MCP SERVER | NO CODE | CLOUD HOSTED

Tiered Discount Simulator MCP for AI Agents

Maximizing E-commerce Savings Through Spending Thresholds

The Tiered Discount Simulator calculates the most cost-effective way to hit higher discount tiers. It tells you exactly how much filler product you need to add to your cart so that the resulting percentage discount outweighs the cost of those extra items.

A+ Quality Score 100/100

shopping | discounts | savings | upsell | logic-engine

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vinkius.com/mcp/tiered-discount-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.

Tiered Discount Simulator MCP

3 tools available
Cloud-hosted on Vinkius

This MCP helps shoppers stop guessing if they should spend more money just to get a better deal. You feed it your current cart total and the specific spending thresholds required for discounts, like '10% off over $100' or '25% off over $300.' It then analyzes complex discount logic to figure out if adding some low-cost items—the filler stuff—will trigger a higher percentage discount that makes the whole transaction cheaper. Instead of just checking your current savings, you get clear advice on how to strategically increase your basket value while still getting a net cost reduction. Connecting this MCP via Vinkius gives your AI agent access to deep, real-time pricing logic for better shopping efficiency.

Core Capabilities

01 — Check current discount status

Determines the actual percentage discount already applied to a cart total.

02 — Calculate added item financial impact

Figures out how much adding an extra, low-cost item will change your overall spending.

03 — Find optimal savings path

Pinpoints the minimum amount of money you need to spend on filler items to unlock the best possible discount tier.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/tiered-discount-simulator** — connect your AI agent in three steps.

01 You tell your AI client your current cart total and all the discount tiers available (e.g., 10% at $100, 25% at $300).

02 The MCP analyzes this data against complex financial logic to model potential spending increases.

03 It returns a recommendation: the minimum additional spend needed on filler items and the resulting net cost savings compared to your original total.

The bottom line is that it turns discount rules into concrete, actionable purchasing advice.

Built For

Anyone who shops online and feels annoyed by complicated spending thresholds. If you've ever added an item just because you thought it would make your cart qualify for a better sale price, this MCP is built for you.

E-commerce Shopper

Uses the tool to compare multiple discount scenarios before finalizing a purchase, ensuring they hit the highest possible savings tier without overspending.

Pricing Analyst

Tests new promotional strategies by simulating how different spending thresholds and filler item costs affect total perceived customer value.

What Changes When You Connect

01 Stop guessing if you should add more items. The `find_optimal_strategy` tool pinpoints the exact minimum filler amount needed to unlock a better discount tier.

02 Know your savings before you click 'buy.' Use `check_discount` to instantly see what percentage discount applies right now, giving you total clarity on costs.

03 Avoid spending money just for discounts. The `calculate_upsell_impact` tool lets you weigh the cost of filler items against the potential savings percentage.

04 It's a powerful logic engine that models complex pricing structures, letting your agent recommend optimal purchases across multiple thresholds.

05 You get clear advice: whether adding $10 or $50 is actually worth it. The focus shifts from spending more to saving smarter.

Real-World Applications

The cart total isn't high enough for the best sale.

You have a $180 cart, but the 30% discount only kicks in at $250. Your agent uses `find_optimal_strategy` and advises that adding three $10 items gets you to $210—enough for the better tier—but spending the extra $30 is still cheaper than missing the savings.

Comparing two different sale models.

You are comparing Store A (20% off over $200) vs. Store B (15% off over $150). Your agent runs both scenarios through the simulator, using `check_discount` on your current total to recommend which store offers better savings.

I need to know if a small add-on item is worth it.

You're debating buying a $25 accessory. Your agent uses `calculate_upsell_impact` and shows that while the accessories raise your total, the resulting discount increase doesn't offset the cost of the items themselves.

Patterns to Avoid

Adding items purely based on a visual 'good deal' feeling.

✗ AVOID

Just throwing random low-cost accessories into the cart because they are cheap, without checking if the resulting discount actually makes it cheaper overall.

✓ INSTEAD

Instead of guessing, let your agent use `find_optimal_strategy`. It will tell you the precise amount needed to hit a threshold while keeping your net cost down.

Forgetting to check existing discounts first.

✗ AVOID

Thinking adding an item is necessary because you see a high discount percentage, forgetting that your current total already qualifies for a decent sale price.

✓ INSTEAD

Always run `check_discount` first. This confirms the base savings before modeling any potential upsell impact.

Ignoring threshold spacing.

✗ AVOID

Assuming you need to jump directly from $100 (10%) to $300 (25%), when maybe there's a smaller, more efficient step up at $180 (18%).

