MCP SERVER | NO CODE | CLOUD HOSTED

NASA MCP

Access deep space science data via conversation.

NASA MCP connects your AI agent to NASA's massive collection of open APIs. Instantly pull everything from Earth satellite imagery and Mars rover photos to deep space images, asteroid tracking data, and technology patents—all through natural conversation. Stop navigating dozens of separate scientific websites; get the core space data you need instantly.

A+ Quality Score 100/100

astronomy | space-exploration | satellite-imagery | planetary-science | mars-rover

MAINTAINED BY VINKIUS CLOUD FOR AI AGENTS · JUNE 2026
vinkius.com/mcp/nasa

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.

NASA MCP

9 tools available
Cloud-hosted on Vinkius

Connecting your AI agent to NASA means you can talk to the entire archive of global space science. Need today's Astronomy Picture of the Day? You just ask. Want to track asteroids passing Earth this week, or check out historical satellite views of a specific coordinate? It works the same way. This MCP lets you pull data from deep-space images, browse photos taken by rovers on Mars, and search through NASA's patent database—everything is unified under one chat interface. Instead of opening ten different browser tabs to compile research, your AI client handles the retrieval. With Vinkius hosting this catalog, you get direct access to all these tools without needing developer credentials for every single endpoint. You simply ask your agent what data you need, and it pulls the images, metadata, and reports immediately.

Core Capabilities

01 — View Earth's historical satellite views

Retrieve Landsat 8 imagery or deep space EPIC photos for any specific geographic coordinate and date.

02 — Track planetary bodies and asteroids

Get a feed of Near-Earth Objects (NEOs), including size, velocity, and hazard ratings over time periods.

03 — Browse Mars rover photo archives

Search through photos taken by rovers like Perseverance or Curiosity, filtering by date, camera type, and location.

04 — Analyze academic media assets

Search NASA's massive image and video library using free text queries to find educational content.

05 — Research technology transfer

Find information on patented technologies or scientific discoveries available for licensing purposes.

One Click on Vinkius — From Prompt to Execution

Available at **vinkius.com/mcp/nasa** — connect your AI agent in three steps.

01 Subscribe to the NASA MCP and provide your free API key.

02 Your AI client connects through Vinkius, making all of NASA's APIs available in a single chat context.

03 You instruct your agent with natural language (e.g., 'Show me Mars photos from 2018') and receive structured data or images.

The bottom line is you use conversation to access massive, complex scientific databases that used to require expert API knowledge.

Built For

This MCP is for anyone who needs reliable, deep-dive space data without spending hours learning NASA's specific APIs. It serves researchers who need comparative imagery, students needing lesson material, and commercial developers looking at patent opportunities.

Academic Researcher

Needs to compare historical satellite views of a site with current data, or track asteroid movement over several years for a paper.

Educator/Curriculum Developer

Must quickly find specific Astronomy Picture of the Day (APOD) images and Mars rover photos to illustrate complex concepts in presentations.

Patent Attorney / Tech Consultant

Needs to search NASA's technology transfer database or patent records to identify commercially viable space technologies.

What Changes When You Connect

01 You get immediate access to specialized imagery. Instead of visiting multiple sites, you can use the `get_earth_imagery` tool and immediately pull Landsat 8 satellite views for any coordinate on Earth.

02 Tracking planetary threats is simple. The `get_neo_feed` tool gives you a clear list of Near-Earth Objects, showing their estimated size and hazard rating without complex calculations.

03 Researching space technology used to be slow. Now, the `search_patents` and `get_tech_transfer` tools let you find commercially available patents or licensed technologies in minutes.

04 You stop hunting through file directories for media assets. The `search_nasa_library` tool lets you use natural language queries against NASA's entire image and video catalog.

05 Comparing rovers is easy. You can run the `get_mars_photos` tool, filtering by different cameras (MAHLI vs. NAVCAM) or specific dates to compare data sets instantly.

Real-World Applications

A university curriculum needs comparative imagery.

The professor asks their agent: 'Compare the Landsat 8 view of this river basin from 2015 to today.' The MCP uses `get_earth_imagery` twice, providing two side-by-side views showing geographic changes over time.

A planetary defense group needs risk assessment.

The analyst asks: 'What asteroids are predicted within a 7-day window?' The agent uses `get_neo_feed`, providing the count, estimated diameter, and hazard classification for all relevant objects.

A startup needs IP scouting.

The founder asks: 'Find any NASA patents related to autonomous deep-sea exploration.' The agent calls `search_patents` and filters the results using keywords, showing licensing status immediately.

A journalist is writing about space history.

They ask for 'pictures of the Pillars of Creation and today's APOD.' The MCP uses both `get_apod` (for current data) and retrieves historical images, building a cohesive narrative.

Patterns to Avoid

Searching by general topic only

✗ AVOID

A user asks: 'Tell me about Mars.' This gives vague Wikipedia-style text with no actionable data or specific photos.

✓ INSTEAD

Be precise. Ask the agent to use `get_mars_photos` for a specific rover (e.g., Perseverance) and date range, or use `get_rovers` first to confirm which rovers are active.

Assuming data availability

✗ AVOID

A user asks: 'Show me all photos from the Mars rover last month.' The agent might fail because it needs a specific camera type.

