MCP SERVER | NO CODE | CLOUD HOSTED

Grape Receiving & Weighing Logistics MCP

Manage harvest arrivals and quality control through your AI client.

Grape Receiving & Weighing Logistics MCP handles the math behind winery harvest operations. It lets your AI client calculate truck wait times, determine sampling frequencies based on volume, and build arrival schedules that respect lot segregation. You can also check if your facility capacity can handle incoming loads to avoid bottlenecks at the weighbridge or crush pad.

A+ Quality Score 100/100

winery | harvest | queuing-theory | quality-control | logistics-optimization

MAINTAINED BY VINKIUS CLOUD FOR AI AGENTS · SEPTEMBER 2026
vinkius.com/en/ai-agent-connect/grape-receiving-weighing-logistics

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.

Grape Receiving & Weighing Logistics MCP

4 tools available
Cloud-hosted on Vinkius

Managing a grape harvest means juggling truck arrivals, quality sampling, and facility capacity in real time. This MCP connects your AI client to the core metrics needed to keep a winery running smoothly during peak crush. Instead of manually calculating wait times or sampling intervals, you can ask your agent to run the numbers for you.

You can use it to predict how long trucks will sit in line or how long the entire receiving process will take. If you need to maintain strict lot segregation, the MCP can generate an optimized arrival sequence that keeps different grape lots organized. It also helps you avoid overwhelming your equipment by checking if your planned receiving batches fit within your weighbridge or crush capacity. For quality control, it calculates exactly how often you need to pull samples based on the total volume coming through the gate.

Core Capabilities

01 — Queue Prediction

Your agent calculates truck wait times and total receiving duration.

02 — Sampling Math

The AI determines sampling frequency based on incoming grape volume.

03 — Capacity Checks

Your agent verifies if the facility can handle the planned receiving volume.

04 — Schedule Optimization

The MCP builds arrival sequences that respect lot segregation and reduce congestion.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/en/ai-agent-connect/grape-receiving-weighing-logistics** — connect your AI agent in three steps.

01 Connect your AI client to the MCP via Vinkius.

02 Provide your harvest data or specific logistics questions to your agent.

03 The agent calls the necessary tools to perform calculations.

04 Your agent provides the optimized schedule, sampling plan, or queue metrics.

Connect your AI client to the Vinkius hosted MCP to start running harvest logistics.

Built For

This MCP is built for winery operations teams managing high-volume grape harvests.

Winery Manager

Uses the AI to monitor facility utilization and manage overall harvest flow.

Harvest Coordinator

Hands off truck scheduling and queue management to the AI agent.

Quality Control Lead

Uses the tool to set sampling protocols based on incoming tonnage.

What Changes When You Connect

01 Reduces truck congestion through optimized arrival sequences.

02 Prevents facility bottlenecks by checking crush and weighbridge capacity.

03	Standardizes quality control by automating sampling frequency math.
04	Provides clear visibility into truck wait times and total processing duration.

Real-World Applications

Managing Truck Queues

Predict how long drivers will wait when multiple trucks arrive at the weighbridge.

Maintaining Lot Integrity

Generate schedules that group specific lots together to satisfy segregation requirements.

Quality Control Planning

Calculate the exact number of samples needed for a specific tonnage of grapes.

Capacity Monitoring

Ensure the crush pad or weighbridge isn't overwhelmed by a sudden influx of fruit.

4 Tools Available

#	TOOL	DESCRIPTION
01	`calculate_sampling_protocol`	This tool determines how often you need to take quality samples based on the volume of grapes arriving.
02	`get_facility_utilization`	This tool checks if your planned receiving batch will overwhelm your facility's capacity.
03	`get_queue_metrics`	This tool calculates truck wait times and the total duration of the receiving process.
04	`optimize_receiving_schedule`	This tool creates an arrival sequence that minimizes congestion and follows lot segregation rules.

See It in Action

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

U How long will 20 trucks wait if the weighbridge processes 5 per hour and crush capacity is 10 per hour?

The average wait time for the 20 trucks will be 1.5 hours, with a total receiving duration of 4 hours.

U What is the sampling protocol for 500 tons of premium grapes with a sampling rate of 0.05 samples per ton?

For 500 tons of premium grapes, you need to take 25 total samples, with a sampling interval of 12 minutes.

U Generate a schedule for 10 trucks that must be grouped by lot segregation requirements starting at 8 AM.

The optimized arrival sequence starts at 08:00, grouping the required lots consecutively to ensure smooth flow through the weighbridge.

Frequently Asked Questions

01 **How does this MCP help with truck management?**

It uses queue metrics to predict wait times and optimizes arrival sequences to prevent congestion and respect lot segregation.

02 **Can I use this to plan my quality control?**

Yes, the calculate_sampling_protocol tool determines how often to take samples based on the volume of grapes being received.

03 **Will this prevent my facility from being overwhelmed?**

The get_facility_utilization tool evaluates if a planned batch of grapes will exceed your facility's capacity.

04 **What AI clients can I use with this MCP?**

You can connect this MCP to any compatible client like Claude, Cursor, Windsurf, or VS Code.

05 **Do I need to host this myself?**

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

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 `"grape-receiving-weighing-logistics": { "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

Grape Receiving & Weighing Logistics 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	Grape Receiving & Weighing Logistics MCP
Server ID	`01a0ab98-d252-70e2-b11f-183d5556f666`
Platform	Vinkius Cloud for AI Agents
Endpoint	`https://edge.vinkius.com/{token}/mcp`

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