MCP SERVER | NO CODE | CLOUD HOSTED

Mastery Progression Calculator MCP

Pinpoint player progress and reward schedules.

Mastery Progression Calculator simulates your advancement through skill mastery tiers—Bronze, Silver, Gold, and Platinum. Plug in your typical usage rate per hour to map out exactly how long you'll take to hit any rank. It lets you analyze streak bonuses and predict total cumulative rewards along the way.

A+ Quality Score 100/100

mastery | progression | gaming-stats | skill-leveling | efficiency

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vinkius.com/mcp/mastery-progression-calculator

SCAN TO VIEW

The infrastructure that powers AI agents in the real world.

Vinkius connects AI to the world's software through secure, enterprise-grade infrastructure — enabling real-world execution at scale, built on the Model Context Protocol (MCP).

Your AI Connections Run Through Vinkius Cloud

The world's largest managed MCP catalog

Vinkius is the cloud infrastructure where AI agents connect 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.

Mastery Progression Calculator MCP

4 tools available
Cloud-hosted on Vinkius

This MCP gives you a clear picture of skill progression. Instead of guessing when you'll reach the next rank, it calculates your entire roadmap through mastery tiers. You just tell it how often you use your skills, and it handles the rest, giving you an accurate timeline from start to Platinum. Need to see how much time a single tier requires? It figures that out. Want to know what total rewards you'll rack up by Gold? That data is available too. If you're tracking progression for a game or system, this MCP provides the predictive analytics you need. Vinkius makes connecting these deep analytical tools simple, letting your agent access complex gaming stats without needing specialized software.

Core Capabilities

01 — Model total advancement roadmap

Generates a complete schedule showing how many hours it will take to reach the final Platinum rank.

02 — Determine time for specific ranks

Calculates the precise number of hours required just to pass through one particular mastery tier.

03 — Analyze streak bonus impact

Assesses how a running streak multiplier changes your effective progression speed and efficiency.

04 — Track total accrued bonuses

Sums up all the rewards you'll collect from the start until you hit any specific tier level.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/mastery-progression-calculator** — connect your AI agent in three steps.

01 Tell your AI client how many times per hour you typically use your skills.

02 Run the calculation, specifying which mastery rank or metric you want to analyze (e.g., total time, specific tier duration, or cumulative rewards).

03 The MCP returns a concrete number, giving you the hours needed for that milestone.

The bottom line is, it takes raw usage data and translates it into predictive timelines so you know exactly when to expect major milestones.

Built For

Game designers who need to balance progression curves. Data analysts modeling player retention rates. Product managers launching new skill-based systems. If you're building a system where the rate of progress matters, this MCP is for you.

Game Designer

Uses it to test if their intended mastery curve feels too fast or too slow by running simulations on different usage rates.

Data Analyst

Builds models predicting player lifecycles and retention points based on calculated progress timelines.

Product Manager

Determines the necessary incentive structures by calculating how much total reward is accumulated at key user milestones (e.g., Gold tier).

What Changes When You Connect

01 Predicting Milestones: Use get_total_progression_timeline to immediately see the full roadmap, eliminating guesswork about when players hit Platinum.

02 Tuning Difficulty: Running simulations with get_tier_duration allows you to balance game difficulty by setting precise time requirements for specific ranks.

03 Balancing Rewards: By running get_cumulative_reward_value, you can ensure that rewards feel appropriate and motivating at every major achievement point.

04 Modeling Efficiency: calculate_streak_acceleration_factor lets you test how heavily streak bonuses impact player speed before committing to the mechanic.

05 Clear Data Outputs: All calculations provide hard numbers for hours or units, giving your team reliable metrics instead of vague estimates.

Real-World Applications

The new 'Gold' rank feels too fast.

A designer needs to slow down the Gold tier. Instead of guessing, they run get_tier_duration and find that increasing the required hours from 50 to 75 will provide the necessary difficulty boost without affecting other ranks.

We need to know total rewards at Platinum.

A PM wants to ensure players feel rewarded enough to keep playing until they reach the highest rank. They use get_cumulative_reward_value to predict the maximum bonus value, which then informs marketing copy.

How does a 2x streak affect my timeline?

A data analyst needs to test player retention with a new feature. They input their base usage rate and run calculate_streak_acceleration_factor to see the exact percentage increase in speed, making sure it doesn't accelerate progress too much.

The whole progression feels undefined.

A team lead wants a single source of truth for player journey estimates. They use get_total_progression_timeline to generate one comprehensive chart showing the required hours from Bronze all the way through Platinum.

