

8x8

Building your digital experience with APIs.

Communications Platform
as a Service (CPaaS)
Solution Brief



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What is CPaaS?

In the digital age, what sets your company apart is the ability to provide an engaging and personalized customer experience. Today, customers expect immediate access to information, convenience through automation, and efficiency through simplicity. To meet these rising expectations and deliver a differentiated experience, companies are using Communications Platform as a Service (CPaaS) APIs to reimagine each customer engagement point.

CPaaS is a cloud-based communications infrastructure that provides the platform upon which developers can integrate real-time communications capabilities such as SMS, chat and video directly into their applications, websites and workflows, using APIs.

Using CPaaS, companies are finding that they can reimagine workflows, increase their ability to adapt to change, and create new customer experiences through automated notifications, more engaging marketing campaigns, increased security, and reimaged field and customer support operations.

The 8x8 Communications APIs

The 8x8 API portfolio is built on a single, secure, reliable platform designed to reliably deliver the message to your customers, no matter where they are or what communication channels they prefer.

Messaging

Built on a network of 160+ carriers reaching all countries, the 8x8 messaging APIs include SMS, Chat Apps, and Voice.

1. SMS

The 8x8 SMS API portfolio comprises 5 APIs:

- SMS API (send)
- SMS Engage API (surveys)
- SMS Reporting API
- SMPP API
- Mobile Verification API

Example use cases for SMS:

- Supports REST and SMPP.
- Automated prioritization and fall-backs.
- Send unlimited messages (up to 5,000 SMS/second, subject to carrier limits).
- Google Verified SMS available, to allow verified business messaging.

2-way	Receive and respond— e.g. confirm reservation	Survey large group
1-way	ad-hoc individual notification messages, mobile verification	Mass notifications
	1:1	Bulk

How it works:

Send SMS—Single

This endpoint generates individual SMS requests on the fly:

- JSON formatting
- Flexible authentication
- Immediate feedback on request submission

Send SMS—Bulk

All the single endpoint features in 2 endpoints enabling batches of up to 5,000 SMS in one request to:

- Maximize message submission speed
- Reduce latency by eliminating network handshakes
- Eliminate complex multithreading logic on the client side

2. Chat Apps

Just one API delivers your message to 7 popular chat apps, with automatic content adaptation.



WhatsApp



Viber



WeChat



LINE



Zalo



Messenger



KaKaoTalk

- Channel orchestration provides a fallback sequence between the different chat apps and SMS.
- Automatic content adaptation for each channel, including alternative text for rich media.
- Official Business Solution Provider (BSP) for WhatsApp Business API.
- Expert guidance for onboarding and usage of each chat app.
- Convenient template management for WhatsApp approved templates.
- Multichannel sender for easy launch of single or bulk messaging, using 8x8 Connect platform.

Explore Turn-key integrations with main customer service tools, such as Salesforce, Freshdesk and Zendesk.

See the integrations section for more information.

3. Voice

The 8x8 Voice APIs and SDK provide versatile voice solutions, including text to speech, voice messaging, and call masking capabilities.

- Voice messaging turns text to speech with voice messaging, adding another channel for your notifications and one-time passwords to be shared with customers.
- The Voice SDK enables in-app voice calls on your applications, using VoIP technology. Supports iOS and Android platforms.
- Call masking automatically changes displayed numbers so that personal phone numbers are kept private.

8x8 messaging API features

Features	Description	SMS API	SMS Engage	Mobile Verification	Chat Apps	Voice Messaging	Call Masking	App-to-App Calling
Single/Bulk Messaging	Send single or bulk messages.	■	■		■	■		
Multichannel Sender	Online portal to start sending messages - no API integration required.	■	■		■	■		
Sender/Caller ID	Customize the sender ID or caller ID that appears on users' devices.	■	■	■	■			■
Verified Sender	Get your brand's own verified account to improve the credibility of your messaging account.	Google SMS	Google SMS	■	■			
Intelligent Routing	Auto-selection of the best routes to ensure quality of service, deliverability.	■	■	■				
Auto Adaptation	Message content and Sender IDs are automatically adapted for each delivery channel	■	■	■	■			
Programmatic History Retrieval	Retrieve your API history programmatically to create your own reports	■	■	■	■	■		
Customizable Fields in API	Specify custom fields such as contact name or order number in your messages via this API or 8x8 Connect	■	■	■	■			
URL Shortener	Dynamic URLs are automatically shortened with trackable click-through rates	■						
2-way Communication	Receive messages from customers through 2-way messaging	■	■		■		■	■
Number Lookup	Check the validity and current location of phone numbers	■	■	■		■		
Single Endpoint	Use the same API for SMS and Chat Apps (e.g. WhatsApp, Viber, KakaoTalk, WeChat, LINE, Zalo, Messenger and SMS)				■			
Smart Retry	All undelivered messages will reroute to another channel (Configurable Fallbacks) to ensure delivery				■			
SMS Fallback	Undelivered or unread messages are re-sent via SMS to ensure delivery				■			
Preferred Channel Management	Set your own priority order for fallback channels				■			

