

UbiCast - LTI 1.3

Integration with Open edX

Administrator Guide

Table of Content

- UbiCast - LTI 1.3..... 1**
- Integration with Open edX..... 1**
 - Administrator Guide..... 1
 - Table of Content..... 2
 - 1. Introduction..... 2
 - 1.1 What This Guide Covers..... 3
 - 1.2 How LTI 1.3 Works..... 3
 - 2. Prerequisites..... 3
 - 2.1 Open edX Requirements..... 3
 - 2.2 Nudgis Requirements..... 4
 - 2.3 Network Requirements..... 4
 - 2.4 Enabling the LTI Consumer XBlock..... 4
 - 3. Creating the LTI 1.3 Tool in Open edX Studio..... 5
 - 4. Collecting LTI 1.3 Platform Values from Open edX..... 6
 - 5. Registering Open edX as a Platform in Nudgis..... 7
 - 6. Copying the Nudgis Public Key..... 9
 - 7. Configuring Nudgis Tool Values in Open edX..... 10
 - 8. Enabling Required LTI 1.3 Options..... 11
 - Core LTI Options..... 11
 - User Information Sharing..... 11
 - 9. Enabling PII Sharing at Course Level (Django Admin)..... 12
 - 9.1 Enabling NRPS PII Transmission (Waffle Flag)..... 13
 - 10. Configuring Nudgis LTI Settings..... 15
 - 10.1 Accessing LTI Settings..... 15
 - 10.2 Key Settings..... 15
 - 10.3 Field Mapping..... 16
 - 10.4 Permission Profiles..... 16
 - 11. Verifying the Integration..... 17
 - 11.1 LTI Test Page Verification..... 17
 - 11.2 Media Launch Test..... 17
 - 11.3 Deep Linking Test..... 18
 - 12. Troubleshooting..... 19
 - 12.1 Common Issues..... 19
 - 12.2 Log Locations..... 19
 - 12.3 The LTI Test Page..... 20
 - 12.4 Getting Support..... 20
 - 13. Appendix: Configuration Reference..... 20
 - 13.1 Complete Field Mapping Summary..... 20
 - 13.2 Django Admin Paths..... 21
 - 13.3 Nudgis Admin Paths..... 21
 - 13.4 Required Waffle Flags..... 21

1. Introduction

This guide provides a complete, step-by-step walkthrough for administrators to integrate Nudgis with Open edX using the LTI 1.3 standard. Nudgis is a video and rich media management platform that enables institutions to record, manage, and distribute educational video content.

Through the LTI 1.3 integration, instructors can embed Nudgis media directly within Open edX courses, and students can view video content seamlessly from the learning environment. The integration supports Deep Linking for content selection, automatic user provisioning based on LTI roles, and optional playback progress reporting.

1.1 What This Guide Covers

This document is intended for Open edX platform administrators and covers the technical configuration required to establish the LTI 1.3 connection between Open edX and Nudgis. For instructor and student usage, refer to the corresponding Instructor Guide and Student Guide.

1.2 How LTI 1.3 Works

LTI 1.3 establishes a trust relationship between two systems:

- **Platform (Open edX):** The learning management system that initiates the tool launch and provides user context.
- **Tool (Nudgis):** The video platform that receives the launch, authenticates the user, applies role-based permissions, and serves media content.

The integration involves exchanging public keyset URLs, client IDs, and endpoint URLs between both systems to establish mutual authentication.

2. Prerequisites

Before beginning the integration, ensure the following requirements are met:

2.1 Open edX Requirements

- Open edX platform running a supported release (Olive or later recommended)
- LTI Consumer XBlock installed and enabled at the platform level
- Administrator access to Open edX Studio
- Administrator access to the LMS Django Admin panel
- The "LTI Consumer" advanced module must be enabled in the course's Advanced Settings

2.2 Nudgis Requirements

- Active Nudgis instance (version 12.2.0 or later recommended for LTI 1.3 support)
- Administrator access to Nudgis with “Can edit site settings” permission
- LTI enabled in Nudgis (Administration → Settings and Authentication Services → LTI)

2.3 Network Requirements

- Both Open edX LMS and Nudgis must be accessible over HTTPS
- LTI 1.3 requires server-to-server communication; ensure both servers can reach each other directly via HTTPS
- If Nudgis and Open edX are on different domains, ensure third-party cookies are allowed or use a shared top-level domain

“Important: Third-party cookie restrictions in modern browsers can prevent the LTI iframe from functioning correctly. UbiCast recommends using a subdomain of the same top-level domain for Nudgis (e.g., if LMS is lms.yourdomain.com, use nudgis.yourdomain.com).”

2.4 Enabling the LTI Consumer XBlock

If the LTI Consumer XBlock is not yet enabled for the course, follow these steps:

1. In Open edX Studio, navigate to the course.
2. Go to Settings → Advanced Settings.
3. In the Advanced Module List field, add "lti_consumer" to the list (if not already present).
4. Click Save Changes.

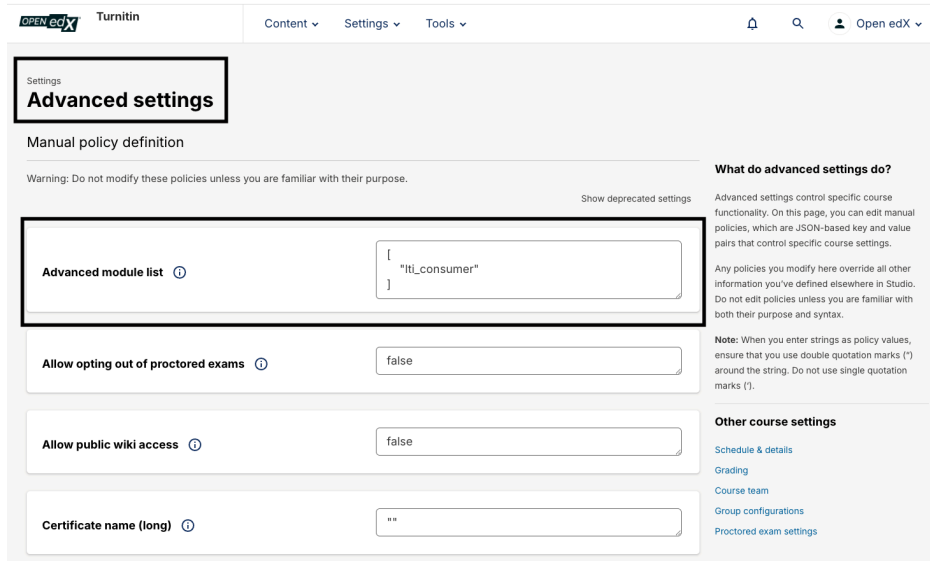


Figure: Advanced Settings → Advanced Module List with lti_consumer added

3. Creating the LTI 1.3 Tool in Open edX Studio

This is for the creation of a new LTI Consumer block configured for LTI 1.3.

