Docker Hands On Deploy Administer Docker Platform

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.

The software architecture landscape has evolved dramatically over the past decade. Microservices have displaced monoliths. Data and applications are increasingly becoming distributed and decentralised. But composing disparate systems is a hard problem. More recently, software practitioners have been rapidly converging on event-driven architecture as a sustainable way of dealing with complexity - integrating systems without increasing their coupling.In Effective Kafka, Emil Koutanov explores the fundamentals of Event-Driven Architecture - using Apache Kafka - the world's most popular and supported open-source event streaming platform.You'll learn: - The fundamentals of event-driven architecture and event streaming platforms- The background and rationale behind Apache Kafka, its numerous potential uses and applications- The architecture and core concepts - the underlying software components, partitioning and parallelism, load-balancing, record ordering and consistency modes- Installation of Kafka and related tooling - using standalone deployments, clusters, and containerised deployments with Docker- Using CLI tools to interact with and administer Kafka classes, as well as publishing data and browsing topics- Using third-party web-based tools for monitoring a cluster and gaining insights into the event streams- Building stream processing applications in Java 11 using off-the-shelf client libraries- Patterns and best-practice for organising the application architecture, with emphasis on maintainability and testability of the resulting code- The numerous gotchas that lurk in Kafka's client and broker configuration, and how to counter them- Theoretical background on distributed and concurrent computing, exploring factors affecting their liveness and safety- Best-practices for running multi-tenanted clusters across diverse engineering teams, how teams collaborate to build complex systems at scale and equitably share the cluster with the aid of quotas- Operational aspects of running Kafka clusters at scale, performance tuning and methods for optimising network and storage utilisation- All aspects of Kafka security -including network segregation, encryption, certificates, authentication and authorization.The coverage is progressively delivered and carefully aimed at giving you a journey-like experience into becoming proficient with Apache Kafka and Event-Driven Architecture. The goal is to get you designing and building applications. And by the conclusion of this book, you will be a confident practitioner and a Kafka evangelist within your organisation - wielding the knowledge necessary to teach others.

An expert guide to helping you use DevOps techniques with the latest GitLab version to optimize and manage your software workflow Key Features Delve into GitLab's architecture, and install and configure it to fit your environment Learn about the underlying principles of Agile software development and DevOps Explore Gitlab's features to manage enterprise cloud-native applications and services Book Description GitLab is an open source repository management and version control toolkit with functions for enterprises and personal software projects. It offers configurability options, extensions, and APIs that make it an ideal tool for enterprises to manage the software development life cycle. This book begins by explaining GitLab options and the components of the GitLab architecture. You will learn how to install and set up GitLab on-premises and in the cloud, along with understanding how to migrate code bases from different systems, such as GitHub, Concurrent Versions System, Team Foundation Version Control, and Subversion. Later chapters will help you implement DevOps culture by introducing the workflow management tools in GitLab and continuous integration/continuous deployment (CI/CD). In addition to this, the book will guide you through installing GitLab on a range of cloud platforms, monitoring with Prometheus, and deploying an environment with GitLab. You'll also focus on the GitLab CI component to assist you with creating development pipelines and jobs, along with helping you set up GitLab runners for your own project. Finally, you will be able to choose a high availability setup that fits your needs and helps you monitor and act on results obtained after testing. By the end of this book, you will have gained the expertise you need to use GitLab features effectively, and be able to integrate all phases in the development process. What you will learn Install GitLab on premises and in the cloud using a variety of configurations Conduct data migration from the SVN, TFS, CVS, and GitHub platforms to GitLab Use GitLab runners to develop different types of configurations in software development Plan and perform CI/CD by using GitLab features Monitor and secure your software architecture using Prometheus and Grafana Implement DevOps culture by introducing workflow management tools in GitLab Who this book is for If you are a software developer, DevOps professional, or any developer who wants to master GitLab for productive repository management in your day-to-day tasks, this book is for you. Basic understanding of the software development workflow is assumed.

Mastering Ubuntu Server, Third Edition not only strengthens your server fundamentals but also equips you with the advanced concepts of Ubuntu 20.04 LTS. It polishes and expands your skill set to prepare you for better business opportunities.

Learn the key differences between containers and virtual machines. Adopting a project based approach, this book introduces you to a simple Python application to be developed and containerized with Docker. After an introduction to Containers and Docker you'll be guided through Docker installation and configuration. You'll also learn basic functions and commands used in Docker by running a simple container using Docker commands. The book then moves on to developing a Python based Messaging Bot using required libraries and virtual environment where you'll add Docker Volumes to your project, ensuring your container data is safe. You'll create a database container and link your project to it and finally, bring up the Bot-associated database all at once with Docker Compose. What You'll Learn Build, run, and distribute Docker containers Develop a Python App and containerize it Use Dockerfile to run the Python App Define and run multi-container applications with Docker Compose Work with persisting data generated by and used by Docker containers Who This Book Is For Intermediate developers/DevOps practitioners who are looking to improve their build and release workflow by containerizing applications

Microservices can have a positive impact on your enterprise—just ask Amazon and Netflix—but you can fall into many traps if you don't approach them in the right way. This practical guide covers the entire microservices landscape, including the principles, technologies, and methodologies of this unique, modular style of system building. You'll learn about the experiences of organizations around the globe that have successfully adopted microservices. In three parts, this book explains how these services work and what it means to build an application the Microservices Way. You'll explore a design-based approach to microservice architecture with guidance for implementing various elements. And you'll get a set of recipes and practices for meeting practical, organizational, and cultural challenges to microservice adoption. Learn how microservices can help you drive business objectives Examine the principles, practices, and culture that define microservice architectures Explore a model for creating complex systems and a design process for building a microservice architecture Learn the fundamental design concepts for individual microservices Delve into the operational elements of a microservices architecture, including containers and service discovery Discover how to handle the challenges of introducing microservice architecture in your organization

Microservices is an architectural style in which large, complex software applications are composed of one or more smaller services. Each of these microservices focuses on completing one task that represents a small business capability. These microservices can be developed in any programming language. They communicate with each other using language-neutral protocols, such as Representational State Transfer (REST), or messaging applications, such as IBM® MQ Light. This IBM Redbooks® publication gives a broad understanding of this increasingly popular architectural style, and provides some real-life examples of how you can develop applications using the microservices approach with IBM BluemixTM. The source code for all of these sample scenarios can be found on GitHub (https://github.com/). The book also presents some case studies from IBM products. We explain the architectural decisions made, our experiences, and lessons learned when redesigning these products using the microservices approach. Information technology (IT) professionals interested in learning about microservices and how to develop or redesign an application in Bluemix using microservices can benefit from this book.

