MCP SERVER | NO CODE | CLOUD HOSTED

Tatum Blockchain Infra MCP

Track Fees, Portfolios, and Events Live

Tatum (Blockchain Infra) lets you manage complex blockchain operations using natural language. Estimate transaction fees, track crypto portfolios across multiple chains, and monitor real-time event streams without writing boilerplate code. Connect your AI agent to get live data on gas costs, asset balances, and exchange rates from 40+ protocols.

A+ Quality Score 100/100

web3 | blockchain-infrastructure | gas-estimation | portfolio-tracking | evm | decentralized-apps

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vinkius.com/mcp/tatum-blockchain-infra

SCAN TO VIEW

The connectivity layer between AI and the world's software.

Vinkius sits between AI and every application. All communication passes through Vinkius Cloud via the Model Context Protocol (MCP) — with governance, observability, and security at every layer.

Your AI Connections Run Through Vinkius Cloud

The world's largest managed MCP catalog

Vinkius is the connectivity layer where AI connects to the software your business already runs. We handle the hosting, the security, the credentials, the uptime — you get agents that actually do things.

We operate the world's largest managed MCP catalog. Major SaaS platforms, CRMs, databases, and cloud providers — running, monitored, production-ready. This MCP server is hosted and maintained by the Vinkius Cloud for AI Agents.

> *The agent doesn't manage credentials, doesn't manage uptime, doesn't manage security. Vinkius does.*
>
> — Architecture principle

Four Pillars of the Vinkius Runtime

01 — Security by design

Credentials stay encrypted at rest via AES-256. The AI agent never touches raw keys — they're injected into a sandboxed V8 isolate at runtime. Actions are logged, and connections have an emergency kill switch.

02 — Built on MCP Fusion

This MCP server was built with **MCP Fusion**, the open-source framework (Apache 2.0) that powers the entire Vinkius catalog. Schema-as-firewall strips undeclared fields, compiled PII redaction runs at zero overhead, and cryptographic lockfiles produce git-diffable audit trails.

03 — Deterministic observability

Eight immutable metrics per endpoint: request volume, p95 latency, error rate, active connections, cost attribution. A live payload feed logs every tool call with mutation detection.

04 — Autonomous operations

Servers are deployed, monitored, and patched autonomously. New capabilities and security patches ship weekly. Zero-downtime deployments ensure continuous availability across all managed MCP servers.

AES-256	Ed25519	24h TTL	V8 Isolate
Encryption at rest	PKI vault signatures	Ephemeral session keys	Sandboxed execution

One Token. Instant Access.

Every MCP server on Vinkius is accessed through a **Connection Token**. Tokens are generated in the cloud dashboard and produce a unique MCP endpoint URL. Paste this URL into any MCP-compatible client — no SDK required.

A single token can serve **multiple AI clients simultaneously**, or you can issue separate tokens per client for granular access control. Each token tracks its own request count, last activity timestamp, and can be individually enabled or revoked.

MCP ENDPOINT

```
https://edge.vinkius.com/{token}/mcp
```

Claude · Cursor · VS Code · Windsurf · Grok · Gemini

Security Is the Architecture

Security in Vinkius is not a feature — it's the foundation of the runtime. The gateway enforces multiple independent protection layers between AI agents and third-party APIs.

01 — Ed25519 PKI Vault

Every workspace has an Ed25519 Master Key. Session keys are generated ephemerally (24h TTL) and signed by the Master Key. Credentials never leave the vault boundary.

02 — V8 Isolate Sandboxing

Tool code runs inside isolated-vm V8 isolates with 64 MB memory caps and per-request timeouts. No filesystem access, no network access except through the SSRF-guarded fetch bridge.

03 — SSRF Guard

All outbound HTTP requests are DNS-resolved and validated before execution. Private IP ranges (10.x, 172.16-31.x, 192.168.x, AWS metadata 169.254.x) are blocked at the network layer.

04 — DLP & PII Redaction

A ResponseGuard pipeline intercepts every tool response. Configurable redaction patterns strip sensitive fields (emails, SSNs, card numbers) before data reaches the AI agent.

05 — Cryptographic Audit Trail

Every request is signed into a SHA-256 hash chain with Ed25519 signatures. Events form a tamper-proof, SIEM-exportable forensic record.

