

Learnvelo LTI 1.3 Setup Guide for Canvas

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

Prerequisites

- Canvas administrator access (account-level, not just course-level)
- 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 Canvas Admin > Developer Keys

Overview

Setting up the integration requires configuring both Learnvelo and Canvas. 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. Create a Developer Key in Canvas using those URLs
4. Enter the Canvas-provided configuration values back in Learnvelo
5. 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 (e.g., <https://university.edu>)
 - **Primary Contact Name** – The person managing the LTI integration
 - **Contact Title** – Their role (e.g., "Director of Educational Technology")
 - **Description** – Optional brief description
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.

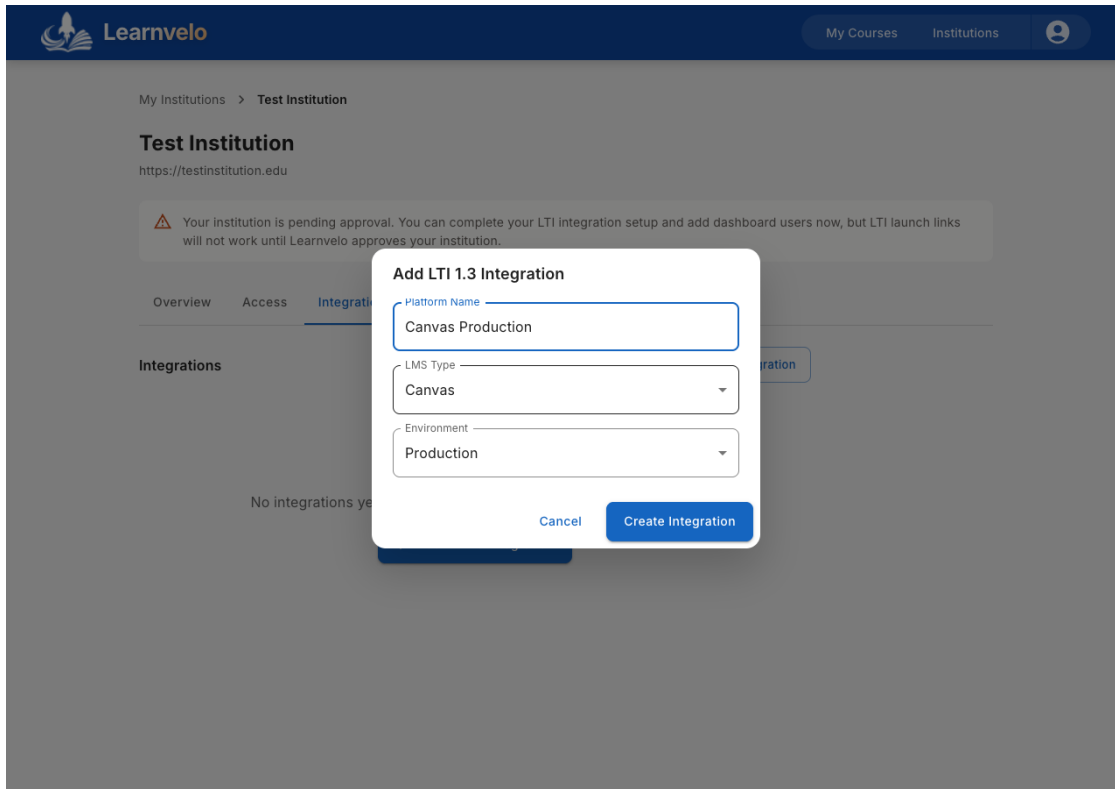
Submit Registration

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., “Canvas Production”)
 - **LMS Type** – Select **Canvas**
 - **Environment** – Select **Production** (or Staging/Development for testing)
4. Click **Create Integration**



Learnvelo add integration dialog

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 four URLs when configuring Canvas:

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

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

Tool Configuration

Copy these URLs into your LMS when registering Learnvelo as an LTI 1.3 tool.

Login Initiation URL

Launch / Redirect URL

Deep Linking URL

JWKS URL

Platform Registration Details

Enter the values provided by your LMS after completing registration.

Issuer URL

Client ID

OIDC Authorization Endpoint

Your LMS JWKS URL

This is your LMS's public key URL, not Learnvelo's JWKS URL.

OAuth 2.0 Token Endpoint

Learnvelo tool configuration URLs

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

Step 4: Create a Developer Key in Canvas

Now switch to your Canvas admin panel.

4a. Open Developer Keys

1. In Canvas, navigate to **Admin** (account-level) > **Developer Keys**
2. Click **+ Developer Key** > **LTI Key**

Canvas Developer Keys page

4b. Enter Key Details and Redirect URIs

1. Enter a **Key Name** (e.g., “Learnvelo”)
2. In the **Redirect URIs** field, paste the **Launch / Redirect URL** from Learnvelo:
<https://api.learnvelo.com/api/lti/launch/>
3. Under **Method**, leave it as **Manual Entry**

4c. Enter Required Values

Fill in the following fields using the URLs from Learnvelo (Step 3):

Canvas Field	Learnvelo Value
Title	Learnvelo
Description	AI-powered interactive learning platform
Target Link URI	Paste the Launch / Redirect URL
OpenID Connect Initiation Url	Paste the Login Initiation URL

For the **JWK Method**, select **Public JWK URL** and paste the **JWKS URL** from Learnvelo.

