



LMS Integration - Moodle

3 July 2020

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Overview

LMS integration with Moodle can be implemented using the kuraCloud plugin. This can be found in the Moodle plugins directory.

The kuraCloud plugin adds the following functionality to your kuraCloud and Moodle environments:

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

Note: KuraCloud currently supports the latest Moodle versions.

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 Moodle 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 [Appendix A](#).

1. Activate LMS integration

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

2. Obtain a token

Generate a token within kuraCloud to enable communication with Moodle:

- 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 *Moodle* from the drop-down menu then press the *Enable LMS Integration* button. Copy the provided token to a safe place. This is important because your token can be viewed only once in kuraCloud, losing this will require the generation of a completely new token.

CARE REQUIRED: It is strongly recommended that a new token is generated for your production Moodle installation following trials within a test environment. This will ensure data from your test environment is no longer synchronized with kuraCloud.

3a. Install the plugin directly

While logged into moodle.org go to https://moodle.org/plugins/block_kuracloud

- Select the *Install now* button
- Follow the dialogues until the plugin is installed
- (Full instructions in Appendix A)

3b. Download and install the kuraCloud plugin

If you cannot directly install it then download the kuraCloud plugin from https://moodle.org/plugins/block_kuracloud

Navigate to the *Site administration* page to install the extension:

- Move to the *Plugins* tab.
- Select *Install plugins*.
- Drag the *kuraclou-moodle.zip* file from your computer into the marked area.

or

- Search for the *kuraclou-moodle.zip* file from the *Choose a file...* button.

or

- if you have a moodle.org account you can install the kuraCloud plugin directly from the Moodle plugin Directory by selecting *Install plugins from the Moodle plugins directory*.
- Select *Install plugin from the ZIP file*.
- Select *Continue* once the plugin has been validated.
- Select *Upgrade Moodle database now*.
- Select *Continue* to confirm

4. Create an instance Mapping

Navigate to the Moodle *Site Administration* page to map the plugin:

- Move to the *Plugins* tab.
- Scroll to the Blocks section and select *kuraCloud*.

- Ensure *Blocks editing* is on.
- Select *Add a new connection*.
- Select *Click to enter text*.
- Enter your token in the provided field and click *Save changes*. (Leave kuraCloud API URL unchanged.)
- Verify the token has been accepted by checking your kuraCloud instance name is now listed.

kuraCloud connections can be deleted by clicking the cross in the actions column.

Configuration

The following steps outline the configuration of kuraCloud integration from within Moodle. A more detailed guide with screenshots may be found in [Appendix B](#).

Create a course Mapping

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

Navigate to the chosen course page to map courses:

- Select the cog in the top left corner
- Select *Turn editing on*.
- Select *Add a block* that has appeared in the bottom left corner.
- Select *kuraCloud* from the list that appears.
- Select *Setup kuraCloud mapping*.
- Select the course to be mapped to from the provided drop-down menu or type to search, then click the *Save changes* button.

The new mapping should now be listed at the bottom of the course page on moodle.

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

Removing a Course Mapping

Navigate to the course administration page and the mapping at the bottom of the page:

- Select the Cross to delete course mapping.
- Select *Continue* to confirm deletion

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

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

Workflows

The following section outlines standard workflows, however, a more detailed guide with screenshots may be found in [Appendix C](#).

Synchronization of Students from Moodle

Within Moodle navigate to the course:

- From the kuraCloud block select *Sync user enrolments*. 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 Moodle will be deleted from kuraCloud.
2. If a student's email has changed in kuraCloud or Moodle 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 Moodle users with the institution role of 'Student' and the course role of

'Student' will be synchronized to kuraCloud. (These are default values within Moodle)

- Select *Continue* to confirm synchronization.

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

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

Synchronization of grades to Moodle

This will synchronize all grades within a mapped course from kuraCloud to Moodle.

Within Moodle navigate to the course:

- From the kuraCloud block select *Sync grades from kuraCloud*.

Note: if students have not yet been synchronized for this course then you will be redirected to the synchronize students page.

- Grades will be synchronized from kuraCloud to Moodle.

If a lesson has a negative grade in kuraCloud it will become zero in moodle. If a lesson has grade greater than its maximum in kuraCloud then it will be reduced to the maximum grade for that lesson.

Editing and Deleting Courses

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

- A mapped kuraCloud course is deleted.
- A mapped Moodle course is deleted.

Restoring the deleted course on either platform will reinstate the functionality of the mapping 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 Moodle Versions

The kuraCloud plugin v1.1 has been updated to support the latest version of Moodle. The kuraCloud plugin also supports Moodles GDPR API, see https://docs.moodle.org/dev/Privacy_API for more information.

Resolving Issues

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

- Navigate to *Site Administration*.
- Select *Reports*.
- Select *Logs*.

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

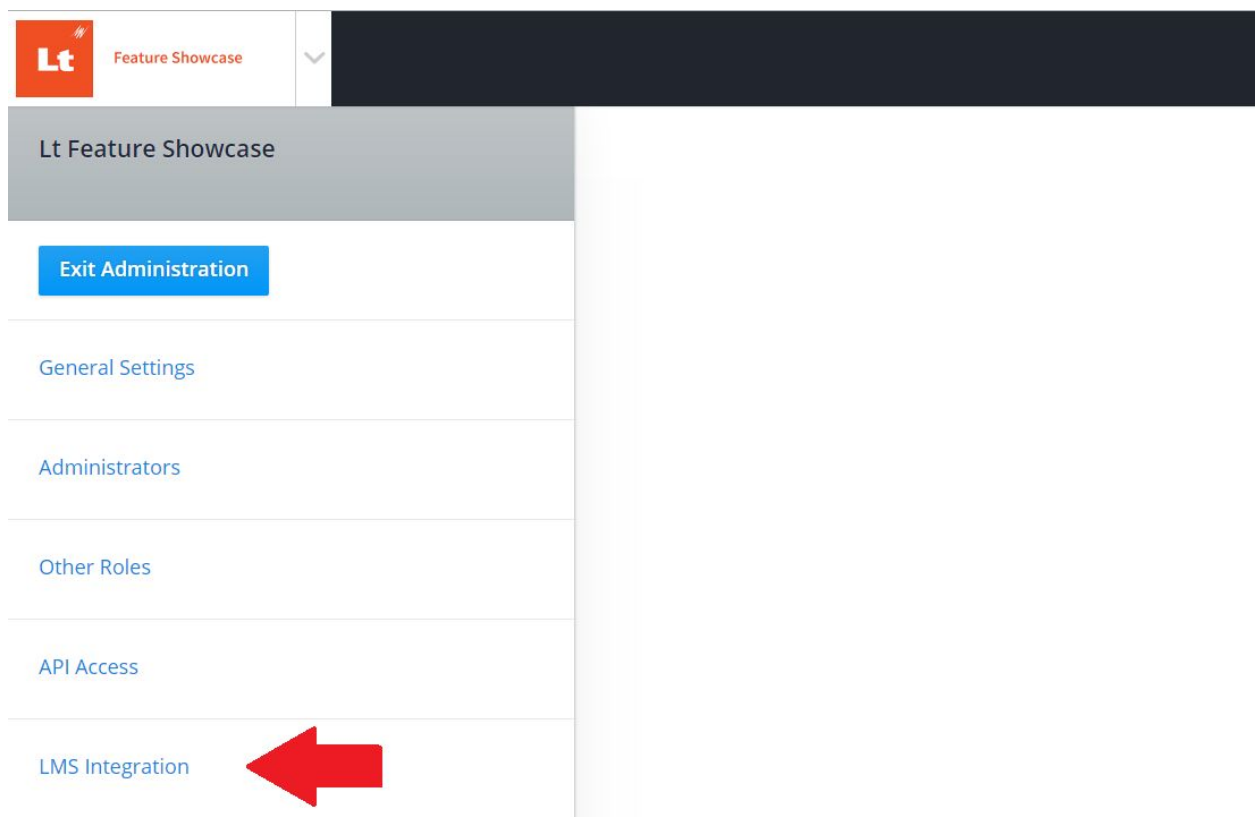
- A detailed description of your issue.
- The Moodle build version you have installed.
- Applicable screenshot(s) that illustrate the issue.
- A copy of any relevant logs.

Appendix A - Detailed Setup Guide


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

Obtain a token

To generate a token within kuraCloud to enable communication with Moodle, 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.

 Feature Showcase

Lt Feature Showcase

Exit Administration

General Settings

Administrators

Other Roles

API Access

LMS Integration >

LMS Integration Configuration

LMS Integration allows Course Administrators to synchronize student accounts and send grades to the LMS.

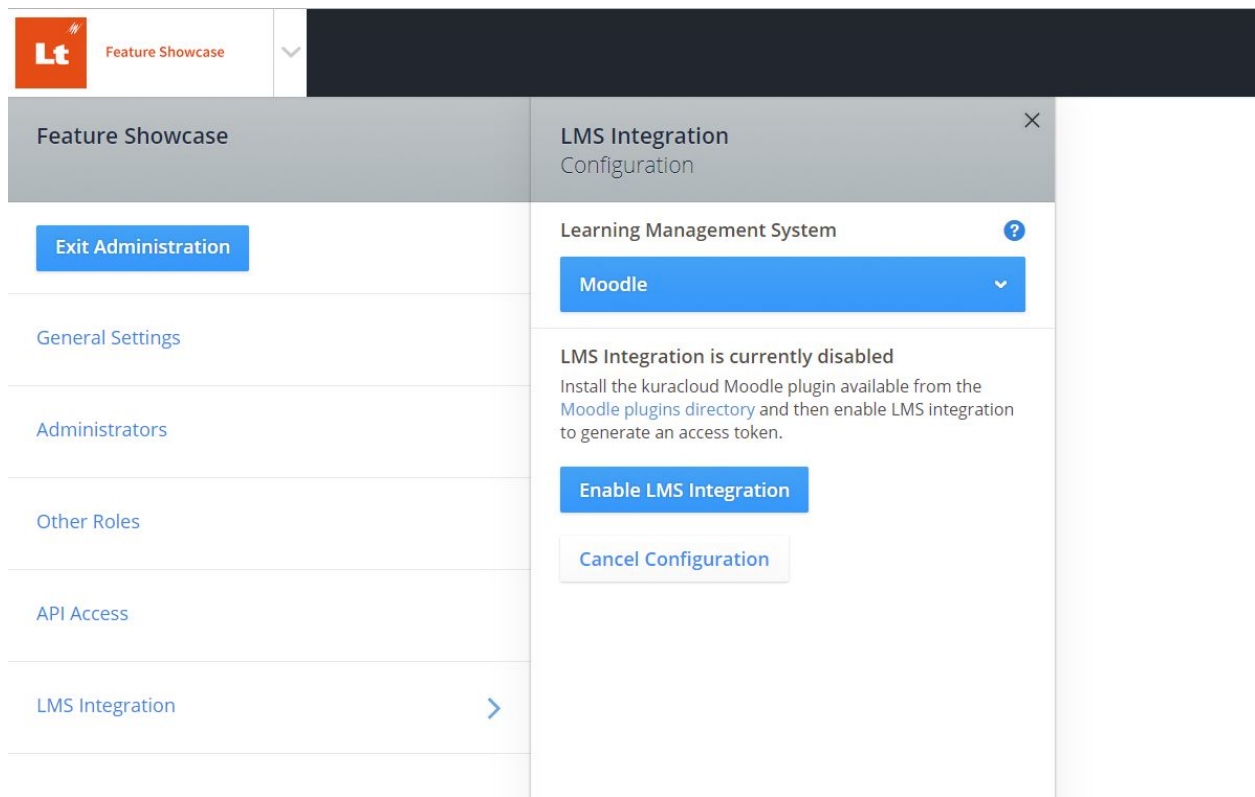
For detailed information visit our [support site](#).

