

Ebook free The docker containerization is new virtualization james turnbull [PDF]

The Docker Book Containerization Puppet for Containerization Docker Unboxed Getting Started with Containerization Getting Started with Kubernetes The Box Development of Containerization Podman for DevOps Containerization with Ansible 2 Docker Cookbook Docker The Rise of Maritime Containerization in the Port of Oakland DevOps with Kubernetes The Impact of Containerization on the New York City Region Extending OpenStack Kubernetes – An Enterprise Guide The Box Getting Started with Kubernetes Illicit Trade Misuse of Containerized Maritime Shipping in the Global Trade of Counterfeits Containers, Towards a New Generation of Inland and Maritime Loading Units Mastering Docker Container Shipping: Full Ahead Docker: Up & Running Port Newark and the Origins of Container Shipping Containerization The The Complete Kubernetes Guide Maximizing the Power of Kubernetes, Containers, and Microservices Docker for Developers Kubernetes Container Security Monitoring Microservices and Containerized Applications Practical Docker with Python Containerization with LXC Bulletin of the United States Bureau of Labor Statistics Readings in Canadian Industrial Relations Learn Docker - Fundamentals of Docker 18.x Kubernetes Patterns Getting Started with Kubernetes Kubernetes Cookbook

The Docker Book 2014-07-14

updated for docker community edition v18.09 docker book designed for sysadmins sres operations staff developers and devops who are interested in deploying the open source container service docker in this book we ll walk you through installing deploying managing and extending docker we re going to do that by first introducing you to the basics of docker and its components then we ll start to use docker to build containers and services to perform a variety of tasks we re going to take you through the development lifecycle from testing to production and see where docker fits in and how it can make your life easier we ll make use of docker to build test environments for new projects demonstrate how to integrate docker with continuous integration workflow and then how to build application services and platforms finally we ll show you how to use docker s api and how to extend docker yourself we ll teach you how to install docker take your first steps with a docker container build docker images manage and share docker images run and manage more complex docker containers deploy docker containers as part of your testing pipeline build multi container applications and environments learn about orchestration using compose and swarm for the orchestration of docker containers and consul for service discovery explore the docker api getting help and extending docker

Containerization 1974

learn about configuration management and gain complete control of your docker containers using puppet about this book this is the first book that focuses specifically on the combination of containerization and configuration management tools as the landscape for system administration changes it demonstrates to administrators how to seamlessly integrate containerization without disrupting their entire system it provides a canny way for you to grow your tool kit and embrace new tech such as docker while building on your existing skill set who this book is for this book is designed for system administrators who are looking to explore containerization intermediate experience and expertise with puppet is presumed what you will learn write puppet modules to build docker create docker compose templates with erb files get to know the architecture of docker schedulers create a docker network and service discovery framework build a fully functional docker scheduler with puppet make docker production ready with puppet in detail this book teaches you how to take advantage of the new benefits of containerization systems such as docker kubernetes docker swarm and docker ucp without losing the panoptical power of proper configuration management you will learn how to integrate your containerized applications and modules with your puppet workflow you will also understand how to manage monitor and orchestrate hosts to keep deployed containers running seamlessly with the help of this book you can efficiently automate and document with containers as a part of your system the book will also cover use cases of deploying puppet within a containerized environment style and approach this book uniquely focuses on the pain point of making containerization part of a bigger established workflow of system administration it will begin with the presumption that one has a use for docker containers and a background in system administration then step by step it takes you through the concepts and methods necessary to integrate this new time saving technology into a well managed configuration run by puppet

Puppet for Containerization 2016-05-16

in the fast paced and ever evolving field of information technology the idea of containers has emerged as a crucial and game changing factor containerization ushers in a new era that is streamlined productive and scalable in contrast to the era of cumbersome virtual machines that are bloated and inefficient docker is the driving force behind this technological revolution docker has revolutionized the process through which software developers build distribute and run programs because of its capacity to enclose an application along with all of its dependencies into a single container this is not just another technical manual rather docker unboxed mastering modern infrastructure with container technology provides a comprehensive guide to container technology this e book is an all encompassing exploration into the enormous ocean that is docker and container technologies this e book is designed for you if you are an it professional who wants to modernize infrastructure a developer who wants to increase productivity or just a tech enthusiast who desires to understand the complexities of containerization over the course of the chapters we will dissect docker from its most fundamental aspects all the way up to its most advanced and intricate ideas in this e book we will talk about its architecture its components and its integration within the technology ecosystems of today to ensure that you have a well rounded educational experience in addition to the theoretical expositions you will also be given real world case studies hands on activities and recommendations for best practices

