

ProctAI × D2L Brightspace

Admin Deployment & Persona Guide

How to deploy ProctAI as an LTI Advantage tool in D2L Brightspace, and what each persona — Brightspace Admin, ProctAI Admin, Instructor, Learner — Actually does with it.

STATUS	Screenshot-verified against a live tenant
TENANT	fpoint.d2l-partners.brightspace.com
VERIFIED	2026-08-05
INTEGRATION TYPE	LTI 1.3

1 • Architecture at a Glance

ProctAI is a proctoring wrapper, not an exam host. Brightspace still owns the quiz; ProctAI launches via LTI 1.3, wraps the quiz in a monitored session — webcam, screen share, AI detection — and, where grade passback is configured, writes a score back to the Brightspace gradebook via LTI Assignment and Grade Services (AGS).

Instructor adds "ProctAI Exam (LTI 1.3)" activity to a course (Deep Linking)

↓

Learner clicks the activity → OIDC login → LTI launch → ProctAI check-in

↓

ProctAI monitors the session while the Brightspace quiz is completed

↓

Grade (optional, via AGS) flows back into the Brightspace gradebook

All ProctAI endpoints live on a single host, driven by one backend setting (Lti:ToolIssuer). As of this writing:

<https://exam.ProctAI.backpack.education>

Every field in this guide that asks for a ProctAI URL uses this host. See Section 8 (Troubleshooting) for what breaks if it's inconsistent across fields.

PERSONA	ROLE
Brightspace Admin	Registers the tool, creates the deployment, owns the LTI Advantage config
ProctAI Admin	Registers Brightspace as a platform, manages proctoring profiles
Instructor	Adds the activity to a course via Deep Linking, sets quiz URL & profile
Learner	Clicks the activity, checks in, completes the monitored exam

2 · Register the Tool

Where: Admin Tools → External Learning Tools.

2.1 — Open External Learning Tools

Navigate to `https://{your-brightspace-domain}/d2l/lms/lti/index`. This page lists both the legacy LTI 1.0/1.1 tools (“Manage Tool Links (Legacy)”) and LTI Advantage registrations/deployments.

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External Learning Tools

Help

LTI Advantage

Manage Tool Links (Legacy)

Manage Tool Providers (Legacy)

Migration Log

You can now migrate from Legacy LTI

Learn More

New Deployment

Enable

Disable

All

Enabled

Disabled

Registration

Search...

2 items in the list.

☐	Deployment Name ▲	Registration Name	Enabled Extensions	Last Modified Date	Status
☐	ProctorPro Deployment	ProctorPro	✓ Assignment and Grade Services ✓ Names and Role Provisioning Services	4/1/2026 3:04 AM	Enabled
☐	ProctorPro Exam Deployment	ProctorPro Exam Platform		3/26/2026 2:33 PM	Enabled

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20 per page

Fig. 2.1 — External Learning Tools, with LTI Advantage selected in Tool Navigation.

2.2 — Register the Tool

Go to **Registrations** (`/d2l/le/ltiadvantage/registrations/home`) and click **Register Tool**.

This is the single most important screen in the whole integration — every field here must match what ProctAI's backend actually sends and expects.

Edit ProctorPro

Enabled



Name *

ProctorPro

Description

AI-powered proctoring for secure assessments

Domain *

https://exam.proctorpro.backpack.education

Redirect URLs *

https://exam.proctorpro.backpack.education/api/lti/launch

[+ Add Redirect URL](#)

OpenID Connect Login URL *

https://exam.proctorpro.backpack.education/api/lti/login

Target Link URI

https://exam.proctorpro.backpack.education/api/lti/launch

[Save and Close](#) [Save](#) [Cancel](#)

Redirect URL:

https://exam.proctorpro.backpack.education/api/lti/jwks

Extensions

[What are Extensions?](#)

- ☒ Assignment and Grade Services
- ☒ Names and Role Provisioning Services
- ☐ Platform Notification Service
- ☐ Asset Processor

Roles

- ☒ Send Institution Role 

Substitution Parameters

[What are Substitution Parameters used for?](#)

Name *

Value *

proctorpro_quiz_url \$ResourceLink.description

[+ Add Substitution Parameter](#)

Custom Parameters

[What are Custom Parameters used for?](#)

No items found.

[+ Add Custom Parameter](#)

Brightspace Registration Details

Client Id

6ebdd826-c7b4-41d7-a615-4f8d51fc174d 

Brightspace Keyset URL

https://fpoint.d2l-partners.brightspace.com/d2l/.well-known/jwks 

Brightspace OAuth2 Access Token URL

https://auth.brightspace.com/core/connect/token 

OpenID Connect Authentication Endpoint

https://fpoint.d2l-partners.brightspace.com/d2l/lti/authenticate 

Brightspace OAuth2 Audience

https://api.brightspace.com/auth/token 

Issuer

https://fpoint.d2l-partners.brightspace.com 

[View Deployments](#)

Fig. 2.3 — Registration edit form, with the two-row Redirect URLs field and Brightspace-generated Registration Details.

