

Learnvelo LTI 1.3 Setup Guide for D2L Brightspace

This guide walks LMS administrators through connecting Learnvelo to D2L Brightspace using LTI 1.3. After completing these steps, instructors will be able to add Learnvelo content directly into their Brightspace courses.

Visual reference: For screenshots of the Brightspace admin interface, see D2L's official documentation on [Tool Registration, Deployment, and Links](#) and [LTI Advantage \(v1.3\)](#).

Prerequisites

- D2L Brightspace administrator access
- A Learnvelo account with the **LMS Admin** role. If you don't have one, sign up at app.learnvelo.com/signup and select **LMS Admin** as your role during registration – no approval from Learnvelo is needed to create an account.
- Access to Brightspace Admin Tools > External Learning Tools

Overview

Setting up the integration requires configuring both Learnvelo and Brightspace. You will switch between the two systems during this process:

1. Register your institution in Learnvelo
2. Create an LTI platform in Learnvelo and copy the tool configuration URLs
3. Register Learnvelo as an external learning tool in Brightspace
4. Enter the Brightspace-provided configuration values back in Learnvelo
5. Create a deployment and add the Deployment ID
6. Test the connection

Step 1: Register Your Institution in Learnvelo

If your institution is not yet registered in Learnvelo, you will need to register it first.

1. Log in to Learnvelo at app.learnvelo.com
2. Navigate to **My Institutions** from the dashboard menu
3. Click **Register Institution**
4. Fill in the required fields:
 - **Institution Name** – Your institution's official name
 - **Website** – Your institution's website URL
 - **Primary Contact Name** – The person managing the LTI integration
 - **Contact Title** – Their role

5. Click **Submit Registration**

My Institutions > Register Institution

Register Institution

Once submitted, your institution will be reviewed by the Learnvelo team. You can configure LTI platforms while the review is in progress.

Institution Name *
Test Institution

Website *
https://testinstitution.edu

Primary Contact Name *
John Smith

Contact Title *
Director of Educational Technology

Description
Test institution for documentation screenshots.

Submit Registration

Learnvelo institution registration form

Note: Your institution will be reviewed by the Learnvelo team. You can proceed with the LTI configuration while the review is in progress, but LTI launches will not work until approval is granted.

Step 2: Create an LTI Platform in Learnvelo

1. From your institution's detail page, go to the **Integrations** tab
2. Click **Add Integration**
3. In the dialog, enter:
 - **Platform Name** – A descriptive name (e.g., “Brightspace Production”)
 - **LMS Type** – Select **D2L Brightspace**
 - **Environment** – Select **Production**
4. Click **Create Integration**

You will be redirected to the platform detail page.

Step 3: Copy Tool Configuration URLs from Learnvelo

On the platform detail page, locate the **Tool Configuration** section. You will need these URLs when configuring Brightspace:

Field	URL
Login Initiation URL	https://api.learnvelo.com/api/lti/login/
Launch / Redirect URL	https://api.learnvelo.com/api/lti/launch/
Deep Linking URL	https://api.learnvelo.com/api/lti/launch/
JWKS URL	https://api.learnvelo.com/api/lti/jwks/{platform-id}/

Important: The JWKS URL is unique to your platform. Use the copy button next to each field to ensure accuracy.

The screenshot shows two sections of the Learnvelo configuration interface. The top section, titled "Tool Configuration", contains four input fields with their respective URLs and copy icons: Login Initiation URL (https://api.learnvelo.com/api/lti/login/), Launch / Redirect URL (https://api.learnvelo.com/api/lti/launch/), Deep Linking URL (https://api.learnvelo.com/api/lti/launch/), and JWKS URL (https://api.learnvelo.com/api/lti/jwks/9cb1dce1-786d-4f79-852d-9771144a8e2e/). The bottom section, titled "Platform Registration Details", contains five input fields: Issuer URL, Client ID, OIDC Authorization Endpoint, Your LMS JWKS URL (with a "Verify JWKS" button), and OAuth 2.0 Token Endpoint. A "Save" button is located at the bottom left of the second section.

Learnvelo tool configuration URLs

Keep this Learnvelo tab open – you will return to it after configuring Brightspace.

Step 4: Register Learnvelo in Brightspace

Now switch to your Brightspace admin panel.

D2L reference: See [Tool Registration, Deployment, and Links](#) in the Brightspace documentation for screenshots of the admin interface described in these steps.

4a. Open External Learning Tools

1. In Brightspace, go to **Admin Tools > External Learning Tools > Manage Tool Providers**

4b. Register a New Tool Provider

1. Click **Register Tool Provider**
2. Select **Standard Registration (manual)**
3. Fill in the following fields:

Brightspace Field	Value
Name	Learnvelo
Domain	api.learnvelo.com
OIDC Login Initiation URL	Paste the Login Initiation URL from Learnvelo
Redirect URL	Paste the Launch / Redirect URL from Learnvelo
Keyset URL	Paste the JWKS URL from Learnvelo

4c. Configure Extensions

Enable the following extensions as needed:

- **Assignment and Grade Services** – Required for grade passback
- **Names and Role Provisioning Services** – Optional, enables roster sync
- **Deep Linking** – Required for the Learnvelo content picker

4d. Configure Security Settings

Under **Security Settings**, configure the tool to send user information:

- **Send Institution Role** – Recommended
- **Send Name Information** – Recommended, so student and instructor names display correctly in Learnvelo
- **Send Email Information** – Recommended, so Learnvelo can match LTI users with existing accounts

Note: Sharing email provides a seamless experience for users who already have Learnvelo accounts. Sharing name ensures student and instructor names display correctly in Learnvelo.

