Openshift At Red Hat Summit 2017

> Covers Red Hat Enterprise Linux 8 > Covers ALL official exam objectives for the RHCSA exam based on Red Hat Enterprise Linux 8 > Equally good for self-study and in-class training > 81 Step-by-Step exercises > 70 Do-It-Yourself Challenge Labs > 375 Check Your Understanding Questions & Answers > Concepts explained with diagrams > Commands and options summarized in tables > Exam tips included > 4 Unique Sample RHCSA Exams This book has 21 chapters that are organized logically. It covers the topics on local RHEL 8 installation; initial interaction with the system and basic commands; compression and archiving; file editing and manipulation; standard and special permissions; file searching and access controls; user monitoring and authentication files; users, groups, and password aging; bash shell features and startup files; processes and task scheduling; basic and advanced software administration techniques; system boot process and bootloader; kernel management and system initialization; logging and system tuning; basic and advanced storage management tools and solutions; local and remote file systems and swap regions; network device and connection configuration; time synchronization and hostname resolution; the secure shell service; and firewall and SELinux controls. Each chapter highlights the major topics and relevant exam objectives at the beginning, and ends with review questions & answers and Do-It-Yourself challenge labs. Throughout the book, figures, tables, screen shots, examples, and exam tips have been furnished to support explanation and exam preparation. This book includes four sample exams for RHCSA, which are expected to be done using the knowledge and skills attained from reading the material and practicing the exercises and challenge labs. The labs and the sample exams include references to relevant topics and/or exercises.
Get an in-depth tour of OpenShift, the container-based software deployment and management platform from Red Hat that provides a secure multi-tenant environment for the enterprise. This practical guide describes in detail how OpenShift, building on Kubernetes, enables you to automate the way you create, ship, and run applications in a containerized environment. Author Graham Dumpleton provides the knowledge you need to make the best use of the OpenShift container platform to deploy not only your cloud-native applications, but also more traditional stateful applications. Developers and administrators will learn how to run, access, and manage containers in OpenShift, including how to orchestrate them at scale. Build application container images from source and deploy them Implement and extend application image builders Use incremental and chained builds to accelerate build times Automate builds by using a webhook to link OpenShift to a Git repository Add configuration and secrets to the container as project resources Make an application visible outside the OpenShift cluster Manage persistent storage inside an OpenShift container Monitor application health and manage the application lifecycle This book is a perfect follow-up to OpenShift for Developers: A Guide for Impatient Beginners (O'Reilly).
Gain hands-on experience of installing OpenShift Origin 3.9 in a production configuration and managing applications using the platform you built Key Features Gain hands-on experience of working with Kubernetes and Docker Learn how to deploy and manage applications in OpenShift Get a practical approach to managing applications on a cloud-based platform Explore multi-site and HA architectures of OpenShift for production Book Description Docker containers transform application delivery technologies to make them faster and more reproducible, and to reduce the amount of time wasted on configuration. Managing Docker containers in the multi-node or multi-datacenter environment is a big challenge, which is why container management platforms are required. OpenShift is a new generation of container management platforms built on top of both Docker and Kubernetes. It brings additional functionality to the table, something that is lacking in Kubernetes. This new functionality significantly helps software development teams to bring software development processes to a whole new level. In this book, we'll start by explaining the container architecture, Docker, and CRI-O overviews. Then, we'll look at container orchestration and Kubernetes. We'll cover OpenShift installation, and its basic and advanced components. Moving on, we'll deep dive into concepts such as deploying application OpenShift. You'll learn how to set up an end-to-end delivery pipeline while working with applications in OpenShift as a developer or DevOps. Finally, you'll discover how to properly design OpenShift in production environments. This book gives you hands-on experience of designing, building, and operating OpenShift Origin 3.9, as well as building new applications or migrating existing applications to OpenShift. What you will learn Understand the core concepts behind containers and container orchestration tools Understand Docker, Kubernetes, and OpenShift, and their relation to CRI-O Install and work with Kubernetes and OpenShift Understand how to work with persistent storage in OpenShift Understand basic and advanced components of OpenShift, including security and networking Manage deployment strategies and application's migration in OpenShift Understand and design OpenShift high availability Who this book is for The book is for system administrators, DevOps engineers, solutions architects, or any stakeholder who wants to understand the concept and business value of OpenShift.
Intrigued by the possibilities of developing web applications in the cloud? With this concise book, you get a quick hands-on introduction to OpenShift, the open source Platform as a Service (PaaS) offering from Red Hat. You'll learn the steps necessary to build, deploy, and host a complete real-world application on OpenShift, without having to read long, detailed explanations of the technologies involved. Though the book uses Python, application examples in other languages are available on GitHub. If you can build web applications, use a command line, and program in Java, Python, Ruby, Node.js, PHP, or Perl, you're ready to get started. Dive in and create your first example application with OpenShift Modify the example with your own code and hot-deploy the changes Add components such as a database, task scheduling, and monitoring Use external libraries and dependencies in your application Delve into networking, persistent storage, and backup options Explore ways to adapt your team processes to use OpenShift Learn OpenShift terms, technologies, and commands Get a list of resources to learn more about OpenShift and PaaS Keen to build web applications for the cloud? Get a quick hands-on introduction to OpenShift, the open source Platform as a Service (PaaS) offering from Red Hat. With this practical guide, you'll learn the steps necessary to build, deploy, and host a complete real-world application on OpenShift without having to slog through long, detailed explanations of the technologies involved. OpenShift enables you to use Docker application containers and the Kubernetes cluster manager to automate the way you create, ship, and run applications. Through the course of the book, you'll learn how to use OpenShift and the Wildfly application server to build and then immediately deploy a Java application online. Learn about OpenShift's core technology, including Docker-based containers and Kubernetes Use a virtual machine with OpenShift installed and configured on your local environment Create and deploy your first application on the OpenShift platform Add language runtime dependencies and connect to a database Trigger an automatic rebuild and redeployment when you push changes to the repository Get a working environment up in minutes with application templates Use commands to check and debug your application Create and build Docker-based images for your application