Features	Description	SMS API	SMS Engage	Mobile Verification	Chat Apps	Voice Messaging	Call Masking	App-to-App Calling
Channel Orchestration	Determine the conditions in which a fallback is triggered, i.e. "if a message is not read within X minutes"				■			
No Download Required	Communicate with customers without needing them to download any additional apps	■	■	■	■	■	■	■
Interactive Voice Response	Multi-level Interactive Voice Response (IVR) menus for Voice calls					■	■	
Content Localization Compatibility	Text to speech can be used in 45 local languages, SMS can use special encodings to send messages containing local characters (e.g. Thai characters, European accents, etc.)					■	■	
Virtual Phone Numbers	Virtual phone numbers allow communications to take place without revealing private information.	■	■	■			■	
Numbers Pool Management	Manage and configure a virtual number pool through an API						■	
Call Handling	Programmatically control the entire call flow. Bridge calls between callers or play text to speech or sound files.						■	

8x8 Video

8x8 provides two flexible and secure programmable video solutions, Jitsi as a Service and Video Interaction.

8x8 Jitsi as a Service

8x8 Jitsi as a Service enables developers to embed the most secure programmable HD video and audio into applications, websites, and workflows. Most competitors offer lower-level APIs, but 8x8 helps companies accelerate time to market by providing this video service on a proven, highly available, massively scaled global infrastructure with the experience built-in, right out of the box.

8x8 Video Interaction

8x8 Video Interaction enables an instant (no app, no download) mobile-first video engagement between mobile users and desktop agents. With the simplicity of sending an SMS to the end-user's mobile phone to launch a call within their web browser and no app or software download in between, the 8x8 Video Interaction solution is ideal for remote customer support, telehealth, real estate and field services.

8x8 Video features

Features	Description	8x8 Jitsi as a Service	8x8 Video Interaction
HD Video	Ability to support 720p video	■	■
HD Audio	Opus Codec	■	■
Highly available massively scaled global infrastructure	Real-time automatic scaling of compute capacity to ensure the right capacity is always available	■	■
Your brand experience	Brand the experience with your company information. No 8x8 or Jitsi branding shown anywhere in the app	■	
Configure, enable and disable features	Configure, enable, and disable features to build the experience you want end users to have	■	■
Industry-leading SLA	99.99% Platform Uptime SLA	■	■
IP Whitelisting	Ability to provide a full set of IP addresses	■	
HIPAA Compatible	8x8 is HIPAA compatible and can provide a BAA. It is incumbent upon users to operate the technology in a HIPAA compliant manner.	■	
Webhooks	Use webhooks to know when users join, when users leave, when a recording is available	■	
GDPR requirements for data processors	GDPR compliant for data processors	■	■
DTLS-SRTP Encryption	Encryption using DTLS-SRTP to secure video	■	■
Additional End to End Encryption	True end to end encryption even along the videobridge for desktop video meetings	■	
Secure passcodes	The ability to set a passcode to provide an additional layer of security	■	
Number of Participants Possible in One Meeting	The number of users that can join a meeting via video or audio	100 Participants	
Phone access to meetings	Call into meetings using 80+ dial in number options (11 toll-free) for 58 countries	■	
Screen sharing	Share your computer screen and choose which applications or monitors to display	■	■
Group chat	Send messages to every video meeting participant	■	
Private Chat	Send private messages to individuals in a video meeting	■	■
Bandwidth controls	Users can monitor their connectivity quality and adjust their video bandwidth	■	
YouTube Video Sharing	Users can share a YouTube video for everyone in the conference to see	■	
Smart layout	Dynamically control app layout and display based on audio activity. Automatically or manually switch between tile and stage view, automatically focus on any participant and manage screen sharing.	■	
Dominant speaker indication	Indicates who is the dominant speaker at any given point in time	■	

