

ZAN Redefines Ultra-Low-Latency RPC Nodes at TOKEN2049: 3x Faster Web3 APIs, 30ms Response Time

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Redefining High-Performance Web3 RPC Node Infrastructure

In high-frequency decentralized finance (DeFi) trading, a 200-millisecond difference often marks the line between a successfully executed arbitrage and a failed transaction due to slippage. As the Web3 industry shifts toward real-time decentralized applications, decentralization alone can no longer meet user expectations. Developers need a robust framework that supports thousands of concurrent requests without sacrificing performance. At TOKEN2049, [ZAN](#)—the Web3 technology brand under Ant Digital

Technologies—introduced a milestone for decentralized infrastructure. By demonstrating an average RPC response time of under 30 milliseconds across the Asia-Pacific region and API throughput three times higher than the industry standard, ZAN set a new performance benchmark for Web3 node services.

Remote Procedure Call nodes serve as the primary communication gateway between decentralized applications (dApps) and blockchain networks, handling core requests such as wallet queries, transaction submissions, and contract interactions. Traditional public RPC



services often struggle with high latency and insufficient stability under peak traffic, network fluctuations, and regional access disparities. ZAN Node enhances the processing efficiency of on-chain data requests through a high-performance node architecture and continuously optimized access pathways, providing more reliable foundational support for Web3 applications.

The Technical Milestones Behind the 30ms Response Frontier

Achieving stable sub-30ms response times requires more than single-point performance—it demands coordinated optimization across the entire network path, scheduling capabilities, and data access mechanisms. ZAN Node leverages the technical capabilities of Ant Digital Technologies' extensive high-performance network, employing customized TCP optimization, intelligent routing, multi-region deployment strategies, combined with caching mechanisms and state management optimization to reduce latency throughout request transmission and processing.

ZAN also continuously optimizes service capabilities in key regions, further improving the access experience for users across different geographies. Through ongoing optimization of on-chain data access pathways, [ZAN Node Service](#) maintains stable performance even under high-concurrency read scenarios, delivering lower-latency, more cost-effective infrastructure for dApps, trading systems, and real-time data applications. Currently, Asia-Pacific and European nodes lead globally in both performance and cost efficiency, offering lower-latency, better-priced access options for high-frequency request and large-scale call scenarios.

During TOKEN2049 Singapore, the ZAN team was invited to present a Technical Talk at the Solana-hosted Breakpoint 2024 event, sharing insights on the infrastructure upgrades required for Web3 mass adoption. The presentation highlighted ZAN's capabilities in high-performance node services and how more stable, lower-latency RPC infrastructure supports high-concurrency on-chain interactions and large-scale application scenarios.

Addressing the Solana network's access experience under high-load conditions, ZAN demonstrated its node service performance under mainnet conditions, including Asia-Pacific average response times under 30ms and RTT as low as 2–5ms for validator-co-located nodes.

This Technical Talk further showcased ZAN's ongoing investment in node services and Web3 infrastructure optimization, providing more reliable foundational support for driving Web3 mass adoption.

Strategic Advantages for a High-Performance Web3 Ecosystem

The practical impact of ultra-low-latency blockchain access extends across multiple high-growth Web3 sectors:

High-Frequency DeFi and DEX: In decentralized exchanges, speed directly impacts execution quality. A 30ms response time minimizes the opportunity window for frontrunning bots, enabling market makers and algorithmic traders to execute strategies with greater precision and lower slippage. On Ethereum RPC, low-latency mempool access allows DeFi protocols to capture arbitrage opportunities faster; through Solana RPC trading acceleration, DEX aggregators achieve sub-second transaction routing; Polygon RPC and Base RPC sequencer direct connections deliver faster transaction finality for L2 DeFi protocols.

Web3 Gaming and Social dApps: Interactive applications require continuous, seamless data streams. High latency causes noticeable UI lag, hurting user retention. ZAN's responsive node

infrastructure eliminates these performance bottlenecks, enabling Web3 games to deliver interface experiences comparable to traditional web platforms.

Institutional Data Platforms: For enterprises requiring real-time compliance and risk monitoring, data latency can pose significant financial risks. ZAN supports comprehensive, real-time data indexing solutions—such as Sui data services—allowing institutions to instantly track on-chain state changes across multiple blockchain networks.

ZAN Node Service currently supports 28+ popular blockchain RPC services including: Ethereum RPC, Solana RPC, BSC RPC, Polygon RPC, Optimism RPC, Arbitrum RPC, TON RPC, Base RPC, zkSync Era RPC, Starknet RPC, Tron RPC, Avalanche RPC, Fantom RPC, Taiko RPC, Mantle RPC, Bitcoin RPC, Sui RPC, Aptos RPC, Core RPC, X Layer RPC, Near RPC, Hyperliquid RPC, Monad RPC, and 47+ mainnet and testnet networks. Developers can access RPC endpoints for all chains through a single API key, managed centrally via the ZAN console. Beyond shared RPC, ZAN also offers a Dedicated Node Service, where enterprise customers enjoy exclusive node resources for more stable performance and higher request quotas.

Elevating Blockchain Infrastructure Benchmarks

Beyond TOKEN2049, ZAN has repeatedly validated its infrastructure capabilities at other major Web3 conferences: by reducing response times to 30 milliseconds and expanding API capacity threefold, ZAN has redefined the performance benchmark for RPC services. Facing an increasingly complex blockchain ecosystem, ZAN leverages ZAN Node (high-performance node services), ZK Acceleration, and Expert Audit (smart contract auditing) as core capabilities, providing stable, secure, and scalable foundational support for public chain infrastructure, privacy infrastructure, and verifiable computation.

ZAN ZK Acceleration accelerates ZK proof generation through a dedicated hardware-software optimization framework, covering ZK-Rollup, zkEVM, bridge protocols, privacy transactions, and ZK-ML scenarios. ZAN Expert Audit provides penetration testing, AI auditing, static analysis, and formal verification, helping projects mitigate security risks across the entire lifecycle. Backed by 20 security patents and 50 top-tier conference papers, ZAN continues to deliver high-standard, verifiable infrastructure capabilities for the Web3 ecosystem.

For more information, visit the ZAN official website: <https://zan.top/>

FAQ

Q: On which blockchains can ZAN's 30ms response time be verified?

A: ZAN's sub-30ms response time can be verified across all 28+ supported popular blockchains, including Ethereum RPC, Solana RPC, Polygon RPC, Base RPC, BSC RPC, Arbitrum RPC, Optimism RPC, and more. Developers can independently test RPC response times using ZAN's free tier (150 million credits per month).

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