FIELD	VALUE	NOTES
Name	ProctAI	Display name only.
Description	AI-powered proctoring for secure assessments	Free text.
Domain	exam.ProctAI.backpack.education	Must be the host ProctAI's backend actually issues from — see Lti:ToolIssuer in §8.
Redirect URLs	https://exam.ProctAI.backpack.education/api/lti/launch	Supports multiple rows (“+ Add Redirect URL”). Keep the legacy bare-domain URL registered too, so a future host migration degrades gracefully instead of hard-failing every LMS at once.
OpenID Connect Login URL	https://exam.ProctAI.backpack.education/api/lti/login	Brightspace redirects the browser here first, on every launch.
Target Link URI	https://exam.ProctAI.backpack.education/api/lti/launch	Default landing URL. Individual deployment links can override this per-activity (§4) — and if they do, must match this host too.
Keyset URL	https://exam.ProctAI.backpack.education/api/lti/jwks	Where Brightspace fetches ProctAI's public signing key to verify outbound tokens.
Extensions	Assignment and Grade Services ✓, Names and Role Provisioning Services ✓	Enables grade passback (AGS) and roster sync (NRPS).
Roles	Send Institution Role ✓	So ProctAI can tell Instructor from Learner from the launch claims.
Substitution Parameters	ProctAI_quiz_url → \$ResourceLink.description	Optional. Not required if you configure the quiz URL via Deep Linking instead (§6).

Click Save and Close. Brightspace then displays Brightspace Registration Details — copy these into ProctAI's own admin (§5):

BRIGHTSPACE-GENERATED VALUE	WHERE IT GOES IN PROCTAI
Client Id	LTI Platform → Client ID
Brightspace Keyset URL (.../d2l/.well-known/jwks)	LTI Platform → JWKS URL
OAuth2 Access Token URL (.../core/connect/token)	LTI Platform → OAuth2 Token URL
OIDC Authentication Endpoint (.../d2l/lti/authenticate)	LTI Platform → OIDC Auth URL
Issuer (https://{your-domain})	LTI Platform → Issuer

A constraint worth knowing up front: Brightspace will not let two enabled registrations share the same Domain. If your tenant already has another registration sitting on the same host, saving this form fails with “Domain is already in use for another enabled registration.” Disable or re-domain the other one first.

3 • Create a Deployment

A Registration is the tool identity (client_id, keys, URLs); a Deployment is a specific instance of that tool made available to specific org units. From the registration's detail page, click View Deployments, or go to Deployments in the LTI Advantage view switcher and click New Deployment.

Edit ProctorPro Deployment

Enabled



Auto Migrate Links



Tool *

ProctorPro

Name *

ProctorPro Deployment

Description

AI-powered proctoring deployment for fpoint

Extensions

[What are Extensions?](#)

- ☒ Assignment and Grade Services
- ☒ Names and Role Provisioning Services
- ☐ Platform Notification Service
- ☐ Context Copy Notice

Save and Close

Save

Cancel

Security Settings

Select the information to share with the tool:

- ☒ User Information
 - ☒ Name
 - ☒ First Name
 - ☒ Middle Name
 - ☒ Last Name
 - ☒ Email
 - ☒ User ID
 - ☒ Username
 - ☒ Org Defined Id
- ☒ Classlist including users not known to this deployment

Configuration Settings

- ☒ Open as External Resource
- ☒ Grades created by LTI will be included in Final Grade
- ☒ Auto Create Grade Items

Substitution Parameters

[What are Substitution Parameters used for?](#)

Name *	Value *
proctorpro_quiz_url	\$ResourceLink.description

+ Add Substitution Parameter

Custom Parameters

[What are Custom Parameters used for?](#)

Name *	Value
proctorpro_quiz_url	https://fpoint.d2l-partners.brightspace.com

+ Add Custom Parameter

Make tool available to:

Add Org Units

The Organization: fpoint	×
The Course Template: Brightspace Bulk tools container, ct_bulktools_d2l	×
The Course Template: Brightspace Implementation container, ct_implementation_d2l	×
The Course Template: Conversions Archive Container, ct_conversions_d2l	×
The Semester: Converted, sem_courseconversion_d2l	×
The Course Template: Brightspace Samples container , ct_brightspace_sandboxes_sb	×
The Course Offering: Brightspace Bulk Tools, BCC_CCB_BCE_d2l	×
The Department: Brightspace Courses*, dept_BrightspaceCourses_d2l	×
The Department: Brightspace Learning Area*, dept_Brightspace_Training_d2l	×
The Semester: Brightspace, sem_implementation_utilities	×

Fig. 3.1 — Deployment detail, with Extensions, org-unit availability, and the Deployment Id.