LMS Integration is currently disabled

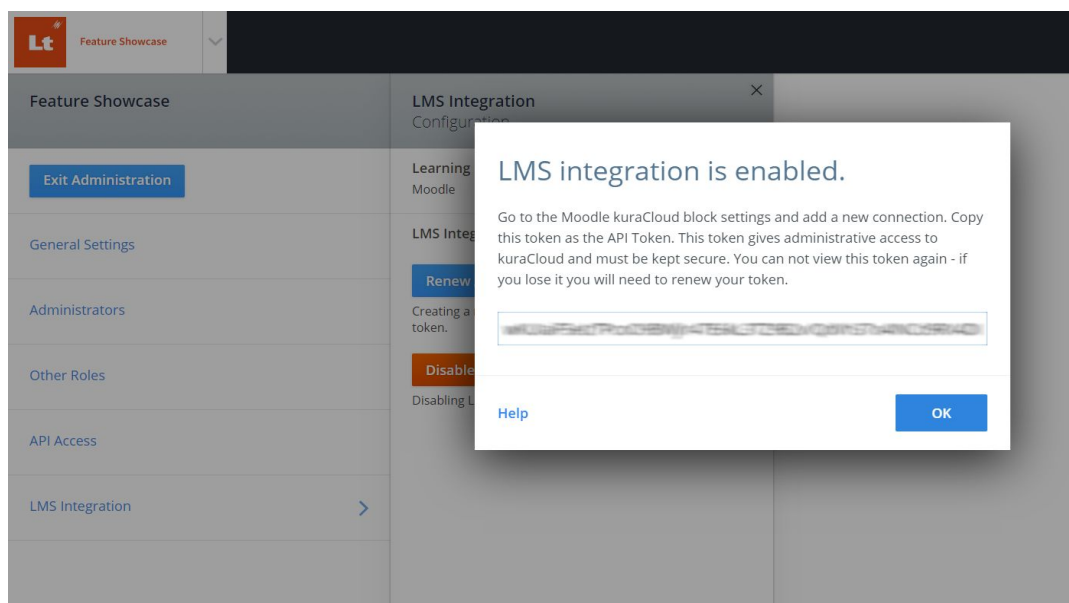
Configure LMS Integration



Select *Moodle* from the drop-down menu.



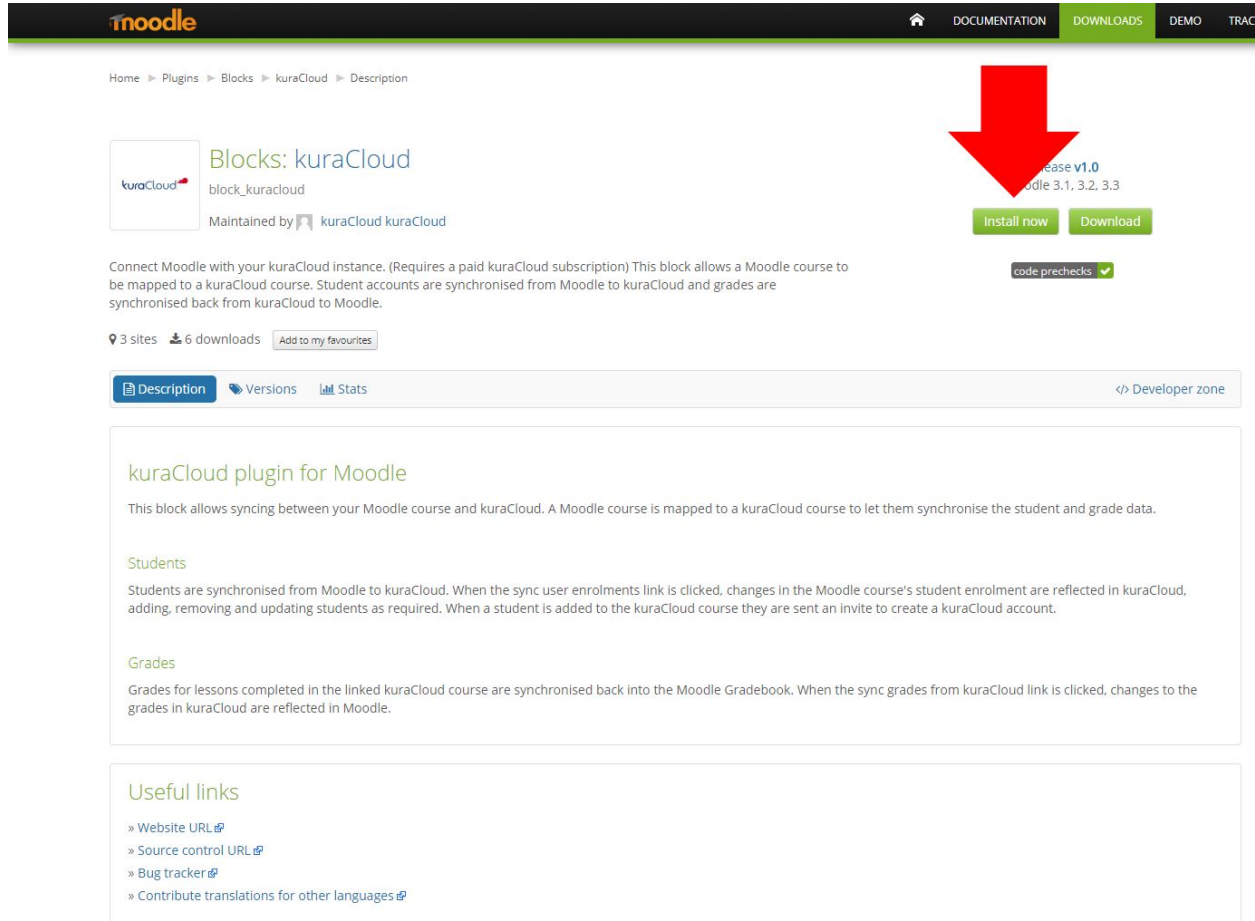
Press the *Enable LMS Integration* button. Copy the provided token to a safe place. This is important because your token can be viewed only once in kuraCloud, losing this will require the generation of a completely new token.



Install Directly

Navigate to the plugin page at https://moodle.org/plugins/block_kuracloud

Click the *Install now* button



The screenshot shows the Moodle plugin page for 'Blocks: kuraCloud'. The page has a dark header with the Moodle logo and navigation links: HOME, DOCUMENTATION, DOWNLOADS, DEMO, and TRACKING. Below the header, a breadcrumb trail reads 'Home > Plugins > Blocks > kuraCloud > Description'. The main content area features a plugin card with the 'kuraCloud' logo, the title 'Blocks: kuraCloud', the identifier 'block_kuracloud', and the maintainer 'kuraCloud kuraCloud'. A red arrow points to the 'Install now' button, which is highlighted in green. Next to it is a 'Download' button. Below these buttons, a 'code prechecks' status is shown with a green checkmark. The page also displays '3 sites' and '6 downloads' with an 'Add to my favourites' button. A tabbed interface shows 'Description', 'Versions', and 'Stats' tabs, with 'Developer zone' on the right. The description text states: 'Connect Moodle with your kuraCloud instance. (Requires a paid kuraCloud subscription) This block allows a Moodle course to be mapped to a kuraCloud course. Student accounts are synchronised from Moodle to kuraCloud and grades are synchronised back from kuraCloud to Moodle.' Below this, sections for 'Students' and 'Grades' describe the synchronization process. A 'Useful links' section at the bottom lists links for the website, source control, bug tracker, and translations.

Home > Plugins > Blocks > kuraCloud > Description

Blocks: kuraCloud
block_kuracloud
Maintained by kuraCloud kuraCloud

Connect Moodle with your kuraCloud instance. (Requires a paid kuraCloud subscription) This block allows a Moodle course to be mapped to a kuraCloud course. Student accounts are synchronised from Moodle to kuraCloud and grades are synchronised back from kuraCloud to Moodle.

3 sites 6 downloads Add to my favourites

Description Versions Stats </> Developer zone

kuraCloud plugin for Moodle

This block allows syncing between your Moodle course and kuraCloud. A Moodle course is mapped to a kuraCloud course to let them synchronise the student and grade data.

Students

Students are synchronised from Moodle to kuraCloud. When the sync user enrolments link is clicked, changes in the Moodle course's student enrolment are reflected in kuraCloud, adding, removing and updating students as required. When a student is added to the kuraCloud course they are sent an invite to create a kuraCloud account.

