



CS 237 Final Status Report

Group 4

Tien-Hsin Lin
Meng-Hsuan Chiang
Chuan-Chun Kuo

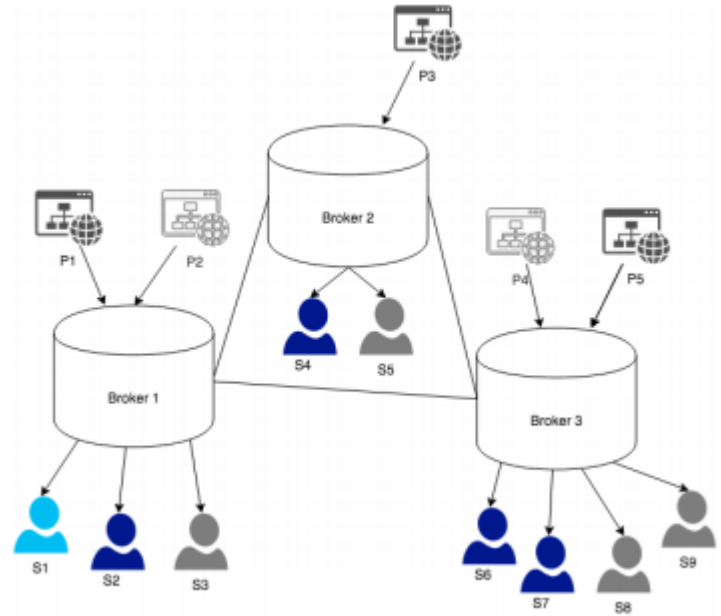


Motivation & Introduction

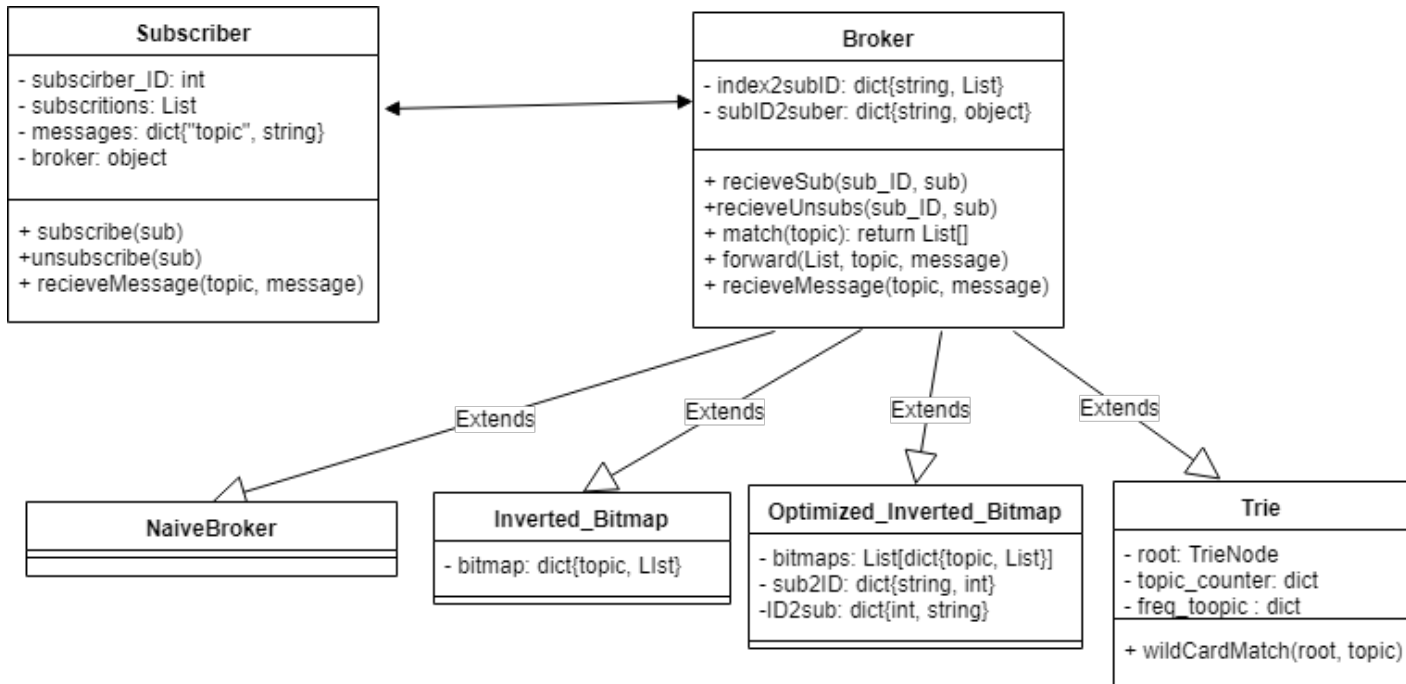
- A common problem in a pub/sub system is how to effectively match topics to interested subscribers.
- The wildcard character “*” is a bottleneck for many message-oriented middleware.
- Our first milestone is to perform 3 different algorithms on a single broker multiple publishers and subscribers system.
- And then compare performance of time and space between them.
- Algorithms
 - Naive
 - Inverted Bitmap
 - Trie

Related Pub/Sub Architecture

- Topic-based pubsub
 - Events are classified according to keywords.
 - Participants publish events and subscribe to individual topics
- Content-based pubsub
 - Message is routed based on its content
- Broker Infrastructure



System Design





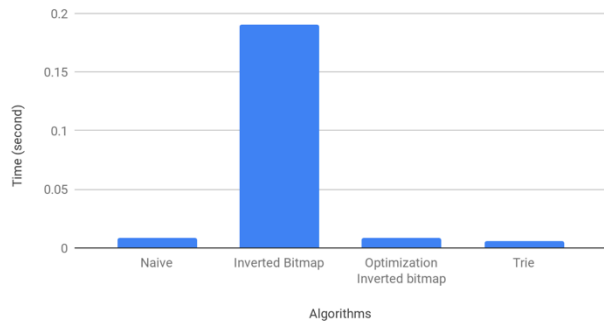
Experiments & Evaluation

- Perform Time Complexity Evaluation among different algorithms
- Perform Space Evaluation among different algorithms
- Compare Algorithm behaviour under different data distribution (uniform vs random)

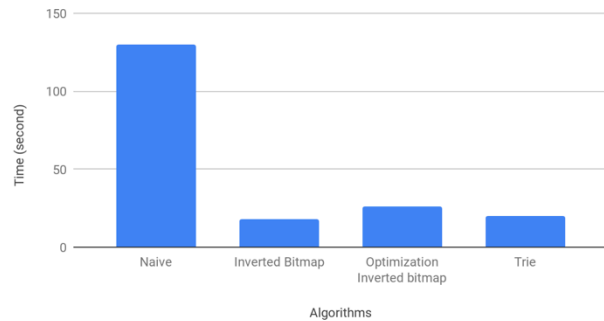


Test Results

Subscription Management



Lookup



Lookup Time for Different Publish Patterns (uniform vs normal)

