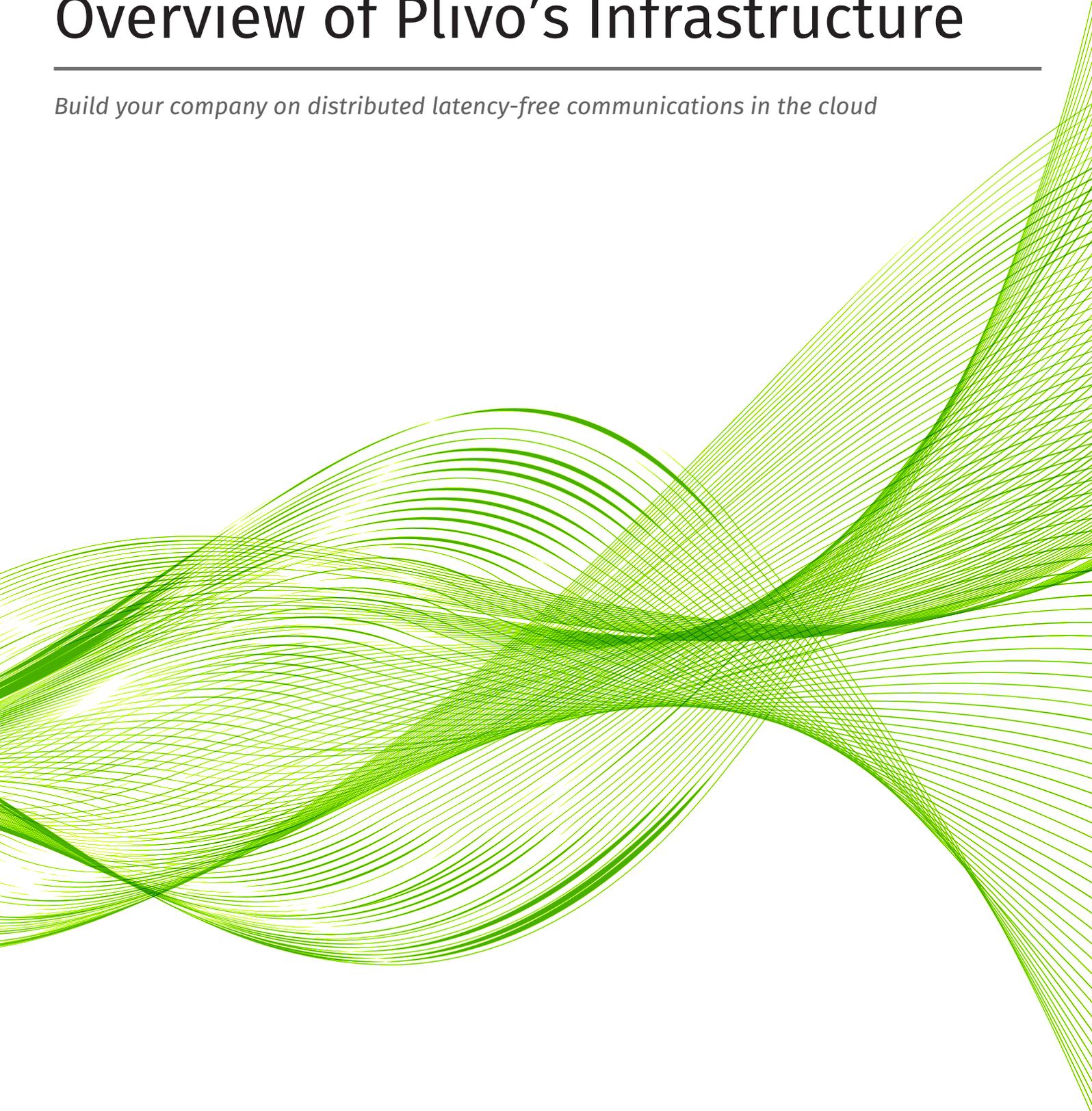


Robust Network and QoS: Overview of Plivo's Infrastructure

Build your company on distributed latency-free communications in the cloud



Optimized Cloud Infrastructure For Global Businesses

Plivo's cloud communications is backed by a robust, reliable, fault-tolerant and highly available infrastructure.

Plivo supports 1000's of businesses that rely on our infrastructure to deliver the best customer experiences to their end users. With years of experience building trusted cloud infrastructures, Plivo's team has built a robust, reliable, fault-tolerant and highly available network infrastructure that is battle tested to handle the most demanding loads and traffic conditions. This optimized infrastructure of clustered media relays, switches, databases, routers, session border controllers, and firewalls, powers Plivo's uncompromising network and allows us to provide top tier quality of service at incredible wholesale prices.

