Comtrade Mobile Token is standard based, secure generator of one-time passwords, compliant to European Central Bank recommendations for internet payments. It enables two-factor authentication for web banking, mobile banking or other security-sensitive web and mobile applications. It works together with a Comtrade Authentication Server or can be configured to use other OATH-compliant servers.

Two Factor Authentication

Static passwords are simply not enough to protect access to security sensitive applications, such as banking via a mobile device or web browser. Once the attacker has obtained the static password, the door to fraud is wide open.

Dynamic or One-time Passwords (OTP) are an important security improvement. Each one-time password can only be used once. This significantly narrows the window of opportunity for the attacker, even in the unlikely case of successful interception of the OTP code.

Comtrade Mobile Token OTP (One-Time Password) Library generates one-time passwords. In order to generate valid OTP code, two factors are needed: something-user-has (a secret, that is stored on the device and shared with a server side) and something-user-knows (PIN needed to make use of the secret).
Library or Standalone Application

Comtrade Mobile Token can operate as a standalone mobile application or integrated as a part of mobile application.

The standalone application generates the OTP code and displays it to the user, who then types it into the login form of web application, e.g. web banking.

Integrated Comtrade Mobile Token is intended for mobile applications such as m-banking. A user types in a PIN and a one-time password is transparently routed to the server side, without need for typing to log the user in.

Figure 1 - Standalone Mobile Token: After one-time activation where the PIN is set, the user types in the PIN to generate OTP code for login

Supported client mobile platforms: Android, IOS, Windows

Recommended server side: Comtrade Authentication Server
Oath Standards

Comtrade Mobile Token supports three modes of operation from OATH (Initiative For Open Authentication) standards family:

- **TOTP** - Time-based One-time Password Algorithm
- **HOTP** - HMAC-based One-time Password Algorithm
- **OCRA** - OATH Challenge-Response Algorithm

**Secure**

Security features of Comtrade Mobile Token Library:

- HTTPS communication is used to encrypt communication and verify server authenticity, to prevent leaking of OTP or other confidential data
- Secret data is only meaningful when combined with a user PIN and verified by the server side. Even when an attacker is in the possession of user’s device, and extracts the stored secrets from it to bruteforce PIN, each PIN results in the data that seem equally legitimate to the attacker
- The server side checks limited failed attempts and locks out the attacker quickly
- Distribution of signed app-installation package over official platform markets to reduce the risk of tampering with the package
- Relies on underlying platform (Android, iOS, Windows) architecture for application isolation
- Independent penetration test

**Technical Features**

In response to ever-increasing web banking fraud, the European Central Bank issued RECOMMENDATIONS FOR THE SECURITY OF INTERNET PAYMENTS. Comtrade Mobile Token Library has been verified by independent 3rd party specialists to meet the applicable part of these recommendations for the area of strong user user authentication. The statement of compliance is available upon request.
Creating value through partnership

Comtrade is a leading IT organization in South East Europe specializing in the fields of IT solutions, system integration and hardware distribution. With more than 900 satisfied customers and offices across Europe and the USA, Comtrade has become a recognized name on the global stage. Founded in 1990, Comtrade now employs over 1,500 business and IT experts, including 1,000+ software engineers. With a proven track record of delivering IT solutions and services that help reduce business complexities and costs, we are a trusted technology partner to medium and enterprise businesses.

1500+ Total employees
30 Strategic partnerships
1000+ Software engineers
10 Development campuses
900+ Loyal customers
03 Technology centers

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