



Open Gateway

Overview, use cases and case studies on the QoD Mobile API

Telefónica Open Gateway

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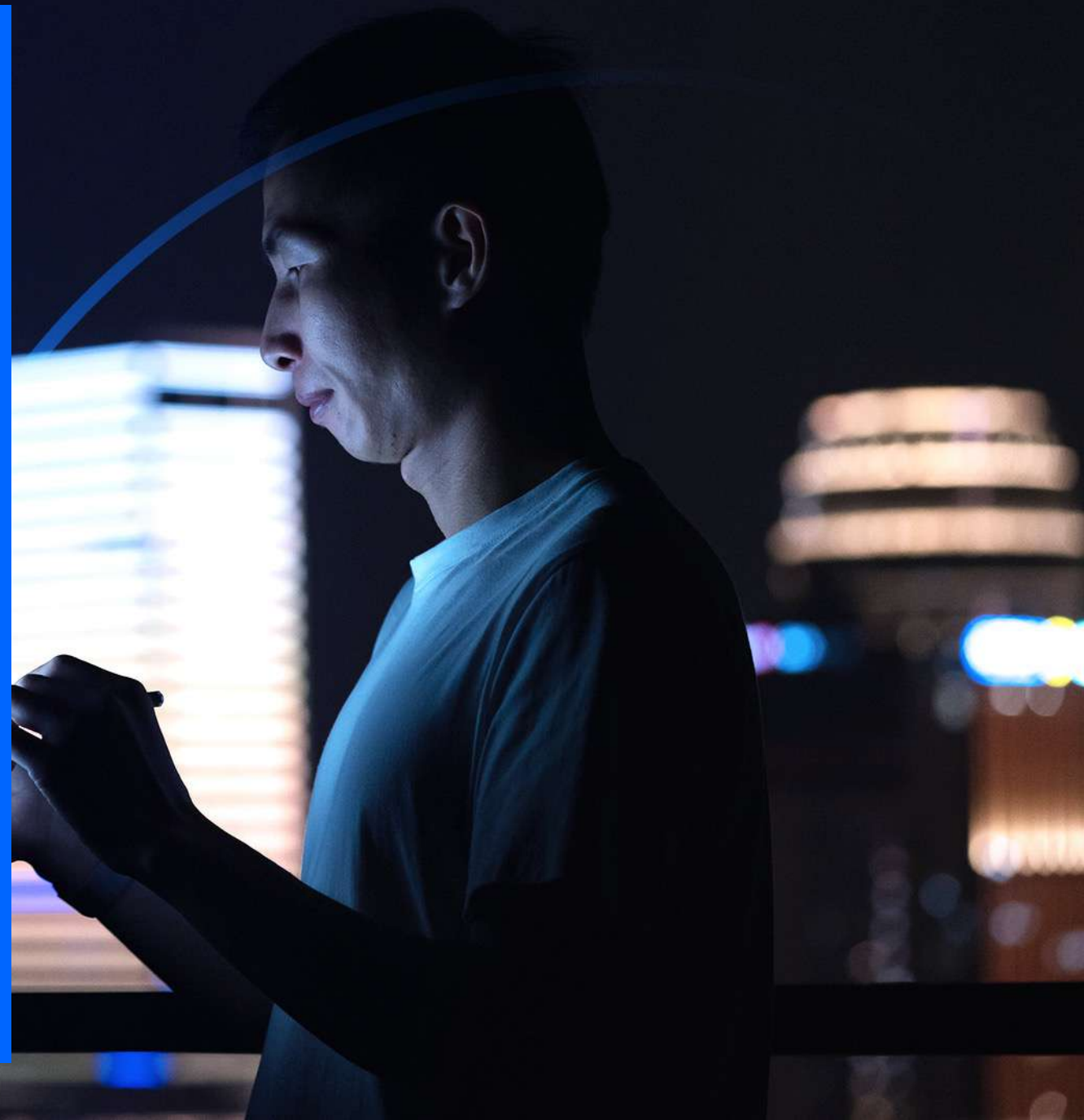


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**Description,
Features and
Categorization**

01



All the power of the network, at the service of your experiences.

The QoD Mobile Service lets your applications control the mobile connectivity of your customers so that you can focus on building the best possible user experiences!

Unlock new features for the services you build that are not possible without a finer grain of control of the quality of service of the connectivity of your clients. The QoD service is meant for those services that require advanced networking capabilities, in terms of availability, security or performance (latency and throughput).

