RelayHub: A Resource-Efficient Real-Time Event Broadcasting Gateway

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Abstract

Traditional real-time systems require full-duplex socket connections between clients and servers, which can be resource-intensive and difficult to scale. In this work, I am proposing a lightweight relay system called 'RelayHub'. It enables real-time communication by allowing event-producing applications to send standard HTTP requests, which 'RelayHub' then relays to end users over persistent WebSocket connections. This removes the burden of managing socket infrastructure from the application server and simplifies deployment. 'RelayHub' is built to act as a centralized intermediary between HTTP-based systems and real-time clients, making it especially useful for legacy systems or microservices that require real-time features without a complete architectural change.

Notice

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