1. Log in to Open edX Studio and open the course where Nudgis will be integrated.
2. Navigate to the desired Unit within the course structure.
3. Click Advanced and then select LTI Consumer from the component list.
4. Click Edit on the newly added LTI Consumer block.
5. In the LTI Version field, select LTI 1.3.
6. Click Save.

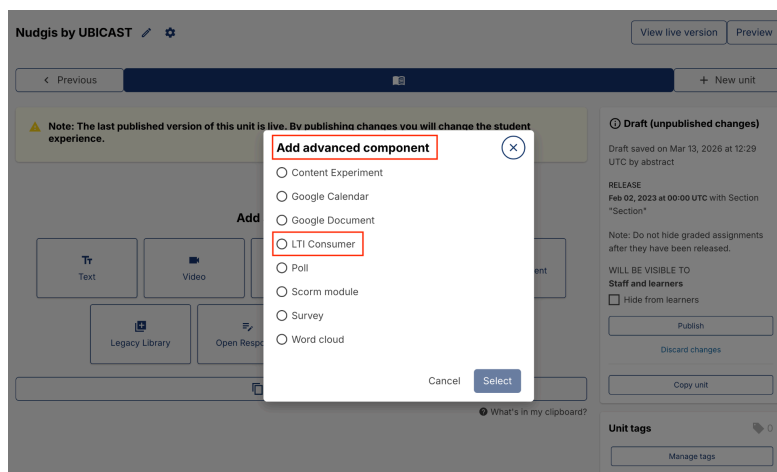


Figure: Unit page showing Advanced component options with LTI Consumer highlighted

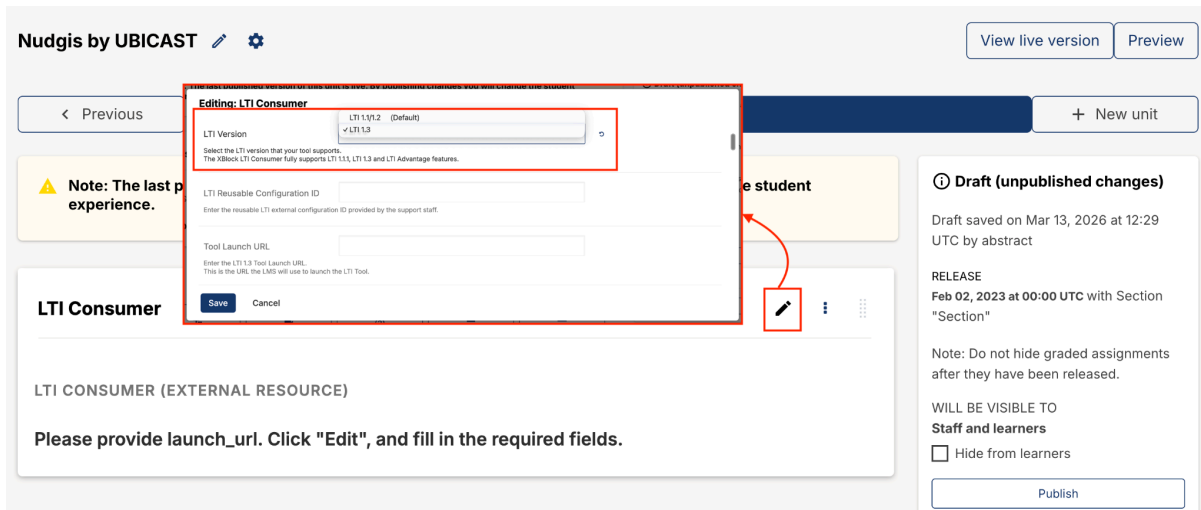


Figure: LTI Consumer block edit dialog showing LTI Version set to LTI 1.3

“Note: After saving, Open edX automatically generates the required LTI 1.3 platform configuration values. These values are needed in Step 5 to register Open edX in Nudgis.”

4. Collecting LTI 1.3 Platform Values from Open edX

Once the LTI Consumer block is saved with LTI 1.3 selected, Open edX generates five platform values. These are mandatory for registering Open edX as a platform in Nudgis.

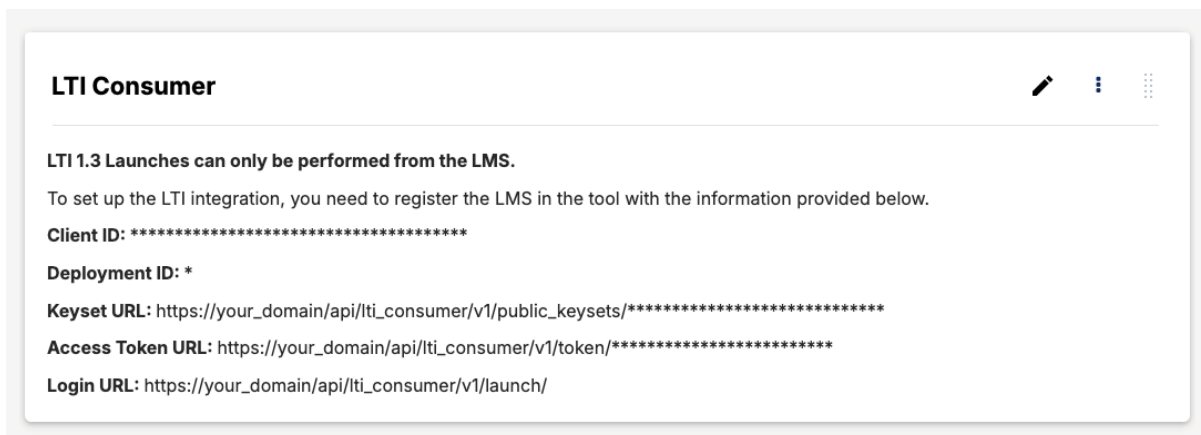


Figure: LTI Consumer block showing the generated LTI 1.3 platform values

The generated values are:

| Field | Value / Source |
|-------------------------|-----------------------------------------------------------------------|
| Client ID | A unique identifier for this LTI tool registration |
| Deployment ID | Identifies the specific deployment of the tool |
| Keyset URL | The URL where Open edX publishes its public keys for JWT verification |
| Access Token URL | The endpoint Nudgis will use to request OAuth 2.0 access tokens |
| Login URL | The OpenID Connect login initiation endpoint |

“Important: Copy and store these five values securely. They are required for the Nudgis registration in the next step.”

