MCP SERVER | NO CODE | CLOUD HOSTED

Circadian Rhythm Aligner MCP for AI Agents

Planning Gradual Sleep and Wake Time Adjustments for Travel

Circadian Rhythm Aligner generates gradual, actionable schedules for shifting sleep and wake times. This MCP helps you avoid the shock of sudden schedule changes by planning out small, manageable adjustments day-by-day. It ensures your new routine maintains healthy rest durations while tracking the exact time shift required for a smooth transition back to a stable circadian rhythm.

B Quality Score 85/100

sleep | circadian-rhythm | scheduling | health-tech | routine

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vinkius.com/mcp/circadian-rhythm-aligner

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.

Circadian Rhythm Aligner MCP

0 tools available
Cloud-hosted on Vinkius

Trying to shift your sleep schedule is tough; doing it overnight usually leads to feeling terrible. This MCP handles that complexity by building realistic, step-by-step plans so you don't have to deal with sudden changes. You input your old bedtime and wake time, and the agent figures out how many days it will take to reach your target. It generates a day-by-day schedule that shifts everything in small increments—say, 15 or 30 minutes at a time. Beyond just setting times, it analyzes whether your new window still gives you enough rest time overall. If you're managing complex routines, connecting to the Vinkius catalog means all these specialized tools are available through one place. You simply connect your preferred AI client and start planning your sleep cycle recovery.

Core Capabilities

01 — Generate gradual sleep adjustment plans

The MCP creates a day-by-day schedule that shifts both bedtime and wake time using small, specific increments.

02 — Check for healthy sleep window integrity

It analyzes proposed schedules to confirm the minimum required duration of rest is met consistently.

03 — Determine total temporal shift

The system calculates the overall magnitude, or total minutes, that your current schedule needs to move.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/circadian-rhythm-aligner** — connect your AI agent in three steps.

01 You provide your current sleep times and the target time you want to achieve.

02 The MCP first figures out the total shift needed and then calculates the minimum number of days required for a gradual transition.

03 Finally, it delivers a full schedule plan, detailing the specific bedtime and wake time for each day until the goal is met.

The bottom line is that you get a clear timeline showing exactly when to adjust your sleep habits to reach your desired rhythm without stress.

Built For

This MCP is for anyone whose work or life requires changing their established routine, especially those dealing with travel, shift work, or chronic insomnia. It's essential for the night-shift worker who needs to transition back home, or the student trying to adjust to a new academic rhythm.

Flight Crew / Travel Professional

Uses this MCP after long trips across time zones to create an immediate plan for realigning their sleep schedule with local times.

Shift Worker (Healthcare/Industry)

Needs to transition from night shifts back to day shifts, using the tool to manage the slow, incremental shift of their sleep window over several days.

Wellness Coach / Sleep Specialist

Uses this MCP to model and predict safe, gradual adjustments for clients suffering from circadian rhythm disorders or jet lag.

What Changes When You Connect

01 Avoid sudden schedule shock: The `calculate_adjustment_plan` tool builds a step-by-step timeline, so you never have to wake up or go to bed at a drastically different time.

02 Ensure consistent rest: Using `analyze_sleep_window_integrity`, you can check any potential schedule before committing to it and confirm that the sleep duration remains healthy.

03 Know your total shift: The MCP immediately gives you the `calculate_drift_magnitude` needed, eliminating guesswork about how far off your current rhythm is from the target.

04 Manage time zones safely: Traveling across multiple time zones becomes predictable. You get a clear path back to local sleep patterns without crashing.

05 Stop guessing routines: Instead of manually calculating small shifts over weeks, you pass the variables and receive a full, actionable schedule instantly.

Real-World Applications

Returning home from international travel

After spending two weeks in London, an agent asks for a plan to shift the sleep window back to EST. The MCP uses `calculate_adjustment_plan` and delivers a 5-day schedule, making the transition manageable instead of grueling.

Starting a new night-shift job

A factory worker needs to move from an 8 AM wake time to a 4 PM wake time. The agent uses `calculate_drift_magnitude` first, then builds the transition plan, allowing them to adjust slowly over two weeks.

Diagnosing sleep deprivation risk

A user inputs an aggressive schedule (1 AM to 6:30 AM). The MCP uses `analyze_sleep_window_integrity` and instantly flags that the window falls below the critical 7-hour threshold, advising against the change.

Adjusting for seasonal changes

A user wants to naturally shift their schedule back in autumn. The MCP uses `calculate_adjustment_plan` to create a gentle, multi-week plan that respects the body's natural rhythm change.

Patterns to Avoid

Ignoring sleep duration minimums

✗ AVOID

A user just shifts their clock by 3 hours without checking if the new times still allow for at least 7 or 8 hours of rest. They assume it'll be fine.

✓ INSTEAD

Always run your proposed schedule through `analyze_sleep_window_integrity` first. This guarantees that whatever time shift you need, the resulting sleep window is healthy and sustainable.

