

LMS Integration - Canvas

11 March 2020

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Overview

LMS integration with Canvas can be implemented using the kuraCloud app.

The kuraCloud app adds the following functionality to your kuraCloud and Canvas environments:

- Synchronization of students from Canvas courses to kuraCloud courses.
- Synchronization of student kuraCloud grades to Canvas.

Note: kuraCloud supports the most recent version of Canvas.

Setup

LMS integration is disabled by default on new and existing instances. A request to have it enabled for an instance can be submitted via your ADInstruments representative.

Setup is required from within both kuraCloud and Canvas and will require an administrative account on both platforms. The following steps outline the initial setup, however, a more detailed guide with screenshots may be found in <u>Appendix A</u>.

1. Activate LMS integration

Contact your ADInstruments representative to have LMS integration enabled for your kuraCloud instance.

2. Obtain Secret and Consumer keys and Config URL

kuraCloud and Canvas use a shared secret keys to ensure that only your Canvas instance can connect to your kuraCloud instance. Generate Secret and Consumer keys within kuraCloud as well as the config URL to enable communication with Canvas:

- As a kuraCloud Administrator, navigate to *Instance Administration*.
- Select *LMS Integration* then *Configure LMS Integration*. Please note this menu will not be visible until LMS Integration is enabled for your kuraCloud Instance.
- Select Canvas from the drop-down menu then press *Enable LMS Integration* button.

Copy the provided Keys and config URL to a safe place. This is important because your keys and URL can be viewed only once in kuraCloud, losing this will require the generation of completely new keys.

CARE REQUIRED: It is strongly recommended that new keys are generated for your production Canvas installation following trials within a test environment. This will ensure data from your test

environment is no longer synchronized with kuraCloud.

3. Install the App

Navigate to the appropriate Canvas account level and follow the instructions to install the app as provided by Instructure here:

https://guides.instructure.com/m/4152/l/74482-how-do-i-configure-an-external-app-for-a-course-usi ng-a-url

Use the keys and config URL acquired from kuraCloud.

4. Authorize the App

kuraCloud requires advanced permissions to take actions like bulk importing of grades, performing these actions requires the kuraCloud app to act as the user. In order to allow kuraCloud to act on your behalf in Canvas, you will need to provide it with a Canvas developer key. Do this by:

- Click the dropdown for the kuraCloud App and select Configure.
- Copy the Redirect URI.
- Go to Admin > Developer Keys in Canvas.
- Add a Developer Key using the Redirect URI.
- Copy the Developer ID and Developer Key.
- Go to Settings > Apps.
- Click the dropdown for the kuraCloud App and select Configure.
- Enter the Developer ID and Developer Key.
- If using a scoped developer key tick the *Using scoped key* box.

The app is now authorized to make changes to courses required to import grades and sync users.

Note - Scoped Developer Keys

kuraCloud-Canvas integration supports scoped developer keys for additional security. The scope of API's that the integration requires are (Scopes added in the most recent version are shown in **bold**):

Accounts

url:GET|/api/v1/accounts/:account_id/courses

Assignment Groups

url:GET|/api/v1/courses/:course_id/assignment_groups url:POST|/api/v1/courses/:course_id/assignment_groups

Assignments

url:POST|/api/v1/courses/:course id/assignments

url:GET|/api/v1/courses/:course_id/assignment_groups/:assignment_group_id/assignments

Courses

url:GET|/api/v1/courses/:id

url:GET|/api/v1/courses/:course_id/users

Enrollments

url:GET|/api/v1/courses/:course_id/enrollments

Progress

url:GET|/api/v1/progress/:id

Sections

url:GET|/api/v1/courses/:course_id/sections

Submissions

url:GET|/api/v1/courses/:course_id/assignments/:assignment_id/submissions url:POST|/api/v1/courses/:course_id/assignments/:assignment_id/submissions/update_grades

Users

url:GET|/api/v1/users/:id

This list is also available in the App Configuration dialog box.

Configuration

The following steps outline the configuration of kuraCloud integration from within Canvas. A more detailed guide with screenshots may be found in Appendix B.

Create a course Link

Before following these steps you must ensure that the course(s) to be linked exist in both kuraCloud and Canvas.

You must link Canvas courses to kuraCloud courses before they can be synchronised, this must be done from the *Admin* section in the correct Sub-Account in Canvas.