5. Registering Open edX as a Platform in Nudgis

In this step, you will create a new LTI 1.3 platform configuration in Nudgis using the values generated by Open edX.

1. Log in to Nudgis as an administrator.
2. Navigate to: Admin → Administration → Authentication Services → LTI.
3. Create a new LTI 1.3 platform configuration.
4. Fill in the following platform fields using the values generated by Open edX:
5. Click Save Changes.

| Nudgis Field | Value from Open edX |
|-------------------------------|---------------------------------------------------------------|
| Issuer | Use the Open edX LMS host URL (e.g., https://lms.example.com) |
| Client Identifier | Use the Client ID generated by Open edX |
| Login Endpoint | Use the Login URL generated by Open edX |
| Authorization Endpoint | Use the Access Token URL generated by Open edX |
| JWKS Endpoint | Use the Keyset URL generated by Open edX |
| Deployment Identifiers | Use the Deployment ID generated by Open edX |

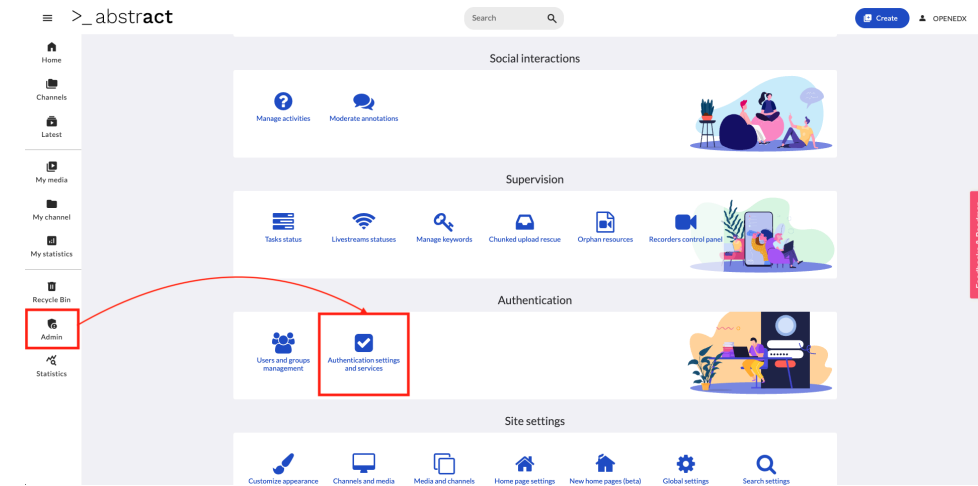


Figure: Nudgis Administration menu → Authentication Services → LTI

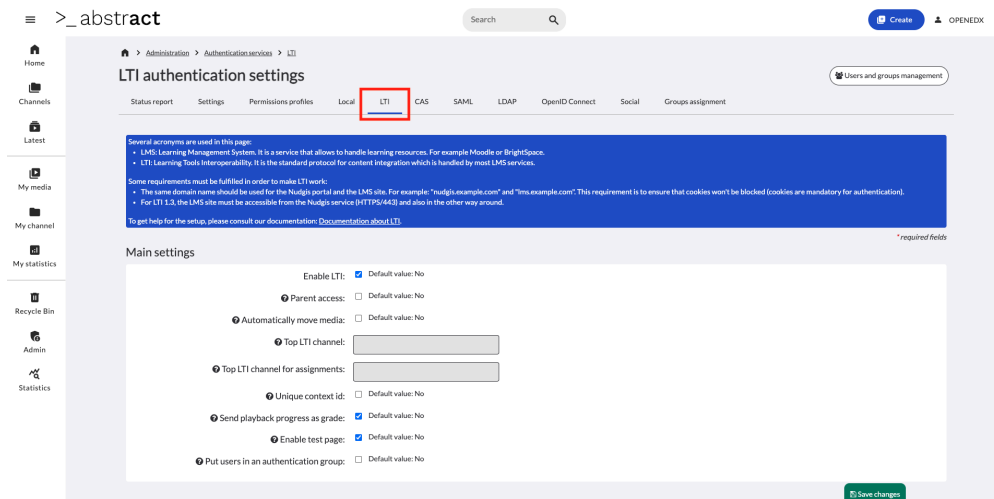


Figure: Authentication Services → LTI

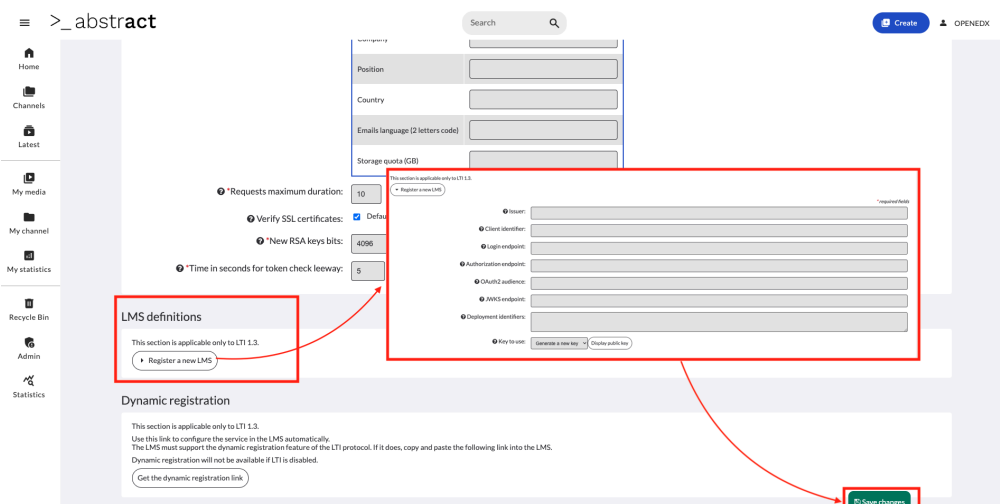


Figure: Nudgis LTI 1.3 platform registration form with Open edX values filled in

“Important: Ensure the Issuer URL matches exactly what Open edX uses as its LMS base URL (including https:// and without a trailing slash, unless Open edX includes one). A mismatch will cause authentication failures.”

6. Copying the Nudgis Public Key

Unlike some other LTI 1.3 tools that provide a Tool Keyset URL, Nudgis provides a Public Key that must be copied directly into Open edX.

1. After saving the LTI configuration in Nudgis (Step 5), reopen the saved LTI entry.
2. Locate the section labelled "Key to use".
3. Copy the entire Public Key provided by Nudgis.

