MCP SERVER | NO CODE | CLOUD HOSTED

Sleep Cycle Calculator MCP

Stop waking up groggy. Plan your perfect rest cycle.

Sleep Cycle Calculator helps you find ideal wake-up and bedtime windows based on your body's natural sleep rhythms. It calculates optimal times using full 90-minute cycles, factoring in a typical 15-minute latency period so you don't wake up groggy. Use this MCP to optimize rest periods and align your schedule with your biology.

A+ Quality Score 100/100

sleep | wellness | optimization | circadian | rest

MAINTAINED BY VINKIUS CLOUD FOR AI AGENTS · JUNE 2026
vinkius.com/mcp/sleep-cycle-calculator

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.

Sleep Cycle Calculator MCP

3 tools available
Cloud-hosted on Vinkius

Tired of setting alarms that wake you halfway through deep sleep? This MCP helps you plan your rest around your body's natural 90-minute cycles. Instead of picking random times, it calculates optimal windows so when your alarm goes off, you're naturally finishing a sleep cycle, minimizing grogginess and maximizing recovery. You can use the tool to figure out ideal wake-up slots based on when you plan to go to bed. Need to make sure you get enough rest for a specific meeting? Just tell it what time you need to wake up, and it figures out when you should start your night. It even assesses if the total sleep duration you're aiming for is actually sufficient or optimal. Finding this kind of scheduling math used to require looking up complex formulas online; now, connecting through Vinkius makes accurate rest planning available right where you work.

Core Capabilities

01 — Determine Ideal Wake Times

Calculates the best wake-up times given a planned bedtime.

02 — Plan Optimal Bedtimes

Figures out when you should fall asleep to meet a specific required wake-up time.

03 — Assess Sleep Quality

Checks if the total sleep duration you plan falls into optimal or insufficient categories.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/sleep-cycle-calculator** — connect your AI agent in three steps.

01 Tell your AI client what time you need to wake up, or when you plan to start your bedtime.

02 The MCP processes this input, running the necessary calculations for 90-minute cycles and latency periods.

03 It returns a list of ideal times—either suggested bedtimes or recommended wake-up windows.

The bottom line is you get mathematically optimized sleep schedules that fit your life.

Built For

This MCP is for anyone whose schedule depends on consistent, high-quality rest. Think shift workers who need to coordinate sleep with demanding jobs, students cramming for finals, or executives managing intense travel schedules. You're the person who knows that 'getting enough sleep' isn't just about counting hours.

Night Shift Worker

Needs to calculate optimal rest periods on days when their natural circadian rhythm is fighting their schedule.

Student/Researcher

Uses it before big exams or deadlines to ensure planned sleep windows are genuinely restorative.

Travel Consultant

Calculates necessary sleep adjustments when coordinating meetings across multiple time zones and varied schedules.

What Changes When You Connect

01 Plan bedtime around required wake-ups: If you know when you need to be functional, use the calculate_bedtimes tool. It tells you exactly what time you should start winding down so you can wake up on time and ready.

02 Minimize morning grogginess: Use calculate_wake_times to see all your ideal options if you set a bedtime. You'll pick a cycle that puts you at the natural end of a sleep phase, not in the middle of one.

03 Verify total rest duration: Don't trust simple math. run assess_sleep_window to check if 480 minutes is actually enough for deep recovery or if you need more time.

04 Save planning time: Instead of manually calculating complex cycles and latency, your AI client handles all the math instantly, letting you focus on what needs doing with your rest period.

05 Adapt to irregular schedules: Whether you're dealing with travel or late shifts, this MCP ensures your sleep schedule always aligns with biological reality.

Real-World Applications

The transatlantic traveler needs a quick bedtime fix.

A consultant landing in London at 9 AM knows they need to wake up by 7 AM local time, but wants to know what time she should even start preparing for sleep. She asks her agent to calculate_bedtimes using the target 7:00 AM wake-up time, instantly getting three optimal bedtime options (like 1:45 AM or 4:15 AM) that keep her aligned with natural cycles.

The student needs a guaranteed good night's sleep.

A college student has an 8-hour block of study time and estimates she will only get 360 minutes of sleep. She runs assess_sleep_window with 360 minutes and the system correctly flags it as insufficient, prompting her to adjust her schedule before she even hits the pillow.

The shift worker needs a reliable wake-up time.

A hospital orderly has to be awake at 10:30 AM but doesn't want to feel rough. They ask their AI client about calculate_wake_times based on an 8 PM bedtime, and the tool returns ideal windows like 12:45 PM or 02:15 PM, giving them reliable options that respect natural sleep cycles.

Coordinating rest across different zones.

A manager is planning a team retreat and needs everyone to be ready for an early start. She uses calculate_bedtimes with the target wake-up time of 6:30 AM, ensuring that every required arrival date has a recommended bedtime that maximizes quality sleep.

Patterns to Avoid

Calculating manually in a spreadsheet

✗ AVOID

Trying to calculate wake times by simply subtracting 90-minute blocks from the desired time, and forgetting to account for the initial latency period.

✓ INSTEAD

Use calculate_wake_times. This MCP automatically handles the full cycle math and the necessary sleep latency factor so you get accurate options without manual effort.

Relying on generic health articles

✗ AVOID

Reading an article that says 'try to get 7-9 hours of sleep' but gives no specific timing recommendations, leaving the user guessing which time slot will be optimal.

