

# Using Kamailio to Connect WebRTC to SIP and PSTN

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WebRTC Live #70 — August 23, 2022

# Kamailio, WebRTC, PSTN

## Agenda

- Introduction
- What is Kamailio?
- Kamailio as a WebRTC Bridge
- Questions / Answers



# Introduction

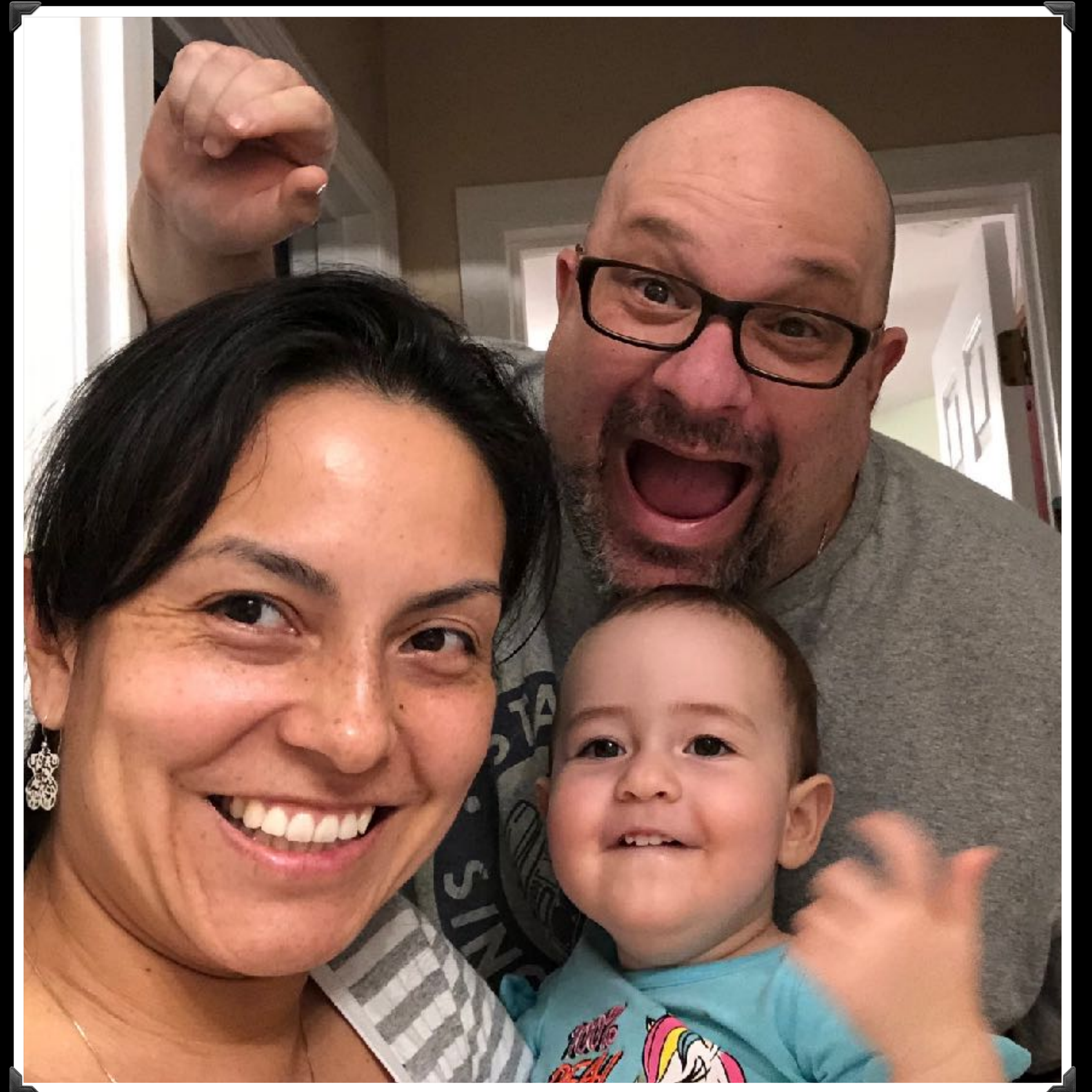
**Hi.  
I'm Fred.**

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**What is Kamailio?**

# What is Kamailio?

[kamailio.org](http://kamailio.org) / [@kamailio](https://twitter.com/kamailio)

- Open source SIP server
- 20 years and running
- Module based
- Very fast, light



