MONGOOSE™ CONNECTS MILLIONS OF REAL-TIME VIDEO CALLS

Vidyo.io™ is the only video collaboration platform that provides a multi-party experience without the compromises of peer-to-peer, or bridged calls. Its Video API allows its clients to easily build and embed highly reliable and scalable video chat into their applications.

Vidyo.io’s developer-friendly API and truly global presence has seen the technology adopted in use cases such as telehealth, remote support, and team collaboration.

CHALLENGE

A decade ago, Vidyo set out to be the world’s leading content delivery network for real-time video. Vidyo pioneered Scalable Video Coding (SVC) technology, and was the first to take advantage of H.264 compression with SVC.

Over time, as internet speeds rose and global internet coverage grew, so did user expectations and real-time video use cases. Vidyo identified an opportunity among new industries. In emergency response and telehealth, doctors could use video platforms to administer remote healthcare. Brands could use video to see eye-to-eye with their dissatisfied customers during video support calls, offering technical support then and there. Even financial services had a use case, where bankers could discuss high value transactions with their agents at the click of a button.

Many of these new opportunities would offer time-, security-, and quality-critical conversations to Vidyo’s clients; conversations that would not tolerate downtime or lag, no matter the user’s location or network quality.
Vidyo set out to develop a highly reliable, secure and scalable infrastructure that assured high network and error resilience, geo-redundancy, high service availability, and minimal downtime. Enter: Vidyo.io - a new kind of video platform whose point of difference lies in offering cloud based services which leverage the company’s years of work on creating industry-leading video technology.

This required a signaling layer that would enable them to scale to millions of users, and become the basis of all communications across Vidyo.io’s platform.

**Vidyo.io’s requirements included:**

+ A battle-hardened stack proven to work at a global scale
+ BOSH support to support the endpoints
+ Cross-platform compatibility and support
+ Rock-solid firewall traversal to allow P2P video conferencing systems to communicate smoothly across networks but without compromising security
+ An open source and cost effective solution
+ A responsive team willing to collaborate on bespoke features

**SOLUTION**

XMPP emerged as the only globally viable stack for Vidyo.io.

**XMPP** is an open source, secure and standards-based protocol for real-time communication maintained by the [XMPP Standards Foundation (XSF)](https://xmpp.org). It currently powers a wide range of applications including instant messaging, presence, collaboration, multiparty chat, IoT, and voice and video calling.

Throughout the market investigation, Vidyo.io assessed various XMPP servers on the market, looking closely at existing deployments, case studies and evaluations.

Vidyo.io’s unique feature requirements and their deployment of the XMPP protocol meant that their stack would need a number of iterations to meet their needs. They also needed a reliable, responsive tech partner who was open to making various adaptations to the stack to address their specific use case.

Vidyo.io started using an open source version of MongooseIM, Erlang Solutions’ robust XMPP platform aimed at large installations. Soon after their evaluation process, Vidyo.io reached out to Erlang Solutions for further consulting and support.

“What we needed was a signalling layer that could really scale to millions, if not tens of millions or hundreds of millions, of online users. There is only one global stack that gets you there: XMPP [on the Erlang virtual machine]. Erlang Solutions were hands down the best option for us.”

Nicholas Reid, SVP Product Management @ Vidyo.io
As Vidyo.io’s specific use case required the development of new features, Erlang Solutions worked closely with them to extend the MongooseIM platform with features that would meet their needs and benefit the larger open source community.

Erlang Solutions consulted on technical issues and architectural aspects of Vidyo.io’s solution, as and when needed throughout the development process, over the course of a few years.

In exchange, Vidyo.io sponsored the development of these new features, which were later merged with the open source MongooseIM server. Vidyo.io was able to maintain its autonomy and nurture its internal teams by working through different areas in-house, while relying on Erlang Solutions’ consultants when XMPP and Erlang expertise was needed.

RESULT

Today, MongooseIM is pivotal to Vidyo.io’s service. Once any single Vidyo.io call is established, all of signaling and call control - including call setup and teardown, virtual meeting room management, chat, geo-allocation, and authentication - happens over their XMPP channel, powered by MongooseIM.

XMPP made it really simple for Vidyo.io's own back-end developers to use a federated, cluster-based architecture.

By selecting MongooseIM, the call process was made as smooth as possible for third-party application developers integrating Vidyo.io into their own apps. So smooth in fact, that app developers can build a video chat app using Vidyo.io in just nine minutes.

Features Vidyo.io sponsored in open source MongooseIM:

+ Dynamic configuration to add and remove tenants to Vidyo.io’s hosted environment without taking down the whole system
+ Multi-tenant support, which is increasingly important in recent architectures to make MongooseIM cloud-ready
+ Reverse proxying for load balancing in the cloud
+ Modern token-based authentication to help integrate with Vidyo.io’s front-end and other back-end services
+ Features associated with third party components

Vidyo.io was able to significantly lower their total cost of ownership (TCO) in the long term by collaborating with Erlang Solutions on the open source MongooseIM. Erlang Solutions’ team is responsible for iterating on the platform, taking ownership of all of the features in the stack, including those sponsored by Vidyo.io, and the associated maintenance costs. For Vidyo.io it was one-off spend to add features that cater precisely to their use case.

The collaboration also allowed Erlang Solutions to press forward with one of the most competitive XMPP servers on the market - MongooseIM. This venture has enriched the MongooseIM platform with new, battle-tested features, which have been embraced by the wider open source community.
Today, Vidyo.io is a leading content delivery network for scalable real-time video. They have over 15 points of presence globally, and counting. What’s more, they cater to industries including telehealth, remote support, field services, customer engagement, and finance.

Vidyo.io was able to benefit from custom software developed to meet their precise needs in the context of an open source framework. Erlang Solutions’ flexible, customised approach gave Vidyo.io a world class solution with excellent support. A win-win for Vidyo.io, for MongooseIM, and most importantly - for Vidyo.io’s customers who get the best quality video possible as a part of their application.

“We have nothing but positive things to say. They got back to us, responded to our questions, even coding new versions of their software to meet our requirements.”

Nicholas Reid, SVP Product Management at Vidyo.io

**HOW WE WILL HELP?**

MongooseIM is Erlang Solutions’ massively-scalable instant messaging platform used to build high-volume, mobile messaging solutions. It provides real-time communication for millions of online users in sectors such as social media, IoT, gaming, telecommunications, and healthcare. We have a dedicated product team that specialises in designing, optimising and implementing instant messaging solutions.

We are ready to help you install, run and expand your XMPP-based service. We are also experienced in providing expert support and training for your technical staff and service support teams.

**CONTACT US TO TALK ABOUT:**

+ Designing, optimising and implementing instant messaging solutions
+ Building customised MongooseIM and XMPP features to address your specific use case
+ Simplifying your overall messaging experience using XMPP and REST API
+ Integrating chat features much faster and more easily into your new and existing apps

Erlang Solutions has built scalable systems for over 300 clients to power their emerging sectors; media, telecoms, gaming, finance, online gambling & betting, mobile apps, and IoT.

Contact us to discuss your project at general@erlang-solutions.com