Start from scratch and develop the essential skills needed to create, deploy, and manage cloud-native applications using Docker Key Features Get a solid understanding of Docker and containers Overcome common problems while containerizing an application Master Docker commands needed for creating, deploying, and running applications Book Description Most applications, even the funky cloud-native microservices ones, need high-performance, production-grade infrastructure to run on. Having impeccable knowledge of Docker will help you to thrive in the modern cloud-first world. With this book, you'll gain the skills you need to work with Docker and its containers. The book begins with an introduction to containers and explains its functionality and application in the real world. You'll then get an overview of VMware, Kubernetes, and Docker and learn to install Docker on Windows, Mac, and Linux. Once you've understood the Ops and Dev perspective of Docker, you'll be able to see the big picture and understand what Docker exactly does. The book then turns its attention to the more technical aspects, guiding your through practical exercises covering Docker engine, Docker images, and Docker containers. You'll learn techniques for containerizing an app, deploying apps with Docker Compose, and managing cloud-native applications with Swarm. You'll also build Docker networks and Docker overlay networks and handle applications that write persistent data. Finally, you'll deploy apps with Docker stacks and secure your Docker environment. By the end of this book, you'll be well-versed in Docker and containers and have developed the skills to create, deploy, and run applications on the cloud. What you will learn Become familiar with the applications of Docker and containers Discover how to pull images into Docker host's local registry Find out how to containerize an app Build and test a Docker overlay network in the swarm mode Use Docker compose to deploy and manage multi-container applications Securely share sensitive data with containers and Swarm services Who this book is for Whether you are a beginner or an experienced developer looking to utilize Docker to develop and operate cloud-native microservices apps, this book is for you. Anyone who wants to learn Docker orchestration, networking, imaging, and security will also find it useful. No prior knowledge of Docker is necessary.

Use this beginner's guide to understand and work with Kubernetes on the Google Cloud Platform and go from single monolithic Pods (the smallest unit deployed and managed by Kubernetes) all the way up to distributed, fault-tolerant stateful backing stores. You need only a familiarity with Linux, Bash, and Python to successfully use this book. Proficiency in Docker or cloud technology is not required. You will follow a learn-by-doing approach, running small experiments and observing the effects. Google open sourced Kubernetes in 2015 and now it is the industry standard in container orchestration. It has been adopted by all leading vendors of cloud, on-prem, and hybrid infrastructure services: Microsoft (Azure AKS), Amazon (AWS EKS), IBM (IBM Cloud Kubernetes Services), Alibaba Cloud (ACK), RedHat (OpenShift), and Pivotal (PKS). Even though Kubernetes is offered by all of the market-leading cloud providers, the Google Cloud Platform (GCP) offers an integrated shell (Google Cloud Shell) and a $300 credit to get started, which makes it the ideal platform to not only learn Kubernetes but also to implement final production workloads. What You Will Learn Set up a Kubernetes cluster in GCP Deploy simple Docker images using monolithic Pods Arrange highly available and highly scalable applications using Deployments Achieve zero-downtime deployments using the Service controller Externalize configuration using ConfigMaps and Secrets Set up batch processes and recurrent tasks using Jobs and CronJobs Install horizontal (sidecar pattern) services using DaemonSets Implement distributed, stateful backing stores using StatefulSets Who This Book Is For Beginners with basic Linux admin and scripting skills (Bash and Python). Proficiency with Docker is not required as all examples in the book use off-the-shelf public images from Docker Hub.

Kubernetes for Full-Stack Developers
Cloud Native DevOps with Kubernetes
Learn Docker - Fundamentals of Docker 19.x
A Hands-On Guide to the Fundamentals of AWS Cloud
Getting Started with Containers in Google Cloud Platform
Build, Release and Distribute your Python App with Docker
The complete guide to accelerate collaboration with Jenkins, Kubernetes, Terraform and Azure DevOps
Microservices from Theory to Practice: Creating Applications in IBM Bluemix Using the Microservices Approach
Tracking Dynamic Host and Application Metrics at Scale
Containerization Is the New Virtualization
Kubernetes and Docker - an Enterprise Guide
EX200
Building, Deploying, and Scaling Modern Applications in the Cloud
Jenkins: The Definitive Guide
Patterns and Paradigms for Scalable, Reliable Services

In the race to compete in today's fast-moving markets, large enterprises are busy adopting new technologies for creating new products, processes, and business models. But one obstacle on the road to digital transformation is placing too much emphasis on technology, and not enough on the types of processes technology enables. What if different lines of business could build their own services and applications—and decision-making was distributed rather than centralized? This report explores the concept of a digital business platform as a way of empowering individual business sectors to act on data in real time. Much innovation in a digital enterprise will increasingly happen at the edge, whether it involves business users (from marketers to data scientists) or IoT devices. To facilitate the process, your core IT team can provide these sectors with the digital tools they need to innovate quickly. This report explores: Key cultural and organizational changes for developing business capabilities through cross-functional product teams A platform for integrating applications, data sources, business partners, clients, mobile apps, social networks, and IoT devices Creating internal API programs for building innovative edge services in low-code or no-code environments Tools including Integration Platform as a Service, Application Platform as a Service, and Integration Software as a Service The challenge of integrating microservices and serverless architectures Event-driven architectures for processing and reacting to events in real time You'll also learn about a complete pervasive integration solution as a core component of a digital business platform to serve every audience in your organization.

The common patterns and practices of the microservice architecture and their application using the Clojure programming language. Key Features Relevance of the microservice architecture and benefits of Clojure's functional and simple features to implement it. Learn best practices and common principles to avoid common pitfalls while developing microservices. Learn how to use Pedestal to build your next microservices, secure them using JWT, and monitor them using the ELK stack Book Description The microservice architecture is sweeping the world as the de facto pattern with which to design and build scalable, easy-tomaintain web applications. This book will teach you common patterns and practices, and will show you how to apply these using the Clojure programming language. This book will teach you the fundamental concepts of architectural design and RESTful communication, and show you patterns that provide manageable code that is supportable in development and at scale in production. We will provide you with examples of how to put these concepts and patterns into practice with Clojure. This book will explain and illustrate, with practical examples, how teams of all sizes can start solving problems with microservices. You will learn the importance of writing code that is asynchronous and non-blocking and how Pedestal helps us do this. Later, the book explains how to build Reactive microservices in Clojure that adhere to the principles underlying the Reactive Manifesto. We finish off by showing you various ways to monitor, test, and secure your microservices. By the end, you will be fully capable of setting up, modifying, and deploying a microservice with Clojure and Pedestal. What you will learn Explore the pros and cons of monolithic and microservice architectures Use Clojure to effectively build a reallife application using Microservices Gain practical knowledge of the Clojure Pedestal framework and how to use it to build Microservices Explore various persistence patterns and learn how to use Apache Kafka to build event-driven microservice architectures Secure your Microservices using JWT Monitor Microservices at scale using the ELK stack Deploy Microservices at scale using container orchestration platforms such as Kubernetes Who this book is for You should have a working knowledge of programming in Clojure. However, no knowledge of RESTful architecture, microservices, or web services is expected. If you are looking to apply techniques to your own projects, taking your first steps into microservice architecture, this book is for you.