Create modular scalable enterprise-grade applications with JBoss Enterprise Application Platform 7 About This Book Leverage the power of JBoss EAP 7 along with Java EE 7 to create professional enterprise grade applications. Get you applications cloud ready and make them highly scalable using this advanced guide. Become a pro Java Developer and move ahead of the crowd with this advanced practical guide. Who This Book Is For The ideal target audience for this book is Java System Administrators who already have some experience with JBoss EAP and who now want explore in depth creating Enterprise grade apps with the latest JBoss EAP version. What You Will Learn Configure services using the Command Line Interface Deliver fault tolerant server configurations Harden the application server with advanced techniques Expand the application server's horizon with tools such as like Docker/OpenShift Create enterprise ready configurations using clustering techniques. Deliver advanced security solutions and learn how to troubleshoot common network/performance issues In Detail The JBoss Enterprise Application Platform (EAP) has been one of the most popular tools for Java developers to create modular, cloud-ready, and modern applications. It has achieved a reputation for architectural excellence and technical savvy, making it a solid and efficient environment for delivering your applications. The book will first introduce application server configuration and the management instruments that can be used to control the application server. Next, the focus will shift to enterprise solutions such as clustering, load balancing, and data caching; this will be the core of the book. We will also discuss services provided by the application server, such as database connectivity and logging. We focus on real-world example configurations and how to avoid common mistakes. Finally, we will implement the knowledge gained so far in terms of Docker containers and cloud availability using RedHat's OpenShift. Style and approach If you are a Java developer who wants to level-up to modern day Java web development with the latest Java EE 7 and JBoss EAP 7, this book is the ideal solution for you. It addresses (in a clear and simple way) proof-of-concept scenarios such as clustering and cloud and container configurations, and explains how to solve common issues.

Microservices is an architectural style that structures an application as a collection of distributed services. Microservices are certainly appealing but there are many questions that should be asked prior to diving into this architectural style: How do I deal with an unreliable network in a distributed architecture? How do I test my services? How do I monitor them? How do I package and execute them?That's when Quarkus comes into play.In this fascicle, you will learn Quarkus but also its ecosystem. You will discover Quarkus internals and how you can use it to build REST and reactive microservices, bind and process JSON or access datastores in a transactional way. With Cloud Native and GraalVM in mind, Quarkus makes packaging and orchestrating your microservices with Docker and Kubernetes easy.This fascicle has a good mix of theory and practical examples. It is the companion book of Practising Quarkus 1.x where you learn how to develop an entire microservice architecture.

The New Kingmakers documents the rise of the developer class, and provides strategies for companies to adapt to the new technology landscape. From recruiting to retention, it provides a playbook to work more efficiently and effectively with the most important members of your organization.

Discover the "road map to changing your life by changing the lives of others" (Jillian Michaels, New York Times bestselling author) with the eye-opening and inspirational story of how one person—a film producer by trade and an optimist by nature—accidentally realized that no problem is unsolvable with a little bit of DIY. As an enthusiastic participant in the Maker Movement, Mick Ebeling has found countless ways to create new, simple, do-it-yourself technologies. But Ebeling has always dreamed big and soon realized that by ignoring that little voice of doubt in his head, his hobby could have the potential to actually help people surmount seemingly impossible odds. From crafting prosthetics for a young Sudanese boy who lost his hands in a bombing to a machine that allowed a paralyzed artist to draw again, Ebeling soon saw that nothing is actually impossible. Now, he shares his fascinating accomplishments including the creation of the Eyewriter—a device that tracks eye movements and translates them onto a screen, allowing them to be painted on a canvas or printed into a 3D sculpture. A true testament to the power of determination, Not Impossible is the launching pad for you to uncover your abilities to change the world, too. Bursting with optimism and new ideas, "this is the template for a new science of consciousness. Mick Ebeling sees impossible just as a word for something not yet done. Read his book. Think like him. Then do the impossible" (Deepak Chopra).

