

Three sections

Section-1 — core (Broker, Producer, Consumer)

CH1
...
CH5 } → see II

Section-2 (Additional) (Schema Reg
Kafka stream
KSQLDB
Kafka Connect)

CH-6
...
CH-11

Section-3 (Advance)

CH-12
...
CH-15 } Partitions
Consumer
offset
Testing

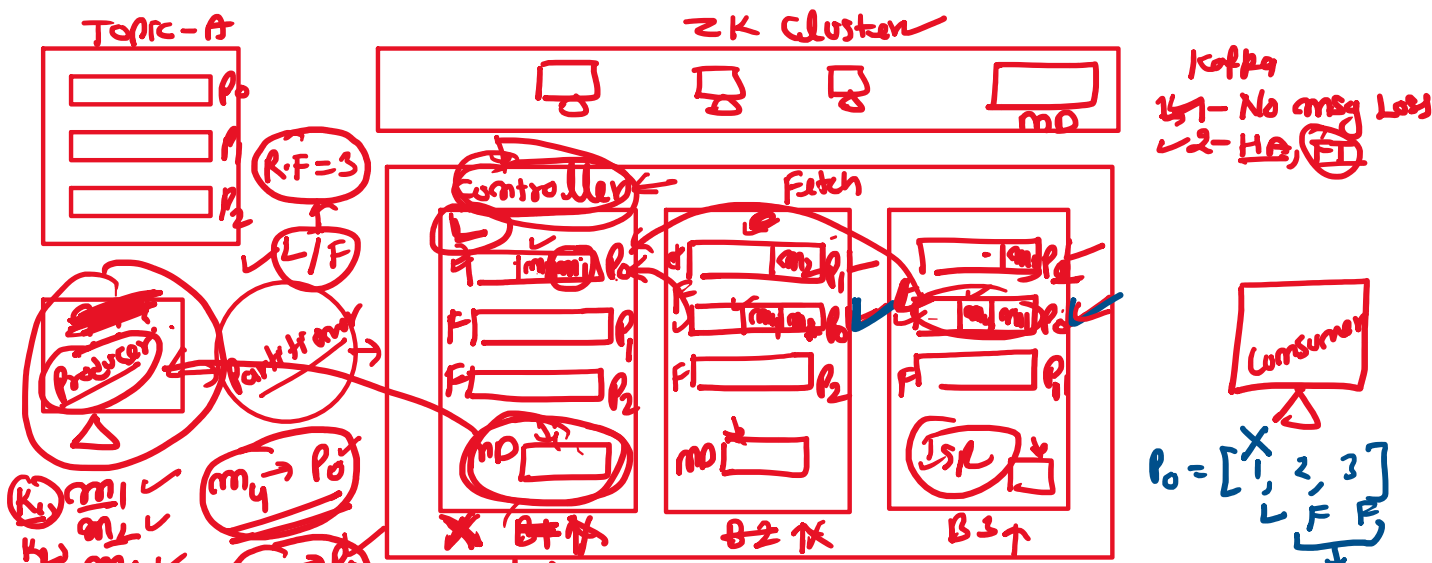
Tea Breaks

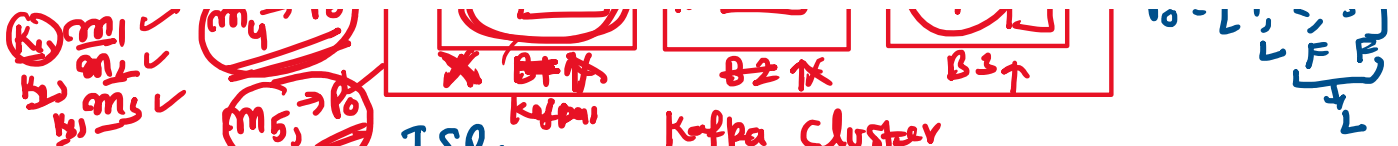
15 min Tea Break 90 mins

Lunch Break

60 mins Lunch Break

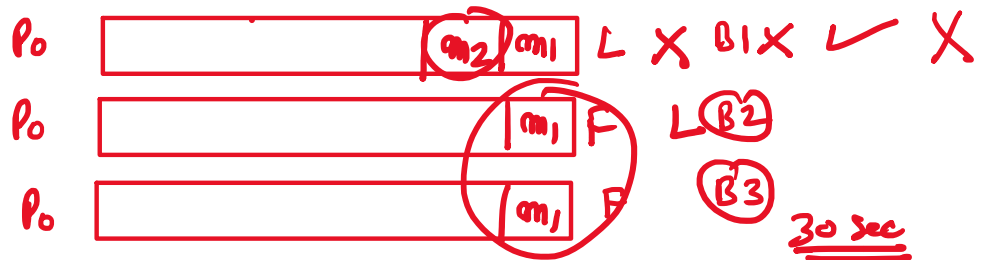
9:00 + 3:00 → ① 12:00 - 1:00 PM ←
→ ② 12:30 - 1:30 PM





ISR $R.F \leq \text{No. of Brokers} = 1, 2, 3$ $R.F \leq 3$

BS = Kafka1: 9092, Kafka2: 9092, Kafka3: 9092



Controller

In-sync-Replica List

ISR = [B1, B2, B3] $\leftarrow m_1$ [
 $\leftarrow m_2$
 ISR = [B1, B2]
 ISR = [B2]
 ISR = [B1, B3]
 ISR = []

ISR = [B2] \rightarrow Leader

ISR = [B1, B3]