Docker Unboxed *2023-11-17*

choose the smarter way to learn about containerizing your applications and running them in production key features deploy and manage highly scalable containerized applications with kubernetes build high availability kubernetes clusters secure your applications via encapsulation networks and secrets book description kubernetes is an open source orchestration platform for managing containers in a cluster environment this learning path introduces you to the world of containerization in addition to providing you with an overview of docker fundamentals as you progress you will be able to understand how kubernetes works with containers starting with creating kubernetes clusters and running applications with proper authentication and authorization you ll learn how to create high availability kubernetes clusters on amazon services aws and also learn how to use kubeconfig to manage different clusters whether it is learning about docker containers and docker compose or building a continuous delivery pipeline for your application this learning path will equip you with all the right tools and techniques to get started with containerization by the end of this learning path you will have gained hands on experience of working with docker containers and orchestrators including swarmkit and kubernetes this learning path includes content from the following packt products kubernetes cookbook second edition by hideto saito hui chuan chloe lee and ke jou carol hsu learn docker fundamentals of docker 18 x by gabriel n schenker what you will learn build your own container cluster run a highly distributed application with docker swarm or kubernetes update or rollback a distributed application with zero downtime containerize your traditional or microservice based application build a continuous delivery pipeline for your application track metrics and logs for every container in your cluster implement container orchestration to streamline deploying and managing applications who this book is for this beginner level learning path is designed for system administrators operations engineers devops engineers and developers who want to get started with docker and kubernetes although no prior experience with docker is required basic knowledge of kubernetes and containers will be helpful

Getting Started with Containerization *2019-03-27*

schedule and run application containers using kubernetes key features get to grips with a wide range of tools to monitor and secure your deployments manage your container clusters and networks using kubernetes get well versed with the fundamentals of kubernetes book description kubernetes has continued to grow and achieve broad adoption across various industries helping you to orchestrate and automate container deployments on a massive scale based on the recent release of kubernetes 1.12 getting started with kubernetes gives you a complete understanding of how to install a kubernetes cluster the book focuses on core kubernetes constructs such as pods services replica sets replication controllers and labels you will understand cluster level networking in kubernetes and learn to set up external access to applications running in the cluster as you make your way through the book you ll understand how to manage deployments and perform updates with minimal downtime in addition to this you will explore operational aspects of kubernetes such as monitoring and logging later moving on to advanced concepts such as container security and cluster federation you ll get to grips with integrating your build pipeline and deployments within a kubernetes cluster and be able to understand and interact with open source projects in the concluding chapters you ll orchestrate updates behind the scenes avoid downtime on your cluster and deal with underlying cloud provider instability within your cluster by the end of this book you ll have a complete understanding of the kubernetes platform and will start deploying applications on it what you will learn download install and configure the kubernetes code base set up and access monitoring and logging for kubernetes clusters set up external access to applications running in the cluster learn how to manage and scale kubernetes with hosted platforms on aws azure and gcp run multiple clusters and manage them from a single control plane discover top tools for deploying and managing a kubernetes cluster learn how to get production ready and harden kubernetes operations networking and storage who this book is for getting started with kubernetes is for developers system administrators and devops engineers who want to automate the deployment process and scale their applications no prior knowledge of kubernetes is required

Getting Started with Kubernetes *2018-10-30*

in april 1956 a refitted oil tanker carried fifty eight shipping containers from newark to houston from that modest beginning container shipping developed into a huge industry that made the boom in global trade possible the box tells the dramatic story of the container s creation the decade of struggle before it was widely adopted and the sweeping economic consequences of the sharp fall in transportation costs that containerization brought about but the container didn t just happen its adoption required huge sums of money both from private investors and from ports that aspired to be on the leading edge of a new technology it required years of high stakes bargaining with two of the titans of organized labor harry bridges and teddy gleason as well as delicate negotiations on standards that made it possible for almost any container to travel on any truck or train or ship ultimately it took mclean s success

in supplying us forces in vietnam to persuade the world of the container's potential drawing on previously neglected sources economist marc levinson shows how the container transformed economic geography devastating traditional ports such as new york and london and fueling the growth of previously obscure ones such as oakland by making shipping so cheap that industry could locate factories far from its customers the container paved the way for asia to become the world's workshop and brought consumers a previously unimaginable variety of low cost products from around the globe published in hardcover on the fiftieth anniversary of the first container voyage this is the first comprehensive history of the shipping container now with a new chapter the box tells the dramatic story of how the drive and imagination of an iconoclastic entrepreneur turned containerization from an impractical idea into a phenomenon that transformed economic geography slashed transportation costs and made the boom in global trade possible

The Box 2016-04-05

this book describes the development of containerization and presents a worldwide overview of all major system components and drivers that have contributed to their great success