- Go to the kuraCloud App (as named during installation).
- Click "Create New Link".
- Select the Canvas and kuraCloud Courses you wish to link together.
 - You can use the provided search boxes to narrow down the list.
- Click "Link Courses"
- Navigate to the linked Canvas course.
- Go to Settings > Navigation.
- Drag the kuraCloud App into the navigation list.
- Click Save.

Note: When linking is complete you will no longer be able to edit the students from within that kuraCloud course.

Removing a Course Link

Removing a Course link must be done from the Admin section of the correct sub-account in Canvas.

- Go to the kuraCloud App (as named during installation).
- Find the link in the list provided.
- Click "Remove Link".

Note: The following information may be useful to users that are considering the removal of a course link:

- If a course link is removed, student accounts that were synchronized from Canvas will remain in the kuraCloud course. These accounts may be deleted manually from within kuraCloud.
- A link may only be removed from active kuraCloud courses. If a kuraCloud course is

deleted it must first be restored before the link can be removed. This kuraCloud course may safely be deleted again when the link is removed.

Workflows

The following section outlines standard workflows, however, a more detailed guide with screenshots may be found in <u>Appendix C</u>.

Please note only default Teacher and Admin roles are able to use the kuraCloud App to synchronize students and grades.

Synchronization of Students from Canvas

Students can be Synchronized from within a linked Canvas course.

- Click on the kuraCloud App (as named during installation).
- Click Sync Accounts

CARE REQUIRED: Be sure to carefully review the detailed summary that is provided to ensure you are happy with the outcome of this synchronization. The following important points should be considered:

- **1.** Students that exist in your kuraCloud course but not in Canvas will be deleted from kuraCloud.
- **2.** If a student's email has changed in kuraCloud or Canvas following a previous synchronization, the student's kuraCloud account will be deleted and a new invite will be sent to their new email address.
- **3.** Only Canvas users with the course role of 'Student' will be synchronized to kuraCloud. (This is a default role within Canvas)
- **4.** kuraCloud sections will be created to match sections existing in the Canvas course. Students can only exist in one section in kuraCloud so they will be assigned to the first section they are in alphabetically in Canvas. The integration allows you to choose the sections that are created in kuraCloud. Use 'Select Sections' to choose only the sections relevant to kuraCloud.
- Select *OK* to confirm synchronization.

Students that have been synchronized will be created within the linked course in kuraCloud and be sent an invite email. If the kuraCloud course already contains students with a matching email address from Canvas their details will be updated and no invite will be sent.

If you make changes to student's details (including deleting students) within a linked cour	se you

should resynchronize to ensure consistency across platforms.

Synchronization of grades to Canvas

This will synchronize all grades within a linked course from kuraCloud to Canvas. Within Canvas navigate to the course:

- From the kuraCloud app select *Sync grades*.

Note: It is generally recommended that you sync students before syncing grades, as only grades for synchronized students will be added to Canvas.

CC

Editing and Deleting Courses

Course links are resilient and will be remembered if the following occurs:

- A linked kuraCloud course is deleted.
- A linked Canvas course is deleted.

Restoring the deleted course on either platform will reinstate the functionality of the link so it can be used again.

Deleting a course within one platform will not delete the corresponding course within the other platform.

Support and Troubleshooting

Supported Canvas Versions

The kuraCloud app supports the latest version of Canvas.

Resolving Issues

If you are experiencing problems with installing and/or using the kuraCloud app please contact your Canvas administrator in the first instance. This will allow them to check the Canvas logs for issues, this can be done as follows:

- Navigate to Admin.
- Select Admin Tools.
- Select Logging.

If your Canvas administrator is unable to rectify the issue, please contact your ADInstruments representative and provide them with the following:

- A detailed description of your issue, including the approximate time that it occurred.
- Applicable screenshot(s) that illustrate the issue.