Selling your CTO on the merits of OpenShift and Kubernetes is only the beginning. To operate and scale OpenShift, you also need to know how to manage and expose resources to application teams and continuously deliver changes to the applications running in these environments. With this practical book, new and experienced developers and operators will learn specific techniques for operationalizing OpenShift and Kubernetes in the enterprise. Industry experts Michael Elder, Jake Kitchener, and Brad Topol show you how to run OpenShift and Kubernetes in production and deliver your applications to a highly available, secure, and scalable platform. You'll learn how to build a strong foundation in advanced cluster operational topics, such as tenancy management, scheduling and capacity management, cost management, continuous delivery, and more. Examine the fundamental concepts of Kubernetes architecture Get different Kubernetes and OpenShift environments up and running Dive into advanced resource management topics, including capacity planning Learn how to support high availability inside a single cluster Use production-level approaches for continuous delivery and code promotion across clusters Explore hybrid cloud use cases, including multicluster provisioning, upgrading, and policy support Devise and deliver disaster recovery strategies

This is the eBook version of the print title. Learn, prepare, and practice for Red Hat RHCSA 8 (EX200) exam success with this Cert Guide from Pearson IT Certification, a leader in IT Certification learning. Master Red Hat RHCSA 8 EX200 exam topics Assess your knowledge with chapter-ending quizzes Review key concepts with exam-preparation tasks Practice with four unique practice tests Learn from two full hours of video training from the author's Red Hat Certified System Administrator (RHCSA) Complete Video Course, 3rd Edition. Red Hat RHCSA 8 Cert Guide is a best-of-breed exam study guide. Leading Linux consultant, author, and instructor Sander van Vugt shares preparation hints and test-taking tips, helping you identify areas of weakness and improve both your conceptual knowledge and hands-on skills. Material is presented in a concise manner, focusing on increasing your understanding and retention of exam topics. The book presents you with an organized test-preparation routine through the use of proven series elements and techniques. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. Review questions help you assess your knowledge, and a final preparation chapter guides you through tools and resources to help you craft your final study plan. Well regarded for its level of detail, assessment features, and challenging review questions and exercises, this study guide helps you master the concepts and techniques that will enable you to succeed on the exam the first time, including Basic system management: Installation, tools, file management, text files, RHEL8 connections, user/group management, permissions, and network configuration Operating running systems: Managing software, processes, storage, and advanced storage; working with systemd; scheduling tasks; and configuring

logging Advanced system administration: Managing the kernel and boot procedures, essential troubleshooting, bash shell scripting Managing network services: Configuring SSH, firewalls, and time services; managing Apache HTTP services and SE Linux; and accessing network storage

Summary Camel in Action, Second Edition is the most complete Camel book on the market. Written by core developers of Camel and the authors of the highly acclaimed first edition, this book distills their experience and practical insights so that you can tackle integration tasks like a pro. Forewords by James Strachan and Dr. Mark Little Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Apache Camel is a Java framework that implements enterprise integration patterns (EIPs) and comes with over 200 adapters to third-party systems. A concise DSL lets you build integration logic into your app with just a few lines of Java or XML. By using Camel, you benefit from the testing and experience of a large and vibrant open source community. About the Book Camel in Action, Second Edition is the definitive guide to the Camel framework. It starts with core concepts like sending, receiving, routing, and transforming data. It then goes in depth on many topics such as how to develop, debug, test, deal with errors, secure, scale, cluster, deploy, and monitor your Camel applications. The book also discusses how to run Camel with microservices, reactive systems, containers, and in the cloud. What's Inside Coverage of all relevant EIPs Camel microservices with Spring Boot Camel on Docker and Kubernetes Error handling, testing, security, clustering, monitoring, and deployment Hundreds of examples in Java and XML About the Reader Readers should be familiar with Java. This book is accessible to beginners and invaluable to experts. About the Author Claus Ibsen is a senior principal engineer working for Red Hat specializing in cloud and integration. He has worked on Apache Camel for the last nine years where he heads the project. Claus lives in Denmark. Jonathan Anstey is an engineering manager at Red Hat and a core Camel contributor. He lives in Newfoundland, Canada. Table of Contents Part 1 - First steps Meeting Camel Routing with Camel Part 2 - Core Camel Transforming data with Camel Using beans with Camel Enterprise integration patterns Using components Part 3 - Developing and testing Microservices Developing Camel projects Testing RESTful web services Part 4 - Going further with Camel Error handling Transactions and idempotency Parallel processing Securing Camel Part 5 - Running and managing Camel Running and deploying Camel Management and monitoring Part 6 - Out in the wild Clustering Microservices with Docker and Kubernetes Camel tooling Bonus online chapters Available at https://www.manning.com/books/camel-in-?action-second-edition and in electronic versions of this book: Reactive Camel Camel and the IoT by Henryk Konsek