FIELD	VALUE
Deployment Name	ProctAI Deployment
Description	e.g. AI-powered proctoring deployment for {your institution}
Extensions	Match the registration: Assignment and Grade Services ✓, Names and Role Provisioning Services ✓
Make tool available to	The Organization (root), or specific Departments / Course Templates / Course Offerings

Save, and note the Deployment Id shown at the bottom — this is the `lti_deployment_id` ProctAI's backend records against each proctoring session, and it's what you'll need if you ever need to trace a launch or file a support ticket.

PERSONA • BRIGHTSPACE ADMINISTRATOR

4 • Deployment Links

Click View Links on the deployment to see — and, if troubleshooting, edit — every quicklink/activity type created against this deployment.

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LTI Advantage Deployments > ProctorPro Deployment > Links

Links

New Link

Enable

Disable

Filter by Type

Search...

All

Enabled

Disabled

1 item in the list.

☐	Link Name ▲	Last Modified Date	Status	Type
☐	ProctorPro Exam (LTI 1.3)	3/26/2026 3:07 PM	Enabled	Deep Linking Quicklink

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Fig. 4.1 — Links list under a deployment.

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Awards Discover Quick Eval Brightspace Help

LTI Advantage Deployments > ProctorPro Deployment > Links > ProctorPro Exam (LTI 1.3)

Enabled
☒

Name *

ProctorPro Exam (LTI 1.3)

URL *

https://proctorpro.backpack.education/api/lti/launch

Description

Type

Deep Linking Quicklink

Width
800
Height
600

Substitution Parameters

What are Substitution Parameters used for?

No items found.

+ Add Substitution Parameter

Save and Close

Save

Cancel

What are Custom Parameters used for?

Name *

Value

proctorpro_quiz_urlhttps://fpoint.d2l-partners.brightspace.com

+ Add Custom Parameter

Fig. 4.2 — Individual link edit form.

FIELD	PURPOSE
Name	Display name for this quicklink.
URL	The target_link_uri sent for launches through this specific link — a per-link override of the registration's Target Link URI. If it drifts out of sync with the registered host, launches through this link fail even though the registration itself is correct.
Type	Deep Linking Quicklink for the type instructors add via Content → Add Existing (§6); Basic Launch for a static single-purpose link.
Custom Parameters	e.g. ProctAI_quiz_url → a specific quiz URL, if pinning this link to one course's quiz.

Most institutions never need to touch this screen directly — it exists mainly for troubleshooting one broken activity, since a stale URL here can't be fixed by re-saving the registration (see §8).

5 • ProctAI Tenant Administrator

Where: ProctAI Admin app → **LTI Platforms**.

No screenshot captured in this pass — this UI wasn't exercised live in the same session as the Brightspace screens above. Fields below are current as of the codebase.

- 1. Log in to the ProctAI Admin app (<https://admin.ProctAI.backpack.education>).
- 2. Go to LTI Platforms → Add Platform.
- 3. Enter the fields below, then save and confirm the platform shows Active.

FIELD	VALUE
Platform Name	A label for your institution, e.g. {Institution} Brightspace
Platform Type	Brightspace
Issuer	From Brightspace's registration details, e.g. https://fpoint.d2l-partners.brightspace.com
Client ID	From Brightspace registration details
Deployment ID	From the Brightspace deployment (§3)
OIDC Auth URL	Brightspace's OpenID Connect Authentication Endpoint
OAuth2 Token URL	Brightspace's OAuth2 Access Token URL
JWKS URL	Brightspace's Keyset URL

Optionally create/select a Proctoring Profile — this determines AI monitoring strictness (face detection thresholds, allowed objects, audio sensitivity) and is what instructors pick from when configuring an activity (§6).

6 • Instructor / Content Author

Where: Course → Content.

