MCP SERVER | NO CODE | CLOUD HOSTED

LocationIQ MCP

Calculate routes and pinpoint precise map locations.

LocationIQ (Geocoding & Maps) connects your AI agent to professional mapping services. It lets you convert addresses into GPS coordinates, calculate driving or cycling routes between points, and find human-readable street addresses from raw latitude and longitude data, all through conversation.

A+ Quality Score 100/100

geocoding | routing | reverse-geocoding | location-intelligence | maps-api

MAINTAINED BY VINKIUS CLOUD FOR AI AGENTS · JUNE 2026
vinkius.com/mcp/locationiq-geocoding-maps

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.

LocationIQ (Geocoding & Maps) MCP

10 tools available
Cloud-hosted on Vinkius

Need to know where an address is, how far it is, or the best way to drive there? This MCP turns your AI client into a full mapping service. You can ask your agent to take a vague location name and get precise coordinates instantly. Need to calculate optimal paths for a delivery fleet? Just describe the start and end points, and the agent figures out the distance matrix for you. If you only have raw GPS numbers, this MCP translates them back into formatted street addresses with postal details. It also helps clean up messy data by snapping inaccurate signals right onto the nearest road network. Because Vinkius hosts all 4,000+ available tools in one catalog, you can connect your preferred AI client and instantly access top-tier geospatial intelligence without needing dozens of separate API keys.

Core Capabilities

01 — Convert Addresses to Coordinates

The agent takes a street address (like '1600 Pennsylvania Avenue') and returns the exact latitude and longitude.

02 — Calculate Optimal Routes

It determines the best driving, walking, or cycling path between two or more points, including estimated travel time.

03 — Find Addresses from Coordinates

The agent converts raw latitude and longitude numbers back into complete, readable street addresses with postal data.

04 — Map Distance Between Multiple Points

It calculates a table showing the travel time and distance between multiple origins and destinations at once.

05 — Clean Up GPS Data

The agent takes slightly inaccurate GPS readings and snaps them perfectly to the actual street grid for accurate tracking.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/locationiq-geocoding-maps** — connect your AI agent in three steps.

01 Subscribe to this MCP on Vinkius and enter your unique LocationIQ API Key.

02 Your AI client accesses the tool via natural conversation, telling it what location task you need (e.g., 'What's the route from A to B?').

03 The agent uses the necessary functions in the background and gives you a clear, conversational answer with all the map data.

The bottom line is that your AI client handles all the complex mapping calculations so you don't have to write any code.

Built For

Anyone dealing with physical locations, logistics, or data cleaning needs this. Specifically, developers building location-aware apps and operations teams that manage fleets.

Software Developer

You use it to build features where users need to input an address and get coordinates immediately, making your application smarter.

Logistics Manager

You ask the agent for the optimal route or a distance matrix showing travel times between three different warehouse locations.

Data Analyst

You use it to enrich messy datasets, converting raw GPS coordinates into verified street addresses and postal data for analysis.

What Changes When You Connect

01 Stop guessing coordinates. Use `search_geocode` to turn any address string into guaranteed, accurate GPS numbers in a single conversation.

02 Tired of manual routing? The MCP calculates optimal paths using `calculate_directions`, giving you the best driving or walking route instantly.

03 Clean up messy data batches. If your dataset has slightly inaccurate GPS signals, use `snap_nearest_roads` to snap everything onto the real street network.

04 Build better logistics planning with `calculate_distance_matrix`. Instead of running ten separate searches, you get a single table comparing multiple routes at once.

05 Turn raw data into actionable intelligence. Use `reverse_geocode` to instantly convert coordinates back into full street addresses and postal codes for your records.

Real-World Applications

Optimizing Delivery Routes

A logistics manager needs to know the quickest way to service 15 different client sites across a city. Instead of manually mapping every segment, they ask their agent to calculate a distance matrix for all points, saving hours of planning time.

Cleaning Dirty Data

A data analyst receives a spreadsheet with thousands of GPS coordinates that are slightly off due to poor signal. They prompt the agent to run `snap_nearest_roads` across the whole batch, ensuring every point is accurately tied to an actual street.

Developing Location Search Features

A developer wants a user-friendly search box on their site. They use `search_autocomplete` so that as the user types 'New Yor...', the agent immediately suggests valid city and neighborhood options, improving accuracy.

International Address Validation

A global sales team needs to verify if a client's recorded coordinates match their physical address in France. They use `reverse_geocode` combined with the language bias tool to get the precise local street address and translation.

Patterns to Avoid

Assuming generic search works

✗ AVOID

Asking your agent, 'Find me an address near this coordinate,' when you actually need a formatted postal street name.

✓ INSTEAD

If you have coordinates and need the full official address, use `reverse_geocode`. If you only want to confirm the location exists, try `search_bounding_box`.

Forgetting regional limits

✗ AVOID

Running a search for an address across the entire continent when your client is only operating in Texas.

✓ INSTEAD

Always constrain your searches using `search_country_filter` or, if you know the exact area, use `search_bounding_box` to limit results.

Treating coordinates as endpoints

✗ AVOID

Trying to find a route by giving two coordinate pairs without specifying the direction of travel.

✓ INSTEAD

To calculate paths, always specify what you are traveling (driving, walking, or cycling) and use `calculate_directions`.