Development of Containerization 2012

build deploy and manage containers with the next generation engine and tools key features discover key differences between docker and podman build brand new container images with buildah the podman companion learn how to manage and integrate containers securely in your existing infrastructure book description as containers have become the new de facto standard for packaging applications and their dependencies understanding how to implement build and manage them is now an essential skill for developers system administrators and sre operations teams podman and its companion tools buildah and skopeo make a great toolset to boost the development execution and management of containerized applications starting with the basic concepts of containerization and its underlying technology this book will help you get your first container up and running with podman you'll explore the complete toolkit and go over the development of new containers their lifecycle management troubleshooting and security aspects together with podman the book illustrates buildah and skopeo to complete the tools ecosystem and cover the complete workflow for building releasing and managing optimized container images podman for devops provides a comprehensive view of the full stack container technology and its relationship with the operating system foundations along with crucial topics such as networking monitoring and integration with systemd docker compose and kubernetes by the end of this devops book you'll have developed the skills needed to build and package your applications inside containers as well as to deploy manage and integrate them with system services what you will learn understand podman's daemonless approach as a container engineer run manage and secure containers with podman discover the strategies concepts and command line options for using buildah to build containers from scratch manage oci images with skopeo troubleshoot runtime build and isolation issues integrate podman containers with existing networking and system services who this book is for the book is for cloud developers looking to learn how to build and package applications inside containers and system administrators who want to deploy manage and integrate them with system services and orchestration solutions this book provides a detailed comparison between docker and podman to aid you in learning podman quickly

Podman for DevOps 2022-04-28

automate the container lifecycle from image build through cloud deployment using the automation language you already know about this book use ansible container as an integral part of your workflow to increase flexibility and portability manage the container life cycle using existing ansible roles and automate the entire container build deployment and management process a step by step guide that will get you up and running from building a simple container image to deploying a complex multi container app in the cloud who this book is for this book is aimed at devops engineers administrators and developers who already have some familiarity with writing and running ansible playbooks and want to learn how to use ansible to implement containerization what you will learn increase your productivity by using ansible roles to define and build images learn how to work with ansible container to manage test and deploy your containerized applications increase the flexibility and portability of your applications by learning to use ansible discover how you can apply your existing ansible roles to the image build process get you up and running from building a simple container image to deploying a complex multi container app in the cloud take an in-depth look at the architecture of ansible container and learn how to build reusable container images reliably and efficiently in detail today many organizations are adopting containerization and devops methodologies to improve the flexibility and reliability of deploying new applications building custom application containers often means leveraging brittle and oftentimes complex dockerfiles that can lead

to cumbersome multi layered containers ansible container brings a new workflow for managing the development of containers from development all the way through to production the goal of this book is to get you up and running with ansible container so that you can create container images from ansible roles run containers locally and deploy them to the cloud we ll progress from a simple single container application to a complex application consisting of multiple connected containers you ll learn how to run the application locally how to deploy it to an openshift cluster running locally and how to deploy it to a kubernetes cluster running in the cloud along the way you ll see how to use roles to define each image or micro service and how to share your completed project with the ansible community next you will be able to take full advantage of ansible container and use it to automate the container lifecycle in your own projects by the end of this book you will gain mastery of the ansible container platform by building complex multi container projects ready for deployment into production style and approach this book will walk you through ansible containerization from building a simple container image to deploying a complex multi container app in the cloud you will get an in depth understanding of how to effectively manage containers using ansible 2

Containerization with Ansible 2 2017-12-07

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

Docker Cookbook 2018-08-31

learn to implement devops using docker kubernetes about this book learning devops container and kubernetes within one book leverage kubernetes as a platform to deploy scale and run containers efficiently a practical guide towards container management and orchestration who this book is for this book is targeted for anyone who wants to learn containerization and clustering in a practical way using kubernetes no prerequisite skills required however essential devops skill and public private cloud knowledge will accelerate the reading speed if you re advanced readers you can also get a deeper understanding of all the tools and technique described in the book what you will learn learn fundamental and advanced devops skills and tools get a comprehensive understanding for container learn how to move your application to container world learn how to manipulate your application by kubernetes learn how to work with kubernetes in popular public cloud improve time to market with kubernetes and continuous delivery learn how to monitor log and troubleshoot your application with kubernetes in detail containerization is said to be the best way to implement devops google developed kubernetes which orchestrates containers efficiently and is considered the frontrunner in container orchestration kubernetes is an orchestrator that creates and manages your containers on clusters of servers this book will guide you from simply deploying a container to administrate a kubernetes cluster and then you will learn how to do monitoring logging and continuous deployment in devops the initial stages of the book will introduce the fundamental devops and the concept of containers it will move on to how to containerize applications and deploy them into the book will then introduce networks in kubernetes we then move on to advanced devops skills such as monitoring logging and continuous deployment in kubernetes it will proceed to introduce permission control for kubernetes resources via attribute based access control and role based access control the final stage of the book will cover deploying and managing your container clusters on the popular public cloud amazon services and google cloud platform at the end of the book other orchestration frameworks such as docker swarm mode

amazon ecs and apache mesos will be discussed style and approach readers will be taken through fundamental devops skills and kubernetes concept and administration with detailed examples it introduces comprehensive devops topics including microservices automation tools containers monitoring logging continuous delivery and popular public cloud environments at each step readers will learn how to leverage kubernetes in their everyday lives and transform their original delivery pipeline for fast and efficient delivery

