

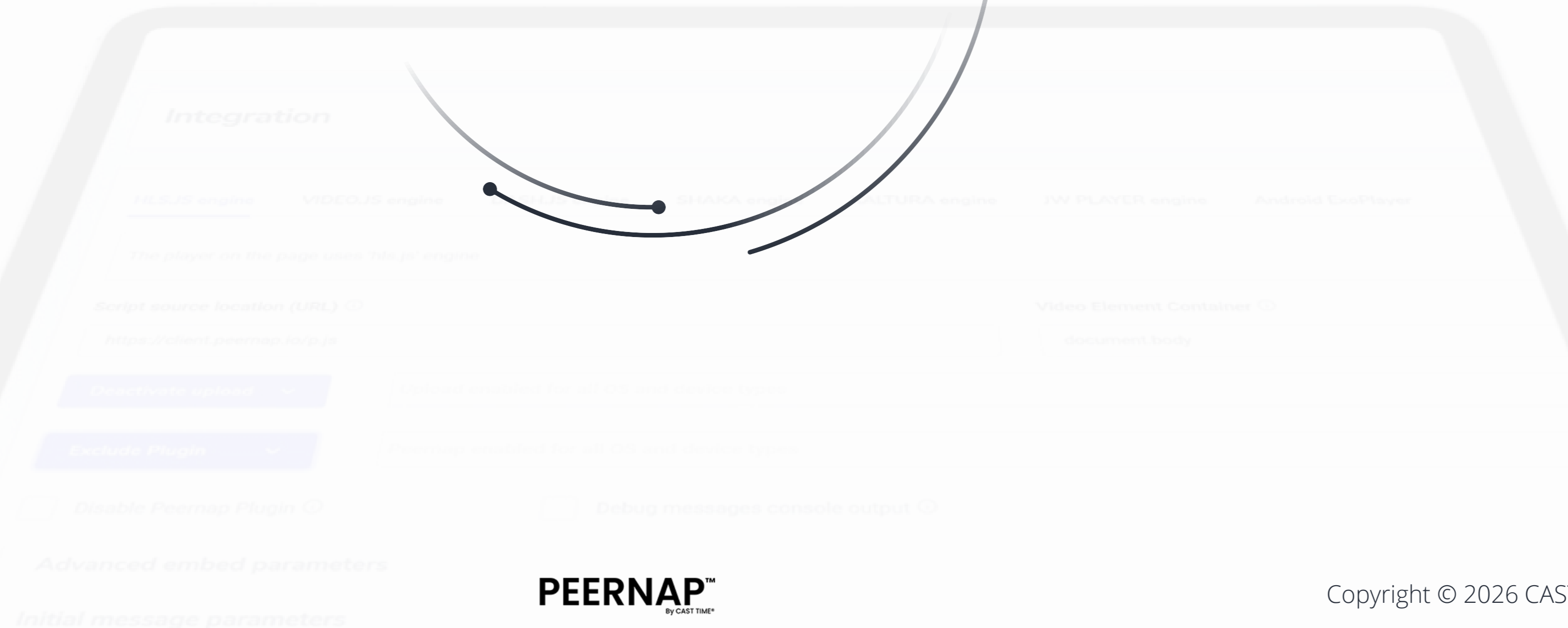
The Next-Gen Serverless Peer-assisted Content Delivery Network

30-second integration into your existing video stack.

Introducing

CASTIME

Next-Gen Content Delivery





CAST TIME

Serverless Edge Caching CDN Technology

PEERNAP™

CAST TIME™ INTRODUCING

PEERNAP™

Serverless Peer-assisted CDN NETWORK

- * Offloads up to 95% of CDN traffic
- * Increases your video delivery capacity
- * Turns Edge Servers into P2P Mesh
- * Generates Geo-based P2P Mesh CDN PoPs.
- * Multi-sourced content delivery from CDN or P2P Mesh Network (Multi-CDN support).