Health Check

ISR = []

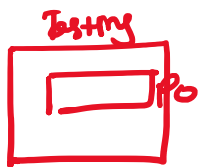
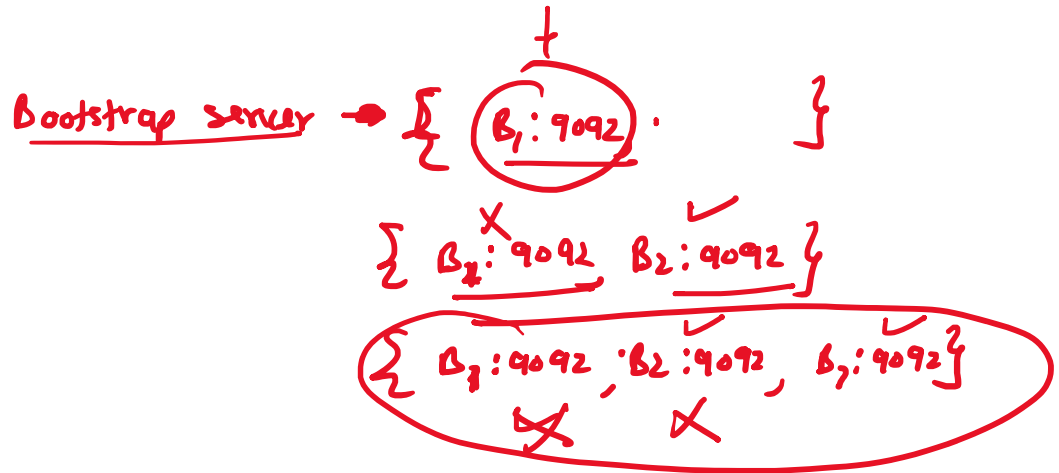
Kafka will not allow to make New leader

Unclean Leader Election = enable = false
 = true

- 1- Broker
- 2- Controller
- 3- ZK
- 4- MD
- 5- R.F. \leftarrow
- 6- L/F \leftarrow
- 7- ISR
- 8- Leader Election

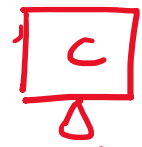
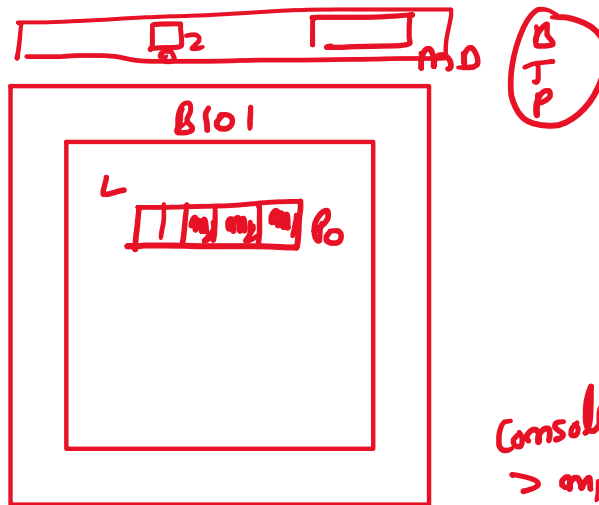
Bootstrap Server

- 7- Isp
- 8- Leader Election
- 9- Unclean Leader Election



Kafka-Console-Producer

> Java-Producer



Console-Consumer

> m1
> m2
> m3

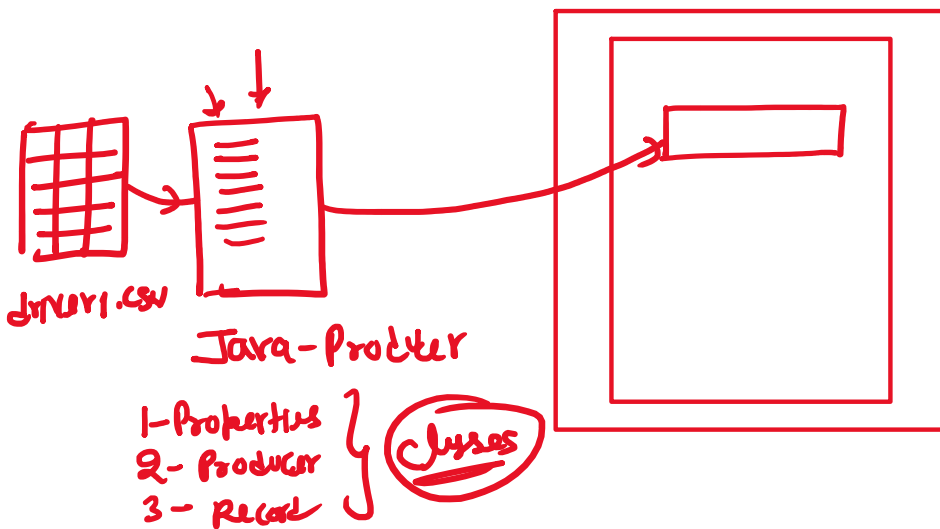


Diagram illustrating a memory hierarchy:

- CPU** (Left): Contains two slots, P_1 and P_2 .
- Cache** (Right): Contains two slots, C_2 and C_3 . C_2 contains a crossed-out box.
- Main Memory** (Bottom): Contains two slots.

Connections (Arrows):

- From P_1 to C_2 .
- From P_2 to C_3 .
- From the top Main Memory slot to C_2 .
- From the bottom Main Memory slot to C_3 .