CompTIA Cloud+, Part 4 of 8: Virtualization in the Cloud

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Meet the expert: Patrick Loner has certifications for MCSA, MCSE, MCITP, A+, Network+, Security+, and more. He has been working as a Microsoft Certified Trainer, network administrator, and network consultant for over ten years. He has over a decade of experience working with and teaching about Windows networks with client and server operating systems. He has guided many students toward Microsoft and CompTIA certifications. Most recently, he has worked as a freelance trainer and network consultant specializing in Windows Server 2008 and Microsoft Exchange 2007 and Exchange 2010 implementations, design, and upgrades. Patrick continues to branch out now working with and training on Windows Server 2012, Windows 8, Exchange 2013, and System Center Configuration Manager 2012.

Prerequisites: This course assumes you are familiar with the basic concepts of cloud computing, either from completing CompTIA Cloud+ Part 1 course or through outside study.

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Course description: A key component in the cloud computing environment is virtualization. This course will explore the basics of virtualization, beginning with an overview of the individual components, as well as take a deeper dive into some of the more important components including the hypervisor, or the host system. Discover how to configure particular virtualization hosts to support the migration of virtual machines and applications, and learn more about the benefits of virtualization in the cloud and where to begin with migrating your existing infrastructures.

Course outline:

Virtualization Overview
- Introduction
- Virtualization Overview
- The IT Landscape
- Virtualization Advantages
- Virtualization Components
- Summary

Understanding Hypervisors
- Introduction
- Understanding Hypervisors
- Type 1 Hypervisor
- Type 2 Hypervisor
- Type 1 Advantages
- Proprietary vs. Open-Source
- Summary

Configuring Virtualization Hosts
- Introduction
- Configuring Virtualization Hosts
- Hardware-Assisted Virtualization
- Sizing the Virtualization Host
- Summary

Creating and Configuring Virtual Machines
- Introduction
- Creating and Configuring Virtual Machines
- Virtual Machine Components
- Virtual Hard Disks
- Thin Provisioning
- Virtual NIC and Virtual Switch
- Memory
- Storage Virtualization
- Guest Tools
- Summary

Using Virtulaization in the Cloud
- Introduction
- Using Virtualization in the Cloud
- Shared Resources
- Elascticity
- More Benefits of Virtualization
- Summary

Migrating Virtual Resources
- Introduction
- Migrating Virtual Resources
- Virtual Machine Templates
- Physical to Virtual
- Virtual to Physical
- Virtual Machine Cloning
- Migrating Storage
- Migration Considerations
- Summary