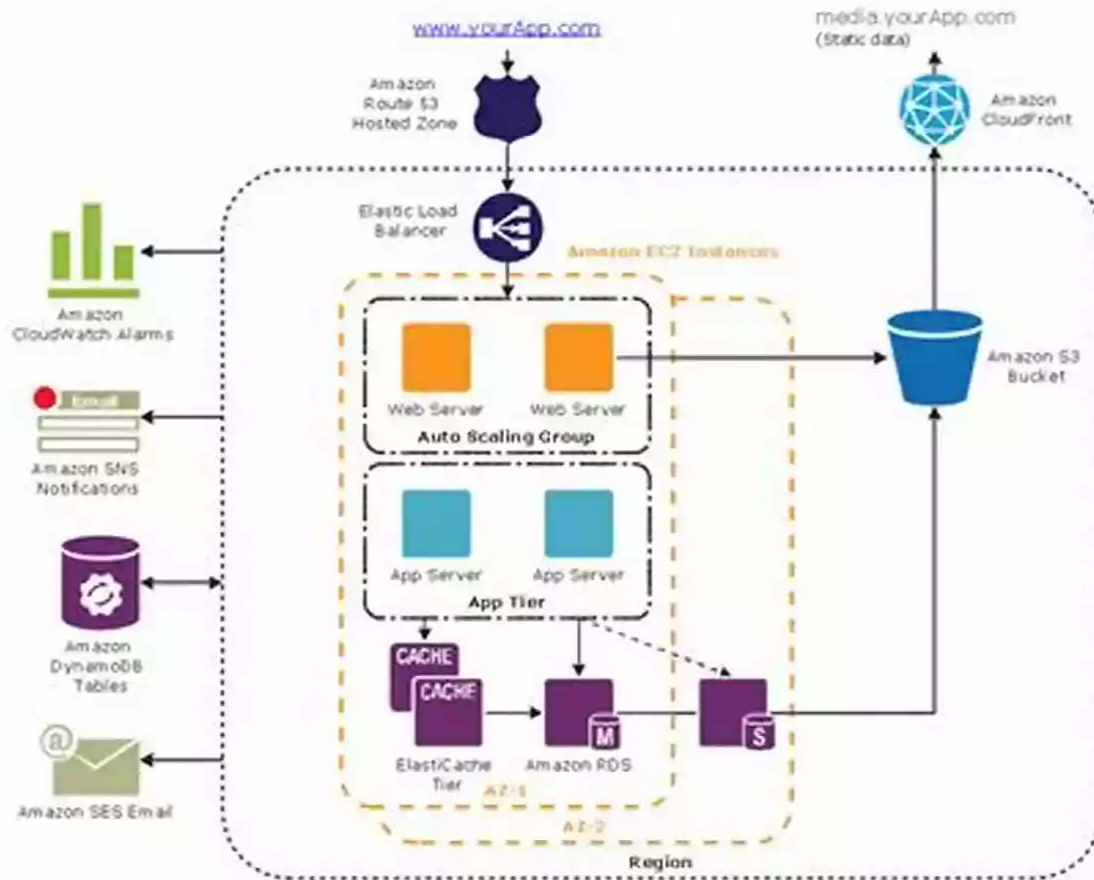


Practical Guide To Understand How To Build Virtual Datacenter Into The AWS Cloud



Welcome to our comprehensive guide on building a virtual datacenter in the AWS Cloud. If you are just starting out or looking to enhance your knowledge about cloud infrastructure, you have come to the right place. In this article, we will provide you with a step-by-step practical guide to understand how to build a virtual datacenter into AWS, utilizing its robust cloud computing capabilities.

Chapter 1: to the AWS Cloud

Before we dive into the details, let's first understand what the AWS Cloud is and how it can benefit your organization. The AWS Cloud is a secure and scalable

cloud computing platform provided by Amazon Web Services (AWS). It offers a wide range of services that enable businesses to build and deploy applications, without the need for upfront investments in physical infrastructure.



AWS Networking Fundamentals: A Practical Guide to Understand How to Build a Virtual Datacenter into the AWS Cloud

by Mona Lisa Harding([Print Replica] Kindle Edition)

★★★★★ 5 out of 5

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In this chapter, we will explore the various services provided by AWS, including Elastic Compute Cloud (EC2), Simple Storage Service (S3), Virtual Private Cloud (VPC), and many more. We will also discuss the benefits of using the AWS Cloud, such as cost-effectiveness, scalability, and enhanced security.

Chapter 2: Planning Your Virtual Datacenter

Building a virtual datacenter requires careful planning and consideration of your organization's specific requirements. In this chapter, we will walk you through the necessary steps to plan and design your virtual datacenter within the AWS Cloud. We will discuss topics like choosing the right AWS region, determining the required resources, and defining your networking and security policies.

Additionally, we will explore the concept of Availability Zones (AZs) and how you can design your datacenter to achieve high availability and fault tolerance. By the end of this chapter, you will have a clear understanding of the key factors involved in planning your virtual datacenter.

Chapter 3: Setting Up Your Virtual Datacenter

Once you have defined your virtual datacenter's blueprint, it's time to put it into action. In this chapter, we will guide you through the process of setting up your virtual datacenter within the AWS Cloud. We will provide detailed instructions, along with screenshots, on how to create a VPC, launch EC2 instances, configure network gateways, and establish secure connectivity between your datacenter and the AWS Cloud.

You will also learn about the best practices for managing your virtual datacenter, including monitoring performance, optimizing costs, and implementing automated backups. By following the step-by-step instructions in this chapter, you will have your virtual datacenter up and running in no time.

