MCP SERVER | NO CODE | CLOUD HOSTED

Open-Meteo Historical Weather MCP

Analyze 84 Years of Global Climate Data

Open-Meteo Historical Weather gives you access to 84 years of global climate data, covering everything from temperature and humidity to wind patterns and rainfall. You can pull detailed hourly records or broad daily averages for any location on Earth, making it the ultimate resource for long-term climate research and risk modeling.

A+ Quality Score 100/100

historical-data | meteorology | climate-science | time-series | api-integration | environmental-data

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vinkius.com/mcp/open-meteo-historical-weather

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 Historical Weather MCP

3 tools available
Cloud-hosted on Vinkius

This MCP lets your agent access decades of continuous weather history for any place you name. Forget looking up data across multiple physical archives; here you get a single stream of reliable global records dating back to 1940. You can run complex analyses, comparing how rainfall changed between two different decades in the same city or calculating average temperature shifts over fifty years. Whether you're modeling risk for insurance policies, tracking agricultural yield changes, or just curious about historical climate patterns, this MCP handles the heavy lifting. It provides dedicated tools to retrieve general weather metrics across a date range, pull specific daily aggregates like max/min temperatures, and focus purely on long-term temperature trends. Connecting Open-Meteo Historical Weather through Vinkius means your agent has access to one of the largest catalogs of specialized data sources available.

Core Capabilities

01 — Calculate historical weather metrics

Retrieve comprehensive hourly and daily climate records (temperature, wind speed, precipitation) for any specified location and date range.

02 — Analyze long-term temperature trends

Focus on apparent temperature data to model how average temperatures have shifted over decades or centuries at a specific site.

03 — Generate daily weather summaries

Get aggregated historical records, including maximum and minimum temperatures, total precipitation, and sunshine duration for any given day.

One Click on Vinkius — From Prompt to Execution

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

01 Specify the target location by providing latitude and longitude coordinates.

02 Define the time window you need data for (start date and end date) and select whether you need general, daily, or trend-specific metrics.

03 Your agent pulls the historical records into a structured format ready for immediate analysis.

The bottom line is that your agent processes global climate archives into clean, actionable data sets.

Built For

Anyone who deals with risk over time—from insurance adjusters needing to check flood records years ago to agronomists predicting yield changes. If your job involves tracking patterns that span more than a season, you need this.

Climate Scientist

Uses the MCP to compare average temperature shifts between different decades or analyze precipitation changes across continents.

Agricultural Analyst

Checks historical rainfall and extreme weather data for specific coordinates to advise on optimal planting seasons or crop selection.

Insurance Underwriter

Retrieves long-term daily aggregates of flood and storm damage metrics to accurately price regional risk models.

What Changes When You Connect

01 Instead of guessing, you get hard data. Using `get_historical_weather`, your agent pulls comprehensive records for any date range, letting you pinpoint exact historical conditions.

02 Model risk with certainty. By using `get_historical_daily`, you move beyond simple averages to access specific daily aggregates like max/min temperatures and total precipitation.

03 Track long-term warming trends efficiently. The dedicated tool, `get_historical_temperature`, focuses purely on apparent temperature data, perfect for climate trend analysis.

04 Avoid manual cross-referencing. This MCP consolidates decades of global weather history into a single source accessible by your agent.

05 Support complex modeling needs. It handles coordinates and date ranges globally, supporting everything from local farm planning to continental risk assessment.

Real-World Applications

Determining flood impact zones

An insurance underwriter asks their agent: 'What was the daily precipitation in Miami between 1980 and 2000?' The agent uses `get_historical_daily` to build a precise risk model, giving the company accurate data for premium setting.

Assessing agricultural viability

An agronomist needs to compare average growing season temperatures across three different regions over 30 years. The agent uses `get_historical_temperature` to pull longitudinal data, advising the client on climate-resilient crops.

Investigating historical event conditions

A researcher asks: 'What was the full weather breakdown in London on June 6, 1944?' The agent uses `get_historical_weather` to retrieve detailed hourly data for that specific date.

Comparing climate shifts

A developer wants to show clients how much cooler summers used to be. They use the MCP, specifically targeting temperature trends across multiple coordinates over a 70-year period.

Patterns to Avoid

Using general search engines

✗ AVOID

Searching Google for 'weather data in Paris 1955' yields dozens of academic PDFs and fragmented, unstandardized datasets that require manual cleaning.

✓ INSTEAD

Use the `get_historical_weather` tool within your agent. It takes coordinates and date ranges directly, delivering clean, structured historical records instantly.

