

MCP SERVER

NO CODE

CLOUD HOSTED

U.S. Census Full MCP

Analyze population, income, and housing trends instantly.

The U.S. Census Full MCP gives you instant, deep access to American demographic and economic data. Pull population counts, income levels, housing metrics, racial breakdowns, and local business activity for any state or county across all 50 states. It lets your agent analyze where money flows and who lives there.

F Quality Score 3.6/100

demographics

socioeconomic-data

population-statistics

economic-indicators

census-data

public-records



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.

U.S. Census Full — Complete Demographic & Economic Intelligence MCP

14 tools available

Cloud-hosted on Vinkius

Need to understand a market? This MCP connects you directly to the U.S. Census Bureau's vast dataset. You can ask about everything from median household income in specific counties to educational attainment across entire states, all without needing to build complex API calls yourself. Instead of clicking through dozens of specialized government dashboards, your agent handles the heavy lifting. You just tell it what you need—a comparison of vacancy rates versus bachelor's degree holders in three key metro areas, for example. It pulls together demographic profiles, economic indicators, and housing market data from thousands of localities nationwide. If you're looking to use this toolset with other specialized connectors, Vinkius is the best place to start building your workflow.

Core Capabilities

01 — Analyze State Profiles

Retrieve a single snapshot containing population figures, income levels, and housing data for an entire state.

03 — Map Demographics by Geography

Get racial and ethnic breakdowns—like White, Black, Asian, or Hispanic populations—for any specified county or state.

05 — Run Custom Data Queries

Execute highly specific queries using known Census variables to pull precise data points not covered by standard tools.

02 — Compare County Economies

Pull detailed economic metrics like median income, poverty rates, and local business counts for specific counties within a state.

04 — Calculate Population Trends

Determine the total population and median age for all major geographic areas, including states, counties, and incorporated cities.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/mcp/us-census-full-complete-demographic-economic-intelligence — connect your AI agent in three steps.

- 01** First, you must provide the MCP with an active API key from the U.S. Census Bureau.
- 02** Next, tell your agent exactly what data you need: for example, 'Give me the median income and housing values for King County.'
- 03** The MCP runs the query through the appropriate tool and returns structured results detailing the requested demographic or economic metrics.

The bottom line is that it turns massive government datasets into simple, actionable intelligence via a single command.

Built For

This MCP targets professionals who base decisions on local human capital and economic health. It's for the real estate developer who can't afford to guess where value is, or the urban planner tracking population shifts decade-over-decade.

Commercial Real Estate Investor

Uses `get_income_by_county` and `get_business_patterns` to identify specific counties that are growing their payroll base alongside rising median incomes.

Urban Planner / Policy Analyst

Leverages `get_demographics_by_state` and `get_population_by_city` to model how infrastructure needs change based on race, age, or population density shifts.

Corporate Strategy Consultant

Employs `get_county_profile` and `query_census` to benchmark potential new office locations by comparing the local educational attainment levels against corporate revenue goals.

What Changes When You Connect

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- 01 Pinpoint economic disparity: Use `get_income_by_county` to compare median household incomes across neighboring counties, helping you determine if a site is ripe for development.

 - 02 Model community growth: Combine `get_population_by_state` with `get_demographics_by_state` to forecast how changes in foreign-born or minority populations might affect local services.

 - 03 Benchmark market potential: Run `get_business_patterns` by county to understand the density and size of existing commerce, which is crucial for site selection reports.

 - 04 Quick state oversight: The `get_state_profile` tool gives you a single source of truth—population, housing values via `get_housing_by_state`, and income—for any state in one go.

 - 05 Targeted market analysis: If diversity matters, use `get_demographics_by_county`. This lets you segment markets based on specific racial or ethnic concentrations at the county level.
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Real-World Applications

Identifying new commercial hubs in a state.

A strategy consultant needs to prove that three counties are ready for corporate expansion. They use `get_income_by_county` and `get_business_patterns` to show high median income growth paired with rapidly increasing payroll establishments, proving the area's economic maturity.

Assessing risk in a multi-state investment portfolio.

An investor wants to know if their holdings are vulnerable to demographic shifts. They run `get_demographics_by_county` and compare it against `get_housing_by_county` data, identifying counties where population growth is outpacing housing value appreciation.

Developing a targeted non-profit campaign.

A policy analyst needs to know which communities are most underserved. They use `get_population_by_city` and pair it with `get_demographics_by_county` and `get_income_by_county` to pinpoint specific, high-need geographic areas.

Building a comprehensive state report.

A researcher needs an annual overview. Instead of compiling separate reports, they use `get_state_profile` and then supplement it with `get_education_by_state` to generate a single document linking economic health directly to educational capital.

Patterns to Avoid

Treating the data as simple counts.**✗ AVOID**

Assuming that because one county has high population, it automatically means high disposable income or low poverty. Population alone isn't a full picture.

✓ INSTEAD

Don't just look at `get_population_by_county`. Always cross-reference this with `get_income_by_county` and `get_demographics_by_county` to build a complete economic portrait.

Forgetting the scope of data.**✗ AVOID**

Trying to find specific industry revenue totals for one city using only general population tools. The MCP is too broad for niche financial reports.

✓ INSTEAD

Use `get_business_patterns` first; it tells you *what* kind of businesses exist in a county, narrowing your focus before attempting a custom query with `query_census`.

Confusing state and local data boundaries.**✗ AVOID**

Asking for the population of 'the South' or 'the Northeast.' The MCP requires precise administrative units (state, county, city).

✓ INSTEAD

You must specify using `get_population_by_state` or, better yet, use the FIPS codes with `get_population_by_county` to target exact boundaries.