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"Plivo met all of our requirements. The API was easy to use and it has proved reliable during testing. As we continue to build out our automated testing suite for Firefox OS, we can see other opportunities to use Plivo in the future."
.....
Bob S., Engineer, Mozilla
.....

Plivo's globally distributed infrastructure delivers a guaranteed 99.95% up-time service level agreement (SLA) that promise:

- GLOBALLY DISTRIBUTED POPS 3**
5 points of presence (POPs) strategically placed across 4 continents.
- 24/7 MONITORED NOCS 5**
Two geographically distributed NOCs, performance monitoring tools, and alert escalation systems deliver round-the-clock support from trained engineers.
- OPTIMIZED CALL ROUTING AND UPTIME 4**
Plivo's intelligent call routing system ensures that all traffic is sent over the most reliable routes.
- LATENCY-FREE CONNECTIVITY 3**
Under 50 millisecond (ms) connection to carriers and end phones, with flexibility and scalability due to multi-vendor interoperability .
- HIGH SMS DELIVERABILITY 4**
We connect directly to local in-country carriers to bring you high SMS delivery rates to handsets anywhere in the world.
- LOW NOISE AND HIGH VOICE CLARITY 4**
Plivo's optimized bare-metal servers and infrastructure preserve high voice quality while reducing noise and latency on all calls.

Globally Distributed PoPs

Each of our POPs are operated by top tier hosting partners with highly trained specialists that utilizes the latest technologies. Our enterprise-grade data centers are strategically placed around the world in Chicago, Dallas, London, Hong Kong, and Sydney.

24/7 monitored NOCs

We have two geographically distributed NOC location in Bangalore and San Francisco. This NOC redundancy helps us deliver round-the-clock support from trained engineers who proactively monitor and detect network performance. Our systems are also integrated with powerful tools to automatically alert and escalate potential issues to the right team members.



Optimized Call Routing and Uptime

Plivo's intelligent call routing system ensures that all traffic is sent over the most reliable routes. That is, our internal protocol routes calls through the closest servers to preserve voice quality and minimize latency. With multi-carrier connectivity in each country, our call routing algorithm detects carrier stability and automatically diverts traffic to the best quality routes in the event of a carrier outage.

Latency-Free Connectivity

Minimizing latency is imperative to providing a quality communications infrastructure. Unlike resellers and large aggregators, we do not centralize routing. Instead, we practice distributed routing where our RTP (real-time transport protocol) media (i.e., voice media) is routed directly from our own servers in the closest geographical regions. Distributed routing is advantageous because by utilizing multiple alternate routes, we eliminate single points of failure that's present in centralized routing strategies. This significantly reduces our latency in most regions to under 50 ms connection to carriers and end phones, as well as provide better flexibility and scalability due to multi-vendor interoperability (i.e., system compatibility).

Not only should SMS text messages be delivered instantly, voice calls should also be free from latency. That is, the time it takes for voice to travel from the speaker's mouth to the receiver's ear (called the mouth-to-ear delay) should be undetectable to all callers. To give you perspective, the human ear will start to notice voice delays only when latency is greater than 250 ms. Even though the International Telecommunication Union's recommendation for most voice applications states that delays should be kept below 150 ms, we set our standards to deliver sub 50 ms connectivity to all of our customers.

High SMS Deliverability

Our direct carrier interconnections give our customers the ability to send SMS text messages to all major carriers in the world. By connecting directly to local in-country carriers, we eliminate hops between aggregators and bring you high SMS deliverability and quicker call delivery to handsets. This also means that we have direct control over our routes and eliminate the middlemen and bad practices that can potentially jeopardize our quality of service including routing dilution, blending, and least-cost routing.

Low Noise and High Voice Clarity

Our voice media runs on dedicated servers, not virtual machines. Hosting our own servers gives us control over call quality, where as virtual machines can cause call degradation because servers are shared between customers and hosted by a third party. We have also optimized our servers and infrastructure to perform minimum transcoding to codecs to reduce noise and latency on all calls. Plivo also adheres to high standards that ensures that our network is always optimized and never diluted. That is, our servers are always kept under capacity and equipped with algorithms that deploy additional capacity in the event of traffic spikes.

Let's Get Started

Contact us at sales@plivo.com



Plivo is a leading cloud API platform and global carrier services provider for voice calls and SMS. Plivo's mission is to simplify global telecom and enable access to high quality cloud communications at a low price. Currently, Plivo has one of the largest Tier-1 coverage areas in the industry. 1000's of businesses from SMBs to large enterprises already trust Plivo as their global communication provider.

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