

M C P S E R V E R

N O C O D E

C L O U D H O S T E D

Air Quality Health Impact Assessment MCP

Predict how local air pollution affects your physical health.

Air Quality Health Impact Assessment MCP connects your AI client to real-time environmental data to evaluate health risks. It calculates how specific pollutants and AQI levels impact individual profiles, predicts the likelihood of physiological symptoms, and provides actionable lifestyle adjustments to mitigate exposure.

A+ Quality Score 100/100

aqi

health-risk

air-quality

pollution

wellness



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.

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.

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.

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

Encryption at rest

Ed25519

PKI vault signatures

24h TTL

Ephemeral session keys

V8 Isolate

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.

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.

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.

06 — Honeypot Trap System

Phantom credentials are injected into isolated environments. If a honeypot 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.

FinOps

Cost tracking per tool, payload compression savings, budget optimization signals, and consumption trends.

Firewall & DLP

PII redaction activity, sensitive data protection counters, and security event timeline.

Agent Activity

Which AI clients are connecting, how often, and what they're doing — real-time session tracking.

Tool Health

Slowest and most error-prone tools, with actionable root-cause insights and performance baselines.

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.

Air Quality Health Impact Assessment MCP

4 tools available

Cloud-hosted on Vinkius

You can use this MCP to turn raw air quality data into personal health intelligence. Instead of just looking at a number on a weather app, your AI client can analyze how specific pollutants like Ozone or Particulate Matter interact with your specific health profile. If you have a respiratory condition or belong to a sensitive age group, your agent can immediately flag risks that a standard index might miss.

You can ask your agent to check if current conditions warrant staying indoors or if you should avoid vigorous exercise. It handles the heavy lifting of cross-referencing AQI levels with physiological symptom probabilities. This makes it easy to get clear, data-driven guidance on how to adjust your daily activities based on the air you are breathing.

Core Capabilities

01 — Risk Categorization

Your agent uses this to assign health risk levels based on AQI and individual profiles.

02 — Symptom Prediction

The AI calculates the probability of physiological reactions to specific pollutants.

03 — Activity Modification

Your agent suggests lifestyle changes to minimize exposure during high pollution events.

04 — Vulnerability Identification

The tool flags individuals who require heightened monitoring due to their health status.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/en/ai-agent-connect/air-quality-health-impact-assessment — connect your AI agent in three steps.

- 01
- Connect the MCP to your AI client via Vinkius.
- 02
- Provide your AI agent with your health profile and current AQI data.
- 03
- The agent calls the necessary tools to analyze the risk.
- 04
- Receive specific health assessments and activity recommendations.

Get health-focused air quality insights through your AI client in a few steps.

Built For

This MCP is built for anyone needing to translate environmental data into personal health decisions.

Health Coaches

They hand off air quality data to the AI to generate client activity guidelines.

Personal Wellness Users

They use the AI to check daily health risks before outdoor exercise.

Caregivers

They use the tool to monitor air quality impacts for sensitive individuals in their care.

What Changes When You Connect

- 01
- Converts AQI numbers into specific health risk profiles.
- 02
- Predicts physiological symptoms based on pollutant types.
- 03
- Provides direct lifestyle recommendations to mitigate exposure.

04 Identifies high-risk individuals within sensitive groups.

Real-World Applications

Daily Exercise Planning

Check if current air quality levels make outdoor workouts unsafe for your specific health profile.

Symptom Anticipation

Estimate the likelihood of respiratory issues before they occur during high pollution periods.

Sensitive Group Monitoring

Identify when elderly individuals or those with respiratory issues need to stay indoors.

Lifestyle Adjustments

Get specific instructions on how to modify daily routines when air quality drops.

Patterns to Avoid

Generic AQI Monitoring

❌ AVOID

You ask your agent if the air quality is good or bad based only on a general index.

✓ INSTEAD

Use `get_risk_assessment` to get a profile tailored to your specific health needs instead of relying on generic numbers.

Ignoring Personal Vulnerability

❌ AVOID

You check the weather app and decide to go for a run even though you have asthma.

✓ INSTEAD

Run `check_sensitive_group_status` first to see if your specific health profile requires extra monitoring today.

Vague Activity Planning

❌ AVOID

You see high ozone levels and simply decide to stay inside without a plan.

✓ INSTEAD

Use `get_activity_guidelines` to find specific lifestyle changes that minimize your exposure while still managing your day.

The Right Fit

Connect this MCP if you need to translate environmental data into personal health decisions. It is not for users who only care about general weather trends. The decision depends on whether you need to know how pollutants affect a specific individual's physiology.

Air Quality Health Impact Assessment 4 Tools

These tools convert raw pollutant data into actionable health intelligence. They bridge the gap between environmental readings and personal physiological risks.

#	TOOL	DESCRIPTION
01	check_sensitive_group_status	This tool identifies if a person needs extra monitoring based on their specific health profile.
02	get_activity_guidelines	This tool provides specific lifestyle or physical activity changes to reduce health risks from poor air quality.
03	get_risk_assessment	This tool generates a detailed health risk profile for an individual by looking at current air conditions.
04	get_symptom_probability	This tool estimates how likely you are to experience specific physical symptoms from pollutant exposure.

See It in Action

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

U What is my health risk if the AQI is 150 for Ozone and I am 70 years old with a respiratory condition?



Your health risk category is Unhealthy for Sensitive Groups. You may experience increased respiratory symptoms, and it is recommended to reduce prolonged outdoor exertion.

U What symptoms might I expect if I've been exposed to Particulate Matter at an AQI of 50 for 30 minutes?



At an AQI of 50, the probability of experiencing respiratory symptoms is low.

U What should I do if the AQI is 200 and I am in a sensitive group?



With an AQI of 200, you should limit outdoor activities, stay indoors in a filtered environment, and avoid vigorous physical exertion.

Frequently Asked Questions

01 How does this MCP help with air quality?

It translates air quality index (AQI) and pollutant data into specific health risk assessments and activity recommendations for individuals.

02 Can I use this with Claude or Cursor?

Yes, you can connect this MCP to any MCP-compatible client like Claude, Cursor, or Windsurf through the Vinkius platform.

03 Does it account for personal health conditions?

Yes, the tools allow you to include individual profiles to determine how specific conditions or sensitive group status affect your risk.

04 What kind of activity advice does it give?

It provides guidelines such as limiting outdoor exertion or staying in filtered environments based on the current pollution levels.

05 Do I need to host the MCP myself?

No, Vinkius hosts and manages the MCP for you, so it is ready to use immediately after connection.

06 How does this tool determine health risk?

The ``get_risk_assessment`` tool calculates risk by combining the Air Quality Index (AQI) value with individual factors like age and pre-existing health conditions.

07 Can I get recommendations for physical activities?

Yes, you can use ``get_activity_guidelines`` to receive specific recommendations for adjusting your activity levels based on current air quality and your sensitivity status.

08 Does it identify sensitive populations?

Yes, the ``check_sensitive_group_status`` tool identifies if an individual is at higher risk due to age or existing health conditions relative to specific pollutants.

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 <code>"air-quality-health-impact-assessment": { "url": "..." }</code>
 Windsurf	MCP Settings → <code>mcp_settings.json</code> → 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

Air Quality Health Impact Assessment 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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DOCUMENT INFORMATION

Generated	September 2026
MCP Server	Air Quality Health Impact Assessment MCP
Server ID	01a0b3b7-81d8-738e-a0c9-2c63a6da021e
Platform	Vinkius Cloud for AI Agents
Endpoint	<code>https://edge.vinkius.com/{token}/mcp</code>

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