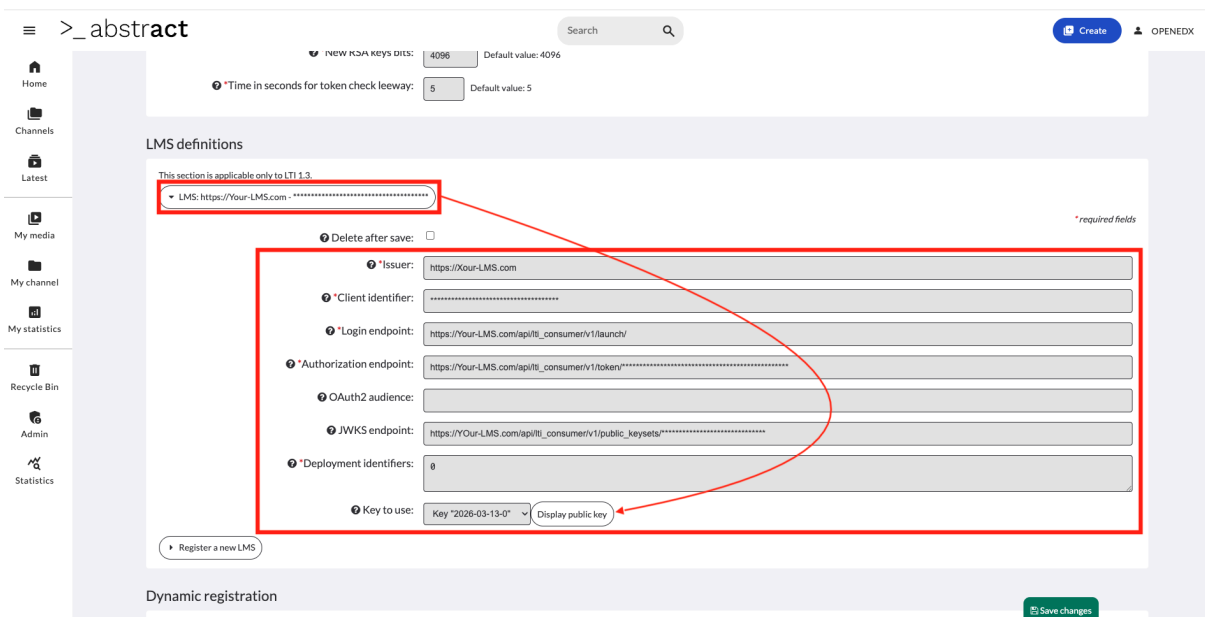


Figure: Nudgis LTI configuration showing the "Key to use" section with the Public Key

“Important: You must copy the complete public key, including the "-----BEGIN PUBLIC KEY-----" and "-----END PUBLIC KEY-----" lines. An incomplete key will cause JWT verification to fail.”

“Note: This public key will be pasted into the Tool Public Key field in the Open edX LTI Consumer block in the next step. Alternatively, the Tool Keyset URL field in Open edX may also be used, as it exposes the same key material.”

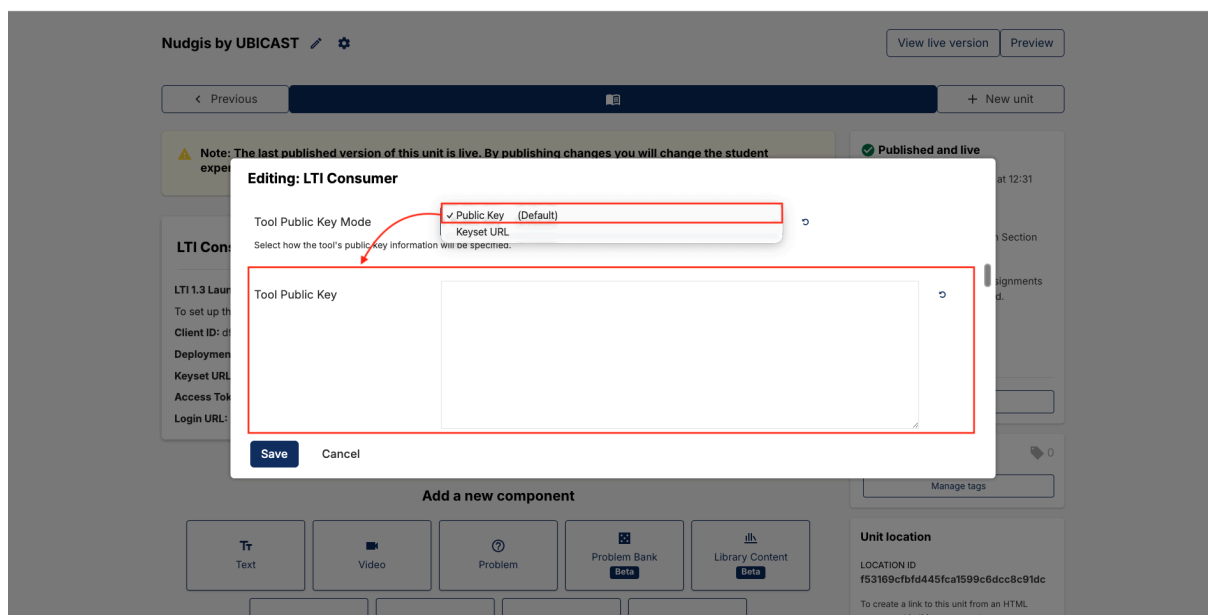
7. Configuring Nudgis Tool Values in Open edX

Return to Open edX Studio and open the same LTI Consumer block created in Step 3 for editing. You will now enter the Nudgis tool values.

Configure the following fields:

| Open edX Field | Value from Nudgis |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tool Launch URL | Test Page Link / Navigation pages link <ul style="list-style-type: none">• Link to the channels page (or)• Link to the latest content page (or)• Link to the search page |
| Registered Redirect URIs | Redirection link |
| Tool Initiate Login URL | Login link |
| Tool Public Key | Nudgis field: Key to use → click "Display public key" and paste the full key |
| Deep Linking Launch URL | Redirection link |

"Note: Please use the most relevant link that is for your use case from the navigation pages link and not all"



