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Running Software Applications in the Cloud: Possibilities and Considerations

Short Answer Key

1. Virtual machines and containers are technologies that assist in deploying software applications in the cloud. Virtual machines create separate, isolated environments for software, while containers provide lightweight, portable environments. They help ensure software compatibility and efficient resource utilization.
2. Running software applications in the cloud offers benefits like accessibility from anywhere, scalability to match demands, and reduced maintenance. Users can work remotely, and resources can be adjusted to optimize performance and cost.
3. Challenges related to data security and privacy include the responsibility to protect sensitive data in the cloud. Steps to address these challenges include encryption, access controls, and compliance with data privacy regulations.
4. Software applications may face compatibility issues when migrating to the cloud due to differences in the cloud environment, software architecture, or dependencies. Compatibility challenges can be overcome by testing, updates, or using cloud-native alternatives.
5. Cost management is important because cloud services are billed based on usage. Cost optimization strategies include resource scaling, reserved instances, and monitoring resource usage.

