

PeopleFluent Learning

LTI Tool Integration Guide

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About this Document

Introduction

Learning Tools Interoperability (LTI) is one of the critical interoperability standards needed to integrate multiple campus systems so that institutions can create a coherent technology ecosystem (shared environments) with products from several different vendors. PeopleFluent Learning can integrate with LTI tools via the Rustici Engine. This guide explains how to set up the integration.



On-premise customers will need to be provided with the URLs for the PeopleFluent-hosted Rustici Engine to use this feature.

Document Information

This section lists any changes or updates that occur following initial publication.

Revision Information		
Revision Date:	May 3, 2024	
Revised Document Version Number:	1.0	
Details of Revision:	Initial publication.	

Rustici Engine Configuration

This configuration does not require code changes, but needs to be configured on Rustici Engine.

System-Level Configuration

The following parameters should be configured at the system level.

• LtiPlatformIssuer - This is the primary URL used by the customer for PeopleFluent Learning. It may be different from the SaaS default.

These are configured with a system-level POST request to the V2 API's /api/v2/appManagement/configuration endpoint:

```
"settings": [

{
    "settingId": "LtiPlatformIssuer",

    "value": "https://customer.learning.peoplefluent.com"

}]
}
```

Tenant-Level Configuration

The following parameters should be configured at the tenant level.

- LtiBaseUrl This is the Rustici Engine URL and path to the '/api' endpoint.
- LtiConsumerIdentifier This is a unique identifier for PeopleFluent Learning, and will be the same for all customers.
- **RemoteDeliverPageUrl** This will be the URL for the primary URL used by the customer and the path to the '/player' endpoint.

These are configured with a tenant-level POST request to the V2 API's /api/v2/appManagement/configuration endpoint:

```
"value": "http://HostName/RusticiEngine/api"

},

{
    "settingId": "LtiConsumerIdentifier ",

    "value": "PeopleFluentLearning"

},

{
    "settingId": "RemoteDeliverPageUrl",

    "value": "https://customer.learning.peoplefluent.com/ekp/rustici/player/"

}]
```

When sending the POST, the engineTenant must be included in the header.

LTI Tool Setup in PeopleFluent Learning

Related Permissions

Permission to access, create and edit LTI Tool setups are based on the **Catalog Manager** permission.

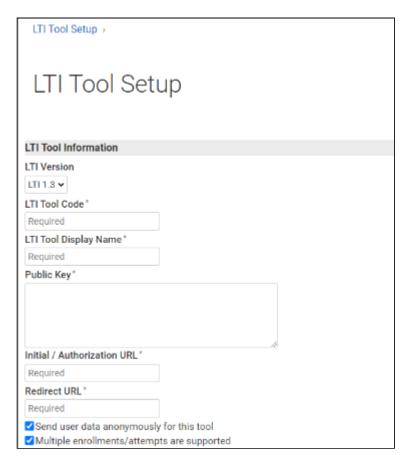
- Users who have **Unrestricted** access within the Catalog Manager role can create and edit LTI tools and view the tool details.
- Users who have Read Only access within the Catalog Manager role can only view the LTI details.
- Users who have No Access within the Catalog Manager role are not able to access the LTI Tool Setup screen.

Create a New LTI Tool Setup

1. Navigate to Learning > Catalog General Settings > LTI Tool Setup.



2. Click Create New. The LTI Tool Setup screen displays.



3. Configure the fields:

- LTI Version The only option will be LTI 1.3. This is included for future expansion to other LTI versions.
- LTI Tool Code This is a customer-entered field that will be used in the Course Data Loader to designate the tool for a course. The Code must be unique in the system.
- LTI Tool Display Name This is the name of the LTI Tool being set up. The Display Name must be unique in the system.
- Public Key This will be the public key necessary to support OIDC/OAuth, obtained from the LTI Tool provider.
- Initial / Authorization URL This initial URL of the LTI Tool platform used to login or connect, which must be HTTPS.
- **Redirect URL** This is where the LTI Tool provider will redirect after authorization, obtained from the LTI Tool provider.
- Checkbox to send user data anonymously.
- Checkbox to allow multiple enrollments/attempts.
- 4. You will notice that there are read-only fields in the Additional Information section of the screen. This is information that will need to be passed to the LTI 1.3 tool provider about the engine configuration. It is displayed here for your reference. For additional information, please see Submit Information to Rustici Engine.