Features	Description	8x8 Jitsi as a Service	8x8 Video Interaction
In-meeting connection indications	Show information about connections status, such as bitrate, packet loss, resolution, frame rate and estimated bandwidth	■	
Raise your hand	Participants can discreetly indicate they have something to say without interrupting the current speaker	■	
Participant controls	The ability for any participant (not just the host) to mute, control volume or remove other participants in meeting	■	
Controller mode	Users can control what screens the viewers see and what users can share in meetings	■	
Push to talk mode	Mode in which all speakers stay muted unless they press the spacebar key to speak	■	
Audio sharing	Users can share system audio in a meeting from a device or browser tab	■	
Remote desktop control through electron integrations	Control the mouse and keyboard movements of another user remotely through electron integrations	■	
Localization of interfaces	Interfaces localized to 45+ different languages	■	
Meeting recording	Record the audio, video, and screen share from a meeting. Save it to reference later or to send to those who could not attend.	\$0.06 per minute	■
RTMP Streaming to a Live Streaming service	Live stream video using RTMP. For instance, live stream to YouTube to an unlimited number of viewers.	\$0.06 per minute	
Conference Call-out	Dial-in meeting participants from within a meeting	\$	
Closed Captions	Real-time audio-to-text transcription displayed	\$	
Advanced Analytics through Callstats	500 variables tracked every 10 seconds to provide real time insight into call quality, performance and usage	\$	
Optimized for Mobile Web Browser	No app download required by end user as video call launches on mobile browser		■
Remote Camera Control	Control user's mobile phone camera features such as flash, zoom and photo capture		■
Geolocation	Obtain the location of your customers' device to tag captured photos with timestamp and GPS		■
Automatic Call Distribution	Let customers initiate calls and automatically connect to available agents when the video chat starts		■
SMS Invitation	Launch the Video Interaction call through SMS or embeddable link to enable a seamless invitation process		■
Photo Capture and Annotation	Capture images, annotate them, and share them during your call.		■



Integrations

Leverage native integrations with your business apps for CRM, marketing, customer support, and developer tools to create one system of engagement that elevates the customer experience.

Integrations for 8x8 Messaging APIs

Integration	Description	SMS API	SMS Engage	Mobile Verification	Chat Apps	Voice Messaging	Call Masking	App-to-App Calling
Zendesk	Integrate SMS or Chat Apps messaging from within your Zendesk app	■	■	■	■	■		
Freshdesk	Integrate SMS or Chat Apps messaging within Freshdesk's ticketing	■			■			
Salesforce	Integrate Chat Apps from within Salesforce				■			
Braze	Engage more customers with SMS or Chat Apps with Braze	■			■			
CleverTap	Add SMS or Chat Apps messaging in your mobile and marketing campaigns	■			■			
Zapier	Connect your apps on Zapier and create custom 8x8 Zaps	■	■	■	■	■	■	■
Workato	Integrate SMS messaging with Workato's workflows	■	■	■	■	■	■	■
Shortcuts	Add SMS messaging on your Apple Shortcuts	■	■	■	■	■	■	■
Adobe Campaign	SMPP integration with Adobe campaigns for SMS	■						
Oracle Responsys	Add SMS to your marketing strategy with 8x8 through Responsys' SPAN	■						



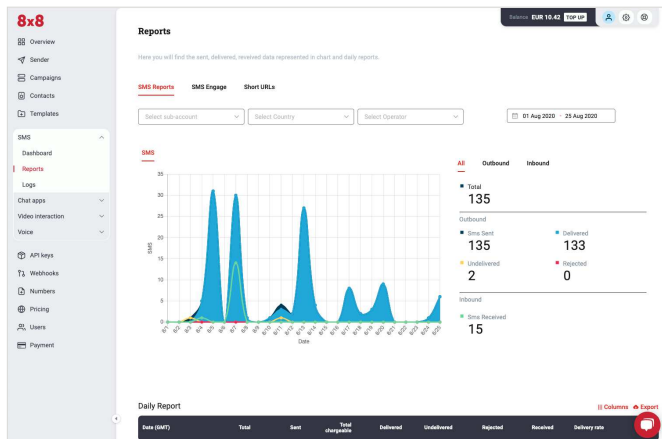
All the insights in one location

8x8 customer communication analytics across the SMS, Chat Apps and Voice are available on one portal, enabling more informed decisions and enhanced personalizations that improve the effectiveness of communication strategies. For more customized insights, the data can be pulled into any platform through a simple API call. The Reporting API allows you to retrieve your SMS and Chat App logs for any time range in either JSON or CSV format, with no size limit.

The 8x8 API analytics

SMS

- Monitor total SMS sent in real time
- Measure delivery rates of SMS
- Track spend on SMS
- Retrieve SMS API history programmatically with no size limit



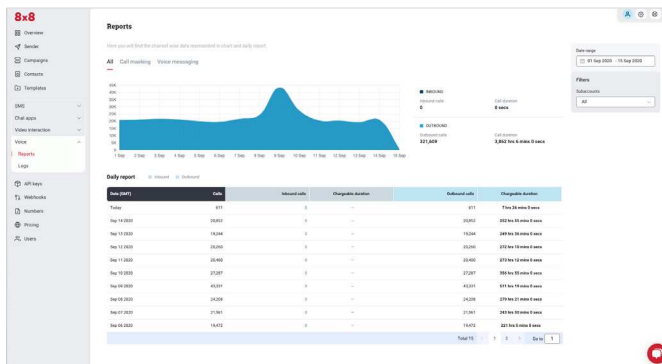
Chat Apps

- View total messages sent and received
- Track the number of messages by channel
- Monitor delivery rates
- Retrieve Chat Apps API history programmatically with no size limit