DevOps with OpenShiftCloud Deployments Made Easy"O'Reilly Media, Inc."

Data in the genomics field is booming. In just a few years, organizations such as the National Institutes of Health (NIH) will host 50+ petabytes—or over 50 million gigabytes—of genomic data, and they're turning to cloud infrastructure to make that data available to the research community. How do you adapt analysis tools and protocols to access and analyze that volume of data in the cloud? With this practical book, researchers will learn how to work with genomics algorithms using open source tools including the Genome Analysis Toolkit (GATK), Docker, WDL, and Terra. Geraldine Van der Auwera, longtime custodian of the GATK user community, and Brian O'Connor of the UC Santa Cruz Genomics Institute, guide you through the process. You'll learn by working with real data and genomics algorithms from the field. This book covers: Essential genomics and computing technology background Basic cloud computing operations Getting started with GATK, plus three major GATK Best Practices pipelines Automating analysis with scripted workflows using WDL and Cromwell Scaling up workflow execution in the cloud, including parallelization and cost optimization Interactive analysis in the cloud using Jupyter notebooks Secure collaboration and computational reproducibility using Terra

Deploy, manage, and secure containers and containerized applications on Google Cloud Platform (GCP). This book covers each container service in GCP from the ground up and teaches you how to deploy and manage your containers on each service. You will start by setting up and configuring GCP tools and the tenant environment. You then will store and manage Docker container images with GCP Container Registry (ACR). Next, you will deploy containerized applications with GCP Cloud Run and create an automated CI/CD deployment pipeline using Cloud Build. The book covers GCP's flagship service, Google Kubernetes Service (GKE), and deployment of a Kubernetes cluster using clear steps and considering GCP best practices using the GCP management console and gcloud command-line tool. Also covered is monitoring containers and containerized applications on GCP with Cloud Monitoring, and backup and restore containers and containerized applications on GCP. By the end of the book, you will know how to get started with GCP container services and understand the fundamentals of each service and the supporting services needed to run containers in a production environment. This book also assists you in transferring your skills from AWS and Azure to GCP using the knowledge you have acquired on each platform and leveraging it to gain more skills. What You Will Learn Get started with Google Cloud Platform (GCP) Store Docker images on GCP Container Registry Deploy Google Kubernetes Engine (GKE) cluster Secure containerized applications on GCP Use Cloud Build to deploy containers Use GCP Batch for batch job processing on Kubernetes Who This Book Is For Google Cloud administrators, developers, and architects who want to get started and learn more about containers and containerized applications on Google Cloud Platform (GPC)

Deploy and execute Microsoft Azure container and containerized applications on Azure. This second book in author Shimon Ifrah's series on containers will help you manage and scale containers along with their applications, tools and services. You'll start by setting up the Azure environment and quickly work through techniques and methods of managing container images with Azure Container Registry (ACR). As you move forward, deploying containerized applications with Azure container instances and Azure Kubernetes Service is discussed in detail, and in the process, you'll see how to install Docker container host on Azure Virtual Machine. This is followed by a discussion on security in Azure containers where you'll learn how to monitor containers and containerized applications backed by illustrative examples. Next, you will review how to scale containers along with methods for backing up and restoring containers and containerized applications on Azure. Towards the end, the book demonstrates troubleshooting applications and Docker container host issues in Azure. Getting Started with Containers in Azure will equip you to deploy, manage and secure containerized applications using Azure tools and services for containers. What You'll Learn Explore containers on Microsoft Azure. Store Docker images on Azure Container Registry Automate deployment of container services using Azure CLI and Azure Cloud Shell Use Azure Container Instances (ACI) for smaller deployment Who This Book Is For Azure administrators, developers, and architects who want to get started and learn more about containers and containerized applications on Microsoft Azure.

Successfully create and manage your Hyper-V environment without any of the marketing fluff. This book's lab-driven, hands-on approach will get you up and running as quickly and efficiently as possible. Virtualization is the cornerstone of today's data center. As a modern-day IT pro, you are required to manage environments that are in a regular state of flux and increasing in both size and complexity. To keep up, you need practical information in a format that is succinct, yet comprehensive and highly applicable. Pro Hyper-V 2019 breaks down critical and time-saving topics into a series of easy-to-digest chapters, showing you how to perform Hyper-V management tasks using both GUI and PowerShell-based tools. Building on your existing knowledge of Windows Server management, Active Directory, networking, and storage, experts and Microsoft MVPs Syrewicze and Siddaway begin with a foundation of why computing workloads are virtualized. This is followed by chapters covering the range of management tasks associated with virtualized environments, including: managing hosts and guest machines; networking, storage, and high availability (host and guest); disaster recovery and virtual machine migration; and monitoring. What You'll Learn Apply practical information to administer your Hyper-V environments Understand multiple administration styles (GUI, command line, and automation) Written by IT pros for IT pros – just the information you really need without the padding Administer and use containers Utilize hands-on labs to learn about storage, networking, and high availability Who This Book Is For IT administrators tasked with implementing Hyper-V environments or migrating from VMware. IT pros joining a team that is responsible for managing Hyper-V and "lone administrators" covering the gamut in smaller organizations will also find this book indispensable.

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

Take full creative control of your web applications with Flask, the Python-based microframework. With the second edition of this hands-on book, you'll learn the framework from the ground up by developing, step-by-step, a real-world project created by author Miguel Grinberg. This refreshed edition accounts for important technology changes that have occurred in the past three years. You'll learn the framework's core functionality, as well as how to extend applications with advanced web techniques such as database migration and web service communication. The first part of each chapter provides you with reference and background for the topic in question, while the second part guides you though a hands-on implementation of the topic. If you have Python experience, this book shows you how to take advantage of the creative freedom Flask provides.

