MCP SERVER | NO CODE | CLOUD HOSTED

Day-by-Day Burn Simulator MCP for AI Agents

Predicting Startup Liquidity and Daily Cash Flow Forecasting

Day-by-Day Burn Simulator predicts your company's cash runway by simulating daily bank balances. It tracks spending, models incoming funds, and alerts you immediately when an overdraft is likely. Stop guessing about liquidity; get a precise, day-by-day forecast of your operational capacity.

A+ Quality Score 100/100

cash-runway | burn-rate | financial-forecasting | liquidity | overdraft-prediction

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vinkius.com/mcp/day-by-day-burn-simulator

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.

Day-by-Day Burn Simulator MCP

3 tools available
Cloud-hosted on Vinkius

Managing cash flow doesn't have to be a spreadsheet nightmare. This MCP acts as a financial projection engine, simulating what happens to your bank account balance every single day based on known spending and scheduled income. You can see exactly how long your current funds will last and pinpoint when negative balances might occur. The tool handles recurring burn rates and complex cash flow events automatically, giving you true visibility into your company's liquidity.

It goes beyond simple totals. By analyzing daily fluctuations, it determines your operational runway and pinpoints the exact periods where a low balance is expected, helping you plan for capital injections or cost cuts well in advance. If you need financial forecasting tools integrated with your AI workflow, checking out the entire Vinkius catalog means you're covered. This MCP gives your agent all the data it needs to predict cash shortages and identify recovery windows.

Core Capabilities

01 — Predicting Operational Runway

Determines precisely how many days of business activity remain before the company balance hits zero.

02 — Forecasting Daily Balances

Generates a complete, day-by-day ledger showing expected bank balances and flagging immediate overdraft risks.

03 — Analyzing Negative Balance Periods

Identifies specific time windows where the balance is negative and estimates when incoming funds will restore stability.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/day-by-day-burn-simulator** — connect your AI agent in three steps.

01 Input your starting capital, recurring daily burn rates, and all scheduled cash inflows or outflows (e.g., payroll dates, client payments).

02 The MCP simulates these transactions day by day, building a comprehensive ledger that tracks the resulting balance at the end of each 24-hour period.

03 Your agent analyzes this projected data to report key metrics: your full cash runway remaining, or specific days when an overdraft event is predicted.

The bottom line is you get a clear, predictable timeline of your company's financial health, eliminating guesswork from the burn rate.

Built For

This MCP is essential for founders and operational leaders running high-growth or cash-sensitive businesses. If you spend too much time building complex spreadsheets just to know if you're going to survive the month, this tool saves you hours of manual financial modeling.

Startup Founder

Uses it to model different spending scenarios (e.g., hiring more staff or launching a new product) and understand how each decision impacts cash runway.

CFO / Financial Analyst

Runs detailed simulations using the MCP to predict liquidity shortfalls, allowing them to prepare for capital raises or adjust spending budgets proactively.

Operations Manager

Checks daily balance projections to ensure critical operational payments—like vendor invoices and payroll—are covered by predicted incoming funds.

What Changes When You Connect

01 Avoid critical surprises. By using the `project_daily_balance_ledger`, you get a daily view of your bank account, eliminating the risk of unexpected overdrafts.

02 Know your limits instantly. The `calculate_cash_runway` tool tells you exactly how many days of operations remain, giving you clear targets for fundraising or cost reduction.

03 Plan for recovery instead of reacting to crisis. You can use `identify_overdraft_recovery_windows` to predict when negative periods end and funds stabilize.

04 Stop using static spreadsheets. This MCP updates forecasts dynamically as your cash flows change, providing real-time financial visibility.

05 Model 'what if' scenarios quickly. Ask your agent how a major expenditure or delayed payment affects your runway without manually adjusting formulas.

Real-World Applications

Modeling the Impact of Delayed Payments

A startup founder needs to know what happens if their largest client pays 30 days late. They prompt their agent, asking for a simulation using `project_daily_balance_ledger`. The agent immediately shows the exact date and day count when cash reserves drop below safety levels.

Determining Funding Needs Before a Crunch

A CFO needs to present a clear liquidity picture to investors. They ask for a full runway calculation using `calculate_cash_runway`, which provides the hard number of days they must survive, guiding their pitch deck requirements.

Planning for Budget Shortfalls

An Ops Manager notices spending spikes and asks to analyze the negative periods. They use `identify_overdraft_recovery_windows` to pinpoint the exact dates when a large incoming receivable will cover the deficit.

Comparing Spending Scenarios

A founding team compares two spending plans—one with new marketing, one without. They run both scenarios through the simulator to see which plan maintains a safer cash runway over the next quarter.

Patterns to Avoid

Assuming constant burn rates

✗ AVOID

Calculating funding needs by simply dividing total savings by average monthly expenses. This fails when major, non-recurring payments or sudden revenue spikes occur.

✓ INSTEAD

Instead, use the Day-by-Day Burn Simulator to model specific transactions and inflows using tools like `project_daily_balance_ledger`. It accounts for every scheduled cash flow, not just averages.