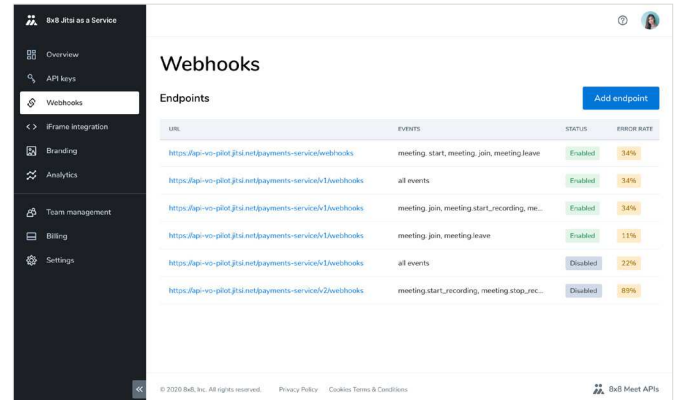
Voice

- Track inbound and outbound call volume and duration
- Monitor chargeable call minutes to keep an eye on expenses



Video

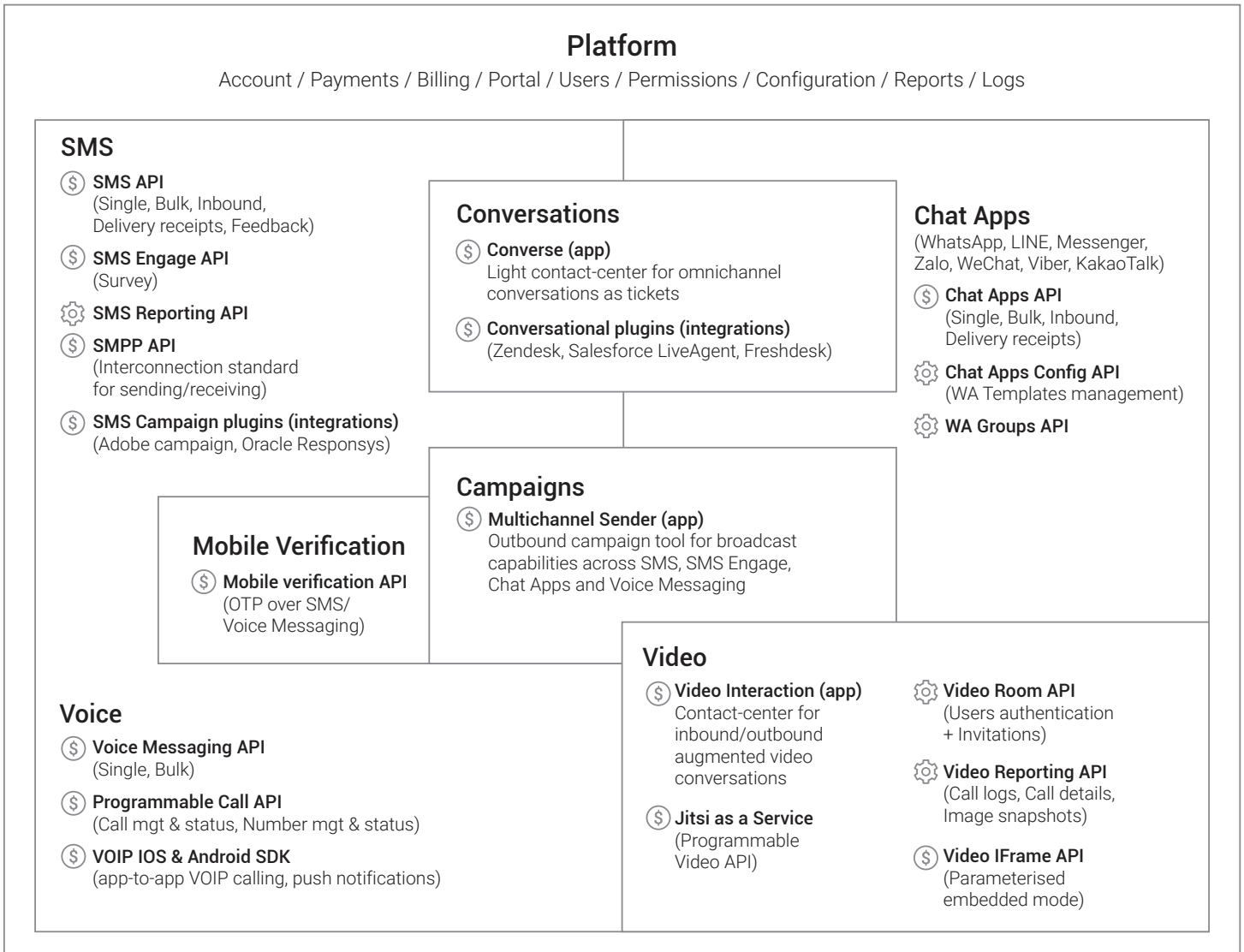
- View the overall error rate for each webhook endpoint
- Drill in to see every single event, including success/fail status, event name, event ID, and event date
- Access call logs and shared images in the Video Interaction portal