Docker 2016

discover new opportunities to empower your private cloud by making the most of the openstack universe key features this practical guide teaches you how to extend the core functionalities of openstack discover openstack s flexibility by writing custom applications and network plugins deploy a containerized environment in openstack through a hands on and example driven approach book description openstack is a very popular cloud computing platform that has enabled several organizations during the last few years to successfully implement their infrastructure as a service iaaS platforms this book will guide you through new features of the latest openstack releases and how to bring them into production straightaway in an agile way it starts by showing you how to expand your current openstack setup and how to approach your next openstack data center generation deployment you will discover how to extend your storage and network capacity and also take advantage of containerization technology such as docker and kubernetes in openstack additionally you ll explore the power of big data as a service terminology implemented in openstack by integrating the sahara project this book will teach you how to build hadoop clusters and launch jobs in a very simple way then you ll automate and deploy applications on top of openstack you will discover how to write your own plugin in the murano project the final part of the book will go through best practices for security such as identity access management and authentication exposed by keystone in openstack by the end of this book you will be ready to extend and customize your private cloud based on your requirements what you will learn explore new incubated projects in the openstack ecosystem and see how they work architect your openstack private cloud with extended features of the latest versions consolidate openstack authentication in your large infrastructure to avoid complexity find out how to expand your computing power in openstack on a large scale reduce your openstack storage cost management by taking advantage of external tools provide easy on demand cloud ready applications to developers using openstack in no time enter the big data world and find out how to launch elastic jobs easily in openstack boost your extended openstack private cloud performance through real world scenarios who this book is for this book is for system administrators cloud architects and developers who have experience working with openstack and are ready to step up and extend its functionalities a good knowledge of basic openstack components is required in addition familiarity with linux boxes and a good understanding of network and virtualization jargon is required

The Rise of Maritime Containerization in the Port of Oakland 2000

master core kubernetes concepts important to enterprises from security policy and management point of view learn to deploy a service mesh using istio build a ci cd platform and provide enterprise security to your clusters key features extensively revised edition to cover the latest updates and new releases along with two new chapters to introduce istio get a firm command of kubernetes from a dual perspective of an admin as well as a developer understand advanced topics including load balancing externaldns global load balancing authentication integration policy security auditing backup istio and ci cdbook description kubernetes has taken the world by storm becoming the standard infrastructure for devops teams to develop test and run applications with significant updates in each chapter this revised edition will help you acquire the knowledge and tools required to integrate kubernetes clusters in an enterprise environment the book introduces you to docker and kubernetes fundamentals including a review of basic kubernetes objects you ll get to grips with containerization and understand its core functionalities such as creating ephemeral multinode clusters using kind the book has replaced podsecuritypolicies psp with opa gatekeeper for psp like enforcement you ll integrate your container into a cloud platform and tools including metallb externaldns openid connect oidc open policy agent opa falco and velero after learning to deploy your core cluster you ll learn how to deploy istio and how to deploy both monolithic applications and microservices into your service mesh finally you will discover how to deploy an entire gitops platform to kubernetes using continuous integration and continuous delivery ci cd what you will learn create a multinode kubernetes cluster using kind implement ingress metallb externaldns and the new sandbox project k8s configure a cluster oidc and impersonation deploy a monolithic application in istio service mesh map enterprise authorization to kubernetes secure clusters using opa and gatekeeper enhance auditing using falco and eck back up your workload for disaster recovery and cluster migration deploy to a gitops platform using tekton gitlab and argocd who this book is for this 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

DevOps with Kubernetes 2017-10-16

in april 1956 a refitted oil tanker carried fifty eight shipping containers from newark to houston from that modest beginning container shipping developed into a huge industry that made the boom in global trade possible the box tells the dramatic story of the container s creation the decade of struggle before it was widely adopted and the sweeping economic consequences of the sharp fall in transportation costs that containerization brought about published on the fiftieth anniversary of the first container voyage this is the first comprehensive history of the shipping container it recounts how the drive and imagination of an iconoclastic entrepreneur malcom mclean turned containerization from an impractical idea into a massive industry that slashed the cost of transporting goods around the world and made the boom in global trade possible but the container didn t just happen its adoption required huge sums of money both from private investors and from ports that aspired to be on the leading edge of a new technology it required years of high stakes bargaining with two of the titans of organized labor harry bridges and teddy gleason as well as delicate negotiations on standards that made it possible for almost any container to travel on any truck or train or ship ultimately it took mclean s success in supplying u s forces in vietnam to persuade the world of the container s potential drawing on previously neglected sources economist marc levinson shows how the container transformed economic geography devastating traditional ports such as new york and london and fueling the growth of previously obscure ones such as oakland by making shipping so cheap that industry could locate factories far from its customers the container paved the way for asia to become the world s workshop and brought consumers a previously unimaginable variety of low cost products from around the globe