Kubernetes on AWS
Microservice Architecture
Genomics in the Cloud
Using Docker, GATK, and WDL in Terra
With Flask, Streamlit, Docker, and Kubernetes on Google Cloud Platform
Microsoft Azure Essentials - Fundamentals of Azure
Harness the full potential of your applications with Docker
With EC2, ECS, and EKS
Learning DevOps
Hands-on Data Virtualization with Polybase
Getting Started with Containers in Azure
Aligning Principles, Practices, and Culture
Build, test, ship, and run containers with Docker and Kubernetes, 2nd Edition
Use Kubernetes to develop, test, and deploy your applications with the help of containers
Hands-on DevOps with Linux

Run queries and analysis on big data clusters across relational and non relational databases KEY FEATURES ? Connect to Hadoop, Azure, Spark, Oracle, Teradata, Cassandra, MongoDB, CosmosDB, MySQL, PostgreSQL, MariaDB, and SAP HANA. ? Numerous techniques on how to query data and troubleshoot Polybase for better data analytics. ? Exclusive coverage on Azure Synapse Analytics and building Big Data clusters. DESCRIPTION This book brings exciting coverage on establishing and managing data virtualization using polybase. This book teaches how to configure polybase on almost all relational and nonr databases. You will learn to set up the test environment for any tool or software instantly without hassle. You will practice how to design and build some of the high performing data warehousing solutions and that too in a few minutes of time. You will almost become an expert in connecting to all databases including hadoop, cassandra, MySQL, PostgreSQL, MariaDB and Oracle database. This book also brings exclusive coverage on how to build data clusters on Azure and using Azure Synapse Analytics. By the end of this book, you just don't administer the polybase for managing big data clusters but rather you learn to optim boost the performance for enabling data analytics and ease of data accessibility. WHAT YOU WILL LEARN ? Learn to configure Polybase and process Transact SQL queries with ease. ? Create a Docker container with SQL Server 2019 on Windows and Polybase. ? Establish SQL Server instance with any other software or tool using Polybase ? Connect with Cassandra, MongoDB, MySQL, PostgreSQL, MariaDB, and IBM DB2. WHO THIS BOOK IS FOR This book is for database developers and administrators familiar with the SQL language and command prompt. Managers and decision-makers will also find this book us prior knowledge of any other technology or language is required. TABLE OF CONTENTS 1. What is Data Virtualization (Polybase) 2. History of Polybase 3. Polybase current state 4. Differences with other technologies 5. Usage 6. Future 7. SQL Server 8. Hadoop Cloudera and Hortonworks 9. Windows Azure Storage Blob 10. Spark 11. From Azure Synapse Analytics 12. From Big Data Clusters 13. Oracle 14. Teradata 15. Cassandra 16. MongoDB 17. CosmosDB 18. MySQL 19. PostgreSQL 20. MariaDB 21. SAP HANA 22. IBM DB2 23. Excel

The Practical, Foundational Technical Introduction to the World's #1 Cloud Platform Includes access to several hours of online training video. Mark Wilkins' expert training video library guides you through setting up core services and prepares you to deploy your own apps and resources. Learning Amazon Web Services (AWS) is the perfect foundational resource for all administrators, developers, project managers, and other IT professionals who want to plan and deploy AWS services and/or earn AWS certification. Top cloud trainer and evangelist Mark Wilkins teaches best practices that align with Amazon's Well-Architected Framework, introduces key concepts in the context of a running case study, carefully explains how core AWS services operate and integrate, and offers extensively tested tips for maximizing flexibility, security, and value. Companion online videos guide you step-by-step through setting AWS compute, storage, networking, scale, security, automation, and more. Balance cost, compliance, and latency in your service designs Choose the right networking options for your virtual private cloud (VPC) Build, host, launch, manage, and budget for EC2 compute services Plan for scale and resiliency, and make informed decisions abo storage Enforce strict security, and automate to improve operational efficiency This book with companion training videos is a valuable learning tool for anyone seeking to demonstrate expertise through formal certification. WEB EDITION: All buyers of the book or ebook can register your book for access to a free online Web Edition of this title, which included videos embedded within the text, plus updates as they become available.

Get hands-on recipes to automate and manage Linux containers with the Docker 1.6 environment and jump-start your Puppet development About This Book Successfully deploy DevOps with proven solutions and recipes Automate your infrastructure with Puppet and combine powerful DevOps methods Deploy and manage highly scalable applications using Kubernetes streamline the way you manage your applications Who This Book Is For This Learning Path is for developers, system administrators, and DevOps engineers who want to use Puppet, Docker, and Kubernetes in their development, QA, or production environm Learning Path assumes experience with Linux administration and requires some experience with command-line usage and basic text file editing. What You Will Learn Discover how to build high availability Kubernetes clusters Deal with inherent issues with container virtualization and container concepts Create services with Docker to enable the swift development and deployment of applications Make optimum use of Docker in a testing environment Create efficient manifests to streamline your deployments Automate Puppet master deployment using Git hooks, r10k, and PuppetDB In Detail With so many IT management and tools on the market, both open source and commercial, it's difficult to know where to start. DevOps is incredibly powerful when implemented correctly, and here's how to get it done.This Learning Path covers three broad areas: Puppet, Docker, and Kubernetes. This Learning Path is a large resource of recipes to ease your daily DevOps tasks. We begin with recipes that help you develop a complete and expert understanding of Puppet's latest and most advanced features. Then we provide recipes that help you efficiently work with the Docker environment. Finally, we show you how to better manage containers in different sce production using Kubernetes. This course is based on these books: Puppet Cookbook, Third Edition Docker Cookbook Kubernetes Cookbook Style and approach This easy-to-follow tutorial-style guide teaches you precisely how to configure complex systems in Puppet and manage your containers using Kubernetes.

This book is designed to help newcomers and experienced users alike learn about Kubernetes. Its chapters are designed to introduce core Kubernetes concepts and to build on them to a level where running an application on a production cluster is a familiar, repeatable, and automated process. From there, more advanced topics are introduced, like how to manage a Kubernetes cluster itself.

Microsoft Azure Essentials from Microsoft Press is a series of free ebooks designed to help you advance your technical skills with Microsoft Azure. The first ebook in the series, Microsoft Azure Essentials: Fundamentals of Azure, introduces developers and IT professionals to the wide range of capabilities in Azure. The authors - both Microsoft MVPs in Azure - present both conceptual and how-to content for key areas, including: Azure Websites and Azure Cloud Services Azure Virtual Machines Azure Storage Azure Virtual Networks Databases Azure Active Directory Management tools Business scenarios Watch Microsoft P blog and Twitter (@MicrosoftPress) to learn about other free ebooks in the "Microsoft Azure Essentials" series.

