GhostWire Protocol Adapters

Contents

Protocol Adapters

What is a Protocol Adapter?

- **Plain:** A protocol adapter is like a translator that lets GhostWire talk to other messaging networks (like Briar, Meshtastic, Matrix).
- **Technical:** Adapters are software modules that translate messages and events between GhostWire and other protocols, enabling cross-network messaging, group chat, and file sharing.

Supported & Planned Adapters

Adapter	Status	Notes / Features
Briar	Planned	Contact-based messaging, offline queuing, groups
Meshtastic	Planned	LoRa radio, store-and-forward, mesh relay
Matrix	Planned	Federation, bridges to IRC/XMPP, group chat
Bitchat	Planned	Simple mesh chat, proof-of-concept

How Adapters Work

- Each adapter implements a common interface.
- Adapters can be enabled/disabled at runtime.
- Messages are translated, deduplicated, and relayed as needed.
- Adapters can bridge group chats, files, and metadata.

Real-World Bridging Scenarios

- **Disaster Response:** GhostWire nodes bridge LoRa mesh to Matrix, letting first responders communicate with remote teams.
- **Activist Networks:** Protesters use GhostWire to bridge to Briar, expanding their secure communication reach.
- **Community Mesh:** Rural users connect GhostWire and Meshtastic for long-range, low-power messaging.

Developer Notes

- Adapters run as part of the backend, in their own modules.
- Adapter logic is isolated for security and maintainability.
- Future adapters (e.g., Signal, Tox) can be added easily.
- Adapter SDK (planned) will make third-party protocol support easier.

GhostWire: Bridging worlds, connecting communities.