06 — Honeytoken Trap System

Phantom credentials are injected into isolated environments. If a honeytoken is used outside Vinkius infrastructure, the server is quarantined instantly.

Emergency Kill Switch

EU AI Act Art. 14(1) Compliant

The kill switch is an **emergency halt** mechanism — not a simple toggle. When triggered, it executes three actions atomically:

01 — Server deactivated

The MCP server is immediately taken offline across the entire cluster.

02 — All tokens revoked

Every connection token is invalidated. Total lockout — reconnection blocked until new tokens are issued.

03 — WebSocket connections killed

Active connections terminated via Redis pubsub broadcast. Propagates to every runtime node in the cluster.

Full Visibility. Zero Guesswork.

The Vinkius cloud dashboard includes a full MCP Governance suite — real-time analytics and security controls for production AI operations.

Control Plane

KPI dashboard with request volume, latency, success rate, token consumption, and AI-generated operational briefings.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Incident Log

Error trends, failure rates, status-code breakdowns, and forensic audit trail access.

> Get started at **cloud.vinkius.com** — connect your AI agent in under 60 seconds.

Tatum (Blockchain Infra) MCP

11 tools available
Cloud-hosted on Vinkius

Managing modern decentralized applications means juggling constant data feeds: checking gas limits, tracking token movements, and knowing current fiat rates. This MCP connects your AI agent directly to Tatum's infrastructure, letting you handle all that complexity through conversation. Instead of jumping between multiple dashboards or writing complex API calls just to check a balance, you ask your agent what you need, and it handles the rest. You can easily estimate costs for transactions using recommended fee tools and track entire wallet portfolios across native assets, ERC-20 tokens, and NFTs—all in one chat. When you're building something that needs constant event monitoring, you don't have to set up webhooks manually; your agent manages those subscriptions for you. Vinkius makes connecting this powerful data source simple, letting any MCP-compatible client give you deep visibility into the blockchain ecosystem.

Core Capabilities

01 — Estimate Transaction Costs

Calculate recommended fees or estimate gas limits and prices for EVM transactions.

02 — View Wallet Balances

Retrieve current asset holdings, including native coins, ERC-20 tokens, and NFTs, across specified addresses.

03 — Manage Blockchain Events

Create, list, or cancel real-time webhook subscriptions for incoming or outgoing transactions.

04 — Check Transaction History

Pull detailed records of past activity for any given blockchain address.

05 — Get Market Rates

Find live exchange rates between cryptocurrencies and fiat currencies.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/tatum-blockchain-infra** — connect your AI agent in three steps.

01 Subscribe to this MCP on Vinkius and enter your Tatum API Key.

02 Your AI client uses natural language prompts to determine the required blockchain operation (e.g., 'What is the balance for X?').

03 The MCP executes the necessary tool calls, retrieves real-time data from the blockchain, and presents a clear answer back to your agent.

The bottom line is you get conversational access to complex, live blockchain data without writing any boilerplate code.

Built For

Anyone dealing with decentralized finance or web3 infrastructure. This MCP helps the DeFi analyst who can't afford downtime waiting for manual reports, and the smart contract developer tired of switching between local IDEs and external APIs just to check gas fees.

DeFi Analyst

Monitors portfolio health in real-time by asking the agent to aggregate balances across multiple chains and checking live exchange rates.

Web3 Developer

Quickly estimates gas limits and transaction fees directly within their coding environment, accelerating contract testing and deployment.

DevOps Engineer

Automates the monitoring setup by creating and listing webhook subscriptions to track critical blockchain events without manual CLI commands.

What Changes When You Connect

01 Know the true cost of transactions instantly. Use `get_recommended_fee` or `estimate_evm_gas` to check gas limits before you submit code, saving time and preventing failed deployments.

02 Maintain a complete financial picture with `get_wallet_portfolio`. This single tool gathers balances for native coins, ERC-20 tokens, and NFTs across addresses, so you never have to jump between multiple wallet interfaces.

03 Automate monitoring flows. Instead of logging into a dashboard every five minutes, use the subscription tools (`create_subscription` , `list_subscriptions`) to keep your AI agent updated on incoming events automatically.

