

Open Gateway

# Number Verification API

Transforming User Authentication  
for Modern Businesses





Open Gateway is a global initiative,  
**enabling telco operators to expose core  
network capabilities as standardized,  
interoperable APIs.**



**Global & Multi-telco:** Backed by GSMA, adopted by Telcos Worldwide



**Standardized & Secure:** Built on CAMARA open standards, privacy-first by design.



**Trusted Network Intelligence:** Telco-grade accuracy and trust.

**80**

Operator  
Groups

**291**

Mobile  
Networks

**>80%**

Network  
Connections

# Current multi-factor authentication systems cause challenges



## Weak Authentication Methods

Manual identity checks delay account creation and frustrate customers, reducing conversion rates.

- Increased fraud risk
- Customer trust declines

**76%**

Of businesses targeted by SMS phishing attacks ([KeepNet](#))



## User Friction

Complex authentication steps frustrate customers and lead to higher abandonment rates during onboarding.

- Drop-offs increase
- Poor experience

**68%**

Abandonment rate during onboarding due to complexity ([Signicat](#))



## Operational Costs

Managing multiple authentication systems increases complexity and drives up operational expenses.

- Higher infrastructure costs
- Increased support burden

**\$4M**

Annual spend by large enterprise of fragmented IAM systems ([KPMG](#))

A solution is needed that provides **silent authentication** while addressing current security vulnerabilities and **user experience** issues...

# Network authentication is the new standard in fraud prevention

Moving away from **SMS OTPs** and **app-based authenticators** toward a more **cost-efficient** and **trusted source**, delivering an **improved user experience**



# Why a user's phone number is the most powerful authentication tool



Mobile numbers are the most ubiquitous, unique and durable identifiers of the digital era.



Phone number is the most used digital identity and possession factor



Telcos can provide secure MSISDN authentication



Safer and simpler than passwords, authenticators, passkeys and SMS OTPs



No user onboarding required



Any device with a SIM can make use of the assigned MSISDN

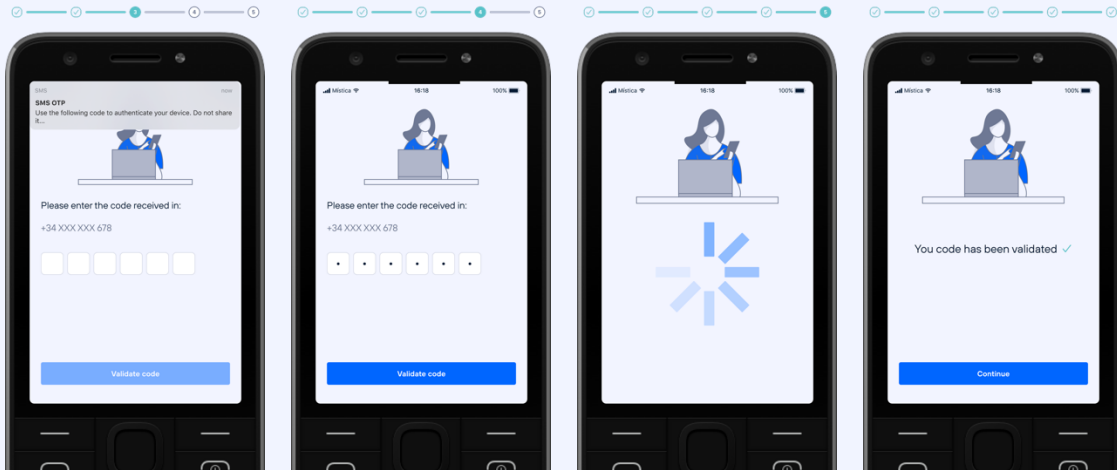
# Number Verification provides secure and silent authentication



Authenticates the user of an app or online service by checking if the phone number they provide matches the one associated with the device they are currently using.



