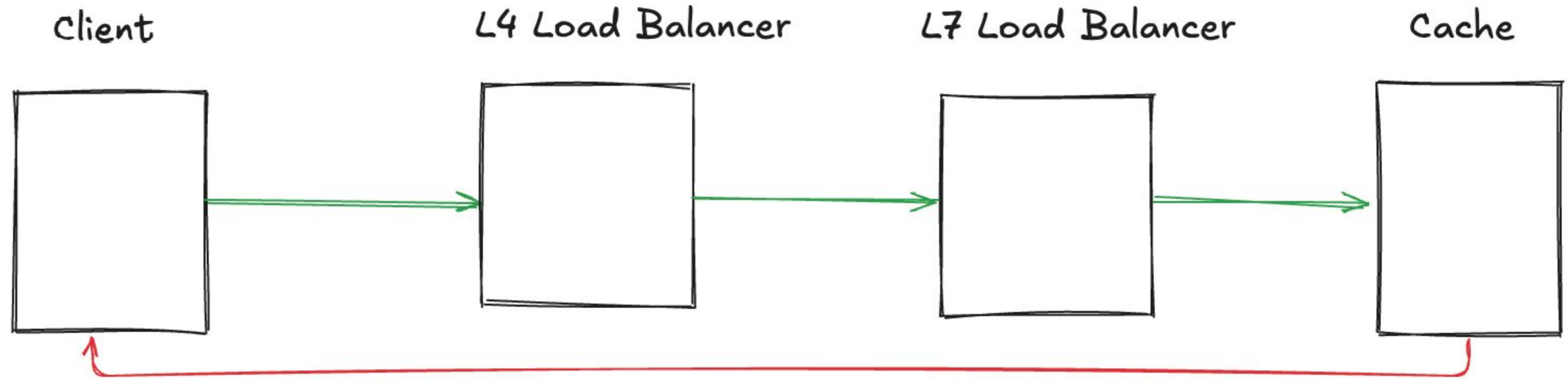


QUIC Cache DSR

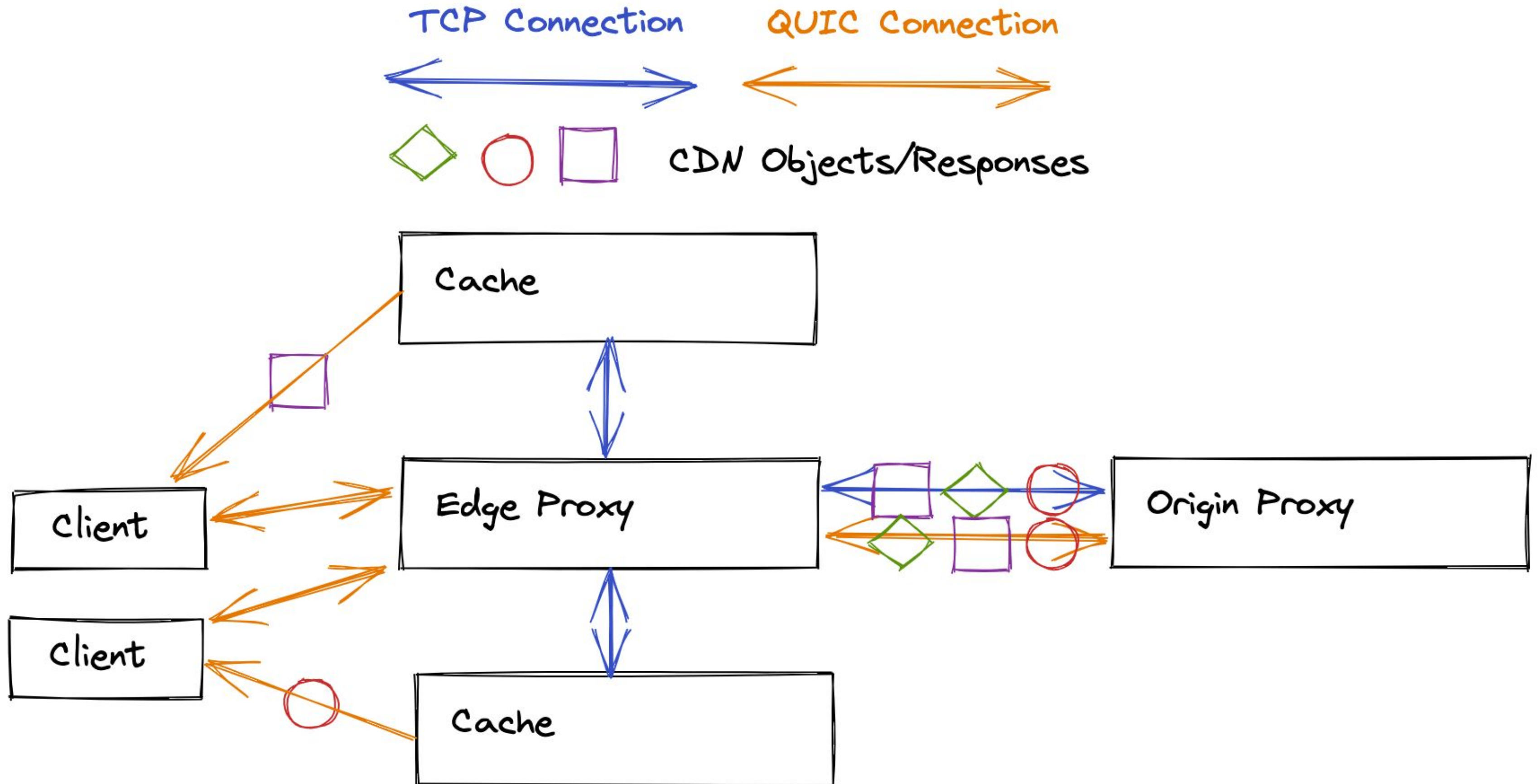
Using QUIC to rearchitect the CDN response path