The Right Fit

Use this MCP if your core problem revolves around location intelligence: translating addresses to coordinates, calculating travel time, or cleaning up messy GPS data. You need the agent to act like a dedicated GIS specialist in conversation.

Don't use it if you just need to store mapping data or run simple calculations not related to geography (e.g., currency conversion). For complex database interactions that don't involve physical location, look for a general record management MCP instead. If your goal is simply text processing, use a specialized NLP tool. This MCP excels at the 'where' and 'how long' questions.

The Problem With Manual Mapping

Right now, if you need to service multiple locations—say, tracking deliveries across a county—you typically have to jump between specialized mapping websites. You copy the starting coordinates into one tab, paste the ending coordinates into another, and then manually calculate the total distance using a third tool. This process is slow, prone to human error, and involves constant switching between browser tabs.

With this MCP, you tell your agent exactly what you need: 'What's the best route from point A to point B for five vehicles?' The agent handles the entire calculation in one go, providing a clean, calculated answer right where you are working. You don't copy anything; you just ask.

Pinpoint Locations with LocationIQ

You no longer have to manually cross-reference different location databases or worry about whether your GPS signals are too messy. Instead of guessing if a point is on the road, you simply ask the agent to snap it using `snap_nearest_roads`, guaranteeing data accuracy.

The difference is that you stop dealing with raw data points and start getting actionable insights. You get the definitive, clean answer immediately.

LocationIQ (Geocoding & Maps) with 10 Tools

These tools allow you to perform every location task—from finding basic autocomplete suggestions to calculating complex distance matrices—all through natural conversation.

#	TOOL	DESCRIPTION
01	search_autocomplete	The agent provides a list of suggested locations when you type out the beginning of an address or city name.
02	check_account_balance	You verify how many location requests are left on your account to prevent unexpected usage limits.
03	calculate_directions	It calculates the best path and travel time when moving by driving, walking, or cycling between two coordinates.
04	calculate_distance_matrix	You generate a table that shows the travel duration and distance for many different start points going to many end points.
05	snap_nearest_roads	The agent corrects slightly off GPS data by aligning it perfectly with the nearest physical road segment.
06	reverse_geocode	It converts raw latitude and longitude coordinates into a standard, human-readable postal address.
07	reverse_language_bias	The agent performs reverse geocoding while translating the resulting full address into your desired language.
08	search_geocode	You convert a specific, typed-out street address string directly into its corresponding latitude and longitude coordinates.
09	search_bounding_box	It restricts location searches so results only appear within a defined geographical map rectangle.
10	search_country_filter	The agent ensures that all search results are limited to addresses within specific country codes.

See It in Action

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

U Find the coordinates for the 'Eiffel Tower' in Paris

Resolving address... I've found the Eiffel Tower at latitude 48.8584 and longitude 2.2945. The address is 5 Avenue Anatole France, 75007 Paris, France. Would you like me to find nearby hotels?

U What is the best driving route from Lisbon to Porto?

Calculating directions... The optimal route via A1 is approximately 312 km and will take about 2 hours and 55 minutes with current traffic. I can provide the detailed turn-by-turn instructions if you'd like.

U Check my remaining LocationIQ request balance

Retrieving balance... You have 4,850 requests remaining out of your 5,000 daily limit. Your account is in good standing. Would you like me to perform any more geocoding lookups?

Frequently Asked Questions

01 **How do I use LocationIQ (Geocoding & Maps) to find coordinates for an address?**

Use `search_geocode`. Simply tell your agent the full street address and it returns precise latitude and longitude numbers immediately.

02 **Can I calculate routes with LocationIQ (Geocoding & Maps)?**

Yes, use `calculate_directions`. Just specify the two points and the mode of travel—driving, walking, or cycling—and it gives you the optimal path.

03 **What if my coordinates are inaccurate?**

If your GPS data is messy, run `snap_nearest_roads`. This tool fixes the signal by aligning the point perfectly to the actual street network.

04 **How does LocationIQ (Geocoding & Maps) handle multiple stops?**

Use `calculate_distance_matrix`. You list all your origins and destinations, and it computes a comprehensive table of travel times and distances between every pair.

05 **Does this MCP help with international addresses?**

Yes. Besides general searching, you can use `reverse_language_bias` to get the full street address converted into specific native language tags for global accuracy.

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 `"locationiq-geocoding-maps": { "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

LocationIQ (Geocoding & Maps) 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

INDEPENDENT PLATFORM DISCLAIMER

Vinkius is an independent platform and is not affiliated with, endorsed by, sponsored by, verified by, or otherwise authorized by LocationIQ (Geocoding & Maps). All third-party trademarks, logos, and brand names are the property of their respective owners. Their use in this document is strictly for informational purposes to identify service compatibility and interoperability.

DOCUMENT INFORMATION

Generated	June 2026
MCP Server	LocationIQ (Geocoding & Maps) MCP
Server ID	`019d75c9-9be8-7157-b93c-05bf6ebebc4e`
Platform	Vinkius Cloud for AI Agents
Endpoint	`https://edge.vinkius.com/{token}/mcp`

LICENSE & USAGE

This document is generated automatically by the Vinkius PDF Engine. Content reflects the MCP server configuration at the time of generation and may change as updates are deployed. For the most current information, visit vinkius.com/mcp/locationiq-geocoding-maps.