AzothSolver Logo

📄 AzothSolver Whitepaper

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Abstract

AzothSolver is a performance-driven, infrastructure-optimized solver designed to extract protocol rewards and slippage alpha within the CoW Protocol. Our approach combines bare-metal compute, proprietary routing algorithms, and deep market insights to achieve consistent profitability, protect user execution, and ultimately power a suite of advanced trading tools and market analytics products.

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1. The Problem & The Opportunity

Decentralized trading protocols like CoW Protocol offer MEV-protected trading via solver auctions. However, success in this arena is a function of speed and intelligence. In the last year alone, an estimated **$15-20 million** in potential value was left on the table due to suboptimal routing and settlement latency.

AzothSolver is built to capture this value by addressing the core bottlenecks:

- **Low-Latency Infrastructure:** We deploy bare-metal hardware and a finely-tuned network stack to gain a critical millisecond edge.
- **Advanced Algorithmic Alpha:** Our custom routing strategies go beyond standard pathfinding to identify and execute on uniquely profitable opportunities.
- **Scalable Architecture:** Designed from day one for multi-network operation, ensuring we can expand as the market evolves and use our intelligence to power user-facing products.

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2. Technical Strategy

Infrastructure Alpha (The Edge)

- **Hardware:** Bare-metal server collocated for minimal latency to key network peers.
- **OS & Network:** Ubuntu 24.04 with a real-time (RT) kernel, custom TCP stack, and isolated CPU cores to ensure our solver processes run without interruption.
- **Execution:** Local `op-geth` node for the Base network, with a direct path to our custom-built, high-performance transaction scheduler.

Algorithmic Alpha (The Secret Sauce)

- **Proprietary Pathfinding:** Our graph-based algorithm doesn't just find the shortest path; it models gas volatility and uncovers asymmetric **CoW ring trades** often missed by competitors.
- **Intent-Based Analysis:** We analyze order flow patterns to predict likely settlement paths, allowing us to pre-compute optimal routes before the auction begins.
- **Intelligence Gathering:** Our infrastructure is built not just for execution but for intelligence, capturing a wide spectrum of cross-chain data to provide deep market visibility through our future analytics products.

3. The Team

AzothSolver is led by a team of deeply experienced builders with a proven track record in crypto infrastructure and decentralized technology.

- **Lead Founder & Engineer:** A full-stack architect with deep infrastructure expertise. Previously built and launched a novel **cross-chain messaging protocol** from the ground up. Has extensive experience running large-scale, multi-network crypto mining operations, where they designed and implemented custom monitoring solutions to maximize efficiency and profitability. Also developed and taught Web3 curricula for **European universities and consulting firms**.
- **Core Contributors:** A collective of low-latency engineers, smart contract auditors, and quantitative analysts passionate about optimization.

4. Architecture

Layer	Tech Stack
Hardware	Ryzen 9 7950X, 128GB DDR5 RAM, NVMe SSDs
OS	Ubuntu 24.04 + Real-Time Kernel
Blockchain	`op-geth` node (Base), future: Arbitrum, Solana, L2s
Monitoring	Prometheus + Grafana + PostgreSQL
Execution	Docker-based job manager, custom Rust-based scheduler

5. Roadmap & KPIs

Phase 1: Setup (Month 1–2)

- Launch bare-metal server, secure HSM, pass KYC.
- Deploy node infrastructure and benchmark tooling.
- **KPI:** System ready for development and entry into shadow mode.

Phase 2: Development (Month 3–4)

- Build Tier 1 solver (partial fill + AMM routing).
- Connect to CoW Protocol shadow pool for live testing.
- **KPI:** Achieve a baseline **0.5%** win rate in a competitive environment.

Phase 3: Optimization & Profitability (Month 5–7)

- Deploy Tier 2 (multi-hop) & Tier 3 (proprietary CoW rings) algorithms.
- Secure bonding and enter the official DAO auction.
- **KPI:** Reach **2.5%** shadow win rate; generate **$500–$2.5k/mo** in net profit.

Phase 4: Scale & Expand (Month 8–18)

- Scale infrastructure via AWS for multi-network redundancy.
- Deploy solver across **3+ new networks** (Arbitrum, Solana, etc.).
- Develop data backend and API for our public-facing analytics dashboard.
- **KPI:** Target **$15k–$35k/month** in net PnL; Complete v1 of the public data API.

Phase 5: Product Ecosystem (Month 19+)

- Develop and launch **Azoth Terminal**, a public-facing trading dashboard.
- This terminal will expose our solver's routing power to users, offering best swap routes, advanced market analytics, real-time network info, and a predictive gas fee oracle.
- **KPI:** Achieve **$5M** in monthly trade volume through the dashboard and 1,000 monthly active users.

Contact

✉ **azothsolver@gmail.com**

🌐 **https://azothsolver-web.vercel.app**

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