Simplify your DevOps roles with DevOps tools and techniques Key Features Learn to utilize business resources effectively to increase productivity and collaboration Leverage the ultimate open source DevOps tools to achieve continuous integration and continuous delivery (CI/CD) Ensure faster time-to-market by reducing overall lead time and deployment downtime Book Description The implementation of DevOps processes requires the efficient use of various tools, and the choice of these tools is crucial for the sustainability of projects and collaboration between development (Dev) and operations (Ops). This book presents patterns and tools that you can use to provision and configure an infrastructure in the cloud. You'll begin by understanding DevOps culture, the application of DevOps in cloud infrastructure, provisioning with Terraform, configuration with Ansible, and image building with Packer. You'll then be taken through source code versioning with Git and the construction of a DevOps CI/CD pipeline using Jenkins, GitLab CI, and Azure Pipelines. This DevOps handbook will also guide you in containerizing and deploying your applications with Docker and Kubernetes. You'll learn how to reduce deployment downtime with blue-green deployment and the feature flags technique, and study DevOps practices for open source projects. Finally, you'll grasp some best practices for reducing the overall application lead time to ensure faster time to market. By the end of this book, you'll have built a solid foundation in DevOps, and developed the skills necessary to enhance a traditional software delivery process using modern software delivery tools and techniques What you will learn Become well versed with DevOps culture and its practices Use Terraform and Packer for cloud infrastructure provisioning Implement Ansible for infrastructure configuration Use basi commands and understand the Git flow process Build a DevOps pipeline with Jenkins, Azure Pipelines, and GitLab CI Containerize your applications with Docker and Kubernetes Check application quality with SonarQube and Postman Protect DevOps processes and applications using DevSecOps tools Who this book is for If you are a developer or a system administrator interested in understanding continuous integration, continuous delivery, and containerization with DevOps tools, this book is for you.

Learn to implement container orchestration on AWS with ease Key Features Leverage the power of Kubernetes on AWS to deploy highly scalable applications Provision Kubernetes clusters on Amazon EC2 environments Implement best practices to improve efficiency and security of Kubernetes on the cloud Book Description Docker containers promise to radicalize the way developers and operations build, deploy, and manage applications running on the cloud. Kubernetes provides the orchestration tools you need to realize that promise in production. Kubernetes on AWS guides you in deploying a production-ready Kubern on the AWS platform. You will then discover how to utilize the power of Kubernetes, which is one of the fastest growing platforms for production-based container orchestration, to manage and update your applications. Kubernetes is becoming the go-to choice for production-grade deployments of cloud-native applications. This book covers Kubernetes from first principles. You will start by learning about Kubernetes' powerful abstractions - Pods and Services - that make managing container deployments easy. This will be followed by a guided tour through setting up a production-ready Kubernetes cluster on AWS, while learnin techniques you need to successfully deploy and manage your own applications. By the end of the book, you will have gained plenty of hands-on experience with Kubernetes on Amazon Web Services. You will also have picked up some tips on deploying and managing applications, keeping your cluster and applications secure, and ensuring that your whole system is reliable and resilient to failure. What you will learn Learn how to provision a production-ready Kubernetes cluster on AWS Deploy your own applications to Kubernetes with Helm Discover strategies for troubleshooting your cluster and know where to find help wit Explore the best ways to monitor your cluster and the applications running on it Supercharge your cluster by integrating it with the tools provided by the AWS platform Architect your cluster for high availability Who this book is for If you're a cloud engineer, cloud solution provider, sysadmin, site reliability engineer, or developer with an interest in DevOps and are looking for an extensive guide to running Kubernetes in the AWS environment, this book is for you. Though any previous knowledge of Kubernetes is not expected, some experience with Linux and Docker containers would be a bonus.

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 l 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 orchestrat using Compose and Swarm for the orchestration of Docker containers and Consul for service discovery. * Explore the Docker API. * Getting Help and Extending Docker.

If you create, manage, operate, or configure systems running in the cloud, you're a cloud engineer--even if you work as a system administrator, software developer, data scientist, or site reliability engineer. With this book, professionals from around the world provide valuable insight into today's cloud engineering role. These concise articles explore the entire cloud computing experience, including fundamentals, architecture, and migration. You'll delve into security and compliance, operations and reliability, and software development. And examine networking, organizational culture, and more. You're sure to find 1, 2, or 97 thi inspire you to dig deeper and expand your own career. "Three Keys to Making the Right Multicloud Decisions," Brendan O'Leary "Serverless Bad Practices," Manases Jesus Galindo Bello "Failing a Cloud Migration," Lee Atchison "Treat Your Cloud Environment as If It Were On Premises," Iyana Garry "What Is Toil, and Why Are SREs Obsessed with It?", Zachary Nickens "Lean QA: The QA Evolving in the DevOps World," Theresa Neate "How Economies of Scale Work in the Cloud," Jon Moore "The Cloud Is Not About the Cloud," Ken Corless "Data Gravity: The Importance of Data Management in the Cloud," Geoff Hughes "Even in the Cloud, the Network Is the Foundation," David Murray "Cloud Engineering Is About Culture, Not Containers," Holly Cummins

Effectively Containerize Applications, Integrate Enterprise Systems, and Scale Applications in Your Enterprise
Effective Kafka
Gain expertise in the art of deploying, configuring, managing, and troubleshooting Ubuntu Server, 3rd Edition
Deploy Containers on AWS

A Hands-On Guide to Building Robust and Scalable Event-Driven Applications with Code Examples in Java
Practical Docker with Python
Cloud Deployments Made Easy
Beginning Kubernetes on the Google Cloud Platform
Learn Amazon Web Services in a Month of Lunches
Docker Deep Dive
Flask Web Development
Linux in Action
Deploy Machine Learning Models to Production
Deploy and manage production-ready Kubernetes clusters on AWS
DevOps: Puppet, Docker, and Kubernetes

