

Telegram, secure messaging



Francisco Luque Sánchez - María de Mar Ruiz Martín

Universidad de Granada

fluque1995@correo.ugr.es - mariadel52@correo.ugr.es

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Introduction

Telegram is a safe instant messaging application. Features:

- ▶ Secure
- ▶ Encrypted
- ▶ Own transport protocol (MTProto)
- ▶ Multiplatform
- ▶ Cloud-based
- ▶ Open source
- ▶ Powerful APIs (provided by Telegram team)
- ▶ Free "forever"

Telegram security

Telegram uses different features for secure messaging and message encryption

- ▶ MTProto message encryption
- ▶ Private chatting
- ▶ End-to-end encrypted messages
- ▶ Self-destruction for messages

MTPROTO protocol

Transport and encryption protocol created by Telegram team (invented by Nikolai Durov, PhD Saint Petersburg Univ.). Based on:

- ▶ 256-bits symmetric AES encryption
- ▶ RSA 2048 encryption
- ▶ Diffie-Hellman key exchange

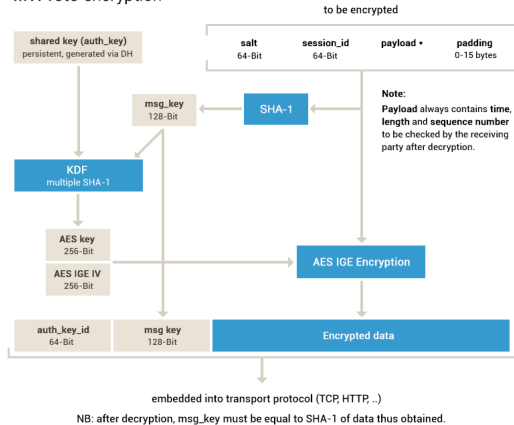
It allows multi-platform usage and file sending in every format

[MTPROTO detailed description](#)

Telegram haking contest: They will pay 300000 \$ to the Telegram Encryption cracker

MTPProto encryption schema

MTPProto encryption



End-to-end encrypted messages - secret chats

Completely secure chats

Messages encrypted end-to-end (Encrypted by sender and decrypted by receiver)

No one is allowed to see the content of those messages, including Telegram team

They are not stored in Telegram cloud (you will only have access from the device of origin or destiny)

News: [Iran blocked Telegram App after spy request](#)

Self destruction for messages

Secret chat feature

Messages and files are deleted after a period of time

They are deleted from sender and receiver

Not stored on their servers

Everything you delete is deleted forever. Except for cats.
We never delete your funny cat pictures, we love them too much.

Telegram developer team

Open Source and APIs

Almost the whole code is open source, except for some code from the server (Keep calm! They promise they will release it soon)

APIs for Bots and applications

[Android App code](#)

[ETSIIT Bot source code](#)

The End.