

Cloud Solutions for ABC Animation Studio



**Final Exam**

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ABC Animation Studios leads the animation industry, pushing technical boundaries. Their experienced animation technicians use the latest software to create stunning visuals. However, as the demand for project rendering increases, their current systems face stress.

1.Characteristics of a cloud that will help Company ABC address its problems   
  
Cloud computing offers a compelling answer to ABC's predicament. Scalability: Cloud computing provides the ability to scale computing assets up or down primarily based on call for. During rendering spikes, ABC can quickly allocate extra processing strength to address the in depth duties. Conversely, during idle intervals, they are able to cut back to store charges.

1. Elasticity cloud resources exhibit remarkable elasticity. ABC can rapidly provision these resources for rendering tasks and then release them just as quickly, ensuring optimal resource utilization.
2. Scalability: Cloud computing provides the ability to scale computing assets up or down primarily based on call for. During rendering spikes, ABC can quickly allocate extra processing strength to address the in depth duties.
3. Resource Optimization: Cloud systems optimize resource allocation, making sure green utilization. ABC can allocate computing electricity exactly when needed, heading off wastage during idle periods. (ODEN-IKPI, 2023)

2. The cloud delivery model that would be best suited for ABC

Perhaps the most appropriate cloud delivery model for ABC Animation Studios is Infrastructure as a Service (IaaS). IaaS provides virtualized computing resources over the Internet. This includes servers, storage, networking, and other infrastructure components. Users can assign these features and manage them as needed.  
Applicability to ABC Animation Studios:

* ABC can use IaaS to delegate tasks during peak times. Instead of managing an expensive on-premise server farm, a virtual server can be leased from a cloud provider.
* IaaS ABC can scale computing power up or down based on its rendering requirements. In spikes, additional resources can be allocated faster and capacity reduced to save costs during idle periods.
* IaaS gives ABC more control over its virtualized resources than other models such as Platform as a Service (PaaS) or Software as a Service (SaaS). This control is essential for optimizing and maintaining their proprietary animation software and IT environment
* Examples: Amazon EC2, Google Compute Engine, or Microsoft Azure Virtual Machines.

3. The five key workloads the company might consider migrating to the cloud.

While migrating critical business applications (CRM, ERP) is an option, ABC should prioritize work that directly addresses rendering challenges. Here are 5 key cloud services to focus on:

* **Scalable rendering farm:** Move existing rendering to IaaS for on-demand compute power during peak rendering times, by reducing idle hardware costs.
* **Cloud-based development**: Outsource custom animation software development (PaaS/IaaS) for better resource management and streamlined collaboration.
* **Centralized storage and backup**: Use cloud storage for project files and backup, and eliminate ease of access, disaster recovery, and the need for on-premises infrastructure.
* **Advanced collaboration**: Deploy project management communication tools in the cloud for real-time team collaboration across locations.
* **Distributed databases**: Leverage cloud storage and processing capabilities for distributed databases, which can improve animation rendering performance. (What is cloud migration?, n.d.)

4. The migration strategy best suited for each workload identified

ABC can adopt different migration strategies for each workload:

* Mission-Critical Apps (Rehosting): Move these apps with minimal changes ("lift and shift") to benefit from cloud scalability while minimizing disruption.
* Data Backup & Recovery (Hybrid): Keep sensitive data on-premise for compliance, but leverage the cloud for backups, offering a gradual transition with cloud benefits.
* Software Development (Refactoring): Re-architect their custom animation software for the cloud (cloud-native) to optimize performance, scalability, and cost.
* Collaboration Tools (Cloud-to-Cloud): If already using cloud collaboration tools, consider migrating them between cloud providers for better cost or security.
* Rendering Workloads (Multicloud): Utilize multiple cloud providers for rendering-intensive tasks to optimize performance and cost through workload orchestration across platforms. (Khan, 26)

By tailoring the strategy to each workload, ABC can achieve a smooth and successful cloud migration.

5.Considering a migration to AWS Cloud or Microsoft Azure, discuss the vital foundational services you will leverage for the migration.

Choosing between AWS and Azure for cloud migration requires understanding their foundational services. Here's a quick comparison:

* Compute: Both offer on-demand virtual machines (VMs) - EC2 (AWS) and Azure VMs - for scalable compute power.
* Networking: VPC (AWS) and Virtual Networks (Azure) create secure, isolated network environments for your cloud resources.
* Identity & Access Management: IAM (AWS) and Azure AD manage user access and permissions, ensuring security.
* Databases: Both offer managed database services - RDS (AWS) and Azure SQL Database - for popular relational databases.
* Migration Tools: AWS Migration Hub and Azure Migrate help assess workloads, compatibility, and migration costs.
* Additional Considerations: Plan network connectivity, security, data migration using platform-specific tools (DMS for AWS, Azure Database Migration Service), and user access control. Leverage monitoring tools for performance and cost optimization. Ultimately, the best platform (AWS vs Azure) depends on your specific needs and business goals. (Discover, assess, and migrate Amazon Web Services (AWS) VMs to Azure, 2024)

**Conclusion**

ABC Animation Studios can leverage the cloud to address rendering challenges and optimize workflows. By migrating key workloads like rendering farms and development environments, they gain scalability, cost-efficiency, and remote collaboration. Choosing the right cloud delivery model (IaaS) and migration strategy (lift-and-shift, refactoring) for each workload is crucial. AWS and Azure offer foundational services (compute, storage, networking) and migration tools to ease the transition. Ultimately, a successful cloud migration hinges on careful planning, considering workload specifics, compliance needs, and business objectives.

# **References**

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