About the Reader For DevOps engineers and administrators working in a Linux-based distributed environment. About the Authors Jamie Duncan is a cloud solutions architect for Red Hat, focusing on large-scale OpenShift deployments. John Osborne is a principal OpenShift architect for Red Hat. Table of Contents PART 1 - FUNDAMENTALS Getting to know OpenShift Getting started Containers are Linux PART 2 - CLOUD-NATIVE APPLICATIONS Working with services Autoscaling with metrics Continuous integration and continuous deployment PART 3 - STATEFUL APPLICATIONS Creating and managing persistent storage Stateful applications PART 4 - OPERATIONS AND SECURITY Authentication and resource access Networking Security

The Kubernetes Book

Understand the Kubernetes ecosystem and learn techniques to run fault-tolerant, scalable applicationsKey Features* Gain insight into the inner workings of Kubernetes* Learn how to deploy and manage applications on Kubernetes* Explore ways to build and secure Kubernetes clustersBook DescriptionKubernetes is the leading orchestrator of cloud-native apps. With knowledge of how to work with

Kubernetes, you can easily deploy and manage applications on the cloud or in your on-premises data center. The book begins by introducing you to Kubernetes and showing you how to install it. You'll learn how to use Kubernetes Services and bring stable and reliable networking to apps that are deployed on Kubernetes. You'll delve deep into the powerful storage subsystem of Kubernetes and learn how to leverage the variety of external storage backends in your applications. As the book progresses, it shows you how to use features such as DaemonSets, Helm, and RBAC to enhance your Kubernetes applications. You'll explore the six categories of identifying vulnerabilities and look at a few ways to prevent and mitigate them. You'll also look at ways to secure the software delivery pipeline by discussing some image-related best practices. The book ends by sharing with you some resources that'll help take your Kubernetes knowledge to the next level.By the end of the book, you'll have the confidence and skills to leverage all the features of Kubernetes to develop scalable applications.What you will learn* Explore cluster-level and node-level isolation and runtime isolation options* Use Kubernetes Deployments for self-healing, scaling, and updating apps* Manage Kubernetes clusters with kubectl* Write a Container Storage Interface (CSI) plugin to work across multiple orchestrators* Use Kubernetes features such as Jons and CronJobs in your apps* Identify vulnerabilities and learn measures to prevent and mitigate themWho this book is forIf you want to be more comfortable using Kubernetes to orchestrate your containerized applications, this is the ideal book for you. To easily grasp the concepts explained in this book, you must be familiar with Docker and

containers.

Learning Docker

Kubernetes radically changes the way applications are built and deployed in the cloud. Since its introduction in 2014, this container orchestrator has become one of the largest and most popular open source projects in the world. The updated edition of this practical book shows developers and ops personnel how Kubernetes and container technology can help you achieve new levels of velocity, agility, reliability, and efficiency. Kelsey Hightower, Brendan Burns, and Joe Beda—who've worked on Kubernetes at Google and beyond—explain how this system fits into the lifecycle of a distributed application. You'll learn how to use tools and APIs to automate scalable distributed systems, whether it's for online services, machine learning applications, or a cluster of Raspberry Pi computers. Create a simple cluster to learn how Kubernetes works Dive into the details of deploying an application using Kubernetes Learn specialized objects in Kubernetes, such as DaemonSets, jobs, ConfigMaps, and secrets Explore deployments that tie together the lifecycle of a complete application Get practical examples of how to develop and deploy real-world applications in Kubernetes

Beginning DevOps with Docker

Linux in Action is a task-based tutorial that will give you the skills and deep understanding you need to administer a Linux-based system. This hands-on book guides you through 12 real-world projects so you can practice as you learn. Each chapter ends with a review of best practices, new terms, and exercises.

Using Docker

Svelte and Sapper in Action teaches you to design and build fast, elegant web applications. You'll start immediately by creating an engaging Travel Packing app as you learn to create Svelte components and develop great UX. You'll master Svelte's unique state management model, use Sapper for simplified page routing, and take on modern best practices like code splitting, offline support, and server-rendered views. Summary Imagine web apps with fast browser load times that also offer amazing developer productivity and require less code to create. That's what Svelte and Sapper deliver! Svelte pushes a lot of the work a frontend framework would handle to the compile step, so your app components come out as tight, well-organized JavaScript modules. Sapper is a lightweight web framework that minimizes application size through server-rendering front pages and only loading the JavaScript you need. The end result is more efficient apps with great UX and simplified state management. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Many web frameworks load hundreds of "just-in-case" code lines that clutter and

slow your apps. Svelte, an innovative, developer-friendly tool, instead compiles applications to very small bundles for lightning-fast load times that do more with less code. Pairing Svelte with the Sapper framework adds features for flexible and simple page routing, server-side rendering, static site development, and more. About the book Svelte and Sapper in Action teaches you to design and build fast, elegant web applications. You'll start immediately by creating an engaging Travel Packing app as you learn to create Svelte components and develop great UX. You'll master Svelte's unique state management model, use Sapper for simplified page routing, and take on modern best practices like code splitting, offline support, and server-rendered views. What's inside - Creating Svelte components - Using stores for shared data - Configuring page routing - Debugging, testing, and deploying Svelte apps - Using Sapper for dynamic and static sites About the reader For web developers familiar with HTML, CSS, and JavaScript. About the author Mark Volkmann is a partner at Object Computing, where he has provided software consulting and training since 1996. Table of Contents PART 1 - GETTING STARTED 1 Meet the players 2 Your first Svelte app PART 2 - DEEPER INTO SVELTE 3 Creating components 4 Block structures 5 Component communication 6 Stores 7 DOM interactions 8 Lifecycle functions 9 Client-side routing 10 Animation 11 Debugging 12 Testing 13 Deploying 14 Advanced Svelte PART 3 - DEEPER INTO SAPPER 15 Your first Sapper app 16 Sapper applications 17 Sapper server routes 18 Exporting static sties with Sapper 19 Sapper offline support PART 4 - BEYOND SVELTE AND SAPPER 20 Preprocessors 21 Svelte Native

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION