

MCP SERVER

NO CODE

CLOUD HOSTED

D2L Brightspace MCP for AI Agents

Administer course materials, manage enrollments, and track student grades.

D2L Brightspace MCP connects your AI client directly to your learning management system (LMS). Manage everything from user accounts and class enrollments to grade updates and content creation—all through natural conversation, without clicking through complex menus.

A+ Quality Score 98.33/100

course-management

student-records

lms-integration

enrollment-management

academic-administration

learning-analytics



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.

D2L Brightspace MCP

33 tools available

Cloud-hosted on Vinkius

This connector lets you manage nearly every administrative task within your D2L Brightspace environment using only your agent's chat interface. Instead of logging in, navigating deep menu structures, and copy-pasting data, you simply ask what you need done. You can create entirely new course offerings or duplicate existing content between different units. Need to fix an enrollment issue? It handles that. Want to check a student's progress on assignments or provide feedback directly? Your agent takes care of it. If you're using Vinkius, this MCP gives your client access to the entire Brightspace catalog through one connection point. You manage users by creating accounts and setting up permissions; you track grades by viewing assignment results or updating a score for an individual student. This means your AI workflow stays focused on teaching and research, not admin work.

Core Capabilities

01 — Manage Course Structure and Content

Create new course offerings, retrieve existing details, copy full courses between units, or list all root modules for a specific class.

03 — Track and Update Student Grades

Access detailed grade lists for a course, check individual student scores for specific assignments, or directly input updated grades for a user.

05 — Engage with Course Communication Tools

List active discussion forums and modules, create a new topic for an announcement, or post content directly into an existing thread.

02 — Handle User Accounts and Roles

Search the user directory to find accounts, create brand-new users, update their personal data, or manage system roles and permissions.

04 — Control Enrollments and Organizational Units

Add users to courses (enrollment), remove them from classes, create new organizational units, or view the structure of your academic hierarchy.

One Click on Vinkius — From Prompt to Execution

Available at vinkius.com/mcp/d2l-brightspace — connect your AI agent in three steps.

- 01 Subscribe to this MCP on Vinkius and provide your Brightspace Host URL and Access Token.
- 02 Connect the MCP to your preferred AI client (like Cursor or Claude).
- 03 Ask your agent natural language questions, such as 'What is John Doe's grade in Module 3?' The agent executes the necessary actions through the connector and provides the result.

The bottom line is that you tell your AI client what administrative action to take, and it handles the connection details and API calls to Brightspace for you.

Built For

Anyone spending too much time clicking through academic software menus needs this. It's built for LMS Administrators who spend hours setting up new courses; Instructors who are tired of checking student progress across multiple tabs; and Academic Researchers needing to pull raw data from course records.

LMS Administrator

Automating user creation, managing organizational unit structures, or handling bulk enrollment changes for new academic terms.

Instructor/Professor

Reviewing student submissions, providing detailed feedback on assignments, and quickly checking a student's overall grade status without leaving the chat window.

Academic Researcher

Extracting specific course data points or assessment metrics (like quiz attempts) in natural language so they can be immediately used for analysis.

What Changes When You Connect

- 01 Save time running reports. Instead of manually checking grade lists or listing submissions, you can ask your agent to compile a summary report on performance for a cohort.

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- 02 Maintain consistent content. Use the `copy_course` tool to duplicate entire course structures and then use your agent to update specific modules automatically, saving hours of setup time.

 - 03 Simplify user lifecycle management. You no longer need to jump between directories; you can create new users (`create_user`) or modify roles (`update_user`) directly through a single prompt.

 - 04 Improve communication flow. Need to make an announcement? Instead of finding the correct module, use your agent to `create_topic` or `create_post` right where it needs to go.

 - 05 Get data instantly for analysis. You can pull complex information, like all quiz attempts (`list_quiz_attempts`) and student grades (`get_user_grade`), without building custom database queries.
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Real-World Applications

Updating Grades After Finals

The grading coordinator has a spreadsheet of final scores. Instead of logging in 50 times to update the grades, they prompt their agent: 'Update John Doe's grade on Assignment X to 92%.' The agent handles the `update_user_grade` call instantly.

Investigating Student Progress

A professor notices a student is struggling. They ask their agent: 'Show me all of Sarah Smith's submissions and her grades on the last five modules.' The agent calls `list_submissions` and `get_user_grade`, giving an immediate performance snapshot.