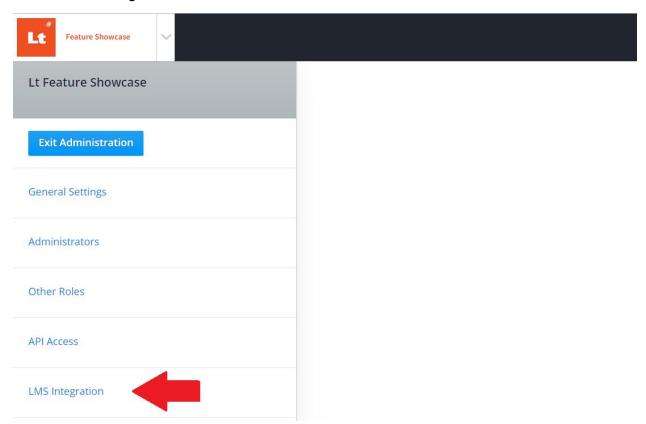
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Appendix A - Detailed Setup Guide

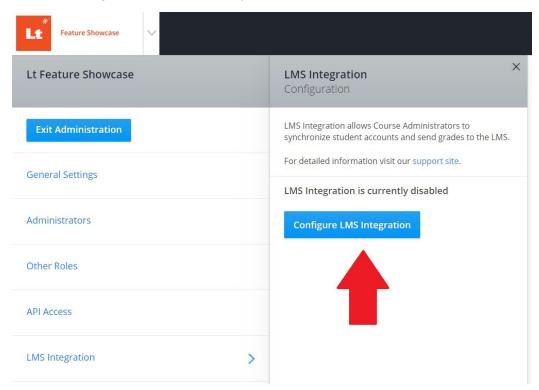
Please ensure you have contacted your ADInstruments representative to have LMS integration enabled for your kuraCloud instance.

Obtain Keys

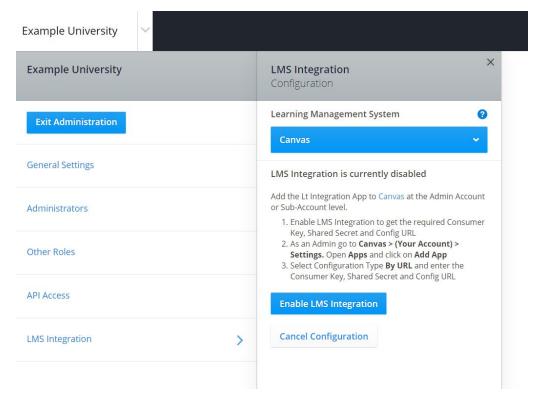
To generate Keys within kuraCloud to enable communication with Canvas, then as a kuraCloud Administrator navigate to *Instance Administration*.



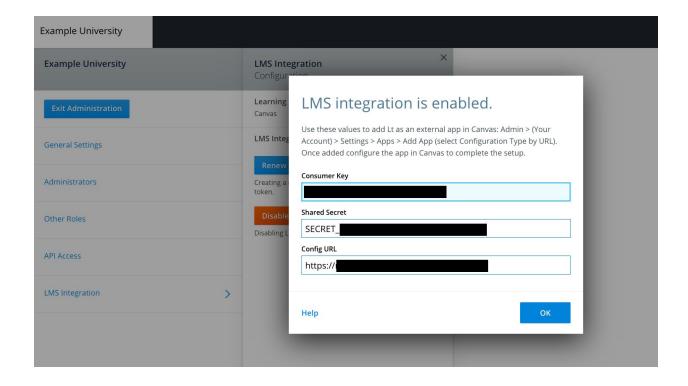
Select *LMS Integration* then *Configure LMS Integration*. Please note this menu will not be visible until LMS Integration is enabled for your kuraCloud Instance.



Select Canvas from the drop-down menu.

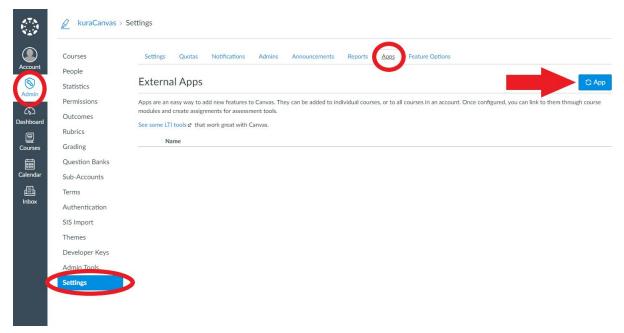


Press the *Enable LMS Integration* button. Copy the provided Keys to a safe place. This is important because your Keys can be viewed <u>only once</u> in kuraCloud, losing this will require the generation of completely new Keys.

