MCP SERVER | NO CODE | CLOUD HOSTED

Numeral Formatter Engine MCP

Always format numbers for perfect report presentation.

Numeral Formatter Engine takes raw numbers and instantly converts them into perfect display strings. Stop worrying about if '10000' should be $10,000.00 or 10K. This MCP handles all the tricky formatting rules—currencies ($), bytes (MB), percentages (%), and abbreviations (k). It ensures your data looks right every single time, giving you deterministic output for reports and dashboards.

D Quality Score 56.75/100

data-formatting | localization | currency-formatting | data-visualization | deterministic-output | number-parsing

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vinkius.com/mcp/numeral-formatter-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.

Numeral Formatter Engine MCP

1 tools available
Cloud-hosted on Vinkius

When an AI agent pulls data, it often spits out numbers that are technically correct but visually unusable. Trying to write a financial report or build a dashboard summary with raw figures is a nightmare; the LLM might use commas where periods belong, or forget decimal places entirely. This MCP fixes that. It applies strict rules—the same ones professional software uses—to guarantee your numbers look right for any audience. You just pass it the number and the format you want, and it returns clean text ready to paste into a document. By connecting this Numeral Formatter Engine through Vinkius, you make sure all data presentation is reliable, letting your agent focus on analysis instead of fixing formatting.

Core Capabilities

01 — Format currency values

Converts raw integers into accurate, localized monetary strings like $10,000.00.

02 — Convert raw bytes to readable size

Transforms large byte counts (e.g., 2560000) into human-readable units like 2.4MB or 1.5GB.

03 — Calculate percentages

Takes decimal inputs (like 0.973) and outputs them as accurate percentage strings (97%).

04 — Shorten large numbers with abbreviations

Compresses big counts into simplified, readable formats like '1.5k' or '5M'.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/numeral-formatter-engine** — connect your AI agent in three steps.

01 You give your agent the raw number and specify what kind of format it needs (like 'currency' or 'bytes').

02 This MCP runs the number through established formatting rules, checking for locale-specific symbols and decimal places.

03 Your agent receives a perfectly formatted string ready to be used in text output.

The bottom line is that you get clean, display-ready numbers without ever having to manually adjust dollar signs or commas.

Built For

Data analysts who spend hours fixing formatting errors, financial reporting specialists building dashboards, and engineers whose agents process metrics for client reports. If your work requires presenting data to a human, you need this.

Financial Analyst

They use the MCP every time they build a quarterly report summary, ensuring all revenue figures and costs adhere to strict currency formatting rules.

Data Visualization Engineer

They integrate this MCP into agent pipelines that generate dashboard metrics, guaranteeing byte sizes or counts always appear in the correct unit (MB, GB).

Product Manager

When summarizing feature adoption rates for stakeholders, they use it to correctly format percentages and abbreviations.

What Changes When You Connect

01 Avoids hallucinated formatting. When your agent generates a financial summary, you trust that the $ sign and comma placement are always right because of `format_numeral`.

02 Universal compatibility means you only connect once through Vinkius to access deterministic number formatting for every client application, whether it's Cursor or VS Code.

03 Consistency across all data types. Use this MCP to treat currencies, file sizes (bytes), and percentages with the same level of accuracy in your outputs.

04 Saves time on manual cleanup. Instead of writing post-processing logic to fix inconsistent symbols, you just pass the raw number to `format_numeral` and get clean text back instantly.

05 Deterministic output guarantees that running the same number through this MCP will always give you the exact same formatted result.

Real-World Applications

Building a Q3 Revenue Report

A financial analyst needs to summarize revenue data. Instead of getting raw numbers like '1200000', they prompt their agent, which uses `format_numeral` with the currency pattern ('$0,0.00'). The output is clean text: '$1,200,000.00', ready for the PDF.

Analyzing File Storage Usage

An engineer needs to report total storage used across multiple servers. They pass a raw byte count (e.g., 536870912) to `format_numeral` with the bytes pattern ('0.0b'). The resulting output is immediately understandable, like '512MB'.

Calculating Feature Adoption

A product manager needs to show how many users clicked a new feature out of 800 total users. They use `format_numeral` with the percentage pattern ('0%') on the decimal ratio (0.125), and the agent reports '12.5%'.

