

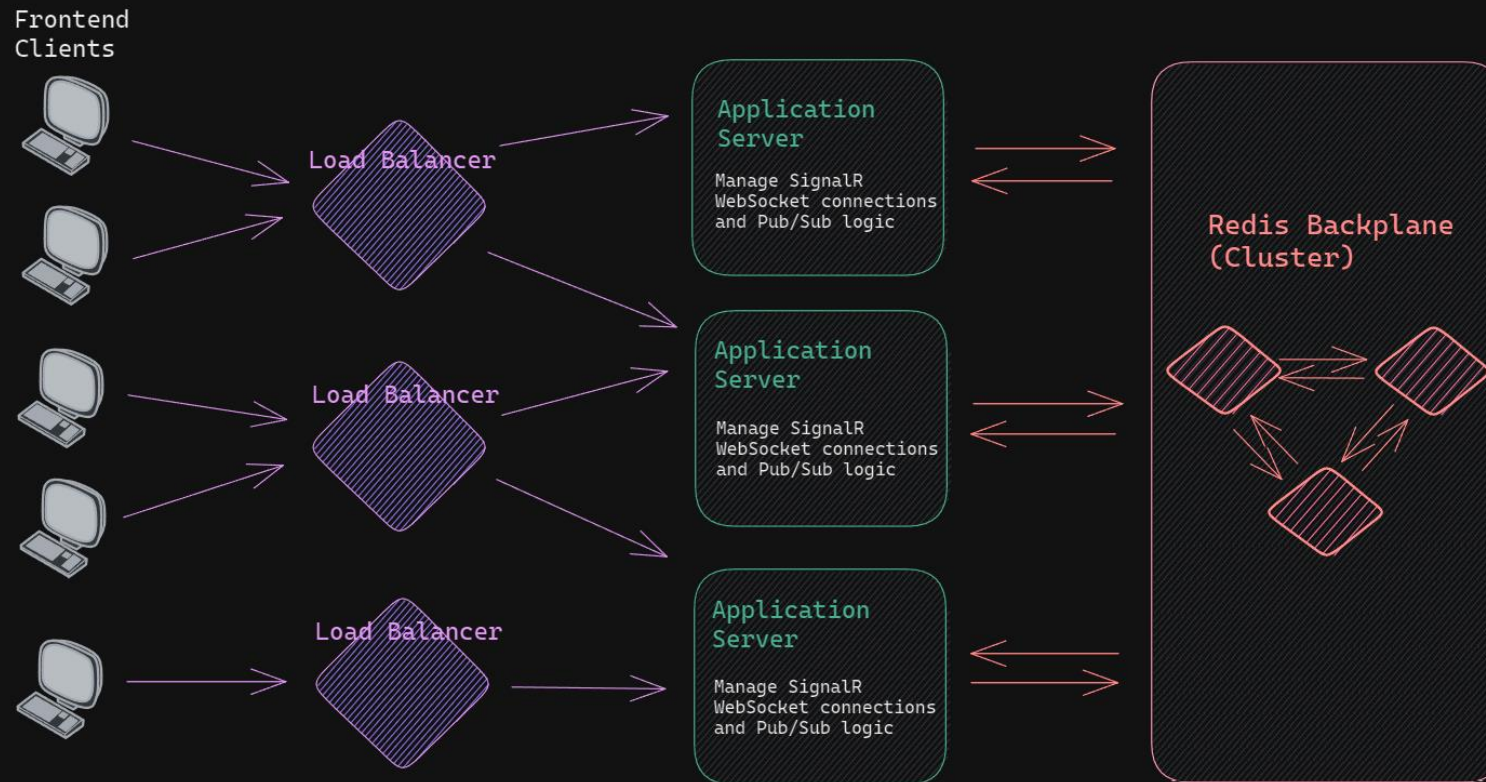
# Distr Chat

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# Purpose

- **Horizontal scaling** and **high availability** of a WebSocket based real-time messaging system
- **High availability:** System should have no single-point-of-failure
- **Common bottleneck:** The number of WebSocket connections to a single application server is a common bottleneck
  - Being able to horizontally scale application servers is valuable
- **Problem:** App server can only send messages through its own WebSocket clients
  - Thus, there must be a way of communication between the app servers

# Architecture



- Frontend client
  - TypeScript, React
- Load balancer
  - C# .NET
- Application server
  - C# .NET
  - WebSocket lib: SignalR
- Backplane
  - Redis (Cluster, Pub/Sub)

# Repository

<https://github.com/VilleKylmamaa/Distributed-Systems-Project>