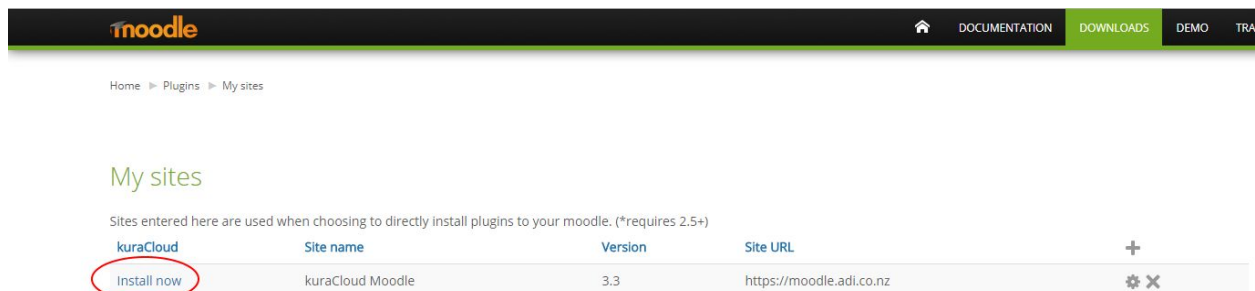
Grades

Grades for lessons completed in the linked kuraCloud course are synchronised back into the Moodle Gradebook. When the sync grades from kuraCloud link is clicked, changes to the grades in kuraCloud are reflected in Moodle.

Useful links

- » Website URL
- » Source control URL
- » Bug tracker
- » Contribute translations for other languages

Click the *Install now* link



The screenshot shows the 'My sites' page in Moodle. The header is identical to the previous screenshot. The breadcrumb trail is 'Home > Plugins > My sites'. The page title is 'My sites'. Below the title, a note states: 'Sites entered here are used when choosing to directly install plugins to your moodle. (*requires 2.5+)'. A table lists the sites. The first site is 'kuraCloud' with 'Site name' 'kuraCloud Moodle', 'Version' '3.3', and 'Site URL' 'https://moodle.adl.co.nz'. The 'Install now' link in the first column of this table is circled in red. To the right of the table are icons for adding a new site (+), settings (gear), and deleting (X).

Home > Plugins > My sites

My sites

Sites entered here are used when choosing to directly install plugins to your moodle. (*requires 2.5+)

	Site name	Version	Site URL	
kuraCloud	kuraCloud Moodle	3.3	https://moodle.adl.co.nz	+
Install now				⚙️ ✕

Click the *Continue* button

Install plugins from the Moodle plugins directory

Confirm

There is a request to install plugin **kuraCloud** (block_kuracloud) version 2017092200 from the Moodle plugins directory on this site. If you continue, the plugin ZIP package will be downloaded for validation. Nothing will be installed yet.



Continue

Cancel

Click the *Continue* button

kuraCloud Moodle

Install plugins from the Moodle plugins directory

Downloading block_kuracloud ... OK

Validating block_kuracloud ... OK

Validation successful, installation can continue

Continue



Select *Upgrade Moodle database now*.

Plugins check

This page displays plugins that may require your attention during the upgrade, such as new plugins to be installed, plugins to be upgraded, missing plugins etc. Additional plugins are displayed if there is an available update for them. It is recommended that you check whether there are more recent versions of plugins available and update their source code before continuing with this Moodle upgrade.

Check for available updates

Last check done on 3 October 2017, 10:08 AM

Plugins requiring attention

Cancel new installations (1)

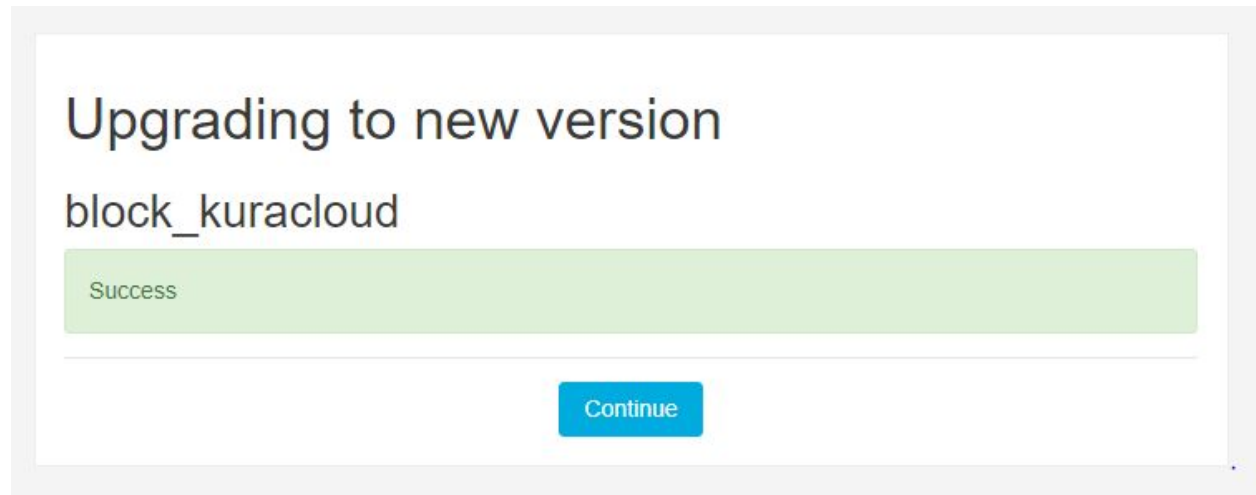
Plugins requiring attention **1** All plugins **392**

Plugin name / Directory	Current version	New version	Requires	Source / Status
Blocks				
kuraCloud /blocks/kuracloud		2017092200	• Moodle 2016052300	Additional To be installed Cancel this installation

 Reload

Upgrade Moodle database now

Select *Continue* to confirm



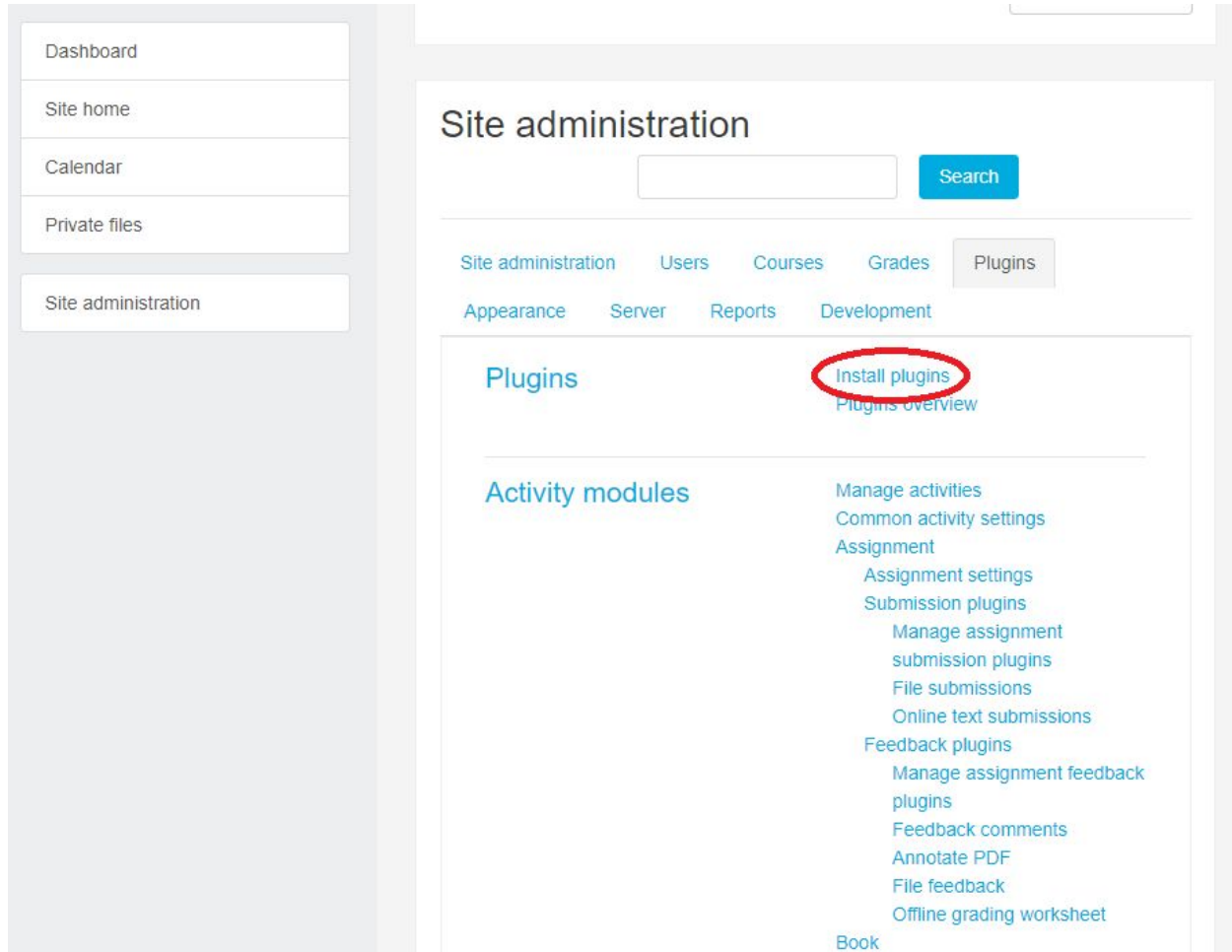
Download the kuraCloud plugin

Download the kuraCloud plugin from https://moodle.org/plugins/block_kuracloud

A screenshot of the Moodle.org website showing the plugin page for 'block_kuracloud'. The page has a dark header with the Moodle logo and navigation links: HOME, DOCUMENTATION, DOWNLOADS, DEMO, and TRACKING. Below the header is a breadcrumb trail: Home > Plugins > Blocks > kuraCloud > Description. The main content area features a plugin card for 'Blocks: kuraCloud' with a 'kuraCloud' logo, the text 'block_kuracloud', and 'Maintained by kuraCloud kuraCloud'. To the right of the card is a red arrow pointing down to a 'Download' button. Above the button is the text 'Release v Moodle 3.1, 3.2' and below it is a 'code prechecks' status with a green checkmark. Below the plugin card is a paragraph of text: 'Connect Moodle with your kuraCloud instance. (Requires a paid kuraCloud subscription) This block allows a Moodle course to be mapped to a kuraCloud course. Student accounts are synchronised from Moodle to kuraCloud and grades are synchronised back from kuraCloud to Moodle.' Below this text are links for '3 sites', '6 downloads', and 'Add to my favourites'. At the bottom of the page is a 'Useful links' section with links to the website URL, source control URL, bug tracker, and contribute translations for other languages.

Install the kuraCloud plugin

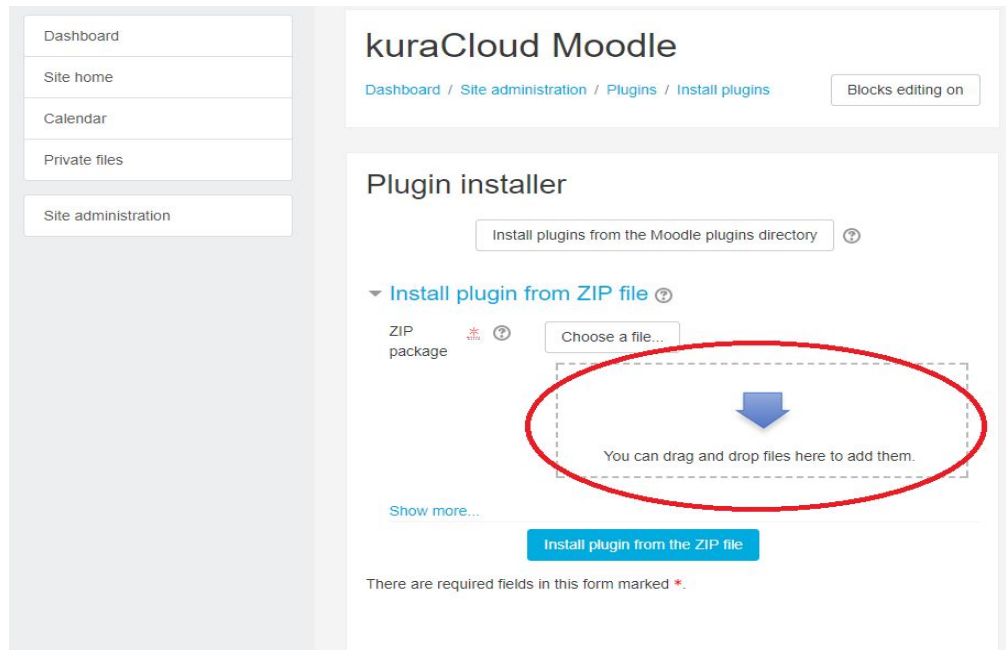
Navigate to the *Site administration* page to install the extension then move to the *Plugins* tab and select *Install plugins*.



The screenshot displays the Moodle Site administration interface. On the left is a sidebar menu with links to Dashboard, Site home, Calendar, Private files, and Site administration. The main content area is titled 'Site administration' and includes a search bar and a set of tabs: Site administration, Users, Courses, Grades, Plugins, Appearance, Server, Reports, and Development. The 'Plugins' tab is selected. Under the 'Plugins' heading, there are two links: 'Install plugins' (which is circled in red) and 'Plugins overview'. Below this, the 'Activity modules' section lists various modules and their settings, including Manage activities, Common activity settings, Assignment, Assignment settings, Submission plugins, Manage assignment submission plugins, File submissions, Online text submissions, Feedback plugins, Manage assignment feedback plugins, Feedback comments, Annotate PDF, File feedback, Offline grading worksheet, and Book.

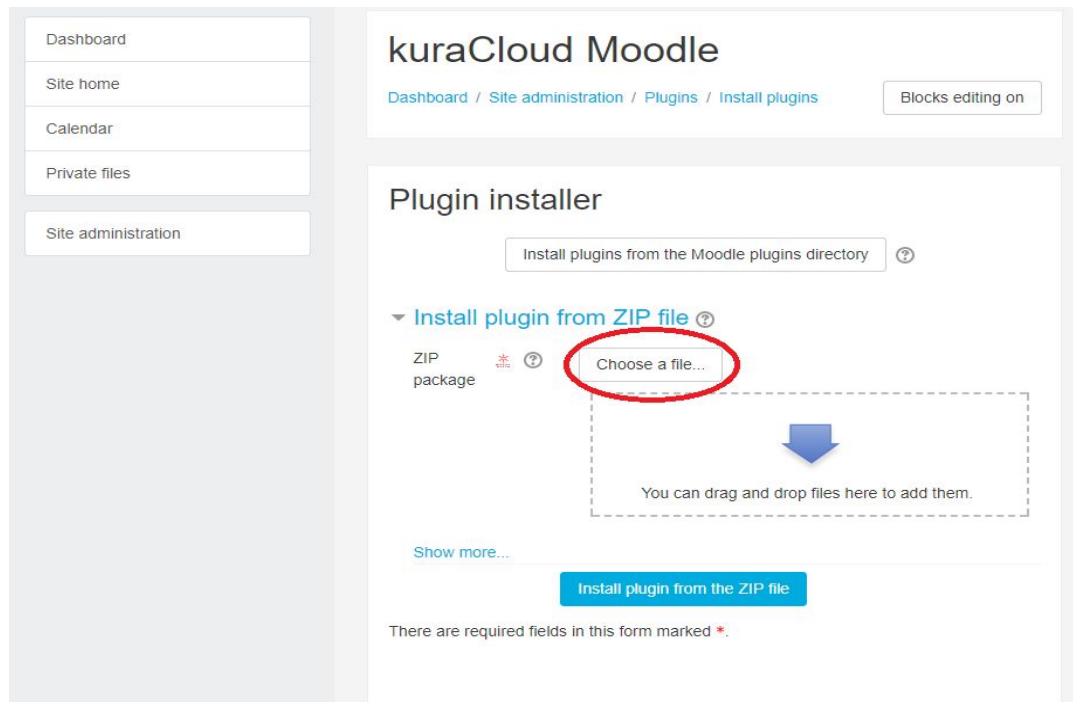
Then ether:

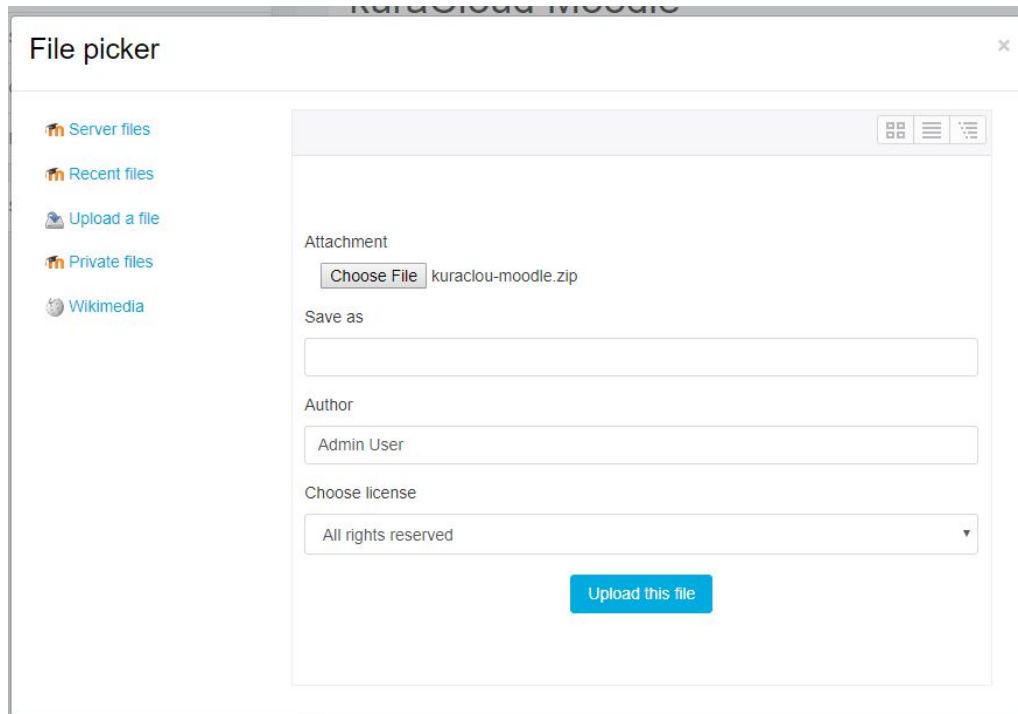
- Drag the *kuraclou-moodle.zip* file from your computer into the marked area.



or

- Search for the *kuraclou-moodle.zip* file from the *Choose a file...* button.

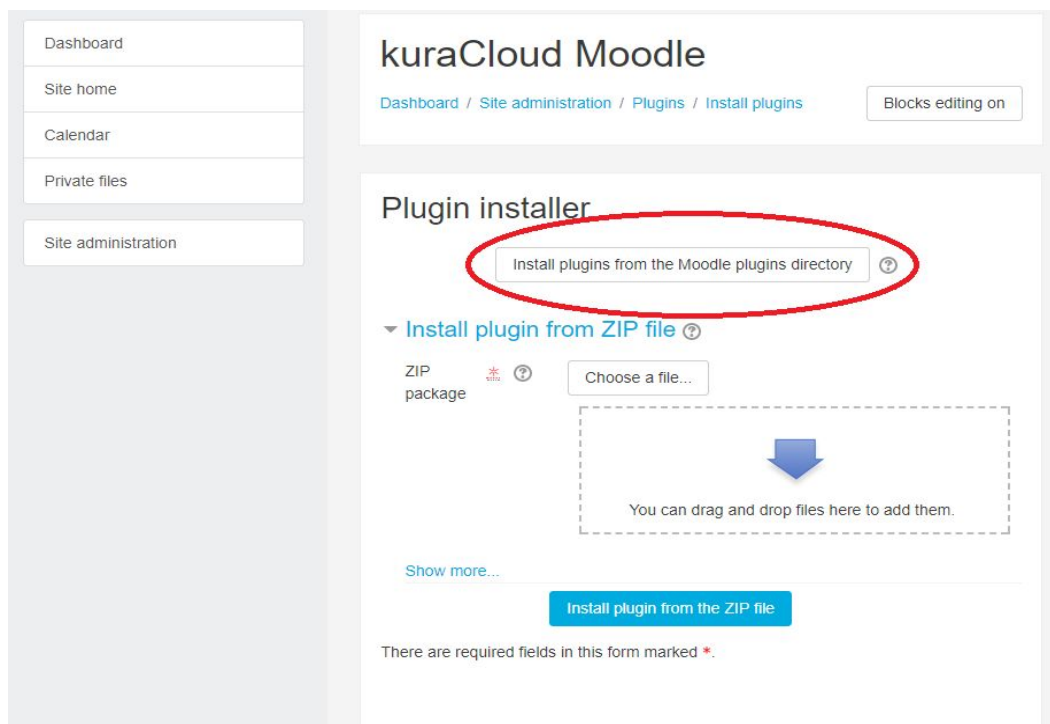




A 'File picker' dialog box with a sidebar on the left containing links: 'Server files', 'Recent files', 'Upload a file', 'Private files', and 'Wikimedia'. The main area is titled 'Attachment' and shows a file named 'kuraclou-moodle.zip' with a 'Choose File' button. Below this is a 'Save as' text input field. The 'Author' field contains 'Admin User'. The 'Choose license' dropdown menu is set to 'All rights reserved'. At the bottom is a blue 'Upload this file' button.

or

- if you have a moodle.org account you can install the kuraCloud plugin directly from the Moodle plugin Directory by selecting *Install plugins from the Moodle plugins directory*.