Traffic

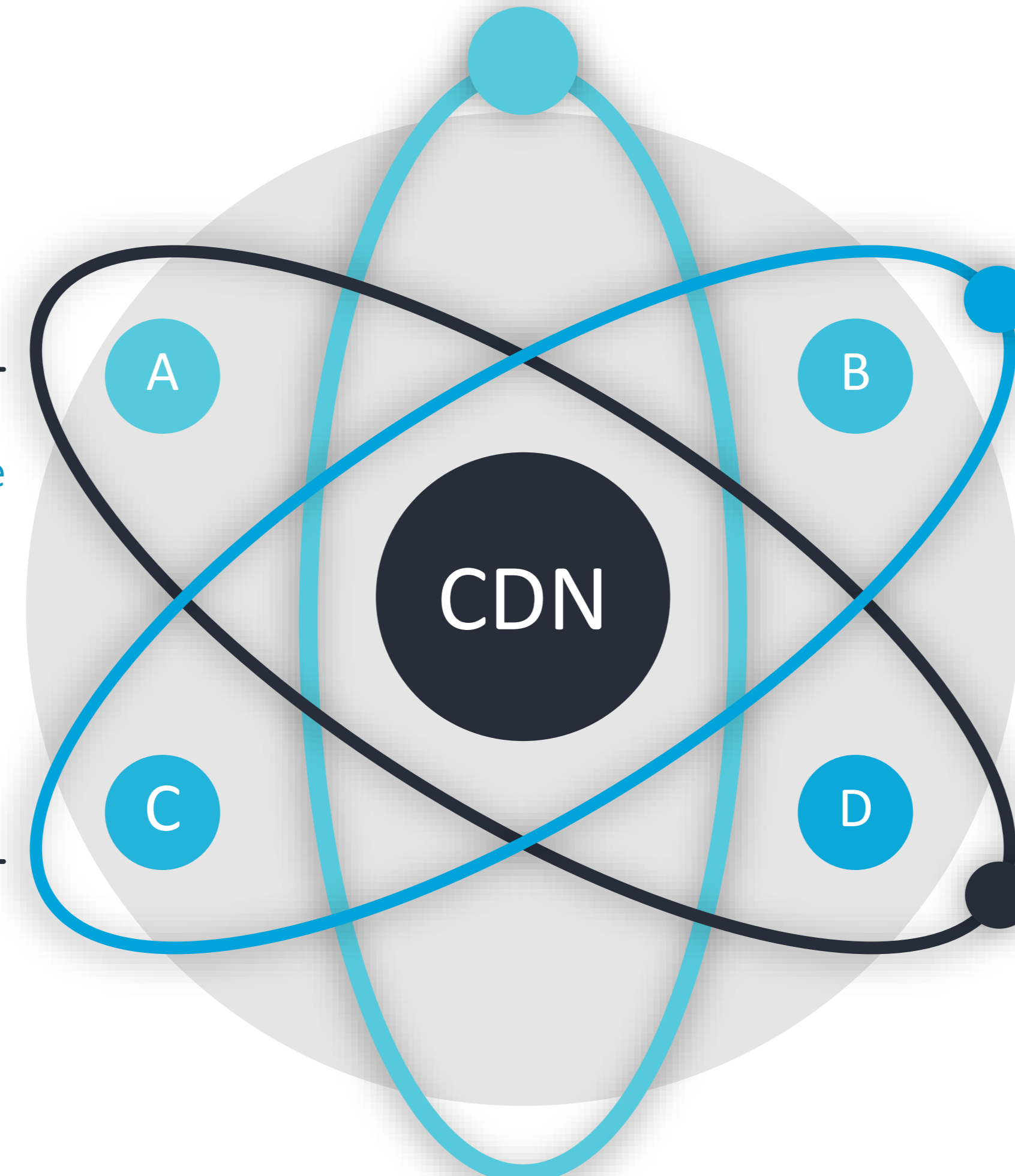


Speed



Serverless Peer-Assisted CDN Technology

Next-Gen Media Delivery



Increase your video delivery by **40X**

The more viewers, the better the viewing experience

Geo-based Peer-to-peer CDN PoPs

UP TO 130+
PoPs (Point of presence)

