

M C P S E R V E R

N O C O D E

C L O U D H O S T E D

Oil Change Supply Comparator MCP

Calculate and compare the true cost of vehicle maintenance.

Oil Change Supply Comparator MCP helps you break down the full cost of vehicle service. It looks past the sticker price to account for oil volume, filters, labor, and fees. You can compare different service tiers or project how much you'll spend on oil changes over an entire year based on your specific driving habits.

A+ Quality Score 100/100

oil-change

vehicle-maintenance

cost-comparison

automotive-tools

maintenance-planning



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.

Oil Change Supply Comparator MCP

4 tools available

Cloud-hosted on Vinkius

You can stop guessing which oil change package is actually the best deal. This MCP breaks down the math for you by looking at the total lifecycle cost of your vehicle maintenance. Instead of just looking at a single service price, you can factor in the specific oil volume your car needs, the cost of filters, labor, and even disposal fees.

If you're trying to decide between a budget tier and a premium service, you can use your AI client to rank these options based on your actual driving mileage. It also handles the math for annual budgeting. By inputting your yearly mileage and service intervals, you'll get a clear picture of what your maintenance budget needs to look like for the next twelve months. It's a practical way to make sure you aren't overpaying for service tiers that don't fit your driving patterns.

Core Capabilities

01 — Single Service Math

Your agent calculates the exact cost of one oil change including labor and fees.

02 — Annual Budgeting

Your AI client projects yearly maintenance spending based on mileage.

03 — Tier Comparison

Your agent ranks different service packages to find the lowest total cost.

04 — Volume Adjustment

The tool adjusts pricing based on the specific oil volume your vehicle requires.

05 — Data Validation

Your agent checks supply data to ensure comparison accuracy.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/en/ai-agent-connect/oil-change-supply-comparator — connect your AI agent in three steps.

- 01
- Connect your AI client to the Vinkius hosted MCP.
- 02
- Provide your vehicle's oil requirements and driving habits.
- 03
- Ask your agent to compare options or project annual costs.
- 04
- Review the calculated totals and rankings provided by the agent.

Connect the MCP to your client and start running cost calculations immediately.

Built For

This MCP is for anyone managing vehicle maintenance budgets or looking for the most cost-effective service options.

Fleet Managers

They hand off mileage and service interval data to the AI to project annual fleet costs.

Budget-Conscious Drivers

They use the tool to compare different service tiers before heading to a shop.

Personal Assistants

They use the tool to calculate maintenance expenses for household budgeting.

What Changes When You Connect

- 01
- Accounts for oil volume to ensure fair price comparisons.
- 02
- Factors in labor and disposal fees for a true total cost.
- 03
- Projects yearly spending based on actual driving habits.

04 Ranks service tiers to identify the best value.

Real-World Applications

Annual Budget Planning

You provide your yearly mileage to see how much to set aside for oil changes.

Single Visit Costing

You input specific oil, filter, and labor prices to get an immediate total.

Service Tier Comparison

You compare a basic oil change against a premium package to see the real price difference.

Driving Habit Analysis

You use your specific service intervals to see how frequent driving affects your total cost.

Patterns to Avoid

Ignoring oil volume requirements

❌ AVOID

You compare two service packages based only on the sticker price without checking how much oil your engine actually takes.

✓ INSTEAD

Use ``calculate_single_service_cost`` to factor in the specific oil volume and filters needed for a real total.

Guessing annual maintenance costs

❌ AVOID

You try to set a yearly budget by just multiplying a single oil change price by four.

✓ INSTEAD

Run ``get_annual_maintenance_projection`` using your actual yearly mileage to get a realistic spending estimate.

Using unverified service pricing

❌ AVOID

You pull random prices from a website and assume they are accurate for your specific car model.

✓ INSTEAD

Run ``validate_supply_data`` to ensure the numbers you are using for comparison are actually correct.

The Right Fit

Connect this MCP if you manage a fleet or a household budget and need to stop overpaying for service tiers. Do not connect it if you only care about the cheapest sticker price regardless of total lifecycle costs.

Oil Change Supply Comparator Tools

These tools handle the math for service costs, annual budgeting, and tier comparisons based on your specific vehicle needs.

#	TOOL	DESCRIPTION
01	calculate_single_service_cost	This tool calculates the immediate total for one oil change. It sums up oil, filters, labor, and fees.
02	compare_service_options	This tool ranks different service tiers. It uses your vehicle requirements and driving habits to find the best value.
03	get_annual_maintenance_projection	This tool estimates your yearly spending. It projects total annual costs based on your specific driving patterns.
04	validate_supply_data	This tool checks your provided supply data. It ensures the information is accurate for a fair comparison.

See It in Action

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

U Which oil change option is cheapest for a car that needs 5 quarts of oil, has a 5,000 mile service interval, and drives 15,000 miles a year?



The cheapest option is the Economy Tier with a total annual cost of \$180.00.

U How much will I spend on oil changes in a year if one service costs \$65 and I drive 12,000 miles with a 4,000 mile interval?



You will spend \$195.00 on oil changes over the next year.

U Calculate the cost of a single oil change where oil is \$25 for 5 quarts, the filter is \$8, labor is \$30, and the disposal fee is \$5, for a 5-quart capacity vehicle.



The total service cost for this oil change is \$68.00.

Frequently Asked Questions

01 How does this MCP handle different oil amounts?

The engine adjusts for oil volume to make sure you are comparing prices fairly across different product sizes.

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.

03 Does it include labor costs in the calculation?

Yes, it calculates the full cost including oil, filters, labor, and fees.

04 How do I project my yearly maintenance costs?

You can use the `get_annual_maintenance_projection` tool by providing your yearly mileage and service intervals.

05 Do I need to host the MCP myself?

No, Vinkius hosts and manages the MCP for you. You just connect your client and start using the tools.

06 How does the tool calculate the cost of oil?

The tool calculates an effective unit price by dividing the product price by its volume, then multiplies this by the vehicle's required capacity to ensure an accurate comparison.

07 Can I compare different service tiers?

Yes, you can use ``compare_service_options`` to compare Economy, Standard, and Premium tiers to find the most cost-effective option for your driving patterns.

08 What factors are included in the total service cost?

The total cost includes the adjusted oil price, the filter cost, labor fees, and mandatory disposal fees.

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>"oil-change-supply-comparator": { "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

Oil Change Supply Comparator 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

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Platform	Vinkius Cloud for AI Agents
Endpoint	https://edge.vinkius.com/{token}/mcp

LICENSE & USAGE

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