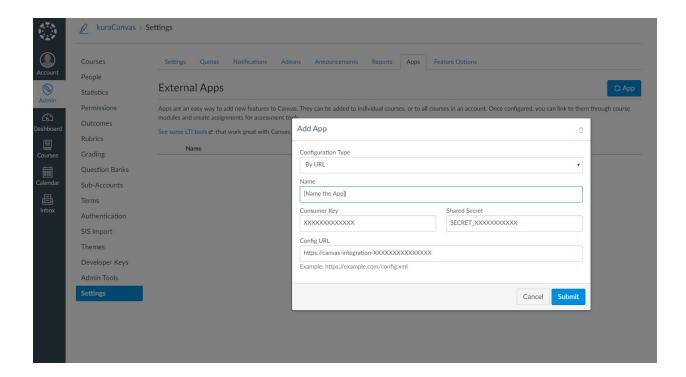


Install the App

Navigate to Admin > Settings > Apps and click on App.

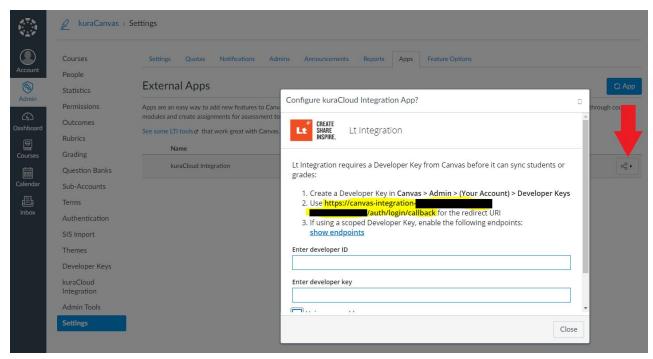


Select By *URL* from the dropdown, then name the app something appropriate and enter in the Keys and URL acquired from kuraCloud.

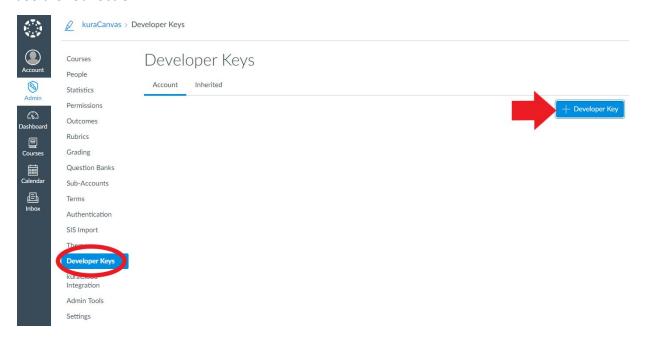


Authorize the App

Click on configure button to acquire the Redirect URI.

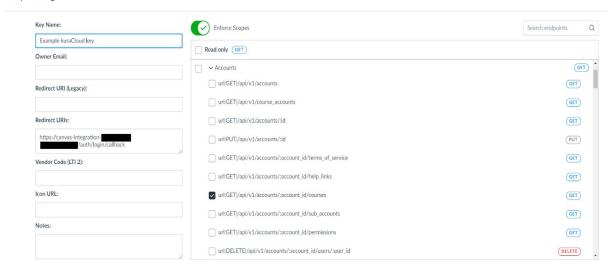


Go to *Developer Keys* and add a key or identify a suitable existing key. The Developer key must use the redirect URI.

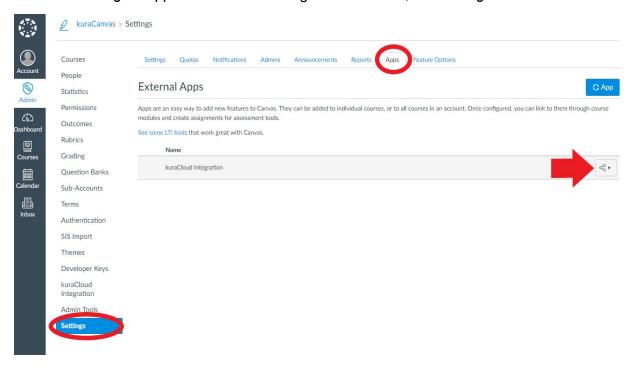


Apply the key scope if necessary.

