

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

Balance & Stability Index MCP

Turn physical test data into actionable surfing performance scores.

Balance & Stability Index MCP measures your physical readiness for the water. It analyzes your static balance, dynamic balance, and core strength to produce a stability score. The engine adjusts your results based on your board type, giving you a realistic look at how your fitness translates to specific equipment.

A+ Quality Score 100/100

surfing

balance

stability

core-strength

athlete-performance



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.

Balance & Stability Index MCP

4 tools available

Cloud-hosted on Vinkius

You can use this MCP to turn raw physical metrics into a clear picture of your surfing potential. Instead of guessing if you're fit enough for a new shortboard, you can input your test data to see how your stability holds up. The engine calculates a score and places you in a category ranging from Beginner to Elite. It doesn't just look at your body in a vacuum; it factors in your board size to account for how much stability the equipment provides. If your scores show a gap, your AI client can use the data to suggest specific physiological training to fix those weaknesses. It's a direct way to bridge the gap between gym work and wave performance.

Core Capabilities

01 — Stability Scoring

Your agent uses this to turn balance and core data into a single performance number.

02 — Equipment Adjustment

The AI uses this to modify scores based on whether you ride a longboard or a shortboard.

03 — Weakness Identification

Your client uses this to pinpoint exactly which physiological areas need work.

04 — Data Validation

The MCP uses this to make sure your input metrics are physically possible.

05 — Training Guidance

Your agent uses this to suggest specific exercises like single-leg hops.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/en/ai-agent-connect/balance-stability-index — connect your AI agent in three steps.

- 01 Connect your MCP-compatible client to Vinkius.
- 02 Input your physical test metrics like static and dynamic balance.
- 03 The MCP validates your data to ensure it is realistic.
- 04 The engine calculates your score and adjusts for your board type.
- 05 Your AI client provides your stability category and training advice.

Connect your client to Vinkius and start feeding it your physical test data.

Built For

This is built for athletes looking to quantify their physical readiness for surfing.

Surfers

Use it to track how gym progress affects your ability to ride different boards.

Surf Coaches

Hand off athlete metrics to the AI to generate personalized training plans.

Strength Coaches

Use the stability scores to validate if your training programs are working for surfers.

What Changes When You Connect

- 01 Adjusts difficulty based on board type.
- 02 Converts raw physical data into performance categories.
- 03 Identifies specific physiological training needs.

04 Validates test data for accuracy.

Real-World Applications

Equipment Transition

Check if your current stability is high enough to move from a longboard to a shortboard.

Performance Tracking

Monitor how your core strength improvements change your overall stability score over time.

Training Optimization

Get specific exercise recommendations when your dynamic balance scores drop.

Athlete Assessment

Create a full stability profile for a student to see where they sit on the Beginner to Elite scale.

4 Tools Available

#	TOOL	DESCRIPTION
01	get_board_adjustment_factor	This tool calculates how your specific board type changes the stability requirements for your session.
02	get_stability_assessment	Use this to generate a complete stability profile based on your physical test results.
03	get_training_focus	This tool provides specific physiological training advice to target your identified physical weaknesses.
04	validate_input_metrics	This tool checks your physical test data to ensure the numbers fall within realistic human performance ranges.

See It in Action

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

U Calculate my stability profile. I have a static score of 85, dynamic score of 70, core strength of 75, and I use a shortboard.



Your stability score is 78, placing you in the Advanced category. Due to the high difficulty of a shortboard, your functional stability is highly rated.

U What training should I focus on if my dynamic balance is low?



Your primary focus should be Reactive Balance. Recommended exercises include single-leg hops and unstable surface training at a moderate intensity level.

U How much does a longboard change the difficulty rating?



A longboard provides high stability assistance, resulting in a lower difficulty rating compared to shortboards.

Frequently Asked Questions

01 How does board size affect my score?

The MCP uses a board adjustment factor to account for equipment difficulty. A longboard provides more stability, which results in a different difficulty rating than a shortboard.

02 What kind of training advice does it give?

The MCP provides targeted physiological advice based on your weaknesses. For example, if your dynamic balance is low, it might suggest reactive balance exercises like single-leg hops.

03 Can I use this with Claude or Cursor?

Yes, you can connect this MCP to any MCP-compatible client including Claude, Cursor, and Windsurf.

04 What metrics do I need to provide?

You typically provide static balance, dynamic balance, and core strength scores to get a full assessment.

05 How are the performance categories determined?

The engine analyzes your physical data and board type to assign a category from Beginner to Elite.

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>"balance-stability-index": { "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

Balance & Stability Index 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>

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