Ignoring payment lags

✗ AVOID

Assuming that a large client invoice sent on Day 1 is paid immediately. This ignores standard Net-30 or Net-60 payment terms.

✓ INSTEAD

The simulator handles payment timing. Use the tools to model receivables with specific due dates, seeing exactly when that money actually hits your bank account.

Overlooking recovery periods

✗ AVOID

Focusing only on the moment a balance goes negative without knowing when it will return to normal.

✓ INSTEAD

The `identify_overdraft_recovery_windows` tool gives you the full story, showing not just the crisis point, but also the precise date and amount when cash stabilizes.

The Right Fit

You should use the Day-by-Day Burn Simulator if your financial planning requires granular timing—specifically, if your liquidity depends on predictable, scheduled cash flows (like payroll cycles or large client payments). If you need to know *when* money is available and how long negative balances will last, this MCP is mandatory. Don't use it if all you need is a simple average burn rate; for that, a basic calculator works fine. However, don't rely on it to predict market changes or sudden macroeconomic shifts—it only models the data you feed it. It helps with internal operational finance; it isn't an investment advisor.

Day-by-Day Burn Simulator for Forecasting Startup Liquidity

Right now, cash flow planning means juggling three different spreadsheets: one for expenses, one for expected revenue, and a third to manually calculate the resulting balance. When you have to account for payments that hit 30 days late or payroll that runs on specific dates, it's an agonizing process of copy-pasting and cross-referencing dates.

With this MCP, your agent ingests all those variables—the burn rate, the scheduled outflows, the expected inflows—and spits out a single, linear ledger. You get to see the precise day your balance dips below zero and exactly when it climbs back up.

Day-by-Day Burn Simulator for Managing Overdraft Risk

The biggest headache is always figuring out how long you'll be in the red. Manual forecasting only tells you *if* you will overdraft, not *when* or for how long that negative pressure lasts. You end up with a vague warning instead of actionable dates.

This simulator provides surgical precision. It doesn't just say 'danger'; it uses tools like `identify_overdraft_recovery_windows` to map out the entire period of financial stress, telling you exactly what needs to happen and when stability returns.

Day-by-Day Burn Simulator: 3 Tools for Cash Flow Forecasting

Use these tools to forecast bank balances, calculate operational runway, and pinpoint exactly when cash flow shortages are expected.

#	TOOL	DESCRIPTION
01	`calculate_cash_runway`	Calculates the exact number of days your company can operate based on current burn rates and cash reserves.
02	`project_daily_balance_ledger`	Provides a complete, day-by-day breakdown of expected bank balances, flagging potential overdraft dates as it goes.
03	`identify_overdraft_recovery_windows`	Analyzes specific periods of negative balance to estimate exactly when funds will be replenished and stability returns.

See It in Action

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

U If I start with $50k, burn $1k daily, but get a major payment of $20k on day 45, how long can I survive?

Day-by-Day Burn Forecast

DAY	STARTING BALANCE	DAILY ACTIVITY	ENDING BALANCE
1	$50,000	-$1,000	$49,000
...	...	...	...
43	$8,000	-$1,000	$7,000
44	$7,000	-$1,000	$6,000
45	$6,000	**+$20,000 (Client Payment)**	**$26,000**

Conclusion: With the payment boost on Day 45, your new cash runway is now approximately 26 days.

U Can you show me a balance ledger for $10k starting funds with regular spending and an extra $3k outflow on day 15?

Simulated Balance Ledger

The daily burn is steady at $50. The simulation shows the balance dropping consistently until Day 14, where it stands at **$8,000**. On Day 15, the additional $3,000 outflow brings the balance down to **$7,000**.

This means your immediate safety buffer after that outflow is reduced by $3,000.

U I'm worried about a big shortfall. What happens if my burn rate increases suddenly?

Burn Rate Impact Analysis

Current Runway: 95 days.

If the daily operational expenditure (OpEx) increases by $200, your cash runway drops from 95 days to **78 days**. This change significantly impacts your ability to absorb unexpected costs.

Frequently Asked Questions

01 **How does the Day-by-Day Burn Simulator calculate my remaining operational lifespan?**

The simulator calculates how many full 24-hour periods you can operate before the projected bank balance hits zero. It accounts for every known expense and income event to give you a precise number.

02 **I need help predicting if I'll go into overdraft based on my spending schedule.**

This MCP handles that. You feed it your expected cash flow, and it will pinpoint the exact dates when your balance is predicted to dip below zero, giving you time to adjust.

03 **Can I use Day-by-Day Burn Simulator for comparing different spending plans?**

Yes. You can run multiple scenarios through the simulator—say, one with hiring and one without—to compare which plan maintains a safer cash runway over time.

04 **What if my revenue is irregular? Can it handle that in the Day-by-Day Burn Simulator?**

Absolutely. It models scheduled payments, no matter how irregularly spaced they are. You just tell it the expected date and amount for each major inflow.

05 **Does the Day-by-Day Burn Simulator account for taxes or other large one-time outflows?**

Yes, you include those as scheduled cash outflows. The simulator treats them just like any other expense when calculating your balance on that specific day.

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 `"day-by-day-burn-simulator": { "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

Day-by-Day Burn Simulator 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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