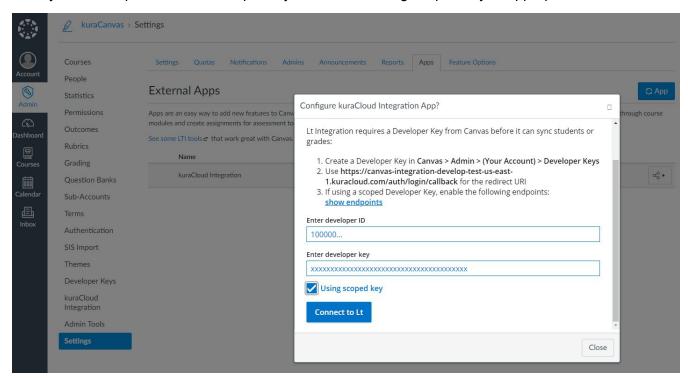
Key Settings



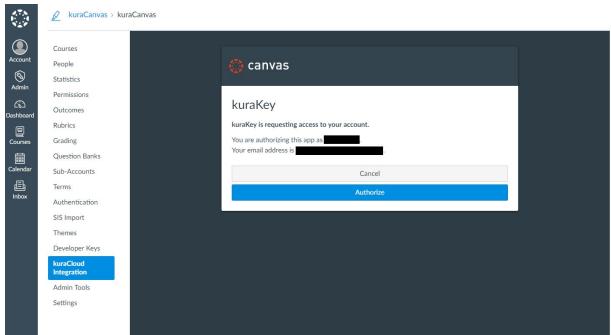
Return to Settings > Apps and click the configurations button, then configure.



Enter your developer ID and Developer key and check "Using scoped key" if appropriate.



Finally, click on the App in the menu and click Authorize.

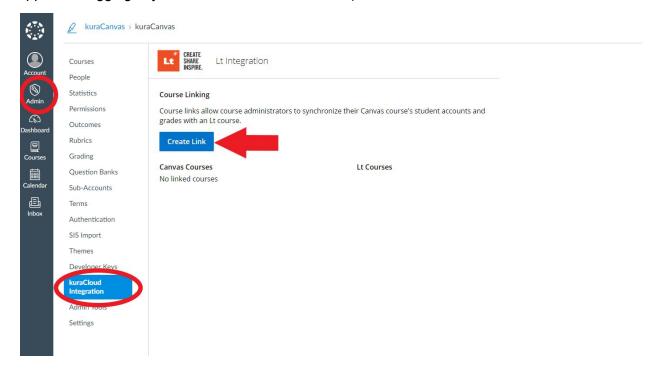


Appendix B - Detailed Configuration Guide

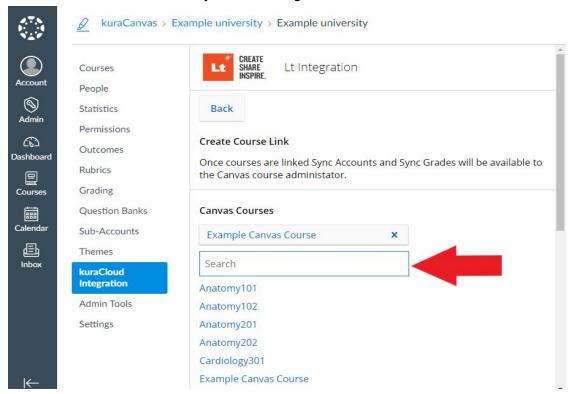
Create a course Link

Before following these steps you must ensure that the course(s) to be linked exist in both kuraCloud and Canvas.

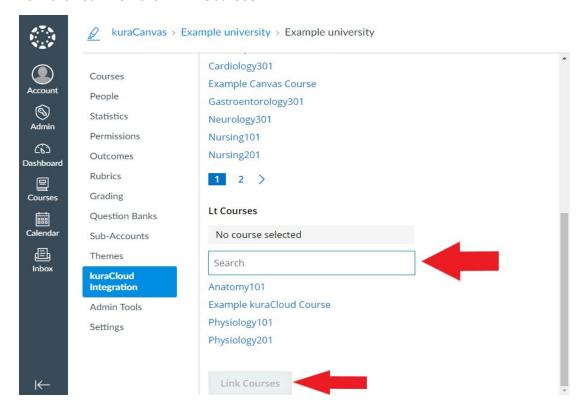
Navigate to the correct Sub-Account in the admin menu that contains the Canvas course to be linked. In the *Admin* menu click on the kuraCloud app tab, (If you have not interacted with the app since logging in you will need to click *Authorize*) then click *Create Link*.



