

MCP SERVER

NO CODE

CLOUD HOSTED

# Multi-Trade Repair Coordinator MCP

Keep construction trades in sync and avoid site conflicts.

Multi-Trade Repair Coordinator MCP acts as your central scheduling engine for complex repair and construction projects. It handles the logic of trade dependencies, material arrival constraints, and room allocation rules to prevent spatial conflicts on site. Your AI client uses this to build timelines and manage the handoff between different crews.

**A+** Quality Score 100/100

trades

logistics

dependency-management

resource-allocation

timeline



# The connectivity layer between AI and the world's software.

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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

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## 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

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## 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

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## 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](https://cloud.vinkius.com) — connect your AI agent in under 60 seconds.

# Multi-Trade Repair Coordinator MCP

4 tools available

Cloud-hosted on Vinkius

Managing a construction site means juggling moving parts that often crash into each other. This MCP solves the headache of trade sequencing and spatial management. Instead of manually checking if the plumber is finished before the drywaller starts, your AI client handles the logic. It looks at the dependencies between tasks and ensures no two crews are fighting for the same room at the same time.

You can use it to build a master timeline that accounts for material arrivals and specific site constraints. When a delivery is late or a crew hits a snag, the MCP helps you recalculate the schedule without starting from scratch. It also keeps track of the critical decisions owners need to make and the specific requirements passed between trades during handoffs. It turns a messy list of tasks into a structured, conflict-free execution plan.

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## Core Capabilities

### 01 — Dependency Sequencing

Your agent uses this to ensure one trade only starts after the previous one finishes.

### 02 — Spatial Conflict Prevention

The AI checks room allocation rules to keep crews from overlapping in the same space.

### 03 — Material Constraint Management

Your client tracks material arrivals to prevent scheduling work before supplies are on site.

### 04 — Disruption Recovery

The agent uses playbooks to recalculate timelines when delays occur.

### 05 — Decision Tracking

Your AI identifies where owner approvals are needed to keep the project moving.

# One Click on Vinkius — From Prompt to Execution

Available at [vinkius.com/en/ai-agent-connect/multi-trade-repair-coordinator](https://vinkius.com/en/ai-agent-connect/multi-trade-repair-coordinator) — connect your AI agent in three steps.

- 01 Connect your preferred MCP-compatible client to Vinkius.
- 02 Provide your trade list and task requirements to your AI agent.
- 03 The MCP runs dependency and room allocation logic.
- 04 Your agent generates a conflict-free master schedule or recovery plan.

Connect your AI client to Vinkius to start managing your construction logic.

## Built For

This MCP is built for professionals managing multi-crew construction or renovation projects who need to keep schedules tight.

### Project Managers

They use the MCP to oversee trade handoffs and timeline accuracy.

### Site Supervisors

They rely on it to manage room allocations and prevent crew conflicts.

### General Contractors

They use it to coordinate material arrivals and owner approval points.

## What Changes When You Connect

- 01 Prevents crews from working in the same room at the same time.
- 02 Automates the logic of trade dependencies.
- 03 Provides immediate recovery plans when delays happen.

04 Tracks critical owner decisions to prevent project stalls.

# Real-World Applications

**Residential Renovations**

Coordinate plumbers, electricians, and drywallers in tight living spaces.

**Disruption Management**

Use the playbook to adjust schedules instantly when a supply chain delay hits.

**Commercial Build-outs**

Manage complex trade sequences and material deliveries across large sites.

**Trade Handoffs**

Ensure painters and carpenters follow exact prep requirements between stages.

# Patterns to Avoid

**Manual Schedule Rebuilding**

❌ AVOID

You spend three hours in a spreadsheet trying to move every task forward because a lumber delivery was late.

✓ INSTEAD

Let your agent handle the math. Use ``generate_master_schedule`` to create a new, conflict-free timeline instantly.

**Ignoring Trade Requirements**

❌ AVOID

A painter shows up to a room before the drywaller has finished sanding, causing a massive delay.