The Impact of Containerization on the New York City Region 2017

orchestrate and manage large scale docker deployments with kubernetes to unlock greater control over your infrastructure and extend your containerization strategyabout this book learn the fundamentals of kubernetes how it works and how it fits into the growing containerization trend integrate kubernetes into your workflow alongside continuous delivery tools to address today s operational challenges get to grips with a wide range of tools to help you monitor and secure your deploymentswho this book is forif you have some experience with docker and want to get more from containerization this book is the perfect place to start focused on helping you take control of your deployments in a simple way you ll soon find out how to transform your operations for greater organizational and technical agility what you will learn download install and configure the latest version of kubernetes perform smooth updates and patches with minimal downtime streamline the way you deploy and manage your applications with large scale container orchestration find out how kubernetes can simplify the way you configure your clusters and networks learn why the open container initiative is so important for the way you manage your infrastructure discover third party tools that can enhance your production operations explore and use the most persistent storage options for your clusterter integrate kubernetes with continuous delivery tools such as gulp and jenkinsin detailkubernetes is the tool that s pushing the containerization revolution largely driven by docker to another level if docker has paved the way for greater agility and control in the way we organize and manage our infrastructure kubernetes goes further by helping you to orchestrate and automate container deployments on a massive scale kubernetes really does think big and it s time you did too this book will show you how to start doing exactly that showing you how to extend the opportunities that containerization innovations have brought about in new and even more effective ways get started with the basics explore the fundamental elements of kubernetes and find out how to install it on your system before digging a little deeper into kubernetes core constructs find out how to use kubernetes pods services replication controllers and labels to manage your clusters effectively and learn how to handle networking with kubernetes once you ve got to grips with these core components you ll begin to see how kubernetes fits into your workflow from basic updates to integrating kubernetes with continuous delivery tools such as jenkins and gulp the book demonstrates exactly how kubernetes will transform the way you work with further insights on how to install monitoring and security tools this book provides you with a direct route through kubernetes so you can take advantage of it fast style and approachthis straightforward guide will help you understand how to move your container applications into production through best practices and step by step walkthroughs tied to real world operational strategies

Extending OpenStack 2018-02-27

the report provides empirical evidence about the misuse of container ships in international trade in counterfeits it also suggests the main routes of trade with containers polluted with illicit trade

Kubernetes – An Enterprise Guide 2021-12-22

unlock the full potential of the docker containerization platform with this practical guide key features explore tools such as docker engine machine compose and swarm discover how you can integrate docker into your everyday workflows get well versed with kubernetes options such as minikube kind and microk8s book description docker has been a game changer when it comes to how modern applications are deployed and created it has now grown into a key driver of innovation beyond system administration with a significant impact on the world of web development mastering docker shows you how you can ensure that you're keeping up with the innovations it's driving and be sure you're using it to its full potential this fourth edition not only demonstrates how to use docker more effectively but also helps you rethink and reimagine what you can achieve with it you'll start by building managing and storing images along with exploring best practices for working with docker confidently once you've got to grips with docker security the book covers essential concepts for extending and integrating docker in new and innovative ways you'll also learn how to take control of your containers efficiently using docker compose docker swarm and kubernetes by the end of this docker book you'll have a broad yet detailed sense of what's possible with docker and how seamlessly it fits in with a range of other platforms and tools what you will learn get to grips with essential docker components and concepts discover the best ways to build store and distribute container images understand how docker can fit into your development workflow secure your containers and files with docker's security features explore first party and third party cluster tools and plugins launch and manage your kubernetes clusters in major public clouds who this book is for if you are a software architect devops engineer sysadmin or it professional looking to leverage docker's extensive features for innovating any process from system administration to web development mastering docker will show you how you can use it to its full potential a basic understanding of containerization and prior docker experience is necessary

The Box 2008-01-27

usa booklet forecasting the effects of technological change in goods transportation activities in the sea transport industry on port activities in new york and new jersey outlines technical aspects of containerisation and its impact on trade volume port installations etc

Getting Started with Kubernetes 2015-12-21

updated to cover docker version 1.10 docker is quickly changing the way that organizations are deploying software at scale but understanding how linux containers fit into your workflow and getting the integration details right are not trivial tasks with this practical guide you'll learn how to use docker to package your applications with all of their dependencies and then test ship scale and support your containers in production two lead site reliability engineers at new relic share much of what they have learned from using docker in production since shortly after its initial release their goal is to help you reap the benefits of this technology while avoiding the many setbacks they experienced learn how docker simplifies dependency management and deployment workflow for your applications start working with docker images containers and command line tools use practical techniques to deploy and test docker based linux containers in production debug containers by understanding their composition and internal processes deploy production containers at scale inside your data center or cloud environment explore advanced docker topics including deployment tools networking orchestration security and configuration

