Amazon Web Services

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## **Workloads**

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| Workload | Business Input | Technical Input |
| **Backend Infrastructure Workloads** | Plan for potential player loads and geographical distribution of players | Utilize cloud resources efficiently, implement load balancing strategies, and deploy scalable infrastructure using tools like Google Kubernetes Engine (GKE). |
| **Game Development Workloads** | Understand market trends and player preferences for graphics quality and game mechanics. | Collaborate with graphic designers and game developers, using appropriate tools for graphics rendering and game logic development. |
| **Storage and Data Management Workloads** | Identify data storage requirements for analytics and future analysis. | Implement structured storage for game activity logs and scoring data, leveraging cloud storage solutions. |
| **Monitoring and Analytics Workloads** | Emphasize performance monitoring and analytics for informed decision-making. | Implement monitoring solutions for server performance, user behavior tracking, and analytics tools for iterative improvements. |

## **Migration Strategy**

Cloud to cloud migration + Lift and shift for various workloads

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| --- | --- |
| Workload | Migration Strategy |
| **Backend Infrastructure Workloads** | Phased life and shift |
| **Game Development Workloads** | Phased life and shift |
| **Storage and Data Management Workloads** | Lift and Shift |
| **Monitoring and Analytics Workloads** | Lift and shift |

## **Migration Tool**

The choice of migration tool for AWS depends on the specific characteristics of your workloads and the migration strategy is adopted. Also, the different configuration matter can include destination type (serverless or containers specific), amount of data, deployment configuration, diversity of workloads, etc.

Some AWS Migration tools are listed as follows:

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| --- | --- |
| Migration Tool | Best Suited for |
| AWS DataSync | Transferring large amounts of game data |
| AWS Migration Hub | Coordinating and tracking multiple migration tasks. |
| AWS Serverless Application Model (SAM) | Migrating specific game features to a serverless architecture |
| CloudEndure Migration | Continuous replication and migration of game servers |
| AWS Server Migration Service | Lift-and-shift migration of virtual machines |

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## **Comparison**

|  |  |  |  |
| --- | --- | --- | --- |
| Aspect | AWS Migration Tool | GCP Migration Tool | Azure Migration Tool |
| Compute Migration | **AWS Server Migration Service (SMS):** Continuous replication for minimal downtime during VM migrations | **Compute Engine Migration:** Simplified migration process for VMs | **Azure Migrate:** Comprehensive assessment and migration of on-premises servers to Azure |
| Database Migration | **AWS Database Migration Service (DMS):** Supports various database engines, minimizing downtime | **Database Migration Service:** Focused on efficient and reliable database migrations | **Azure Database Migration Service:** Online and offline migrations, supporting various database engines |
| Data Transfer | **AWS DataSync:** Efficient and accelerated data transfer with synchronization | **Cloud Storage Transfer Service:** Managed, serverless data transfer for large datasets | **Azure Data Box:** Secure, physical data transfer for massive datasets with simplified migration |
| Hybrid Cloud Solutions | **AWS Outposts, AWS Snow Family:** Hybrid cloud solutions for extending AWS services to on-premises environments | **Anthos:** Hybrid and multi-cloud platform for application modernization | **Azure Arc, Azure Stack:** Extending Azure services and infrastructure to on-premises and edge environments |

## **References**

*Migrate from GCP and Azure to AWS using CloudEndure Migration | Amazon Web Services*. (2023, August 9). Amazon Web Services. <https://aws.amazon.com/blogs/storage/migrate-from-gcp-and-azure-to-aws-using-cloudendure-migration/>

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