The Moodle 'Plugin installer' interface. A sidebar on the left lists navigation options: 'Dashboard', 'Site home', 'Calendar', 'Private files', and 'Site administration'. The main content area is titled 'kuraCloud Moodle' and shows the breadcrumb 'Dashboard / Site administration / Plugins / Install plugins'. A 'Blocks editing on' button is in the top right. The 'Plugin installer' section has a red circle around the 'Install plugins from the Moodle plugins directory' button. Below it, the 'Install plugin from ZIP file' section is expanded, showing a 'ZIP package' label, a 'Choose a file...' button, and a dashed box with a blue arrow pointing down and the text 'You can drag and drop files here to add them.' At the bottom of this section is a blue 'Install plugin from the ZIP file' button. A 'Show more...' link is also present. A note at the bottom states: 'There are required fields in this form marked *.'

Select *Install plugin from the ZIP file*. Moodle will then validate the zip file is an appropriate plugin, select *Continue* once the plugin has been validated.

kuraCloud Moodle

Install plugin from ZIP file

Validating block_kuracloud ... OK

Validation successful, installation can continue

Continue

Cancel

Select *Upgrade Moodle database now*.

Plugins check

This page displays plugins that may require your attention during the upgrade, such as new plugins to be installed, plugins to be upgraded, missing plugins etc. Additional plugins are displayed if there is an available update for them. It is recommended that you check whether there are more recent versions of plugins available and update their source code before continuing with this Moodle upgrade.

Check for available updates

Last check done on 3 October 2017, 10:08 AM

Plugins requiring attention

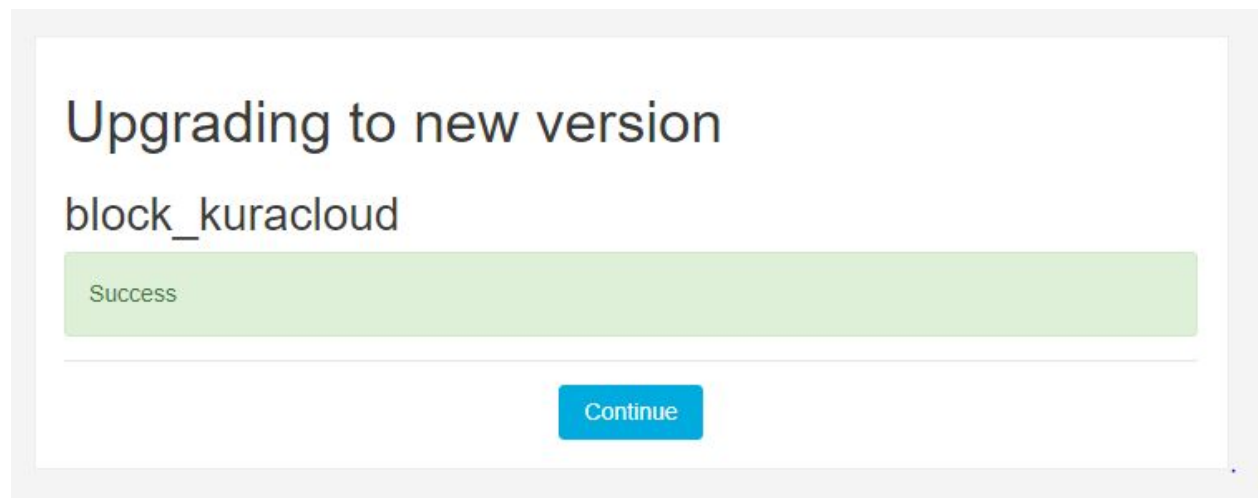
Cancel new installations (1) **Plugins requiring attention** 1 All plugins 392

Plugin name / Directory	Current version	New version	Requires	Source / Status
Blocks				
kuraCloud /blocks/kuracloud		2017092200	• Moodle 2016052300	Additional To be installed Cancel this installation

Reload

Upgrade Moodle database now

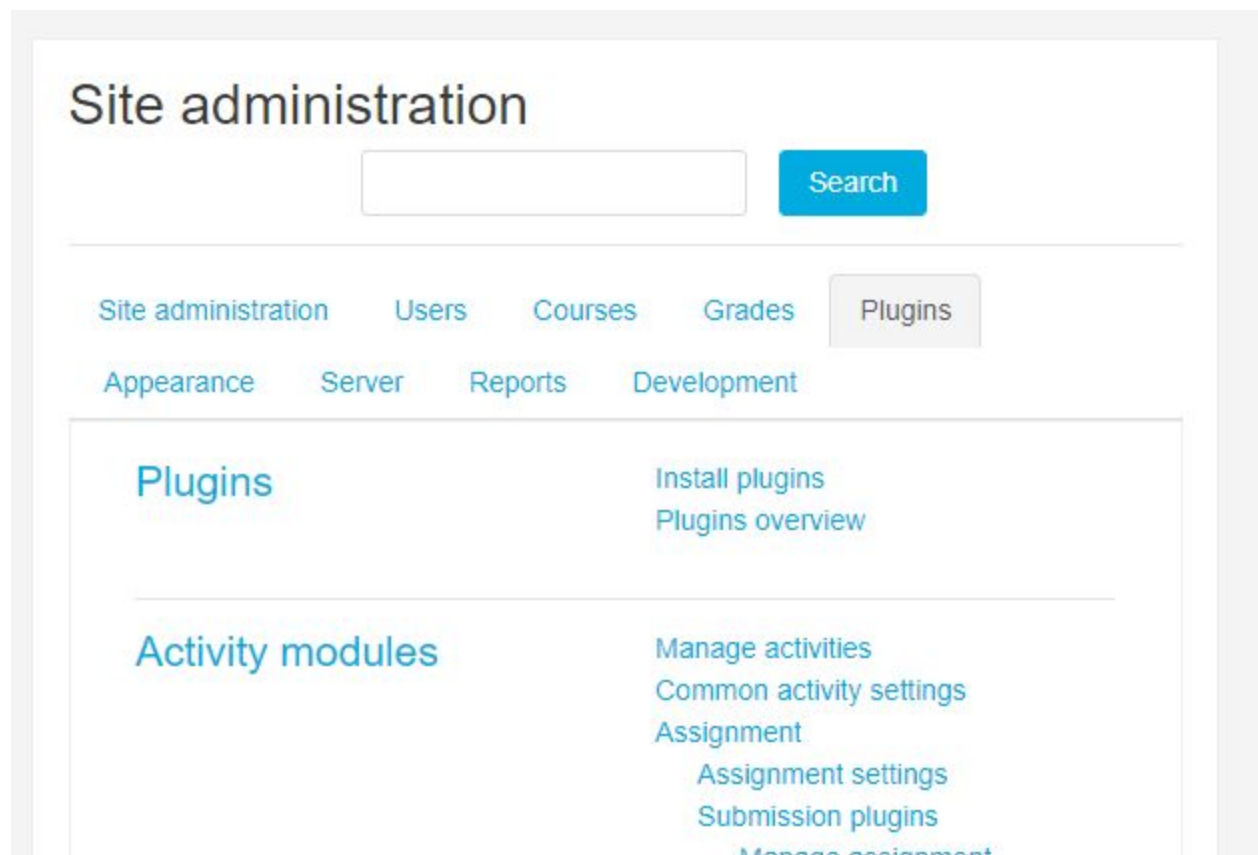
Select *Continue* to confirm



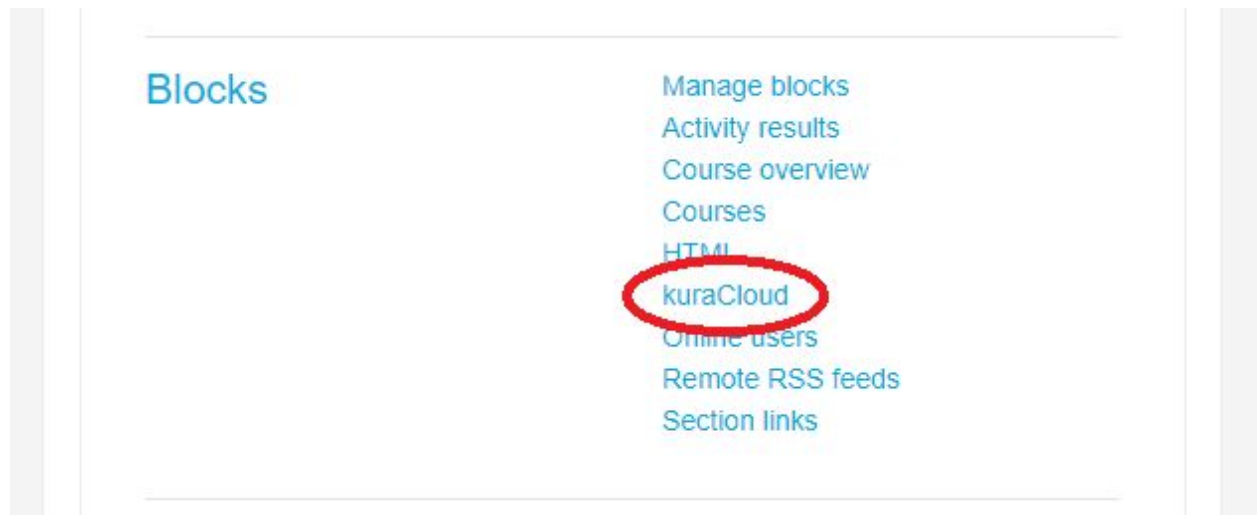
Create an instance Mapping

Navigate to the Moodle *Site Administration* page to map the plugin:

