Updated Scaling Plan for PiSync (with Kafka)

You can replace or complement BullMQ/Redis with Kafka for high-throughput event streaming.

Kafka in the PiSync Architecture:

```
[ Device Sync Event ]
       |
[ API Gateway / REST Server ]
       |
[ Kafka Topic: sync-events ]   <- High-throughput event pipeline
       |
[ Kafka Consumer Group ]
       |
[ Workers / Microservices ]
       |
[ MongoDB + Redis + Notification System ]
```

Kafka Benefits for PiSync

Feature	Why It Helps PiSync
High Throughput	Handles 10k+ events/sec easily
Partitioning by device_id	Ordered processing per device
Durable & Replayable	Can reprocess any event from log
Decoupled Architecture	API and consumers are independent

Kafka Consumers (Examples)

- DB Writer Service -> Writes events to MongoDB

- Failure Monitor -> Tracks device sync patterns

- Metrics Exporter -> Sends data to Prometheus

Kafka + Redis Combo

- Use Kafka to ingest and buffer events

- Use Redis to cache latest syncs per device

- Use MongoDB for long-term storage