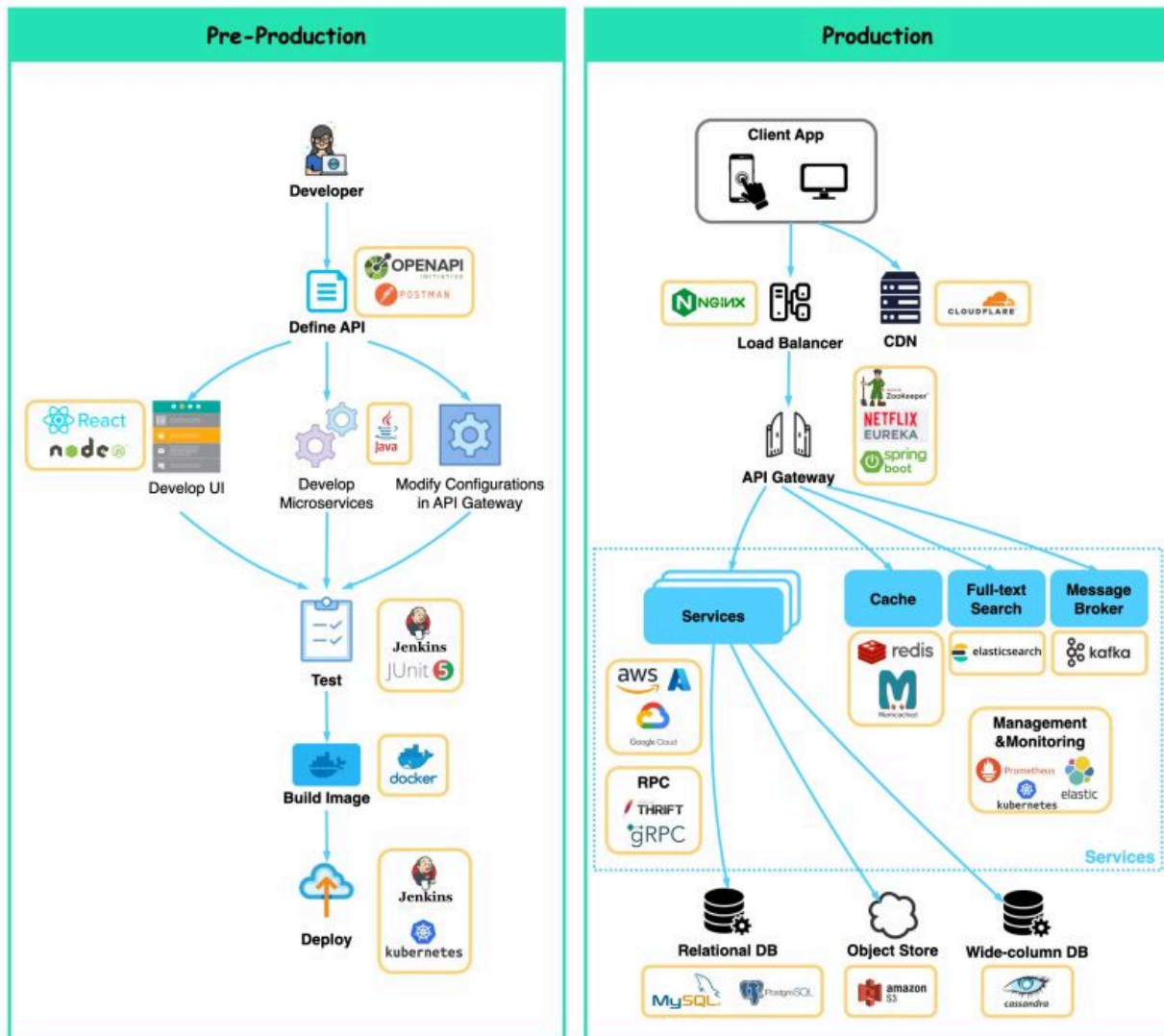# What tech stack is commonly used for microservices?

Below you will find a diagram showing the microservice tech stack, both for the development phase and for production.

▶️ **Pre-production**
- Define API - This establishes a contract between frontend and backend. We can use Postman or OpenAPI for this.

- Development - Node.js or react is popular for frontend development, and java/python/go for backend development. Also, we need to change the configurations in the API gateway according to API definitions.

- Continuous Integration - JUnit and Jenkins for automated testing. The code is packaged into a Docker image and deployed as microservices.

▶️ **Production**
- NGinx is a common choice for load balancers. Cloudflare provides CDN (Content Delivery Network).

- API Gateway - We can use spring boot for the gateway, and use Eureka/Zookeeper for service discovery.

- The microservices are deployed on clouds. We have options among AWS, Microsoft Azure, or Google GCP.

- Cache and Full-text Search - Redis is a common choice for caching key-value pairs. ElasticSearch is used for full-text search.

- Communications - For services to talk to each other, we can use messaging infra Kafka or RPC.

- Persistence - We can use MySQL or PostgreSQL for a relational database, and Amazon S3 for object store. We can also use Cassandra for the wide-column store if necessary.

- Management & Monitoring - To manage so many microservices, the common Ops tools include Prometheus, Elastic Stack, and Kubernetes.

Over to you: Did I miss anything? Please comment on what you think is necessary to learn microservices.