Relying on single-source weather APIs

✗ AVOID

Using a service that only provides current or seasonal data means you can't compare 1940 to today; your analysis is incomplete.

✓ INSTEAD

This MCP accesses global archives spanning over eight decades. Use `get_historical_daily` to ensure you capture the necessary long-term historical scope.

Confusing daily averages with trends

✗ AVOID

Treating a single day's temperature reading as representative of an entire decade leads to major modeling errors.

✓ INSTEAD

For trend analysis, use `get_historical_temperature`. It is designed specifically to isolate and track apparent temperature shifts over extended periods.

The Right Fit

Use this MCP if your project requires time-series data spanning multiple decades or centuries. You need concrete metrics like precipitation totals, wind patterns, or temperature averages across specific coordinates for a defined range of dates. Don't use it if you only care about today's forecast; those tools are designed for the past.

If you only need to check the weather for one random day in the last five years, `get_historical_weather` works fine. But if your core task is calculating the rate of warming or comparing climate stability across different time periods (e.g., 1950 vs. 2020), you must use the specialized tools like `get_historical_temperature` and `get_historical_daily`. This MCP is for deep, longitudinal research, not quick checks.

Manually tracking historical climate data is a nightmare of clicks.

Today, analyzing long-term weather shifts means opening multiple academic databases. You're clicking through reports for rainfall totals on one tab, max temperatures on another, and then cross-referencing wind speed from a third source—all while copy-pasting dates and coordinates into a spreadsheet.

With this MCP, the process is simple: you ask your agent for the data range and type of metric. It pulls everything together automatically. You get clean, structured climate records ready for modeling in minutes.

Open-Meteo Historical Weather gives you the full picture.

You no longer have to worry about whether a single source provides hourly data or only daily aggregates. The MCP handles general records with `get_historical_weather`, dedicated summaries via `get_historical_daily`, and specialized trend metrics using `get_historical_temperature`.

Your workflow shifts from spending hours gathering fragmented data points to actually analyzing the patterns that matter.

Open-Meteo Historical Weather: 3 Tools

Use these three specialized tools to retrieve comprehensive historical weather metrics, from general records to dedicated temperature trend analysis.

#	TOOL	DESCRIPTION
01	`get_historical_weather`	Gets comprehensive weather data—including temperature, humidity, wind, and rain—for any date range over 84 years of global records.
02	`get_historical_daily`	Retrieves summarized daily weather reports, providing max/min temperatures, total precipitation, and sunshine duration.
03	`get_historical_temperature`	Focuses on climate trend analysis by retrieving detailed historical data on temperature, apparent temperature, and dewpoint.

See It in Action

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

U What was the weather in London on D-Day, June 6, 1944?

🏛️ **London — June 6, 1944**

Max temp: 16.2°C | Min: 10.8°C
Precipitation: 2.1mm (light rain)
Wind: 28 km/h from the west
Cloud cover: Heavy overcast

Historical records confirm the famously poor weather conditions that nearly delayed the Normandy invasion.

U Compare average temperatures in São Paulo between 1950 and 2020

📊 **São Paulo Temperature Trend (70 years)**

1950s avg: 19.2°C
1980s avg: 19.8°C
2010s avg: 20.6°C

A clear warming trend of +1.4°C over 70 years, consistent with global urban heat island effects.

U How much rain fell in Mumbai during the 2005 flood?

🌧️ **Mumbai — July 26, 2005**

Daily precipitation: 944mm (one of the highest single-day totals ever recorded in India)
Hourly peak: 190mm between 14:00-15:00

This catastrophic flood event displaced over 20 million people.

Frequently Asked Questions

01 **How far back can I go with Open-Meteo Historical Weather?**

The MCP covers 84 years of continuous records, going back to 1940. This range is suitable for nearly any long-term climate study.

02 **Do I need coordinates or just city names for get_historical_weather?**

You must provide the exact latitude and longitude coordinates for all historical queries to ensure accurate data retrieval. City names aren't specific enough.

03 **What difference is there between get_historical_daily and get_historical_temperature?**

Daily retrieves general aggregates like total precipitation and max/min temps for a day. Temperature focuses specifically on apparent temperature data, which is better for long-term climate trend analysis.

04 **Can I compare two different cities using Open-Meteo Historical Weather?**

Yes. You simply run separate queries for the coordinates of each city and then use your agent to synthesize the resulting time series data into a single comparison report.

05 **Is the weather data in get_historical_weather hourly or daily?**

Depending on the parameters you provide, `get_historical_weather` can deliver both comprehensive hourly records and broader daily summaries.

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-historical-weather": { "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 Historical Weather 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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