Migrations under Production Load

How to Switch Your Database without Disrupting Service

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What is a migration?

A CHANGE IN ARCHITECTURE without a change in behavior
0  Justify

1.  Write
2.  Compare
3.  Optimize
4.  Wait & clean up
Feed Migration

- Goal: migrate feed to new dataset
  - new feed delivered via new write path

- Opportunity: clean up stale data
  - data model does not support deletions
  - system that emits references handles deletions

- Opportunity: upgrade hardware
Database Migration

- Problem: mySQL approaching maximum QPS
  - without sharding

- Problem: mySQL writes are too slow
  - queues build up, delaying updates

- Data model bad fit for relational database