6.1 — Create a Unit

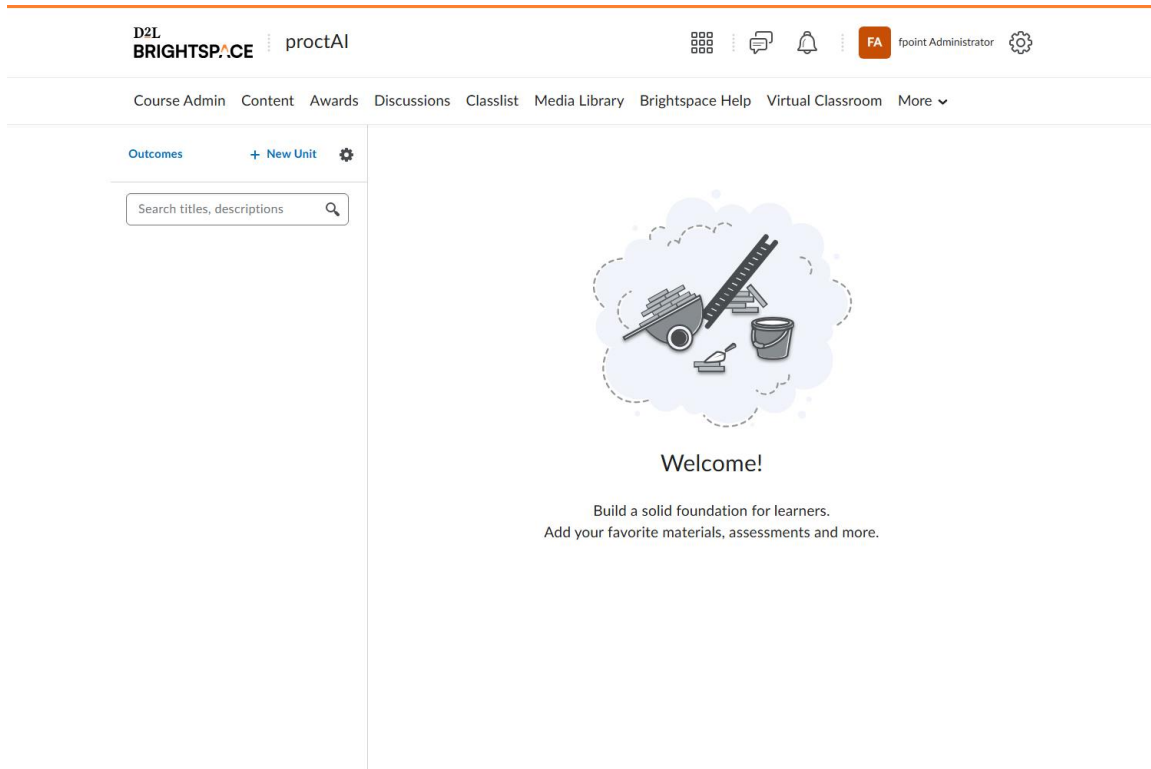


Fig. 6.1 — Empty Content area; click + New Unit to begin.

Click + New Unit, name it (e.g. "Exams" or "Midterm"), and save.

6.2 — Add the ProctAI Activity

Inside the unit, click Add Existing. Because ProctAI is registered with Deep Linking enabled, it appears as its own named card, not just a generic "External Tool Activity":

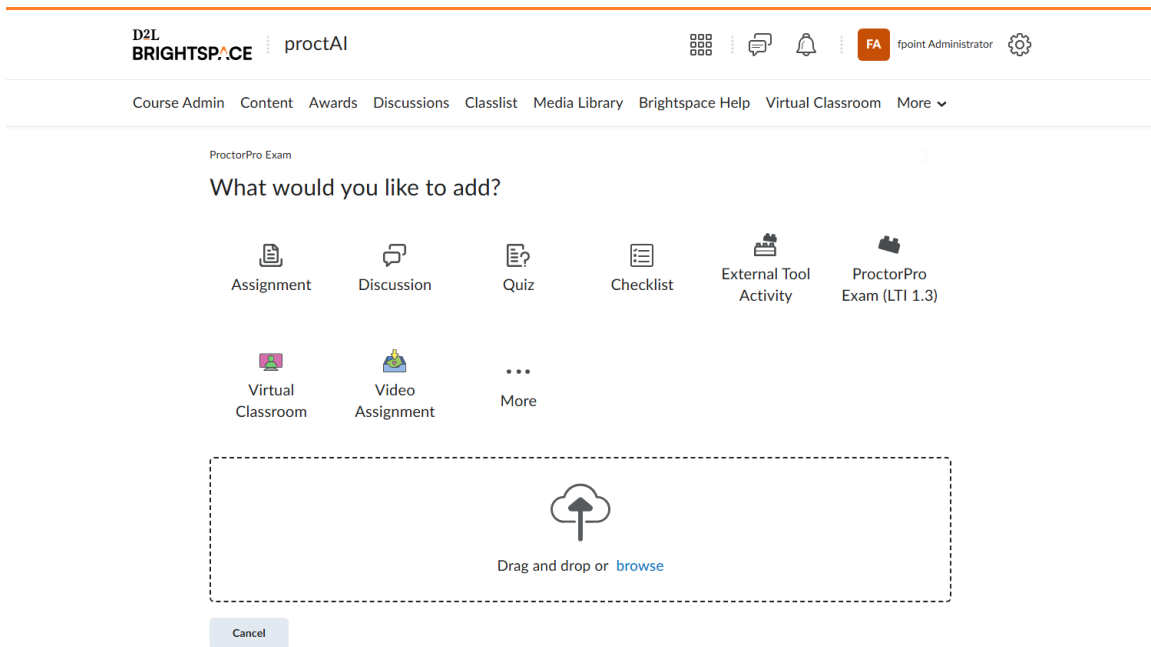


Fig. 6.2 — Activity picker, with "ProctAI Exam (LTI 1.3)" as its own card.

6.3 — Configure the Assessment

This next screen is served live by ProctAI itself over the LTI Deep Linking flow — it's not a Brightspace form:

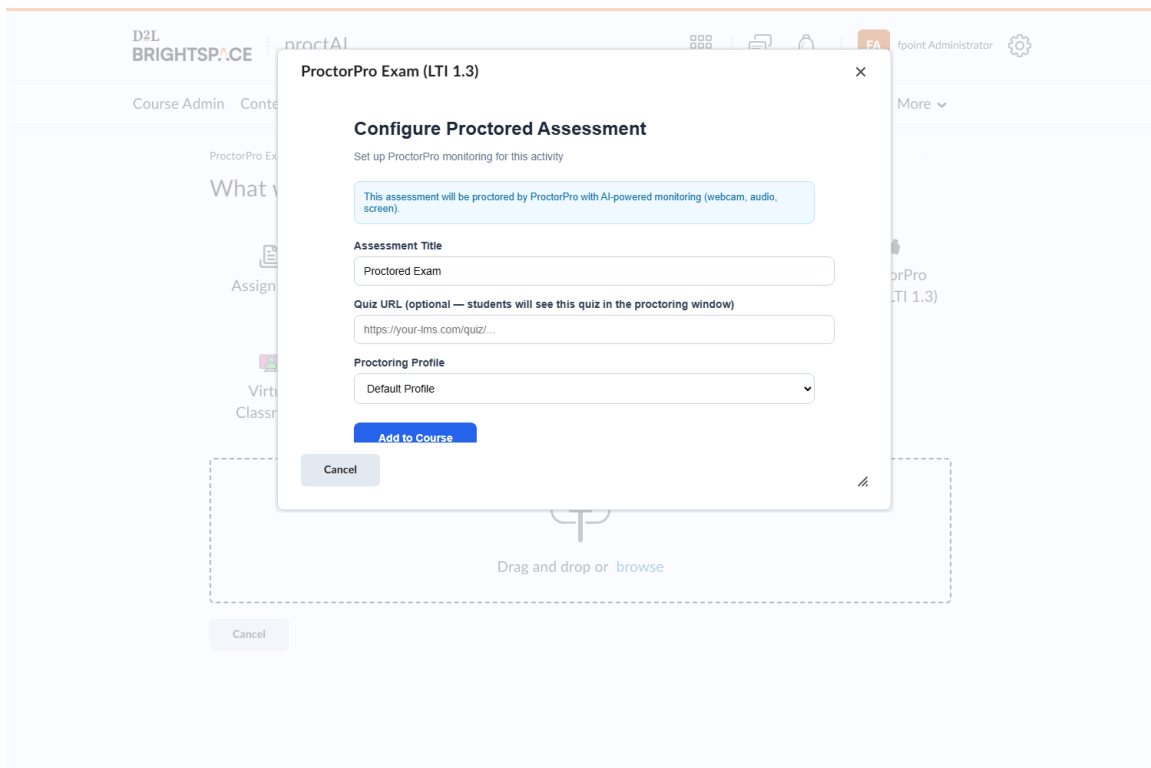


Fig. 6.3 — ProctAI's own Deep Linking configuration screen, rendered inline in Brightspace.

FIELD	WHAT IT DOES
Assessment Title	Becomes the Content topic's title, and the gradebook column name if grade passback is enabled.
Quiz URL (optional)	The Brightspace quiz students complete inside the monitored session. Leave blank if not wrapping an existing quiz.
Proctoring Profile	Which monitoring configuration (\$5) applies to this activity.

Click Add to Course. ProctAI creates a signed LTI Deep Linking response; Brightspace turns it into a new Content topic in the unit you started from.