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
Leverage Docker to deploying software at scale Key Features Leverage practical examples to manage containers efficiently Integrate with orchestration tools such as Kubernetes for controlled deployments Learn to implement best practices on improving efficiency and security of containers Book Description Docker is an open source platform for building, shipping, managing, and securing containers. Docker has become the tool of choice for people willing to work with containers. Since the market is moving toward containerization, Docker will definitely have a big role to play in the future tech market. This book starts with setting up Docker in different environment, and helps you learn how to work with Docker images. Then, you will take a deep dive into network and data management for containers. The book explores the RESTful APIs provided by Docker to perform different actions, such as image/container operations. The book then explores logs and troubleshooting Docker to solve issues and bottlenecks. You will gain an understanding of Docker use cases, orchestration, security, ecosystems, and hosting platforms to make your applications easy to deploy, build, and collaborate on. The book covers the new features of Docker 18.xx (or later), such as working with AWS and Azure, Docker Engine, Docker Swarm, Docker Compose, and so on. By the end of this book, you will have gained hands-on experience of finding quick solutions to different problems encountered while working with Docker. What you will learn Install Docker on various platforms Work with Docker images and containers Container networking and data sharing Docker APIs and language bindings Various PaaS solutions for Docker Implement container orchestration using Docker Swarm and Kubernetes Container security Docker on various clouds Who this book is for Book is targeted towards developers, system administrators, and DevOps engineers who want to use Docker in his/her development, QA, or production environments. It is expected that the reader has basic Linux/Unix skills such as installing packages, editing files, managing services, and so on. Any experience in virtualization technologies such as KVM, XEN, and VMware will be an added advantage
Build and deploy machine learning and deep learning models in production with end-to-end examples. This book begins with a focus on the machine learning model deployment process and its related challenges. Next, it covers the process of building and deploying machine learning models using different web frameworks such as Flask and Streamlit. A chapter on Docker follows and covers how to package and containerize machine learning models. The book also illustrates how to build and train machine learning and deep learning models at scale using Kubernetes. The book is a good starting point for people who want to move to the next level of machine learning by taking pre-built models and deploying them into production. It also offers guidance to those who want to move beyond Jupyter notebooks to training models at scale on cloud environments. All the code presented in the book is available in the form of Python scripts for you to try the examples and extend them in interesting ways. What You Will Learn Build, train, and deploy machine learning models at scale using Kubernetes Containerize any kind of machine learning model and run it on any platform using Docker Deploy machine learning and deep learning models using Flask and Streamlit frameworks Who This Book Is For Data engineers, data scientists, analysts, and machine learning and deep learning engineers
This book describes the essential components of the SCION secure Internet architecture, the first architecture designed foremost for strong security and high availability. Among its core features, SCION also provides route control, explicit trust information, multipath communication, scalable quality-of-service guarantees, and efficient forwarding. The book includes functional specifications of the network elements, communication protocols among these elements, data structures, and configuration files. In particular, the book offers a specification of a working prototype. The authors provide a comprehensive description of the main design features for achieving a secure Internet architecture. They facilitate the reader throughout, structuring the book so that the technical detail gradually increases, and supporting the text with a glossary, an index, a list of abbreviations, answers to frequently asked questions, and special highlighting for examples and for sections that explain important research, engineering, and deployment features. The book is suitable for researchers, practitioners, and graduate students who are interested in network security.
Kubernetes is the operating system of the cloud native world, providing a reliable and scalable platform for running containerized workloads. In this friendly, pragmatic book, cloud experts John Arundel and Justin Domingus show you what Kubernetes can do—and what you can do with it. You'll learn all about the Kubernetes ecosystem, and use battle-tested solutions to everyday problems. You'll build, step by step, an example cloud native application and its supporting infrastructure, along with a development environment and continuous deployment pipeline that you can use for your own applications. Understand containers and Kubernetes from first principles; no experience necessary Run your own clusters or choose a managed Kubernetes service from Amazon, Google, and others Use Kubernetes to manage resource usage and the container lifecycle Optimize clusters for cost, performance, resilience, capacity, and scalability Learn the best tools for developing, testing, and deploying your applications Apply the latest industry practices for security, observability, and monitoring Adopt DevOps principles to help make your development teams lean, fast, and effective
A developer's field-guide to designing scalable services using Kubernetes Key Features Develop and run your software using containers within a Kubernetes environment Get hands-on experience of using Kubernetes with DevOps concepts such as continuous integration, benchmark testing, monitoring, and so on Pragmatic example-based approach showing how to use Kubernetes in the development process Book Description Kubernetes is documented and typically approached from the perspective of someone running software that has already been built. Kubernetes may also be used to enhance the development process, enabling more consistent testing and analysis of code to help developers verify not only its correctness, but also its efficiency. This book introduces key Kubernetes concepts, coupled with examples of how to deploy and use them with a bit of Node.js and Python example code, so that you can quickly replicate and use that knowledge. You will begin by setting up Kubernetes to help you develop and package your code. We walk you through the setup and installation process before working with Kubernetes in the development environment. We then delve into concepts such as automating your build process, autonomic computing, debugging, and integration testing. This book covers all the concepts required for a developer to work with Kubernetes. By the end of this book, you will be in a position to use Kubernetes in development ecosystems. What you will learn Build your software into containers Deploy and debug software running in containers within Kubernetes Declare and add configuration through Kubernetes Define how your application fits together, using internal and external services Add feedback to your code to help Kubernetes manage your services Monitor and measure your services through integration testing and in production deployments Who this book is for If you are a full-stack or back-end software developers interested, curious, or being asked to test as well as run the code you're creating, you can leverage Kubernetes to make that process simpler and consistent regardless of where you deploy. If you're looking for developer focused examples in NodeJS and Python for how to build, test, deploy, and run your code with Kubernetes, this is perfect for you.
