MCP SERVER | NO CODE | CLOUD HOSTED

Business Day Calculator MCP for AI Agents

Accurate Global Scheduling and International Workforce Planning

The Business Day Calculator MCP instantly handles complex date math for international scheduling. It projects deadlines, calculates work periods, and counts working days across 50+ countries by skipping weekends and local public holidays. Whether your team operates in the US, the Middle East, or Europe, this MCP gives your AI client accurate global timekeeping.

A+ Quality Score 100/100

date-calculation | business-days | holidays | global-calendar | workday-planner

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vinkius.com/mcp/business-day-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.

Business Day Calculator MCP

5 tools available
Cloud-hosted on Vinkius

Scheduling internationally is a headache. Standard date functions won't cut it when you have to account for different national holidays or non-standard weekend schedules. This connector solves that by giving your AI agent access to high-precision utility logic built for global workforce planning. You can accurately project deadlines, knowing the system handles everything from US federal holidays to specific regional calendar rules. Need to know how many working days passed between two dates in a country with unique weekends? It figures it out. The entire catalog of specialized tools is hosted and managed by Vinkius, giving you one place to connect your AI client to this global timekeeping power.

Core Capabilities

01 — Projecting Future Deadlines

Adds a specified number of working days to any given date, respecting local holidays and weekend rules.

02 — Calculating Past Work Periods

Subtracts a specific number of business days from a start date to determine an earlier work period end date.

03 — Counting Working Days Between Dates

Counts the exact number of working days that occur between two specified dates, factoring in country-specific holidays.

04 — Finding Next Available Workday

Determines the next calendar day that is a recognized business day for a given location.

05 — Generating Date Ranges

Creates a full list of all working days within a defined start and end date range.

One Click on Vinkius — From Prompt to Execution

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

01 You ask your AI client to calculate a schedule, providing the start date, the target country/region, and any specific business rules.

02 The MCP processes this request by running complex global calendar logic that skips weekends and public holidays according to the specified location's rules.

03 Your agent receives the precise result: a new projected date, or an accurate count of working days.

The bottom line is you get reliable, globally accurate scheduling data without having to consult multiple country-specific calendar websites.

Built For

This MCP is essential for anyone whose job involves coordinating people or projects across different time zones and national boundaries. It's perfect for operations analysts who dread manual spreadsheet checks, or project managers juggling international client deadlines.

Project Manager

Uses this MCP to set realistic, global milestones for deliverables, ensuring that team members in different countries aren't assigned tasks over holidays.

Operations Analyst

Calculates staffing needs and resource availability when scheduling operational windows across multiple international sites.

HR Specialist

Determines the actual working period for annual leave or training programs that span several countries with unique holiday schedules.

What Changes When You Connect

01 Avoid manual holiday checking. Use `add_business_days` to project deadlines that automatically skip public holidays, regardless of the country.

02 Calculate time gaps accurately. Need to know how many working days passed between two dates? The `count_business_days` tool gives you the exact number, ignoring non-working periods.

03 Handle reverse scheduling easily. Use `subtract_business_days` when planning back from a final deadline to set realistic project start dates.

04 Identify immediate next steps. If an employee misses a day due to a local holiday, `find_next_business_day` tells you exactly when they can resume work.

05 Map out entire periods at once. The `get_workday_range` tool delivers a full list of every working day, perfect for comprehensive resource planning.

Real-World Applications

Calculating Project Milestones Across Borders

A project manager needs to set a final delivery date that accounts for US holidays and the differing weekend structure in Mexico. The agent uses the Business Day Calculator MCP to ensure the projected deadline is achievable, resulting in a realistic schedule.

Analyzing Team Productivity Over Time

An operations analyst wants to measure how many actual working days passed between two dates for payroll purposes. The agent uses `count_business_days` to get the accurate count, avoiding errors caused by local bank or national holidays.

Determining Start Dates for Training Programs

An HR specialist needs to plan a 10-day training course starting after a major holiday in India. The agent uses `add_business_days` and specifies the region, getting a precise start date that skips all local holidays.

Finding Available Slots for Client Calls

A global sales team needs to schedule a follow-up call after an employee's leave. The agent uses `find_next_business_day` in the target country, immediately getting the first available working day.

Patterns to Avoid

Simple date subtraction

✗ AVOID

The user simply subtracts 10 days from a deadline using basic calendar math, ignoring that two of those days were actually public holidays.

✓ INSTEAD

Always use the `subtract_business_days` tool. This ensures the calculation correctly accounts for all local holidays and non-working weekends before projecting the earlier date.