This API empowers you to control the networking performance for your applications, enhancing the user experience and not having to worry about the telco operator that your client has subscribed to.

Features and Categorization

CAMARA	
COUNTRIES	
SECTORS	<p>FINANCIAL SERVICES & INSURANCES ECOMMERCE & RETAIL ICT SERVICES</p> <p>TRANSPORT & LOGISTICS TRAVEL & HOSPITALITY CUSTOMER ENGAGEMENT</p> <p>DATA DRIVEN MARKETING INDUSTRY & MANUFACTURING MEDIA, ENTERTAINMENT & XR</p>
SERVICIOS	CONNECTIVITY



Characteristics of QoD Mobile

02

Overview

Characteristics of QoD Mobile



Optimize your clients' networking

With the QoD service, you can activate the best networking configuration that suits better to the needs of your applications in real time. Regardless your application requires a short boost with high throughput or a temporal control on the maximum jitter or latency, there's a QoD policy ready for you to activate.



Seamless user experience

Your clients will enjoy the enhanced services you build with the capabilities brought to you by the QoD service without even noticing their network has been modified. This allows you to upsell advanced features with the security they will not suffer undesirable network issues.



Improve your clients' satisfaction

Reduce the number of customer complaints whose cause is the networking of your clients because you can control and monitor the network conditions and adapt to them whenever your applications are being used. This will light those dark situations when customers didn't experience your application as they should, and you weren't able to manage.

Overview

Characteristics of one standard QoD API



Integrate once, run with any telco

With a standardized API, you can seamlessly integrate the QoD service into your applications just once, this is, without the need for custom implementations for each telco operator. This simplifies the development process and reduces the time-to-market.



Quick and simple onboarding

With the QoD service, you can configure the network of your clients easily with only a couple of lines of code. You will not have to guess and discover the available networking capabilities of their clients and will focus on what matters more to your business.



Development toolboxes

The channel partners that distribute the QoD service have worked with the telcos to unify the development experience so that you can consume the service the same way they are used to with other services. They get all the SDKs, management, monitoring and troubleshooting tools they'd require

Use Cases

03

Overview / Use Cases

Gaming

The gaming industry has experienced significant growth, particularly in the mobile gaming segment. The extremely low latency, the higher bandwidth and a much higher network speed than the current one are the keys that will mark the sector in the coming years.

The API allows you to detect when the network is not offering the level of quality needed by the game and to trigger a connectivity booster to improve the experience of the end gamer.



<p>OTHER RELATED APIS</p> <p>Carrier Billing</p> <p>Number Verification</p>	<p>SECTOR</p>	<p>MEDIA, ENTERTAINMENT & XR</p>	<p>DEVELOPER NEEDS</p> <ul style="list-style-type: none"> • Develop new high-capacity gaming experiences. • Talk to the network when you need to so as to ensure high bandwidth, low latency and lag-free connectivity.
	<p>SERVICE</p>	<p>Connectivity</p>	

Overview / Use Cases

Entertainment

How about watching a football match in person at a stadium from multiple angles, all at the same time? Imagine the impossible.

With QoD Mobile API you can offer real-time highlights and repetitions for crowded live events. This requires to serve chunks of video clips quickly to clients, but is unable most of the time because the cellular network is congested in the geographical area where the live event is happening because of the high amount of attendees.



<p>OTHER RELATED APIS</p> <p>Location Verification</p> <p>Carrier Billing</p>	<p>SECTOR</p> <p>FINANCIAL SERVICES & INSURANCES</p>	<p>DEVELOPER NEEDS</p> <ul style="list-style-type: none"> • Detect when the network is not offering the level of quality needed by the game. • Increase the QoS for its clients temporarily during the download of the clip
	<p>SERVICE</p> <p>Connectivity</p>	

Overview / Use Cases

Future Surgery

Extended Reality (XR) technology is finding growing acceptance and application in different fields of surgery.

It can be used by doctors to practise procedures, crucial for life-saving operations, and furthermore be used to operate remotely and stream operations. Thus improving Healthcare in a way not yet imagined.

QoD Mobile offers to you the possibility to create services that will optimize the work of medical personal by activating lower latency and higher throughput for the high quality video travelling through the network.



OTHER RELATED APIs

SECTOR

ITC SERVICES

SERVICE

Connectivity

DEVELOPER NEEDS

- Develop new services to improve the future of health with the high capabilities of the network
- Ask the network for a reliable connection with stable latency and bandwidth to deliver high-quality 3D rendering. Even during longer interventions.

