1. Installation Overview

1 Overview of Installation

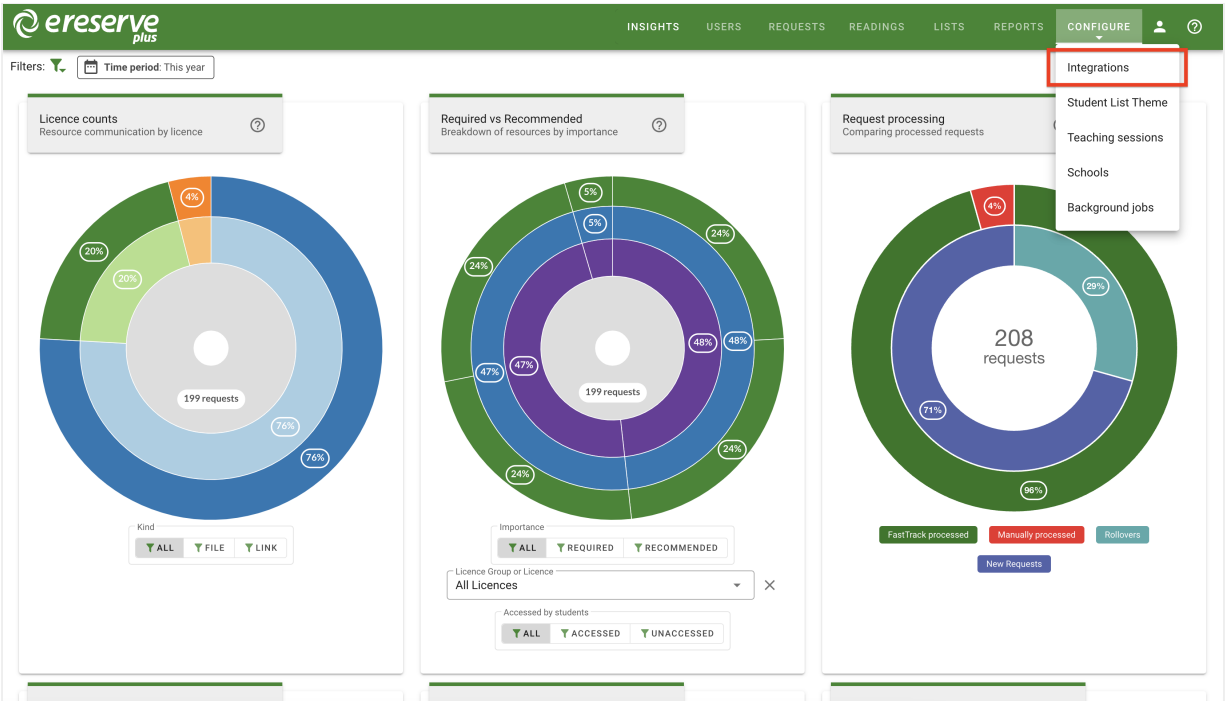
Installation of the eReserve Plus LTI Tool starts in the eReserve Plus Configuration console. Following are the steps necessary to complete the installation.

1.1 Integration Record Creation

Creation of new integration records is done within the eReserve Plus Admin interface. You will need access to this interface to complete this step of the setup. If you do not have access then please contact the eReserve Support Team.

Each integration record contains the details for authentication (a key and a secret) and, once activated it will contain details of the LMS Instance once it has been activated.

Login to eReserve then navigate to Configure > Integrations.



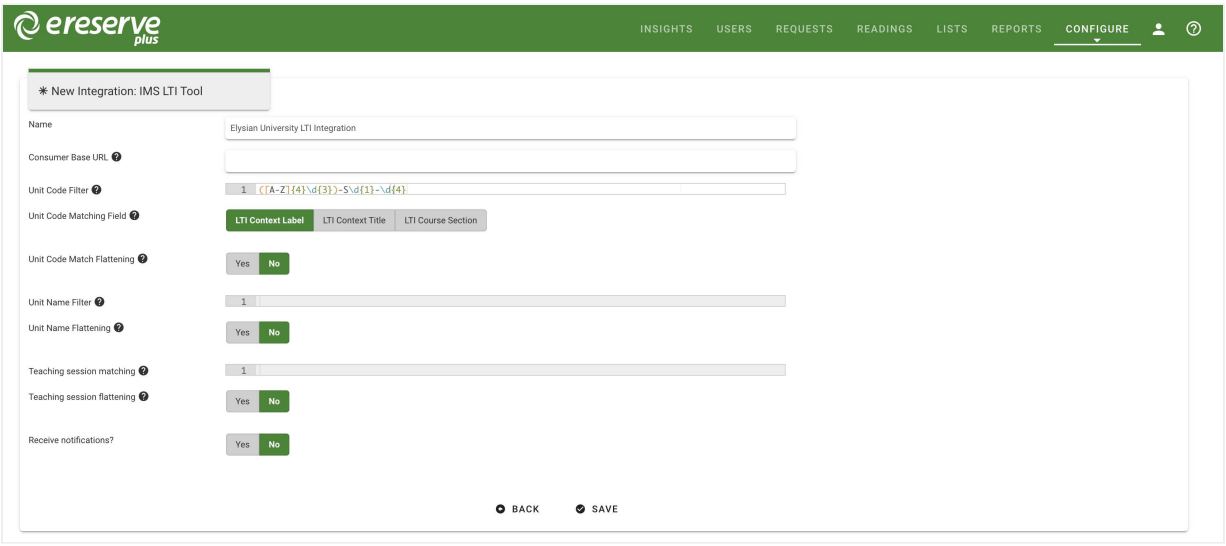
configure-integrations

Once you have navigated to Integrations, you will see the interface pictured below.