Turns viewers into a *scalable*

P2P MESH CDN
PEERNAP™

Multi-sourced CDN Support
CDN / P2P Network

Save up to 80%+ of your CDN traffic and increase viewing experience

Advantages of **PEERNAP™**

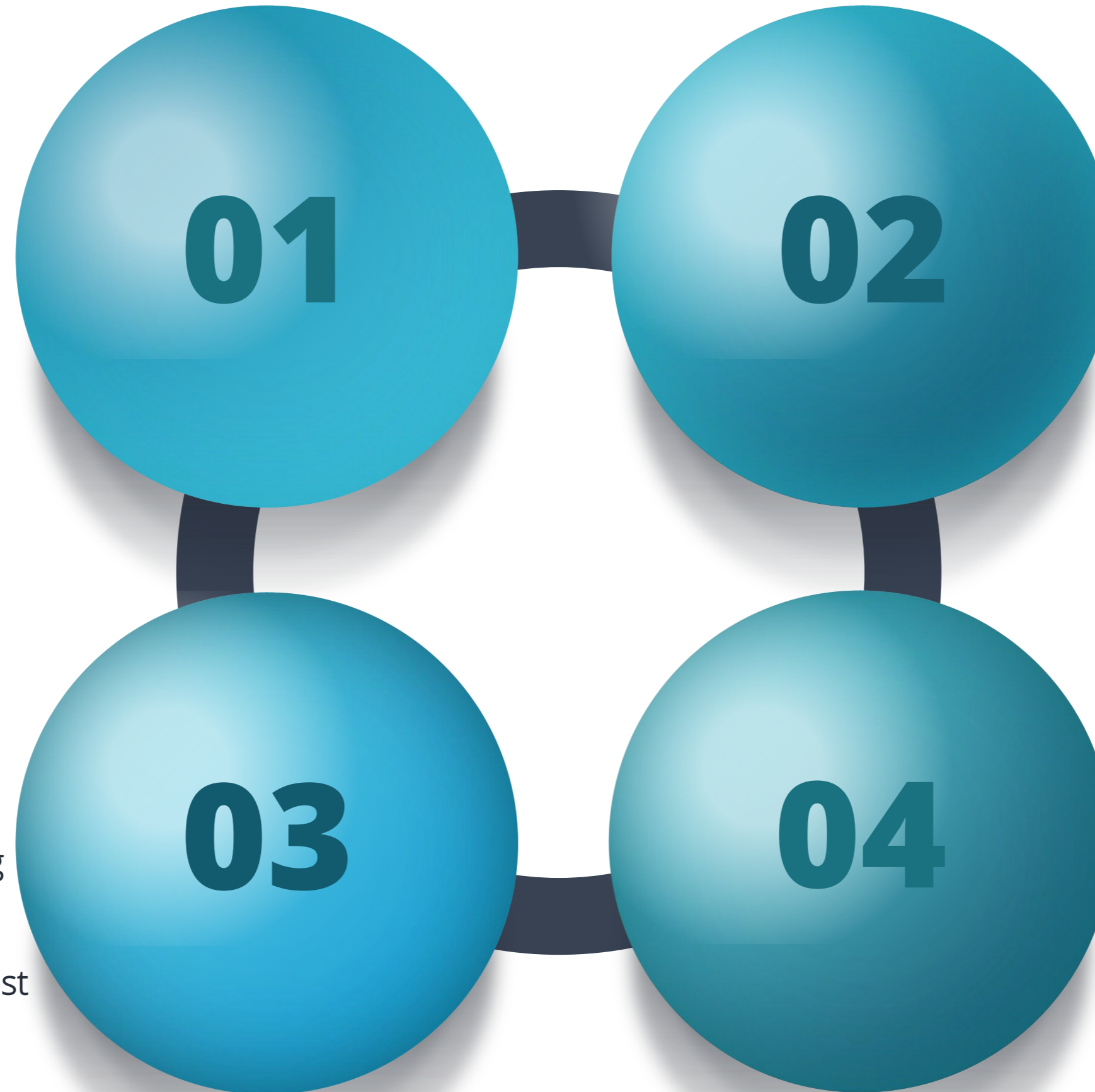
Serverless Peer-Assisted CDN NETWORK

Improved Reliability

By distributing video content across multiple sources, **PEERNAP™ P2P Multi-CDN** reduces reliance on traditional CDN servers and minimizes the risk of bandwidth bottlenecks.

Cost Efficiency

With **PEERNAP™**, publishers can significantly reduce their content delivery costs by leveraging end users' devices for content distribution — dramatically reducing the burden on traditional CDN infrastructure and delivering meaningful cost savings on traffic usage.



Enhanced Scalability

PEERNAP™ P2P Mesh CDN leverages the collective bandwidth and processing power of viewers for **massively-scaled, high-quality streaming**. This enables publishers to scale their video delivery to a larger audience without significant infrastructure investments.

