Synchronous online gaming architecutre in AWS - Highly Available, Scalable & Elastic to support Millions of Players

The below architecture is intended for online mobile & games. These workloads are a natural fit for running on Amazon Web Services, due to unexpected traffic patterns & high demaning request rates.

From above diagram, Amazon Elasticache is for Redis that provides fully managed solution that enhances robustness and reduces the cost of installing, operating & maintaining a highly available & scalable Redis cluster. Leverage Multi-AZ Elasticache in your game to provide automated disaster recovery & a scalable tier with read replicas if needed.

Amazon Aurora, a MySQL compatible database provides very high read & write throughput, up to 64TB 6-way replicated storage & up to 15 low latency read replicas in Multi-AZ. We recommend Aurora as a fast, scalable robust database if you are using a relational database like MySQL. Gaming customers have sen 2-3x reduction in cost after migration to Aurora.

Amazon DynamoDB provides predictable performance & scalability by high speed, low latency managed No-SQL database.