

PeopleFluent Learning

LTI Tool Integration Guide

Contents

About this Document.....	3
Rustici Engine Configuration.....	4
LTI Tool Setup in PeopleFluent Learning.....	6
Submit Information to Rustici Engine.....	9
Configuring a Course to Use an LTI Tool.....	12
LTI Tool Code in the Data Loader and Reports.....	13
Appendix - Documentation.....	14
Legal Notice	17

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:

```
{
  "settings": [
    {
      "settingId": "LtiBaseUrl",
```

```
|   "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**.



The screenshot shows the 'LTI Tool Setup' interface. At the top left, the title 'LTI Tool Setup' is displayed. In the top right corner, there is a button labeled '+ Create new'. Below this is a table with two columns: 'NAME' and 'TYPE'. The table contains three rows of data, each with a gear icon to the left of the name.

NAME	TYPE
 Awareways	LTI 1.3
 Pearson	LTI 1.3
 Harvard Business Publishing	LTI 1.3

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

LTI Tool Setup >

LTI Tool Setup

LTI Tool Information

LTI Version
LTI 1.3 ▼

LTI Tool Code *
Required

LTI Tool Display Name *
Required

Public Key *

Initial / Authorization URL *
Required

Redirect URL *
Required

Send user data anonymously for this tool

Multiple enrollments/attempts are supported

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

- **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` endpoint 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.

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

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.

Web Interface

By default, learning modules are launched using a generic HTML initialization. If AICC Tracking is enabled, extra parameter information may be exchanged with the learning module. This option is only meaningful if your learning module supports AICC data exchange and the course requires enrollment (e.g., no Direct Catalog Launch).

Launch interface: LTI Tool ▾

Allow direct launch (NOTE: Direct Launch bypasses any enrollment processing and does not produce any transcripts/records for the user; this should be disabled for AICC, SCORM or NETg cookie-based tracking.):

Show browser toolbar in launch window

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.

Address

This is the Web address (URL) of the resource.

The Web address is the URL invoked when a user launches this resource. You may use the Select button to choose the resource launch file from the file repository. Alternatively, you may enter any valid Web address with or without parameters. For example, an absolute URL such as "http://mysite.com/page1.htm" for resources that are launched remotely from a separate content Web server; or, a relative URL such as "/ekp/nd/fresco/courses/page1.html?UID=anna" for resources that are hosted on the same Web server as PeopleFluent LMS.

Web Address or Embedded Content Select

Alternatively, you can select an exam below and choose "Exam" type so that this program can launch a PeopleFluent LMS exam.

LTI Tool Select an LTI Tool ▾

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.rusticissoftware.com/engine/22.x/LTI/Platform-Overview.html#lti-v13>

API Reference - Content Connectors

<https://docs.rusticissoftware.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/l1p3>

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://l1p3-ri.imsglobal.org/l1p3/tools>

Other Tools

Skillable

<https://docs.skillable.com/lod/lab-on-demand-l1p3-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.

Legal Notice

This document has been created for authorized licensees and subscribers ("Customers") of the software products and associated services of Learning Technologies Group, Inc. by its division PeopleFluent and all of its affiliates (individually and collectively, as applicable, "PeopleFluent"). It contains the confidential and proprietary information of PeopleFluent and may be used solely in accordance with the agreement governing the use of the applicable software products and services. This document or any part thereof may not be reproduced, translated or retransmitted in any form without the written permission of PeopleFluent. The information in this document is subject to change without notice.

PEOPLEFLUENT DISCLAIMS ALL LIABILITY FOR THE USE OF THE INFORMATION CONTAINED IN THIS DOCUMENT AND MAKES NO REPRESENTATIONS OR WARRANTIES WITH RESPECT TO ITS ACCURACY OR COMPLETENESS. PEOPLEFLUENT DISCLAIMS ALL IMPLIED WARRANTIES INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. PEOPLEFLUENT DOES NOT GUARANTEE THAT ITS PRODUCTS OR SERVICES OR ANY SAMPLE CONTENT CONTAINED IN ITS PRODUCTS AND SERVICES WILL CAUSE OR ENABLE CUSTOMER TO COMPLY WITH LAWS APPLICABLE TO CUSTOMER. USERS ARE RESPONSIBLE FOR COMPLIANCE WITH ALL LAWS, RULES, REGULATIONS, ORDINANCES AND CODES IN CONNECTION WITH THE USE OF THE APPLICABLE SOFTWARE PRODUCTS, INCLUDING, WITHOUT LIMITATION, LABOR AND EMPLOYMENT LAWS IN RELEVANT JURISDICTIONS. THE PEOPLEFLUENT PRODUCTS AND SAMPLE CONTENT SHOULD NOT BE CONSTRUED AS LEGAL ADVICE.

Without limiting the generality of the foregoing, PeopleFluent may from time to time link to third-party websites in its products and/or services. Such third-party links are for demonstration purposes only, and PeopleFluent makes no representations or warranties as to the functioning of such links or the accuracy or appropriateness of the content located on such third-party sites. You are responsible for reviewing all content, including links to third-party web sites and any content that you elect to use, for accuracy and appropriateness, and compliance with applicable law.

Any trademarks included in this documentation may comprise registered trademarks of PeopleFluent in the United States and in other countries.

Microsoft, Windows, and Internet Explorer are trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries. Oracle and PeopleSoft are registered trademarks of Oracle International Corporation. Adobe and Acrobat are registered trademarks of Adobe Systems Incorporated. All other names are used for identification purposes only and are trademarks or registered trademarks of their respective owners. Portions of PeopleFluent Workforce Communication software may include technology licensed from Autonomy and are the copyright of Autonomy, Inc. Quartz Scheduler is licensed under the Apache License.

Website: peoplefluent.com

Copyright © 2024, Learning Technologies Group, Inc. All rights reserved.