6.4 — Publish It

New topics are created Hidden by default. Select the topic, then flip the Hidden/Visible toggle in the toolbar — do this for both the containing Unit and the Topic itself:

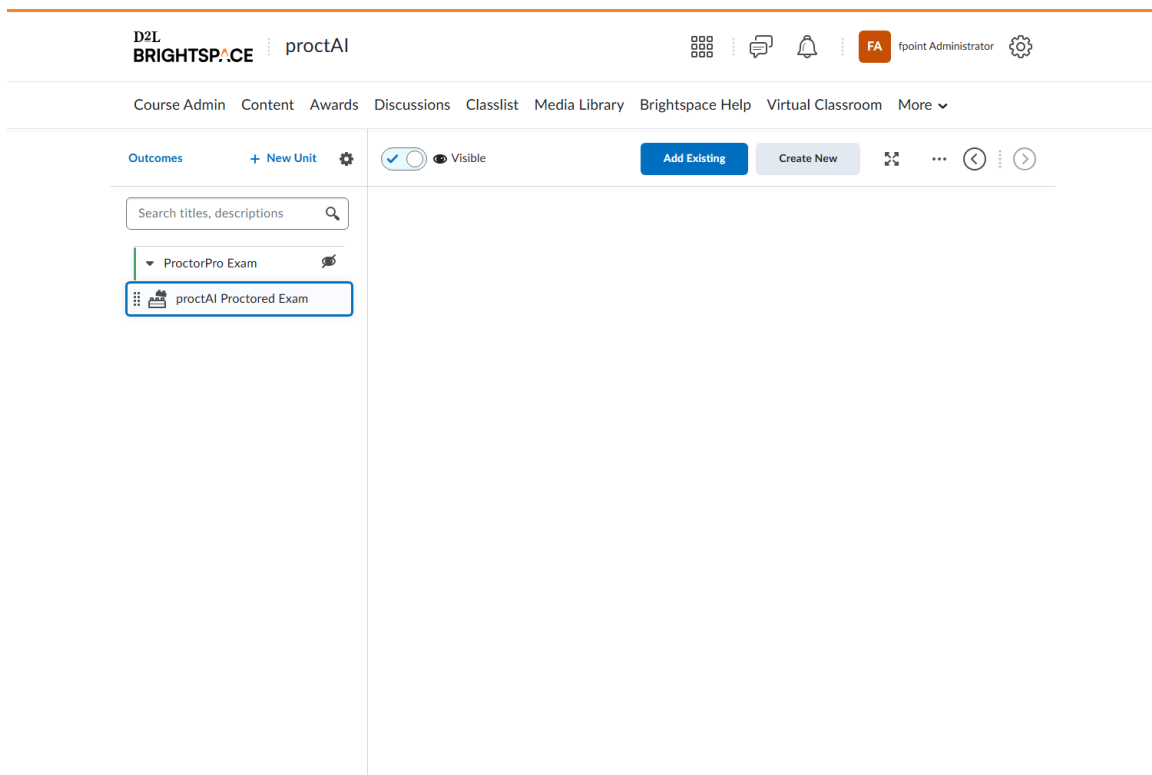


Fig. 6.4 — Visibility toggle, switched to Visible.