(blank intergration screenshot needs to be added or wording above needs to be adjusted)

To start the creation process click on the New integrations for dropdown button then select IMS LTI Tool.

You'll then be presented with the form below. All you need to do is enter a name for your integration then click on the Save button. You'll notice that a key and secret have been automatically created for you. Take note of these, we'll be using them when we head over to your LMS to do the next step.



completed-ims-lti-tool

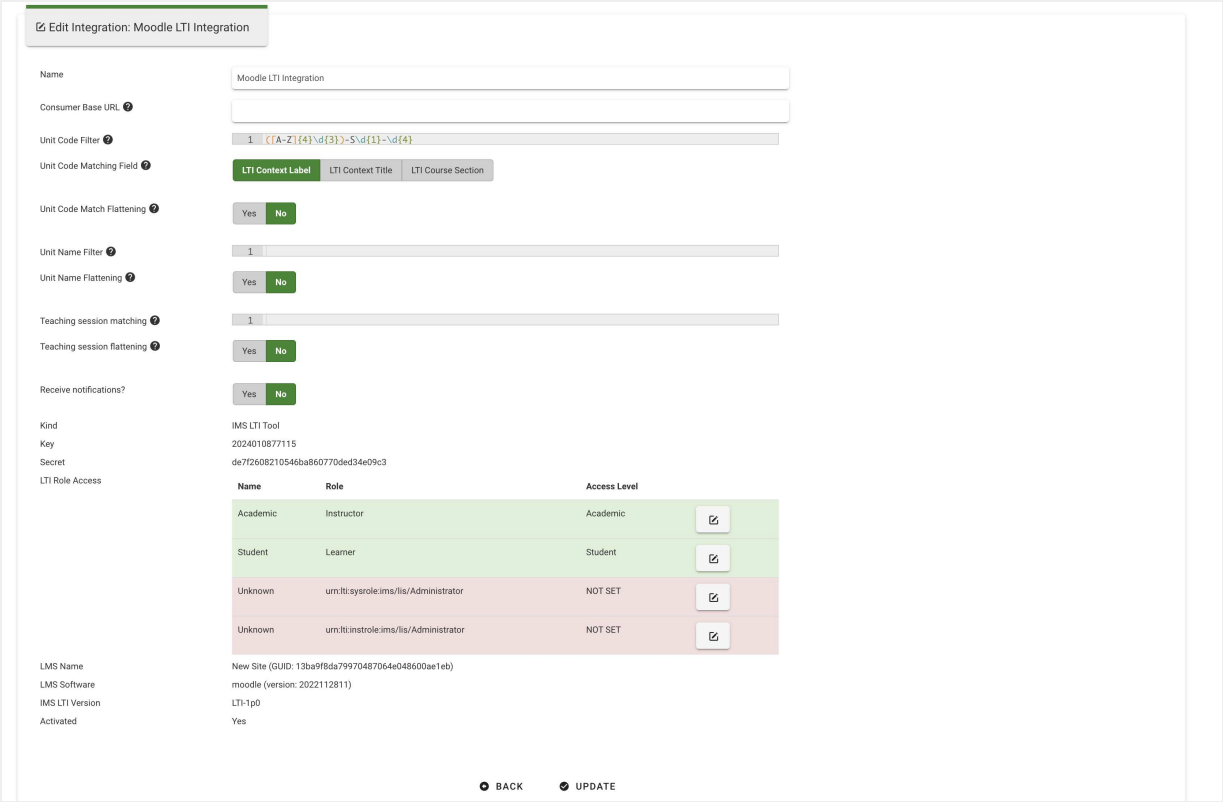
At this point it’s important to note that each instance of your LMS will need its own integration record created in eReserve. So if you have 3 instances of your LMS you’ll have 3 integration records in eReserve. Once an integration record has been activated it can only be used with the LMS instance that it was activated from. So using those credentials for another LMS Instance will fail.

1.2 Installation in your LMS

Each LMS that supports IMS LTI 1.1+ has its own specific installation requirements. With this in mind we've created instructions for each LMS that we support. These can be found in section 3 of this document onwards.

