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Overview, Use Cases & Deployment

Use Case: Healthcare — Clinics, Labs & Imaging Centers

Local-first. Always on. HIPAA and GDPR by design.

What TreeTalk Node Does

TreeTalk Node is a serverless, local-first collaboration platform for medical and clinical teams. Staff share diagnostic files of any size, send encrypted text messages and voice notes, and coordinate work directly over the facility's WiFi, LAN, or VPN — with no cloud infrastructure, no external servers, and no protected health information ever leaving the premises. One small executable file: no installation, no registration, just run and go.

Think of it as "WhatsApp meets Dropbox" — but engineered for environments where patient privacy is not optional and regulatory compliance is non-negotiable.

The Problem for Healthcare Facilities

Clinics, diagnostic laboratories, and imaging centers handle the most sensitive category of personal data that exists: protected health information. The tools most clinical teams use for day-to-day file sharing and internal communication were not built with this responsibility in mind:

- Sending a CT scan, MRI image, or lab result via email or cloud storage routes patient data through third-party servers, creating direct HIPAA liability. Under the HIPAA Breach Notification Rule, even a single unsecured transmission of PHI requires formal breach reporting and patient notification.
- Standard cloud storage platforms — Google Drive, Dropbox, OneDrive — are not HIPAA-compliant by default and require signed Business Associate Agreements (BAAs). Even with a BAA in place, data still transits and resides on external infrastructure, creating residual exposure that an audit will flag.
- Consumer messaging apps including WhatsApp, iMessage, and standard SMS are categorically prohibited for PHI under HIPAA. Many clinical staff use them anyway because there is no simple, fast alternative available at the point of care.
- Large diagnostic files — a single MRI study can be 1-2GB, a full radiology archive can reach tens of gigabytes — are impractical to transfer via email or cloud, particularly between collection points on limited bandwidth connections.
- For multi-site practices and laboratory networks, coordinating between locations over the public internet creates data exposure at every transmission point. Secure alternatives typically require expensive server infrastructure and dedicated IT staff.
- When the internet connection fails — a common occurrence in some clinical environments — cloud-dependent systems stop working entirely. In a healthcare setting, operational continuity is not just a convenience: it is a patient safety and liability issue.

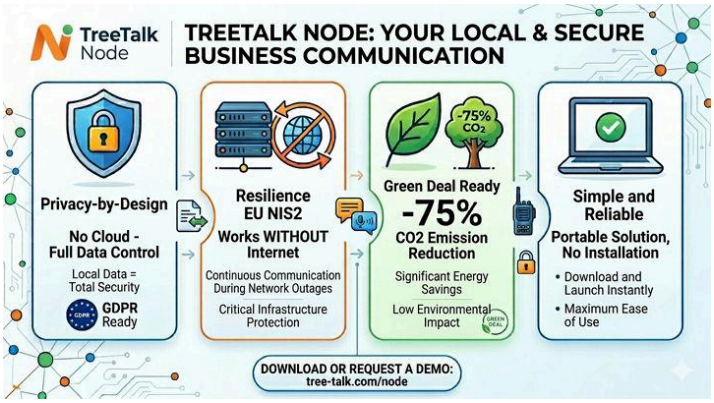
Real-World Deployment

Real-World Deployment: Medical Laboratory Network, Italy

Challenge: 12 medical laboratories across Italy needed to share sensitive patient data and large diagnostic files between collection points without exposing data to the public internet.

Solution: TreeTalk Node deployed over encrypted OpenVPN connections, creating a virtual private network where all locations appear as local peers - regardless of physical distance.

Result: Server-free, peer-to-peer transfers of MRI scans and lab results at LAN speeds, with zero patient data stored on external servers. Full compliance with GDPR and medical privacy regulations achieved through local-only data flow.



How TreeTalk Node Works in a Healthcare Setting

Scenario 1: Sharing Diagnostic Imaging Between Sites

A radiologist at a main imaging center needs to send a 1.8GB MRI study to a specialist at a satellite clinic for urgent review. With TreeTalk Node running over an encrypted VPN connection between the two sites, the transfer happens at LAN speeds — typically under several minutes — with the image data never touching a public server. No BAA negotiation required. No cloud upload. No HIPAA exposure.

Scenario 2: Lab Results to Collection Points

A central laboratory needs to deliver completed blood panel and pathology results to 12 collection points across a region. With TreeTalk Node, results are pushed directly to each location over encrypted VPN as peer-to-peer transfers. Each location receives its own patients' results only. No central server stores the data. No file sits in a shared cloud folder accessible to all sites.

Scenario 3: Clinical Team Communication at the Point of Care

A nurse needs to alert the attending physician that a patient's lab values have come back abnormal, and attach the result file for immediate review. With TreeTalk Node, the message and file transfer happen directly over the clinic's local network in seconds — no email, no consumer messaging app, no PHI leaving the building. The physician receives an encrypted voice note and the attached file simultaneously on their workstation.

Scenario 4: Transferring Patient Records Between Departments

A patient is moving from radiology to cardiology for a follow-up consultation. The radiology department needs to transfer a complete imaging package — multiple studies, reports, and annotations totaling several gigabytes — to the cardiology team before the appointment. With TreeTalk Node, the transfer happens over the hospital's internal network in minutes, with no data leaving the facility and no IT ticket required.