Learn how free software became open source and how you can sell open source software. This book provides a historical context of how open source has thoroughly transformed how we write software, how we cooperate, how we communicate, how we organize, and, ultimately, how we think about business values. You'll look at project and community examples including Linux, BSD, Apache, and Kubernetes, understand the open source development model, and how open source has influenced approaches more broadly, even proprietary software, such as open betas. You'll also examine the flipside, the "Second Machine Age," and the challenges of open source-based business models. Today, open source serves as shorthand for much broader trends and behaviors. It's not just about a free (in all senses of the word) alternative to commercial software. It increasingly is the new commercial software. How Open Source Ate Software reveals how open source has much in common, and is often closely allied, with many other trends in business and society. You'll see how it enables projects that go beyond any individual company. That makes open source not just a story about software, but a story about almost everything. What You'll Learn Understand open source opportunities and challenges Sell software if you're giving it away Apply open source principles more broadly to openorg, devops, etc. Review which organizational incentives you can implement Who This Book Is For Anyone who has an interest in what is happening in open source and the open source community, and anyone who is contemplating making a business that involves open source.

Ready to build cloud native applications? Get a hands-on introduction to daily life as a developer crafting code on OpenShift, the open source container application platform from Red Hat. Creating and packaging your apps for deployment on modern distributed systems can be daunting. Too often, adding infrastructure value can complicate development. With this practical guide, you'll learn how to build, deploy, and manage a multitiered application on OpenShift. Authors Joshua Wood and Brian Tannous, principal developer advocates at Red Hat, demonstrate how OpenShift speeds application development. With the Kubernetes container orchestrator at its core, OpenShift simplifies and automates the way you build, ship, and run code. You'll learn how to use OpenShift and the Quarkus Java framework to develop and deploy apps using proven enterprise technologies and practices that you can apply to code in any language. Learn the development cycles for building and deploying on OpenShift, and the tools that drive them Use OpenShift to build, deploy, and manage the ongoing lifecycle of an n-tier application Create a continuous integration and deployment pipeline to build and deploy application source code on OpenShift Automate scaling decisions with metrics and trigger lifecycle events with webhooks

The way developers design, build, and run software has changed significantly with the evolution of microservices and containers. These modern architectures use new primitives that require a different set of practices than most developers, tech leads, and architects are accustomed to. With this focused guide, Bilgin Ibryam and Roland Huß from Red Hat provide common reusable elements, patterns, principles, and practices for designing and implementing cloud-native applications on Kubernetes. Each pattern includes a description of the problem and a proposed solution with Kubernetes specifics. Many patterns are also backed by concrete code examples. This book is ideal for developers already familiar with basic Kubernetes concepts who want to learn common cloud native patterns. You'll learn about the following pattern categories: Foundational patterns cover the core principles and practices for building container-based cloud-native applications. Behavioral patterns explore finer-grained concepts for managing various types of container and platform interactions. Structural patterns help you organize containers within a pod, the atom of the Kubernetes platform. Configuration patterns provide insight into how application configurations can be handled in Kubernetes. Advanced patterns covers more advanced topics such as extending the platform with operators.

For many organizations, a big part of DevOps' appeal is software automation using infrastructure-as-code techniques. This book presents developers, architects, and infra-ops engineers with a more practical option. You'll learn how a container-centric approach from OpenShift, Red Hat's cloud-based PaaS, can help your team deliver quality software through a self-service view of IT infrastructure. Three OpenShift experts at Red Hat explain how to configure Docker application containers and the Kubernetes cluster manager with OpenShift's developer- and operational-centric tools. Discover how this infrastructure-agnostic container management platform can help companies navigate the murky area where infrastructure-as-code ends and application automation begins. Get an application-centric view of automation--and understand why it's important Learn patterns and practical examples for

managing continuous deployments such as rolling, A/B, blue-green, and canary Implement continuous integration pipelines with OpenShift's Jenkins capability Explore mechanisms for separating and managing configuration from static runtime software Learn how to use and customize OpenShift's source-to-image capability Delve into management and operational considerations when working with OpenShift-based application workloads Install a self-contained local version of the OpenShift environment on your computer

UNIX, UNIX LINUX & UNIX TCL/TK. Write software that makes the most effective use of the Linux system, including the kernel and core system libraries. The majority of both Unix and Linux code is still written at the system level, and this book helps you focus on everything above the kernel, where applications such as Apache, bash, cp, vim, Emacs, gcc, gdb, glibc, ls, mv, and X exist. Written primarily for engineers looking to program at the low level, this updated edition of Linux System Programming gives you an understanding of core internals that makes for better code, no matter where it appears in the stack. -- Provided by publisher.

