MCP SERVER | NO CODE | CLOUD HOSTED

Early Breaking Decision Engine MCP for AI Agents

Quantifying Metabolic Cost During Fasting Protocols

The Early Breaking Decision Engine quantifies your metabolic opportunity cost when ending a fast before you hit your target time. It helps biohackers understand exactly what they lose by breaking the fast early, specifically tracking progress toward critical milestones like the 14-hour autophagy threshold.

A+ Quality Score 100/100

fasting | metabolism | autophagy | health-tracking | biohacking

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vinkius.com/mcp/early-breaking-decision-engine

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.

Early Breaking Decision Engine MCP

2 tools available
Cloud-hosted on Vinkius

Fasting isn't always linear. Sometimes you feel great and think stopping is fine, but that decision can have a real physiological cost. This MCP lets your AI client analyze those moments of doubt. Instead of guessing how far off track you are, it gives you hard numbers on your progress toward deep metabolic states and estimates the actual loss magnitude incurred by quitting early. You input your planned duration and what you actually achieved; the engine does the rest. It's designed for biohackers who treat their bodies like complex machines and need precise data points. By accessing this MCP through Vinkius, you connect once to your preferred AI client (like Claude or Cursor) and gain access to powerful tools that track everything from general fasting progress to specific metabolic thresholds.

Core Capabilities

01 — Calculate fast completion percentage

Determines what fraction of a planned fasting window you have successfully completed.

02 — Estimate metabolic loss magnitude

Calculates the estimated physiological decline when ending a fast prematurely.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/early-breaking-decision-engine** — connect your AI agent in three steps.

01 Tell your AI client the full duration you planned for and how long you actually fasted.

02 The MCP runs these numbers through its models to determine both your completion percentage and the estimated metabolic cost.

03 Your agent receives a clear assessment, showing if you met key thresholds (like 14 hours) and what that means for your fat-burning potential.

The bottom line is: it removes guesswork from fasting so you know the true biological impact of any change in your routine.

Built For

This MCP is built for individuals who treat biohacking and metabolic health seriously. If you're someone tracking specific physiological metrics, like optimizing autophagy or improving endurance, this tool provides the data needed to make informed decisions about your fasting protocols.

Biohacker

Uses it to precisely measure the metabolic consequences of altering their intermittent fasting schedule.

Health Coach

Provides clients with objective data points, helping them understand why sticking to a protocol is crucial for reaching specific health goals.

Athlete/Endurance Runner

Calculates the ideal stopping point during a fasted training session to minimize metabolic loss and maximize fat oxidation.

What Changes When You Connect

01 You stop guessing. The engine uses the `metabolic_loss_tool` to give a percentage estimate of your lost fat-burning potential, so you know if stopping early was worth it.

02 The `fasting_progress_tool` instantly shows what fraction of your target fasting window you've completed, keeping your protocols accurate and data-driven.

03 It grounds complex biohacking concepts into simple metrics. You get clear numbers on reaching important thresholds, like the 14-hour autophagy mark.

04 You gain confidence in your routine. Instead of relying on subjective feelings, you base decisions—like quitting a fast—on concrete physiological data.

05 The engine tracks multiple variables at once: planned duration versus achieved time, ensuring every metabolic choice is accounted for.

Real-World Applications

I want to know if I can quit fasting early today.

An agent analyzes my current fast (12 hours) against a 24-hour goal. It tells me that while I've made good progress, the metabolic loss is significant because I haven't hit the key autophagy marker yet.

I finished my fasted workout and need to know how far along I was.

An agent uses the progress tool to calculate that I completed 75% of my planned fast. This confirms I maintained a sufficient metabolic state for optimal recovery.

I'm planning a long-term fasting cycle and need checkpoints.

An agent compares my current status (18 hours) to the target (20 hours). It shows me that I am nearing the goal but also estimates the metabolic benefit of just waiting an extra two hours.

I'm training for a marathon and need precise timing guidance.

An agent helps fine-tune my fasting window, telling me exactly when I hit key milestones (like 14 hours) to maximize fat burning before the next leg of training.

Patterns to Avoid

Assuming metabolic status based on time

✗ AVOID

Thinking that because 'it's been over 12 hours,' you are metabolically ready to stop fasting, without checking specific thresholds.

✓ INSTEAD

Use the Early Breaking Decision Engine. First, check your completion percentage with `fasting_progress_tool`. Then, use `metabolic_loss_tool` to see if you've passed critical markers before making a decision.

Ignoring the autophagy threshold

✗ AVOID

Breaking a fast at 13 hours because 'I feel hungry,' even though the data shows I haven't reached optimal fat-burning states.