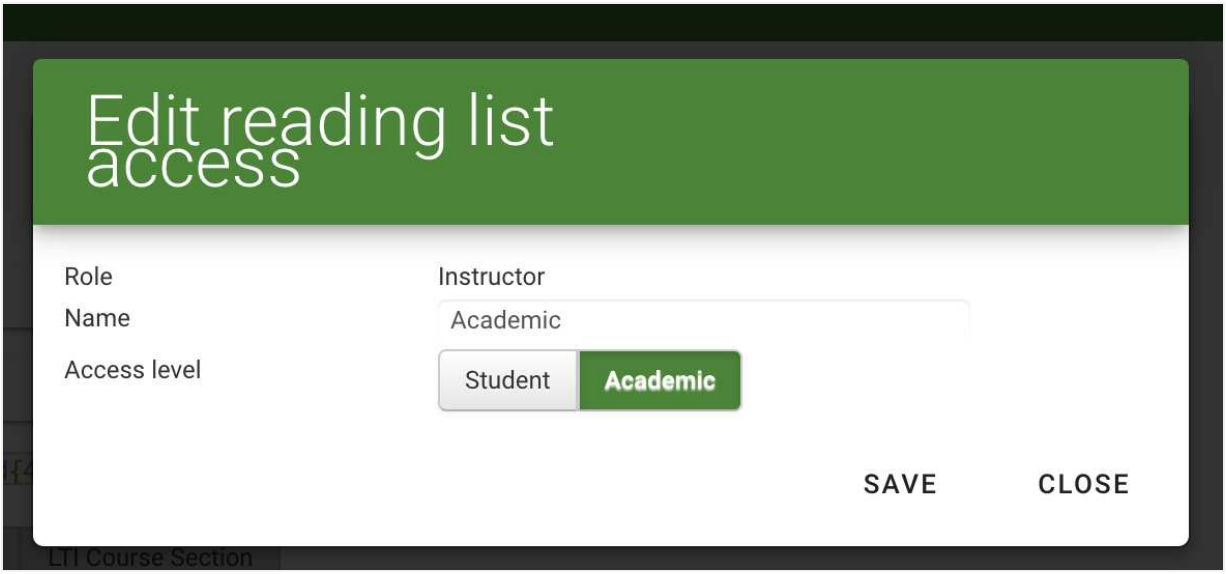
1.3 Reading list access management

Every user from your LMS has a role as defined in the LTI standard (see LTI Role Vocabularies). The role is passed to eReserve Plus at the time a user accesses their Reading List in eReserve Plus. Subsequently this role is then used to dictate what features the user has access to in the reading list. Currently there are two access levels defined in eReserve Plus: Student and Academic. The Student role provides read only access to the Reading List where as the Academic access provides a fully featured reading list management interface. You can manage this access simply by editing your LTI Integration record once it has been activated through the eReserve Plus Integration Management. Once you've started editing your LTI integration, you will see a LTI Role Access console to manage like the image below.



moodle-lti-integration

You'll note the list of LTI roles with their associated access level. Rows that are green have had their access level set and those that are red have not. To set or change the access level it's just a matter of clicking on the edit button. Once clicked you'll see the form below.



edit-reading-list-access

Change the name as needed and select an appropriate access level then click on the save button and you're done. This will be updated immediately and end users will see the change.

The first time an LTI role attempts to access eReserve Plus, the role will be made available in red as per the screenshot above until the Role is mapped in eReserve Plus to a Student or Academic; at which time it which will become green (authorised). If there are Roles in your LTI which have not become available in eReserve then login using the LMS using the appropriate role and select the Reading List activity to initiate the first access of eReserve Plus.

1.4 Reading lists, course codes and course names

When displaying the Reading Lists eReserve Plus will use the course code from your LMS to know which Reading Lists to display. For a lot of Institutions the course code will change each time it is offered. For example, a course code for one offering may be CS101_S2_2014 and the next offering the course code may be CS101_S1_2015. There are commonalities, however they are unique to the offering of the course and will mean that eReserve Plus will not have any historical lists for the new code. This is solved in eReserve Plus through its course code filtering.

1.4.0 Course Code Prefix

In very special circumstances a prefix can be added to all course codes connecting from the integration. If utilised all course codes originating from the integration will have the prefix added and all course code filters will have to be setup based on the prefixed course code.

1.4.1 Course code filter

To map a newly created offering to a base code, eReserve Plus has a filtering mechanism that allows you to match the new offering to the base course code (e.g. CS101 in the example above). To set the filtering simply edit the associated integration record in the Intergration Management interface and complete the Course Code Filter field. To create a filter you will need to provide a Regular Expression. You can use tools like Rublar to test your regular expressions before applying them to your integration record.

NB: It's important that this course code filter is correct otherwise it will lead to incorrect display of Reading Lists. If you are not comfortable with creating a regular expression then please contact the eReserve support team.

1.4.2 Course code filter - Multiple Matching Groups

LTI1.3 integrations support additional flexibility in course code filters. The Multiple Matching Groups switch allows the supplied regular expression to match more than one part of the course code and course name.

1.4.3 Course code matching field

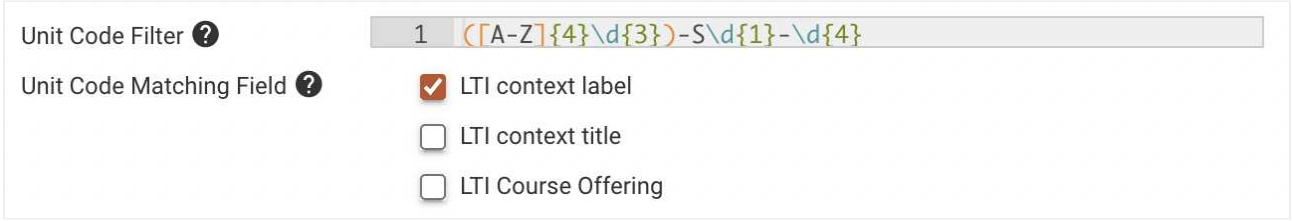
The majority of Learning Management Systems will send the Course Code via the LTI Context Label and the Course Description will be in the LTI Context Title. If the Base Code is only available within the Course Description this option sets which LTI field is processed by the Course Code Filter.

1.4.4 Course code matching field - Multiple Matching Fields

LTI1.3 integrations allow you to select which fields the course code filter is applied to, and can match on multiple fields. Check the boxes for each field that the Course Code Filter regular expression will be applied to.

The combined course code fields are joined together using ~~, before the regular expression is applied. e.g:

```
 LABEL~~TITLE
BMKG201~~Marketing
```