Patterns to Avoid

Using general leveling formulas

✗ AVOID

Calculating progress based on simple linear growth or using a generic 'X points needed' formula that ignores streaks and tiered difficulty.

✓ INSTEAD

Use this MCP to account for complex variables. Check get_tier_duration for specific rank requirements, and use calculate_streak_acceleration_factor if bonuses are involved.

Assuming linear reward growth

✗ AVOID

Believing that rewards will scale evenly across all tiers, which often leads to the mid-game feeling unrewarding.

✓ INSTEAD

Run get_cumulative_reward_value. This tool shows the exact total accumulation point at each tier, helping you identify where a reward spike is needed.

Ignoring usage variability

✗ AVOID

Creating one fixed timeline that fails when player activity naturally dips or spikes over weeks.

✓ INSTEAD

Use get_total_progression_timeline. By simulating progress based on variable 'uses per hour' input, you get a much more realistic and useful roadmap.

The Right Fit

Use this MCP if your game or system progression is governed by measurable tiers (Bronze to Platinum) and the rate of advancement is critical to player experience. You need to know *how long* it takes, not just that progress exists. If you only need a simple total score calculation without regard for time or milestones, you don't need this. Don't use it if your system uses subjective metrics instead of quantifiable 'skill uses per hour.' Stick to this MCP when you need predictive timing using tools like get_tier_duration and get_total_progression_timeline; otherwise, look at general stat tracking APIs.

The headache of manual progression forecasting

Right now, figuring out how long players will take to reach the next big rank requires juggling multiple spreadsheets. You're manually inputting 'uses per hour,' then calculating tier requirements, and cross-referencing reward schedules in a dozen different tabs. It’s slow, and if you change one variable, half your models break.

With this MCP connected via Vinkius, that entire process collapses into one query. You tell it the usage rate, and it spits out the complete roadmap instantly, giving you reliable numbers for total time, specific tier durations, and cumulative rewards.

get_total_progression_timeline Gives You a Complete Picture

You no longer have to piece together the journey from multiple sources. Instead of looking up Bronze time in one place and Gold requirements in another, you run get_total_progression_timeline once. It delivers the entire progression timeline straight through Platinum.

It’s a single source of truth for your game's pacing. You can confidently adjust the difficulty curve knowing that every milestone is accounted for.

Mastery Progression Calculator with 4 Tools

These tools allow you to map out entire skill roadmaps, analyze reward accumulation, or predict the exact hours needed for any given mastery tier.

#	TOOL	DESCRIPTION
01	`get_cumulative_reward_value`	Calculates the sum of all bonuses earned up to a specific mastery rank.
02	`get_total_progression_timeline`	Maps out the complete schedule and hours needed to advance through every available mastery tier.
03	`calculate_streak_acceleration_factor`	Analyzes how a continuous streak bonus increases or decreases your overall rate of progress.
04	`get_tier_duration`	Outputs the precise number of hours required to move from one mastery rank to the next defined level.

See It in Action

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

U How long will it take me to reach Platinum if I use my skills 50 times per hour?

Based on a rate of 50 uses per hour, your total progression time to reach Platinum is 120 hours, with each tier breakdown provided in the timeline.

U What is the impact of a 1.5x streak multiplier on my base usage rate of 40 uses per hour?

A 1.5x streak multiplier increases your progression speed by 50%, resulting in an effective usage rate of 60 uses per hour.

U How many total rewards will I have accumulated once I reach the Gold tier?

Upon reaching the Gold tier, your total accumulated reward value is 150 units.

Frequently Asked Questions

01 **How does the Mastery Progression Calculator handle streak bonuses?**

It analyzes this with calculate_streak_acceleration_factor. This tool determines the exact multiplier effect of streaks, so you know if a bonus truly speeds up progression or just offers a minor boost.

02 **What is needed to find out how long I will reach Platinum?**

You need your average skill uses per hour. Then, use get_total_progression_timeline to generate the complete roadmap from start to finish.

03 **Can this MCP tell me what my total rewards are at Gold tier?**

Yes, you can run get_cumulative_reward_value. This tool sums up all bonuses earned through the ranks and gives you a concrete reward value upon hitting Gold.

04 **What if I want to know just how long one specific rank takes?**

Use the get_tier_duration tool. You simply input the start and end tiers, and it calculates the required hours for that precise segment of progress.

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 `"mastery-progression-calculator": { "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

Mastery Progression Calculator 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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