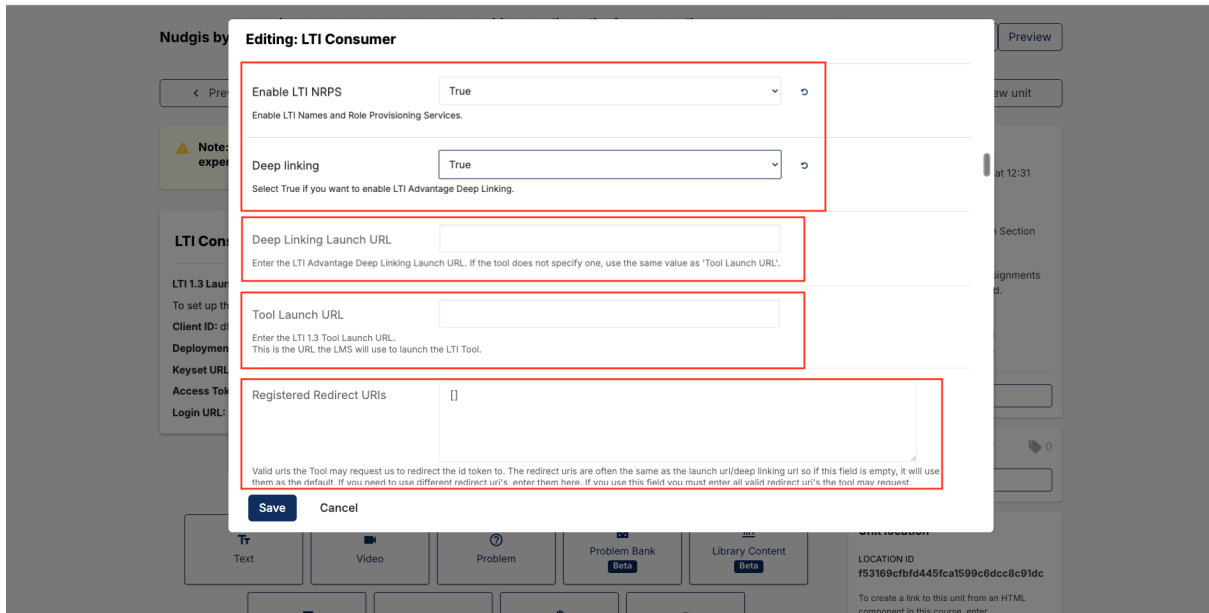


Figure: LTI Consumer block edit screen with Nudgis tool values configured

“Important: For Nudgis, use the “Tool Public Key” field (paste the key directly), NOT the “Tool Keyset URL” field. Leave the Tool Keyset URL field empty.”

8. Enabling Required LTI 1.3 Options

Still within the LTI Consumer block settings, enable several additional options for Nudgis to function correctly.

Core LTI Options

Set the following options to True:

| Field | Value / Source |
|--------------------------------|--------------------------------------------------------------------|
| Enable LTI NRPS | Set to True - enables the Names and Roles Provisioning Service |
| Enable Deep Linking | Set to True - allows instructors to browse and select Nudgis media |
| Deep Linking Launch URL | Set to the Nudgis Target Link URI |

User Information Sharing

Nudgis requires user identity information to create accounts and apply role-based permissions. Enable the following:

| Field | Value / Source |
|--------------------------|----------------|
| Request user's username | Set to True |
| Request user's full name | Set to True |
| Request user's email | Set to True |
| Send extra parameters | Set to True |

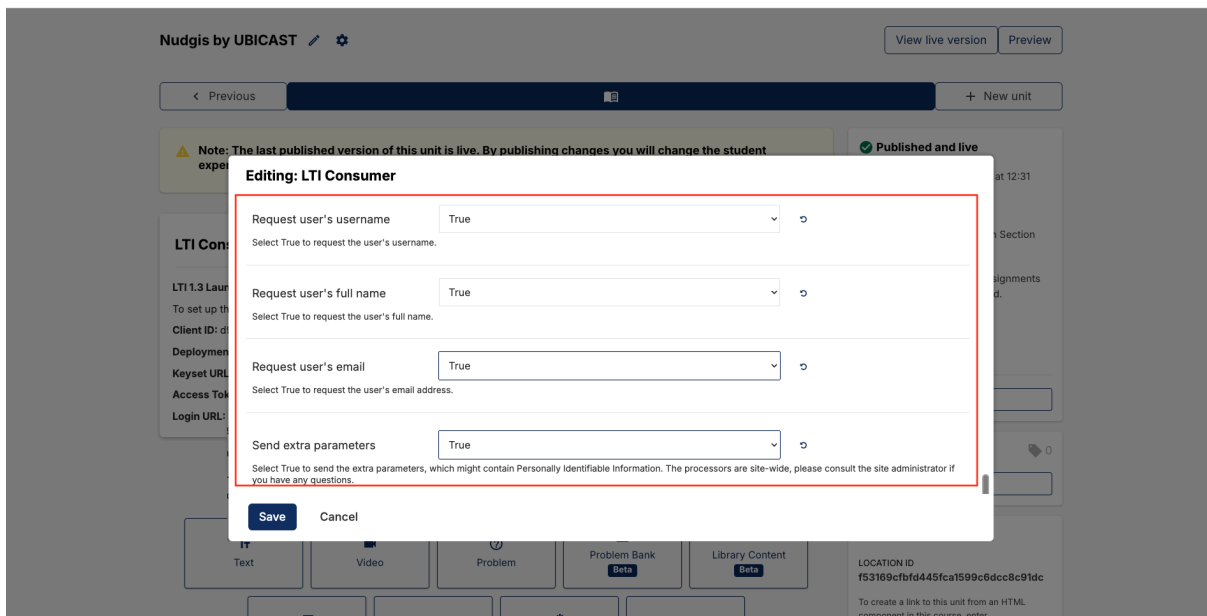


Figure: LTI Consumer block settings showing all enabled options

After verifying all values and options, click Save.

9. Enabling PII Sharing at Course Level (Django Admin)

PII sharing must be explicitly enabled at the course level to allow user identity data to be transmitted to Nudgis.

1. Log in to the LMS Django Admin panel.
2. Navigate to: /admin/lti_consumer/lti_1p3_course_allow_pii_sharing/
3. Click Add.
4. Select the course for which Nudgis is being configured.
5. Enable PII sharing for the course.
6. Click Save.

