

MCP SERVER

NO CODE

CLOUD HOSTED

BIM 360 Field MCP for AI Agents

Track construction projects, safety issues, and tasks across sites.

Connect BIM 360 Field directly to your AI agent. Stop clicking through tabs and filtering dashboards to manage construction sites. This MCP lets you ask natural language questions about project status, safety issues, equipment tasks, or checklists across all your assigned projects.

F Quality Score 3.6/100

site-management

quality-control

safety-compliance

task-tracking

checklist-management

field-operations



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.

BIM 360 Field MCP

9 tools available

Cloud-hosted on Vinkius

Managing a large construction site involves jumping between dozens of dashboards: the issue tracker, the quality control checklist, the user directory, and the task scheduler. Doing this manually is slow and prone to missing details.

This MCP connects your BIM 360 Field account to any AI agent, turning that complex portal into a simple conversation. Instead of navigating five different tabs just to answer one question—like 'What safety issues are open for electrical work in the hospital wing?'—you ask it naturally. The agent pulls data from all those sources and gives you a single, organized answer. If you're already using Vinkius as your central catalog, connecting this MCP adds immediate control over your site execution workflow right where you need it.

Core Capabilities

01 — List available projects

Retrieves all construction projects you have access to in BIM 360 Field.

02 — Get specific project details

Pulls detailed information for one particular assigned project.

03 — Track open issues and safety hazards

Queries all recorded quality, safety, or punch list issues for a given site location.

04 — Retrieve compliance checklists

Fetches specific QA/QC checklists and mandatory safety inspections related to the job.

05 — Manage equipment tasks

Lists out commissioning tasks or required installations for site equipment.

06 — Lookup project personnel and companies

Provides a directory of users, associated companies, and configured site locations involved in the build.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/mcp/bim-360-field — connect your AI agent in three steps.

- 01** First, subscribe to this MCP on Vinkius and enter your BIM 360 Field credentials (username, password, and region).
- 02** Next, activate the connection within your preferred AI client. This gives your agent permission to read data from your account.
- 03** Finally, ask your agent a question in natural language—for example, 'Show me all open safety violations for the Downtown Tower project.' The agent then executes the necessary calls and returns structured results.

The bottom line is you get conversational control over complex construction data without ever leaving your AI chat window.

Built For

Project Managers, Field Engineers, Safety Officers—anyone who has to check multiple dashboards across a large site. You're tired of context switching and copy-pasting status reports from different portals at 2 PM.

Project Manager

Needs to quickly pull together project summaries by checking open issues, checklist completion rates, and company roles without logging into the main portal.

Field Engineer

Requires immediate status updates on equipment installation tasks or specific site locations while they are actually on site, pulling data directly from their workflow tools.

Quality & Safety Manager

Must audit safety issues and inspection logs across multiple projects efficiently. They need to know if a required checklist was completed before moving to the next phase.

What Changes When You Connect

-
- 01 Stop jumping between tabs. Instead of manually checking the issue log and then cross-referencing it with project personnel, you ask your agent to 'Show me all unresolved hazards related to HVAC installation for Project X.'

 - 02 Eliminate repetitive data gathering. Need to know who is responsible? Your agent can pull both the list of users and the company directory in a single query, giving you a complete accountability map.

 - 03 Focus on compliance, not clicks. Use the agent to retrieve specific QA/QC checklists or safety inspections (via `list_checklists`) so you only review necessary documents, saving hours.

 - 04 Instant project context. Need an overview? You can get basic details for any project (`get_project`), making it easy to compare status across multiple sites without logging into the full BIM 360 Field portal.

 - 05 Streamlined reporting. Instead of pulling reports from disparate sources, you ask your agent about tasks and equipment (using `list_tasks`) and get a consolidated update on commissioning progress.
-

Real-World Applications

Daily safety audit for project compliance

A Safety Manager needs to know if the required safety inspections were completed before electrical work starts. They prompt their agent: 'Check all safety issues and checklists for Project Alpha.' The agent then checks both `list_issues` and `list_checklists`, providing a clear pass/fail report.

Onboarding new site personnel

A Project Manager needs to know which companies are involved, who the key users are, and what projects they work on. They prompt their agent to 'List all associated companies and project users.' The agent runs `list_companies` and `list_users`, giving a full contact list.

Checking task dependencies during construction

A Field Engineer needs confirmation that the scaffolding setup is finished before they can commission HVAC units. They ask their agent to compare the status of tasks using `list_tasks` against the project details, getting a definitive go/no-go answer.

Auditing site locations and scope creep

A Quality Manager suspects work is happening outside the planned area. They ask their agent to list all configured sites using `list_locations` and compare that against current reports, ensuring everything stays within approved boundaries.

Patterns to Avoid

Manual portal navigation

✗ AVOID

A user tries to find the status of open issues by navigating through the main dashboard, filtering by date, and then manually checking a separate checklist tab. This takes minutes and is easy to lose track of.

✓ INSTEAD

Use your AI agent to query both sources at once: 'List all open safety issues and any pending QA/QC checklists for Project Beta.' The MCP handles the multi-step lookup automatically.

Searching only by project ID

✗ AVOID

A user knows a Project ID but struggles to recall which specific users or companies were assigned. They type the ID and then waste time clicking through 'Directory' menus.