1.4.5 Course code match flattening

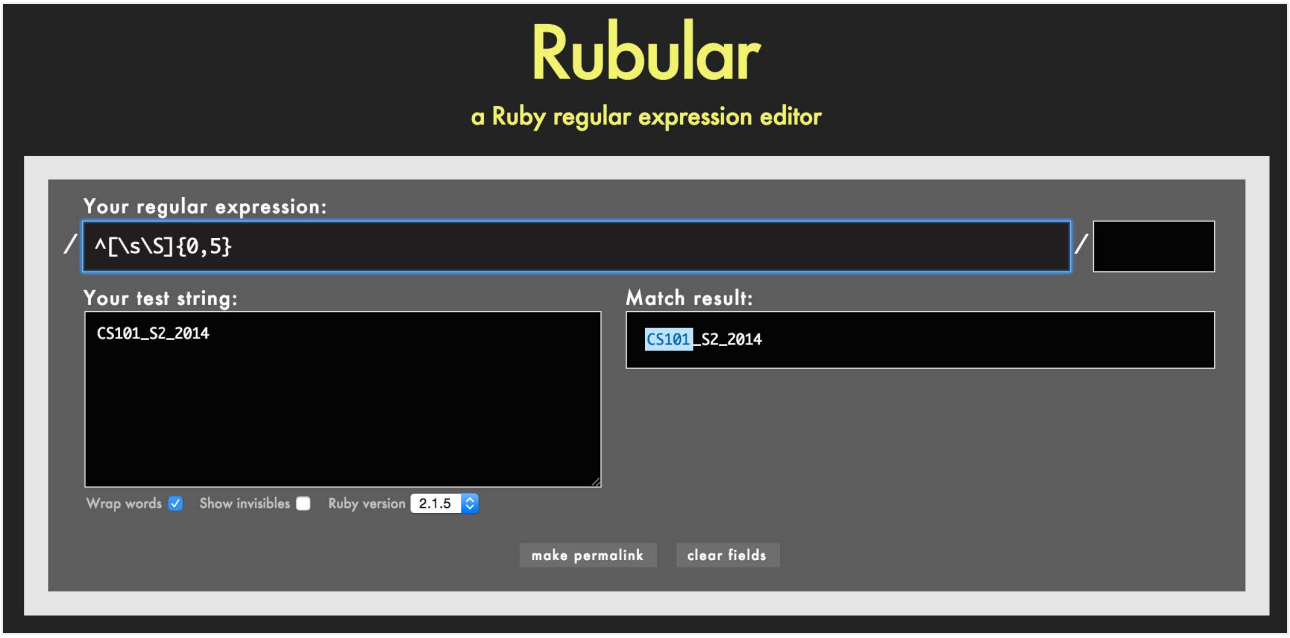
If set to yes all text captured by the regex is joined together in the resulting Base Code.

1.4.6 Example course code filter

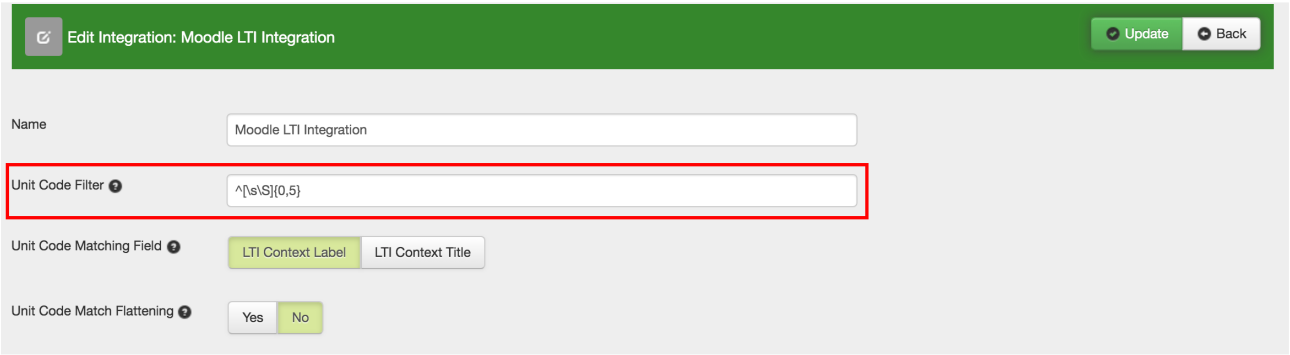
This example is based on a course code with the format below.

```
<base_code>_<teaching_period>_<year>
```

We'll be using the following course code samples for testing Rublar: CS101_S2_2-14 and CS101_S1_2015. Below is a test of the regular expression created for filtering.



As you can see our regular expression (i.e. ^[\s\S]{0,5}) has matched the base_code and we can now apply it to our integration record simply by entering it in the Course Code Filter field then saving the integration record. So every time the course is offered eReserve Plus will only look at the base_code when choosing a reading list to display.



1.4.7 Course name filter

The LTI Course Name Filter allows unnecessary detail and other content about the course to be removed from the course name displayed within eReserve Plus.

When utilised the LTI Course Name filter allows the display of course long names to be modified to fit the display requirements of the reading list within eReserve Plus. Long

course names can be modified to better fit the layout, course code and reading list display within the eReserve Plus interface.

1.4.8 Course name match flattening

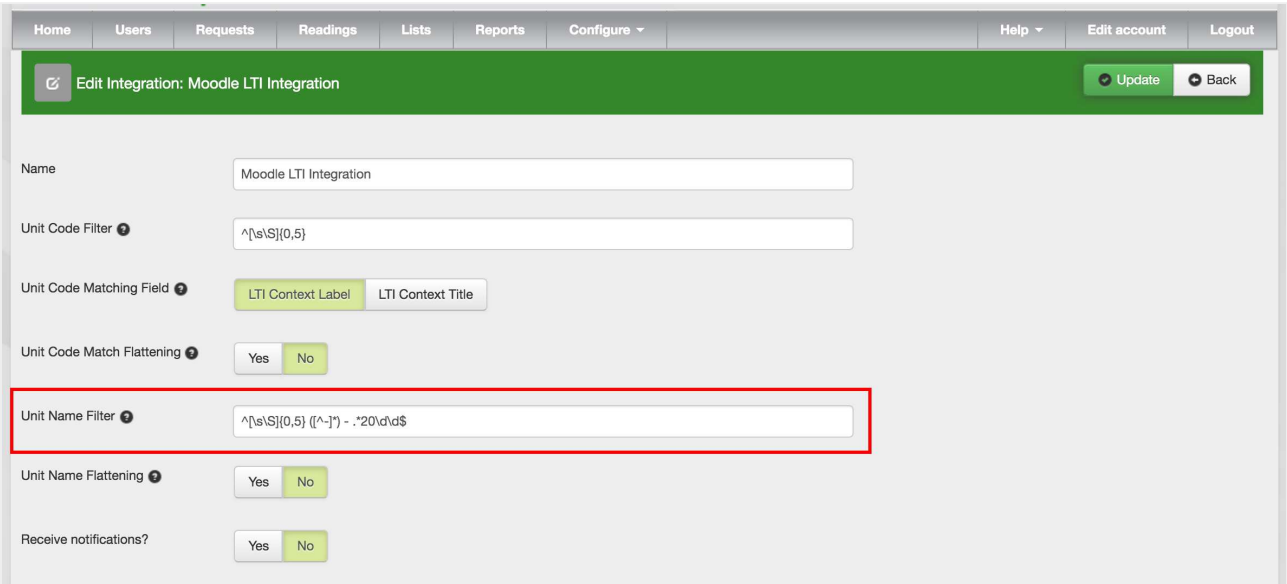
In the same manner as the Course Code Filter if set to yes all text captured by the regex is joined together in the resulting course name.