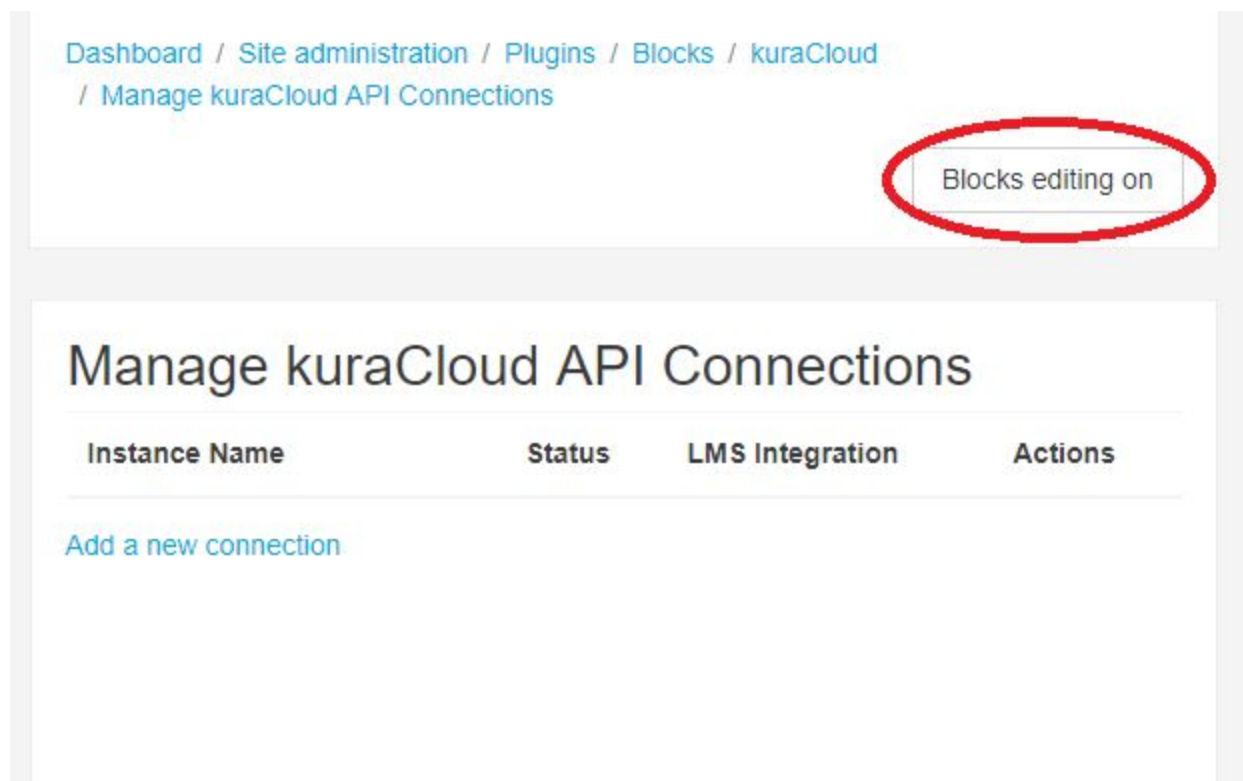
Move to the *Plugins* tab.



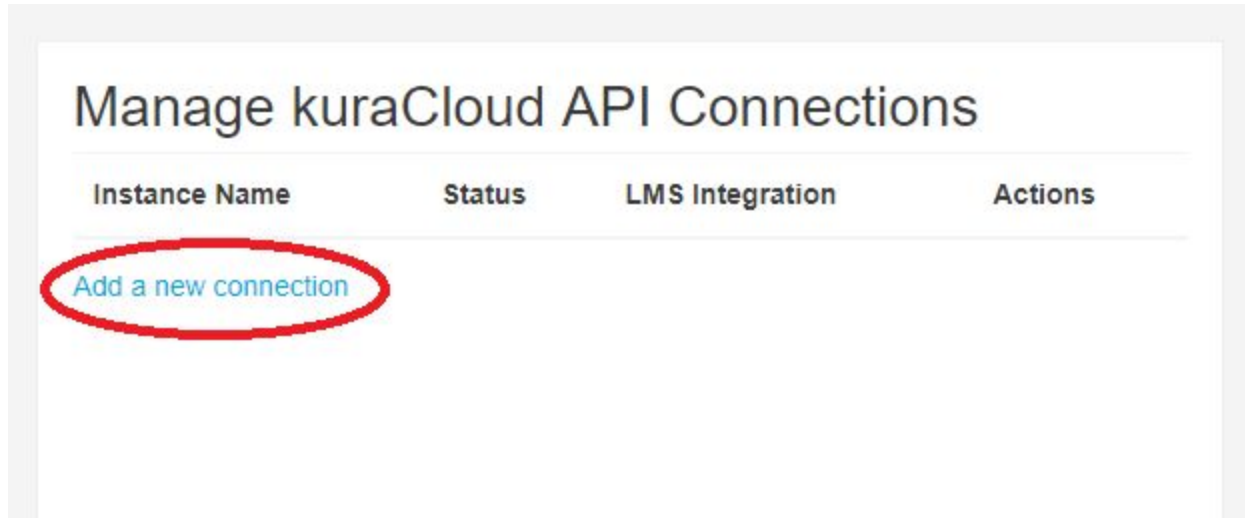
Scroll to the Blocks section and select *kuraCloud*.



Ensure *Blocks editing* is on.



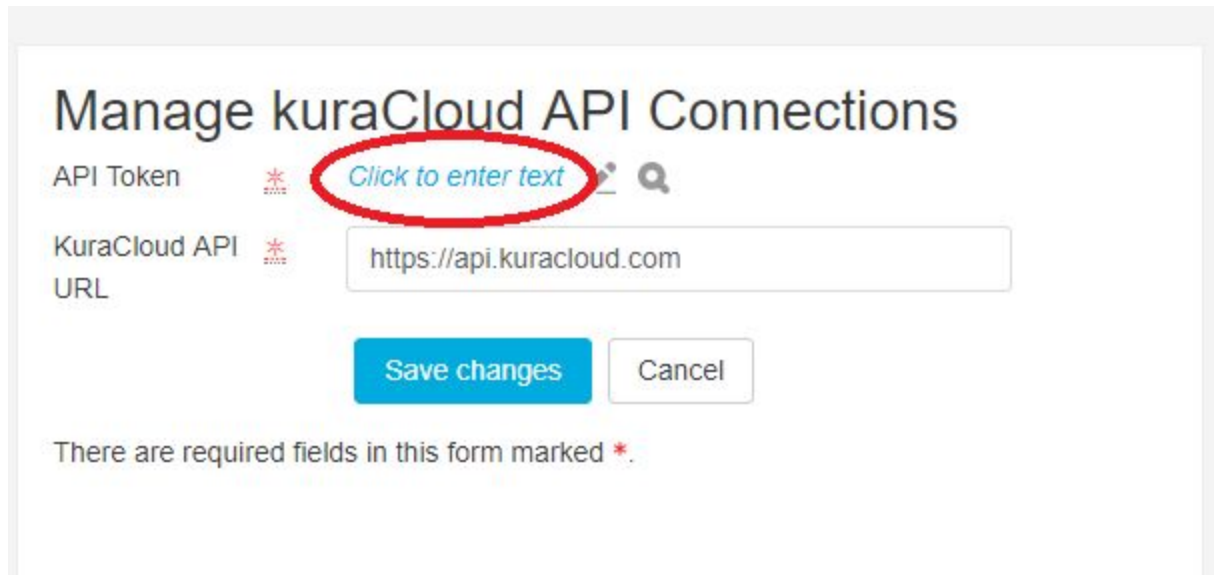
Select *Add a new connection*.



Manage kuraCloud API Connections

Instance Name	Status	LMS Integration	Actions
Add a new connection			

Select *Click to enter text*. Enter your token in the field that appears and click *Save changes*. (Leave kuraCloud API URL unchanged.)



Manage kuraCloud API Connections

API Token * [Click to enter text](#)

KuraCloud API URL *

There are required fields in this form marked *.

Verify the token has been accepted by checking your kuraCloud instance name is now listed.

Manage kuraCloud API Connections

Instance Name	Status	LMS Integration	Actions
Test 1502080215.02_58	OK	Enabled	✕

[Add a new connection](#)

kuraCloud connections can be deleted by clicking the cross in the actions column.