Scenario 5: Operational Resilience During Outage

The facility's internet connection goes down during a busy clinical session. Cloud-based systems become unavailable. With TreeTalk Node, internal file sharing, messaging, and voice communication between all departments and connected sites continue without interruption. Clinical workflows do not stop. Patient care is not compromised. This scenario directly addresses the operational resilience requirements of HIPAA's Contingency Plan standard (45 CFR 164.308(a)(7)).

Regulatory Compliance — Key US and EU Frameworks

TreeTalk Node addresses healthcare data protection requirements by design rather than by policy. The following frameworks are directly relevant to clinical facilities evaluating local-first communication tools:

- HIPAA Privacy Rule (45 CFR Part 164): Requires covered entities to implement technical safeguards that protect PHI in transit. TreeTalk Node provides end-to-end encryption with no PHI transiting external networks, satisfying this requirement at the architectural level — no BAA required because no third party ever handles the data.
- HIPAA Security Rule — Transmission Security (45 CFR 164.312(e)): Specifically requires encryption of PHI transmitted over open networks. TreeTalk Node transfers data only over the local network or encrypted VPN, never over open internet connections.
- HIPAA Contingency Plan Standard (45 CFR 164.308(a)(7)): Requires covered entities to establish procedures for continuing critical operations during emergencies. Local-first architecture means clinical communication and file sharing continue when cloud systems and internet connectivity fail.
- HITECH Act: Significantly expanded HIPAA penalties and extended liability to business associates. By eliminating third-party data handling entirely, TreeTalk Node removes the business associate relationship from the equation.
- 21st Century Cures Act — Information Blocking: Requires healthcare providers to share patient data appropriately while protecting it. Secure local transfer tools that maintain PHI integrity and auditability support information blocking compliance.
- GDPR and EU Medical Privacy Regulations (for European facilities): Article 9 of the GDPR grants special protection to health data as a sensitive personal data category. Local-only data flow satisfies the data minimization and storage limitation principles at the infrastructure level, with no cross-border transfer concerns.
- State medical privacy laws: Many US states impose additional requirements beyond HIPAA, including California's CMIA, New York's SHIELD Act, and Texas Health & Safety Code Chapter 181. Architecture-based data sovereignty provides the strongest possible foundation for compliance across all state regimes simultaneously.

Four Core Benefits in One Tool

HIPAA by Design	Clinical Speed	Always Operational	Multi-Site Ready
PHI never leaves your network. No BAA required. No third party ever handles patient data.	MRI and CT files transfer at LAN speeds. No upload wait. No bandwidth bottleneck.	Works during internet outages. Satisfies HIPAA Contingency Plan requirements.	Connects multiple locations via VPN. All sites appear as local peers. No central server.

How TreeTalk Node Compares

	TreeTalk Node	Cloud / Email	On-Premise Server
PHI never leaves premises	**Yes**	No	Yes
HIPAA-compliant by design	**Yes**	No	Yes
Works during internet outage	**Yes**	No	Yes
Multi-site via VPN	**Yes**	Yes	Complex
Large files (MRI, CT, labs)	**Yes**	Slow	Yes
Zero infrastructure cost	**Yes**	Yes	No
Instant deployment	**Yes**	Yes	No

Deployment Options for Healthcare

TreeTalk Node is flexible enough to cover single-site and multi-site healthcare environments without any server infrastructure:

- Single facility: TreeTalk Node runs on each workstation connected to the facility's local WiFi or LAN. Departments share files and communicate instantly within the building. No configuration required beyond running the executable.
- Multi-site network: TreeTalk Node connects multiple locations over existing encrypted VPN infrastructure (OpenVPN, WireGuard, or similar). Each site's devices appear as local peers to all other sites. File transfers happen at LAN speeds regardless of physical distance between locations.
- Hybrid environments: TreeTalk Node can run alongside existing clinical systems without replacing them. It fills the specific gap of large file transfers and encrypted internal messaging that electronic health record systems and hospital information systems were not designed to handle.

Key Benefits for Your Facility

- PHI protected by architecture — no data ever touches an external server, regardless of user behavior
- HIPAA compliance achieved without Business Associate Agreements, cloud vendor audits, or policy enforcement overhead
- Fast transfer of large diagnostic files: MRI, CT, PET scans, pathology slides, and full radiology archives
- Encrypted internal messaging and voice notes replace prohibited consumer apps at the point of care
- Full operational continuity during internet outages — clinical workflows do not stop
- Multi-site deployment over existing VPN infrastructure with no additional server hardware
- Zero IT infrastructure investment: one executable file, ready in minutes on any Windows workstation
- Free to download and evaluate, no commitment and no registration required

Download free and evaluate it with your clinical team today.

tree-talk.com/node | No installation. No registration. Just run and go.

The scenarios in this document are illustrative examples of how TreeTalk Node can be applied — not an exhaustive list of its capabilities. Every organization works differently, and we are happy to explore how TreeTalk Node fits your specific situation.