**150+**

**Modules**

**5,000+**

**calls/sec as load balancer in stateless mode**



**300,000+**

**Endpoints with just 4GB RAM**

# Kamailio

Continuous Development Since 2001

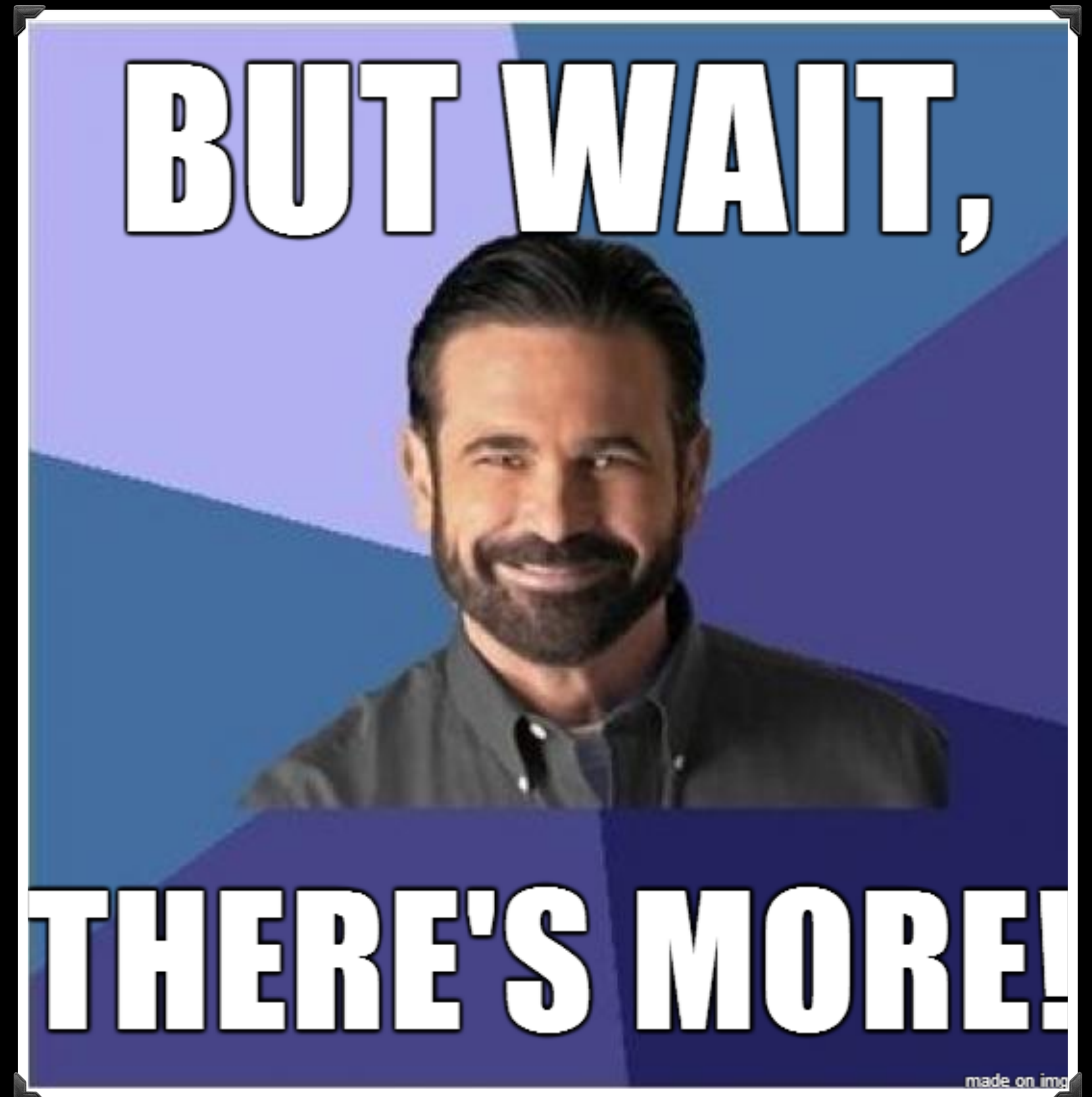
- GPLv2, BSD
- NAT / IPv6 / IPv4
- PostgreSQL, MariaDB/MySQL, Redis, Mongo, etc.
- Registrar / Location / Proxy / Redirect / Application