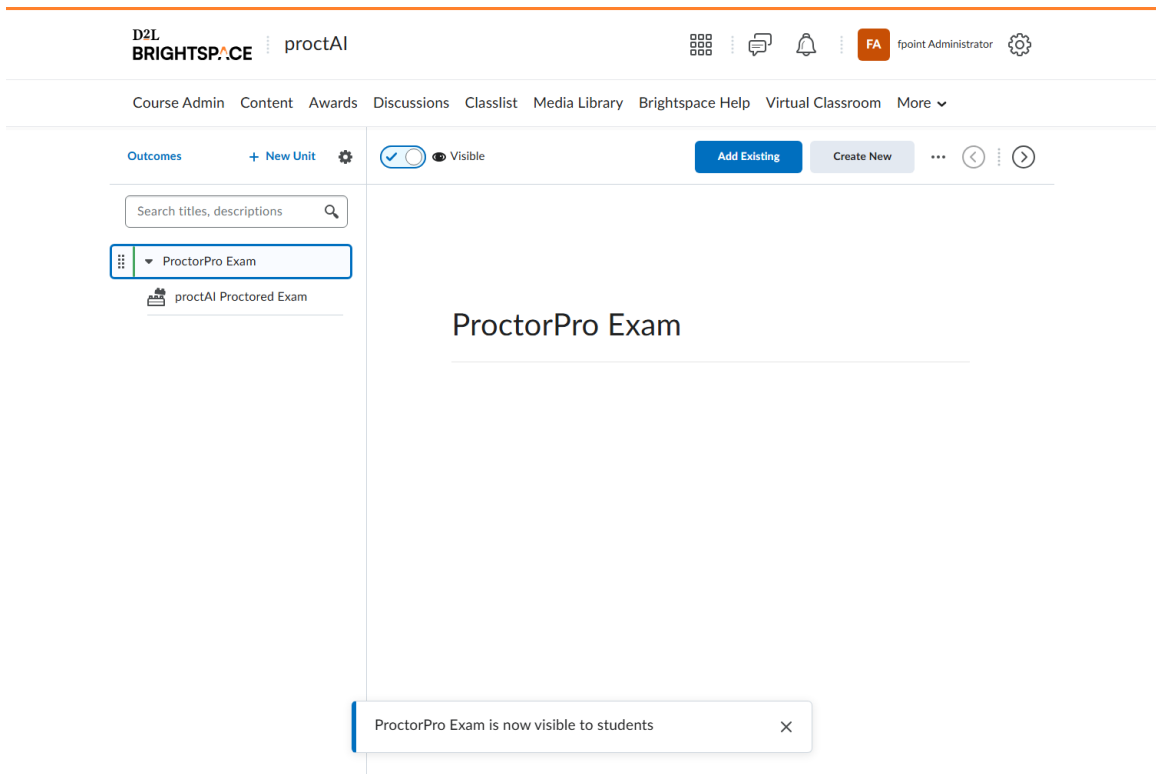


Fig. 6.5 — Brightspace confirms each visibility change with a toast.

6.5 — Other Activity Settings

Selecting the topic and clicking Edit Activity opens availability, completion, and feedback settings — standard Brightspace topic settings, not ProctAI-specific:

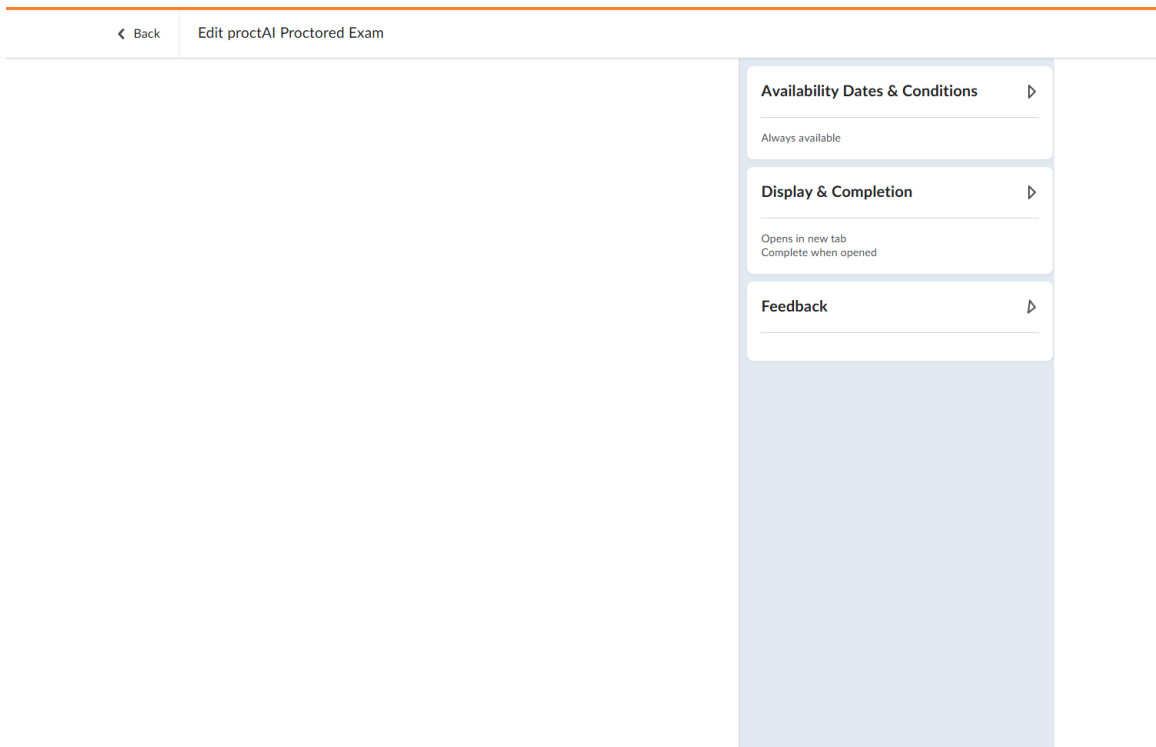


Fig. 6.6 — Edit Activity panel. Note this does not expose the underlying LTI URL (see §8).

Grading

If AGS was enabled at registration (§2), a gradebook column is created automatically, sized out of 100 points by default. Grade passback (where implemented) writes to that column; otherwise ProctAI provides a separate integrity/session report outside the Brightspace gradebook.

7 • Learner / Student

Based on ProctAI's documented check-in flow and code (test-taker app) — not a screenshot captured in the same live session as §2–§6. The admin account used to verify the D2L side is routed into the authoring/preview tool rather than the real learner experience, so a true student-view screenshot needs a separate pass with a learner-role account.