Ben Folds is an internationally celebrated musician, singer-songwriter and former front man of the alternative rock band, Ben Folds Five, beloved for songs such as 'Brick', 'You Don't Know Me', 'Rockin' the Suburbs' and 'The Luckiest'. In A Dream About Lightning Bugs Folds looks back at his life so far in a charming, funny and wise chronicle of his artistic coming of age, infused with the wry observations of a natural storyteller. He opens up about finding his voice as a musician, becoming a rock anti-hero, and hauling a baby grand piano on and off stage for every performance. From growing up in working class North Carolina childhood amid the race and class tensions that shaped his early songwriting to painful life lessons he learned the hard way, he also ruminates on music in the digital age, the absurdity of life on the road, and the challenges of sustaining a multi-decade, multi-faceted career in the music business. A Dream About Lightning Bugs embodies what Folds has been singing about for years: Smile like you've got nothing to prove, because it hurts to grow up, and life flies by in seconds

Microservices is an architectural style that structures an application as a collection of distributed services. Microservices are certainly appealing but there are many questions that should be asked prior to diving into this architectural style: How do I deal with an unreliable network in a distributed architecture? How do I test my services? How do I monitor them? How do I package and execute them?That's when Quarkus comes into play.In this fascicle you will develop an entire microservice application using Quarkus as well as MicroProfile. You will expose REST endpoints using JAX-RS and OpenAPI, customise the JSON output thanks to JSON-B and deal with persistence and transaction with Hibernate ORM with Panache and JTA. Having distributed microservices, you will implement health checks and add some metrics so you can monitor your microservice architecture. Finally, thanks to GraalVM you will build native executables, and package and execute them with Docker.This fascicle is very practical. It is the companion book of the more theoretical Understanding Quarkus 1.x where you'll learn more about Quarkus, MicroProfile, REST and reactive microservices, as well as Cloud Native and GraalVM.

The OpenShift Security Guide was created to help those in cloud infrastructure and security engineering roles address the many security challenges facing them. Cloud security is complex, and Red Hat understands that users need more than just guidance in technical system configurations. The authors have identified approaches that aid in the triaging of security trade-offs and risk, policy enforcement, reporting, and the validation of system configuration. Cloud infrastructure and security engineering roles are central to establishing and preserving security postures. It is the book's intent to support these roles by providing the proper mixture of conceptual, organizational, and technical guidance, thereby increasing the security vigilance and effectiveness of those with such responsibilities. For the cloud security auditor, whether in an internal role or as a third-party assessment organization, this book intends to provide the technical guidance needed to verify, validate, and enforce security controls. For technology professionals charged with security policy management, this book should offer insight into related organizational policy, functional testing, and data stewardship tasks while augmenting knowledge in these areas. While the book speaks to OpenShift from a holistic infrastructure perspective, it does cover areas that application developers and reliability engineers may find valuable. With the ever evolving trends in container-based microservices, baking security into the continuous integration and delivery pipelines is a fundamental requirement. Build and runtime security features are discussed, and advantages of a secure container baseline image are covered as well. Readers are not expected to have expert-level knowledge of core OpenShift concepts. However, basic knowledge of Linux, Containers, and Kubernetes from a user or administrative perspective will certainly be useful, especially when reading through some of the technical implementation described in the chapters.

This IBM® Redpaper publication describes how to deploy Red Hat OpenShift V4.3 on IBM Power Systems servers. This book presents reference architectures for deployment, initial sizing guidelines for server, storage, and IBM Cloud® Paks. Moreover, this publication delivers information about initial supported Power System configurations for Red Hat OpenShift V4.3 deployment (bare metal, IBM PowerVM® LE LPARs, and others). This book serves as a guide for how to deploy Red Hat OpenShift V4.3 and provide start guidelines and recommended practices for implementing it on Power Systems and completing it with the supported IBM Cloud Paks. The publication addresses topics for developers, IT architects, IT specialists, sellers, and anyone who wants to implement a Red Hat OpenShift V4.3 and IBM Cloud Paks on IBM Power Systems. This book also provides technical content to transfer how-to skills to the support teams, and solution guidance to the sales team. This book compliments the documentation that is available at IBM Knowledge Center, and also aligns with the educational offerings that are provided by the IBM Systems Technical Education (SSE).

