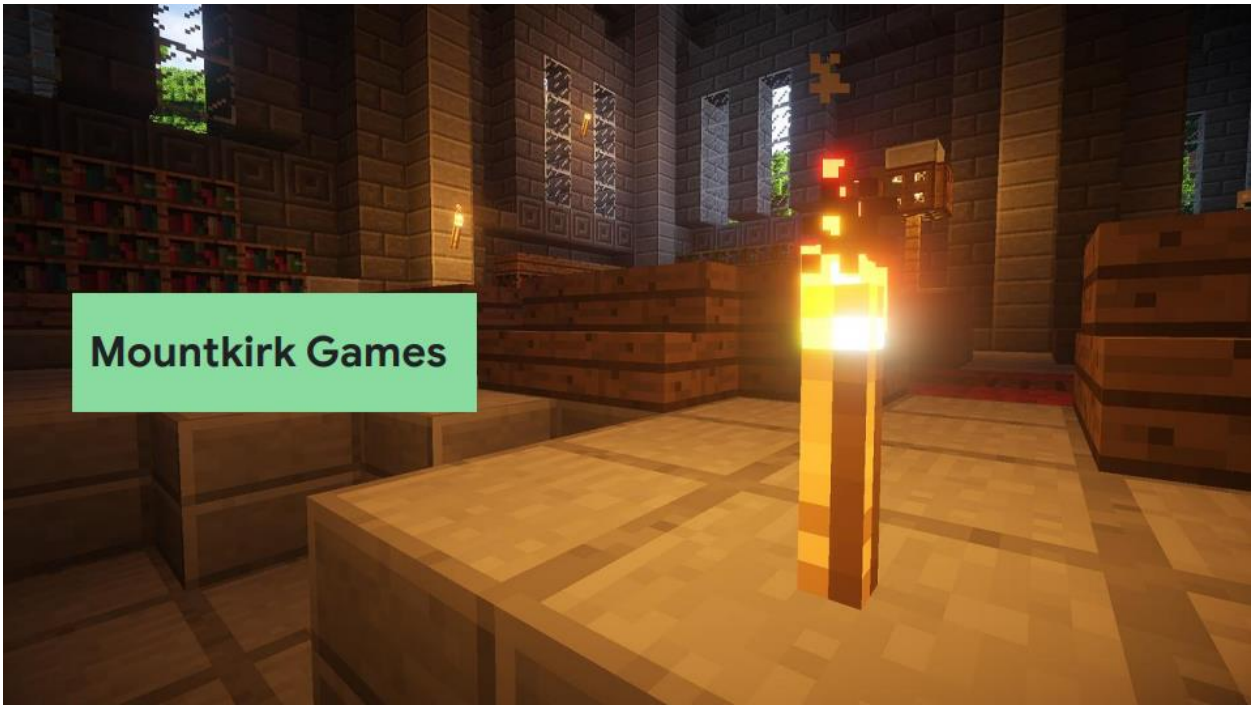

Business Evaluation

Online games platform	Values	Immediate Goals
After initial success with Google Cloud, now want to build all-new games using cloud-native design	● Analyze player behavior and game telemetry ● Online session-based multiplayer games ● Use managed services and pooled resources ● Minimize cost	● Support new gaming platforms beyond mobile ● Rapidly iterate on deployments ● Support hundreds of simultaneous players with global leaderboard

Key business assumptions

Support multiple platforms across multiple regions	Need dynamic scaling to minimize latency and to minimize cost	Potentially different storage solutions for game itself and analytics

Technical Evaluation

Existing Environment	Technical Watch points	Proposed Solution
Existing games migrated to Google Cloud using lift-and-shift VM migrations	Compute ● New game backend to be Google Kubernetes Engine ● Need to scale across regions ● Use GPU processing to render graphics for multi-platform ● Eventual migration of existing games to new platform	● Google Kubernetes Engine ● Global load balancing ● Cloud GPUs
Separate environments for development and testing	Storage ● New game to using a multi-region cluster for global leaderboard	● Cloud Spanner with multi-region configuration
	Data ingestion ● Live metrics from game server ● Game logs stored in structured files for future analysis	● Pub/Sub for buffering of live and late data ● Dataflow for bulk and stream processing ● BigQuery for storage and analytics; this can also contain the 10 TB historic data