MD-12
Kafka Zookeeper

We will start at 7:15 AM

Our Day Learning

1) P2P Messenger System design
2) Notification Service

Agenda

1) Zookeeper
2) Kafka

1) Zookeeper

↓

Run file system

Discuss of zookeeper

1) Tracking server status
2) In node down, look for another node
3) Track state changes and trigger some actions
4) Store configuration.

Zookeeper was developed at Yahoo.
Open-source in Apache Foundation.

How zookeeper works

Provides very similar to Unix file system

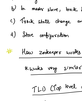
Znode — Store some information

Ephemeral (temporary) — Persistent (Permanent) → Store configs

Ephemeral Znode

/master → IP Address

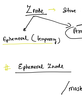
Start a Zookeeper. Master — Store database



- Zookeeper needs to be a highly consistent system

Ephemeral Znode has two types of link :-

1) Leader Election (Lock / Semaphore)
2) Peer-Peer (Lock is released, if the leader exists)



Zookeeper (Java library) → ZK

Architecture

→ Cluster (List of machines)
→ Distributed file system

Replica

Quorum = Majority

Quorum provides with even no. of machines

Majority → Z2 → 2

n → total no of machines should be odd.

Summary

→ Zookeeper is used to track state of machines
→ Zookeeper has concept of znode
→ Znode can be types (Persistent and Ephemeral)
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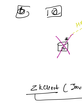
→ Ephemeral Znode → Leader Election, Peer-Peer → TTL/Lease time, Heartbeat

Kafka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