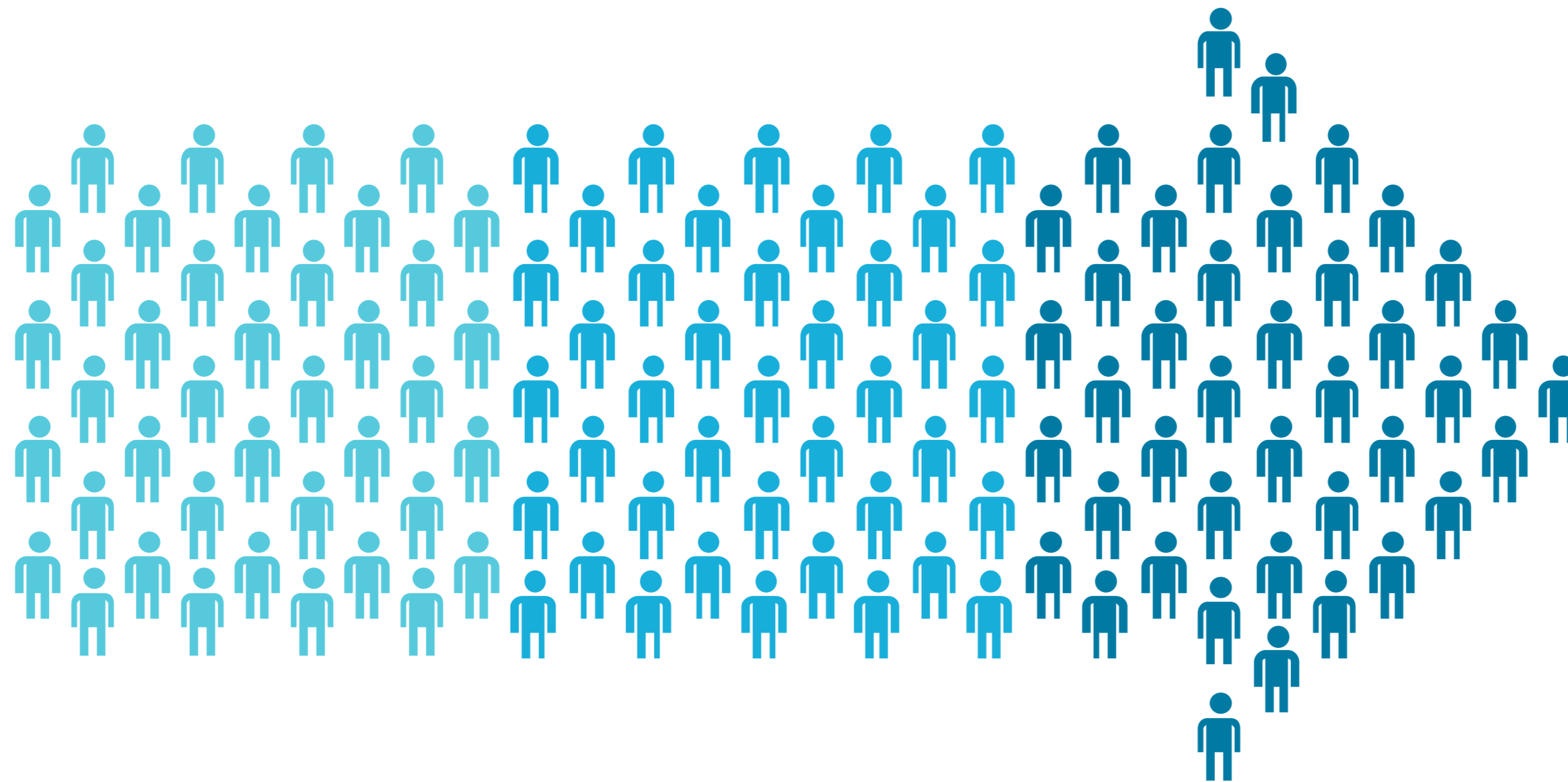
Perfect Video Quality

PEERNAP™ improves **video quality and especially the video delivery experience** by multisourcing video from many peers simultaneously, reducing rebuffering time and improving viewer quality of experience at scale.

Hybrid Peer-Assisted CDN

Virtually unlimited Scalable Peer-assisted CDN Network

Offloads up to
98%
of traditional Video
CDN bandwidth for live
and up to 80% for VOD



BOOST VIDEO
DELIVERY
- 71%
REBUFFERING TIME

PEERNAP™ WebRTC-based
peer-to-peer Video CDN
Network

UP TO
99%
Higher video
engagement

Decentralized CDN Network



**The Next-Gen Peer-Assisted
Multi-CDN Solution That
Scales with **Your Own**
Audience**

Geo-Based Peering · HLS & MPEG-DASH · iOS,
Android & Smart TVs · Self-Healing Network

Virtually **unlimited** scaling capacity grows automatically with your **audience**

Scale effortlessly. Deliver **locally**. Pay dramatically less.



Offload CDN traffic and slash bandwidth costs at scale.



Slash Your CDN Bill

Offloads up to estimated 80%+ of your CDN traffic Peer-assisted delivery and Lower overall CDN costs.



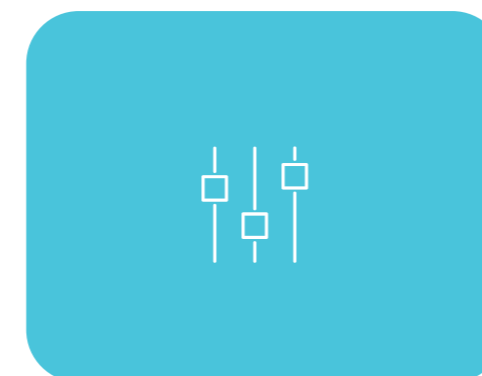
Massive Bandwidth Savings

Leverage your viewers as delivery nodes. Every peer reduces origin bandwidth load, lowering infrastructure costs at scale.