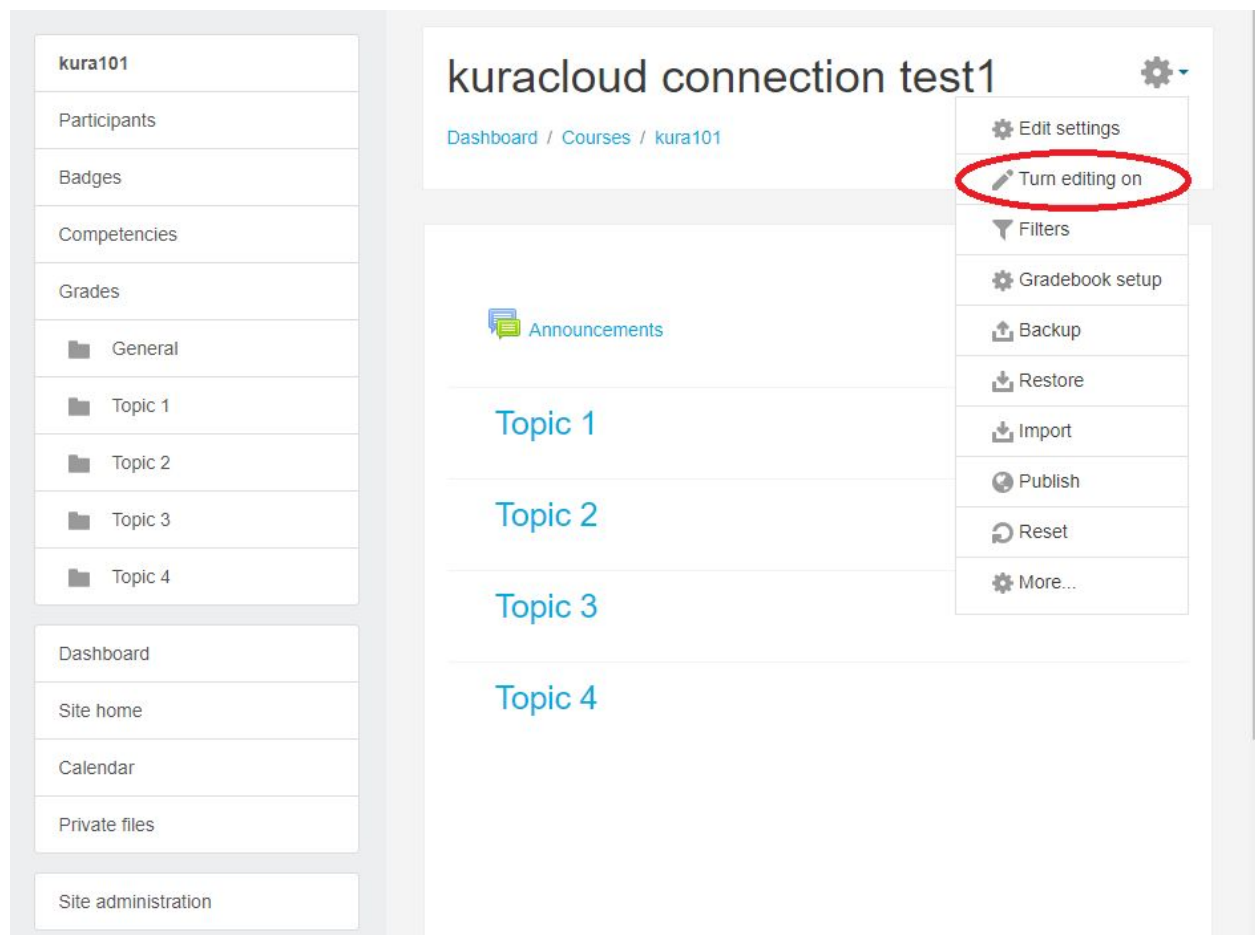
Appendix B - Detailed Configuration Guide

Create a course Mapping

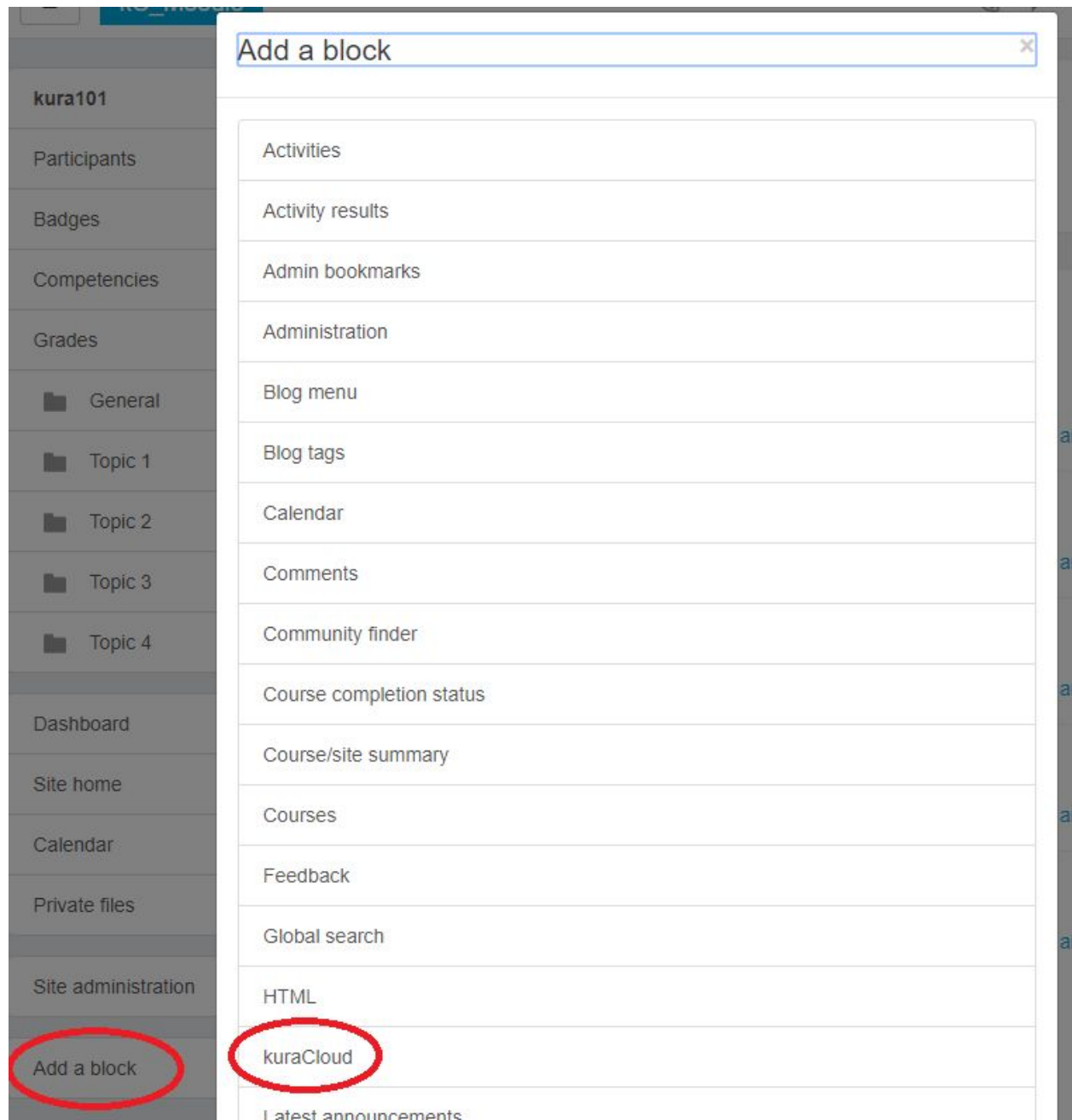
Before following these steps you must ensure that the course(s) to be mapped exist in both kuraCloud and Moodle.

Navigate to the chosen course page to map courses:

Select the cog in the top left corner and *Turn editing on*.



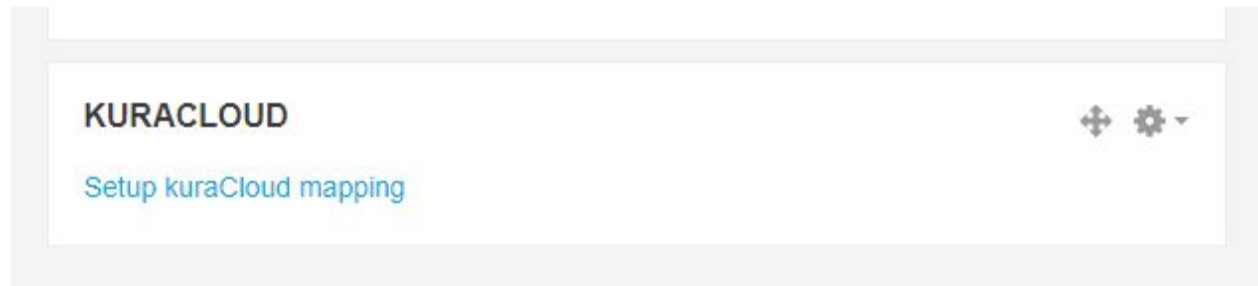
Select *Add a block* that has appeared in the bottom left corner and select *kuraCloud* from the list that appears.



The screenshot shows the Moodle 'Add a block' dialog. On the left is a sidebar with a list of site navigation options. The 'Add a block' option at the bottom is circled in red. The main area of the dialog is titled 'Add a block' and contains a scrollable list of available blocks. The 'kuraCloud' block is circled in red in this list.

Add a block	
	Activities
	Activity results
	Admin bookmarks
	Administration
	Blog menu
	Blog tags
	Calendar
	Comments
	Community finder
	Course completion status
	Course/site summary
	Courses
	Feedback
	Global search
	HTML
	kuraCloud
	Latest announcements

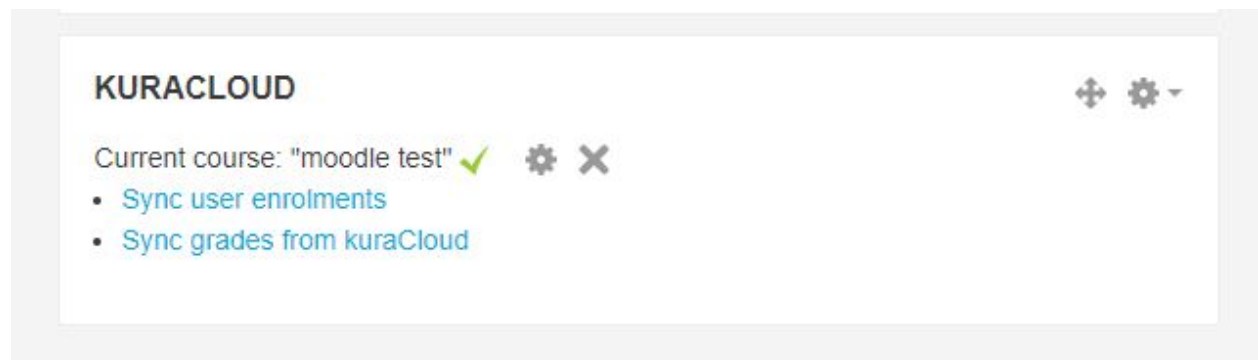
Select *Setup kuraCloud mapping*.



Select the course to be mapped to from the provided drop-down menu or type to search, then click the *Save changes* button.

A screenshot of the 'kuraCloud course mapping' form. The title 'kuraCloud course mapping' is at the top. Below it, the text 'kuraCloud course' is followed by a red asterisk icon. To the right is a blue button that says 'Please select a course'. Below this is a search input field with the placeholder text 'Search' and a downward arrow. At the bottom are two buttons: 'Save changes' (blue) and 'Cancel' (white). A note at the bottom states: 'There are required fields in this form marked *.'

The new mapping should now be listed at the bottom of the course page on moodle.