# SIP Edge Router

## Bridge and Security

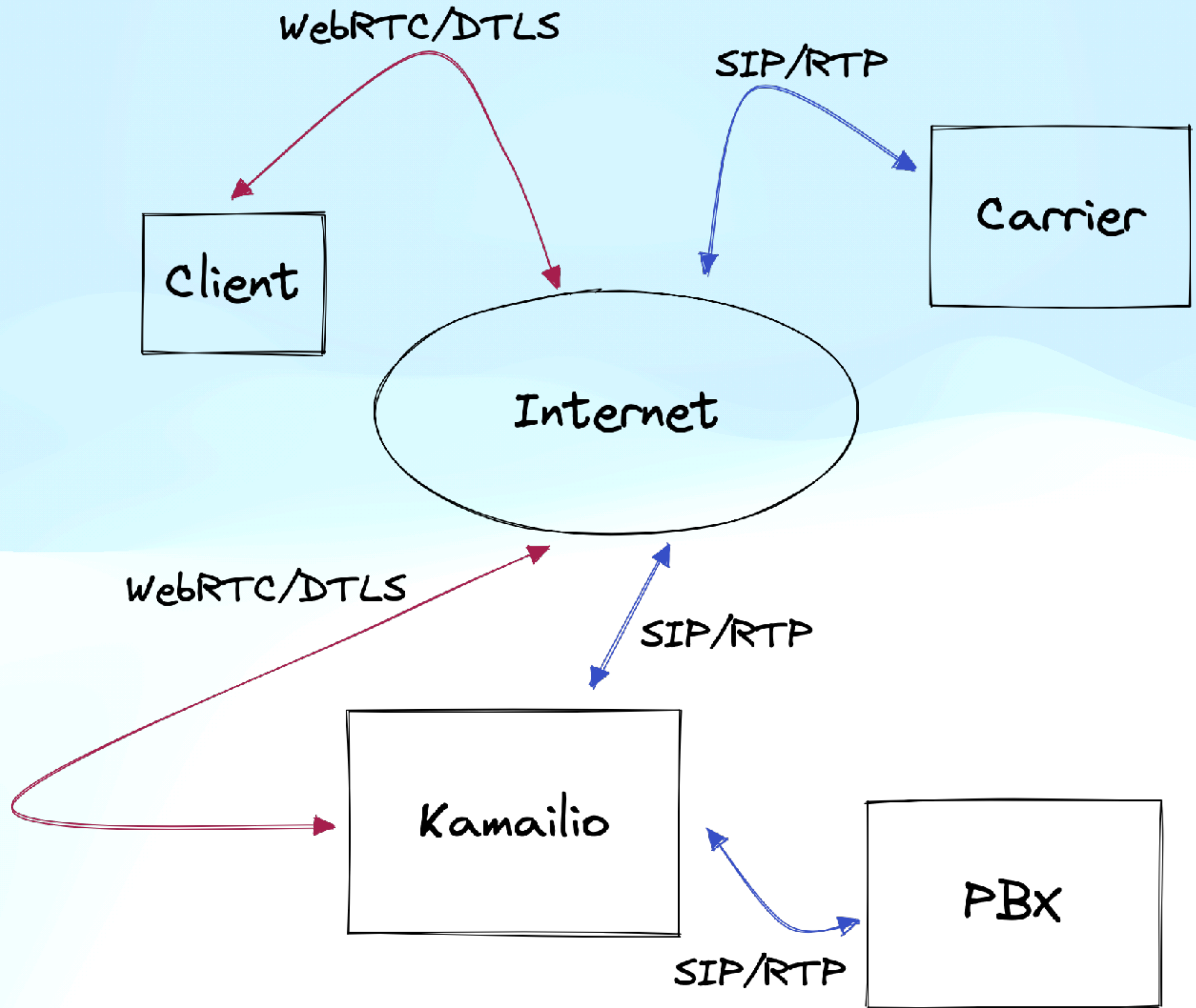
- Load Balancer
- Security Firewall
- LCR
- IMS/VoLTE
- IM/Presence

