

M C P S E R V E R

N O C O D E

C L O U D H O S T E D

Cycling Hydration Manager MCP

Plan your fluid intake to stay safe and perform better.

Cycling Hydration Manager MCP gives your AI client the ability to calculate precise fluid requirements for your rides. It handles the math for total water volume, checks if your planned intake is physiologically safe, and compares your actual consumption against your targets to find any deficits.

A+ Quality Score 100/100

cycling

hydration

fitness

sports-science

health-tracking



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.

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.

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.

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

Encryption at rest

Ed25519

PKI vault signatures

24h TTL

Ephemeral session keys

V8 Isolate

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.

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.

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.

06 — Honeypot Trap System

Phantom credentials are injected into isolated environments. If a honeypot 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.

FinOps

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

Firewall & DLP

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

Agent Activity

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

Tool Health

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

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.

Cycling Hydration Manager MCP

4 tools available

Cloud-hosted on Vinkius

Stop guessing how much water you need to carry on a long ride. This MCP gives your AI client the specific tools to manage your hydration strategy based on ride intensity and duration. You can use it to build a complete hydration plan before you head out, ensuring you don't carry unnecessary weight or, worse, risk dehydration. It also acts as a safety check, flagging if your planned drinking rate is too high for your body to handle safely. After your ride, you can feed your actual intake numbers to your agent to see exactly where you fell short of your goals. It turns your AI into a specialized sports science assistant that keeps your hydration on track.

Core Capabilities

01 — Volume Calculation

Your agent calculates the total water volume needed for any ride duration.

02 — Safety Validation

The AI checks if your planned drinking rate is safe for your body.

03 — Deficit Analysis

Your client compares actual intake against targets to find hydration gaps.

04 — Custom Recommendations

The MCP generates specific hydration plans based on ride intensity.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/en/ai-agent-connect/cycling-hydration-manager — connect your AI agent in three steps.

- 01 Connect your preferred MCP-compatible client to Vinkius.
- 02 Tell your AI client about your planned ride duration and intensity.
- 03 The AI uses the MCP tools to calculate needs and safety limits.
- 04 Review the hydration plan or deficit analysis provided by your agent.

Connect your AI client to Vinkius to access these specialized hydration tools instantly.

Built For

This MCP is built for cyclists who want to use AI to manage their physiological needs during training and racing.

Endurance Athletes

They hand off ride duration and intensity to the AI to get precise fluid targets.

Cycling Coaches

They use the tool to verify that their athletes' hydration plans are within safe limits.

Data-Driven Cyclists

They provide post-ride consumption data to the AI to analyze hydration deficits.

What Changes When You Connect

- 01

Prevents dehydration by calculating exact fluid requirements.
- 02

Reduces health risks by flagging unsafe hydration rates.
- 03

Optimizes gear weight by determining precise water volumes.
- 04

Tracks performance gaps by analyzing consumption deficits.

Real-World Applications

Pre-Ride Planning

Input your planned ride duration to get a total water volume requirement.

Safety Verification

Check if a high-volume drinking plan is safe before you start riding.

Post-Ride Review

Compare your actual water intake to your targets to see if you were under-hydrated.

Intensity Adjustments

Get different hydration recommendations when switching from easy rides to high-intensity efforts.

Patterns to Avoid

Guessing total water needs

❌ AVOID

You tell your agent you're going for a long ride and ask it to guess how much water you should bring.

✓ INSTEAD

Provide your specific ride duration to get an exact volume using `calculate_total_hydration_need`.

Ignoring safety limits

❌ AVOID

You plan to drink a massive amount of water to stay ahead of thirst without checking if it's safe.

✓ INSTEAD

Run your planned hourly rate through `validate_hydration_safety` to ensure you aren't exceeding physiological limits.

Ignoring hydration gaps

❌ AVOID

You finish a ride and assume you were fine because you didn't feel thirsty.

✓ INSTEAD

Input your actual intake numbers into `analyze_hydration_deficit` to see if you actually met your targets.

The Right Fit

Connect this MCP if you are an endurance athlete or coach who needs precise fluid targets based on intensity. Do not connect it if you only do short, low-intensity casual rides where hydration is trivial. The decision depends on whether your ride duration and intensity require calculated physiological management.



Cycling Hydration Manager: 4 Specialized Hydration Tools

These tools handle everything from initial volume calculations to post-ride deficit analysis. Your agent uses them to build, verify, and audit your hydration strategy.

#	TOOL	DESCRIPTION
01	analyze_hydration_deficit	This tool compares the water you actually drank against your calculated requirements to identify any gaps in your hydration.
02	calculate_total_hydration_need	Use this to determine the exact total volume of water required for a specific cycling session.
03	get_hydration_recommendation	This tool provides a summarized hydration plan based on your planned activity and intensity.
04	validate_hydration_safety	This tool checks if your intended hourly hydration rate stays within safe physiological limits.

See It in Action

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

U How much water do I need for a 2 hour ride if I want to drink 500ml per hour?



You will need a total of 1000ml of water for your 2 hour ride.

U I'm planning a high intensity ride for 3 hours. What is the recommended hydration plan?



For a high intensity 3 hour ride, it is recommended to consume 1500ml of water in total, at a rate of 500ml per hour.

U Is it safe to drink 1200ml of water per hour?



No, an hourly rate of 1200ml may exceed safe physiological limits and could increase the risk of electrolyte imbalance.

Frequently Asked Questions

01 Can this MCP help prevent overhydration?

Yes, the `validate_hydration_safety` tool checks if your planned intake rate exceeds safe physiological limits.

02 How does the MCP calculate my water needs?

It uses the `calculate_total_hydration_need` tool to determine the volume required based on your specific ride parameters.

03 Which AI clients can use this hydration tool?

You can use this MCP with any compatible client like Claude, Cursor, Windsurf, or VS Code.

04 Can I use this to track my hydration after a ride?

Yes, you can use the `analyze_hydration_deficit` tool to compare what you actually drank against what you needed.

05 Does the hydration plan change with intensity?

Yes, the `get_hydration_recommendation` tool provides plans tailored to your specific ride intensity.

06 How do I calculate my total water needs?

You can use the `calculate_total_hydration_need` tool by providing the duration of your ride in hours and your target hourly intake in milliliters.

07 Can I check if my hydration plan is safe?

Yes, use the `validate_hydration_safety` tool to verify if your planned hourly fluid intake stays within safe physiological limits.

08 How do I know if I drank enough water during my ride?

Use the `analyze_hydration_deficit` tool. It compares your actual consumption against your target requirement to tell you if you met your goal.

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 <code>"cycling-hydration-manager": { "url": "..." }</code>
 Windsurf	MCP Settings → <code>mcp_settings.json</code> → 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

Cycling Hydration Manager 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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DOCUMENT INFORMATION

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Platform	Vinkius Cloud for AI Agents
Endpoint	<code>https://edge.vinkius.com/{token}/mcp</code>

LICENSE & USAGE

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