FTPChat Project

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Research Summary:

FTPChat is a Python-based messaging protocol that replaces traditional socket communication with FTP-based message relays. It repurposes FTP servers, such as those embedded in ZTE routers or hosted on platforms like SFTPCloud.io, into secure, decentralized messaging hubs.

Instead of maintaining persistent socket connections, FTPChat enables clients to exchange messages by downloading a shared file from the FTP server, decrypting its contents, appending their own message, re-encrypting the updated content using a 24-layer mono-alphabetic cipher, and uploading it back. This cycle allows each client to act as both a reader and a writer, maintaining a synchronized message flow across all participants.

The protocol supports both asynchronous and synchronous communication, making it ideal for environments where socket access is restricted, blocked by firewalls, or technically infeasible. Its layered encryption ensures that all messages remain secure during transit and storage, even on publicly accessible FTP servers.

Short Abstract:

FTPChat is a Python-based messaging protocol that replaces sockets with FTP-based encrypted message relays.

It uses FTP servers as secure hubs, enabling asynchronous communication even in firewall-enabled PCs or legacy networks.

Messages are encrypted with a 24-layer cipher and exchanged via upload/download cycles.

Ideal for environments where sockets are blocked or unreliable.

Features:

1. It enables message transfer between multiple computers without using the internet.

2. It boasts a high degree of security and privacy due to its lack of internet connectivity and its use of 24 levels of encryption.

3. It is less expensive than other DIY devices.

4. Its small size makes it easy to carry.

5. It has achieved a development goal, as it consumes significantly less power than similar devices currently in use.