Chapter 4: Data Storage and Backup Strategies

One of the essential aspects of a virtual datacenter is data storage and backup. In this chapter, we will discuss the various storage services offered by AWS, such as S3, Elastic Block Store (EBS), and Glacier. We will guide you on how to choose the right storage options based on your data requirements, performance needs, and budget.

Additionally, we will delve into backup strategies and explore the AWS services that can help you in implementing robust data backup solutions. We will cover topics like automated backups, lifecycle policies, and disaster recovery options.

By the end of this chapter, you will have a comprehensive understanding of how to ensure the safety and availability of your data within the virtual datacenter.

Chapter 5: Security and Compliance

Security is a top concern when it comes to the cloud. In this chapter, we will focus on the security measures you should implement to protect your virtual datacenter in the AWS Cloud. We will discuss topics like Identity and Access Management (IAM), network security groups, encryption, and compliance standards.

You will gain insights into best practices for securing your data, setting up secure network connections, and implementing strong access controls. By implementing the security measures discussed in this chapter, you can ensure the confidentiality, integrity, and availability of your virtual datacenter.

Chapter 6: Monitoring and Optimization

The final chapter of our guide will focus on monitoring and optimizing your virtual datacenter in the AWS Cloud. We will explore the tools and services provided by AWS to monitor the performance and health of your resources. Additionally, we will discuss techniques for optimizing costs, such as rightsizing instances, implementing automated scaling, and utilizing AWS Trusted Advisor for cost optimization recommendations.

By the end of this chapter, you will have the necessary knowledge to monitor and optimize your virtual datacenter, ensuring efficiency and cost-effectiveness.

Building a virtual datacenter in the AWS Cloud can be a complex task, but with proper guidance and understanding, it becomes a manageable and rewarding process. In this article, we have provided you with a practical guide to understand how to build a virtual datacenter in the AWS Cloud.

We hope that this guide has given you valuable insights into the key concepts, planning, setup, storage and backup strategies, security measures, and monitoring techniques involved in building and managing a virtual datacenter.

Remember, the AWS Cloud offers endless possibilities, and by leveraging its features effectively, you can create a powerful and scalable infrastructure for your organization. So, embrace the cloud and embark on your journey to build a virtual datacenter in the AWS Cloud today!



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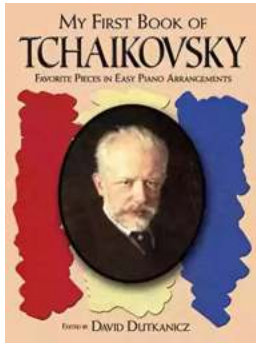
The first chapter explains how you can start your virtual Datacenter, Virtual Private Cloud (VPC). You will learn what AWS Regions and Availability Zones (AZ) are and how you create subnets within AZ. The second chapter introduces a Mapping-Service, the Control-Plane of AWS. It also discusses Data-Plane operation and VPC encapsulation. The third chapter explains how you create a public subnet, from where EC2 instances have a bi-directional Internet connection through the Internet Gateway (IGW). The fourth chapter introduces the concept of a private subnet. It also explains how to allow egress-only Internet connection from the private subnet through a NAT Gateway (NGW). The fifth

chapter shows how to build a VPN connection from an on-prem Datacenter to your VPC using a VPC-specific Virtual Private Gateway (VGW). The sixth chapter introduces a Transit Gateway (TGW) service that allows regional inter-VPC traffic and a multi-VPC VPN connection from a remote site. The seventh chapter discusses how to implement VPC segmentation using TGW route tables. Chapter eight introduces how to enable inter-region VPC traffic flows using Transit GW peering. The ninth chapter introduces a unidirectional VPC peering solution. Chapter 10 explains how to build an application-specific, bi-directional inter-VPC PrivateLink using Network Load Balancer. The last five chapters focus on the AWS Direct Connect (DX) connection. Chapter 11 explains how you order a cross-connect connection between the AWS device and the customer device located in AWS Direct Connect Location. This chapter also introduces how to create AWS Direct Connect Gateway (DXGW) and how you build BGP peering between DXGW and customer devices. Chapter 12 introduces AWS Hosted Direct Connect connection. It explains how AWS Direct Connect Partners offers a cross-connection from the AWS Direct Connect Partner using their infrastructure. Because some AWS DCPs used BGP EVPN/VXLAN Fabric for their Hosted Direct Connect service, this chapter also introduces the BGP EVPN based MAC address learning process and explains how the VXLAN Data-Plane traffic forwarding works. Chapter 13 introduces how we can affect to egress path selection process on AWS Direct Connect Gateway (DXGW) using BGP route aggregation, BGP AS-Path Prepending, and BGP Communities. Chapter 14 introduces a Direct Connect SiteLink service that enables site-to-site traffic over DX connections terminated into the same DXGW. It also explains how to migrate an existing Corporate inter-site WAN connection to AWS BackBone. The last chapter introduces how to use an AWS Direct Connect connection (DX) and a Public Virtual Interface (P-VIF) for accessing AWS Public Service.



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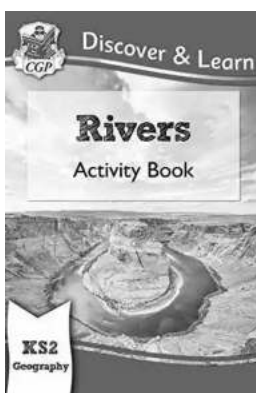
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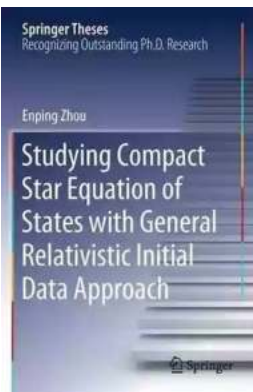
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