Scale Without Limits

Capacity grows organically as your audience grows. More viewers means more peers, delivering cost-efficient scale automatically.



Maximize Your ROI

Spend less on delivery, invest more in content. PEERNAP turns bandwidth costs into competitive advantage.



Powerful
platform
features
built for
next-gen
video
delivery.

PEERNAP CORE FEATURES

The Future-Ready **Hybrid** Peer-Assisted CDN for OTT Video Streaming

Edge Network Built Around Your Audience

Optimizes peer traffic per ISP and IP subnet, creating instant virtual PoPs inside your viewers' own networks.

Seamless integration

just one line of JavaScript on the web, or our native SDK for native apps.

Enterprise-Grade Security

Built on WebRTC with DTLS and SRTP encryption for secure peer-to-peer transfers and HMAC 256 token authentication.

Hybrid Approach

Peer-assisted delivery on top of your existing video stack.

PEERNAP™ Analytics

Long-term trends of peer-assisted vs CDN traffic, total volume, and distribution. Analyze patterns, optimize strategy, and cut costs over time.

Multi-source Video Delivery

Viewers can access dozens of video sources simultaneously.

Real-Time Analytics

Peer-assisted & CDN bandwidth, savings, viewers, and IOPS. Monitor, optimize, and decide on the fly.

Activation Rate

Real-time control to set the traffic split between PEERNAP™ P2P mesh and your CDN.



hls.js

dash.js



ExoPlayer



kaltura

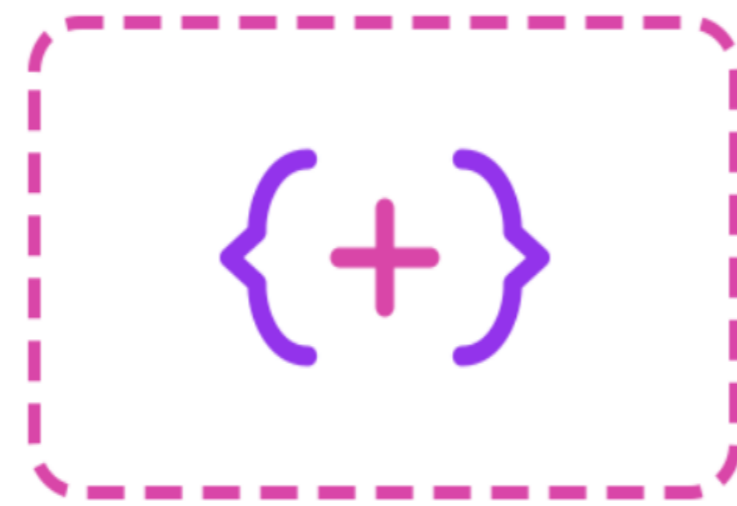


JWPLAYER



media-chrome

RADIANT
[MEDIA]
PLAYER



CUSTOM
INTEGRATION



PEERNAP:

Built to
Integrate with
Popular and
Custom Video
Players

Hybrid **CDN** Architecture

Multi-CDN **Peer-assisted** primary delivery with seamless **traditional CDN** protection.

P

Peer-Assisted Mesh Layer

Peers exchange video segments directly via WebRTC. Geo-proximity matching reduces hop count and maximizes bandwidth efficiency.

G

Geo-Based Routing

Viewers are paired with the nearest peers based on geographic location, ISP, and network conditions to minimize latency.

A

Activation Rate Control

A real-time, customer-controlled routing mechanism allowing administrators to set the exact percentage of traffic delivered via P2P vs. traditional CDN.



CDN Safety Net

Traditional CDN infrastructure serves as a guaranteed fallback. If P2P fails, CDN takes over instantly fully transparent to the viewer.

Real-Time Control

Activation Rate gives operators live control over the P2P to CDN ratio from 0 percent to 100 percent P2P without any code changes.

Traffic Optimization

Save up to 50% of CDN traffic costs by routing the majority of delivery through the peer network during high-viewership events.

C

R

T

Geo-Based Peering & Activation Rate

Geo-Based Peering

Geographic Optimization

PEERNAP clusters viewers by location, ISP, and network topology. Peers within the same region exchange data directly, drastically cutting CDN egress costs.

Low Latency Delivery

By sourcing video from nearby peers rather than distant CDN servers, PEERNAP reduces buffering time and improves startup speed — especially in bandwidth-constrained regions.

PoP Integration

Points of Presence (PoPs) are automatically leveraged for multi-CDN redundancy alongside the P2P mesh layer.

Activation Rate Control

How It Works

A real-time, customer-controlled routing mechanism allowing administrators to set the exact percentage of traffic delivered via P2P vs. traditional CDN.