Over a half-million sold! The sequel, The Unicorn Project, is coming Nov 26 "Every person involved in a failed IT project should be forced to read this book."—TIM O'REILLY, Founder & CEO of O'Reilly Media "The Phoenix Project is a must read for business and IT executives who are struggling with the growing complexity of IT."—JIM WHITEHURST, President and CEO, Red Hat, Inc. Five years after this sleeper hit took on the world of IT and flipped it on it's head, the 5th Anniversary Edition of The Phoenix Project continues to guide IT in the DevOps revolution. In this newly updated and expanded edition of the bestselling The Phoenix Project, co-author Gene Kim includes a new afterword and a deeper delve into the Three Ways as described in The DevOps Handbook. Bill, an IT manager at Parts Unlimited, has been tasked with taking on a project critical to the future of the business, code named Phoenix Project. But the project is massively over budget and behind schedule. The CEO demands Bill must fix the mess in ninety days or else Bill's entire department will be outsourced. With the help of a prospective board member and his mysterious philosophy of The Three Ways, Bill starts to see that IT work has more in common with a manufacturing plant work than he ever imagined. With the clock ticking, Bill must organize work flow streamline interdepartmental communications, and effectively serve the other business functions at Parts Unlimited. In a fast-paced and entertaining style, three luminaries of the

DevOps movement deliver a story that anyone who works in IT will recognize. Readers will not only learn how to improve their own IT organizations, they'll never view IT the same way again. "This book is a gripping read that captures brilliantly the dilemmas that face companies which depend on IT, and offers real-world solutions."—JEZ HUMBLE, Co-author of Continuous Delivery, Lean Enterprise, Accelerate, and The DevOps Handbook ———— "I'm delighted at how The Phoenix Project has reshaped so many conversations in technology. My goal in writing The Unicorn Project was to explore and reveal the necessary but invisible structures required to make developers (and all engineers) productive, and reveal the devastating effects of technical debt and complexity. I hope this book can create common ground for technology and business leaders to leave the past behind, and co-create a better future together."—Gene Kim, November 2019

An inspiring entrepreneur and philanthropist describes his do-it-yourself-style inventions, which have included a prosthetic hand made on a 3D printer for a boy in the Sudan and a tracking device that turns eye movements into an onscreen cursor. 50,000 first printing

While containers, microservices, and distributed systems dominate discussions in the tech world, the majority of applications in use today still run monolithic architectures that follow traditional development processes. This practical book helps developers examine these long established models and demonstrates how to bring monolithic applications successfully into the future. Relying on their years of modernization experience, authors Markus Eisele and Natale Vinto walk you through the steps necessary to update your application. You'll discover how to dismantle your monolithic application and move to an up-to-date software stack that works across clouds and on-premises installations. Learn the basics of cloud native applications and assess what you need to migrate and modernize Understand how enterprise Java specifications can help you transition projects and teams Build a cloud native development platform that supports effective development without falling into buzzword traps Find a starting point for your migration projects by identifying and applying the correct steps for first module extractions Learn the necessary pieces to complement a traditional enterprise Java application with components on top of containers and Kubernetes.

Learn, understand, and apply people-, process-, and technology-related practices to make OpenShift and DevOps adoption a success within your organization.

Facebook's algorithms shaping the news. Self-driving cars roaming the streets. Revolution on Twitter and romance on Tinder. We live in a world constructed of code--and coders are the ones who built it for us. Programmers shape our everyday behavior: When they make something easy to do, we do more of it. When they make it hard or impossible, we do less of it. From acclaimed tech writer Clive Thompson comes a brilliant anthropological reckoning with the most powerful tribe in the world today, computer programmers, in a book that interrogates who they are, how they think, what qualifies as greatness in their world, and what should give us pause. In pop culture and media, the people who create the code that rules our world are regularly portrayed in hackneyed, simplified terms, as ciphers in hoodies. Thompson goes far deeper, taking us close to some of the great programmers of our time, including the creators of Facebook's News Feed, Instagram, Google's cutting-edge AI, and more. Speaking to everyone from revered "10X" elites to neophytes, back-end engineers and front-end designers, Thompson explores the distinctive psychology of this vocation--which combines a love of logic, an obsession with efficiency, the joy of puzzle-solving, and a superhuman tolerance for mind-bending frustration. Along the way, Coders ponders the morality and politics of code, including its implications for civic life and the economy and the major controversies of our era. In accessible, erudite prose, Thompson unpacks the surprising history of the field, beginning with the first coders -- brilliant and pioneering women, who, despite crafting some of the earliest personal computers and programming languages, were later written out of history. At the same time, the book deftly illustrates how programming has become a marvelous new art form--a source of delight and creativity, not merely danger. To get as close to his subject as possible, Thompson picks up the thread of his own long-abandoned coding skills as he reckons, in his signature, highly personal style, with what superb programming looks like. To understand the world today, we need to understand code and its consequences. With Coders, Thompson gives a definitive look into the heart of the machine.