Key Settings

x

<code>https://api.learnvelo.com/api/lti/launch/</code>	Title * Learnvelo	Description * AI-powered interactive textbook platform
Notes: <div style="border: 1px solid #ccc; height: 20px;"></div>	Target Link URI * <code>https://api.learnvelo.com/api/lti/launch/</code>	OpenID Connect Initiation Uri * <code>https://api.learnvelo.com/api/lti/login/</code>
	JWK Method * Public JWK URL	
	Public JWK URL * <code>https://api.learnvelo.com/api/lti/jwks/your-platform-id/</code>	
<p>▼ LTI Advantage Services</p> <div style="border: 1px solid #f00; padding: 5px;"><p>Services must be supported by the tool in order to work. Check with your Tool Vendor to ensure service capabilities.</p></div> <ul style="list-style-type: none"><input checked="" type="checkbox"/> Can view LTI registrations associated with the tool.<input checked="" type="checkbox"/> Can send automatic updates to be approved by an Administrator.<input checked="" type="checkbox"/> Can create and view assignment data in the gradebook associated with the tool.<input checked="" type="checkbox"/> Can view assignment data in the gradebook associated with the tool.		
		<input type="button" value="Cancel"/> <input type="button" value="Save"/>

Canvas LTI Key - required values

4d. Configure LTI Advantage Services

Expand the **LTI Advantage Services** section and enable the following:

- **Can create and view assignment data in the gradebook associated with the tool** – Required for grade passback
- **Can view assignment data in the gradebook associated with the tool** – Required for grade passback
- **Can view submission data for assignments associated with the tool** – Required for grade passback
- **Can create and update submission results for assignments associated with the tool** – Required for grade passback
- **Can retrieve user data associated with the context the tool is installed in** – Recommended for roster sync

Key Settings

x

▼ LTI Advantage Services

Services must be supported by the tool in order to work. Check with your Tool Vendor to ensure service capabilities.

- Can view LTI registrations associated with the tool.
- Can send automatic updates to be approved by an Administrator.
- Can create and view assignment data in the gradebook associated with the tool.
- Can view assignment data in the gradebook associated with the tool.
- Can view submission data for assignments associated with the tool.
- Can create and update submission results for assignments associated with the tool.
- Can retrieve user data associated with the context the tool is installed in.
- Can register to receive asynchronous notifications from Canvas.
- Can update public jwk for LTI services.
- Can lookup Account information.
- Can view Progress records associated with the context the tool is installed in.
- Can view the content of a page the tool is launched from.

> Additional Settings

Placements

Account Navigation X Link Selection X ▼

Cancel Save

Canvas LTI Advantage Services

4e. Configure Privacy and Additional Settings

Expand the **Additional Settings** section and set the **Privacy Level** to **Public**. This allows Canvas to share user name and email with Learnvelo, which is needed for account matching and displaying names.

Note: If your institution restricts sharing user data with external tools at the account level, you may need to coordinate with your Canvas administrator to allow this for the Learnvelo tool.

4f. Configure Placements for Deep Linking

The **Placements** section controls where Learnvelo appears in Canvas and how it launches. For instructors to use Learnvelo's content picker when adding content to their courses, the placements must be configured with the **LtiDeepLinkingRequest** message type.

1. In the **Placements** dropdown, add the following two placements:
 - **Link Selection** – Allows instructors to add Learnvelo content to modules
 - **Assignment Selection** – Allows instructors to link Learnvelo content when creating assignments
2. Remove any other default placements (such as Account Navigation) that are not needed
3. For each placement, click to expand it and configure:

- **Message Type** – Select **LtiDeepLinkingRequest** (this is critical – do not leave it as LtiResourceLinkRequest)
- **Target Link URI** – Enter: `https://api.learnvelo.com/api/lti/launch/`

Important: If the message type is left as the default LtiResourceLinkRequest, instructors will not see Learnvelo’s content picker when adding content. Instead, Canvas will insert a static link that does not support deep linking or grade passback.

Key Settings

x

> LTI Advantage Services

> Additional Settings

Placements

Assignment Selection x Link Selection x

Assignment Selection

! This placement requires Deep Link support by the vendor. Check with your tool vendor to ensure they support this functionality

Target Link URI

Select Message Type

LtiDeepLinkingRequest

LtiResourceLinkRequest

Icon Url

Text

Selection Height

Selection Width

> Link Selection

Cancel Save

Canvas placement configuration

4g. Save and Note the Client ID

1. Click **Save**
2. Canvas will display the new Developer Key with a **numeric Client ID** in the key list
3. **Copy this Client ID** – you will need it in the next step

Canvas Developer Key with Client ID

4h. Enable the Key

The key is created in an **OFF** state by default. Toggle it to **ON** to enable it.