Start deploying, managing, and scaling containerized applications into AWS container infrastructure using Docker on Amazon EC2, Amazon Elastic Container Service (ECS), and AWS Elastic Kubernetes Service (EKS). This step by step practical book will cover all the available container services on AWS and review the usage of each one based on your required scale and cost. Further, you will see how to set up each environment and finally deploy, manage, and scale containerized applications on each one. In the chapter about Elastic Kubernetes Service (EKS), you will learn the process of building and managing Kubernetes clusters on AWS and see how to provision hosts in a matter of minutes, while deploying containers in seconds and making them available globally. Deploy Containers on AWS shows you how to get started with AWS container offerings and manage production or test environments of containerized applications using a hands-on approach with step-by-step instructions. What You Will Learn Deploy and manage containers with Docker on Amazon EC2 Store and retrieve container images using the Amazon EC2 container registry Orchestrate containers with Amazon Elastic Container Service (ECS) Run Kubernetes-managed infrastructure on AWS (EKS) Monitor, manage, back up, and restore containers on AWS Who This Book Is ForDevelopers, cloud and systems administrators, and architects
Learn how to deploy and test Linux-based Docker containers with the help of real-world use cases Key Features Understand how to make a deployment workflow run smoothly with Docker containers Learn Docker and DevOps concepts such as continuous integration and continuous deployment (CI/CD) Gain insights into using various Docker tools and libraries Book Description Docker is the de facto standard for containerizing apps, and with an increasing number of software projects migrating to containers, it is crucial for engineers and DevOps teams to understand how to build, deploy, and secure Docker environments effectively. Docker for Developers will help you understand Docker containers from scratch while taking you through best practices and showing you how to address security concerns. Starting with an introduction to Docker, you'll learn how to use containers and VirtualBox for development. You'll explore how containers work and develop projects within them after you've explored different ways to deploy and run containers. The book will also show you how to use Docker containers in production in both single-host set-ups and in clusters and deploy them using Jenkins, Kubernetes, and Spinnaker. As you advance, you'll get to grips with monitoring, securing, and scaling Docker using tools such as Prometheus and Grafana. Later, you'll be able to deploy Docker containers to a variety of environments, including the cloud-native Amazon Elastic Kubernetes Service (Amazon EKS), before finally delving into Docker security concepts and best practices. By the end of the Docker book, you'll be able to not only work in a container-driven environment confidently but also use Docker for both new and existing projects. What you will learn Get up to speed with creating containers and understand how they work Package and deploy your containers to a variety of platforms Work with containers in the cloud and on the Kubernetes platform Deploy and then monitor the health and logs of running containers Explore best practices for working with containers from a security perspective Become familiar with scanning containers and using third-party security tools and libraries Who this book is for If you're a software engineer new to containerization or a DevOps engineer responsible for deploying Docker containers in the cloud and building DevOps pipelines for container-based projects, you'll find this book useful. This Docker containers book is also a handy reference guide for anyone working with a Docker-based DevOps ecosystem or interested in understanding the security implications and best practices for working in container-driven environments.
Apply Kubernetes beyond the basics of Kubernetes clusters by implementing IAM using OIDC and Active Directory, Layer 4 load balancing using MetalLB, advanced service integration, security, auditing, and CI/CDKey Features* Find out how to add enterprise features to a Kubernetes cluster with theory and exercises to guide you* Understand advanced topics including load balancing, externalDNS, IDP integration, security, auditing, backup, and CI/CD* Create development clusters for unique testing requirements, including running multiple clusters on a single server to simulate an enterprise environmentBook DescriptionContainerization has changed the DevOps game completely, with Docker and Kubernetes playing important roles in altering the flow of app creation and deployment. This book will help you acquire the knowledge and tools required to integrate Kubernetes clusters in an enterprise environment.The book begins by introducing you to Docker and Kubernetes fundamentals, including a review of basic Kubernetes objects. You'll then get to grips with containerization and understand its core functionalities, including how to create ephemeral multinode clusters using kind. As you make progress, you'll learn about cluster architecture, Kubernetes cluster deployment, and cluster management, and get started with application deployment. Moving on, you'll find out how to integrate your container to a cloud platform and integrate tools including MetalLB, externalDNS, OpenID connect (OIDC), pod security policies (PSPs), Open Policy Agent (OPA), Falco, and Velero. Finally, you will discover how to deploy an entire platform to the cloud using continuous integration and continuous delivery (CI/CD).By the end of this Kubernetes book, you will have learned how to create development clusters for testing applications and Kubernetes components, and be able to secure and audit a cluster by implementing various open-source solutions including OpenUnison, OPA, Falco, Kibana, and Velero.What you will learn* Create a multinode Kubernetes cluster using kind* Implement Ingress, MetalLB, and ExternalDNS* Configure a cluster OIDC using impersonation* Map enterprise authorization to Kubernetes* Secure clusters using PSPs and OPA* Enhance auditing using Falco and EFK* Back up your workload for disaster recovery and cluster migration* Deploy to a platform using Tekton, GitLab, and ArgoCDWho this book is forThis book is for anyone interested in DevOps, containerization, and going beyond basic Kubernetes cluster deployments. DevOps engineers, developers, and system administrators looking to enhance their IT career paths will also find this book helpful. Although some prior experience with Docker and Kubernetes is recommended, this book includes a Kubernetes bootcamp that provides a description of Kubernetes objects to help you if you are new to the topic or need a refresher.
Develop event-driven, scalable, and reactive microservices with real-time monitoring
Developing Web Applications with Python
Kubernetes for Developers
Learning Amazon Web Services (AWS)
Mastering GitLab 12
Continuous Integration for the Masses
Develop and run your application with Docker containers using DevOps tools for continuous delivery
Designing Distributed Systems
Pro Microsoft Hyper-V 2019
Docker Cookbook - Second Edition
Microservices with Clojure
DevOps with OpenShift
SCION: A Secure Internet Architecture
Practical Guidance and Hands-On Labs
A Guide to Automating Application Deployment, Scaling, and Management

