Distributed Systems – Fault Tolerance

Lab 1

2022/2023

Naive replication

Attempt to provide fault tolerant operation by having multiple servers for the `lin-kv` service.

Steps

1. Run multiple instances of the same server and recognize the need to propagate updates.

2. Implement and test a simple strategy to keep servers synchronized.

3. Retest with increasing request rate (`--rate`) and network latency (`--latency`).

4. Retest with network partitions (`--nemesis partition`).

5. Discuss problems found and speculate about solutions.

Learning Outcomes Recognize and discuss the challenges of fault tolerant replication.