MCP SERVER | NO CODE | CLOUD HOSTED

OpenWeatherMap MCP

Get global weather, pollution, and forecast data instantly.

OpenWeatherMap gives your agent instant access to global meteorological data, covering current conditions, 5-day forecasts, and air quality metrics for any location worldwide. It handles everything from converting city names to precise coordinates to running detailed pollution reports using tools like `get_air_pollution`. Stop relying on patchy weather websites; connect this MCP to your AI client for reliable, real-time environmental data right where you work.

F Quality Score 3.6/100

meteorology | weather-forecast | air-quality | real-time-data | geospatial | environmental-data

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.

OpenWeatherMap MCP

6 tools available
Cloud-hosted on Vinkius

Need to know what the weather's doing or if the air is breathable in a specific spot? This connector hands your AI agent global meteorological tools. You can pull live readings—like temperature and humidity—for any city or coordinate using `get_current_weather`. If you're planning something bigger, like a multi-day trip or an industrial site inspection, you've got the 5-day forecast via `get_forecast` or even longer projections through `get_onecall`. It also handles air quality monitoring with `get_air_pollution`, giving you hard numbers on things like PM2.5 and ozone levels. Need to figure out coordinates? You can convert city names into precise locations using `direct_geocoding` or map back from coordinates to a readable city name using `reverse_geocoding`. When you connect this MCP through Vinkius, your AI client instantly accesses all these services without needing separate API keys or messy manual lookups.

Core Capabilities

01 — Check live weather conditions

Retrieve current temperature, wind speed, and atmospheric descriptions for any specified location.

02 — Forecast future weather trends

Pull multi-day forecasts or detailed hourly projections spanning multiple days to plan logistics.

03 — Monitor air quality levels

Get real-time pollution data, including specific metrics like PM2.5 and CO, for environmental assessments.

04 — Convert city names to coordinates

Translate a place name or zip code into latitude and longitude pairs for precise targeting.

05 — Determine location from coordinates

Reverse engineer a geographical coordinate pair back into a readable city or place name.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/openweathermap** — connect your AI agent in three steps.

01 Subscribe to this MCP and enter your OpenWeatherMap API Key within the Vinkius catalog.

02 Ask your AI client—whether it's Claude, Cursor, or any compatible agent—to find data for a specific location or time frame.

03 The MCP runs the necessary tool (like `get_current_weather` or `get_air_pollution`) and sends back structured, usable weather or environmental metrics.

The bottom line is your AI agent speaks directly to global weather services, getting you actionable data without leaving your workflow.

Built For

This MCP is essential for anyone whose job depends on accurate location and environmental context. If you're an operations lead who needs to reschedule a shipment because of unexpected fog, or a researcher tracking pollution spikes over time, this is for you.

Logistics Planner

Checks weather conditions along planned routes using `get_forecast` to avoid delays caused by storms or poor visibility.

Field Environmental Scientist

Runs `get_air_pollution` at several coordinates to map out pollution hotspots and track pollutant changes.

Real Estate Analyst

Uses `direct_geocoding` and `reverse_geocoding` to validate property addresses or determine the closest city center from a given plot of land.

What Changes When You Connect

01 Don't rely on manually checking multiple websites. You can use `get_current_weather` to get live temperature and wind speed in one prompt.

02 Need long-term planning? Use `get_onecall` to pull detailed weather patterns for eight days, letting you plan complex logistics cycles.

03 For environmental monitoring, running `get_air_pollution` gives immediate, quantitative data on pollutants like PM2.5 and CO levels.

04 Stop guessing locations. Use `direct_geocoding` to turn a vague city name into exact coordinates for any API call.

05 Need the reverse? If you only have GPS coordinates, use `reverse_geocoding` to identify the nearest major city name.

Real-World Applications

Optimizing multi-city travel routes

A travel coordinator needs to check weather for a tour spanning four cities over two weeks. They prompt their agent, which uses `get_forecast` and `get_onecall` sequentially, providing a consolidated report that flags periods of expected rain or high winds.

Assessing industrial site safety

An engineer needs to know if construction workers are exposed to bad air quality. They prompt the agent with coordinates and run `get_air_pollution`, instantly checking for dangerous levels of ozone or PM10.

Validating property data

A real estate analyst receives a list of vague addresses. Instead of manual lookups, they use the agent to run `direct_geocoding` on every entry, converting them all into standardized coordinates for mapping.

Building location-aware applications

A developer builds a service that displays weather. Instead of hardcoding locations, they use the agent to run `reverse_geocoding` on user-provided GPS data, making their application universally adaptable.

Patterns to Avoid

Assuming location services are universal

✗ AVOID

Trying to check a location by just typing 'near the river' into an agent and expecting it to know the coordinates.