1.4.9 Example course name filter

The Course Name Filter can be designed to remove the Course Code and Time Period from the Course Name. The matched string for the Course Name would be Civil and Criminal Procedure.

```
^[\s\S]{0,5} ([^-]*) - .*20\d\d$
```

When eReserve receives the LTI handshake from the LMS, it will receive the string CS101 Introduction to Computational Theory - Semester One 2015, however it will only store and display Introduction to Computational Theory.



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3. D2L Brightspace Integration

Throughout this section of the document are the details on getting your Brightspace instance connected to eReserve Plus. It's very important to read all of the details in section 2 of this document, and complete all of the activities in this section. Section 2 deals with the setup required on the eReserve Plus side, including the generation of the LTI Key and Secret. Should you have any questions please contact the eReserve Support Team at support@ereserve.com.au

3.1 Requirements

The eReserve Plus LTI Tool is regularly tested with the Brightspace releases supported by D2L. It is recommended that you use a D2L supported version of Brightspace however the eReserve Plus LTI Tool has been tested with earlier Brightspace versions without incident. This document covers configuration of Brightspace hosted by D2L.

3.2 LTI Advantage Access

In order to configure and manage LTI Advantage Tools you will need to configure permissions on the roles for those staff performing these tasks. When logged in as the Super Administrator you do the following for the roles that need the access:

1. Click on Roles and Permissions in the Security section of the admin settings menu.
2. You will be presented with a table of roles.
3. Select the role name that you want to give admin access and manage the LTI Advantage Tools and select External Learning Tools for the Filter by Tool option.
4. Tick the two options for LTI Advantage Tools (see screenshot below)
5. Click Save and Close

