MCP SERVER | NO CODE | CLOUD HOSTED

Azure Cognitive Search MCP for AI Agents

Execute advanced full-text and vector queries against enterprise indexes

Azure Cognitive Search connects your AI agents to powerful enterprise indexing capabilities. It lets you run full-text searches, perform structural vector lookups, and inspect how complex data sources like Azure blobs or databases are being processed into searchable indexes.

F Quality Score 3.6/100

cognitive-search | semantic-queries | data-retrieval | cloud-infrastructure | index-management

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vinkius.com/mcp/azure-cognitive-search

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.

Azure Cognitive Search MCP

7 tools available
Cloud-hosted on Vinkius

Need to query massive amounts of corporate data that lives across multiple systems? This MCP brings the power of professional information retrieval directly into your workflow. Instead of building custom pipelines just to search documents, you connect this and let your agent handle it.

Your agent can execute standard keyword searches against indexes or perform advanced vector lookups for semantic meaning. Beyond searching, it lets you audit the entire data flow: list indexers to confirm background tasks are running, or inspect cognitive skillsets to see if OCR is correctly translating images into searchable text. When you connect this through Vinkius, your agent gains access to a full suite of indexing and search tools, letting you treat complex enterprise data like simple conversational context.

Core Capabilities

01 — List available indexes

Checks which Azure Search indexes are currently set up in your environment.

02 — Get index details

Retrieves the full schema and configuration details for a specific search index.

03 — Perform keyword searches

Runs standard, lexical full-text queries against your indexed documents.

04 — Execute vector similarity search

Performs high-accuracy K-Nearest Neighbor (KNN) lookups using structural embedding arrays.

05 — Retrieve specific document by ID

Fetches the complete raw JSON content of a single document using its unique UUID key.

06 — List scheduled data sync tasks

Shows which indexers are configured and scheduled to pull fresh data from external sources like databases or file systems.

07 — Inspect text enrichment services

Lists the active cognitive skillsets, showing how things like OCR or translation are applied before search.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/azure-cognitive-search** — connect your AI agent in three steps.

01 Subscribe to this MCP and provide your Azure Search Endpoint and necessary API Key.

02 Your agent uses the connection to query index structures, list available indexes, or inspect active skillsets.

03 It returns real-time search results, schema details, or document content directly to your AI client.

The bottom line is you get deep visibility into and control over large-scale corporate data retrieval without writing the underlying Azure SDK calls yourself.

Built For

This MCP solves problems for technical roles—data engineers, search architects, or ML ops specialists—who spend too much time manually verifying indexing jobs and debugging complex data pipelines. If your job involves making sense of structured enterprise content at scale, this is what you need.

Data Engineer

Uses the MCP to confirm that indexers are successfully pulling fresh documents from source databases and that all necessary cognitive skillsets (like translation) are correctly deployed.

Search Architect

Tests advanced search parameters, comparing BM25 scores with vector similarities, or checking the exact schema definitions to tune retrieval behavior.

Machine Learning Ops Specialist

Compares index schemas after updates and runs iterative tests on various embedding profiles to ensure model changes don't break search functionality.

What Changes When You Connect

01 Get granular visibility into your data flow. You can use list_indexers to confirm that background sync jobs are actually running, not just scheduled.

02 Stop guessing how search works. By checking the active cognitive skillsets using list_skillsets, you know exactly if OCR or translation is applied before a document gets indexed.

03 Skip complex data mapping. When you only need one specific record, get_document lets your agent pull the full raw JSON content directly by its UUID key.

04 Handle both keyword and concept searches in one place. Your agent can toggle between running basic searches using search_documents or advanced semantic matches via vector_search.

05 Audit your entire setup. You can use list_indexes to map out every available data source index without needing deep Azure console access.

Real-World Applications

Finding a specific contract detail in old files

A compliance analyst needs to find the exact clause number from a 3-year-old PDF stored in a blob. They ask their agent, and it uses get_document to pull the full raw JSON record for review.

Comparing product requirements across multiple databases

A data architect needs to know which indexes exist before building a new feature. They simply ask their agent to list_indexes, getting an immediate inventory of all available data sources.

Searching for concepts, not words

A researcher asks the AI about 'the economic impact of sustainable farming.' Instead of finding documents containing those exact three words, it uses vector_search to find conceptually similar reports.

Verifying data pipeline health

An MLOps engineer suspects a database connection is failing. They instruct the agent to list_indexers to check if the background sync jobs are stalled or running correctly, identifying failure points fast.

Patterns to Avoid

Assuming all data is text-searchable

✗ AVOID

Asking an AI agent to search a document when it only contains images and tables. The result will be blank or inaccurate because the indexer didn't run.

✓ INSTEAD

Always check first using list_skillsets to confirm if cognitive services, like OCR, are active for image-heavy documents. This ensures text enrichment happens before you try searching.

