

# Off-heap memory (pre Kafka ~2.2)

- RocksDB in-memory cache lives outside of the JVM's own heap
- Has potential to grow unbounded
  - In our case, could grow up to 13gb!
- Difficult to debug: JMX metrics, dockerized environments, etc
- Solution: `rocksdb.config.setter`, `-XX:MaxRAMPercentage`

# The joy of manual memory management

- [KAFKA-5122] JIRA issue
- Manually configure **rocksdb.config.setter** instance based on formula described by Jon Buffington
- With the assumption that you have 30 partitions, a 28 day window and 3 segments per window
  - **estimated\_per\_segment (20mb) \* partitions (30) \* segments (3) = 1800mb**
  - Those 30 partitions are distributed among 3 instances = **600mb of potential off-heap memory growth per instance.**