✓ INSTEAD

The engine provides clear warnings. It will tell you that metabolic loss remains high if you quit before hitting key markers like 14 hours, guiding you to wait it out.

Treating fasting as a simple timer

✗ AVOID

Just counting hours without considering the physiological state or the overall goal of the fast.

✓ INSTEAD

The Early Breaking Decision Engine is designed for this. It doesn't just count time; it models the *cost* and *progress*, helping you make smarter, data-backed choices.

The Right Fit

Use this MCP if your goal is precision: You need to know not just *how long* you fasted, but the quantifiable metabolic status of that fast. If you are a biohacker or athlete tracking specific metrics like autophagy and fat-burning potential, this tool is essential. Don't use it if you simply want general health advice; other tools can give basic estimates. Crucially, don't rely on its output if your body feels drastically different than anticipated, because the data only reflects metabolic models, not individual biological variance. Always combine the progress check (`fasting_progress_tool`) with the cost assessment (`metabolic_loss_tool`) for a complete picture.

Early Breaking Decision Engine MCP: Managing Fasting Protocol Progress

Right now, tracking a fast means manually checking hours on a clock and hoping you hit key metabolic milestones. You're left guessing if the time gap between 12 hours and 14 hours actually matters, or if you've lost valuable fat-burning potential by stopping early.

With this MCP, your AI client gets an instant, data-backed report. It calculates exactly how far along you are with `fasting_progress_tool` and models the specific metabolic decline using `metabolic_loss_tool`. You get a number that tells you if waiting just another hour was worth it.

Early Breaking Decision Engine MCP: Assessing Metabolic Loss During Fasting

The old way involved generalized advice: 'Keep going!' or, worse, no advice at all. You'd stop based on hunger signals rather than physiological metrics.

Now you get a specific magnitude estimate of your metabolic loss. The engine provides clear thresholds related to the 14-hour autophagy period, allowing you to make truly informed decisions about when and why you end your fast.

2 Tools for Tracking Fasting Progress and Metabolic Loss

These tools allow your AI agent to quantify how far along you are in a fast and calculate the potential metabolic cost of stopping early.

#	TOOL	DESCRIPTION
01	`metabolic_loss_tool`	Estimates how much of your potential metabolism you lose by ending the fast early.
02	`fasting_progress_tool`	Calculates what percentage of time you've completed toward your fasting goal.

See It in Action

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

U I was aiming for a 20-hour fast but I've only managed 15 hours. What's my progress and what does it mean?

Fasting Status Report

- **Goal:** 20 Hours
- **Achieved:** 15 Hours
- **Progress:** 75% complete.

⚠️ **Metabolic Warning:** You have passed the critical 14-hour threshold. Stopping now means a manageable metabolic loss, but you still benefit from extending your fast for deeper autophagy benefits.

U How much am I losing if I quit my fast right now? My goal was 24 hours.

Metabolic Loss Assessment

Based on current parameters, breaking the fast results in a metabolic loss magnitude of **45%**. You are approaching peak fat-burning efficiency but haven't quite hit optimal levels yet. Try to wait until you pass the 16-hour mark for better results.

U I completed my fasted cardio and want to know what percentage of my fast I achieved.

Progress Check

Your fasting window is currently at **85% completion**. This indicates strong adherence to your protocol. Keep up the great work; you're right on track for your goal.

Frequently Asked Questions

01 **What does the Early Breaking Decision Engine MCP tell me about my fasting progress?**

It provides a precise percentage of how close you are to hitting your planned fast duration. This helps you keep track of milestones and ensures you're logging accurate data for your metabolic tracking.

02 **Can I use the Early Breaking Decision Engine MCP to calculate metabolic loss?**

Yes, it estimates the magnitude of physiological cost if you break a fast early. This calculation is crucial for understanding the impact on deep fat-burning states and key thresholds like 14 hours.

03 **Does this MCP help with biohacking protocols?**

Absolutely. It turns complex biological concepts, like autophagy, into measurable data points. You can use it to fine-tune your fasting routines based on numbers rather than just feeling good.

04 **If I'm unsure about stopping a fast, how does the Early Breaking Decision Engine MCP help?**

It gives you an objective assessment. By comparing your actual time achieved versus your target, it tells you if the metabolic loss risk is high or low, helping you decide whether to push through.

05 **Is this tool better than just timing my fast manually?**

Yes. Simple timers only show elapsed hours. This MCP goes deeper, calculating your actual progress percentage and providing a calculated risk assessment of metabolic loss.

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 `"early-breaking-decision-engine": { "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

Early Breaking Decision Engine 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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Endpoint	`https://edge.vinkius.com/{token}/mcp`

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