Search for the Canvas course you want using the search box and select it from the list.

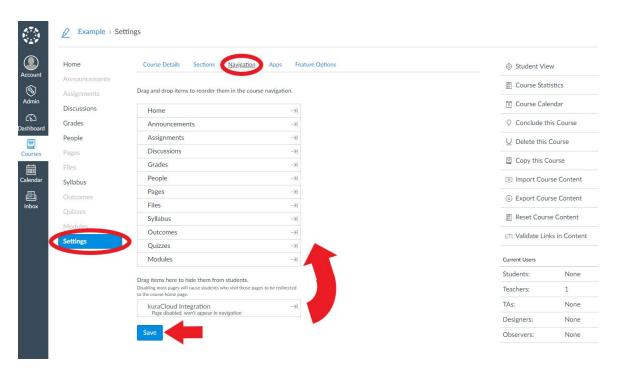


Scroll down and search for the kuraCloud course you want using the search box and select it from the list. Then click *Link Courses*.



Note: When link is complete you will no longer be able to edit the students from within that kuraCloud course.

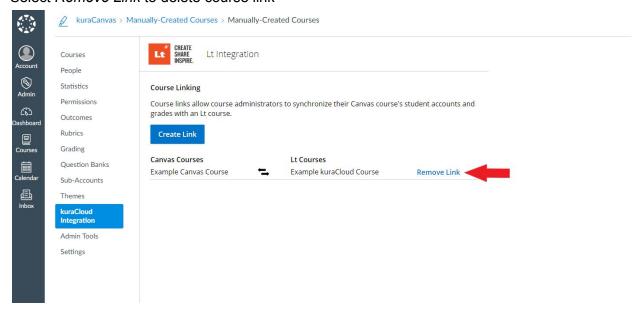
Navigate to the linked Canvas course, select *Settings > Navigation*. Then drag the kuraCloud App into the navigation list. Then click *Save*.



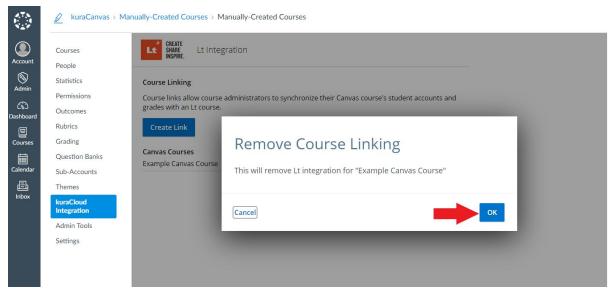
Removing a Course Link

Navigate to the correct Sub-Account in the admin menu for the course link to be removed. From the *Admin* menu click kuraCloud App:

Select Remove Link to delete course link



Select Ok to confirm deletion.



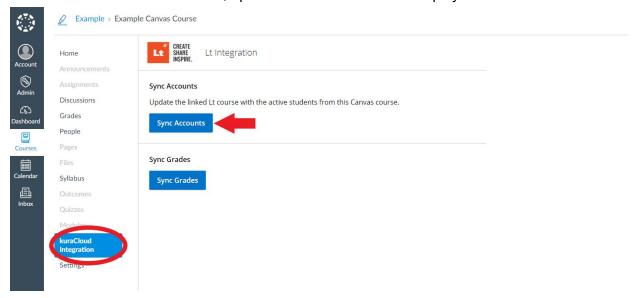
Note: The following information may be useful to users that are considering the removal of a course link:

- If a course link is removed, student accounts that were synchronized from Canvas will remain in the kuraCloud course. These accounts may be deleted manually from within kuraCloud.
- A link may only be removed from active kuraCloud courses. If a kuraCloud course is deleted it must first be restored before the link can be removed. This kuraCloud course may safely be deleted again when the link is removed.

Appendix C - Detailed Workflows Guide

Synchronization of Students from Canvas

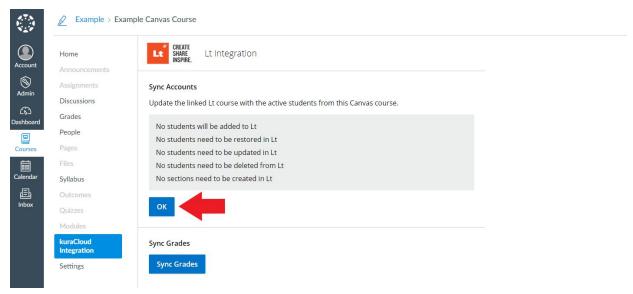
Within Canvas navigate to the course then select the kuraCloud app and click select Sync Accounts. The users to be added, updated and deleted will be displayed.