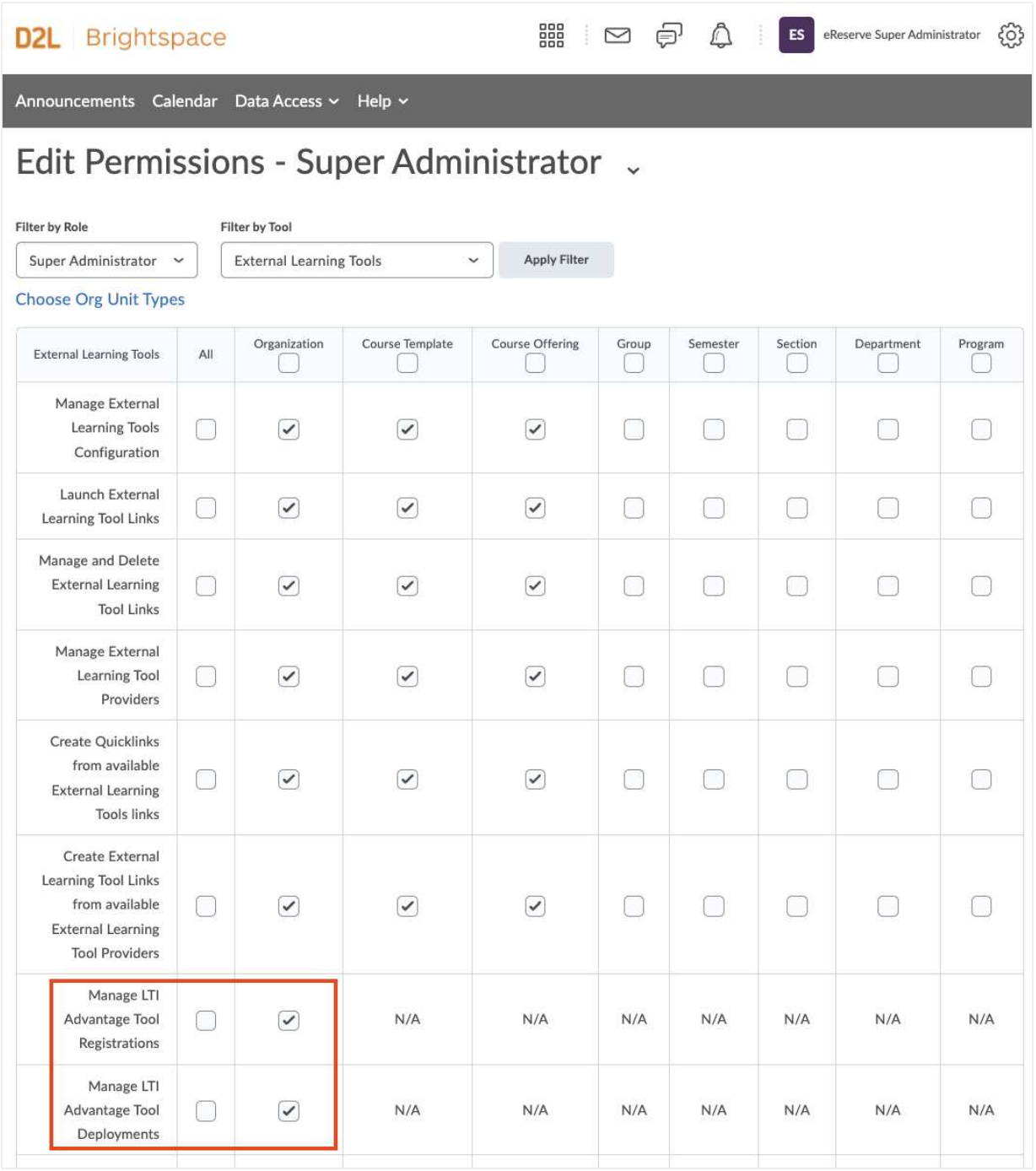

Figure 1: Admin User Role Permissions

3.3 LTI Advantage Registration

To complete the registration of your eReserve Plus instance within D2L Brightspace, please follow the detailed instructions found here: Register an External Learning Tool for LTI Advantage

Below are some samples for the population of key fields on the registration form:

- Name Enter a name to identify the registration is for your eReserve Plus instance. (e.g. eReserve Plus Staging)

- Domain Enter the Domain of your eReserve Plus instance. (e.g. https://eu.ereserve.com.au)

- Redirect URLs You will need to populate the following Redirect URLs

    - Resource link Generation: https://eu.ereserve.com.au/app/integration/lti/resource_link/generate
    - Reading List View / Manage https://eu.ereserve.com.au/app/integration/lti/reading_list/launch
    - Resource Link View: https://eu.ereserve.com.au/app/integration/lti/resource_link

- OpenID Connect Login URL You will need to populate the following URL:

    - https://eu.ereserve.com.au/app/integration/lti/login

- Keyset URL You will need to populate the following URL:

    - https://eu.ereserve.com.au/app/integration/lti/public_jwk.json

- Extensions Select the Deep Linking option only

- Roles Tick Send Institution Role

Ensure that you enable the registration. You also need to take note of the Client ID, this will allow you to locate the registration within the integration records in your eReserve Plus instance.

3.4 LTI Deployment

Once the registration has been completed, Deployments and be created based on the registration. Following are the steps to creating a Deployment for eReserve Plus.

1. Edit the created registration in Brightspace
2. Scroll to the bottom of the page, and select View Deployments link
3. You will be presented with a list of deployments, click on the New Deployment button
4. The Deploy Tool form will be displayed. Complete the form as follows:
    1. Tool Select the registration (e.g. eReserve Plus Staging)
    2. Name Enter a name to identify the deployment is for your eReserve Plus instance (e.g. eReserve Plus Staging)
    3. Security Settings Tick all options except Anonymous
    4. Org Units Add the Org Units that will be using eReserve Plus
5. Click in the Save & Close button