The Right Fit

Use this MCP if your analysis requires hard, verifiable metrics on population movement, economic health, and housing stability across US geography. If you need state-of-the-art predictive modeling based on non-public market data (like proprietary sales figures), this isn't it. If your goal is simply to find general background information or a basic Wikipedia-style summary of a location, using a simple

search engine is faster.

However, if you need the granular depth—for example, comparing median household income from `get_income_by_county` against the specific demographic makeup found via `get_demographics_by_county`—this MCP is unmatched. If your data needs are limited to single-point lookups (e.g., 'What was the population of Dallas in 1980?'), you might find a specialized historical archive better, but for current, comprehensive analysis, this is the tool.

The Problem with Manual Data Collection

Right now, analyzing market readiness means opening three different government websites. You pull population data from one tab, housing values from a second, and then you have to manually copy-paste income figures into a third spreadsheet just to start your comparison. It's time-consuming, tedious, and every copy-pasted number introduces risk.

With this MCP, your agent handles the entire flow. You tell it: 'Show me economic activity in three neighboring counties.' The tool runs `get_county_profile` for all three simultaneously, generating a cohesive report that links population density to business patterns and housing value—instantly.

Accessing Full Demographic & Economic Intelligence

You don't have to run a dozen separate queries. Instead of pulling state totals, then county totals, and finally trying to cross-reference them in Excel, you can use `get_state_profile` to get the full picture, or combine multiple tools like `get_demographics_by_county` with `get_income_by_county` for layered insight.

The result isn't just a spreadsheet; it's an integrated narrative. You immediately see correlations—like how lower educational attainment correlates with specific housing values in a given county.

U.S. Census Full — Complete Demographic & Economic Intelligence (14 Tools)

Use these 14 tools to pull specific data points on everything from population counts and racial breakdowns to median income and business activity across all U.S. states and counties.

#	TOOL	DESCRIPTION
01	<code>get_housing_by_state</code>	Retrieves detailed housing metrics, including owner-occupied and vacant units, for all states.
02	<code>get_housing_by_county</code>	Gathers essential real estate data—like home values, rent averages, and ownership rates—for every county in a state.
03	<code>get_state_profile</code>	Provides one query to pull a full socioeconomic overview of an entire state, covering population, income, and housing data.
04	<code>get_county_profile</code>	Gathers a complete socioeconomic profile for a single, specific county.
05	<code>query_census</code>	Runs any custom query against the Census API to pull niche data points using specified variables and geographies.
06	<code>get_income_by_state</code>	Provides median household income and poverty rates for every state, a key economic benchmark.
07	<code>get_income_by_county</code>	Pulls critical data on median household income and poverty levels across all counties in a state.
08	<code>get_education_by_state</code>	Reports on educational attainment, specifically the percentage of residents with bachelor's degrees or higher for any given state.
09	<code>get_business_patterns</code>	Accesses county business patterns data to count establishments and track employee counts by local industry.
10	<code>get_population_by_state</code>	Calculates the total population and median age for all 50 U.S. states plus DC.
11	<code>get_population_by_county</code>	Provides the total population and median age metrics for every county within a state using FIPS codes.
12	<code>get_population_by_city</code>	Calculates the current population count for all incorporated cities and census designated places.

#	TOOL	DESCRIPTION
13	<code>get_demographics_by_state</code>	Retrieves detailed racial and ethnic demographic data, including White, Black, Asian, Hispanic, and foreign-born populations, for states.
14	<code>get_demographics_by_county</code>	Gathers specific race and ethnicity breakdowns for all counties within a state.

See It in Action

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

U Give me a complete socioeconomic profile for Los Angeles County (037) in California (06)



U.S. Census Bureau: County Profile: 06-037

Los Angeles County, California:

- Population: 9,936,690
- Median Household Income: \$78,671
- Median Home Value: \$692,800
- Median Gross Rent: \$1,754
- Poverty Rate: 13.9%
- Hispanic/Latino: 4,834,166 (48.6%)
- Foreign Born: 3,365,064 (33.8%)

U Which state has the lowest median age?



Population by State

The state with the lowest median age is:

Utah (49)

- Median Age: 31.4 years
- Total Population: 3,337,975

U Correlate rent prices with Bachelor Degree holders nationwide



Analysis: Rent Prices vs. Education Levels

- Massachusetts: Median Rent \$1,469 | Bachelor's or Higher 44.5%
- Colorado: Median Rent \$1,594 | Bachelor's or Higher 42.8%
- Mississippi: Median Rent \$860 | Bachelor's or Higher 23.2%

There is a strong positive correlation between the percentage of the population holding a Bachelor's degree and the state's median rent.

Frequently Asked Questions

01 How do I use the U.S. Census Full MCP to compare income and population?

You can combine `get_income_by_county` for financial data with `get_population_by_county` for demographic numbers, allowing you to run side-by-side comparisons of median income versus total residents.

02 Can the U.S. Census Full MCP tell me about specific industries?

Yes. Use `get_business_patterns` to pull data on establishments and employee counts by industry type for a county, giving you an economic snapshot of local commerce.

03 Do I need special coding skills for the U.S. Census Full MCP?

No. You interact with it using plain language prompts. Your agent handles the complex API calls and data formatting, so you just focus on the analysis.

04 What is the best tool to get a general overview of a state's economy?

Start with `get_state_profile`. This single function provides an immediate cross-section of population, housing metrics (via `get_housing_by_state`), and income levels for that entire state.

05 Can I run a custom query if the standard tools don't cover my need?







Absolutely. The `query_census` tool lets you specify exact Census API variables and geographies, giving you access to data points not covered by the pre-built functions.

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>"us-census-full-complete-demographic-economic-intelligence": { "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

U.S. Census Full — Complete Demographic & Economic Intelligence 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](https://cloud.vinkius.com) →

vinkius.com · support@vinkius.com

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