

Infrastructure Estimation

Prod Environment (1 region, 2 AZ):

- MyLog BE:
 - 2 AZs x 1 m6g.2xlarge = 2 x m6g.2xlarge = \$0.308/hour * 2
 - Monthly cost: $\$0.308 * 2 * 24 * 30 = \sim \442.08
- Lambda for Log Processing:
 - Lambda costs vary based on the number of executions, memory usage, and execution time. Assuming a generous estimate of 2 billions executions per month with an average memory usage of 128 MB and execution time of 100 ms:
 - Monthly cost: $\sim \$600$
- API Gateway:
 - With 15k logs per second, this totals to approximately 1.296 billion requests per month.
 - API Gateway cost: $1.296 \text{ billion requests} * \$3.50/\text{million requests} = \sim \$4,536$
- Amazon Kinesis Data Streams (KDS):
 - 15,000 logs per second (150 bytes each).
 - Monthly data volume: $\sim 5.92 \text{ TB/month}$.
 - Monthly cost: $5.92 \text{ TB} * \$0.015/\text{GB} = \sim \88.80
- Amazon Kinesis Data Firehose (KDF):
 - KDF delivers data to Redshift.
 - Assuming 5.92 TB/month of data delivery to Redshift.
 - Monthly cost: $\sim \$177.60$
- Amazon Redshift:
 - 2 AZs x 2 x ra3.xlplus = 4 x ra3.xlplus = \$1.086/hour * 4
 - Monthly cost: $\$1.086 * 4 * 24 * 30 = \sim \$3,127.68$
- Amazon QuickSight:
 - Standard pricing for QuickSight includes 1 author and 5 readers. Additional readers are priced per user.
 - Monthly cost: Assume $\sim \$24/\text{month}$ for standard users.

Total Monthly Cost (Prod):

- MyLog BE: $\sim \$442.08$
- Lambda: $\sim \$600$
- API Gateway: $\sim \$4,536$
- Kinesis Data Streams (KDS): $\sim \$88.80$
- Kinesis Data Firehose (KDF): $\sim \$177.60$

- Amazon Redshift: ~\$3,127.68
- QuickSight: ~\$24

Total Monthly Cost: ~\$9000