Additional Information	
Issuer:	issuer
Client ID:	toolClientId
Deployment ID:	deploymentId
OIDC Authorization URL:	oidcAuthorizationUrl
Platform JWKS Endpoint:	jwksEndpoint
Maximum Inactive Interval:	accessTokenUrl
Permissions Save Cancel	

- Issuer The value of the required LtiPlatformIssuer configuration setting.
- · Client Id The OAuth Client Id
- **Deployment Id** An identifier for the integration between the platform and the tool. Identical to the connectorId.
- OIDC Authorization URL The endpoint where the tool should send the OIDC Authorization Request
- JWKS Endpoint A link to access Engine's JSON Web Key Set.
- Access Token URL The endpoint the tool should use to retrieve an OAuth 2.0
 access token that it will use to access the Engine's Assignment and Grade Services
 endpoints.
- 5. Click **Permissions** to grant permissions for the LTI Tool Setup. This sets the permissions for who can select the tool in Define Launch Properties.
- 6. Click Save.

Edit an LTI Tool Setup

- 1. Navigate to Learning > Catalog General Settings > LTI Tool Setup.
- 2. Click the **NAME** of the setup you would like to edit.
- 3. Make updates as necessary.
- 4. Click Save.

Delete an LTI Tool Setup

- 1. Navigate to Learning > Catalog General Settings > LTI Tool Setup.
- 2. Click the gear icon for the setup you would like to delete.
- 3. Click **Delete**.

Submit Information to Rustici Engine

In addition to saving the LTI Tool information to the database, some of the information needs to pass to Rustici Engine. Once passed, additional information needs to be retrieved from Engine that needs to be displayed to the user, so it's best to also store this information.

For Rustici Engine API information, see API Reference link in the Appendix.

Create Connector on Engine

First, an LTI 1.3 connector must be created with a POST request to the /api/v2/contentConnectors endpoint with the following schema:

```
"contentConnectorType": "ContentConnector.Lti13",

"configuration": {

   "toolPublicKey": "string",

   "toolOidcLoginInitiationsEndpoint": "string",

   "toolOidcLaunchRedirectUris": ["string"]

},
```

Details:

- toolPublicKey- The Public Key added via the LTI Setup form.
- toolOidcLoginInitiationsEndpoint The Initial / Authorization URL added via the LTI Setup form.
- toolOidcLaunchRedirectUris The Redirect URL added via the LTI Setup form.



Editing an LTI Tool Setup entry should update the existing tool on Rustici Engine by submitting the same information with a PUT request.

A successful POST request will return the connectorId as a UUID in the response.

```
{
   "result": "connectorId"
}
```

Get Connector Instance Information

Second, you will need to provide the LTI 1.3 tool provider with information about the Engine configuration. This information can be retrieved by making a GET request to the /api/v2/contentConnectors enpoint with the includeAdditionalInstanceInformation= true and tenant query parameters.

This will return all of the LTI Tools that have been set up for a given tenant. Within the response, locate the entry corresponding to the connectorID from the first step. The response will contain an additionalInstanceInformation schema with the following keys:

```
"additionalInstanceInformation": {

   "toolClientId": "string",

   "oidcAuthorizationUrl": "string",

   "jwksEndpoint": "string",

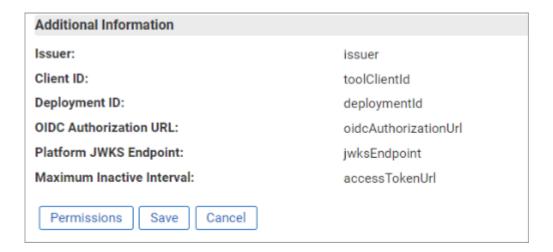
   "issuer": "string",

   "deploymentId": "string",

   "accessTokenUrl": "string"
}
...
```

- Issuer The value of the required LtiPlatformIssuer configuration setting.
- · Client Id The OAuth Client Id
- **Deployment Id** An identifier for the integration between the platform and the tool. Identical to the connectorId.
- OIDC Authorization URL The endpoint where the tool should send the OIDC Authorization Request
- **JWKS Endpoint** A link to access Engine's JSON Web Key Set.
- Access Token URL The endpoint the tool should use to retrieve an OAuth 2.0
 access token that it will use to access the Engine's Assignment and Grade Services
 endpoints.

This information is provided in the Additional Information section of the LTI Tool set up.

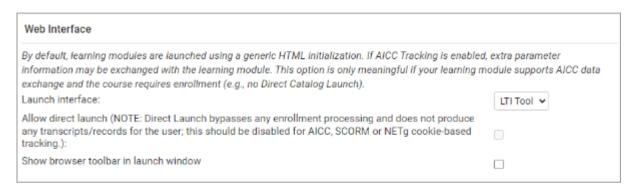


Please see LTI Tool Setup in PeopleFluent Learning for details on accessing this information.