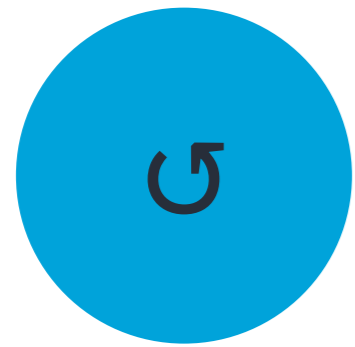
Dynamic Adjustment

Activation Rate can be changed live — no deployment needed. Instantly tune for cost savings during off-peak hours or switch to full CDN during critical broadcasts.

Traffic Optimization

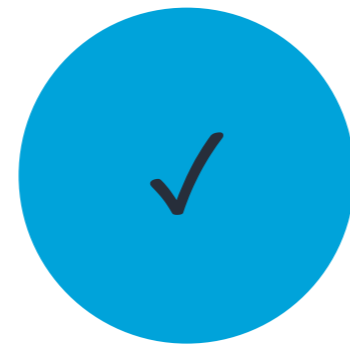
Save up to 50% of CDN traffic costs by routing the majority of delivery through the peer network during high-viewership events.

Self-Healing Network & Protocol Support



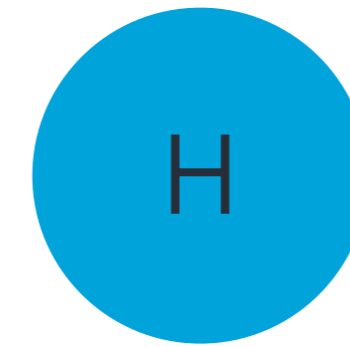
Auto-Rerouting

When a peer node becomes unavailable, PEERNAP automatically and instantly reroutes affected traffic back to CDN — viewers experience zero interruption.



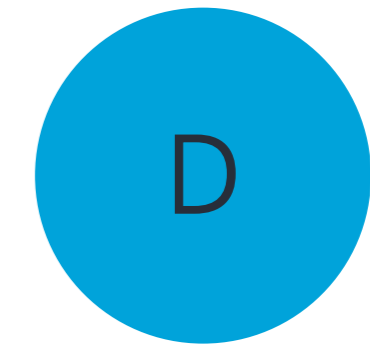
Guaranteed Uptime

The hybrid architecture ensures 100% content availability. Even total P2P network failure cannot disrupt delivery — CDN always serves as backstop.



HLS Support

Full HTTP Live Streaming (HLS) compatibility with all segment formats, encryption, and adaptive bitrate ladders. Works with any HLS-compatible player or workflow.



MPEG-DASH Support

Complete DASH (Dynamic Adaptive Streaming over HTTP) support, enabling PEERNAP integration with enterprise media platforms and custom workflows.

Platform & Player Compatibility

HT
ML

HTML5 Browser

Native WebRTC integration works in all modern browsers — Chrome, Firefox, Safari, and Edge — with zero plugin or extension required from viewers.

iOS

iOS & Android

Native SDK available for iOS and Android applications. Full peer-to-peer delivery within mobile apps with battery and bandwidth optimizations.

TV

Smart TV

Compatible with major Smart TV platforms including Samsung Tizen, LG webOS, and Android TV — bringing peer-assisted efficiency to the living room screen.

SDK

Player Agnostic

Integrates seamlessly with popular players — Video.js, HLS.js, DASH.js, JW Player, Kaltura Player, Shaka Player — and custom implementations via lightweight JavaScript SDK.