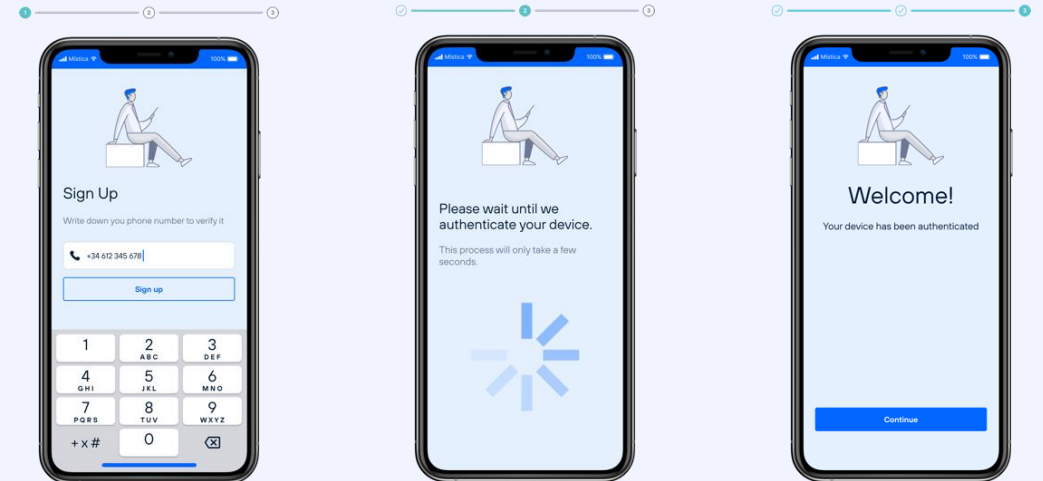
## WITHOUT NUMBER VERIFICATION API



Other authentication solutions require multiple steps, cause users to abandon the app, and impact conversion and user experience.



## WITH NUMBER VERIFICATION API



The user's number is verified using the network with the authentication process in the background shortening the journey and requiring less interaction.

# Number Verification has evolved with the use of **Operator Token**



Operator Token is an encrypted, non-persistent and anonymous identifier that allows a third-party app to authenticate a device with an operator

## Number Verification 1.0

### Benefits

- No need to wait to receive SMS as authentication happens in the background.
- No need to switch screens, and no user interaction.
- No need to enter a pin as the MSISDN is the unique identifier.
- Up to 3x faster than SMS OTP verification.
- Removes social engineering attacks as no PIN is needed.

## Number Verification 2.1 (Operator Token)

### Additional Benefits

- Works regardless of the connection (Wi-Fi and VPN connection).
- No need for an SDK as native OS support.
- Works across all devices (QR binding).
- User consent covered by Operating System with no effect to UX.
- Multiple SIMs - OS native selection of the SIM to be used for authentication.

# Number Verification has evolved with the use of **Operator Token**



Operator Token is an encrypted, non-persistent and anonymous identifier that allows a third-party app to authenticate a device with an operator

## Number Verification 2.1 (Operator Token)

Your app can either ask the user to insert their phone number or ask for permission to access it.



Consent screen for app to use phone number



Silent login completed



Operator token functionality will be prioritised, with previous version as fallback in specific cases.



# Number Verification is applicable to different use cases



## Silent Authentication

Enable frictionless logins by verifying identity through network-level checks without user input.



## Login Security Enhancement

Replace vulnerable SMS OTPs with secure, real-time number verification for account access.



## Transaction Confirmation

Validate identity before high-value transactions to prevent fraud and unauthorized payments.



## Password Reset Validation

Confirm identity during account recovery to stop account takeovers and identity theft.



## Fraud Risk Assessment

Use number verification as part of layered security for sensitive services and transactions.



## Compliance Assurance

Automate identity checks to meet regulatory standards for secure authentication processes.

# Number Verification **benefits**



## **Fraud Prevention**

Eliminate vulnerabilities in SMS OTPs and app-based authenticators with secure network-level verification.



## **Regulatory Compliance**

Aligned with PSD3, eIDAS2, and EUDI Wallet—ensuring compliance, digital sovereignty, and long-term trust.



## **Improved User Experience**

Deliver seamless authentication without requiring additional steps or disrupting onboarding flows.



## **Enhanced Trust**

Strengthen customer confidence by providing secure, transparent authentication across all digital channels.