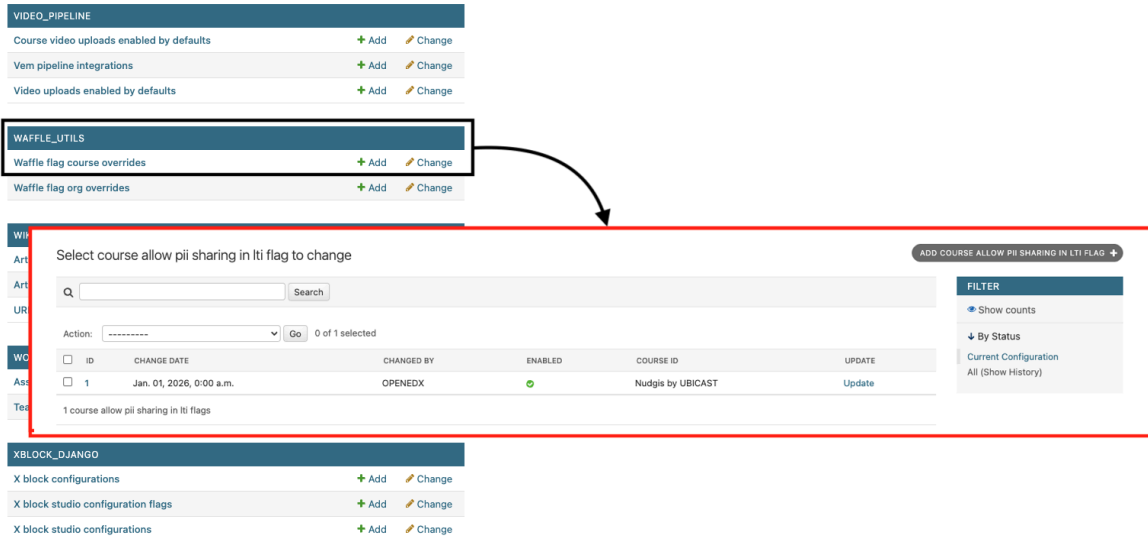


Figure: Django Admin → LTI Consumer → Course PII Sharing page & PII sharing enabled for the selected course

“Note: Without PII sharing, Nudgis will receive anonymous user data and will not be able to properly identify users, apply permissions, or map user attributes (name, email).”

9.1 Enabling NRPS PII Transmission (Waffle Flag)

To allow PII transmission through the Names and Roles Provisioning Service (NRPS):

1. In Django Admin, navigate to:
/admin/waffle_utils/waffleflagcourseoverride/
2. Click Add.
3. Set the following values:

Set the following values:

| Field | Value / Source |
|------------------------|---------------------------------------------------------------------------|
| Waffle Flag | lti_consumer.lti_nrps_transmit_pii |
| Course ID | The course ID where Nudgis is configured (e.g., course-v1:Org+Course+Run) |
| Override Choice | Force On |

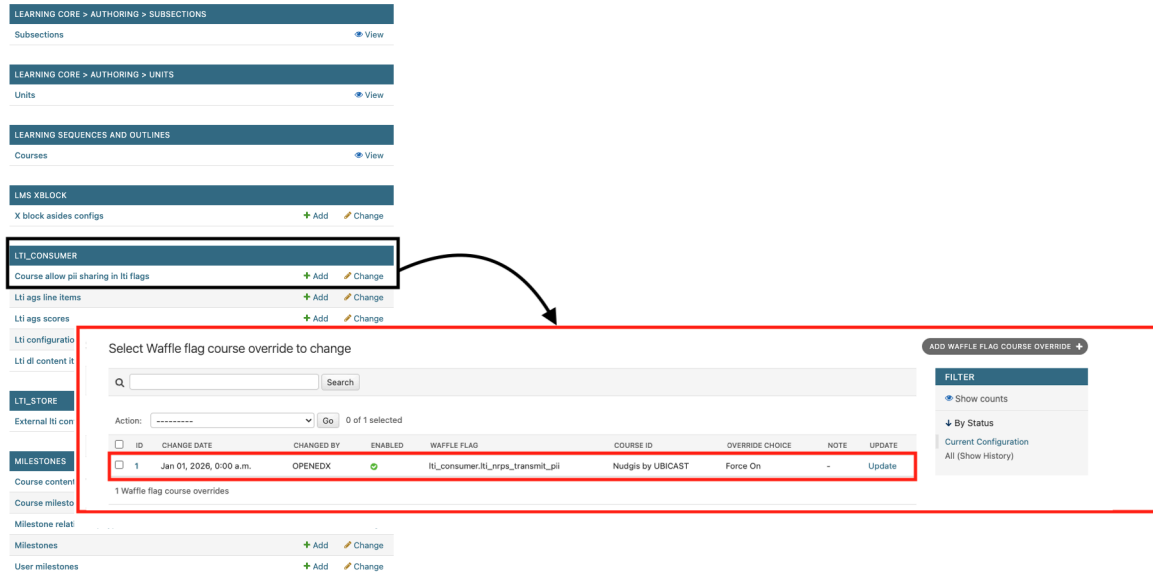


Figure: Django Admin → Waffle Flag Course Override with NRPS PII flag configured

“Note: This step ensures that NRPS user data, including PII, is properly transmitted to Nudgis for roster synchronization and submission workflows.”

10. Configuring Nudgis LTI Settings

After completing the Open edX side of the configuration, fine-tune the Nudgis LTI settings to control how users interact with the platform.

10.1 Accessing LTI Settings

In Nudgis, navigate to: Menu → Administration → Settings and Authentication Services → LTI. (Same as navigated in step 5)

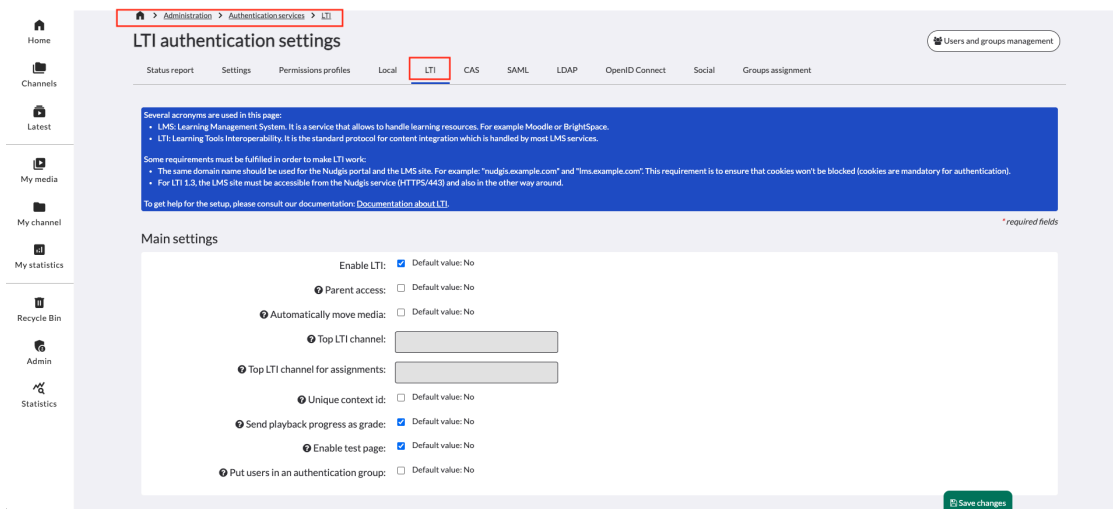


Figure: Nudgis LTI settings page overview

10.2 Key Settings

| Field | Value / Source |
|---------------------------|---------------------------------------------------------------------------------|
| Enable LTI | Must be checked to enable LTI on your Nudgis instance |
| Parent Access | Enable to allow users to browse the Nudgis media catalogue from within Open edX |
| Automatically Move Media | Enable to organize media added via LTI into dedicated channels |
| LTI Main Channel | Define the root channel for LTI-imported content |
| Unique Context Identifier | If enabled, each piece of content can only be embedded in one course |

| | |
|------------------------|--------------------------------------------------------------------------------------------------------|
| Send Playback Progress | If enabled, sends video playback percentage as a grade to the Open edX gradebook (disabled by default) |
| Activate Test Page | Enable the LTI test page for debugging (recommended during setup) |