Jianfeng Tang
Software Engineer

What's DSR



CDN Object Flow With DSR



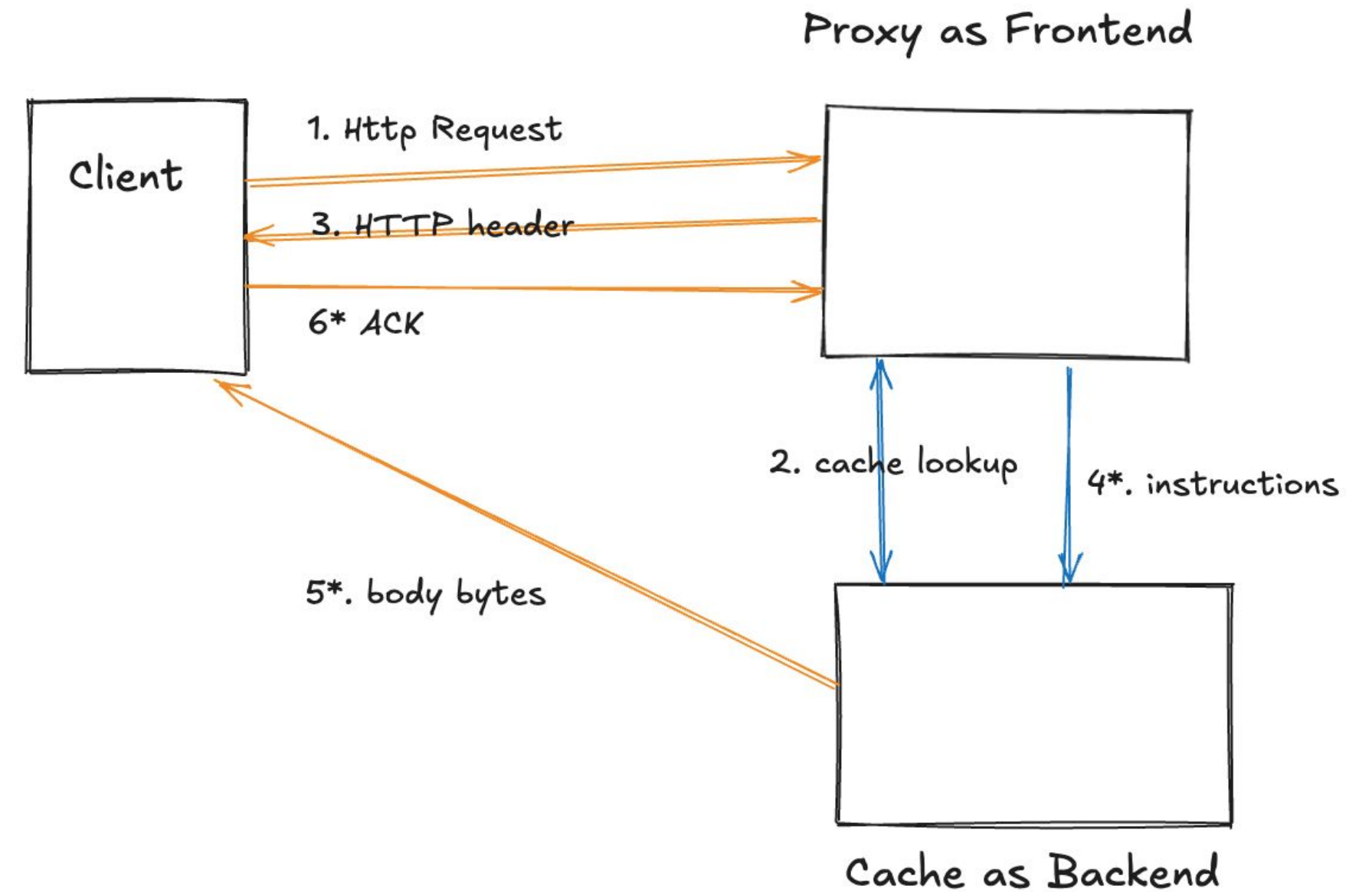
Design decision

Avoid synchronizing state

Separate “frontend” and “backend”