Illicit Trade Misuse of Containerized Maritime Shipping in the Global Trade of Counterfeits 2021-02-22

container shipping is a vital part of the global economy goods from all around the world from vegetables to automobiles are placed in large metal containers which are transported across the ocean in ships then loaded onto tractor trailers and railroad flatbeds but when and where did this world changing invention get started this fascinating study traces the birth of containerization to port newark new jersey in 1956 when trucker malcom mclean thought of a brilliant new way to transport cargo it tells the story of how port newark grew rapidly as mclean's idea was backed by both new york banks and the us military who used containerization to ship supplies to troops in vietnam angus gillespie takes us behind the scenes of today's active container shipping operations in port newark talking to the pilots who guide the ships into port the coast guard personnel who help manage the massive shipping traffic the crews who unload the containers and even the chaplains who counsel and support the mariners port newark shines a spotlight on the unsung men and women who help this complex global shipping operation run smoothly since

mclean s innovation port newark has expanded with the addition of the nearby elizabeth marine terminal this new jersey complex now makes up the busiest seaport on the east coast of the united states some have even called it america s front door the book tells the story of the rapid growth of worldwide containerization and how port newark has adapted to bigger ships with deeper channels and a raised bridge in the end there is speculation of the future of this port with ever increasing automation artificial intelligence and automation

Containers, Towards a New Generation of Inland and Maritime Loading Units 1993

design deploy and manage large scale containers using kubernetes key featuresgain insight into the latest features of kubernetes including prometheus and api aggregationdiscover ways to keep your clusters always available scalable and up to datemaster the skills of designing and deploying large clusters on various cloud platformsbook description if you are running a number of containers and want to be able to automate the way they re managed it can be helpful to have kubernetes at your disposal this learning path guides you through core kubernetes constructs such as pods services replica sets replication controllers and labels you ll get started by learning how to integrate your build pipeline and deployments in a kubernetes cluster as you cover more chapters in the learning path you ll get up to speed with orchestrating updates behind the scenes avoiding downtime on your cluster and dealing with underlying cloud provider instability in your cluster with the help of real world use cases you ll also explore options for network configuration and understand how to set up operate and troubleshoot various kubernetes networking plugins in addition to this you ll gain insights into custom resource development and utilization in automation and maintenance workflows by the end of this learning path you ll have the expertise you need to progress from an intermediate to an advanced level of understanding kubernetes this learning path includes content from the following packt products getting started with kubernetes third edition by jonathan baier and jesse whitemastering kubernetes second edition by gigi sayfanwhat you will learninstall and configure the kubernetes code basecreate and configure custom kubernetes resources use third party resources in your automation workflowsdeliver applications as standard packagesset up and access monitoring and logging for kubernetes clustersset up external access to applications running in the clustermanage and scale kubernetes with hosted platforms on amazon services aws azure and google cloud platform gcp run multiple clusters and manage them from a single control planewho this book is for if you are a developer or a system administrator with an intermediate understanding of kubernetes and want to master its advanced features then this book is for you basic knowledge of networking is required to easily understand the concepts explained

Mastering Docker 2020-10-12

welcome to the world of kubernetes containers and microservices this book is your comprehensive guide to understanding and harnessing the power of these transformative technologies that have revolutionized the way we develop deploy and manage applications in this rapidly evolving landscape of modern application development it is essential to stay informed adapt to new challenges and adopt best practices to leverage the full potential of these technologies in this book we will take you on a journey through the intricacies of kubernetes the foundation of container orchestration and delve into the world of containers and microservices we will explore the benefits of these technologies their evolution and their crucial role in modern software development you will gain a deep understanding of how kubernetes containers and microservices work together to create scalable flexible and resilient applications chapter by chapter we will cover a wide range of topics providing you with a comprehensive understanding of the concepts strategies and best practices that will enable you to get the most out of kubernetes containers and microservices you will learn about their benefits deployment strategies resource management fault tolerance security monitoring and observability we will also discuss their integration with ci cd pipelines hybrid cloud deployments and the future of application development throughout this book we will provide practical tips strategies and recommendations to help you navigate the complexities of these technologies effectively whether you are a developer a devops engineer or an it professional this book will equip you with the knowledge and tools to confidently embrace kubernetes containers and microservices and to build scalable resilient and efficient applications as you progress through each chapter you will gain valuable insights into the nuances and intricacies of these technologies we will present real world examples use cases and best practices to illustrate how organizations are leveraging kubernetes containers and microservices to drive innovation improve development workflows and deliver high quality software at scale it is important to note that this book assumes a basic understanding of containerization cloud computing and software development concepts however even if you are new to these technologies we will provide sufficient context and explanations to help you grasp the fundamental concepts and principles so whether you are embarking on a new containerization journey seeking to enhance your kubernetes skills or looking to optimize your microservices architecture this book will be your trusted companion it is designed to be both a comprehensive reference guide and a practical handbook empowering you to embrace these technologies and make informed decisions in your application development and operations are you ready to dive into the

exciting world of kubernetes containers and microservices let s embark on this journey together and unlock the potential of these technologies to transform your applications and revolutionize your software development practices