04 Stay current on market value. Use `get_exchange_rate` to instantly convert any crypto pair or fiat currency rate directly in conversation, making financial analysis fast and fluid.

05 Audit activity with precision. Run the `get_transaction_history` tool to pull detailed records for any address, letting you trace asset movement back months without digging through multiple explorers.

Real-World Applications

Debugging a Gas Issue

A developer needs to deploy a contract but the gas estimate is too high. They ask their agent: 'What's the recommended fee for Ethereum right now?' The agent uses `get_recommended_fee` and provides three options (fast, standard, slow), allowing the dev to adjust code parameters immediately.

Quarterly Portfolio Review

A DeFi analyst needs a comprehensive view of all holdings across multiple chains. They prompt their agent to run `get_wallet_portfolio` on a single address and get an immediate, aggregated list of tokens and NFTs.

Setting up Alerting

An operations team member needs to know when a specific type of transaction hits the network. They use `create_subscription` via their agent, specifying the event criteria, so they get instant notifications without manual monitoring.

Comparing Asset Values

A client wants to liquidate some assets but needs to know the current USD value of several different tokens. They ask for the exchange rate and the agent uses `get_exchange_rate` to provide immediate, actionable figures.

Patterns to Avoid

Treating blockchain data like a simple database query

✗ AVOID

A user tries to get all portfolio values by manually listing every token contract address and running multiple API calls for each one, which is slow and error-prone.

✓ INSTEAD

Instead of writing repetitive calls, use the `get_wallet_portfolio` tool. It handles the aggregation across native assets, ERC-20 tokens, and NFTs in a single, conversational request.

Ignoring network variability

✗ AVOID

A developer estimates a transaction cost using only one gas model (e.g., assuming 'standard' speed), which fails when the network congestion changes rapidly.

✓ INSTEAD

Always start by calling `get_recommended_fee`. This tool provides optimal suggestions across fast, standard, and slow options based on current network conditions.

Manually tracking events

✗ AVOID

An ops engineer sets up a script to periodically poll transaction data for changes, wasting resources and missing real-time alerts.

✓ INSTEAD

Use the subscription tools. Run `create_subscription` via your agent to receive immediate webhooks when specific transactions occur, making monitoring passive and efficient.

The Right Fit

Use this MCP if your primary need is deep, real-time visibility into blockchain state—checking fees, balances, or event streams. It's perfect for developers writing smart contracts or analysts building DeFi models because it lets you query complex data in natural conversation without coding boilerplate. However, don't use this just because you want to manage a simple web form backend. If your

task is basic CRUD operations (like updating a user record), stick to a standard database MCP. This tool lives solely in the decentralized finance and developer tooling space; it cannot replace traditional API calls for non-blockchain systems.

The Chore of Tracking Crypto Assets

Today, getting a full picture of your digital assets is an absolute nightmare. You have to open multiple explorers—one for the native coin balance, another for ERC-20 tokens, and then you might need a separate dashboard just for NFTs. If you want to check fees, you run one API call; if you want to know how much money that fee equates to in USD, you have to switch to a second tool or website. It's constant switching, copy-pasting addresses, and running five different reports just to get started.

With this MCP, the process is immediate. You simply ask your agent: 'What are my current balances and what do they cost in USD?' The system runs `get_wallet_portfolio` and then uses `get_exchange_rate` —all behind the scenes—and gives you one single, aggregated answer right there in your chat window.

Accessing Portfolio Data with get_wallet_portfolio

Before this MCP, gathering a portfolio value meant piecing together data from multiple sources. You'd check the native balance, query each token contract individually for its amount, and then manually calculate the total market value by looking up fiat exchange rates elsewhere.

Now, you just ask your agent to run `get_wallet_portfolio` . It handles the complex aggregation of all asset types—native coins, tokens, NFTs—and delivers a clean, unified view. The complexity disappears; only the data remains.

Tatum (Blockchain Infra): 11 Tools Available

These tools let you calculate fees, track balances, and list event subscriptions for deep interaction with complex blockchain data.