Frontend maintains all state

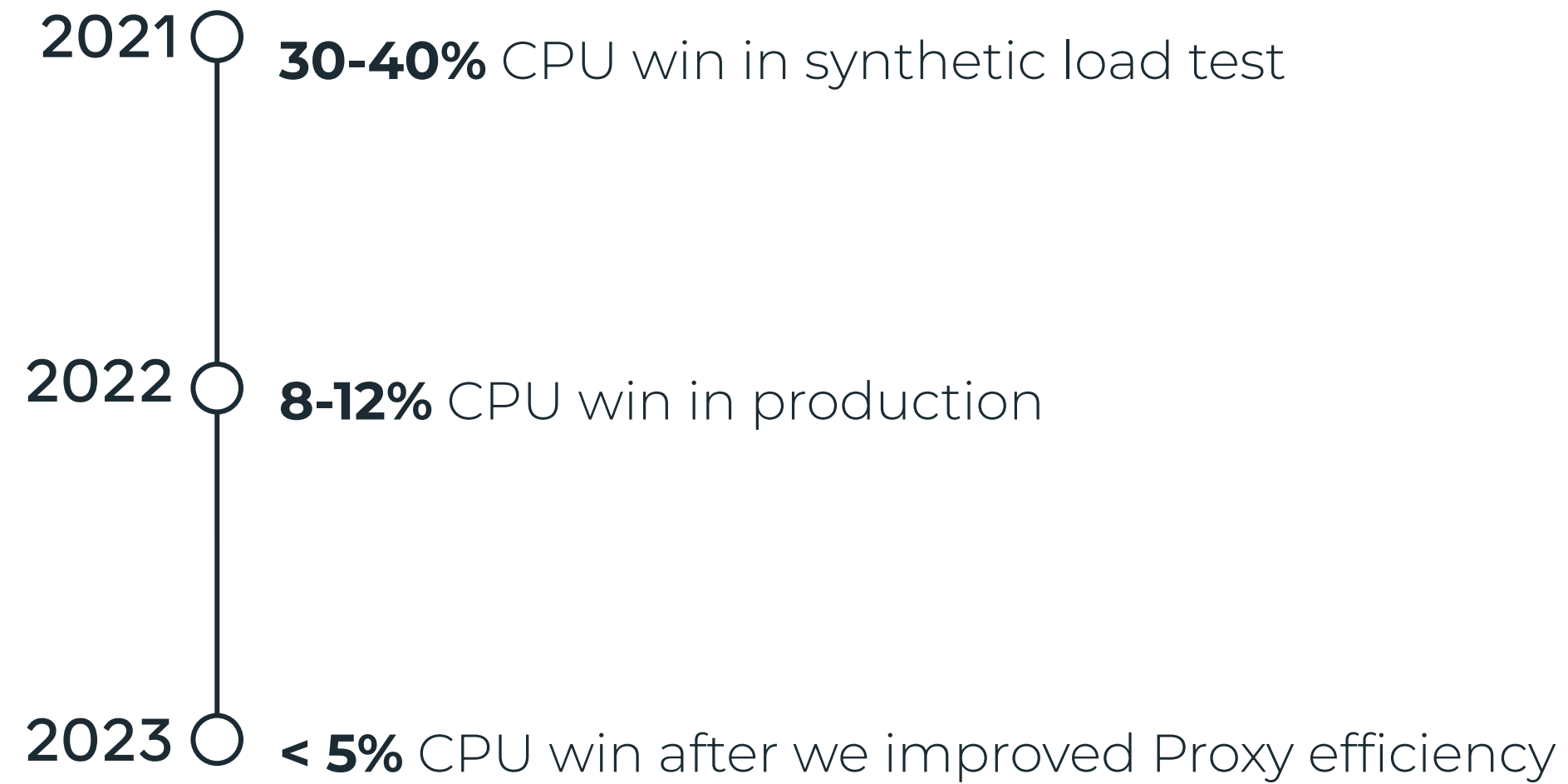
Backend is simply a packet writer



Challenges

- RPC cost & pacing
- Complexity in multiple senders support
 - Reordering & loss detection
- Stream prioritization between DSR and nonDSR traffic
 - Incremental: inefficient
 - Sequential: regression in Quality of Experience

Did it work



~40% reduction in NIC utilization

What's Next

- Revive it
- Reduce communication cost between Proxy and Cache
- Improve Cache system efficiency