✓ INSTEAD

Use `find_optimal_strategy` to map the most cost-effective path between tiers. It finds the sweet spot.

The Right Fit

You should use this MCP if you are trying to maximize savings in a shopping cart with multi-tiered discounts, especially when low-cost filler items are involved. If your discount rules are simple (e.g., '10% off everything'), or if you only care about one single threshold, this is overkill—a basic calculator will work. Don't use it if you need to calculate sales tax or shipping fees; the MCP focuses purely on promotional thresholds. Use `find_optimal_strategy` when your goal is *efficiency* of savings; otherwise, just stick with standard comparison tools.

Tiered Discount Simulator: Mastering E-commerce Savings Logic

Right now, figuring out the best deal means clicking back and forth between product pages and discount charts. You manually check your current total against a list of thresholds, trying to predict if that $20 item you're eyeing will push you into the 25% bracket or just slightly raise your bill without changing anything.

With this MCP, your agent handles that complex math instantly. You give it the rules and your cart contents; it processes whether adding a few filler items actually drops your net cost by hitting an optimal tier. The result is not just a number; it's a clear 'yes' or 'no' on if spending more money will save you money.

Tiered Discount Simulator: Calculating Basket Value and Upsell Impact

The tedious part is the back-and-forth calculation. You have to estimate how much an upsell will increase your total, then run that new number through a separate discount formula, and then compare it to your original net cost—all in your head.

This MCP consolidates all those steps into one query. It provides immediate insight using `calculate_upsell_impact`, telling you exactly how the accessory affects the final price relative to the savings achieved.

Tiered Discount Simulator: 3 Tools for E-commerce Savings Logic

These tools allow your AI agent to check current discounts, model upselling impact, and find the absolute best path to maximize savings across complex pricing tiers.

#	TOOL	DESCRIPTION
01	`check_discount`	Checks the current percentage discount that applies to a given cart total.
02	`calculate_upsell_impact`	Calculates the financial effect on your savings if you add an extra, low-cost item to your basket.
03	`find_optimal_strategy`	Identifies the absolute minimum additional amount needed to reach a higher discount tier efficiently.

See It in Action

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

U I have $150 in my cart. Tiers are: 10% at $100, 20% at $200. Should I add a $40 item?

Discount Analysis Report

- **Current Status:** Your current discount is 10%, netting you $135.
- **Proposed Action:** Adding the $40 item raises your total to $190.
- **Optimal Finding:** To hit the 20% tier, you need at least $50 more. If you add a $60 item, your total is $210. The resulting discount brings your net cost down to **$168**.

Verdict: Adding the items saves you money ($135 vs. $168), but it's not worth it because the new savings don't cover the extra cost.

U Find best strategy for a $120 cart with tiers: 10% at $100, 20% at $200.

Savings Strategy Guide

SCENARIO	FILLER ITEM COST	NEW TOTAL	DISCOUNT APPLIED	NET COST
Current	$0	$120	10% (Max)	**$108**
Target	$80	$200	20%	**$160**

To reach the 20% tier, you need an additional $80. This increases your total cost by $80 and your final net price by $52. Don't do it.

U What is my current discount on a $175 cart with tiers: 15% at $150, 20% at $250?

Current Discount Check

- **Cart Total:** $175.00
- **Applicable Tier:** The current total qualifies for the 15% discount.
- **Savings Calculation:** Your applied discount is **15%**, resulting in savings of $26.25.
- **Net Cost Today:** $148.75.

Frequently Asked Questions

01 **How does the Tiered Discount Simulator help with complex sale rules?**

The simulator analyzes multi-tiered discount logic, meaning it handles situations where your total qualifies for several different percentage discounts. It finds the best possible deal by modeling how spending more impacts the final savings.

02 **Can I use the Tiered Discount Simulator to see if adding filler items is worth it?**

Yes, that's exactly what it does. You can determine if the resulting higher discount percentage from buying extra stuff actually outweighs the cost of those additional filler items.

03 **Is this better than just checking my current savings percentage?**

Absolutely. Checking your current savings only tells you what's happening now. The simulator lets you look forward, predicting future savings and finding strategic paths to the next discount tier.

04 **Does the Tiered Discount Simulator need me to know all my discount tiers?**

Yes, for it to work, you must input your current spending thresholds (e.g., 10% at $100). The MCP uses those rules to calculate what's possible.

05 **What if I only want to know the minimum amount of money I need to spend?**

You can use its optimal strategy tool. It will pinpoint the lowest additional spending required to hit a specific, desirable discount tier without overspending on unnecessary items.

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 `"tiered-discount-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

Tiered Discount 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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