✓ INSTEAD

Check the specific requirements for each stage using ``get_handoff_notes`` to ensure the site is actually ready for the next crew.

**Missing Critical Approvals**

❌ AVOID

Work stops for two days because you didn't realize the owner needed to sign off on a change order.

✓ INSTEAD

Stay ahead of stalls by using ``get_owner_decisions`` to identify exactly where you need an approval to keep moving.

## The Right Fit

General contractors and site supervisors managing multiple crews should connect this MCP. If you are running a single-person solo renovation with no overlapping trades, you don't need it. The deciding factor is whether your project has interdependent tasks that rely on specific room availability and material arrivals.

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# Multi-Trade Repair Coordinator Toolset

These tools manage trade dependencies, track owner decisions, and generate recovery plans when site delays happen.

| #  | TOOL                        | DESCRIPTION                                                                                |
|----|-----------------------------|--------------------------------------------------------------------------------------------|
| 01 | get_delay_response_playbook | Provides a recovery plan to follow when a specific event disrupts your timeline.           |
| 02 | generate_master_schedule    | Creates a complete, conflict-free timeline for all your requested trades and tasks.        |
| 03 | get_handoff_notes           | Retrieves specific instructions and requirements passed from one trade to the next.        |
| 04 | get_owner_decisions         | Identifies the critical decision points where a project owner must approve work or budget. |

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## See It in Action

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

**U** Generate a master schedule for my electrical and plumbing tasks.



The master schedule is ready. Electrical work is set for Monday, and plumbing follows on Wednesday once the prerequisites are met.

**U** What are the handoff requirements between the carpenter and the painter?



The carpenter must finish all sanding and surface preparation before the painter can start the first coat.

**U** The tile delivery is delayed by 3 days. How does this affect my schedule?



A 3-day delay in tile arrival pushes the flooring installation and subsequent grouting tasks back by exactly 3 days.

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## Frequently Asked Questions

### 01 How does this MCP prevent scheduling conflicts?

It enforces room allocation rules and checks the logical dependencies between different trades to ensure they don't overlap or clash.

### 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.

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**03 What happens if a delivery is late?**

You can use the delay response playbook to get a recovery plan that recalculates your timeline based on the disruption.

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**04 Does it track owner approvals?**

Yes, the tool identifies critical decision points where a project owner must approve budget or work to proceed.

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**05 How does it handle handoffs between workers?**

It uses handoff notes to extract and pass specific instructions from one trade to the next.

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**06 How does the tool handle room conflicts?**

The ``generate_master_schedule`` tool applies spatial constraints to ensure only one trade occupies a specific room at any given time.

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**07 What happens if a material delivery is late?**

You can use ``get_delay_response_playbook`` to receive an impact assessment and a revised schedule based on the delay.

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**08 Can I track budget-related decisions?**

Yes, ``get_owner_decisions`` identifies critical dates where budget milestones or inspections require owner approval.

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# Go Live in 60 Seconds

Get your connection token from [cloud.vinkius.com](https://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                                                                                         |
|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
|  <b>Claude AI</b>  | Profile → Customize → Connectors → "+" → Add custom connector → Paste endpoint                             |
|  <b>Cursor</b>     | Settings → Features → MCP Servers → "+" Add New MCP Server → Type: SSE → Paste endpoint                    |
|  <b>VS Code</b>  | Ctrl/Cmd+Shift+P → "MCP: Add Server" → add <code>"multi-trade-repair-coordinator": { "url": "..." }</code> |
|  <b>Windsurf</b> | MCP Settings → <code>mcp_settings.json</code> → Add endpoint URL                                           |
|  <b>ChatGPT</b>  | Settings → Tools & plugins → Add MCP server → Paste endpoint                                               |
|  <b>Gemini</b>   | 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

# Multi-Trade Repair Coordinator 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](https://vinkius.com) · [support@vinkius.com](mailto:support@vinkius.com)

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DOCUMENT INFORMATION

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