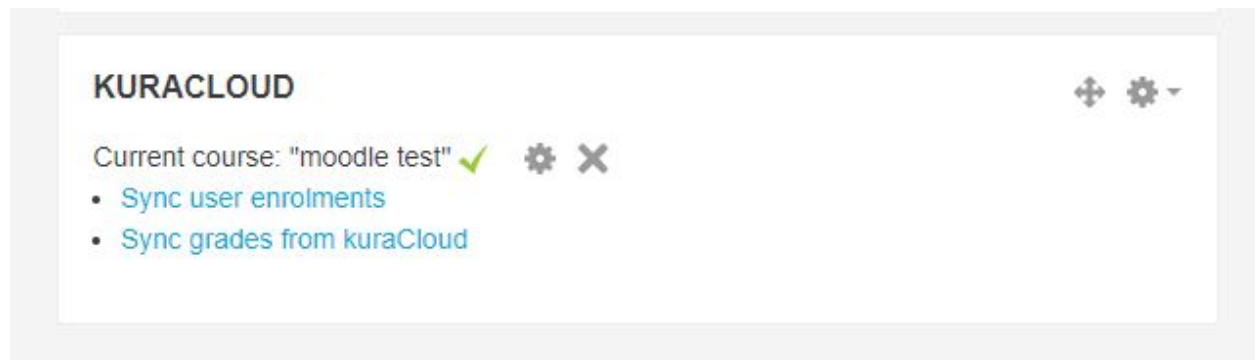


Note: When mapping is complete you will no longer be able to edit the students from within that kuraCloud course.

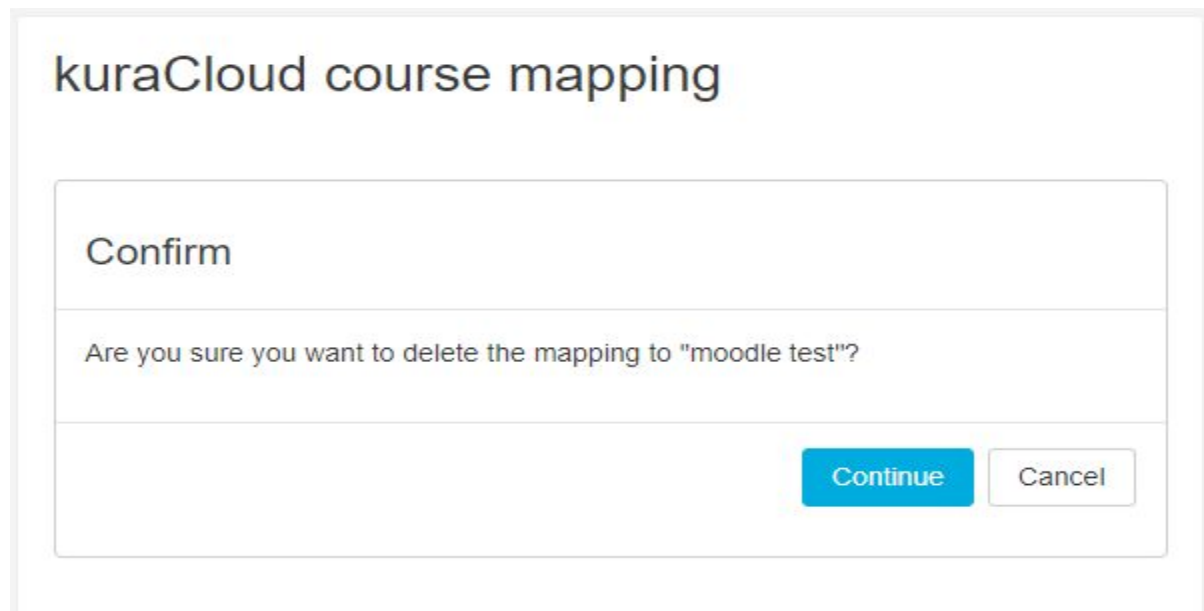
Removing a Course Mapping

Navigate to the course administration page and the mapping at the bottom of the page:

Select the Cross to delete course mapping



Select *Continue* to confirm deletion



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

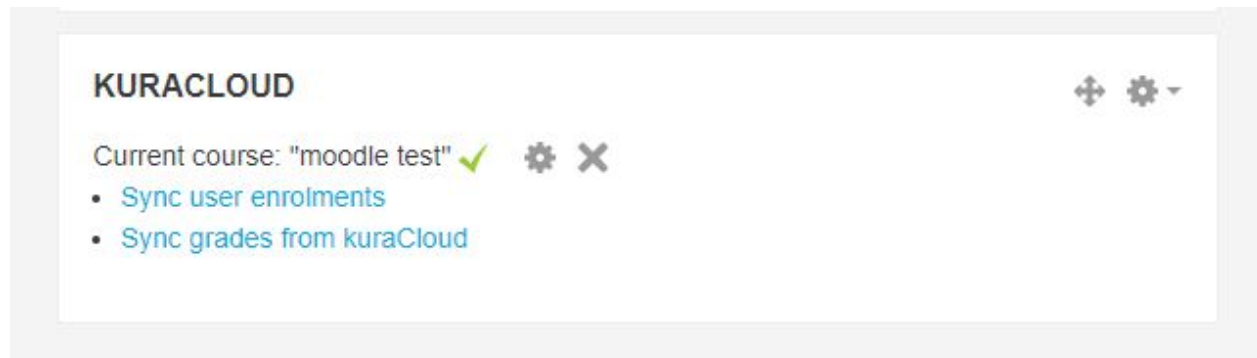
- If a course mapping is removed, student accounts that were synchronized from Moodle will remain in the kuraCloud course. These accounts may be deleted manually from within kuraCloud.
- Mapping may only be removed from active kuraCloud courses. If a kuraCloud course is deleted it must first be restored before the mapping can be removed. This

kuraCloud course may safely be deleted again when the mapping is removed.

Appendix C - Detailed Workflows Guide

Synchronization of Students from Moodle

Within Moodle navigate to the course then from the kuraCloud block select *Sync user enrolments*. 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 Moodle will be deleted from kuraCloud.
2. If a student's email has changed in kuraCloud or Moodle 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 Moodle users with the institution role of 'Student' and the course role of 'Student' will be synchronized to kuraCloud. (These are default values within Moodle)

Sync user enrolments

Confirm

Click 'Continue' to make the following enrolment changes in kuraCloud:

Students to add: 1

- stu dent

Continue

Cancel

Select *Continue* to confirm synchronization.

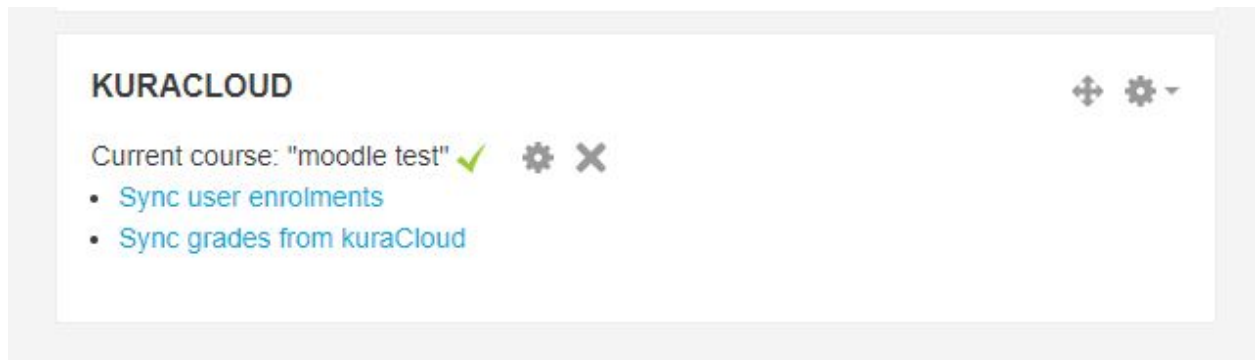
Students that have been synchronized will be created within the mapped course in kuraCloud and be sent an invite email. If the kuraCloud course already contains students with a matching email address from Moodle their details will be updated and no invite will be sent.

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

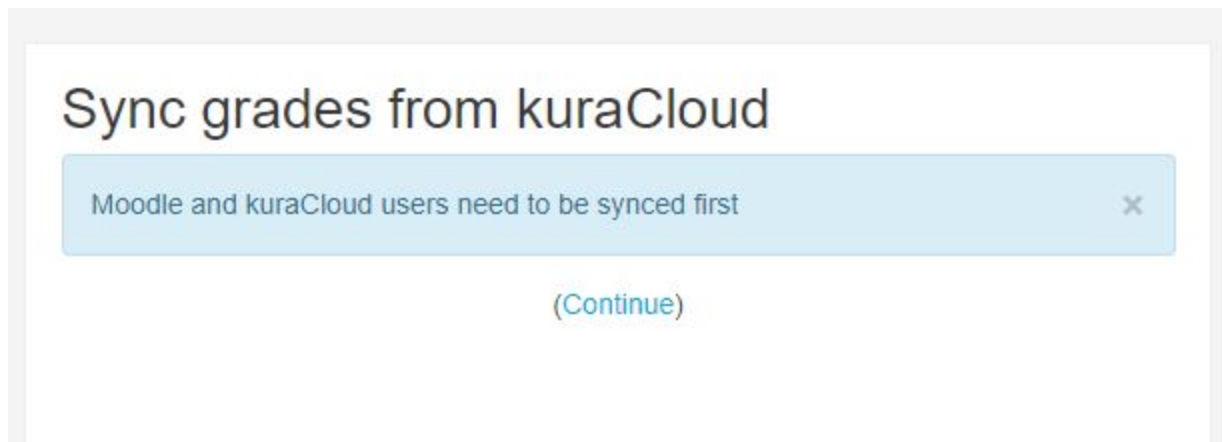
Synchronization of grades to Moodle

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

From the kuraCloud block select *Sync grades from kuraCloud*.



Note: if students have not yet been synchronized for this course then you will be redirected to the synchronize students page.



Select Continue. Grades will be synchronized from kuraCloud to Moodle.

Sync grades from kuraCloud

Confirm

Sync grades from kuraCloud?

Continue

Cancel

If a lesson has a negative grade in kuraCloud it will become zero in moodle. If a lesson has grade greater than its maximum in kuraCloud then it will be reduced to the maximum grade for that lesson.