✓ INSTEAD

Use assess_sleep_window. Give it your actual total minutes, and the tool tells you if that duration is scientifically classified as Optimal or insufficient.

Using basic calendar reminders

✗ AVOID

Setting an alarm for 'wake up at 7 AM' without considering when the user went to bed. This often results in waking mid-cycle, leading to severe grogginess.

✓ INSTEAD

Use calculate_bedtimes first. By figuring out your ideal bedtime based on the required wake time, you make sure your entire night is optimized for quality rest.

The Right Fit

Use this MCP if your primary goal is scheduling physical rest and minimizing sleep inertia (groggy feelings). Specifically, use calculate_wake_times when you know your bedtime but want to find the best possible wake-up slots. Use calculate_bedtimes when you have a hard stop time (a meeting) and need to work backward for an optimal bedtime. Only run assess_sleep_window if you are comparing different total sleep durations. Don't use this MCP if you just need to track your sleep data—that requires a dedicated logging tool. Also, don't try to predict how long you *will* sleep; only calculate based on what duration is optimal or what bedtime fits a required wake-up time.

The struggle of calculating true rest cycles manually.

Right now, if you need to plan your sleep around an important meeting, you're stuck in a loop. You look up basic sleep cycle math—90 minutes—and try to work backward from your required wake-up time. Then you have to manually factor in the 15-minute latency period and figure out which combination of cycles actually works for your schedule. It’s tedious, prone to errors, and leaves you guessing about whether a simple 7 hours is truly 'enough.'

With this MCP, that math just disappears. You tell your agent what time you need to wake up, or when you're going to bed. The tool handles the complex cycle calculation and latency adjustment instantly. It delivers precise, actionable timing advice so you can stop guessing and start sleeping better.

Calculate ideal times with calculate_bedtimes.

Before this MCP, planning your night meant picking a random bedtime hoping it worked. You'd set an alarm for 7:00 AM and just assume you fell asleep enough time before that to wake up properly. If the required wakeup time was early, you often ended up sacrificing quality sleep just to meet the clock.

Now, using calculate_bedtimes gives you precise windows. It doesn't just tell you 'before 7:00 AM'; it tells you *when* you need to be asleep—like 23:15 or 04:15—to wake up feeling refreshed and ready.

Sleep Cycle Calculator: 3 Tools

These tools help you calculate optimal sleep timing, assessing if a duration is sufficient or recommending the best bedtimes for specific wake-up times.

#	TOOL	DESCRIPTION
01	`calculate_bedtimes`	Gets ideal bedtime options based on a required wake-up time.
02	`calculate_wake_times`	Calculates potential wake-up times if you know your planned bedtime.
03	`assess_sleep_window`	Determines whether a given total sleep duration is considered optimal for human rest.

See It in Action

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

U I want to go to sleep at 23:00. When should I wake up?

Based on a 23:00 bedtime, your ideal wake-up times are 00:45, 02:15, 03:45, 05:15, and 06:45.

U I need to wake up at 07:00. What time should I go to bed?

To wake up at 07:00, you should aim to fall asleep at 23:15, 01:45, or 04:15.

U Is 420 minutes of sleep enough?

A duration of 420 minutes is classified as Optimal for your sleep window.

Frequently Asked Questions

01 **Does the Sleep Cycle Calculator MCP account for latency?**

Yes. The tool automatically accounts for a standard 15-minute sleep latency period, ensuring that the calculated times are realistic to fall asleep at and wake up from.

02 **How do I use calculate_wake_times with this MCP?**

You provide your planned bedtime. The tool then returns multiple ideal wake-up times (e.g., 01:45, 03:15) that fall at the end of a natural sleep cycle.

03 **Is assess_sleep_window always accurate?**

It provides a classification based on established biological standards, telling you if the duration is Optimal or insufficient. It's a guideline, not a guarantee.

04 **Can I use calculate_bedtimes to plan for an early start?**

Absolutely. If you need to wake up at 5:00 AM, the tool will recommend ideal bedtime options that allow you to hit your target wake-up time while respecting sleep cycles.

05 **What if my schedule is highly irregular?**

You can still use this MCP. Just input your required wake-up time or planned bedtime for the day, and it will generate optimized options based on those specific inputs.

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 `"sleep-cycle-calculator": { "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

Sleep Cycle Calculator 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 →

INDEPENDENT PLATFORM DISCLAIMER

Vinkius is an independent platform and is not affiliated with, endorsed by, sponsored by, verified by, or otherwise authorized by Sleep Cycle Calculator. All third-party trademarks, logos, and brand names are the property of their respective owners. Their use in this document is strictly for informational purposes to identify service compatibility and interoperability.

DOCUMENT INFORMATION

Generated	June 2026
MCP Server	Sleep Cycle Calculator MCP
Server ID	`019f0489-8016-71f6-a6b5-5be7109c9acb`
Platform	Vinkius Cloud for AI Agents
Endpoint	`https://edge.vinkius.com/{token}/mcp`

LICENSE & USAGE

This document is generated automatically by the Vinkius PDF Engine. Content reflects the MCP server configuration at the time of generation and may change as updates are deployed. For the most current information, visit vinkius.com/mcp/sleep-cycle-calculator.