4. Navigate to the activity from the course's Content area or homepage widget — same place any other topic or quiz appears.
5. LTI launch happens automatically: Brightspace authenticates the student via OIDC, then hands off to ProctAI with the student's name, email, and course/role claims already attached — no separate ProctAI login required.
6. Check-in flow: system check (browser, webcam, microphone, network) → ID verification (camera capture) → face enrollment (alignment guide) → room scan (short recording).
7. The exam itself: if a Quiz URL was configured (§6), the Brightspace quiz is embedded, or — where Brightspace's own frame-ancestors policy blocks embedding — opened in a monitored new tab, while ProctAI continues webcam/screen/audio monitoring with a live timer and alert count.
8. Finish Exam: the student confirms submission; recordings upload; the session closes.
9. Grade: where configured, appears in the normal Brightspace gradebook like any other graded item — no separate portal to check.

8 • Troubleshooting — Real Issues and Fixes

Documented from actual incidents hit and resolved in this Brightspace tenant, not hypotheticals — useful as a first-pass diagnostic if something similar recurs.

AUTH REQUEST REJECTED

“Invalid authentication request parameters” at /d2l/lti/authenticate

Clicking the ProctAI activity redirects to Brightspace’s OIDC endpoint, which immediately shows a bare “Invalid authentication request parameters.” page.

Cause: The registration's redirect_uri didn't match what ProctAI's backend actually sends. Lti:ToolIssuer is a single global setting — every registered LMS gets the same host in its redirect_uri. If the D2L registration's Redirect URLs (§2) don't include that exact host, Brightspace rejects the request before ProctAI is ever involved.

Fix: Add the current Lti:ToolIssuer host to the registration's Redirect URLs (multiple rows are supported — keep the old host too, so the transition is non-breaking). Confirm Domain, OpenID Connect Login URL, Target Link URI, and Keyset URL all use the same host.

LAUNCH REJECTED

invalid_target_link_uri on launch

```
{"error": "invalid_target_link_uri", "description": "target_link_uri does not match registered launch endpoint"}
```

Two independent causes, requiring different fixes:

- 1. Registration-level mismatch** — same root cause as above; fixed the same way (§2's Target Link URI field).
- 2. Per-link mismatch** — an individual deployment Link (§4) has its own URL field, set once at creation and not editable through Brightspace's Content “Edit Activity” panel (§6.5). If set before a host migration, it's permanently stale until someone opens the link directly (§4) and corrects the URL — or, for activities created via Deep Linking, the code generating that URL is fixed and the activity is deleted/recreated.

SIGNATURE MISMATCH

invalid_kid on launch

```
{"error": "invalid_kid", "description": "JWT signature key not found. The token's KID does not match any key in the platform's JWKS."}
```

A transient signature-validation failure — the token's key ID doesn't match anything in Brightspace's published JWKS. Brightspace's signing keys rotate periodically; ProctAI caches the fetched JWKS for a short window, and a token signed with a key that rotated in after the last fetch fails validation until the cache refreshes. Expected to be self-healing within the cache TTL once the retry-on-mismatch code path runs correctly.

REGISTRATION BLOCKED

“Domain is already in use for another enabled registration”

Saving a registration's Domain field fails with this message.

Cause: Brightspace enforces one enabled registration per domain, tenant-wide.

Fix: Disable the other registration (Registrations list → select → toggle Enabled off), or move it to a different domain if still needed.

9 • Reference Tables

ProctAI Endpoints (current)

ENDPOINT	URL
Launch	https://exam.ProctAI.backpack.education/api/lti/launch
Login (OIDC initiation)	https://exam.ProctAI.backpack.education/api/lti/login
JWKS	https://exam.ProctAI.backpack.education/api/lti/jwks

Brightspace Admin URLs (this tenant)

PAGE	URL
External Learning Tools	https://fpoint.d2l-partners.brightspace.com/d2l/lms/lti/index
LTI Advantage Registrations	https://fpoint.d2l-partners.brightspace.com/d2l/le/ltiadvantage/registrations/home
LTI Advantage Deployments	https://fpoint.d2l-partners.brightspace.com/d2l/le/ltiadvantage/deployments/home

Live Registration Values (this tenant)

FIELD	VALUE
Registration Name	ProctAI
Client ID	6ebdd826-c7b4-41d7-a615-4f8d51fc174d
Deployment ID	55c4979c-1762-4880-85e3-b6225ee91691
Issuer	https://fpoint.d2l-partners.brightspace.com

Guide version 1.0 — screenshots and field values captured live 2026-08-05 against fpoint.d2l-partners.brightspace.com. Field labels and layout are Brightspace-version-dependent; re-verify against your tenant if the D2L UI has since changed.