#	TOOL	DESCRIPTION
01	`cancel_subscription`	Stops a previously set up real-time webhook subscription.
02	`create_subscription`	Sets up a new real-time webhook subscription for monitoring blockchain events.
03	`create_virtual_account`	Generates an off-chain ledger account number for transactions.
04	`estimate_evm_gas`	Calculates the expected gas limit and price for EVM compatible transactions.
05	`estimate_transaction_fee`	Provides a calculated estimate of the total fee required for a specific transaction type.
06	`get_exchange_rate`	Retrieves the current trading rate between any two crypto or fiat assets.
07	`get_recommended_fee`	Offers suggestions for optimal transaction fees based on a specified blockchain network.
08	`get_transaction_history`	Fetches the complete list of historical transactions associated with an address.
09	`get_virtual_account_balance`	Checks the current balance held within a virtual account.
10	`get_wallet_portfolio`	Aggregates and displays the total balances of all assets (native, ERC-20, NFT) in a wallet.
11	`list_subscriptions`	Shows all currently active webhook subscriptions that are monitoring blockchain activity.

See It in Action

Real prompts you can use once this MCP is connected to your AI agent through Vinkius Cloud.

U What are the recommended fees for a transaction on Ethereum right now?

I've retrieved the current fee suggestions for ETH: Fast: 25 Gwei, Standard: 20 Gwei, Slow: 15 Gwei. Would you like to estimate the total cost for a specific transfer amount?

U Show me the portfolio for address 0x742d35Cc6634C0532925a3b844Bc454e4438f44e on Polygon.

Checking the Polygon network... This address holds 15.5 MATIC, 250 USDC (ERC-20), and 2 NFTs from the 'Polygon Punks' collection. Do you need the transaction history for these assets?

U What is the current exchange rate from BTC to USD?

The current exchange rate is 1 BTC = 64,250.50 USD. Would you like to check the rate for another pair or calculate a specific conversion?

Frequently Asked Questions

01 **How do I check if my transaction will fail using Tatum (Blockchain Infra)?**

You should use `estimate_evm_gas` or `get_recommended_fee`. These tools calculate the expected gas limit and price, helping you preemptively identify potential cost issues before deployment.

02 **Can Tatum (Blockchain Infra) track NFT balances?**

Yes. The `get_wallet_portfolio` tool is designed to aggregate not just currency balances, but also show your holdings of NFTs alongside other assets.

03 **What if I need continuous alerts for my contract? Use Tatum (Blockchain Infra).**

You can set up permanent monitoring using `create_subscription`. This establishes a webhook that sends real-time data to your agent whenever an event matching your criteria occurs.

04 **Is this MCP for all blockchains?**

No, it focuses on connecting the core infrastructure details across supported chains. However, its ability to track and estimate fees gives you broad visibility into multi-chain operations.

05 **How do I find out the current crypto value of my holdings using Tatum (Blockchain Infra)?**

Run `get_exchange_rate` with your agent. It fetches live rates between various cryptocurrencies and fiat currencies, giving you an immediate valuation.

Go Live in 60 Seconds

Get your connection token from **cloud.vinkius.com**, then paste the endpoint URL into any MCP-compatible client.

YOUR MCP ENDPOINT

```
https://edge.vinkius.com/[TOKEN]/mcp
```

CLIENT	WHERE TO CONFIGURE
Claude AI	Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint
Cursor	Settings → Features → MCP Servers → "+ Add New MCP Server" → Type: SSE → Paste endpoint
VS Code	Ctrl/Cmd+Shift+P → "MCP: Add Server" → add `"tatum-blockchain-infra": { "url": "…" }`
Windsurf	MCP Settings → `mcp_settings.json` → Add endpoint URL
ChatGPT	Settings → Tools & plugins → Add MCP server → Paste endpoint
Gemini	Extensions → Add MCP Server → Paste endpoint URL

ASK AN AI ABOUT THIS

Let your preferred AI explain this MCP server

- Ask ChatGPT
- Ask Claude
- Ask Perplexity
- Ask Gemini
- Ask Grok

READY TO CONNECT

Tatum (Blockchain Infra) is live on Vinkius Cloud.

Get your connection token, paste it into your AI agent, and start building. No SDK. No deployment. Just results.

Start at cloud.vinkius.com →

vinkius.com · support@vinkius.com

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