Overview / Use Cases

Online Training

Pandemic changed not only our lives but also our workstyle. Take learning as example. Online learning took off and still remains. People saw an opportunity to access in an easy way valuable knowledge in today's ever changing labour market. But online learning is much more than that. It's a powerful tool to close the global skills gap.

Webinars are the favourite online training format for professionals, but there is also space for high-quality XR learning experiences for specific training (i.e the Pharma Industry).

With QoD Mobile API you can offer training solutions with guaranteed image and video high quality by interacting with the network.



<p>OTHER RELATED APIs</p> <p>Carrier Billing</p>	<p>SECTOR</p>	<p>ITC SERVICES</p> <p>CROSS-SECTOR</p>	<p>DEVELOPER NEEDS</p> <ul style="list-style-type: none"> • Provide the best-in-class learning experience through their applications • Ask the network for stable connectivity, the very best video resolution and a larger rendering size.
	<p>SERVICE</p>	<p>Connectivity</p>	

Overview / Use Cases

Industry 4.0

Industry sectors market show a continuously growing tendency over the last years, with some sectors like Manufacturing taking the lead in digitalization and automation. Nevertheless, flexible production for customized goods, electrification across industries, reliable tracking across the supply chain and drone delivery are just few examples of the challenges that the industry is facing in present days.

Video technology and real-time connectivity can make a highly versatile and impactful contribution toward industry digitalization, for example applied to the evolution of digital twins, drone delivery and surveillance of just process automation.

Ultra-reliable and real-time communications are the great deal in Industry 4.0 evolution. QoD Mobile API offers you a first step to interact with the network and improve the traffic quality for new digital industrial applications.



OTHER RELATED APIs

SECTOR

INDUSTRY & MANUFACTURING

TRANSPORT & LOGISTICS

SERVICE

Connectivity

DEVELOPER NEEDS

- Improve transmission of audio and video, being able to use better video codecs by having a better network support for the application traffic.
- Talk to the network for better bandwidth, speed and jitter for greater precision and agility in robot control, for instance.
- Designs services and applications to make industrial processes more efficient, and reduce waste helping improve industrial sustainability

Overview / Use Cases

Design & Construction

Augmented reality offers significant value in construction and design fields. It facilitates the visualization of architectural designs superimposed in real environments, improving the understanding of projects and decision making. Most important, it allows construction teams to detect potential problems before construction, reducing errors and costs.

It also streamlines communication between architects, engineers and contractors, improving collaboration. By using mobile devices and AR glasses, professionals can access critical information in the workplace. In addition, AR technology improves safety by providing accurate instructions and hazard alerts.

QoD Mobile API offers you the capability to offer high through put for such devices improving the user experience and guaranteeing the application performance.



OTHER RELATED APIs

SECTOR

INDUSTRY & MANUFACTURING

SERVICE

Connectivity

DEVELOPER NEEDS

- Ask the network for a reliable connection with stable latency and bandwidth to deliver high-quality 3D rendering.
- Designs services and applications to make construction processes more efficient reducing time to deployment and allowing to identify construction issues proactively.

Case Studies

04

Overview / Case Studies

BLACKNUT CLOUD GAMING

Blacknut is a cloud gaming service that provides subscribers unlimited access to 500+ games and cross-device capability for any connected device. Gamers need stable connectivity in key moments, and lag, jitter and buffering are substantial issues that Blacknut wanted to erase from their gamers experience.

With Vonage, we implemented Quality on Demand to activate higher quality gaming.

Now Blacknut's users can enjoy a solid speed, super-fast response times, ultra-low latency and unwavering connectivity, providing a superior experience.



PARTNERS



SECTOR

MEDIA, ENTERTAINMENT & XR

Overview / Case Studies

APOQLAR XR REMOTE SURGERY

Apoqlar's VSI HoloMedicine is a medical software platform with a feature that constructs a volumetric 3D image based on real world patient scans, which a physician can remotely view using the HoloLens. This platform required solid connectivity as the rendering of the volumetric 3D model relies on a highly reliable connection with stable latency and bandwidth.

Utilizing Microsoft's HoloLens hardware, we integrated our QoD API in order to guarantee the quality of rendering of the 3D images. This improves the video, with no image freeze and better resolution, providing a consistent experience for the doctor preparing for surgery.