Step 5: Enter Canvas 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://canvas.instructure.com
Client ID	The numeric Client ID from Canvas (Step 4g)
OIDC Authorization Endpoint	https://{your-canvas-domain}/api/lti/authorize_redirect
Your LMS JWKS URL	https://{your-canvas-domain}/api/lti/security/jwks
OAuth 2.0 Token Endpoint	https://{your-canvas-domain}/login/oauth2/token

Note for Canvas Cloud: If you use Canvas Cloud (hosted by Instructure), replace {your-canvas-domain} with your Canvas instance URL (e.g., `myschool.instructure.com`). The Issuer URL is always `https://canvas.instructure.com` for Canvas Cloud instances.

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

The screenshot shows a web form titled "Platform Registration Details". At the top, there is a text input field for the JWKS URL containing "https://api.learnvelo.com/api/lti/jwks/97124565-67ef-4b60-8ab2-1c1887e5f635/". Below this is a section titled "Platform Registration Details" with the instruction "Enter the values provided by your LMS after completing registration." It contains several input fields: "Issuer URL" with "https://canvas.instructure.com", "Client ID" with "123450000000000001", "OIDC Authorization Endpoint" with "https://myschool.instructure.com/api/lti/authorize_redirect", "Your LMS JWKS URL" with "https://myschool.instructure.com/api/lti/security/jwks" and a "Verify JWKS" button, and "OAuth 2.0 Token Endpoint" with "https://myschool.instructure.com/login/oauth2/token". A "Save" button is at the bottom of this section. Below is a "Deployment IDs" section with the instruction "No deployment IDs yet. Add one from your LMS configuration." It has a "Deployment ID" input field, a "Label (optional)" input field, and an "Add" button.

Learnvelo registration details for Canvas

Step 6: Add the Deployment ID

6a. Install the Tool in Canvas

1. In Canvas, navigate to the course or account where you want to install the tool
2. Go to **Settings > Apps > View App Configurations**
3. Click **+ App**
4. Under **Configuration Type**, select **By Client ID**
5. Enter the **Client ID** from Step 4g
6. Click **Submit**

6b. Copy the Deployment ID

After installation, Canvas displays a **Deployment ID**. Copy this value.

Canvas Deployment ID

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 Canvas
4. Optionally add a label (e.g., “Main Campus” or “College of Engineering”)
5. Click **Add**

JWKS URL
https://api.learnvelo.com/api/iti/jwks/9cb1dce1-786d-4f79-852d-9771144a8e2e/

Platform Registration Details
Enter the values provided by your LMS after completing registration.

Issuer URL

Client ID

OIDC Authorization Endpoint

Your LMS JWKS URL Verify JWKS

This is your LMS's public key URL, not Learnvelo's JWKS URL.

OAuth 2.0 Token Endpoint

Save

Deployment IDs
No deployment IDs yet. Add one from your LMS configuration.

Deployment ID Label (optional) Add

Learnvelo Deployment IDs section

Step 7: Test the Connection

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

To verify the connection end-to-end:

1. In Canvas, navigate to any course as an instructor
 2. Go to **Modules** or **Assignments**
 3. Click **+ Add > External Tool**
 4. Select **Learnvelo** from the list
 5. The Learnvelo content picker should load, confirming the connection works
-

Troubleshooting

“JWKS verification failed”

- Ensure the **LMS JWKS URL** field contains your Canvas JWKS URL, not Learnvelo’s JWKS URL. These are different:

- **Canvas JWKS** (what you enter in Learnvelo): `https://{your-canvas-domain}/api/lti/security/jwks`
- **Learnvelo JWKS** (what you enter in Canvas): `https://api.learnvelo.com/api/lti/jwks/{platform-id}/`
- If your Canvas instance is behind a firewall, ensure the JWKS 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 correct (`https://canvas.instructure.com` for Canvas Cloud)
- Verify the **Client ID** matches exactly (no extra spaces)
- Check that the Developer Key is in the **ON** state
- Ensure the Redirect URI in Canvas matches the Launch URL exactly

Content picker does not appear when adding Learnvelo to a module or assignment

- This is almost always a placement configuration issue. Edit the Developer Key and expand each placement (Link Selection, Assignment Selection)
- Verify that the **Message Type** is set to **LtiDeepLinkingRequest**, not **LtiResourceLinkRequest**
- If the message type was **LtiResourceLinkRequest**, Canvas inserts a static link instead of launching the content picker
- After correcting the placements, save the Developer Key. You may need to remove and re-add the tool in the course for the change to take effect

Grade passback is not working

- Verify that **Assignment and Grade Services (AGS)** is enabled in the Canvas Developer Key settings
- Ensure the content was linked using the Learnvelo deep linking tool (not a manual URL)
- Check that grade passback was enabled during the deep linking content selection

Reference: Canvas-Specific URLs

Purpose	URL Pattern
Issuer (Canvas Cloud)	<code>https://canvas.instructure.com</code>

Purpose	URL Pattern
Issuer (Self-hosted)	https://{your-canvas-domain}
OIDC Authorization	https://{your-canvas-domain}/api/lti/authorize_redirect
JWKS	https://{your-canvas-domain}/api/lti/security/jwks
OAuth 2.0 Token	https://{your-canvas-domain}/login/oauth2/token

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