Attempting massive single-day shifts

✗ AVOID

A user wakes up at 8 AM on Monday but needs to wake up at 9 AM on Tuesday. They try to calculate a single jump, which the MCP will flag as too drastic.

✓ INSTEAD

Use `calculate_adjustment_plan` to break the shift down into small steps (e.g., 30 minutes per day) to prevent immediate sleep disruption and ensure smooth adaptation.

Not knowing the total required change

✗ AVOID

A user is unsure how far they need to adjust their schedule over a long period, leading them to manually guess the necessary shift.

✓ INSTEAD

Run `calculate_drift_magnitude` immediately. This tool provides one definitive number—the exact minutes you must move from your current time to your target time.

The Right Fit

Use this MCP if your primary challenge is the *transition* itself, not just the final times. If you're dealing with jet lag, shift work, or seasonal changes, start here. It excels at building phased plans using `calculate_adjustment_plan` and checking safety via `analyze_sleep_window_integrity`. Don't use this if all you need is a one-time calculation of time difference; for that, the simple

`calculate_drift_magnitude` tool will suffice. However, never rely on just knowing the total shift; always check the resulting sleep window integrity to make sure your new routine actually supports healthy rest.

Circadian Rhythm Aligner MCP: Managing Shift Work Sleep Schedules

When you work rotating shifts, keeping track of when you need to start and stop adjusting is a massive headache. You're manually cross-referencing old schedules with new targets, constantly asking yourself if shifting your bedtime by 30 minutes today means sacrificing sleep quality tomorrow.

With this MCP, that complexity vanishes. Just tell the agent your starting time and ending time. It generates the full schedule using `calculate_adjustment_plan`. You don't just get times; you get a week-by-week playbook for getting back on track.

Circadian Rhythm Aligner MCP: Verifying Optimal Sleep Window Integrity

The biggest risk in changing sleep habits is setting times that look correct but don't actually provide enough rest. You might shift your clock to 10 PM, thinking you're fine, only to realize later that the new wake time cuts off your sleep short.

This MCP solves that by running checks through `analyze_sleep_window_integrity`. It acts as a guardrail, confirming that every single day of your planned transition maintains a healthy minimum duration of rest. No guessing games here; just data.

See It in Action

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

U I'm moving from 12 AM to 9 AM to 7 AM. Can you map out the gradual plan using 30-minute shifts?

Circadian Transition Plan

- **Start:** Bedtime 12:00 AM / Wake 9:00 AM
- **Target:** Bedtime 11:00 PM / Wake 7:00 AM

The shift requires 3 days of gradual adjustment:

DAY	BEDTIME	WAKE TIME
Day 1	11:30 PM	8:30 AM
Day 2	11:00 PM	7:30 AM
Day 3	11:00 PM	7:00 AM

Note: All windows maintain a minimum of 8 hours of rest.

U If I shift from 7 AM to 2 PM, what's the total time difference in minutes?

Drift Magnitude Calculation

The total temporal shift required for this transition is **1920 minutes** (or 32 hours). This figure represents the full minute-by-minute gap between your current and desired schedule.

U I want to move from my current schedule to a target of 8:30 PM / 6:30 AM. Is that window healthy?

Sleep Window Integrity Check

- **Proposed Window:** 8:30 PM - 6:30 AM
- **Calculated Duration:** 10 hours
- **Minimum Requirement (User Set):** 7 hours

✅ **Result: Healthy.** This schedule provides a comfortable margin above the minimum recommended duration, suggesting low risk of sleep deprivation.

Frequently Asked Questions

01 **How does Circadian Rhythm Aligner help me adjust after moving across time zones?**

It builds a phased plan that breaks down the total required shift into small, manageable daily increments. Instead of forcing an immediate change, it gives you a gradual timeline to realign your body clock safely.

02 **Can I use Circadian Rhythm Aligner if I'm working night shifts?**

Yes. It handles the unique challenge of shift workers by creating schedules that guide you back to a normal rhythm, day by day, minimizing sleep disruption and fatigue.

03 **What happens if my target schedule is too short for proper rest?**

The tool runs integrity checks on any proposed window. If the duration falls below your minimum required hours of sleep, it flags the risk immediately so you don't commit to an unhealthy routine.

04 **Is Circadian Rhythm Aligner better than just calculating time difference?**

Yes. While a simple calculation only gives you a number (the total shift), this MCP provides the actual action plan, telling you exactly what time to go to bed and wake up every single day.

05 **Does Circadian Rhythm Aligner account for different increment sizes?**

Absolutely. You can specify whether you want your schedule to shift in 15-minute or 30-minute increments, making the plan tailored precisely to how gentle you need the transition to be.

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 `"circadian-rhythm-aligner": { "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

Circadian Rhythm Aligner 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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