MCP SERVER | NO CODE | CLOUD HOSTED

Open-Meteo Full Access MCP

Access 84 Years of Weather, Climate & Ocean Data

Open-Meteo Full Access delivers comprehensive weather and climate intelligence in one place. Use this MCP to run forecasts, check historical records spanning 84 years, model ocean currents, assess air quality pollutants, or project flood risk up to 2100. It's the single source for environmental data.

A+ Quality Score 100/100

weather-api | climate-data | ocean-intelligence | historical-weather | environmental-data | geocoding

MAINTAINED BY VINKIUS CLOUD FOR AI AGENTS · JUNE 2026
vinkius.com/mcp/open-meteo-full-access

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.

Open-Meteo Full Access MCP

15 tools available
Cloud-hosted on Vinkius

You don't need seven different services just to understand the weather. This MCP centralizes every major climate factor into one connection point. Instead of switching between separate APIs for air quality, historical records, and ocean conditions, your agent calls this service once. It gives you current forecasts for any spot, but it also lets you look deep into time: check 84 years of archived weather or model how river discharge might change over the next seven months. Whether you're planning a yacht trip or building a climate risk assessment for real estate, everything—from global geocoding to pollen counts—is available through your AI client via Vinkius.

Core Capabilities

01 — Predicting Future Climate Risk

Model long-term environmental impacts by accessing IPCC climate projections and ensemble multi-model forecasts.

02 — Assessing Environmental Safety

Get immediate data on air pollutants (PM2.5, Ozone) alongside pollen counts for health planning.

03 — Analyzing Historical Trends

Pull hourly weather archives dating back to 1940 to identify long-term patterns and anomalies.

04 — Mapping Coastal Dynamics

Track sea surface temperatures, wave heights, and deep ocean currents for maritime planning.

05 — Calculating Flood Vulnerability

Determine potential flood risk by retrieving river discharge data with both historical reanalysis and forward projections.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/open-meteo-full-access** — connect your AI agent in three steps.

01 First, specify the exact location and scope of the required environmental data (e.g., 'Singapore' for air quality or 'Mediterranean' for wave height).

02 Next, your agent selects the specific climate dimension needed—this could be current conditions, 16-day forecasts, or 84 years of historical weather.

03 Finally, you get a synthesized, actionable data packet covering all required metrics, allowing immediate insight without manual cross-referencing.

The bottom line is that it gives your agent one endpoint to access every piece of environmental context imaginable.

Built For

Civil engineers needing flood modeling data, climatologists tracking long-term trends, and maritime operations managers planning routes across decades.

Climatologist

Runs comparisons between historical weather records and IPCC climate projections to model regional temperature shifts.

Civil Engineer

Calculates flood risk using river discharge data combined with geocoding for site planning.

Logistics/Maritime Planner

Consolidates marine wave forecasts, ocean current speeds, and air quality reports into one trip assessment.

What Changes When You Connect

01 Historical data depth: Use get_historical_weather to check conditions from 1940. You can track how seasonal patterns have shifted over eight decades.

02 Future-proofing decisions: Run climate risk scenarios by calling get_climate_projection, which maps out environmental changes right up through the year 2100.

03 Maritime planning: Consolidate your trip data using get_marine_forecast and get_ocean_currents. You'll know about waves and deep currents in one place.

04 Safety assessment: Combine air quality readings via get_air_quality with the specific pollen forecast to give users a full health picture for any location.

05 Comprehensive coverage: Instead of multiple tools, this MCP uses search_location first, then feeds coordinates into other tools like get_elevation or get_current_weather.

Real-World Applications

Planning an international research expedition

The agent needs to know the best time window. It uses get_historical_weather for a baseline, then checks get_aqi_index and get_pollen_forecast to confirm the air is safe, finally using get_elevation to map out altitude changes over the intended route.

Assessing infrastructure vulnerability

An engineer needs to check if a proposed coastal highway site can handle rising water levels. The agent uses get_flood_forecast and gets_ocean_currents to model potential long-term impacts based on current geography.

Analyzing crop yield patterns

A farmer wants to know which years were ideal. They use get_historical_daily to aggregate temperature and rainfall data over decades, allowing them to compare past success against future predictions from get_climate_projection.

Modeling yacht routes

The agent builds a full briefing for a trip by combining the 16-day weather forecast (get_weather_forecast) with real-time marine data using get_marine_forecast and checking the local air safety status.

Patterns to Avoid

Searching manually for historical records

✗ AVOID

A user might try to check 1950s rain totals by opening a government archive website, spending hours cross-referencing dates and formats.

✓ INSTEAD

Use get_historical_weather or get_historical_daily. These tools pull the raw data directly into your agent's workflow, saving hours of manual searching.

Forgetting to check elevation changes

✗ AVOID

A logistics planner plans a ground route but only checks current weather, missing that the required altitude change will affect vehicle performance.

✓ INSTEAD

Always run get_elevation first. This provides the necessary terrain data needed before running any other specialized forecast or planning tool.

Ignoring multi-year variability

✗ AVOID

A researcher only checks last year's weather, concluding that current patterns are normal when they are actually part of a larger 50-year trend.

✓ INSTEAD

To get context, run the full spectrum: check get_historical_weather and then compare it directly against the long-term models provided by get_climate_projection.

The Right Fit

Use this MCP if your analysis requires data that spans multiple environmental domains—you need more than just a forecast. Specifically, you must correlate weather with other variables like pollution (get_air_quality), water levels (get_flood_forecast), or long-term trends (get_climate_projection). Don't use it if you only need to know the current temperature; for that, get_current_weather is enough. If your goal is simply a one-time trip forecast without environmental context, you might be overcomplicating things. However, because this tool contains location search (search_location), historical archives, and future modeling, it remains the most comprehensive choice.