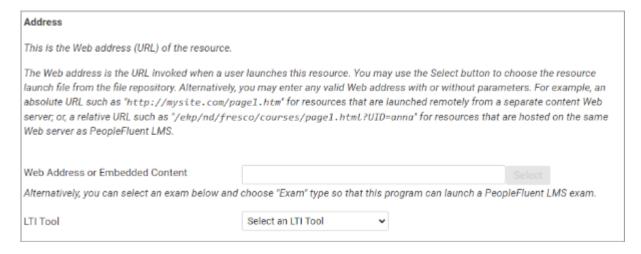
Configuring a Course to Use an LTI Tool

An LTI Tool is configured for a course within the Learning Module Launch Properties.

The LTI tool is selected on the **Define Launch Properties** screen when configuring a course in the Catalog Editor. A new LTI Tool option is available in the **Web Interface** drop-down field.



When the LTI Tool option is selected, the Address section will contain fields that allow the user to select a pre-configured LTI Tool and enter the launch URL. **Note**: Users can only select LTI Tools to which they have Read-Only or Unlimited access.



For additional information about configuring courses and defining launch properties, please see the **Catalog Administration Guide.**

LTI Tool Code in the Data Loader and Reports

Course CSV Data Loader

The Launch.Interface field xx

A column is included in to import the LTI Tool Code; *Launch.LTIToolCode*. In order to import successfully, the LTI Tool Code must match a tool that has already been configured in the application. The user performing the import must have ReadOnly or Unlimited Permission for the tool represented by the code.

R246 and R247 Reports

These reports are output in the same format as the Course CSV Data Loader and therefore contain the *Launch.LTIToolCode field*.

Appendix - Documentation

Rustici Software

There are several options for documentation from Rustici Software for Engine.

LTI 1.3

https://docs.rusticisoftware.com/engine/22.x/LTI/Platform-Overview.html#lti-v13

API Reference - Content Connectors

https://docs.rusticisoftware.com/engine/22.x/api/apiV2.html#/contentConnectors

Integrating with the IMS Test Tool

IMS Global - which rebranded as **1EdTech** in 2022, is the organization responsible for overseeing the LTI standard. They provide the ability to create test tools to allow platforms to test their integration. Rustici Software provides an example of how to do this with Rustici Engine here:

https://support.scorm.com/hc/en-us/articles/4409019279003-Integrating-Engine-with-the-IMS-test-tool-for-LTI-1-3

Example Implementations with Other Providers

https://support.scorm.com/hc/en-us/sections/9165959140507-LTI-Impl

1EdTech (IMS Global)

1EdTech's LTI standard is a technical standard (not a product) used to connect learning tools with an institution's learning environment without logging into each tool. LTI supports a high level of security for passing data about the users, their institutional enrollment, and roles.

LTI 1.3 Specification Documentation

https://www.imsglobal.org/spec/lti/v1p3

LTI Test Tools

This would be a good place to test all of the above when needed. Creating a tool, similar to the Rustici Engine instruction above, and testing it.

https://lti-ri.imsglobal.org/lti/tools

Other Tools

Skillable

https://docs.skillable.com/lod/lab-on-demand-lti-1p3-integration.md

Awareways



This information was provided by our partner, TCC. It is included here for reference, but should not be used for testing purposes.

To set up an LTI connection between the client's LMS and Awareways' Wave, there is a need to exchange some technical details.

From the Awareways to the Client

- LTI version: 1.3
- Initiate (OIDC) login URL: https://lti.anwb.enter-the-wave.com/lti1p3/oidc/initiation
- Provider/Tool URL: https://lti.anwb.enter-the-wave.com/lti/message/<training_id>
- Redirect URL: https://lti.anwb.enter-the-wave.com/lti/message/<training_id>

Insert the training_id listed below inside the provider/tool URL and redirect URL.

Training_ID	Title
cd229f96-b891-4019-8419-e57be9a8959c	Basistraining winkelpersoneel
a022009f-7dde-4d33-b286-c5a7e1e27139	Basistraining Wegenwachten
21ed7566-c1ff-437a-8c74-7459bdd1d57d	Basistraining kantoorpersoneel

This information can be provided as soon as the training id is known, even without requesting it from dev (or even being set up in the platform).

The LTI cannot be set (and hence used) until the rest of the information is received from the client and set up in Wave's LTI Tool.

From Client (LMS) back to Awareways

Platform (LMS)

- Audience URL: this is usually the main URL to the platform
- · OIDC Authentication Url
- · oAuth2 Access Token Url

Registration

- Client ID
- Deployment ID



The above parameters are part of the Additional Information on the LTI Tool Setup screen above.

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