Manually checking holiday lists

✗ AVOID

The user spends hours cross-referencing 50+ country holiday calendars to verify a single project timeline.

✓ INSTEAD

Rely on this MCP. By providing the target region, the tool handles the complex holiday overrides and regional calendar rules instantly.

Using generic date ranges

✗ AVOID

The user asks for all dates between January 1st and February 28th without specifying business days.

✓ INSTEAD

Use the `get_workday_range` tool. This generates a filtered list, giving you only the actual working days in that period.

The Right Fit

You should use this MCP if your scheduling needs require accurate date math across different international boundaries or non-standard work weeks. If you need to project deadlines or measure time spans where local holidays and unique weekend patterns matter, this tool is required. Don't use it if you only deal with single-country schedules that follow standard Saturday/Sunday weekends; a basic calendar function might suffice. However, never rely on simple date math for any global coordination effort. When in doubt about holiday rules or weekend structures (like Friday-Saturday patterns), default to using the `count_business_days` tool.

Business Day Calculator MCP for AI Agents: Solving Global Scheduling Pain

Right now, scheduling a project that crosses borders is pure administrative torture. You're clicking between Google Calendar, HR policy documents, and multiple country-specific holiday websites just to verify if a milestone date actually works. It’s tedious copy-pasting and cross-referencing.

With this MCP, you tell your AI agent the start date, the end date, and the region. The system handles all that complex global logic—skipping weekends, applying custom holiday overrides, and adjusting for diverse local calendar rules. You get a single, accurate timeline.

Business Day Calculator MCP for AI Agents: Optimizing Workforce Planning

Manual workforce planning forces you to calculate resource availability by manually removing holidays and weekends from massive spreadsheets. This process is slow, prone to human error, and takes hours.

Now, your agent uses the MCP's tools like `get_workday_range` or `count_business_days`. You instantly receive a filtered list or an accurate count of working days, making resource planning fast and reliable.

Business Day Calculator: 5 Tools for Global Date Arithmetic

Use these functions to add, subtract, count, or list business days accurately, factoring in holidays and weekends worldwide.

#	TOOL	DESCRIPTION
01	`add_business_days`	Adds a specified number of working days to a given date, respecting holidays and weekends.
02	`count_business_days`	Counts the precise number of business days that fall between two specific dates.
03	`find_next_business_day`	Finds the earliest possible working day following a specified date, adjusting for local time rules.
04	`get_workday_range`	Generates an exhaustive list of every single business day within a provided calendar range.
05	`subtract_business_days`	Subtracts a specified number of working days from a date, projecting backward into the work schedule.

See It in Action

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

U If I need to schedule a 5-week deep dive for the APAC team starting on Sept 1st in Australia?

Project Timeline: Q3/Q4 Planning

The next working day after September 1, 2024, is **September 2, 2024**. A full 5-week deep dive would conclude by:

- **Target End Date:** November 14, 2024
- **Total Working Days:** 23 days (This count excludes Australian public holidays and weekends.)

U How many actual working days are between Christmas Eve and New Year's Day in the UK?

UK Holiday Calculation Report

DATE RANGE	WORKING DAYS COUNT
Dec 24, 2024 – Jan 02, 2025	**3 days**

Note: This count adjusts for both Christmas Day and New Year's Day closures.

U Find the next business day after June 14th in UAE.

Next Available Working Day (UAE)

The next available working day is **June 17, 2024**.

This calculation confirms that Friday and Saturday are non-working days in the UAE, skipping those two dates entirely.

Frequently Asked Questions

01 **Does the Business Day Calculator MCP handle holidays for every country?**

Yes. It supports over 50 countries and accounts for complex regional differences in public holiday schedules, making global scheduling accurate.

02 **Can I find out how many working days are between two dates using the Business Day Calculator MCP?**

Absolutely. The tool counts only business days, skipping all weekends and recognized national holidays for the specified location, giving you a precise count.

03 **What if my company has custom holidays not listed in the calculator?**

The MCP allows for custom holiday overrides via JSON input. You can feed your specific list of company or local holidays to ensure 100% accuracy.

04 **Does this Business Day Calculator MCP work with non-standard weekends (like Friday/Saturday)?**

Yes, it supports diverse weekend structures. You can specify the region's pattern, ensuring that if a country uses a non-traditional weekend, the calculation respects it.

05 **How do I calculate a deadline date 10 working days from today?**

Simply use the tool to add business days. It will automatically advance the calendar by ten full workdays, skipping any holidays that fall in between and providing you with the correct target date.

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 `"business-day-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

Business Day 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 →

vinkius.com · support@vinkius.com

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