8x8 messaging API analytics

Data points	Description	SMS API	SMS Engage	Mobile Verification	Chat Apps	Voice Messaging	Call Masking	App-to-App Calling
Messages Sent	Observe trends on total messages sent	■	■	■	■			
Message and Call Status	Obtain message delivery/call status records of incoming or outgoing messages	■	■	■	■	■		
Read Receipts	Obtain read receipts for select channels	■	■	■	■			
Click-through Rates	Obtain click-through rates for links and call to action buttons in messages		■					
Individual Communication Logs	Easily access communication logs	■	■	■	■	■	■	■
Cost	Analyze cost of SMS sent through the 8x8 Connect	■						
Destination Countries	Analyze destination countries of messages through the 8x8 Connect dashboard	■	■	■				
Reporting API	Retrieve API history and logs programmatically for any time range in JSON or CSV format	■	■	■	■			

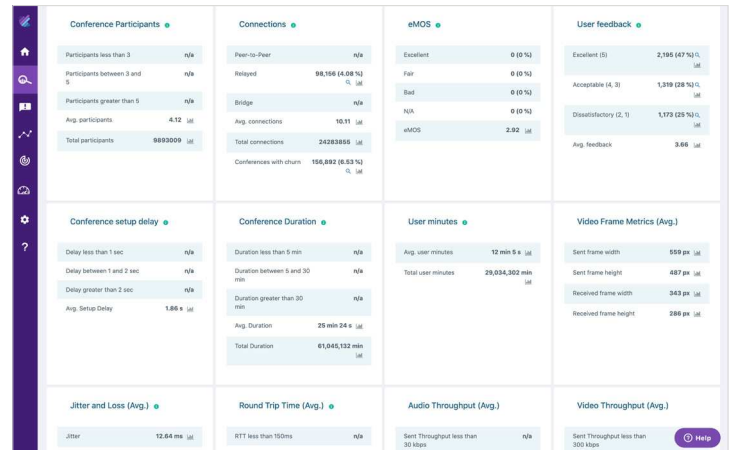
The 8x8 Communications API Portfolio





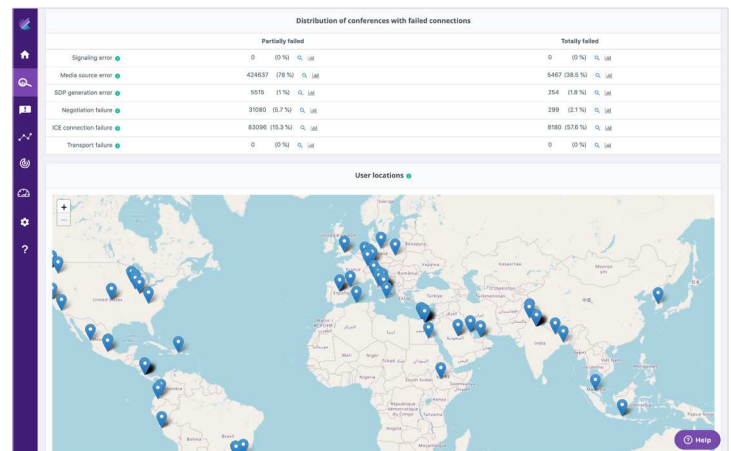
Performance Monitoring: 8x8 callstats

callstats monitors, analyses, and aggregates data for each participant in every call or video meeting. Thousands of data points are collected and presented on the dashboard. AI-driven proactive alerts provide users and network administrators with the root cause of connectivity or media quality issues before they escalate, to reduce troubleshooting and resolution time.



Contact Center Example

Contact Centers are highly tuned to optimize agent productivity and improve customer service and sales outcomes. However, agents are increasingly helping customers from less than optimum networks, such as home or remote offices, resulting in echo, voice distortion and one-way audio. These issues reduce the quality of customer experiences resulting in lower NPS scores and agent productivity and an increase in time-consuming troubleshooting for IT teams to find and fix the problem.



callstats provides real-time monitoring of WebRTC communication sessions and automatically detects when trouble occurs. AI-driven algorithms isolate the problem and identify the root cause, enabling rapid issue resolution, eliminating the time lag between issue occurrence and reporting. Proactively managing call quality means less time troubleshooting, better customer experiences, and more productive agents.

Team Collaboration Example

As the way we work changes, driving adoption of video tools is increasingly important. Yet, meeting participants are now connecting from a growing variety of locations and networks. In particularly home networks of varying quality often deliver poor quality video and/or audio meaning participants can be difficult to understand. Unfortunately, Managers and Supervisors often have very little visibility into the quality metrics impacting the effectiveness of the call and video experience.

Now, managers, supervisors, network administrators and even users, can access detailed call quality metrics needed to ensure delivery of first-class voice, video, and screen-sharing experiences.

Case Study: Verbling.com

Verbling is a language education company that connects language teachers with the students in an online marketplace. Tens of thousands of students connect over WebRTC with their teacher every month. Upholding a quality connection between the two is crucial to the success of the business.