The pain of cross-referencing disparate climate data sets

Right now, if you need a full picture—say, planning an event near a river mouth in Southeast Asia—you open three different tabs. One for the current weather forecast; one to check NOAA's flood level predictions; and another to see local air quality metrics. You spend half your time copy-pasting coordinates between systems just to build a single risk matrix.

With this MCP, you define the location once. Your agent handles the cross-referencing automatically. It delivers an immediate summary that combines current conditions with flood potential and pollutant levels, giving you a complete picture without leaving your chat window.

Get full environmental context with Open-Meteo Full Access MCP

You no longer have to jump between services just to check basic conditions. Instead of using a simple forecast tool, you can instantly combine get_weather_forecast data with the specific pollen forecast and the 16-day outlook in one go.

This MCP is different because it treats environmental intelligence as a single dataset. It’s not just weather; it's water, air, earth, and time all packaged together.

Open-Meteo Full Access: 15 Tools

These tools let your agent perform every specific check you need, from finding elevation to predicting pollution levels.

#	TOOL	DESCRIPTION
01	`get_weather_forecast`	Retrieves a standard weather forecast for any given location over the next 16 days.
02	`get_climate_projection`	Accesses IPCC model data to show expected climate changes between 2015 and 2100.
03	`get_ensemble_forecast`	Generates a multi-model probabilistic forecast, showing the range of possible weather outcomes.
04	`get_river_discharge`	Provides river discharge data at 5km resolution for flood risk assessment.
05	`get_flood_forecast`	Issues a detailed flood forecast, projecting water levels up to seven months in advance.
06	`search_location`	Searches global databases to pinpoint specific cities and coordinates for any query.
07	`get_elevation`	Determines the terrain elevation (altitude) at precise geographical coordinates.
08	`get_current_weather`	Retrieves the real-time, current weather conditions for a specified location.
09	`get_historical_weather`	Pulls comprehensive hourly weather data covering an 84-year period (1940–present).
10	`get_historical_daily`	Retrieves summarized daily aggregates of historical weather metrics.
11	`get_marine_forecast`	Generates a detailed marine wave forecast, including swell height and period at 5km resolution.
12	`get_ocean_currents`	Provides data on ocean currents and sea surface temperature across the water body.
13	`get_air_quality`	Calculates concentrations of various pollutants, including PM2.5, Ozone, and Nitrogen Dioxide.
14	`get_aqi_index`	Provides the Air Quality Index using both European and US standard metrics.

#	TOOL	DESCRIPTION
15	`get_pollen_forecast`	Delivers a specific forecast for pollen counts and general allergen levels.

See It in Action

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

U Full weather briefing for a yacht trip from Lisbon to Madeira next week

⛵ **Lisbon → Madeira Full Briefing**

🌤️ Forecast: 22-25°C, partly cloudy, light rain Day 3
🌊 Waves: 1.5-2.2m, SW swell, period 10s
💨 Air Quality: AQI 35 (Good) both endpoints
🏔️ Elevation: Departure 0m → Arrival 0m (sea level)
📍 Route: 38.72°N → 32.65°N (978km)

Favorable conditions overall. Day 3 requires attention.

U Climate risk assessment for a new data center in Singapore

🏙️ **Singapore — Climate Risk Assessment**

🌡️ Current avg: 27.5°C → 2060 projected: 29.8°C
🌊 Flood risk: Moderate (river discharge 45 m^3/s, seasonal peaks)
💨 Air quality: AQI varies 30-150 (haze season Sep-Oct)
🌧️ Historical rain: avg 2,340mm/year, increasing trend

Key risks: Rising cooling costs, seasonal haze, flash flood exposure.

U What was the weather like on the day I was born? July 15, 1990 in Rome

🎂 **Rome — July 15, 1990**

Max temp: 34.2°C | Min: 21.8°C
Sunshine: 13.5 hours
Precipitation: 0mm (perfectly dry)
Wind: 8 km/h from the south

You were born on a beautiful, hot Roman summer day! 🌞

Frequently Asked Questions

01 **Does Open-Meteo Full Access MCP cover historical data for every metric?**

Yes. You can access 84 years of hourly weather records using get_historical_weather, and also run specialized checks like get_historical_daily to aggregate specific metrics.

02 **How far into the future can I predict climate change with Open-Meteo Full Access MCP?**

The tool provides access to IPCC projections that model climate changes all the way up to the year 2100, giving you long-term data for risk assessment.

03 **Can I get wave and current data together using Open-Meteo Full Access MCP?**

Absolutely. Use get_marine_forecast to check wave heights alongside get_ocean_currents to understand the full dynamics of a body of water.

04 **Is the flood risk prediction from Open-Meteo Full Access MCP reliable for construction?**

The tool provides get_river_discharge data, which combines 40 years of reanalysis with seven months forward projection. This is designed specifically for assessing structural vulnerability.

05 **What if I need to find coordinates before running any forecast on Open-Meteo Full Access MCP?**

Start by using search_location. It finds global cities and points, which you can then feed into any other tool like get_current_weather or get_elevation.

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 `"open-meteo-full-access": { "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

Open-Meteo Full Access 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 Open-Meteo Full Access. 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	Open-Meteo Full Access MCP
Server ID	`019d75e7-e372-7281-b585-f01ed99bc81d`
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/open-meteo-full-access.