Summary Learn Amazon Web Services in a Month of Lunches guides you through the process of building a robust and secure web application using the core AWS services you really need to know. You'll be amazed by how much you can accomplish with AWS! Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology Cloud computing has transformed the way we build and deliver software. With the Amazon Web Services cloud platform, you can trade expensive glass room hardware and custom infrastructure for virtual servers and easy-to-configure storage, security, and networking services. Better, because you don't own the hardware, you only pay for the computing power you need! Just learn a few key ideas and techniques and you can have applications up and running in AWS in minutes. About the Book Learn Amazon Web Services in a Month of Lunches gets you started with AWS fast. In just 21 bite-size lessons, you'll learn the concepts and practical techniques you need to deploy and manage applications. You'll learn by doing real-world labs that guide you from the core AWS tool set through setting up security and storage and planning for growth. You'll even deploy a public-facing application that's highly available, scalable, and load balanced. What's Inside First steps with AWS – no experience required Deploy web apps using EC2, RDS, S3, and Route 53 Cheap and fast system backups Setting up cloud automation About the Reader If you know your way around Windows or Linux and have a basic idea of how web applications work, you're ready to start using AWS. About the Author David Clinton is a system administrator, teacher, and writer. He has administered, written about, and created training materials for many important technology subjects including Linux systems, cloud computing (AWS in particular), and container technologies like Docker. Many of his video training courses can be found on Pluralsight.com, and links to his other books (on Linux administration and server virtualization) can be found at https://bootstrap-it.com. Table of Contents Before you begin PART 1 - THE CORE AWS TOOLS The 10-minute EC2 web server Provisioning a more robust EC2 website Databases on AWS DNS: whatâ€™s in a name? S3: cheap, fast file storage S3: cheap, fast system backups AWS security: working with IAM users, groups, and roles Managing growth Pushing back against the chaos: using resource tags CloudWatch: monitoring AWS resources for fun and profit Another way to play: the command-line interface PART 2 - THE AWS POWER USER: OPTIMIZING YOUR INFRASTRUCTURE Keeping ahead of user demand High availability: working with AWS networking tools High availability: load balancing High availability: auto scaling High availability: content-delivery networks PART 3 - FOOD FOR THOUGHT: WHAT ELSE CAN AWS DO FOR YOU? Building hybrid infrastructure Cloud automation: working with Elastic Beanstalk, Docker, and Lambda Everything else (nearly) Never the end
Graphite has become one of the most powerful monitoring tools available today, due to its ease of use, rapid graph prototyping abilities, and a friendly rendering API. With this practical guide, system administrators and engineers will learn how to use this open source tool to track operational data you need to monitor your systems, as well as application-level metrics for profiling your services. Author Jason Dixon, member of the Graphite project, provides a thorough introduction of Graphite from the basics to the skills and tools you need for troubleshooting and scaling out its software components. If you want to learn more about monitoring systems, services, or applications, this is the book you need. Get an introduction to monitoring, including important concepts and terminology Examine the features and functionality of key Graphite components, including Carbon and Whisper Learn the typical user workflow necessary to create a basic line chart Build complex charts with chained functions and multiple axes that interact directly with the rendering API Understand how to use the native Graphite dashboard, as well as the more popular third-party dashboards Master the art of scaling and troubleshooting high-performance or highly available Graphite clusters
Summary 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. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology You can't learn anything without getting your hands dirtyÃ¢â‚¬â€ including Linux. Skills like securing files, folders, and servers, safely installing patches and applications, and managing a network are required for any serious user, including developers, administrators, and DevOps professionals. With this hands-on tutorial, you'll roll up your sleeves and learn Linux project by project. About the Book Linux in Action guides you through 12 real-world projects, including automating a backup-and-restore system, setting up a private Dropbox-style file cloud, and building your own MediaWiki server. You'll try out interesting examples as you lock in core practices like virtualization, disaster recovery, security, backup, DevOps, and system troubleshooting. Each chapter ends with a review of best practices, new terms, and exercises. What's inside Setting up a safe Linux environment Managing secure remote connectivity Building a system recovery device Patching and upgrading your system About the Reader No prior Linux admin experience is required. About the Author David Clinton is a certified Linux Server Professional, seasoned instructor, and author of Manning's bestselling Learn Amazon Web Services in a Month of Lunches. Table of Contents Welcome to Linux Linux virtualization: Building a Linux working environment Remote connectivity: Safely accessing networked machines Archive management: Backing up or copying entire file systems Automated administration: Configuring automated offsite backups Emergency tools: Building a system recovery device Web servers: Building a MediaWiki server Networked file sharing: Building a Nextcloud file-sharing server Securing your web server Securing network connections: Creating a VPN or DMZ System monitoring: Working with log files Sharing data over a private network Troubleshooting system performance issues Troubleshooting network issues Troubleshooting peripheral devices DevOps tools: Deploying a scripted server environment using Ansible
Manage Linux Servers on-premises and cloud with advanced DevOps techniques using Kubernetes KEY FEATURES [] Detailed coverage on architecture of Web Servers, Databases, and Cloud Servers. [] Practical touch on deploying your application and managing cloud infrastructure using Docker and Terraform. [] Simplified implementation of Infrastructure as Code with Vagrant. [] Explore the use of different cloud services for better provisioning, scalability, and reliability of enterprise applications. DESCRIPTION Hands-on DevOps with Linux brings you advanced learnings on how to make the best use of Linux commands in managing the DevOps infrastructure to keep enterprise applications up-to-date. The book begins by introducing you to the Linux world with the most used commands by DevOps experts and teaches how to set up your own infrastructure in your environment. The book covers exclusive coverage on production scenarios using Kubernetes and how the entire container orchestration is managed. Throughout the book, you will get accustomed to the most widely used techniques among DevOps Engineers in their routine. You will explore how infrastructure as code works, working with Vagrant, Docker and Terraform through which you can manage the entire cloud deployment of applications along with how to scale them on your own. WHAT YOU WILL LEARN [] Create Infrastructure as Code to replicate the configuration to your infrastructure. [] Learn best methods and techniques to build continuous delivery pipeline using Jenkins. [] Learn to Distribute and scale your applications using Kubernetes. [] Get insights by analyzing millions of server logs using Kibana and Logstash. WHO THIS BOOK IS FOR This book is best suited for DevOps Engineers and DevOps professionals who want to make best use of Linux commands in managing the DevOps infrastructure daily. It is a good handy guide for Linux administrators and system administrators too to get familiar with the use of Linux in Devops and advance their skillset in DevOps. TABLE OF CONTENTS 1. Getting started with Linux 2. Working with Bash 3. Setting up a service 4. Configuring a reverse proxy with Nginx 5. Deploying your application using Docker 6. Automating your Infrastructure as Code 7. Creating your infrastructure using cloud services 8. Working with Terraform 9. Working with Git 10. Continuous integration and Continuous Delivery using Jenkins 11. Deploying and scaling your application using Kubernetes 12. Logs with open source Tools
Streamline software development with Jenkins, the popular Java-based open source tool that has revolutionized the way teams think about Continuous Integration (CI). This complete guide shows you how to automate your build, integration, release, and deployment processes with Jenkins—and demonstrates how CI can save you time, money, and many headaches. Ideal for developers, software architects, and project managers, Jenkins: The Definitive Guide is both a CI tutorial and a comprehensive Jenkins reference. Through its wealth of best practices and real-world tips, you'll discover how easy it is to set up a CI service with Jenkins. Learn how to install, configure, and secure your Jenkins server Organize and monitor general-purpose build jobs Integrate automated tests to verify builds, and set up code quality reporting Establish effective team notification strategies and techniques Configure build pipelines, parameterized jobs, matrix builds, and other advanced jobs Manage a farm of Jenkins servers to run distributed builds Implement automated deployment and continuous delivery
Administer Big Data, SQL Queries and Data Accessibility Across Hadoop, Azure, Spark, Cassandra, MongoDB, CosmosDB, MySQL and PostgreSQL (English Edition)
The Docker Book
Build and Deploy DevOps Pipelines Using Linux Commands, Terraform, Docker, Vagrant, and Kubernetes (English Edition)
Implement DevOps culture and repository management solutions
Monitoring with Graphite

97 Things Every Cloud Engineer Should Know
Docker for Developers
Red Hat RHCSA 8 Cert Guide
Mastering Ubuntu Server
Deploy, Manage, and Secure Containerized Applications