Verbling is a San Francisco based company but operates worldwide, with teachers and students connecting everywhere from South America to Siberia. Dealing with firewalls, connection issues, and different ISP is a challenge. callstats plays a crucial role for us in navigating the difficulties in connecting peers across the globe. Verbling support agents can now browse the depths of a video call and get an insight into what went right or wrong, including anything from initial setup delays to intermittent connection disruptions.

“Using callstats has helped us focus on what we do best, and that’s connecting teachers and students to learn a language together; instead of having to worry about diagnosing different audio and video issues.”

Gustav Rydstedt, CEO, Verbling.com

Callstats features

Packages	Essentials	Basic	Pro	Enterprise
Minutes/ month	20k	200k	1 million	Custom
Users / Administrators	1	3	5	
Apps monitored	1	3	3	
Storage retention (days)	1	7	15	
Concurrent sessions	20	100	500	
Notifications			AI	
Works with WebRTC-compatible endpoints	■	■	■	
Support for iOS and Android clients		■	■	
Data protection compliance	■	■	■	
Data storage location selection		■	■	
Pre-call test analysis			■	
Support	email	email	email and phone	
Support response time	Self Serve	72 hours	24 hours	
Reporting / Notification Events	\$	\$	\$	

Access the documentation [here](#) to see how this Javascript library can integrate callstats.io with your WebRTC API application (standards-based W3C) to provide real-time analysis on quality of service and usage metrics.

Callstats Integrations

8x8 callstats provides out-of-the box integrations providing instant visibility for key WebRTC-based Contact Center-as-a-Service (CCaaS) applications. Click on the appropriate integration to access the SDK details:



callstats.io for Amazon Connect

Deep insights that enable high quality communications for Amazon Connect

[Amazon Connect](#)



callstats.io for OpenTok

Deep insights that enable high quality communications

[OpenTok](#)



callstats.io for Twilio Flex

Deep insights that enable high quality communications for Twilio

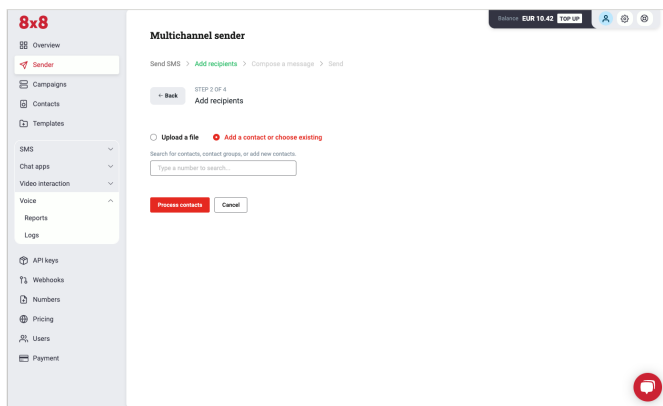
[Twilio Flex](#)

Get started immediately: Messaging

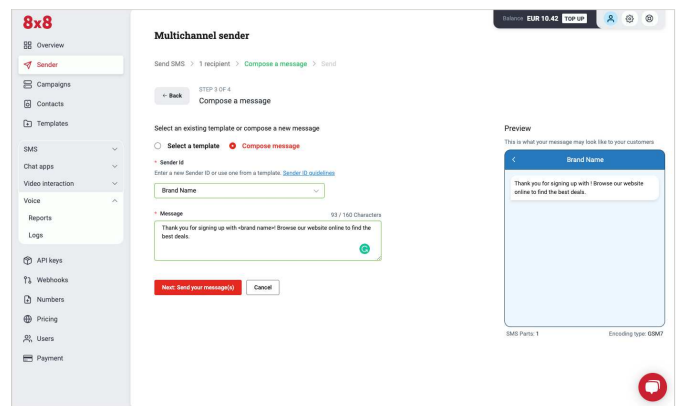
You can [sign up now to start sending messages online](#) using the 8x8 Connect multichannel sender. This online portal enables businesses to start sending out messages right away without having to integrate APIs into your systems. Four steps to sending an SMS using 8x8 Connect:

- Contact management
- Saved templates
- Scheduled campaigns
- Track results

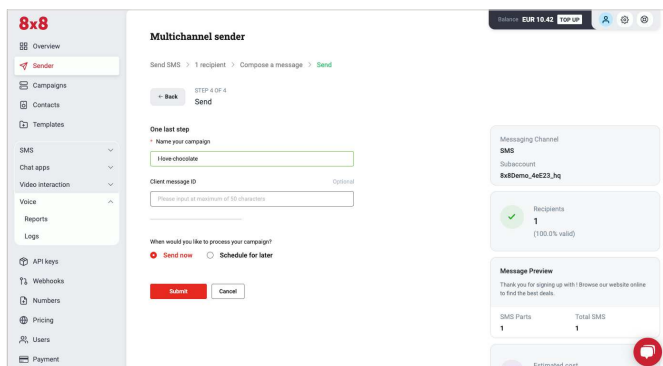
1. Upload and manage your contacts.