## **Operational Efficiency**

Reduce complexity and costs by consolidating authentication processes into a single, automated solution.



## **Future-Ready Security**

Support advanced authentication models and evolving fraud prevention strategies with scalable solutions.

# Real world benefits and added value for business



✓ Number Verification API



Cabify, Spain's top ride-hailing platform with over 85,000 drivers, uses the Number Verification API to speed up rider onboarding by 10 seconds and remove SMS OTPs.

**UP TO  
30%** increase in signup  
completion with



✓ Number Verification API



TikTok, with 98 million+ users in Brazil, showcased the Number Verification API for faster, seamless logins by replacing SMS OTPs with instant, silent mobile network validation.

**>5  
SECS** saved during  
login process

# Number Verification provides **secure and silent authentication**

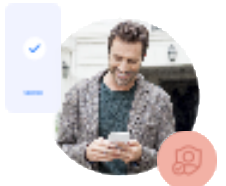


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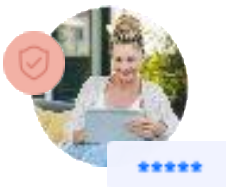
## Onboarding & Transactions

Verify user identity during **onboarding and transactions** without relying on SMS OTPs



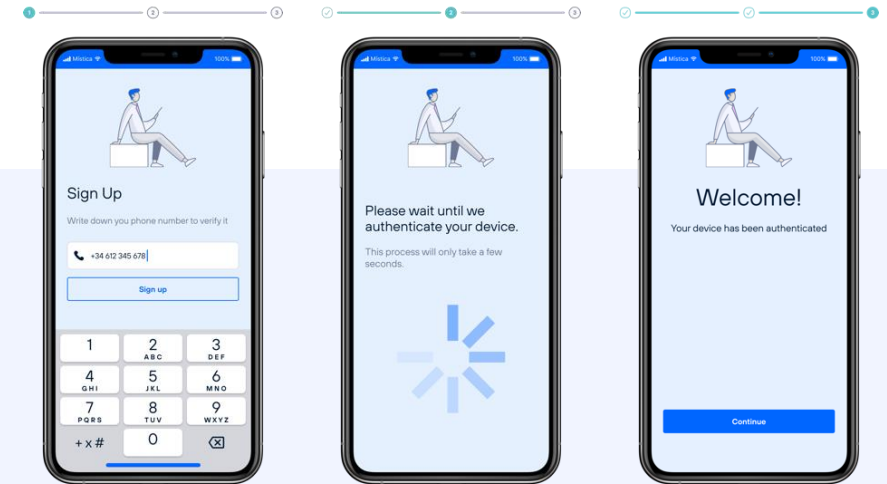
## Login without Credentials

Enable **secure app login** by authenticating phone numbers, removing the need for passwords or usernames.



## Account Recovery

**Simplify** password recovery by verifying user numbers, without the need for interaction with SMS or email.



- ✓ **Frictionless, Secure, and Private Authentication**  
Instant, passwordless verification enhances experience and trust while safeguarding privacy and reducing fraud risk.
- ✓ **Efficient, Reliable, and Cost-Effective Operations**  
Automated, telco-based verification accelerates onboarding, improves reliability, and lowers operational costs.
- ✓ **Trusted, Compliant, and Scalable Solution**  
A regulation-ready, telecom-powered platform built for secure, global, and cross-industry integration.

# Next Steps to start using the Number Verification API



## Sandbox Testing

✓ Join Partner Program ✓ Test use case ✓ PRO environment



## Try & Buy

✓ Proof of Concept ✓ Validate use case ✓ Business model discussion

**Related Open Gateway APIs:** to be combined with Number Verification in particular use case for added value



### SIM Swap API

Checks if a user's SIM card has recently been changed, aiding businesses prevent fraud by alerting them to potential unauthorized account access, enhancing security during logins and transactions.



### Device Swap API

Validates identity information against trusted operator data, using a sophisticated scoring system to provide a reliable approach to rapid online identity verification, onboarding and security.



### KYC - Match API

Detects if a mobile line's SIM card has been inserted into a different device, helping to prevent fraud, improve user security, and track user behavior trends.



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