CARE REQUIRED: Be sure to carefully review the detailed summary that is provided to ensure you are happy with the outcome of this synchronization. The following important points should be considered:

- **1.** Students that exist in your kuraCloud course but not in Canvas will be deleted from kuraCloud.
- **2.** If a student's email has changed in kuraCloud or Canvas following a previous synchronization, the student's kuraCloud account will be deleted and a new invite will be sent to their new email address.
- **3.** Only Canvas users with the course role of 'Student' will be synchronized to kuraCloud. (Teachers and custom roles will not be synchronized.)

Select *OK* to confirm synchronization.

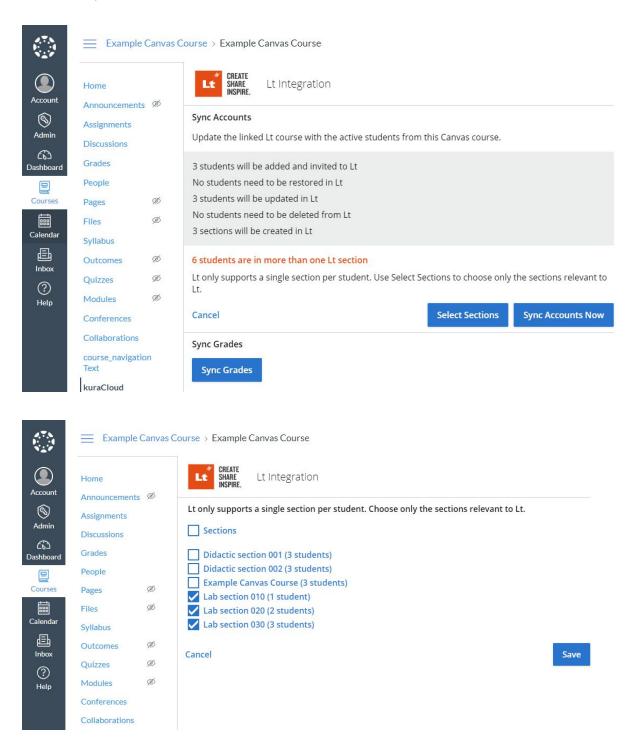


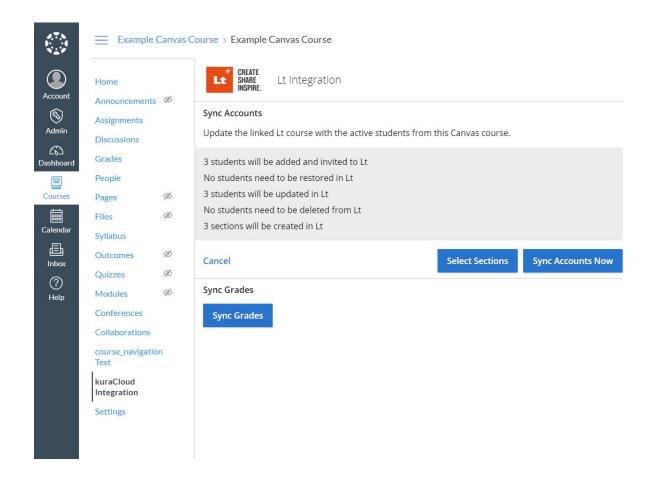
Students that have been synchronized will be created within the linked course in kuraCloud and be sent an invite email. If the kuraCloud course already contains students with a matching email address from Canvas their details will be updated and no invite will be sent.

If you make changes to student's details (including deleting students) within a linked course you should resynchronize to ensure consistency across platforms.

Select sections

Choose only the sections that are relevant to kuraCloud.





Synchronization of grades to Canvas

This will synchronize all grades within a linked course from kuraCloud to Canvas. Assignments will be created With the same name as lessons in the kuraCloud Course. If an assignment already exists with that name then the grades will be updated.

Within Canvas navigate to the course:

Select the kuraCloud App then click Sync Grades.