4e. Save and Note the Configuration Values

1. Click **Save**

2. Brightspace will display the tool provider details including:
 - **Client ID** – Copy this value
 - **Issuer** – <https://api.brightspace.com>
 - **Keyset URL** (Brightspace’s) – Copy this for the JWKS field in Learnvelo
 - **OAuth2 Token URL** – <https://auth.brightspace.com/core/connect/token>

Step 5: Enter Brightspace Configuration in Learnvelo

Switch back to your Learnvelo tab.

1. On the platform detail page, locate the **Platform Registration Details** section
2. Enter the following values:

Learnvelo Field	Value
Issuer URL	https://api.brightspace.com
Client ID	The Client ID from Brightspace (Step 4e)
OIDC Authorization Endpoint	https://auth.brightspace.com/core/connect/authorize
Your LMS JWKS URL	The Keyset URL shown in the Brightspace tool details
OAuth 2.0 Token Endpoint	https://auth.brightspace.com/core/connect/token

3. Click **Verify JWKS** to test that Learnvelo can reach Brightspace’s public keys
4. Click **Save**

Step 6: Create a Deployment and Add the Deployment ID

D2L reference: See the Deployments section of [Tool Registration, Deployment, and Links](#) in the Brightspace documentation for screenshots of the deployment configuration.

6a. Create a Deployment in Brightspace

1. In Brightspace, return to the tool provider you just registered
2. Under **Deployments**, click **New Deployment**
3. Configure:
 - **Name** – A descriptive name (e.g., “Learnvelo - All Courses”)
 - **Security Settings** – Configure as appropriate for your institution
 - **Org Units** – Select which organizational units should have access to Learnvelo
4. Click **Create Deployment**

6b. Note the Deployment ID

Brightspace will assign a **Deployment ID** to the new deployment. Copy this value.

6c. Enter the Deployment ID in Learnvelo

1. Return to the Learnvelo platform detail page
2. Scroll to the **Deployment IDs** section
3. Enter the Deployment ID from Brightspace
4. Optionally add a label (e.g., “All Courses” or “Department of Engineering”)
5. Click **Add**

The screenshot shows a web interface for configuring a platform. At the top, there is a text input field containing a JWKS URL: `https://api.learnvelo.com/api/lti/jwks/9cb1dce1-786d-4f79-852d-9771144a8e2e/`. Below this is a section titled "Platform Registration Details" with the instruction "Enter the values provided by your LMS after completing registration." This section contains several input fields: "Issuer URL", "Client ID", "OIDC Authorization Endpoint", "Your LMS JWKS URL" (with a "Verify JWKS" button), and "OAuth 2.0 Token Endpoint". A "Save" button is located at the bottom of this section. Below the registration details is a section titled "Deployment IDs" with the instruction "No deployment IDs yet. Add one from your LMS configuration." This section contains a "Deployment ID" input field, a "Label (optional)" input field, and an "Add" button.

Learnvelo Deployment IDs section

Step 7: Test the Connection

The Getting Started checklist on the platform detail page tracks your progress. Once all four steps are complete, your integration is ready.

To verify the connection end-to-end:

1. In Brightspace, navigate to any course as an instructor
2. Go to **Content > Add Existing Activities > External Learning Tools**
3. Select **Learnvelo** from the list

4. The Learnvelo content picker should load, confirming the connection works
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Troubleshooting

“JWKS verification failed”

- Ensure the **LMS JWKS URL** field in Learnvelo contains Brightspace’s keyset URL, not Learnvelo’s JWKS URL
- If your Brightspace instance is behind a firewall, ensure the keyset endpoint is accessible from the public internet

“Integration Pending Approval”

Your institution must be approved by Learnvelo before LTI launches will work. Contact support@learnvelo.com if approval is taking longer than expected.

LTI launch shows a blank page or error

- Verify the **Issuer URL** is <https://api.brightspace.com>
- Verify the **Client ID** matches exactly
- Ensure the deployment is active and the correct organizational units are selected

Grade passback is not working

- Verify that Assignment and Grade Services is enabled in the Brightspace tool provider extensions
- Ensure the content was linked using the Learnvelo deep linking tool
- Check that grade passback was enabled during the deep linking content selection

Reference: D2L Brightspace-Specific URLs

Purpose	URL
Issuer	https://api.brightspace.com
OIDC Authorization	https://auth.brightspace.com/core/connect/authorize
OAuth 2.0 Token	https://auth.brightspace.com/core/connect/token
JWKS	Shown in the tool provider details in Brightspace

Additional Resources

- [D2L Brightspace: LTI Advantage \(v1.3\) Overview](#)
- [D2L Brightspace: Tool Registration, Deployment, and Links](#)

- [D2L Brightspace: Create an External Learning Tool Link](#)
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