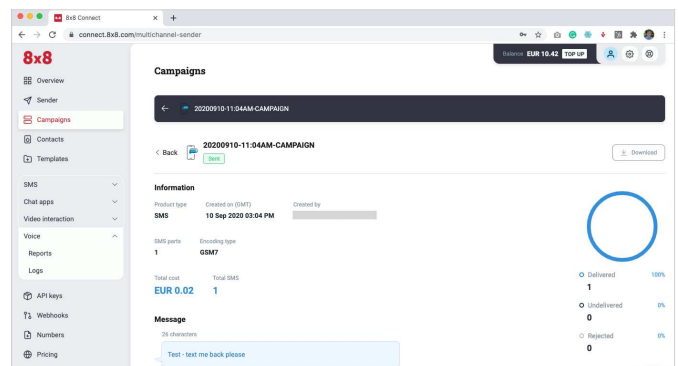
2. Select pre-approved templates or compose new messages depending on the channel you are sending them through.

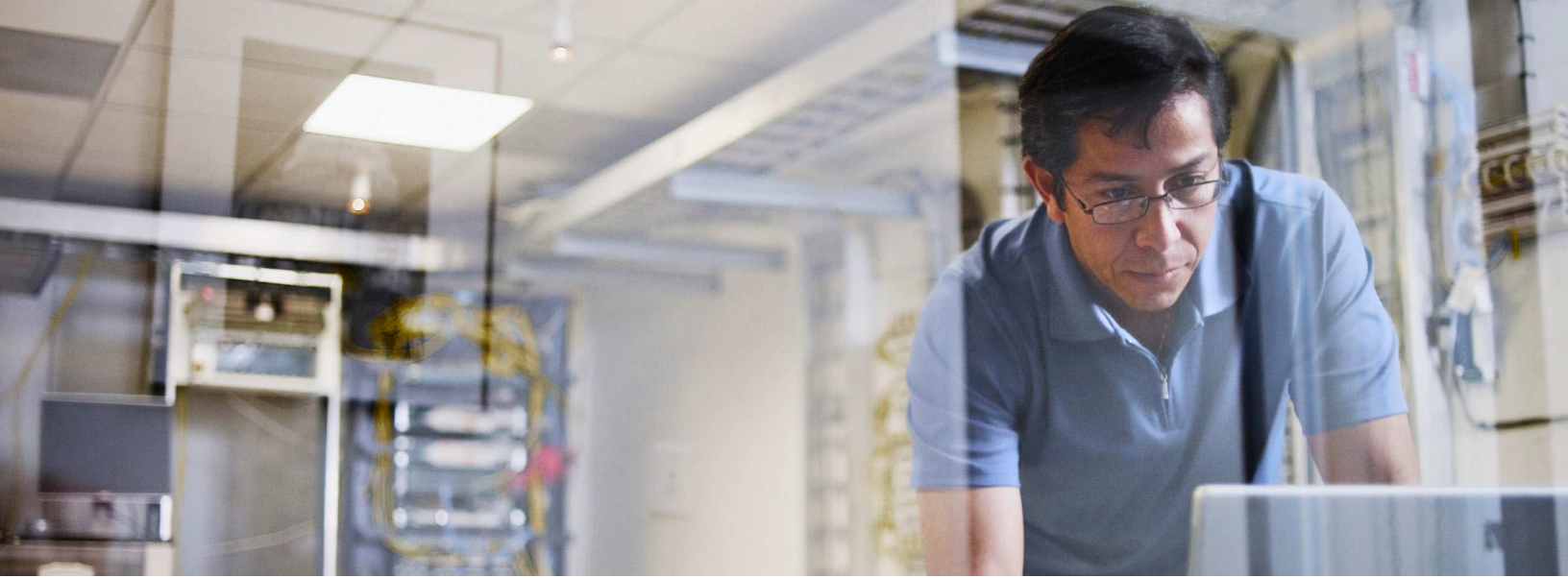


3. Schedule and send out your campaigns instantaneously.



4. Track your campaign results to analyze your reach.





Get started immediately: callstats

Sign up for a free account on callstats.io and get started in 10 minutes and just three lines of code. After creating an account, you will receive instructions for integrating your application into the callstats.io framework.

Reliability from a global network

8x8 ensures your message will be delivered, no matter where you are. Starting in Asia first, we've expanded our coverage to a robust network of more than 160+ direct mobile network operators reaching every country. We continue to grow our network of carriers to ensure the most reliable and low latency deliverability of our SMS and Voice messaging services across the globe.

Some of our network partners



Dedicated to your success— support where and when you need it

8x8 has a global network of operations and customer service centers located in Singapore, Australia, Philippines, Romania, Costa Rica, India, United Kingdom and the United States to provide 24/7/365 follow-the-sun support. Our network operations team is constantly monitoring the 8x8 network and proactively deploying preventative changes to ensure consistent quality and service availability. The support teams provide follow-the-sun support to be there for you wherever and whenever your business needs us.