androidtv



webOS

TIZEN™

Real-Time Analytics Dashboard

P2P & CDN Metrics

Live P2P Metrics

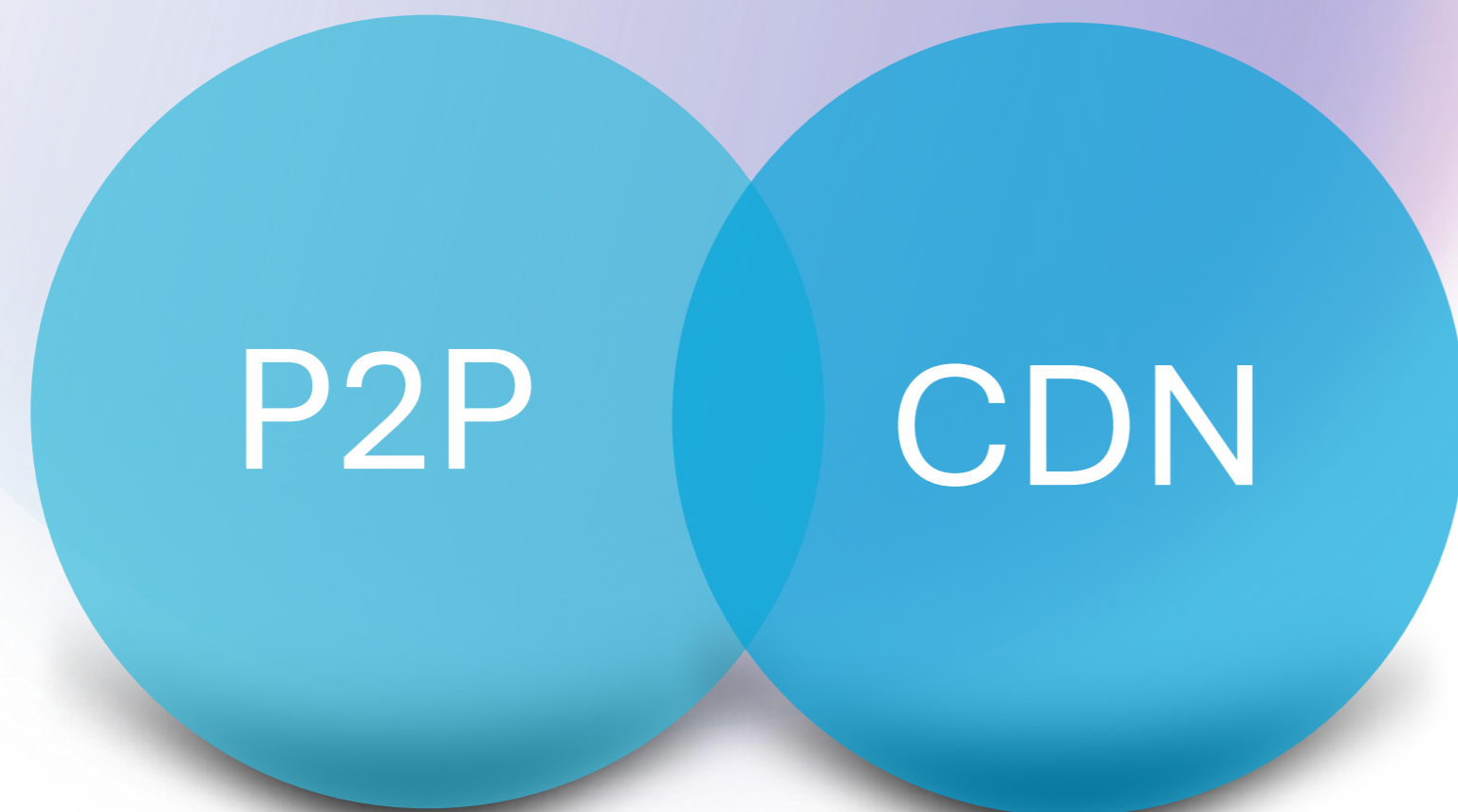
Monitor P2P bandwidth consumption in real time — see exactly how much traffic is being offloaded from your CDN at every moment of a broadcast.

CDN Bandwidth Tracking

Side-by-side visualization of P2P and CDN bandwidth usage. Understand your infrastructure split and cost implications at a glance.

Concurrent Viewers

Track peak and concurrent viewer counts per stream, per geography, and per platform — with second-by-second granularity during live events.



Operational Insights

IOPS Monitoring

Dedicated tracking of I/O operations per second for both P2P and CDN delivery layers. Identify bottlenecks and optimize segment distribution strategies.

Total Bandwidth View

Aggregate view of all bandwidth consumed across delivery methods. Exportable reports for billing, capacity planning, and QoS review.

Activation Rate Live View

See the current P2P-to-CDN ratio at a glance and adjust the Activation Rate directly from the analytics dashboard in real time.

PEERNAP™ Performance at Scale

Measured across **live** deployments with high-concurrency streaming events



CDN Savings

Reduction in traditional CDN bandwidth costs during peak concurrent viewership events (depending on traffic volume)



Network Boost

Increase in effective delivery capacity as concurrent viewers join the P2P mesh

P2P Offload

Maximum percentage of video traffic deliverable via peer-to-peer, bypassing CDN entirely



Failover Time

Automatic reroute to CDN when peer node becomes unavailable — invisible to the viewer



