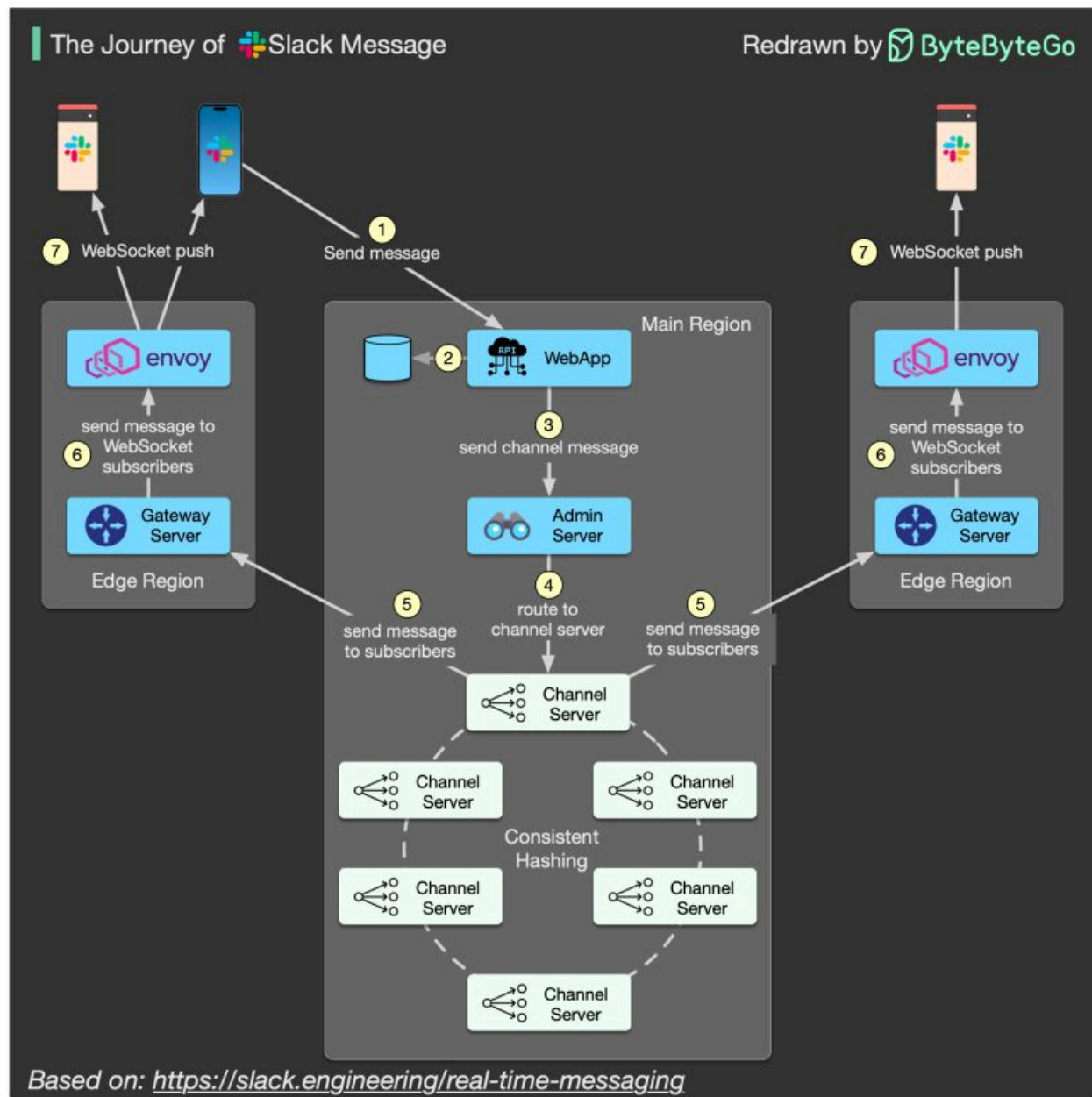


## What is the journey of a Slack message?



In a recent technical article, Slack explains how its real-time messaging framework works. Here is my short summary:

- Because there are too many channels, the Channel Server (CS) uses consistent hashing to allocate millions of channels to many channel servers.
- Slack messages are delivered through WebApp and Admin Server to the correct Channel Server.

- Through Gate Server and Envoy (a proxy), the Channel Server will push messages to message receivers.
- Message receivers use WebSocket, which is a bi-directional messaging mechanism, so they are able to receive updates in real-time.

A Slack message travels through five important servers:

- WebApp: define the API that a Slack client could use
- Admin Server (AS): find the correct Channel Server using channel ID
- Channel Server (CS): maintain the history of message channel
- Gateway Server (GS): deployed in each geographic region. Maintain WebSocket channel subscription
- Envoy: service proxy for cloud-native applications

Over to you: The Channel Servers could go down. Since they use consistent hashing, how might they recover?