Global support teams



- 200+ support team members worldwide
- Operates 24/7/365
- Utilizes 8x8 Contact Center infrastructure
- Offers extensive online knowledge base for self-service
- Expert onboarding assistance for all major chat apps



Peace of Mind through security, reliability and compliance

With regular testing and securing of our platform and servers, 8x8 ensures that our APIs and cloud technologies are built in a secure environment, to deliver the reliability and security your business requires:

Security

- Private network, with 3 levels of restricted subnets
- Strict permission policies, accessible only over secured VPN
- All requests use HTTPS/TLS encryption (IPSec connection supported if needed)

Reliability

- 99.993% uptime
- Redundancy over multiple app-servers
- Fully geo-distributed

Monitoring

- Automated testing and alerting systems
- Automated re-routing based on route availability and quality
- 24/7 monitoring by operations team

Compliance

8x8 adheres to PCI DSS requirements as a merchant and is SOX compliant. Additionally, General Data Protection Regulation (GDPR) compliance, 8x8 has undertaken the following measures to uphold the privacy of our clients and their customers:

- All of our employees are subject to our internal Data Protection Policy providing processes and safeguards to follow in order to prevent any data breach.
- Access to Personal Data is restricted to employees who have been designated by the necessity of their functions and the performance of the services.
- Our third party providers are subject to strict obligations related to the protection of your Personal Data through Data Processing Agreements and security reviews.

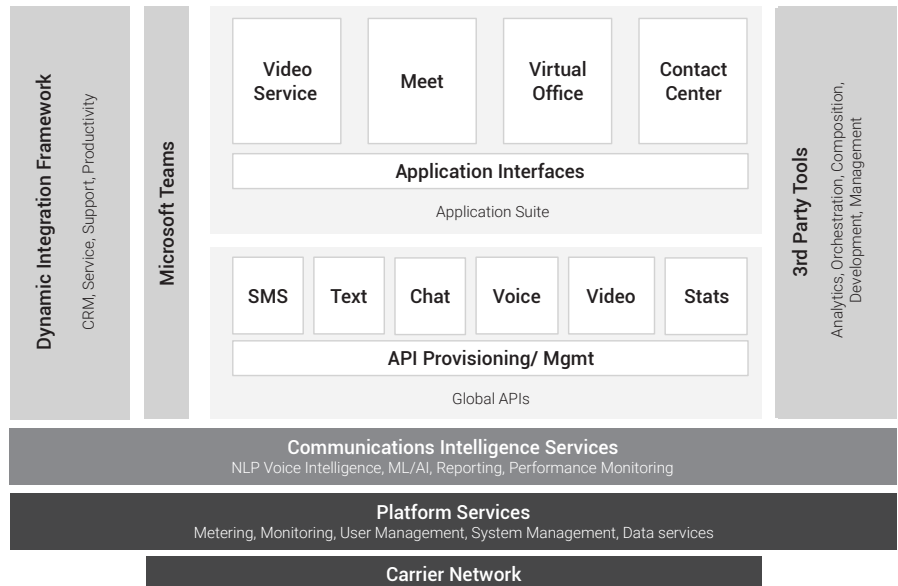
To learn more about the security and compliance measures undertaken by 8x8, read our [Security and Compliance](#) page.

Putting it all together

8x8 Open Communications Platform™

The 8x8 Communications APIs are a component of the 8x8 Open Communications Platform, which brings 8x8's various cloud communication technologies under one umbrella to provide the industry's most complete portfolio of work-from-anywhere enterprise communications.

The 8x8 Open Communications Platform accelerates digital transformation initiatives by providing secure, scalable, and extensible capabilities that are required for organizations to create unique employee and customer experiences at scale.



8x8 APIs:

1. Global network built mobile and Asia first.
2. Reliable with built-in fall back measure to ensure message delivery.
3. Easily deployable and highly customizable.
4. All reporting in one location.
5. 24/7/365 expert support and platform monitoring.

Try out messaging.

See a callstats demo.

Contact us at [1.855.819.3146](tel:1.855.819.3146) to learn more about how you can use the 8x8 APIs to build new customer experiences or visit us at [8x8.com/products/apis](https://www.8x8.com/products/apis).

8x8

8x8, Inc. (NYSE: EGHT) is transforming the future of business communications as a leading Software-as-a-Service provider of voice, video, chat, contact center and enterprise-class API solutions powered by one global cloud communications platform. 8x8 empowers workforces worldwide to connect individuals and teams so they can collaborate faster and work smarter. Real-time analytics and intelligence provide businesses unique insights across all interactions and channels so they can delight end-customers and accelerate their business. For additional information, visit www.8x8.com, or follow 8x8 on LinkedIn, Twitter and Facebook.

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