**Deployment Guide**

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| **Note:** The following online resources/ guides were used to deploy the Microsoft Learn LTI application and Open edX to Azure, respectively:   * [https://github.com/microsoft/Learn-LTI/blob/main/docs/DEPLOYMENT\_GUIDE.md#deploy-to-azure-subscription-using-the-script](https://github.com/microsoft/Learn-LTI/blob/main/docs/DEPLOYMENT_GUIDE.md" \l "deploy-to-azure-subscription-using-the-script) * <https://docs.tutor.overhang.io/configuration.html#custom-open-edx-docker-image> |

After successfully deploying Microsoft Learn LTI application and Open edX to Azure, here are several steps to ensure the successful integration between LTI application and Open edX.

1. Add codes shown in the picture below to the view.py file of xblock-lti-consumer that it can "guess" and fill in the given\_name and family\_name of the user by splitting the comma (",") or space (" ") in the user's full\_name. No need to split the full name necessarily if there has no comma or space in the full name because Learn LTI only needs given name and can have family name blank ("").

**Text

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2. Update the xblock-lti-consumer in Open edX

1. tutor local quickstart

2. nano $(tutor config printroot)/env/build/openedx/Dockerfile

3. Edit the Dockerfile in 2 locations

1. at EDX\_PLATFORM\_REPOSITORY, change the edx/edx-platform to YankeZhang/edx-platform to pull our forked github code
2. right below it, set the version to open-release/ltiopenedx.9

4. tutor images build openedx

5. tutor local stop

6. tutor local quickstart

# **Configure the tool**

The following guide shows the steps to configure the Open edX LMS to work with the Microsoft Learn LTI application. Regardless of the LMS, the typical workflow should remain the same:

1. Obtain parameters from the deployed Microsoft Learn LTI application’s registration page
2. Configure an LTI tool on the LMS using the parameters from step 1.
3. Obtain parameters from the configured LTI tool.
4. Configure the Microsoft Learn LTI application using the parameters from step 3.

By now, you should've obtained the following parameters from the Microsoft Learn LTI application’s registration page. If not, follow the [deployment guide](https://github.com/microsoft/Learn-LTI/blob/main/docs/DEPLOYMENT_GUIDE.md) to deploy Microsoft Learn LTI application and obtain the following parameters from the registration page.

* Login URL
* Launch URL
* Domain URL
* Public Key
* Public JWK
* Public JWK Set URL



If you are not the one who deployed the application, you need to obtain the parameters from that person.

The configuration steps slightly differ depending on the LMS you are using. In general, they will involve registering the Microsoft Learn LTI application as an external tool in the LMS and registering the parameters of external tool back in the Microsoft Learn LTI application's registration page.

**Open edX CMS:**

In the CMS Admin panel, enable the transfer of PII (incl. email) between an edX LTI Xblock component and the MS Learn Functions App.

1. To enable exposing PII information, add a course waffle flag from <http://EDX-LMS-URL/admin/waffle_utils/waffleflagcourseoverridemodel/>.
2. Set waffle flag to - lti\_consumer.lti\_nrps\_transmit\_pii and set course key to your course key. : YOUR-COURSE-ID.
3. Make sure to set the override choice option to - Force On
4. For security reasons, edX only allows to transmit enrolment PII for courses with less than 1000 students per default. To change this set the LTI\_NRPS\_ACTIVE\_ENROLLMENT\_LIMIT Django setting to a lower/higher value.

--> adapted from - [edx/xblock-lti-consumer#124](https://github.com/edx/xblock-lti-consumer/pull/124)

**Graphical user interface, application

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**Open edX LMS:**

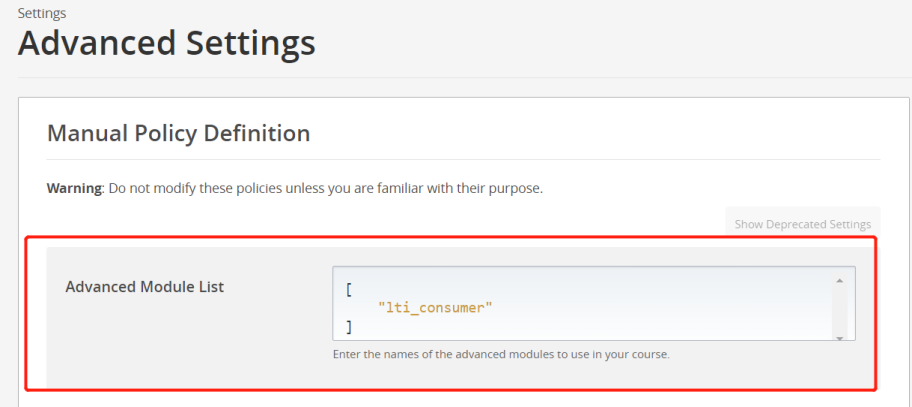
**LTI 1.3**

([https://edx.readthedocs.io/projects/edx-partner-course-staff/en/latest/exercises\_tools/lti\_component.html#setting-up-an-lti-1-3-component](https://edx.readthedocs.io/projects/edx-partner-course-staff/en/latest/exercises_tools/lti_component.html" \l "setting-up-an-lti-1-3-component))

