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Nota di contenuto	Cover -- Title Page -- Copyright and Credits -- Contributors -- About the reviewers -- Table of Contents -- Preface -- Part 1: Containers, Kubernetes, and DevOps for Hybrid Cloud -- Chapter 1: Adopting the Right Strategy for Building a Hybrid Cloud -- Exploring cloud computing -- types and service delivery models -- Defining the hybrid cloud -- Variations in the hybrid cloud -- homogeneous and heterogeneous -- Hybrid cloud use cases -- Understanding the benefits of hybrid cloud computing -- Hybrid cloud strategies -- Addressing compliance considerations -- Automating security measures Finding the right balance between public and private clouds -- Evaluating available tools and technologies -- Summary -- Further reading -- Chapter 2: Dealing with VMs, Containers, and Kubernetes -- Introduction to VM and containers -- VMs -- Containers -- Anatomy of containers -- About OCI and Docker -- The differences between VMs and containers -- Container orchestration -- Why do we need container orchestration? -- Kubernetes -- a container orchestration tool -- OpenShift -- AWS EKS -- Azure Kubernetes Service (AKS) --

VMware Tanzu Kubernetes Grid (TKG) -- HashiCorp Nomad
Google Kubernetes Engine (GKE) -- Docker Swarm -- CI/CD on the hybrid cloud -- Summary -- Further reading -- Chapter 3: Provisioning Infrastructure with IaC -- Infrastructure provisioning overview -- Virtualizing hardware with SDI -- Provisioning IaaS -- Provisioning and managing infrastructure with IaC -- Imperative and declarative frameworks -- Imperative and declarative framework tools for IaC -- Considerations for IaC -- Accelerating IT service delivery with DevOps -- CI/CD -- Continuous testing -- Continuous operations -- Monitoring and observability
Automating delivery and deployment with GitOps -- Push versus pull deployments -- Enabling GitOps using Argo CD -- Best practices for GitOps -- Summary -- Further reading -- Chapter 4: Communicating across Kubernetes -- Pod design patterns -- The sidecar pattern -- The adapter pattern -- The ambassador pattern -- Container-to-container communication -- Pod-to-pod communication -- Pods with multiple interfaces -- Pod-to-service communication -- External-to-service communication -- How to discover pods and services -- How to publish services -- How to stitch multiple K8s clusters
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Accelerate your career growth by building dynamic applications that function across all environments and cloud types Purchase of the print or Kindle book includes a free PDF eBook Key Features Learn hybrid cloud architecture from experienced cloud and telco architects Adapt and deploy emerging technologies like AI and ML in a standardized and secure manner Master communication between Kubernetes clusters and management Book Description Hybrid cloud technology can be leveraged by organizations aiming to build next-gen applications while safeguarding prior technological investments. This book will help you explore different hybrid cloud architectural patterns, whether designing new projects or migrating legacy applications to the cloud. You'll learn about the key building blocks of hybrid cloud enabling you to deploy, manage, and secure applications and data while porting the workloads between environments without rebuilding. Further, you'll explore Kubernetes, GitOps, and Layer 3/7 services to reduce operational complexity. You'll also learn about nuances of security and compliance in hybrid cloud followed by the economics of hybrid cloud. You'll gain a deep understanding of the concepts with use cases from telecom 5G and industrial manufacturing, giving you a glimpse into real industry problems resolved by hybrid cloud, and unlocking millions of dollars of opportunities for enterprises. By the end of this book, you'll be well-equipped to design and develop efficient hybrid cloud strategies, lead conversations with senior IT and business executives, and succeed in hybrid cloud implementation or transformation opportunities. What you will learn Design and build a foundation for hybrid cloud platform Leverage Kubernetes, containers, and GitOps for hybrid cloud Use architectural pattern blueprints to deliver applications on hybrid cloud Enable communication between applications hosted on different clouds Rollout zero-touch provisioning and monitoring in a hybrid architecture Enhance stability and scale up or down without rebuilding

apps Understand principles of hybrid cloud security for application stack Design cost-optimized systems based on the economics of hybrid cloud Who this book is for This book is for cloud architects, developers, and DevOps engineers, responsible for delivering modern applications and deploying resources anywhere. Professionals aspiring to implement distributed and cloud solutions will also benefit from reading this book. Basic understanding of VM, containers, CI/CD and familiarity with public cloud and edge is a must.