PARTNERS



SECTOR



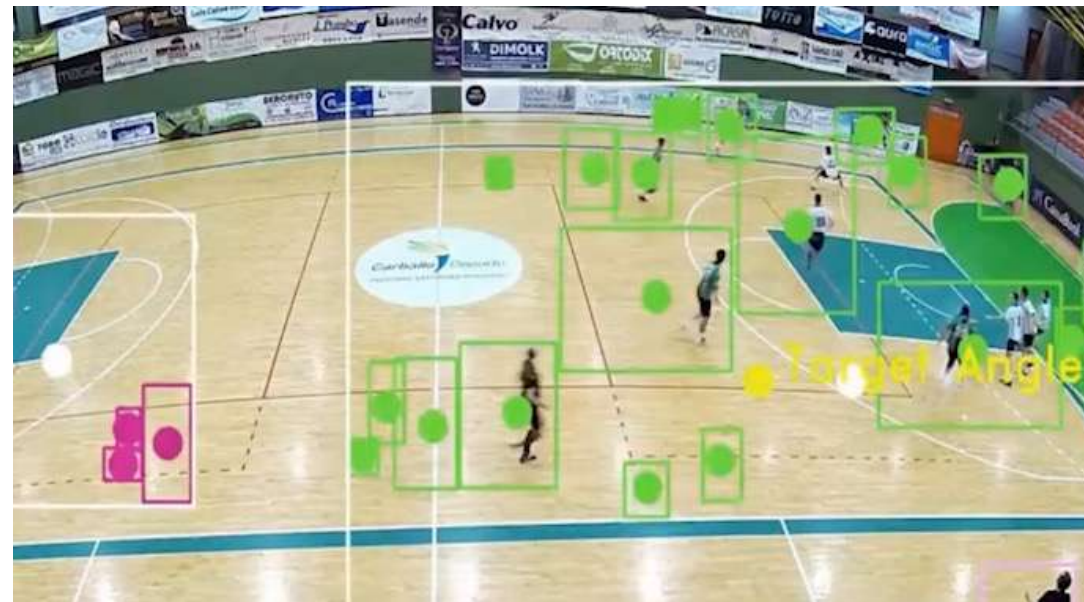
Overview / Case Studies

AI VIDEO PRODUCTION

Cinfo is a company specializing in artificial intelligence, 5G, video technologies with a vision to democratize the production of all kinds of events.

Cinfo wanted to create an affordable system for high quality broadcasting, using AI in order to simplify workflow and reduce errors and costs. These solutions are highly sensitive to connectivity, quality parameters latency and jitter and this is why they use the QoD API for their AI to process the frames at the capturing stream FPS rate, during a live event.

The result is a live sports broadcast, captured using AI, with no video freeze and no pixel or frame loss.



PARTNERS



SECTOR

MEDIA, ENTERTAINMENT & XR

Overview / Case Studies

ONLINE VIDEO TRAINING

Zoom is a video room service that provides different comms services for work meetings, simultaneous virtual rooms and webinars.

Zoom is exploring charging users for higher network quality and/or offering premium services solutions with higher quality to increase the number of paying customers.

Integrating Quality on Demand with Vonage, we were able to vastly improve the virtual education experience

Our solution enables webinar hosts to activate HD mode to ensure the quality of presentations automatically and stabilize connectivity.



PARTNERS



SECTOR

MEDIA, ENTERTAINMENT & XR

Overview / Case Studies

IMMERSIVE EXPERIENCES

YBVR create immersive real time fan experiences with cutting edge streaming of Sports, including VR.

YB Arena solution creates next level engagement with multi-camera access for the fans within a sports venue, showcasing 5G capabilities.

This solution requires cross device low latency streaming, optimized bandwidth and support for high device volume.