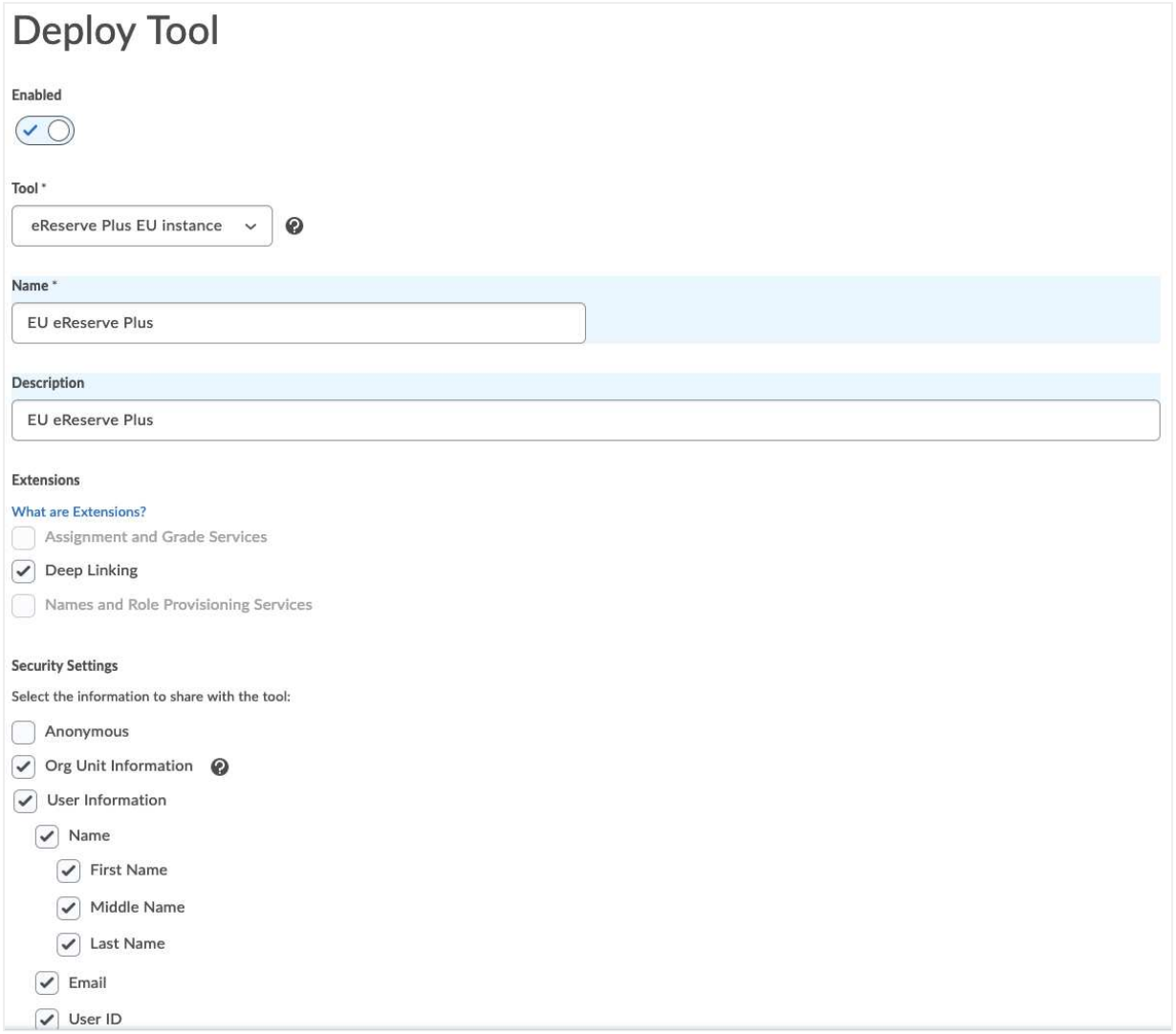

Figure 2: Creation of LTI Deployment

3.5 LTI Link Creation

Once the Deployment has been created, you will need to create links to allow access to eReserve Plus. This is completed on the links page for your deployment. To navigate to the Links page, for your deployment, use the following steps:

1. Edit the eReserve Plus deployment in Brightspace
2. Scroll to the bottom of the page, and click on the View Links page
3. You will now see the Links page

Now that you are on the Links page you can create the required links. Follow these steps for each link.

List View/Management

This link can be used for the management of the list for a site when you have the role of Instructor or to simply view the list for the site when you have the role of Learner.

1. Click on the New Link button
2. Complete the form as follows:
    1. Name Provide a name to identify this is the List View/management tool (e.g. Resource List)
    2. URL https://eu.ereserve.com.au/app/integration/lti/reading_list/launch
    3. Type Choose the Basic Launch option
3. Click on the Save & Close button

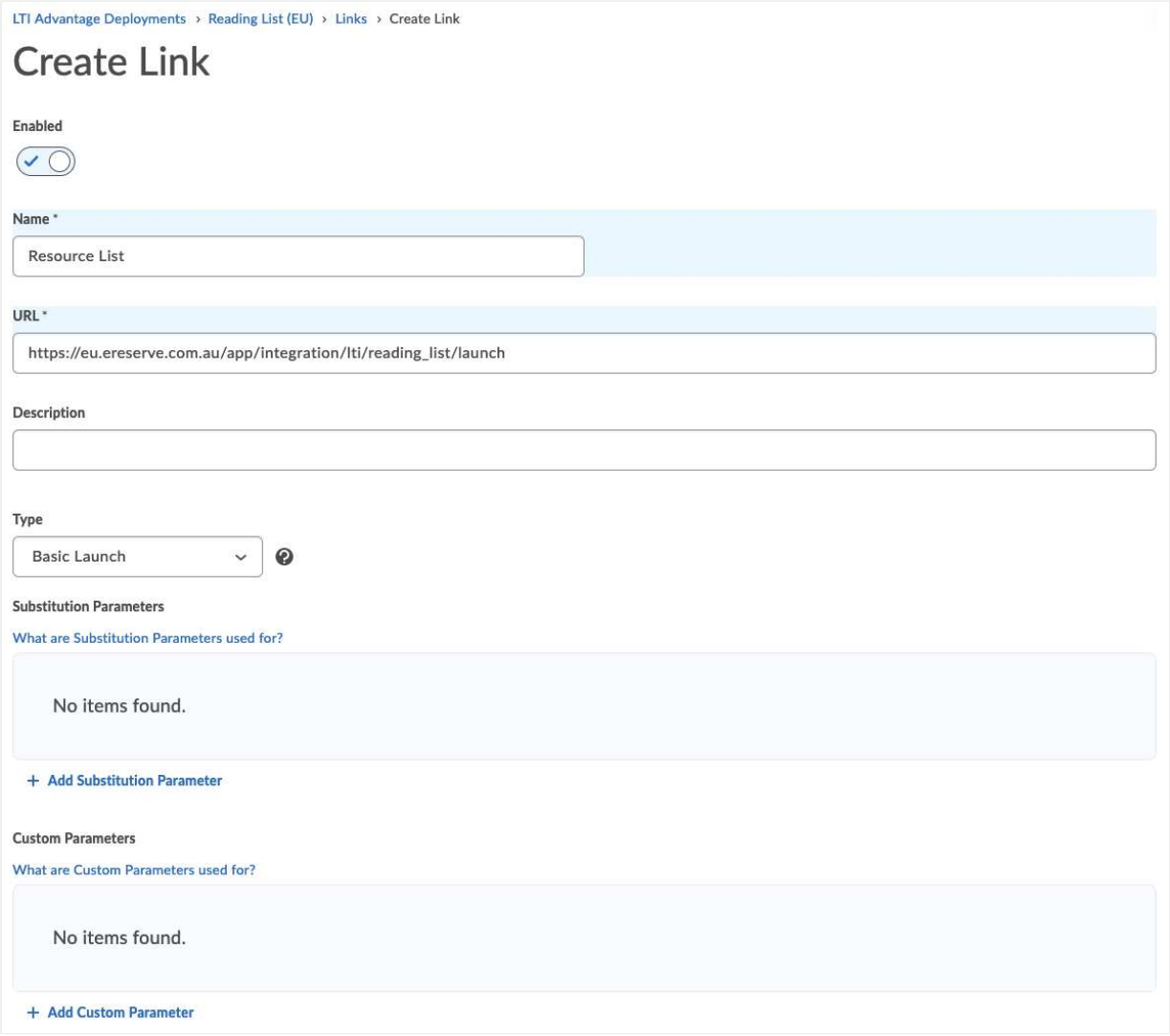

Figure 3: Creation of List View/Management Tool

Resource Link Creation

This link allows Instructors to create new Resource Links in HTML Content

1. Click on the New Link button
2. Complete the form as follows:
    1. Name Provide a name to identify this is Resource Link creation tool (e.g. Resource Linking)
    2. URL https://eu.ereserve.com.au/app/integration/lti/resource_link/generate
    3. Type Choose the Deep Linking Insert Stuff option
3. Click on Save & Close button