Onboarding a New Department

An administrator needs to set up an entirely new department. They ask their agent to 'Create a new organizational unit called History Dept' and then use it to `create_course` offerings for the first three classes, automating the setup.

Course Refresh and Updates

It's time to update a course from last year. Instead of rebuilding everything, the instructor prompts: 'Copy the structure for CS 201 into the new Spring semester unit.' The agent uses `copy_course` immediately.

Patterns to Avoid

Manual Role Management

✗ AVOID

Trying to manually change a user's role from 'Student' to 'TA' by navigating through the Admin dashboard and clicking multiple times.

✓ INSTEAD

Use your agent to call ``update_user`` with the specific ID and the new desired system role. This is faster, more reliable, and logs the action automatically.

Overwriting Course Data

✗ AVOID

Attempting to create a whole new course when all you really needed was a slightly updated version of last semester's content.

✓ INSTEAD

Don't use ``create_course``. Instead, ask your agent to ``copy_course`` from the old unit. Then, refine just the modules or assignments you need.

Forgetting User Context

✗ AVOID

Asking the AI to update a grade without specifying which class and which student's record it belongs to.

✓ INSTEAD

Always provide context. Prompt: 'Update Jane Smith's grade in Course XYZ for Assignment Alpha.' The agent uses ``get_user_grade`` first, ensuring accuracy before calling ``update_user_grade``.

The Right Fit

Use this MCP if your workflow requires interacting with Brightspace's core administrative functions: user records, grade books, course scaffolding, or content organization. It excels at handling the 'where' and 'who' of academic data.

Don't use it if you only need to read static reports that are already exported into a CSV file (use a generic data connector instead). Also, don't rely on it for complex external integrations; while it manages LTI deployments (`create_lti_deployment`), it won't run the actual third-party tool. If your primary goal is simply communicating with users outside of Brightspace (e.g., sending emails), use a dedicated messaging connector instead.

D2L Brightspace MCP: Managing User Accounts and Roles in Your LMS

Right now, managing user accounts feels like navigating a sprawling maze of permission levels. You have to check if the person is registered, what their existing role is, and whether they need an account created at all—it's clicks after endless clicking.

With this MCP, you just ask your agent: 'Create a new TA account for Jane Doe with Instructor-level read/write access.' The agent handles checking permissions and calling `create_user` or `update_user` in one step. You get the account set up, instantly.

D2L Brightspace MCP: Tracking Student Grades and Submissions

Checking student progress is usually a nightmare of jumping between grade books, assignment folders, and quiz reports. You spend minutes aggregating data just to see if someone passed the module.

Now, you ask your agent: 'Give me John Doe's overall grade for Module 5.' The system automatically calls `get_user_grade` and aggregates all necessary scores, giving you a clear result without opening a single tab.

D2L Brightspace: 33 Tools for Academic Administration

Use these tools to orchestrate complex academic tasks like building courses, managing student grades, or updating user permissions with natural language prompts.

#	TOOL	DESCRIPTION
01	<code>copy_course</code>	Starts a job to duplicate an entire existing course structure into a new one.
02	<code>create_course</code>	Creates a brand-new, empty course offering within the Brightspace system.
03	<code>create_enrollment</code>	Automatically signs a specific user into a designated organizational unit or class.
04	<code>create_lti_deployment</code>	Sets up a new integration point for external educational tools using LTI Advantage standards.
05	<code>create_org_unit</code>	Builds and names custom organizational units to categorize course materials or departments.
06	<code>create_post</code>	Adds a new piece of content, like an announcement, into a discussion thread or topic.
07	<code>create_topic</code>	Starts an entirely new conversation topic within a specific course forum.
08	<code>create_user</code>	Generates and adds a completely new user account to the Brightspace system.
09	<code>delete_enrollment</code>	Removes a specific user's access from an organizational unit or course class.
10	<code>get_course_template</code>	Retrieves metadata about the standard template used for creating courses.
11	<code>get_course</code>	Pulls all current details and settings for a specified course unit.
12	<code>get_org_unit</code>	Retrieves the properties and structure of an organizational unit.
13	<code>get_user_grade</code>	Fetches a user's specific grade result for one particular assignment object.
14	<code>list_assignment_folders</code>	Lists all the folder locations where students submit their assignments (dropboxes).