Historical Insights & Reporting

Live Metrics at a Glance

P2P vs. CDN Traffic Split

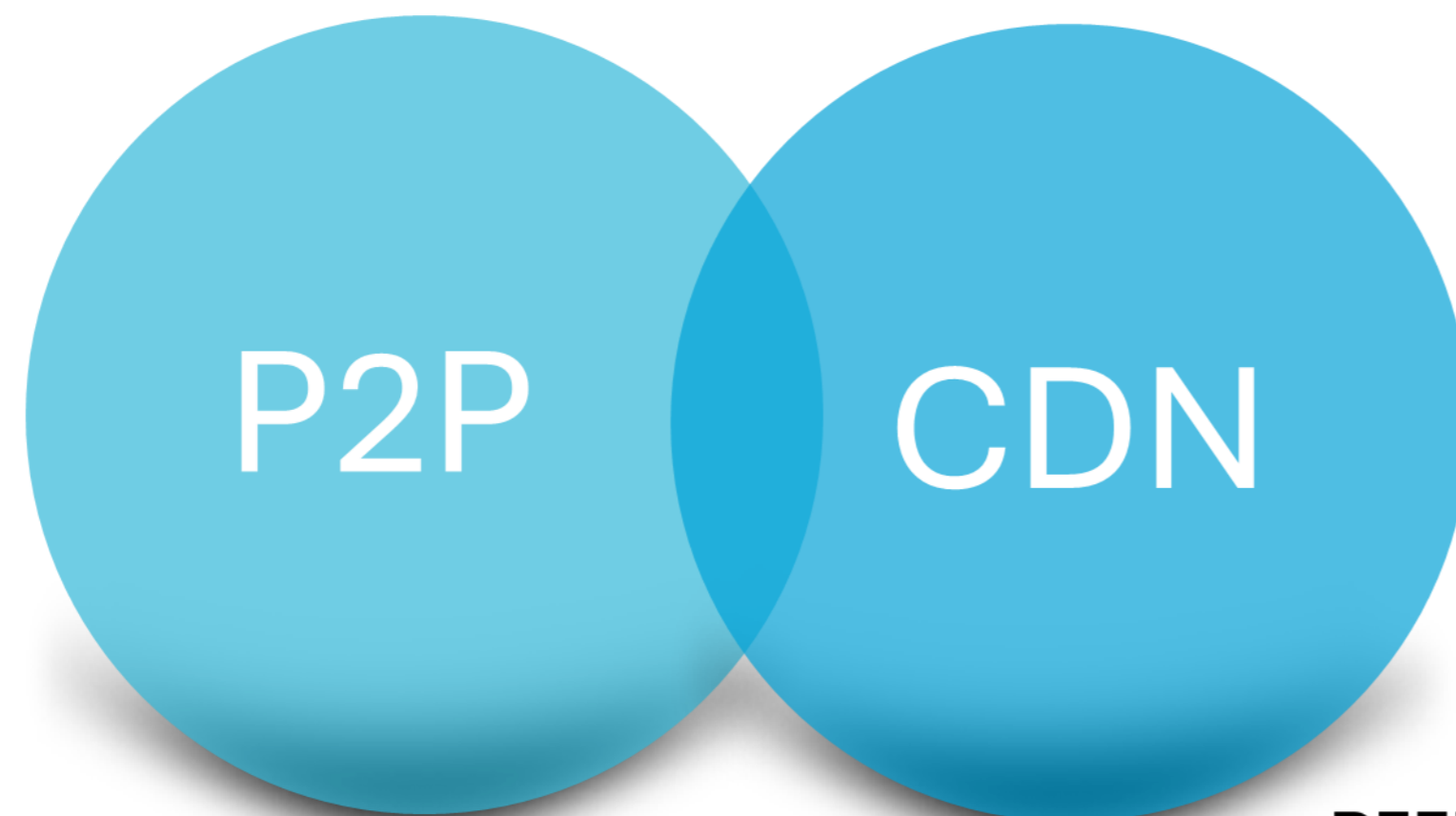
At a glance, see the total traffic volume broken into P2P (PEERNAP™) and CDN shares — displayed both as absolute delivered volume and as a percentage of total. Understand exactly how much your network is offloading from CDN at any moment.

Daily Traffic Bar Chart

A stacked bar chart visualizing daily P2P and CDN delivery volumes side by side across your chosen date range. Easily spot peak delivery days, traffic spikes, and the evolving balance between P2P and CDN over time.

Technology Distribution Donut

A real-time donut chart comparing PEERNAP™ vs. CDN share of total traffic. Hover over segments to reveal exact split percentages. Summary figures for both technologies are displayed directly beneath the chart.



User Behaviour & Filtering

Peak Concurrent Viewers

A dedicated bar chart tracks the maximum number of simultaneous viewers per day. Identify high-concurrency events, audience growth patterns, and the days where P2P offload delivered the most value to your infrastructure.

Peak Users Days Breakdown

A date-segmented donut chart ranks your highest-demand days by peak concurrent viewership — giving a clear visual summary of which events drove the greatest audience load and how that load was distributed across the network.

Domain & Date Range Filters

Filter all metrics instantly by domain and by any custom date range. Every chart, KPI tile, and distribution visual updates in real time. Reports can be exported directly from the dashboard for sharing with operations, finance, or engineering teams.



CAST TIME

Serverless Edge Caching CDN Technology

peernap.io/platform

PEERNAP™

Start delivering smarter. Talk to us .

GET IN TOUCH

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