Learn how to work with the Automate feature of CloudForms, the powerful Red Hat cloud management platform that lets you administer your virtual infrastructure, including hybrid public and private clouds. This practical hands-on introduction shows you how to increase your operational efficiency by automating day-to-day tasks that now require manual input. Throughout the book, author Peter McGowan provides a combination of theoretical information and practical coding examples to help you learn the Automate object model. With this CloudForms feature, you can create auto-scalable cloud applications, eliminate manual decisions and operations when provisioning virtual machines and cloud instances, and manage your complete virtual machine lifecycle. In six parts, this book helps you: Learn the objects and concepts for developing automation scripts with CloudForms Automate Customize the steps and workflows involved in provisioning virtual machines Create and use service catalogs, items, dialogs, objects, bundles, and hierarchies Use CloudForm's updated workflow to retire and delete virtual machines and services Orchestrate and coordinate with external services as part of a workflow Explore distributed automation processing as well as argument passing and handling

Here is a programmer's guide to using and programming POSIX threads, commonly known as Pthreads. A "coder's book", this title tells how to use Pthreads in the real world, making efficient and portable applications. Pthreads are an important set of current tools programmers need to have in today's network-intensive climate.

This is a story of reinvention. Jim Whitehurst, celebrated president and CEO of one of the world's most revolutionary software companies, tells first-hand his journey from traditional manager (Delta Air Lines, Boston Consulting Group) and "chief" problem solver to CEO of one of the most open organizational environments he'd ever encountered. This challenging transition, and what Whitehurst learned in the interim, has paved the way for a new way of managing—one this modern leader sees as the only way companies will successfully function in the future. Whitehurst says beyond embracing the technology that has so far disrupted entire industries, companies must now adapt their management and organizational design to better fit the Information Age. His mantra? "Adapt or die." Indeed, the successful company

Whitehurst leads—the open source giant Red Hat—has become the organizational poster child for how to reboot, redesign, and reinvent an organization for a decentralized, digital age. Based on open source principles of transparency, participation, and collaboration, "open management" challenges conventional business ideas about what companies are, how they run, and how they make money. This book provides the blueprint for putting it into practice in your own firm. He covers challenges that have been missing from the conversation to date, among them: how to scale engagement; how to have healthy debates that net progress; and how to attract and keep the "Social Generation" of workers. Through a mix of vibrant stories, candid lessons, and tested processes, Whitehurst shows how Red Hat has blown the traditional operating model to pieces by emerging out of a pure bottom up culture and learning how to execute it at scale. And he explains what other companies are, and need to be doing to bring this open style into all facets of the organization. By showing how to apply open source methods to everything from structure, management, and strategy to a firm's customer and partner relationships, leaders and teams will now have the tools needed to reach a new level of work. And with that new level of work comes unparalleled success. The Open Organization is your new resource for doing business differently. Get ready to make traditional management thinking obsolete.

Enterprise developers face several challenges when it comes to building serverless applications, such as integrating applications and building container images from source. With more than 60 practical recipes, this cookbook helps you solve these issues with Knative—the first serverless platform natively designed for Kubernetes. Each recipe contains detailed examples and exercises, along with a discussion of how and why it works. If you have a good understanding of serverless computing and Kubernetes core resources such as deployment, services, routes, and replicas, the recipes in this cookbook show you how to apply Knative in real enterprise application development. Authors Kamesh Sampath and Burr Sutter include chapters on autoscaling, build and eventing, observability, Knative on OpenShift, and more. With this cookbook, you'll learn how to: Efficiently build, deploy, and manage modern serverless workloads Apply Knative in real enterprise scenarios, including advanced eventing Monitor your Knative serverless applications effectively Integrate Knative with CI/CD principles, such as using pipelines for faster, more successful production deployments Deploy a rich ecosystem of enterprise integration patterns and connectors in Apache Camel K as Kubernetes and Knative components Operators are a way of packaging, deploying, and managing Kubernetes applications. A Kubernetes application doesn't just run on Kubernetes; it's composed and managed in Kubernetes terms. Operators add application-specific operational knowledge to a Kubernetes cluster, making it easier to automate complex, stateful applications and to augment the platform. Operators can coordinate application upgrades seamlessly, react to failures automatically, and streamline repetitive maintenance like backups. Think of Operators as site reliability engineers in software. They work by extending the Kubernetes control plane and API, helping systems integrators, cluster administrators, and application developers reliably deploy and manage key services and components. Using real-world examples, authors Jason Dobies and Joshua Wood demonstrate how to use Operators today and how to create Operators for your applications with the Operator Framework and SDK. Learn how to establish a Kubernetes cluster and deploy an Operator Examine a range of Operators from usage to implementation Explore the three pillars of the Operator Framework: the Operator SDK, the Operator Lifecycle Manager, and Operator Metering Build Operators from the ground up using the Operator SDK Build, package, and run an Operator in development, testing, and production phases Learn how to distribute your Operator for installation on Kubernetes clusters