Container Shipping: Full Ahead 1967

learn how to deploy and test linux based docker containers with the help of real world use cases key featuresunderstand how to make a deployment workflow run smoothly with docker containerslearn docker and devops concepts such as continuous integration and continuous deployment ci cd gain insights into using various docker tools and librariesbook 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 learnget up to speed with creating containers and understand how they workpackage and deploy your containers to a variety of platformswork with containers in the cloud and on the kubernetes platformdeploy and then monitor the health and logs of running containersexplore best practices for working with containers from a security perspectivebecome familiar with scanning containers and using third party security tools and librarieswho 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

Docker: Up & Running 2015-06-11

master core kubernetes concepts important to enterprises from security policy and management point of view learn to deploy a service mesh using istio build a ci cd platform and provide enterprise security to your clusters key features extensively revised edition to cover the latest updates and new releases along with two new chapters to introduce istio get a firm command of kubernetes from a dual perspective of an admin as well as a developer understand advanced topics including load balancing externaldns global load balancing authentication integration policy security auditing backup istio and ci cdbook descriptionkubernetes has taken the world by storm becoming the standard infrastructure for devops teams to develop test and run applications with significant updates in each chapter this revised edition will help you acquire the knowledge and tools required to integrate kubernetes clusters in an enterprise environment the book introduces you to docker and kubernetes fundamentals including a review of basic kubernetes objects you ll get to grips with containerization and understand its core functionalities such as creating ephemeral multinode clusters using kind the book has replaced podsecuritypolicies psp with opa gatekeeper for psp like enforcement you ll integrate your container into a cloud platform and tools including metallb externaldns openid connect oidc open policy agent opa falco and velero after learning to deploy your core cluster you ll learn how to deploy istio and how to deploy both monolithic applications and microservices into your service mesh finally you will discover how to deploy an entire gitops platform to kubernetes using continuous integration and continuous delivery ci cd what you will learn create a multinode kubernetes cluster using kind implement ingress metallb externaldns and the new sandbox project k8gbconfigure a cluster oidc and impersonation deploy a monolithic application in istio service mesh map enterprise authorization to kubernetes secure clusters using opa and gatekeeper enhance auditing using falco and eck back up your workload for disaster recovery and cluster migration deploy to a gitops 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

Port Newark and the Origins of Container Shipping 2022-10-14

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

Containerization 1959

discover the methodologies and best practices for getting started with container services monitoring using prometheus appdynamics and dynatrace the book begins with the basics of working with the containerization and microservices architecture while establishing the need for monitoring and management technologies you ll go through hands on deployment configuration and best practices for prometheus next you ll delve deeper into monitoring of container ecosystems for availability performance and logs and then cover the reporting capabilities of prometheus further you ll move on to advanced topics of extending prometheus including how to develop new use cases and scenarios you ll then use enterprise tools such as appdynamics and wavefront to discover deeper application monitoring best practices you ll conclude with fully automated deployment of the monitoring and management platforms integrated with the container ecosystem using infrastructure as code tools such as jenkins ansible and terraform the book provides sample code and best practices for you to look at container monitoring from a holistic viewpoint this book is a good starting point for developers architects and administrators who want to learn about monitoring and management of cloud native and microservices containerized applications what you will learn examine the fundamentals of container monitoring get an overview of the architecture for prometheus and alert manager enable prometheus monitoring for containers monitor containers using wavefront use the guidelines on container monitoring with enterprise solutions appdynamics and wavefront who this book is for software developers system administrators and devops engineers working for enterprise customers who want to use monitoring solutions for their container ecosystems

The The Complete Kubernetes Guide 2019-05-20

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

Maximizing the Power of Kubernetes, Containers, and Microservices 2023-06-06

get acquainted with the world of lxc about this book get the most practical and up to date resource on lxc and take full advantage of what linux containers can offer in the day to day operations of large scale applications learn how to deploy and administer various workloads such as web applications inside lxc save your organization time and money by building robust and secure containers and by speeding the deployment process of your software who this book is for this book is for linux engineers and software developers who are looking to deploy applications in a fast secure and scalable way for use in testing and production what you will learn deep dive into the foundations of linux containers with kernel namespaces and cgroups install configure and administer linux containers with lxc and libvirt begin writing applications using python libvirt bindings take an in depth look at container networking set up

monitoring and security with lxc build and deploy a highly available application with lxc in the cloud in detail in recent years containers have gained wide adoption by businesses running a variety of application loads this became possible largely due to the advent of kernel namespaces and better resource management with control groups cgroups linux containers lxc are a direct implementation of those kernel features that provide operating system level virtualization without the overhead of a hypervisor layer this book starts by introducing the foundational concepts behind the implementation of lxc then moves into the practical aspects of installing and configuring lxc containers moving on you will explore container networking security and backups you will also learn how to deploy lxc with technologies like open stack and vagrant by the end of the book you will have a solid grasp of how lxc is implemented and how to run production applications in a highly available and scalable way style and approach a practical guide that introduces the core technologies behind linux containers and provides a deep dive into installation configuration and operations of lxc