10.3 Field Mapping

Nudgis supports field mapping to match LTI attributes with Nudgis user fields. Since version 12.2.0, separate field mapping forms exist for LTI 1.0/1.1 and LTI 1.3.

“Tip: Use the Nudgis LTI test page to verify which attributes are being sent by Open edX, then adjust field mapping accordingly. The test page URL is typically: https://your-nudgis-instance/lti/test/”

10.4 Permission Profiles

Nudgis applies role-based permissions via LTI. The two primary roles are:

| LTI Role | Default Nudgis Permissions |
|----------------------|--------------------------------------------------------------------------------------------|
| Learner (Student) | Can access and view media. A Nudgis user account is created automatically on first access. |
| Instructor (Teacher) | Can access, edit, and moderate media. Automatically recognized as editor and moderator. |

Permission profiles can be customized in: Administration → Settings and Authentication Services → Permission Profiles.

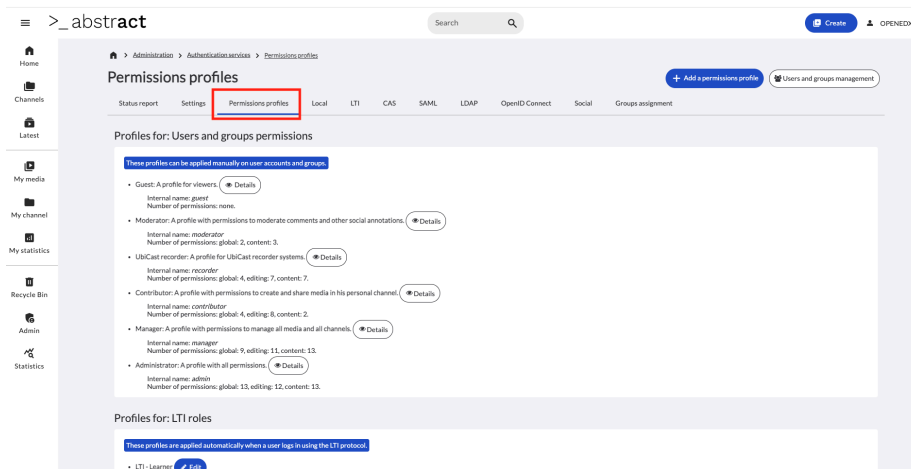


Figure: Nudgis permission profiles configuration for LTI roles

“Note: Since Nudgis 13.1.0, permission profile names use regular expressions (e.g., `^.*Learner$` and `^.*Instructor$`) to support both LTI 1.0/1.1 and 1.3 simultaneously. Update these values if upgrading from an older version.”

11. Verifying the Integration

After completing all configuration steps, verify the integration by performing the following checks:

11.1 LTI Test Page Verification

1. In the LTI Consumer block, temporarily set the Tool Launch URL to the Nudgis LTI test page URL (e.g., `https://your-nudgis-instance/lti/test/`).
2. Navigate to the course unit in the LMS and click the launch button.
3. The test page should display: raw LTI data sent by Open edX, user attributes (name, email, etc.), and the user’s LTI role and Nudgis permissions.

“Tip: The LTI test page is extremely valuable for debugging. Always verify with it before proceeding to production.”

11.2 Media Launch Test

1. Restore the Tool Launch URL to the production Nudgis Target Link URI.
2. Navigate to the course unit in the LMS and click the launch button.
3. Verify that the Nudgis interface loads within Open edX.
4. Confirm that the logged-in user’s name and role appear correctly.

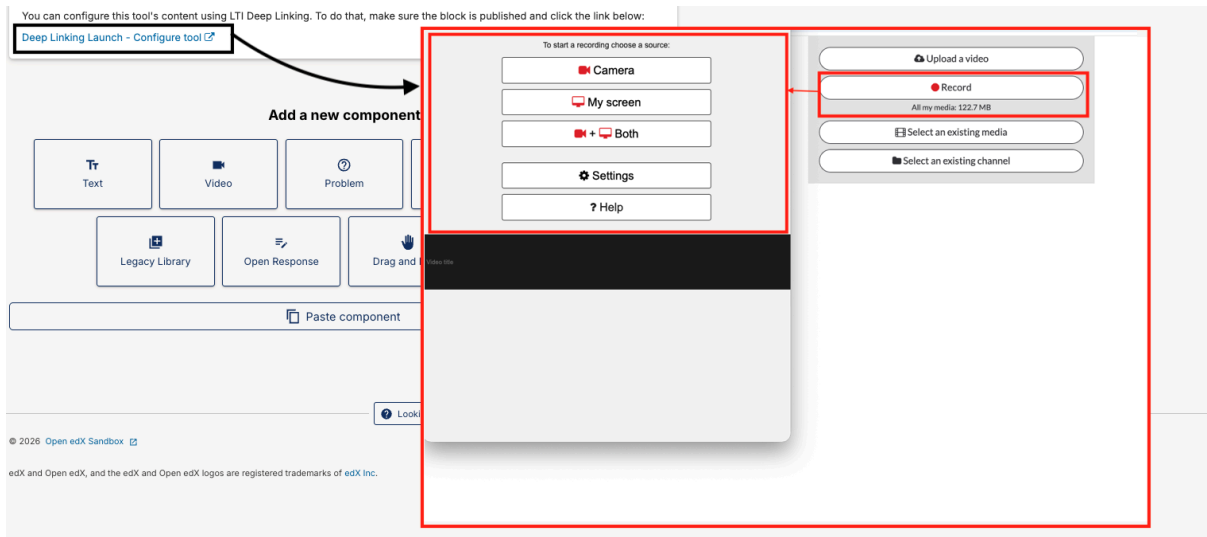


Figure: Nudgis Deep Linking media browser opened from Open edX Studio

11.3 Deep Linking Test

1. As an instructor, open the LTI Consumer block in Studio.
2. Use the Deep Linking feature to browse and select a media item from Nudgis.
3. Verify the selected media is embedded correctly and plays in the LMS.