Istio in Action is a comprehensive guide to handling authentication, routing, retrying, load balancing, collecting data, security, and other common network-related tasks using the Istio service mesh platform. The "service mesh" pattern, implemented by platforms like Istio, helps you push operational issues into the infrastructure so the application code is easier to understand, maintain, and adapt. Istio in Action teaches you how to implement a full-featured Istio-based service mesh to manage a microservices application. Istio in Action is a comprehensive guide to handling authentication, routing, retrying, load balancing, collecting data, security, and other common network-related tasks using the Istio service mesh platform. With helpful diagrams and hands-on examples, you'll learn how to use this open-source service mesh to control routing, secure container applications, and monitor network traffic. You'll also bring Istio to legacy systems without changes to your applications and discover how to use Istio in a multi-cloud world with the data layer deployed on a cluster like Kubernetes. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

Optimized for Kubernetes, Quarkus is designed to help you create Java applications that are cloud first, container native, and serverless capable. With this cookbook, authors Alex Soto Bueno and Jason Porter from Red Hat provide detailed solutions for installing, interacting with, and using Quarkus in the development and production of microservices. The recipes in this book show midlevel to senior developers familiar with Java enterprise application development how to get started with Quarkus quickly. You'll become familiar with how Quarkus works within the wider Java ecosystem and discover ways to adapt this framework to your particular needs. You'll learn how to: Shorten the development cycle by enabling live reloading in dev mode Connect to and communicate with Kafka Develop with the reactive programming model Easily add fault tolerance to your services Build your application as a Kubernetes-ready container Ease development with OpenAPI and test a native Quarkus application

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, Chief Open Source Officer at Isovalent, 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
Devops with OpenshiftCloud Deployments Made Easy"O'Reilly Media, Inc."
This book is written in a Cookbook style with short recipes showing developers how to effectively implement EIP without breaking everything in the process. It is concise and to the point, and it helps developers get their data flowing between different components without the need to read through page upon page of theory, while also enabling the reader to learn how to create exciting new projects. Camel Enterprise Integration Cookbook is intended for developers who have some familiarity with Apache Camel and who want a quick lookup reference to practical, proven tips on how to perform common tasks. Every recipe also includes a summary and reference pointers for more details that make it easy for you to get a deeper understanding of the Apache Camel capabilities that you will use day to day.
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
Get up to speed on the game-changing developments in SQL Server 2019. No longer just a database engine, SQL Server 2019 is cutting edge with support for machine learning (ML), big data analytics, Linux, containers, Kubernetes, Java, and data virtualization to Azure. This is not a book on traditional database administration for SQL Server. It focuses on all that is new for one of the most successful modernized data platforms in the industry. It is a book for data professionals who already know the fundamentals of SQL Server and want to up their game by building their skills in some of the hottest new areas in technology. SQL Server 2019 Revealed begins with a look at the project's team goal to integrate the world of big data with SQL Server into a major product release. The book then dives into the details of key new capabilities in SQL Server 2019 using a "learn by example" approach for Intelligent Performance, security, mission-critical availability, and features for the modern developer. Also covered are enhancements to SQL Server 2019 for Linux and gain a comprehensive look at SQL Server using containers and Kubernetes clusters. The book concludes by showing you how to virtualize your data access with Polybase to Oracle, MongoDB, Hadoop, and Azure, allowing you to reduce the need for expensive extract, transform, and load (ETL) applications. You will then learn how to take your knowledge of containers, Kubernetes, and Polybase to build a comprehensive solution called Big Data Clusters, which is a marquee feature of 2019. You will also learn how to gain access to Spark, SQL Server, and HDFS to build intelligence over your own data lake and deploy end-to-end machine learning applications. What You Will Learn Implement Big Data Clusters with SQL Server, Spark, and HDFS Create a Data Hub with connections to Oracle, Azure, Hadoop, and other sources Combine SQL and Spark to build a machine learning platform for AI applications Boost your performance with no application changes using Intelligent Performance Increase security of your SQL Server through Secure Enclaves and Data Classification Maximize database uptime through online indexing and Accelerated Database Recovery Build new modern applications with Graph, ML Services, and T-SQL Extensibility with Java Improve your ability to deploy SQL Server on Linux Gain in-depth knowledge to run SQL Server with containers and Kubernetes Know all the new database engine features for performance, usability, and diagnostics Use the latest tools and methods to migrate your database to SQL Server 2019 Apply your knowledge of SQL Server 2019 to Azure Who This Book Is For IT professionals and developers who understand the fundamentals of SQL Server and wish to focus on learning about the new, modern capabilities of SQL Server 2019. The book is for those who want to learn about SQL Server 2019 and the new Big Data Clusters and AI feature set, support for machine learning and Java, how to run SQL Server with containers and Kubernetes, and increased capabilities around Intelligent Performance, advanced security, and high availability.
This small book shows you how to get up and running with Red Hats Satellite 6 software.
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