Searching without knowing the scope

✗ AVOID

Running a search query when the system has dozens of indexes and no clear target. The agent might get overwhelmed or return irrelevant results.

✓ INSTEAD

Start by using list_indexes to identify all available data sources, then use get_index to confirm which schema best fits your query type before searching.

The Right Fit

Use this MCP if you are working with enterprise-grade data that requires more than simple keyword matching. If your job involves querying content across multiple systems (like blobs *and* databases) or dealing with unstructured sources, this is essential. Don't use it if all the information you need lives in a single, small database table; basic SQL would be better. You shouldn't use it if your only goal is to perform simple lookups based on known IDs, as simply calling get_document directly might suffice without needing the full search context.

Azure Cognitive Search MCP for AI Agents: Mastering Index Data Retrieval

Right now, getting data from an organization's knowledge base is a mess. You have to jump between SharePoint, Azure Blob Storage, and various database tables. To answer one question,

With this MCP, your agent handles the messy cross-system linking. It can query multiple data types—from structured index details to raw documents—and present a single, unified answer

your team copies text from three different sources, pastes it into a spreadsheet, and then manually runs keyword checks against each tab.

without you ever touching a spreadsheet or jumping between tabs.

Azure Cognitive Search MCP for AI Agents: Auditing Data Pipeline Health

Manually checking if your data pipeline is healthy is tedious. You have to log into the Azure portal, navigate to indexers, and check timestamps to see if the last sync job actually ran or if it's stalled due to a bad connection string.

Now, you just ask your agent to list_indexers. It immediately gives you a status report on all scheduled tasks, telling you exactly which jobs are running cleanly and which ones need attention.

7 Tools in the Azure Cognitive Search MCP for AI Agents: Data Retrieval

Use these tools to list indexes, run keyword searches, perform semantic vector matching, or retrieve specific documents by UUID key.

#	TOOL	DESCRIPTION
01	`list_indexes`	Lists every available Azure Search index in your cloud environment.
02	`get_index`	Retrieves the detailed schema and configuration for a specific search index.
03	`search_documents`	Executes standard text searches using keywords against indexed content.
04	`vector_search`	Performs advanced semantic searches by comparing structural embeddings to find relevant data points.
05	`get_document`	Retrieves the full raw JSON record for a single document using its unique ID key.
06	`list_indexers`	Lists all scheduled background jobs responsible for syncing data from source systems.
07	`list_skillsets`	List Cognitive Services skillsets orchestrating text enrichments

See It in Action

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

U Show me the full details of the 'finance-records' index.

Index Details: finance-records

- **Schema:** `document_id` (string), `author` (string), `date` (datetime), `content` (string).
- **Analyzers:** Built-in English analyzer, date format enforced.
- **Status:** Active. Last updated 5 minutes ago.

This index is ready for full text queries and has a dedicated vector field for semantic matching.

U I need to find documents related to 'Q3 budget adjustments' from the last year.

🔍 Search Results Found (24 Items)

ID	TITLE	RELEVANCE SCORE
9d8a...	Q3 Budget Review Meeting Minutes	0.91
f7c1...	Adjustments to Operating Costs - Sept 24	0.85

Summary: The documents confirm that the primary adjustment was shifting funds from marketing to R&D, impacting profitability by approximately $1.2M.

U Can you get me the raw JSON for record 'user-7789'?

Document ID: user-7789

```json
{
"document_id": "user-7789",
"type": "HR Record",
"employee_name": "Jane Doe",
"department": "Engineering",
"status": "Active",
"last_review": "2024-10-15"
}
```

The record shows Jane Doe is active and her last review was October 15, 2024. No vector map data was found in this specific file.

Frequently Asked Questions

01 **How do I search for information across my entire company's document library using Azure Cognitive Search MCP for AI Agents?**

You can search everything your organization has indexed, whether it's in cloud storage or databases. Your agent uses the underlying tools to execute full-text queries and semantic searches simultaneously, giving you one unified answer instead of multiple searches.

02 **Does this MCP help me find documents based on concepts, not just keywords?**

Yes, that's a key feature. You can use vector search to match the meaning of your query. If you ask about 'sustainable energy solutions,' it finds reports talking about solar and wind power even if those exact words aren't in the document.

03 **What if I need to see the underlying structure or schema of my data index?**

The MCP lets you inspect the index details. You can check the schema definitions to confirm what kind of fields are available and how your search behaviors are configured, which is vital for architects.

04 **Can this tool help me manage my data sync jobs?**

Absolutely. It provides tools to list indexers, letting you see if the background tasks that pull new data from source databases are running successfully or if they've stalled out.

05 **Is this better than just searching files directly in Azure?**

Yes. Direct file searching is limited to keywords and content. This MCP adds layers of intelligence, allowing you to run vector searches, inspect skillsets (like OCR), and query the index structure itself for deeper insights.

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 `"azure-cognitive-search": { "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

Azure Cognitive Search 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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