✓ INSTEAD

Use `get_mars_rovers` first to confirm active rovers, then use `get_mars_photos`, specifying both the date range and one or two likely cameras (e.g., FHAZ).

Trying to find proprietary data

✗ AVOID

A user asks: 'What is the internal NASA strategy for deep space communications?' This data isn't in the public API.

✓ INSTEAD

Focus on what's searchable. Use `get_tech_transfer` or `search_patents` to find publicly available technology and research summaries.

The Right Fit

Use this MCP if your work requires integrating multiple, distinct data types—like combining satellite imagery with asteroid tracking or

patents with rovers' photos. You need a single conversational interface for disparate scientific domains. Don't use it if you are only looking for general background information; the AI agent will give you raw data feeds, not essays. If your goal is simply to read about space in a narrative format, you might find a standard LLM chat better. But if you need actionable metadata, image URLs, or specific sensor readings, this MCP is required.

Juggling NASA's Data Sources Is Painful.

Today, getting comprehensive space data means bouncing between the Landsat catalog, the APOD page, rover photo galleries, and specialized patent databases. You copy URLs here, paste coordinates there, then manually search a whole other site just to find related images. It’s slow, prone to human error, and requires deep knowledge of which API is even relevant.

With this MCP, you simply tell your agent what you need—'Show me the satellite imagery for this coordinate, and also check if there were any patents filed on it.' The AI handles the complex cross-referencing across multiple NASA systems. You get a single, comprehensive data package instantly.

The NASA MCP Delivers Structured Space Data.

You eliminate manual searching for Mars photos by using `get_mars_photos` and specifying the camera type. You stop calculating hazard risk manually; instead, you ask for an NEO feed, and it provides the data structure immediately.

The difference is that your agent doesn't just talk about space science; it *retrieves* it. It gives you structured data points, usable image URLs, and actionable patent abstracts.

NASA MCP: 9 Tools for Scientific Research

These tools give your AI client direct access to specific datasets across NASA's archives. Use them to pull images, track asteroids, and research scientific patents.

#	TOOL	DESCRIPTION
01	`get_apod`	Retrieves the Astronomy Picture of the Day (APOD) image, title, and explanation for a specified or default date.
02	`get_epic_images`	Gets full-disk Earth images from NASA's Deep Space Camera (DSCOVR), allowing filtering by date and color type.
03	`get_earth_imagery`	Retrieves satellite imagery of Earth using Landsat 8, requiring latitude and longitude coordinates for a specific date.
04	`get_mars_photos`	Browses photos taken by Mars rovers (Curiosity, Perseverance, etc.) filtered by camera type, date, and rover name.
05	`get_mars_rovers`	Pulls metadata about all active NASA Mars rovers to see which ones are operational and when they last reported data.
06	`get_neo_feed`	Generates a feed of Near-Earth Objects (asteroids), listing their size, velocity, and potential hazard status over a date range.
07	`get_tech_transfer`	Searches NASA's technology transfer records to find scientific discoveries or patents available for commercial licensing.
08	`search_nasa_library`	Performs a free-text search across NASA's vast media repository of images, videos, and audio files.
09	`search_patents`	Conducts a targeted query against NASA's patent database to find titles, numbers, abstracts, and availability status.

See It in Action

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

U Show me today's Astronomy Picture of the Day.

Today's APOD is 'Pillars of Creation Revisited' — a stunning new infrared image of the Eagle Nebula's iconic star-forming columns captured by the James Webb Space Telescope. The image reveals previously hidden protostars and dust structures.

U Show me photos taken by the Perseverance rover on Mars.

I found 25 photos from Perseverance taken on 2024-01-15. Images include views of Jezero Crater using the NAVCAM, close-up rock analysis with MAHLI, and terrain mapping with RHAZ. Each photo includes the Sol number and Earth date.

U Are there any potentially hazardous asteroids approaching Earth this week?

Over the next 7 days, NASA is tracking 18 near-Earth objects. 2 are classified as 'potentially hazardous'. The largest is approximately 340 meters in diameter (2024 AB1), passing at a safe distance of 4.2 lunar distances on Wednesday. No impact threats are known.

Frequently Asked Questions

01 **How do I get Earth satellite imagery using the NASA MCP?**

You use the `get_earth_imagery` tool. You must provide a specific longitude and latitude coordinate along with the desired date to pull Landsat 8 views.

02 **Can I check for hazardous asteroids with get_neo_feed?**

Yes, `get_neo_feed` tracks Near-Earth Objects. You specify a start and end date (up to seven days) and it returns data on size, velocity, and hazard status.

03 **What is the best way to find space patents with search_patents?**

Use `search_patents` and include specific keywords related to your field. The tool returns patent titles, numbers, abstracts, and whether they are available for licensing.

04 **How many rovers can I check photos from with get_mars_photos?**

You can filter by multiple camera types and specify the rover name. The tool aggregates data from Curiosity, Perseverance, Opportunity, and Spirit across various dates.

05 **Does NASA MCP help me find general space pictures?**

Yes, you use `search_nasa_library` with a free-text query to search the entire media collection of images, videos, and audio assets from NASA.

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 `"nasa": { "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

NASA 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	June 2026
MCP Server	NASA MCP
Server ID	`019d845d-ab05-72be-be6a-cfad09bfa665`
Platform	Vinkius Cloud for AI Agents
Endpoint	`https://edge.vinkius.com/{token}/mcp`

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