Summarizing User Counts

A marketing team gathers usage statistics, getting large numbers like 34500. They use `format_numeral` with the abbreviation pattern ('0.0a') to report '34.5k' instead of a massive number, keeping the document clean and readable.

Patterns to Avoid

Relying on basic string formatting

✗ AVOID

Attempting to write logic like `number.toFixed(2).replace(',', '')` because it often fails with locale changes or large numbers.

✓ INSTEAD

Use the Numeral Formatter Engine MCP. Pass your number and specify the exact format pattern (e.g., 'currency' or '0.0b') to guarantee correct, localized output every time.

Hardcoding formatting rules

✗ AVOID

Writing complex if/then statements in your agent logic: IF type is currency THEN add '$' AND comma ELSE...

✓ INSTEAD

Let the MCP handle it. The `format_numeral` tool accepts a pattern, eliminating the need for dozens of conditional checks and making your agent simpler.

Assuming LLM accuracy

✗ AVOID

Trusting that when you ask an AI to format '$10k', it will always return '10,000.00' correctly across all prompts.

✓ INSTEAD

For critical data presentation, always enforce formatting using this MCP. It forces the output through a strict rule set, guaranteeing accuracy.

The Right Fit

Use this MCP if your primary goal is *presentation*. You need to convert accurate, raw numerical figures into clean, human-readable text for reports, dashboards, or user interfaces. This includes currencies, sizes (bytes), percentages, and abbreviations.

Don't use it if you just need the number itself for a calculation—like calculating tax or finding a total sum. If your agent needs to *perform* math, skip this MCP and let it calculate first. You only call `format_numeral` after the math is done, right before displaying the result. It's purely a presentation layer tool; it doesn't change the underlying numerical value.

The tedious mess of cleaning up numbers in reports

Today, writing any kind of data-heavy report means endless copy-pasting and manual cleanup. You pull a figure from one tab, paste it into another, then realize the comma separator is wrong for that region. Then you have to fix the dollar signs, manually adjusting decimal places until everything looks right. It's time-consuming, error-prone work.

With this MCP, your agent handles all that complexity in a single step. You give it the raw number and tell it what type of data it is—currency, bytes, or percentage. The result you get back is perfectly formatted text, ready to drop right into your final document.

Format numbers with `format_numeral` for perfect results

The biggest manual step that disappears is the need to write complex formatting logic in your prompts. You never have to worry about whether '1000' should be formatted as '$1,000', or if a percentage needs an extra '%' sign appended.

Now, data presentation is deterministic. Your agent outputs reliable, visually accurate numbers every time—no exceptions, no guesswork.

Numeral Formatter Engine: 1 Tool

Use the available tool to reliably format raw numbers into perfect display strings for any purpose.

#	TOOL	DESCRIPTION
01	`format_numeral`	Takes a raw number and a format pattern (like '0.0b' or '$0,0.00') to output a perfectly formatted display string.

See It in Action

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

U Format 10000 as a US dollar amount.

Formatted Number: $10,000.00

U Show 2560000 as a human-readable byte size.

Formatted Number: 2.4MB

U Display 0.973 as a percentage.

Formatted Number: 97%

Frequently Asked Questions

01 **Does Numeral Formatter Engine handle dates?**

No, this MCP only handles numerical values. If you need to format dates (like MM/DD/YYYY), you'll need a dedicated date formatting tool.

02 **Can I use format_numeral for different currencies?**

Yes. You simply pass the raw number and update the pattern string to match the required currency symbol and decimal rules, like using '₹' instead of '$'.

03 **What is the difference between using this MCP and just asking an agent to format a number?**

Asking an agent to format often leads to hallucinations or inconsistent output. This MCP forces the agent to use strict, deterministic rules defined by Numeral.js, guaranteeing accuracy.

04 **If I pass '100', will format_numeral tell me if it's a currency?**

No, you must specify the context via the pattern string. You need to define if '100' means $100 or 100 units using the appropriate pattern for the tool.

05 **Does format_numeral support byte size conversions?**

Yes, it handles bytes by accepting a specific format pattern (like '0.0b'). This converts large raw integers into readable file sizes like MB or GB.

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 `"numeral-formatter-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

Numeral Formatter 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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