

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

Climbing Height Total MCP for route data.

Get precise vertical gain and pitch measurements instantly.

Climbing Height Total MCP handles the math for your climbing data. It lets your AI client calculate cumulative vertical gain, check if pitch heights meet safety standards, find average pitch lengths, and turn raw numbers into a clean summary of your climb.

A+ Quality Score 100/100

climbing

vertical-gain

pitch-analysis

outdoor-sports

climbing-data



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.

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.

Climbing Height Total MCP

4 tools available

Cloud-hosted on Vinkius

You can stop manually adding up meters after a long day on the wall. This MCP gives your AI client the specific tools needed to manage climbing route data and pitch measurements. Whether you are logging a multi-pitch ascent or planning a new route, you can hand your raw data to your agent and let it do the heavy lifting. It calculates total vertical gain across multiple segments and checks your pitch data against standard safety limits to ensure your measurements make sense. You can also use it to find the average height of your pitches or generate a readable summary of your entire climb. It turns a messy list of numbers into organized climbing intelligence.

Core Capabilities

01 — Vertical Gain Calculation

Your agent uses this to sum up the total height of all climbing segments.

02 — Safety Validation

The AI checks pitch lengths to ensure they stay within standard safety limits.

03 — Pitch Averaging

Your client calculates the mean height of individual pitches in a route.

04 — Data Summarization

The tool generates a text summary of your climbing data for easy reading.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/en/ai-agent-connect/climbing-height-total — connect your AI agent in three steps.

- 01 Connect your MCP-compatible client to the Vinkius platform.
- 02 Provide your climbing data or pitch measurements to your AI agent.
- 03 The agent invokes the specific tool needed for your request.
- 04 Receive the calculated gain, validated data, or summary immediately.

Connect your client to Vinkius and start sending climbing data to your agent.

Built For

This MCP is built for anyone tracking vertical movement and route specifics.

Climbers

Hand off raw pitch lengths to your agent to get total gain and summaries.

Route Developers

Use the validation tool to ensure planned pitches meet safety standards.

Outdoor Instructors

Let your AI client organize and summarize student climbing data.

What Changes When You Connect

-
- 01 Eliminates manual math for vertical gain calculations.
 - 02 Flags unsafe pitch lengths automatically.
 - 03 Converts raw numbers into readable climbing summaries.
 - 04 Provides instant averages for pitch height analysis.
-

Real-World Applications

Post-Climb Logging

Give your agent a list of pitch heights to get a total vertical gain and a summary.

Training Analysis

Calculate average pitch heights to track progress over multiple sessions.

Route Planning

Check if a planned single pitch is too long using the validation tool.

Safety Audits

Verify that all recorded pitch data adheres to standard maximum limits.

Patterns to Avoid

Manual Math Errors

❌ AVOID

You try to manually add up a long list of pitch heights in a chat window and hope your agent doesn't hallucinate the sum.

✓ INSTEAD

Hand the raw list of numbers to your agent and use ``get_total_vertical_gain`` to get an accurate sum every time.

Ignoring Safety Limits

❌ AVOID

You plan a massive single pitch without checking if it's actually feasible or safe for your gear and setup.

✓ INSTEAD

Run your measurements through ``validate_pitch_data`` to flag any pitch that exceeds standard safety maximums.

Messy Log Entries

❌ AVOID

You leave your climbing logs as a disorganized pile of numbers that are hard to read later.

✓ INSTEAD

Use ``format_climbing_summary`` to turn those raw numbers into a clean, readable report of your ascent.

The Right Fit

Connect this MCP if you frequently log multi-pitch ascents or develop new climbing routes. If you only do single-pitch sport climbing and don't track vertical gain, you don't need it. The deciding factor is whether you want your agent to handle the math and safety validation for you.

Climbing Height Total: 4 Specialized Tools

These tools handle the math and safety checks for your climbing data. Your agent uses them to calculate vertical gain, average pitch heights, and validate route safety.

#	TOOL	DESCRIPTION
01	format_climbing_summary	This tool converts your raw climbing data into a natural language summary. It turns a list of numbers into a readable report of your ascent.
02	get_average_pitch_height	This tool calculates the mean distance of your pitches. Use it to find the average height across a series of climbing segments.
03	get_total_vertical_gain	This tool sums up the height of multiple segments. It gives you the total vertical gain for your entire route or specific sections.
04	validate_pitch_data	This tool checks your pitch measurements against safety standards. It flags any single pitch that exceeds standard maximum limits.

See It in Action

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

U What is the total vertical gain for pitches of 30m, 50m, and 20m?



The total vertical gain is 100 meters.

U Is a 120m single pitch valid?



No, the pitch height exceeds standard maximum single-pitch limits.

U What is the average height of three 15m pitches?



The average height is 15 meters.

Frequently Asked Questions

01 How do I use this MCP with my AI client?

You connect your client, like Claude or Cursor, to Vinkius once. After that, your agent can use the climbing tools directly.

02 Can this MCP check if my pitch is too long?

Yes, the `validate_pitch_data` tool checks measurements against standard maximum single-pitch limits.

03 Does it calculate total height?

Yes, the `get_total_vertical_gain` tool sums the height of all provided segments.

04 What kind of summary does it produce?

The `format_climbing_summary` tool creates a natural language summary of your climbing data.

05 Do I need to host this myself?

No, Vinkius hosts and manages the MCP so it is ready to use immediately.

06 How do I calculate the total height of my route?

You can use the ``get_total_vertical_gain`` tool by providing an array of the individual pitch heights.

07 Can this tool check if my pitch heights are safe?

Yes, the ``validate_pitch_data`` tool checks if pitch heights are positive and within standard climbing limits.

08 How can I get a summary of my climb?

Use the ``format_climbing_summary`` tool with the total height and pitch count to get a human-readable sentence.

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>"climbing-height-total": { "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

Climbing Height Total 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	https://edge.vinkius.com/{token}/mcp

LICENSE & USAGE

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