PARTNERS



SECTOR

MEDIA, ENTERTAINMENT & XR

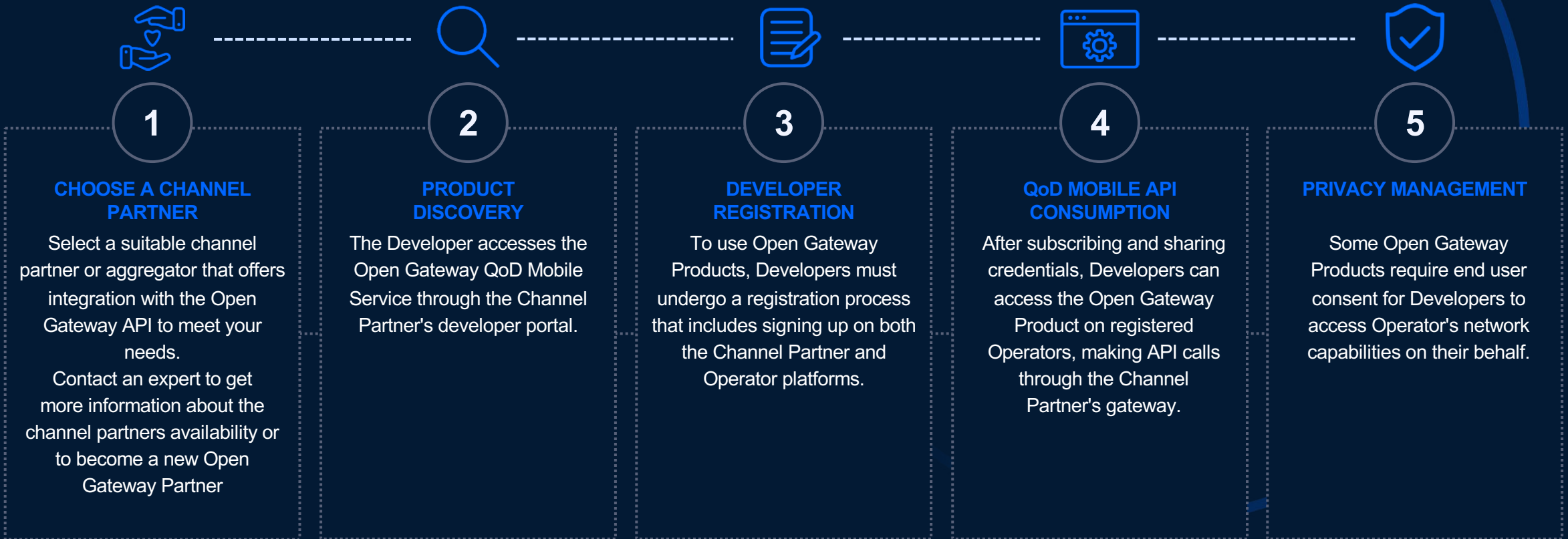
**Start using
QoD Mobile API!**

05

Getting Started with QoD Mobile API

Harness the power of Open Gateway and seamlessly integrate our API services into your app

Follow these initial steps for seamless API services to Developers within Channel Partners' environments, including Operators API Services integration for a cohesive product experience and efficient collaboration among stakeholders.



Documentation

06

Official QoD Mobile CAMARA API Documentation

Over CAMARA

CAMARA is an open source project within Linux Foundation to define, develop and test the APIs. CAMARA works in close collaboration with the GSMA Operator Platform Group to align API requirements and publish API definitions and APIs. Harmonization of APIs is achieved through fast and agile created working code with developer-friendly documentation. API definitions and reference implementations are free to use (Apache2.0 license).

Camara is supported by:



Meetings

- Regular Virtual Meetings
- Bi-weekly on Friday
- 14:00 CET



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QualityOnDemand (Subproject)

✓ [CAMARA QoD Mobile](#)

FAQs

07

API QoD Mobile / FAQs

What is the QoD Mobile API?

The QoD Mobile API is a standardized API that enables you to activate the most suited network policies for your client's mobile connection on their behalf.

How does QoD Mobile improve experiences for users?

QoD Mobile adds value for clients by enabling you to manage and adapt their network automatically and seamlessly to the needs of the applications and services you are offering to them.

How does the QoD Mobile API ensure improvement in network performance?

The standardized API provides a catalogue of policies and uniform access to telco capabilities, ensuring a consistent creation of sessions regardless of the telco operator involved.

Can the QoD Mobile API be used on any network?

The QoD Mobile API is limited to 3GPP cellular networks both 4G and 5G.

Do users need to subscribe to a telco mobile service with QoD Mobile activated to enjoy the benefits?

Yes, the clients whose networking is to be managed by the QoD service should have a subscription with one of the telcos that have embraced the Open Gateway project.

What is the role of the GSMA in the QoD service?

The GSMA plays a key role in setting standards and guidelines for quality of service, ensuring consistency and interoperability across all the telcos that have embraced the Open Gateway project.

How can businesses benefit from consuming Quality on Demand from their applications?

By consuming the service, businesses can create new services with the security that they will have the networking needs they require

Does QoD Mobile comply with regulations?

QoD Mobile complies with European GDPR and Network Neutrality regulations.

**Other relevant
information**

08

Discover more

Join our Developer Hub

Join the [Telefónica Open Gateway Developer Hub](#) to test our APIs, develop use cases with the power of the network and improve user experiences.

Enroll our Partner Program

If you are interested in the potential of Telefónica Open Gateway and you are willing to collaborate with us, you can [enroll our exclusive Partner Program](#).

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