Docker for Developers *2020-09-14*

enhance your software deployment workflow using containers key features get up and running with basic to advanced concepts of docker get acquainted with concepts such as docker containers docker images orchestrators and so on practical test based approach to learning a prominent containerization tool book description docker containers have revolutionized the software supply chain in small and big enterprises never before has a new technology so rapidly penetrated the top 500 enterprises worldwide companies that embrace containers and containerize their traditional mission critical applications have reported savings of at least 50 in total maintenance cost and a reduction of 90 or more of the time required to deploy new versions of those applications furthermore they are benefitting from increased security just by using containers as opposed to running applications outside containers this book starts from scratch introducing you to docker fundamentals and setting up an environment to work with it then we delve into concepts such as docker containers docker images docker compose and so on we will also cover the concepts of deployment orchestration networking and security furthermore we explain docker functionalities on public clouds such as aws by the end of this book you will have hands on experience working with docker containers and orchestrators such as swarmkit and kubernetes what you will learn containerize your traditional or microservice based application 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 via encapsulation networks and secrets know your options when deploying your containerized app into the cloud who this book is for this book is targeted at 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

Kubernetes *2021-12-22*

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

Container Security *2020-04-06*

learn how to schedule and run application containers using kubernetes about this book get well versed with the fundamentals of kubernetes and get it production ready for deployments confidently manage your container clusters and networks using kubernetes this practical guide will show you container application examples throughout to illustrate the concepts and features of kubernetes who this book is for this book is for developers sys admins and devops engineers who want to automate the deployment process and scale their applications you do not need any knowledge about kubernetes what you will learn download install and configure the kubernetes codebase understand the core concepts of a kubernetes cluster be able to set up and access monitoring and

logging for kubernetes clusters set up external access to applications running in the cluster understand how coreos and kubernetes can help you achieve greater performance and container implementation agility run multiple clusters and manage from a single control plane explore container security as well as securing kubernetes clusters work with third party extensions and tools in detail kubernetes has continued to grow and achieve broad adoption across various industries helping you to orchestrate and automate container deployments on a massive scale this book will give you a complete understanding of kubernetes and how to get a cluster up and running you will develop an understanding of the installation and configuration process the book will then focus on the core kubernetes constructs such as pods services replica sets replication controllers and labels you will also understand how cluster level networking is done in kubernetes the book will also show you how to manage deployments and perform updates with minimal downtime additionally you will learn about operational aspects of kubernetes such as monitoring and logging advanced concepts such as container security and cluster federation will also be covered finally you will learn about the wider kubernetes ecosystem with ocp coreos and tectonic and explore the third party extensions and tools that can be used with kubernetes by the end of the book you will have a complete understanding of the kubernetes platform and will start deploying applications on it style and approach this straightforward guide will help you understand how to move your container applications into production through best practices and a step by step walkthrough tied to real world operational strategies

Monitoring Microservices and Containerized Applications 2020-10-01

learn how to automate and manage your containers and reduce the overall operation burden on your system key features use containers to manage scale and orchestrate apps in your organization transform the latest concept of kubernetes 1.10 into examples expert techniques for orchestrating containers effectively book description kubernetes is an open source orchestration platform to manage containers in a cluster environment with kubernetes you can configure and deploy containerized applications easily this book gives you a quick brush up on how kubernetes works with containers and an overview of main kubernetes concepts such as pods deployments services and etc this book explains how to create kubernetes clusters and run applications with proper authentication and authorization configurations with real world recipes you ll learn how to create high availability kubernetes clusters on aws gcp and in on premise datacenters with proper logging and monitoring setup you ll also learn some useful tips about how to build a continuous delivery pipeline for your application upon completion of this book you will be able to use kubernetes in production and will have a better understanding of how to manage containers using kubernetes what you will learn build your own container cluster deploy and manage highly scalable containerized applications with kubernetes build high availability kubernetes clusters build a continuous delivery pipeline for your application track metrics and logs for every container running in your cluster streamline the way you deploy and manage your applications with large scale container orchestration who this book is for this book is for system administrators developers devops engineers or any stakeholder who wants to understand how kubernetes works using a recipe based approach basic knowledge of kubernetes and containers is required

Practical Docker with Python 2018-07-26

Containerization with LXC 2017-02-28

Bulletin of the United States Bureau of Labor Statistics 1913

Readings in Canadian Industrial Relations 1974

Learn Docker - Fundamentals of Docker 18.x 2018-04-26

Kubernetes Patterns 2019-04-09

Getting Started with Kubernetes *2017-05-31*

Kubernetes Cookbook 2018-05-30

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