

# The Micro-Benchmarks

Cloud Databases

DataLab

CS, NTHU

# The Micro-Benchmarks

- Two types of transactions.
  - Read-only transaction => reads 10 records.
  - Read-write transaction => reads and updates 10 records.
  - The ratio is controlled by **WRITE\_TX\_RATE**.

- The data set is split into two parts.



- 1 is chosen from hot set, 9 are chosen from cold set.
- The number of hot records is control by **OP\_CONFLICT\_RATE**.

# How To Run An Experiment ?

- Here are how we do
  1. Decides which variables should be fixed, what values should be given.
  2. Adjusts loading to gain maximum throughput while keeping low latency.
  3. Run a few experiments by varying one parameter for each implementation.

# Example Throughputs of Assignment 3

- Settings
  - RTE = 10
  - Write Tx Rate = 0.5
  - Conflict Rate = 0.001
- Throughputs (txs/min)

Buffer Size	Basic Version	Optimized Version	Speed Up
100000	111558	174521	56%
100	39285	75164	91%