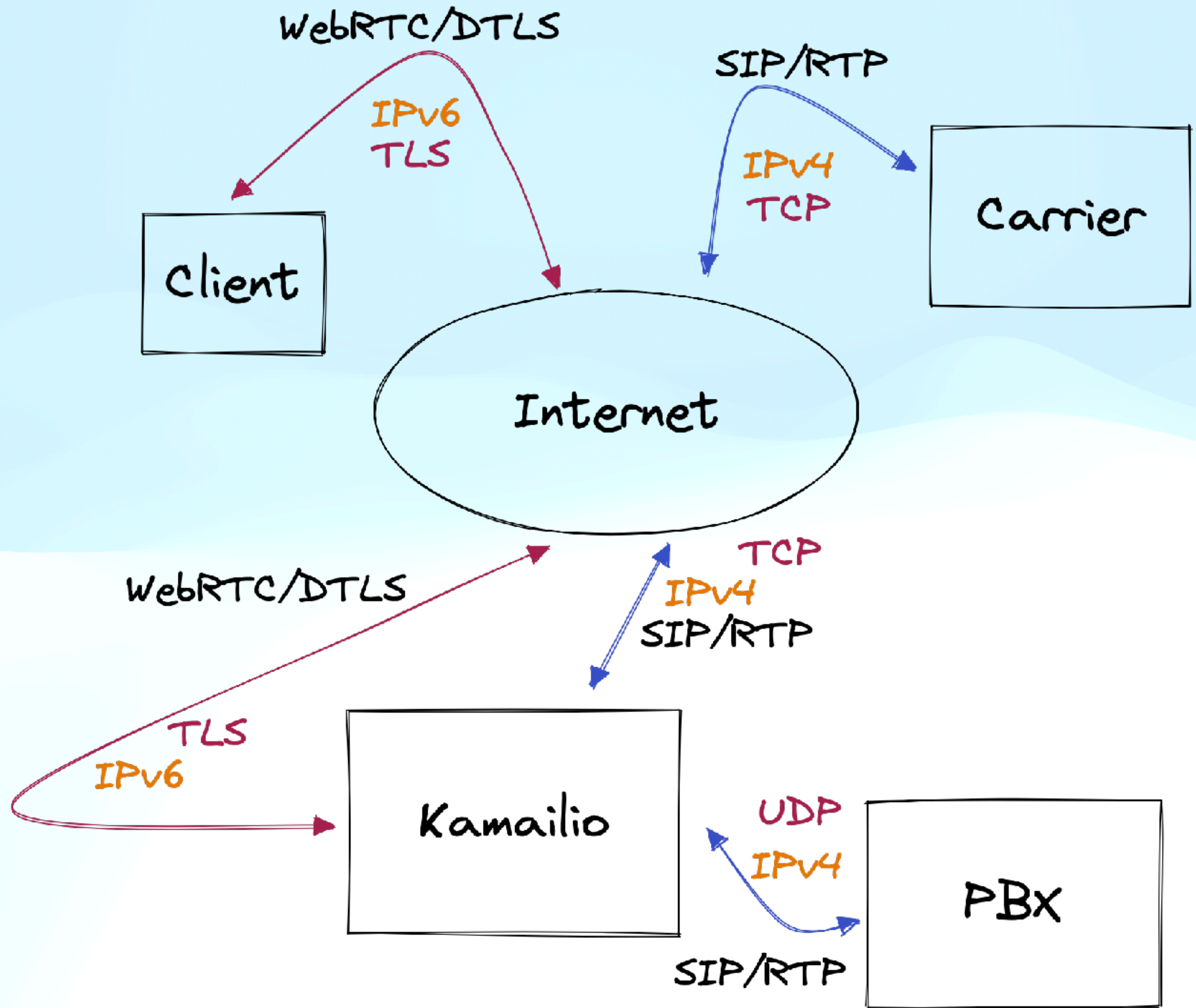


# Proxy vs PBX

- Doesn't initiate calls
- Doesn't answer calls
- No audio/video processing

# Kamailio as a WebRTC Bridge





# Module: WebSocket

<https://kamailio.org/docs/modules/5.6.x/modules/websocket.html>

- WebSocket (RFC 6455) server
- Connection Establishment (handshaking)
- Connection Management (keep-alive)
- Framing for SIP / MSRP WebSocket sub-protocols (RFC 7118, 7997)
- *ws / wss*
- (Requires *xhttp*, *nathelper* (or *outbound*) modules)



# rtpengine

<https://github.com/sipwise/rtpengine>

- Media proxy by Sipwise
- GPL3
- Bridge for DTLS to RTP (or SRTP)
- rtcp-mux / demux
- Can also transcode (outside of kernel)

# More Information

## Kamailio

- <https://www.kamailio.org>
- <https://github.com/kamailio>
- [#kamspace:matrix.kamailio.dev](https://matrix.kamailio.dev)
- Mailing Lists, twitter, etc.



# Questions?

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