YOUR FIRST TOOL INTEGRATION WITH BASIC LEARNING TOOLS
INTEROPERABILITY (BASIC LTI)

Serves: Administrators

Integrating third party or custom tools into Learning Environment using Basic LTI is a straightforward process with immediate results. Once you have set up everything in your environment, adding new tools or trying different configurations is easy. This recipe will make sure you have all the necessary preparations in your environment to get started.

Benefits:
- Straightforward integrations with third party tools, or tools you build in-house
- Employs a standards based approach to allow for a more user friendly process flow
- Compatible with a continually growing, large list of teaching and learning tools in the market

WHAT YOU WILL NEED

Requires your institution to have Learning Environment 8.4.2 or higher

Note: This document is written based on version 9.4.1. Options may appear differently in previous versions.

- External tools that supports Basic LTI version 1.0
- A URL, Key and Secret from the Basic LTI tool vendor

SECTIONS IN THIS RECIPE

- Basic LTI overview
- Set up permissions
- Set up IMS Mappings for roles and org units
- Create a link in a course
- Preview request details
- Incorporate links into courses
- Other ideas to consider trying
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BASIC LTI OVERVIEW

Learning Tools Interoperability (LTI) enables tool consumers, primarily learning management systems, to connect and transfer information to tool providers. Tool providers consist of commercial tools vendors or institutions that write and host tools for eLearning. Examples include wikis, simulations or protected content.

LTI, as a standard from IMS Global Learning Consortium, allows users to access external learning tools from their courses without logging into the tool itself.

For more information about IMS Basic LTI, refer to the whitepaper below:
http://www.desire2learn.com/resource/docs/wp/Desire2Learn_whitepaper_IMS_Basic_LTI.pdf
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SET UP PERMISSIONS

For Basic LTI/ External Learning Tools, there are two sets of permissions you should set from Roles and Permissions to access Learning Environment tools:

**External Learning Tools permissions**

The following are the permissions you can configure under this category:

- Managing configurations
- Launching links
- Managing links
- Creating quicklinks to links
- Managing tools providers

**IMS Mapping permissions**

The only Organization-leveled permission is the Manage IMS Configuration option. This is used for mapping IMS roles and context types to your system’s roles and org unit types.

This permission is usually only given to administrators.

Administrators are typically given all permissions at each level.

Instructors, at a minimum, should have rights to create quicklinks from courses and launch tools anywhere.

Students are not granted rights besides the ability to launch tools from anywhere.
SET UP IMS MAPPINGS FOR ROLES AND ORG UNITS

IMS Global has a few standard user roles and context (org unit) types. As these standard names need to be sent with Basic LTI launch requests, you must map your system’s roles to IMS roles, and your org unit types to IMS contexts.

Use the checkboxes from the IMS Configuration tool, accessed through the My Admin Tools widget, to set up the mappings.

When doing so, use the following best practices as a basic template. You can always modify it according to the tools you are integrating:

- Have a 1:1 mapping for org unit types
- Map/connect
  - Student roles to the Learner and Student options
  - Instructor roles to the Instructor option
  - Administrator roles to the Instructor and Administrator options
  - Course offering org unit type to the Course Offering option
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CREATE A LINK IN A COURSE

The easiest way to start sharing links is to create one from within a course. Access the External Learning Tools option through one of two channels: the Edit Course Link or the My Admin Tools widget on the course homepage.

When setting up a new link, here are a few reminders to note for the various sections of the New Link page:

Properties:

- Name your link in the Title field
- Enter the URL provided by the vendor of the tool

Custom Parameters:

- If you need to send custom parameters, enter them one at a time
- Save after each entry

Key/Secret:

- To ensure that the link is configured properly with your key and secret, select the Link key/secret option
- The tool vendor should have provided you with a key and secret

Security Settings:

- Select all the options to send all available information to the external tool
- Afterwards, you can clear the boxes if what you sent is not required by the tool
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PREVIEW REQUEST DETAILS

Use **Preview Request Details** to display all of the parameters of the Basic LTI launch. This consists of information about the user, course, system, link and encryption in HTML code format. We recommend using this functionality to verify that the information being sent to vendors is accurate or to troubleshoot issues.

The Preview option allows you to launch and access the external tool with your set parameters.

**Tip:** If the tool does not know who you are or what system and course you came from, verify the information in the launch request and troubleshoot the previous steps.

- **Edit Link**

  ![Edit Link](image)

  **Preview Request Details**

  ![Preview Request Details](image)

  **Incorporate Links into Courses**

  Place created links into courses by inserting a quicklink through the HTML editor or by creating a Quicklink (in a News item or Discussion post, for example).

  Remember three steps when creating a quicklink:
  - Choose the External Learning Tools category
  - The Link details is the link you created
  - Add a caption before saving

  Apart from Quicklinks, also try adding links to your Navbar or embed a small tool into a custom widget using an iFrame.
OTHER IDEAS TO CONSIDER TRYING

Once you understand the basic process flow, it’s easy to modify and simplify it to suit your needs. Below is a list of other ideas that you can consider trying in the future!

- Create a link at the organization level so that administration of the link is done at the org level. When shared to courses, instructors will only have to create Quicklinks.

- Create a Tool Provider Configuration if you have a vendor who wants you to create multiple links. Using URL pattern matching, this allows all the links to inherit the same key, secret and system information.

- Modify Security Settings to only send required information to the tool.