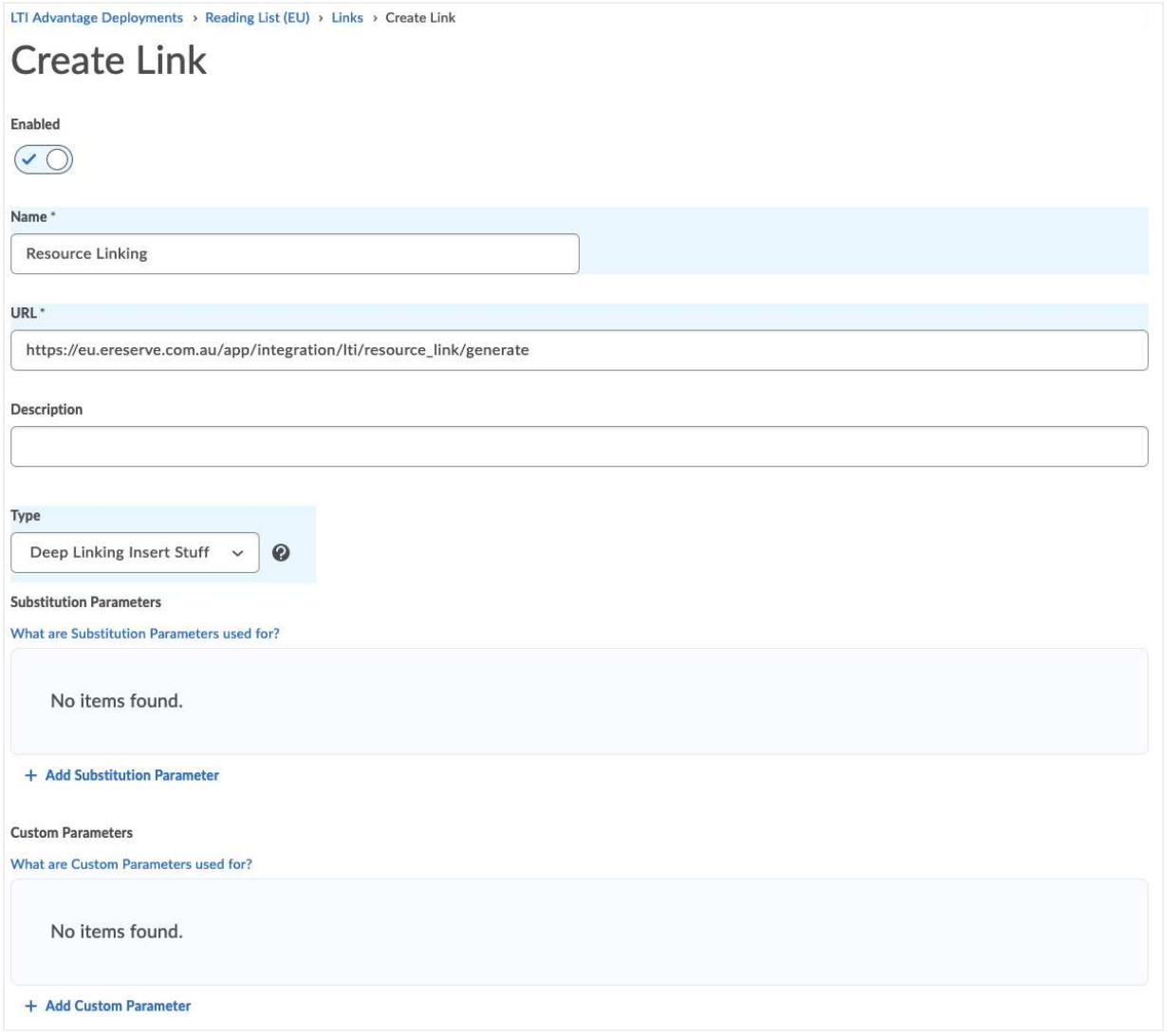

Figure 4: Creation of Resource Link Tool

3.6 eReserve Plus Activation

To activate the registration record in eReserve Plus you will first need to make the List View/Management tool available in a site.

1. Navigate to your site in Brightspace
2. In the site content, click on the Existing Activities button
3. Choose the External Learning Tools option
4. Choose the List View/Management link created in the LTI Link Creation section
5. The link will appear on the page

You are now ready to start the activation. Please note to complete this activation, you will need to have a user account in eReserve Plus with the role of Site Manager. Following are the steps for activation

1. Click on the link you created earlier
2. You will be asked to authorise your Brightspace instance. Click on the button provided
3. You will be presented with the login page for your eReserve Plus instance, login with you Site Manager account.
4. Once authenticated you will see a notification saying your Brightspace instance has been authorised to use eReserve Plus
5. Return to Bright space then reload the page
6. Confirm the details are correct, such as the Course Code Filter, Roles are assigned correctly etc.
7. Click on the Activate button.

Once the above steps have been completed you can then add the List View/ Management link to other sites via the Existing Activities > External Learning Tools menu item. For resource links you can use Inset Stuff.

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