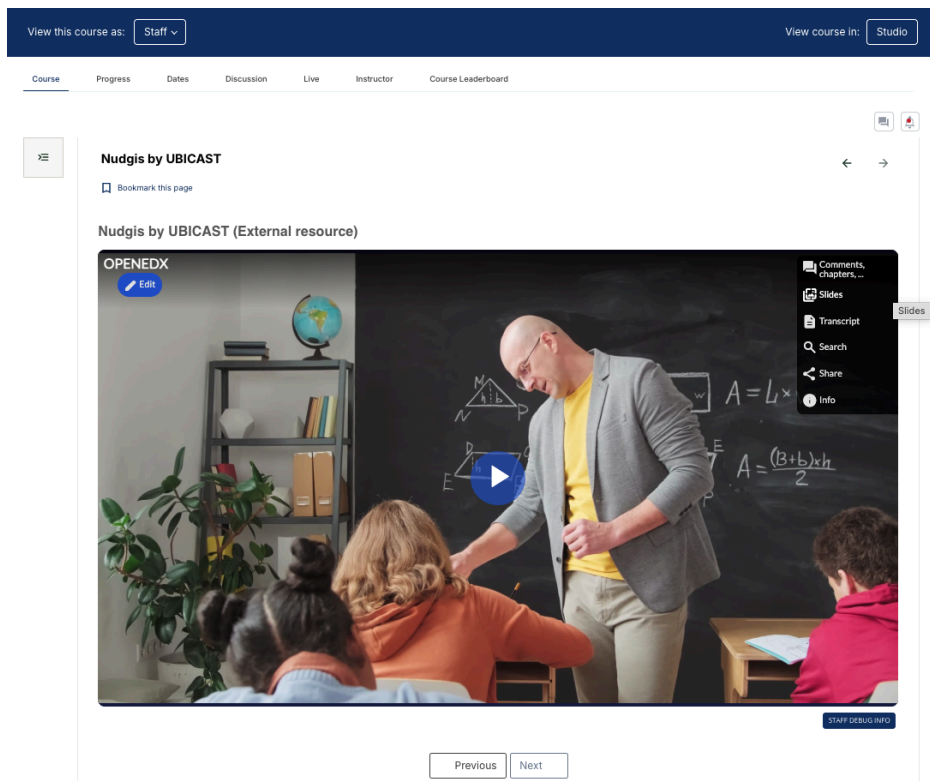


Figure: Nudgis Deep Linking media browser opened within Open edX interface

12. Troubleshooting

12.1 Common Issues

| Field | Value / Source |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Launch fails with authentication error | Verify the Issuer URL in Nudgis matches the Open edX LMS base URL exactly. Check Client ID and Deployment ID. |
| JWT verification fails | Ensure the complete Public Key was copied, including BEGIN/END lines. Verify server clocks are synchronized (NTP). |
| Nudgis does not receive user info | PII sharing must be enabled (Step 9). Check the NRPS waffle flag is set to Force On. |
| Deep Linking does not work | Confirm Enable Deep Linking is True and the Deep Linking Launch URL is correct. |
| Media appears in iframe but cookies fail | Use a shared top-level domain or ensure third-party cookies are allowed in the browser. |
| LTI Consumer block not available | Ensure "lti_consumer" is in the Advanced Module List. |
| Nudgis shows wrong role | Use the LTI test page to check which roles Open edX sends. Adjust Nudgis permission profiles if needed. |
| Playback progress not reported | Enable "Send playback progress" in Nudgis LTI settings. Verify the LTI Consumer block accepts grades. |

12.2 Log Locations

For detailed error information, check:

- Open edX LMS logs: /edx/var/log/lms/edx.log
- Nudgis application logs (check with your Nudgis hosting provider)
- Browser developer console for client-side iframe and cookie errors

12.3 The LTI Test Page

Nudgis provides a dedicated LTI test page that displays all data sent by the LMS. This page is essential for debugging. It shows raw LTI parameters, mapped user attributes, and applied permissions. Access it at: <https://your-nudgis-instance/lti/test/>

12.4 Getting Support

- Contact UbiCast Support for Nudgis-specific issues.
- Contact your Open edX platform administrator or hosting provider for LMS-side issues.

13. Appendix: Configuration Reference

13.1 Complete Field Mapping Summary

The table below summarizes every value exchanged between Open edX and Nudgis:

| Configuration Field | Source | Destination |
|---------------------------|-------------------------------|------------------------------------------------------|
| Client ID | Open edX (auto-generated) | Nudgis → Client Identifier |
| Deployment ID | Open edX (auto-generated) | Nudgis → Deployment Identifiers |
| Keyset URL | Open edX (auto-generated) | Nudgis → JWKS Endpoint |
| Access Token URL | Open edX (auto-generated) | Nudgis → Authorization Endpoint |
| Login URL | Open edX (auto-generated) | Nudgis → Login Endpoint |
| Issuer | Open edX LMS host URL | Nudgis → Issuer |
| Public Key ("Key to use") | Nudgis (from saved LTI entry) | Open edX → Tool Public Key |
| Target Link URI | Nudgis | Open edX → Tool Launch URL & Deep Linking Launch URL |
| Launch / Redirect URL | Nudgis | Open edX → Registered Redirect URIs |
| Login Initiation URL | Nudgis | Open edX → Tool Initiate Login URL |

13.2 Django Admin Paths

| Field | Value / Source |
|----------------------|-------------------------------------------------------|
| PII Sharing | /admin/lti_consumer/lti_1p3_course_allow_pii_sharing/ |
| Waffle Flag Override | /admin/waffle_utils/waffleflagcourseoverridemodel/ |

13.3 Nudgis Admin Paths

| Field | Value / Source |
|----------------------|------------------------------------------------------------------------------------|
| LTI Settings | Menu → Administration → Settings and Authentication Services → LTI |
| Permission Profiles | Menu → Administration → Settings and Authentication Services → Permission Profiles |
| LTI Test Page | https://<nudgis-instance>/lti/test/ |
| Deep Linking Manager | https://<nudgis-instance>/manager/ |

13.4 Required Waffle Flags

| Field | Value / Source |
|------------------------------------|------------------------------------------------------------------------|
| lti_consumer.lti_nrps_transmit_pii | Enables PII transmission via NRPS. Must be set to Force On per course. |