#	TOOL	DESCRIPTION
15	<code>list_forums</code>	Retrieves a list of active discussion forums available in a course.
16	<code>list_grades</code>	Pulls a comprehensive list of all possible grade objects for the entire course.
17	<code>list_legacy_lti_links</code>	Lists older, deprecated links used by external learning tools (LTI 1.1).
18	<code>list_lti_registrations</code>	Retrieves a list of all modern LTI Advantage tool registrations.
19	<code>list_my_eportfolio_objects</code>	Displays the current collection of artifacts and achievements stored in a user's digital portfolio.
20	<code>list_my_enrollments</code>	Checks which courses or units a specific user is currently enrolled in.
21	<code>list_org_unit_children</code>	Shows all the sub-units that belong beneath a main organizational unit.
22	<code>list_quiz_attempts</code>	Retrieves the records of attempts made by users on a specific quiz.
23	<code>list_quizzes</code>	Lists all quizzes that are part of a course module or unit.
24	<code>list_roles</code>	Retrieves and lists every defined system role (e.g., Student, Instructor, Admin) available in Brightspace.
25	<code>list_root_modules</code>	Shows the main, top-level content modules that organize course material.
26	<code>list_submissions</code>	Pulls a list of all submitted student work for a particular assignment folder.
27	<code>list_surveys</code>	Retrieves a list of any surveys or feedback forms attached to the course.
28	<code>list_users</code>	Searches and pages through all registered user accounts in the system.
29	<code>provide_feedback</code>	Adds specific, private feedback notes to a student's submitted assignment work.
30	<code>update_user_grade</code>	Changes the recorded grade score for any user on a given assessment object.
31	<code>update_user</code>	Modifies personal details, roles, or profile information for an existing user account.
32	<code>upload_eportfolio_artifact</code>	Allows a user to upload a file artifact (like a paper or presentation) into their digital portfolio.

#	TOOL	DESCRIPTION
33	get_whoami	Retrieves the identity and context details of the user currently making the request.

See It in Action

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

U What is the full list of roles available to me in Brightspace?



System Roles Available:

- **Student:** View content, submit assignments.
- **Instructor:** Grade submissions, create modules, manage discussions.
- **Admin (Superuser):** Manage all users and system settings.
- **TA:** Limited grading access, assist instructors.

Let me know if you need to check which roles are currently assigned to the History department.

U I need to add a new course for Fall 2025. Can you help with the setup?



Sure thing. I've started the process:

1. **Course Created:** 'History of Rome: Fall 2025'
2. **Template Applied:** Used template ID 8821.
3. **Next Steps:** Do you want me to copy content from last year, or should I wait for module details?

Please confirm if you want to run `copy_course` now.

U Can you enroll the new cohort of 20 students into my main unit?



Enrollment Status Report:

- Successfully enrolled: 18 users.
- Pending enrollment (Needs manual review): 2 users (IDs 9001, 9002).
- Failed to enroll: 0 users.

The two pending accounts might need their roles updated first. Let me know if you want to try updating them.

Frequently Asked Questions

01 Does the D2L Brightspace MCP handle grade updates for large groups of students?

Yes, it can efficiently manage grades for multiple users. You can ask your agent to check a list of student records and update their scores across several assignments using one prompt. This saves massive amounts of time compared to manual entry.

02 How do I use the D2L Brightspace MCP to create new courses?

You tell your agent what kind of course you need, and it handles the initial creation by calling the `create_course` tool. You can also have it copy an existing structure using `copy_course` if you're updating old material.

03 Can I use this MCP to manage user accounts for my department?

Absolutely. The Brightspace MCP lets you create brand-new users, check who is already registered, and even update their roles or personal details using tools like `create_user` and `update_user`. It's great for onboarding.

04 What if I need to add a new discussion topic to a course forum?

You can ask your agent directly. Just prompt it with the context, 'Create a new module on advanced topics.' The MCP handles creating the necessary structure or posting the content into an existing area.

05 Is this D2L Brightspace MCP good for academic research data extraction?

It's excellent. You can ask your agent to pull specific metrics, such as listing all quiz attempts (`list_quiz_attempts`) or retrieving a user's full grade history across multiple assignments. This makes raw data accessible via chat.

06 Does the D2L Brightspace MCP work with any AI client?







Yes, this MCP is compatible with all major MCP-compatible clients, including Claude, Cursor, and Windsurf. You connect it once in your Vinkius catalog to give your agent access regardless of which tool you use next.

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>"d2l-brightspace": { "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

D2L Brightspace 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](https://cloud.vinkius.com) →

vinkius.com · support@vinkius.com

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