✓ INSTEAD

You must first use `direct_geocoding` on a specific city or zip code. If you have GPS points, use `reverse_geocoding` to confirm the nearest major place name.

Mixing up forecast types

✗ AVOID

Using `get_current_weather` when you actually need to know what will happen tomorrow.

✓ INSTEAD

If you want future data, use either `get_forecast` for the 5-day view or `get_onecall` for maximum detail across multiple days.

Ignoring pollution metrics

✗ AVOID

Only checking if it's 'rainy' and ignoring key environmental risks like high PM2.5 levels in the city.

✓ INSTEAD

Always include `get_air_pollution` when assessing urban or industrial areas, as weather doesn't cover air quality.

The Right Fit

Use this MCP if your problem requires knowing what an external natural force—weather, pollution, or physical location coordinates—is doing. This is for predictive modeling (using `get_onecall`) or real-time environmental assessment (using `get_air_pollution`). Don't use it if you just need to look up a simple piece of data that doesn't change with time, like finding the population count of a zip code; for that, use a dedicated database lookup MCP. If your core task is manipulating structured text or executing complex business logic unrelated to geography, this isn't what you need.

Checking conditions requires jumping through too many hoops.

Right now, if you want a comprehensive view of an area—say, checking air quality and predicting rain for next week—you open one site for the forecast, another for pollution data, and maybe a third to confirm the coordinates. You copy-paste location names into different fields, wait for multiple pages to load, and then piece together what you actually need.

With this MCP integrated via Vinkius, your AI client handles all that complexity behind the scenes. You ask one simple question—like, 'What's the air quality in Miami next Tuesday?'—and it returns a clean answer built from multiple data sources, saving you hours of manual clicking and cross-referencing.

OpenWeatherMap MCP: Location Data on Demand

Manual location checks involve guessing if the system accepts a city name or requires coordinates. You might spend time converting 'Paris, France' into Lat/Long pairs just to ask about the current temperature.

This MCP makes that conversion invisible. By using tools like `direct_geocoding` and `reverse_geocoding`, your agent handles the messy geometry work automatically. The result is that you get immediate, validated weather data for any location without ever touching a coordinate pair yourself.

OpenWeatherMap MCP with 6 Tools

These tools allow you to pull current weather conditions, generate long-term forecasts, monitor pollution levels, and convert between city names and coordinates.

#	TOOL	DESCRIPTION
01	`get_air_pollution`	Retrieves current air pollution data, including metrics like PM2.5 and CO.
02	`get_current_weather`	Gets the live weather conditions for a specified city or coordinate pair.
03	`direct_geocoding`	Converts place names, like 'New York City', into precise latitude and longitude coordinates.
04	`get_forecast`	Pulls a detailed 5-day forecast with three-hour interval predictions.
05	`get_onecall`	Accesses comprehensive weather data, including hourly and daily projections for up to eight days.
06	`reverse_geocoding`	Takes a coordinate pair and converts it back into a human-readable city name or location identifier.

See It in Action

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

U What's the current weather in London?

Using `get_current_weather` for London... It's currently 15°C with light rain and 82% humidity.

U Give me the 5-day forecast for Tokyo.

Fetching the 5-day forecast via `get_forecast` ... Tokyo will see mostly clear skies for the next 3 days, with temperatures ranging from 18°C to 24°C.

U Check the air pollution levels at latitude 40.71 and longitude -74.00.

Running `get_air_pollution` for those coordinates... The Air Quality Index is 2 (Fair). PM2.5 is at 12.5 µg/m³ and CO is at 320.4 µg/m³.

Frequently Asked Questions

01 **How do I check multiple locations with OpenWeatherMap MCP?**

You ask your agent to process multiple coordinates or city names in one prompt. The agent will run the required tools, such as `get_current_weather`, for every location you specify.

02 **Is OpenWeatherMap MCP better than a simple API call?**

Yes. Since this is an MCP, your AI client manages all the tool calling, error handling, and data formatting automatically, giving you clean text answers instead of raw JSON dumps.

03 **Can I use OpenWeatherMap MCP to check historical weather?**

The primary focus is real-time or forecast data. For specific historical records, you might need a different time-series database tool, but we can get current conditions using `get_current_weather`.

04 **What if my location name is vague for OpenWeatherMap MCP?**

You should use `direct_geocoding` first. This ensures the agent converts your fuzzy input (like 'the downtown area') into precise coordinates before attempting to get weather data.

05 **Does OpenWeatherMap MCP handle pollution for different pollutants?**

Yes, when you run `get_air_pollution`, it reports on several key metrics simultaneously, including PM2.5, PM10, and Ozone levels.

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 `"openweathermap": { "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

OpenWeatherMap 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 OpenWeatherMap. 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	OpenWeatherMap MCP
Server ID	`019e38cf-685b-714b-b609-44b8ef5b5cb8`
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/openweathermap.