



Redwoods Research

Founded in 2020, Redwoods Research is an innovative systems design firm with expansive roots in pioneering technology communities. We architect, assemble, integrate, and deploy high performance, private, secure systems. Our team offers three decades of expertise drawn from successes such as:

- Co-founder The Tor Project; a resilient, anonymity-oriented network infrastructure for intelligence operations
- Co-founder DarkOwl; offensive cyber security tools for threat intelligence and adversary emulation
- C-Suite of TechTarget & Farsight Security (now DomainTools); enterprise-grade security analytics and domain-intelligence platforms
- Head of Engineering at Norse Federal Corporation; secure, defense-grade IT systems and services

With a consistent history of prototyping and deploying high-impact, landscape-altering tools, Redwoods Research was formed to focus on continuously protecting the warfighter against the siege of 5th generation warfare.

— AI • CYBERSECURITY • DARKNET • INTELLIGENCE —

NAICS: 541511, 541715, 541512, 513210, 541990, 541690, 541611, 541519, 541513, 519290, 518210, 611420

OFFERINGS

Redwoods Research helps clients optimize their technology stacks and improve operational efficiency. Modernizing mission-critical back ends, building event-driven architectures, implementing robust monitoring and observability frameworks.

Our strategic advice has a deep understanding of distributed systems, data engineering, and infrastructure as code. Solutions consider all aspects of security, from direct attack to mosaic-conscious OPSEC and second order risks such as host licensing agreements. All products, off-the-shelf, tailored, or bespoke, are developed security-first: beyond "best practices" and certification requirements.

We build to your timeline and scale to available equipment.

BUILD

Made-to-measure solutions for any problem

- Prototyping & Scaling
- Deploying AI
- Secure Communications
- Research & Development
- Anonymous & Parallel Construction
- Compartmentalized & Blind

SECURE

Reducing threat vectors to operations

- Security Testing
- Hardening Assets
- Invent and Evolve Systems
- Advanced Persistent Threat Analyses
- Defensive Cyber Operations
- Offensive Cyber Operations

GATHER

Mission oriented collections

- Open Source
- Encrypted Communications
- Darknet/Dark Web
- Signals
- Noise Reduction
- Active & Passive Data Collection

TRAIN

Coaching for resiliency and success

- Exploiting Existing Networks
- User Training for Redwood Products
- Sustaining Your Redwood Products
- Improving Operations
- Cyber Hygiene & Situational Awareness
- Trends & Evolving Landscape Briefings

IF YOU NEED IT, WE CAN MAKE IT.

We have worked with the US IC, DoW, FVEY partners, Allies, and Interpol to develop, deploy, and train staff to maintain fully encrypted, near-terabit networks handling petabytes of data daily on commodity hardware hosted in customer data centers spanning 31 countries.

SAFER Warfighter (DARPA)

Crafted comms technology to protect end users from intrusion, interruption, or exposure while supporting instant messaging, electronic mail, social networking, streaming video, voice over Internet protocol (VoIP), and video conferencing.

SharkSEER (NSA, DISA)

Developed and deployed working, real-time analysis of incoming open source or commercial data streams to instantly judge IP's activity. Used BSD-licensed appliance running at 40 Gbps, intercepting at the point of the 3-way TCP handshake.

CRISP (DOE)

Piloted the Cybersecurity Risk Information Sharing Program to deliver relevant and actionable cybersecurity information to protect the US electricity industry and protect the power supply.

US Army CID

Provided technical advisory services training investigators to do Deep Packet Inspection (DPI) on darknet activity pings in the network.

Undercover/Case Officer Training

Designed and delivered program for infiltrating, investigating, and operating a darknet marketplace. Provided safe access to the darknet via a dedicated Raspberry Pi workstation for cost efficiency.

Built data feeds for a system to monitor incoming travelers screening against known criminal elements and then provided Parallel Construction.

Architected and built a prototype for an RF-focused data collection system, then streamed the RF feeds into a queuing system for multi-frequency collections using COTS equipment and open source software.

MEMEX (DARPA)

Created next-generation online search technology and domain-specific search paradigms for more effective, relevant, and expedient information discovery, extraction, retrieval, organization, and sharing.

Architected, developed, maintained a vast search index to function as a "Google for the darknet" with near real time retrieval of text, context, and multimedia content. Separate deployment for agency-only index with sensitive content handling.

Human Trafficking and Exploitation (Interpol)

Architected and built system for member countries to share Terabytes of open case data through a remote gateway, partitioning CSAM from the rest of the data.

US Navy CIS

Assisted investigations into criminal activity within the service via technical advisory services on dark net markets and cryptocurrency

The Tor Project

Developed an overlay network for enabling anonymous communication via multiple layers of encrypted routing built on free and open-source software hosted by volunteers.

Architected and deployed a global proxy network to facilitate the ex-filtration of data from targeted countries as a prototype/proof of concept.

Researched, tested, and built a working prototype to customer specifications of an end-to-end encrypted AI/LLM inference system. Data is encrypted at rest, encrypted in RAM, and encrypted compute while running queries air gapped from the Internet.

"Providing quiet, custom development for any and all flavors of INT"

CONTACT US



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