1. Sign into Open edX Studio (I.e., the Content Management System of Open edX) with the admin account.

2. Enable the LTI Consumer XBlock in Open edX Studio through the advanced settings based on the following steps:

1. From the main page of a specific course, navigate to **Settings -> Advanced Settings** from the top menu.
2. Check for the **advanced\_modules** policy key and add "**lti\_consumer"**to the policy value list, per the below figure.



1. Click the **"Save changes"** button.

3. Edit the unit in which you want to add the remote LTI tool and select **Advanced** from within the **Add New Component** section. Select **LTI Consumer**.

4. Select **Edit** inside the newly created component.

5. In the **LTI Version** field, select **LTI 1.3**.

6. Enter the LTI 1.3 settings provided in the Learn Lti Registration form. For basic LTI 1.3 tools, you need to set the following settings:

* **LTI 1.3 Tool Launch URL** (can also be called redirect url)
* **LTI 1.3 OIDC URL** (can also be called login url)
* **LTI 1.3 Tool Public Key** (a key provided by the LTI tool) The key will look similar to this example:

-----BEGIN PUBLIC KEY-----abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345 abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345abcde12345-----END PUBLIC KEY-----

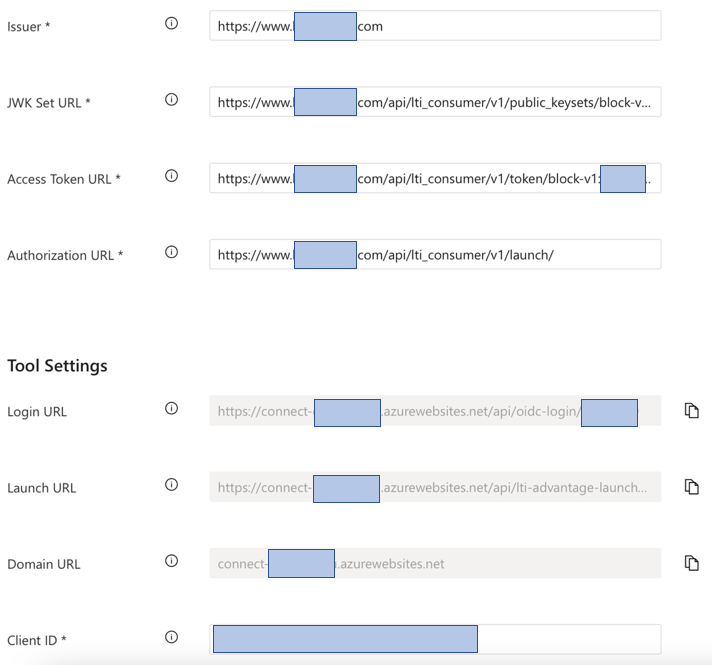
You should paste the key from the tool directly into the configuration field. For more information about each setting, see the [LTI Component Settings](https://edx.readthedocs.io/projects/edx-partner-course-staff/en/latest/exercises_tools/lti_component.html" \l "lti-component-settings).

7. Enable LTI NRPS through setting it to True.

8. Select **Save**.

9. The Studio page will refresh and display LTI configuration required by the tool. Copy each of those values and follow the instructions provided by the tool to set them up.

* **Client** -> Client ID
* **Keyset URL ->** JWK Set URL
* **OAuth Token URL** ->Access Token URL
* **OIDC Callback URL** -> Authorizaton URL



9. Publish the unit where the LTI Component is located.

You're all set. The Learn LTI tool is now configured on your Moodle LMS and your Educators will be able to use it to bring Microsoft Learn content to their courses. Follow the [educator guide](https://github.com/xiaomo728/Learn-LTI/blob/main/docs/USER_GUIDE.md) to create assignments that use the Learn LTI tool.

Note: This guidance document is in an early draft stage. Currently, technical issues exist which may make the integration of the MS Learn LTI application into Open edX technically impossible. A solution is already being worked on.