✓ INSTEAD

Tell your agent: 'Show me all users and associated companies for this project.' The MCP runs `list_users` and `list_companies` together, giving you a single comprehensive list.

Assuming data is always updated

✗ AVOID

A user relies on an old report they printed days ago that shows tasks as complete, but the actual site status has changed. They don't know how to check for updates.

✓ INSTEAD

Always ask your agent for current status by querying `list_tasks` or `list_issues`. This guarantees you are working with data pulled in real-time from BIM 360 Field.

The Right Fit

Use this MCP if your workflow requires aggregating disparate pieces of information—like merging open safety issues, required checklists, and outstanding equipment tasks—into a single conversational summary. You need to ask 'What is the status of X relative to Y?'

Don't use it if you just need to view one specific, static report (e.g., viewing only the full history log for users). For that, the native BIM 360 Field portal is still best. If your primary goal is simply to browse or filter a single data set without needing cross-referencing, stick with the standard interface. This MCP shines when it acts as an orchestrator, pulling together multiple tools like `list_issues` and `list_checklists` for you.

BIM 360 Field: Managing Construction Compliance Issues

Today, auditing a construction site's compliance is painful. You have to open the BIM 360 Field portal, navigate to the issues tab, filter by 'Safety,' then switch over to the checklists area to see if QA/QC forms are filed correctly. Then you repeat that whole process for every different project and department.

With this MCP, you simply tell your agent what you need: 'What is the safety compliance status for Project X?' The system instantly cross-references all open issues (`list_issues`) with mandatory checklists (`list_checklists`), giving you a single, actionable report that pinpoints exactly what needs fixing.

BIM 360 Field: Tracking Site Equipment and Personnel

Tracking who is supposed to do what, and when, is a manual nightmare. You have to check the user directory for names, then manually pull up the task list to see if they are assigned to equipment commissioning, and finally check the project details to confirm the location.

Now, just ask your agent about resources. It pulls together the data from `list_users` , `list_companies` , and `list_tasks` in one go. You get a complete picture of accountability—who is doing what, where, and if it's even been scheduled yet.

9 Tools for BIM 360 Field Project & Task Management

Use these tools to gather detailed information on projects, track issues, manage tasks, and list personnel across your construction sites.

#	TOOL	DESCRIPTION
01	<code>get_project</code>	Retrieves key details for a single, specific construction project.
02	<code>list_checklists</code>	Generates a list of required QA/QC checklists applicable to the current project.
03	<code>list_companies</code>	Retrieves all companies that have been registered or are working on this specific job site.
04	<code>list_issue_types</code>	Shows the different types of issues (e.g., safety, quality) configured for tracking on a project.
05	<code>list_issues</code>	Lists all recorded open and closed issues related to the project site.
06	<code>list_locations</code>	Provides a list of physical areas or sites configured within the project scope.
07	<code>list_projects</code>	Lists every construction project that you are assigned to in BIM 360 Field.
08	<code>list_tasks</code>	Shows all equipment installation or commissioning tasks scheduled for the project.
09	<code>list_users</code>	Retrieves a list of people who are associated with and working on this specific job site.

See It in Action

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

U List all my BIM 360 Field projects.



Project Overview

- **Downtown Tower:** Active. Primary Focus: Electrical/MEP.
- **City Hospital Renovation:** Active. Primary Focus: Safety/Structural.
- **Industrial Park Phase II:** On Hold. Last Update: 2024-11-01.

You are currently assigned to the first two projects.

U Show me recent issues and required checklists for City Hospital Renovation.



City Hospital Renovation (ID: proj_2)

Open Issues Found:

- Safety Hazard: Level 3 HVAC ducting blockage (Severity: High)
- Quality Check: Drywall installation pending sign-off (Severity: Medium)

Required Checklists:

- Level 3 Safety Inspection (Due Date: Tomorrow)
- MEP Rough-In QA/QC Report (Status: Pending Review)

U Who is working on the Downtown Tower and what equipment tasks are pending?



Downtown Tower Personnel & Tasks

Key Companies: Apex Foundations, Skyline Glazing, City Electrical.

Assigned Users: John Doe (Project Lead), Jane Smith (Safety Officer).

Pending Equipment Tasks: 1. Crane lift calibration (Due: Next Week). 2. Elevators commissioning sign-off (Due: End of Month).

Frequently Asked Questions

01 How can I use BIM 360 Field to check project progress?

You ask your AI agent what the current status is. It looks across issues, tasks, and checklists, giving you a consolidated update instead of forcing you to click through multiple tabs in the main portal.

02 Does the BIM 360 Field MCP help with safety compliance?

Yes. You can ask for all open safety issues and any required inspection logs from your agent. It pulls this data together so you don't miss a crucial detail when auditing the site.

03 Can I use BIM 360 Field to find out who is working on my site?

Absolutely. You can ask the agent for a list of all associated users and companies. It compiles the full directory information, saving you from having to navigate multiple sections of the portal.

04 Is this better than just viewing reports in BIM 360 Field?

It's different—it's about orchestration. Instead of *viewing* separate reports, your AI agent *combines* data from multiple tools (like listing issues and tasks) into one conversational summary for you.

05 What if I need to check status across several projects?







You simply tell the agent which project IDs or names to compare. It gathers relevant data points—be it open issues or required checklists—from multiple projects into one easy-to-read response.

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>"bim-360-field": { "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

BIM 360 Field 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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