

Integration with Blackboard Ultra

Introduction

This integration uses a combination of Blackboards API and LTI 1.0. LTI is used as the launch into PebblePad and Memberships and Grades are handled via the Backboards API.

Known issues

- There are currently no known issues affecting this integration.

What is covered in this guide and what is not?

As with most systems there are a number of options that are visible to you but not all are used by our platform, therefore only those that are relevant to the tools configuration are referred to in this document.

The following tasks are covered in this guide

- Adding a REST API Integration
- Adding the Blackboard Integration to PebblePad
- Adding an LTI Tool Provider
- Managing Placements
- Setting up Pebble+
- Setting up ATLAS
- Setting up Deep Linking
- Custom Role Mappings
- Testing the Configuration

The following tasks are NOT covered in this guide

- Using the integration as an Instructor
- Using the integration as a Learner

What can you do, what are the limitations of this implementation and what is not supported?

With this type of integration you WILL be able to:

- Single Sign On from Blackboard to Pebble+.
- Single Sign On from Blackboard to ATLAS.
- Create PebblePad accounts upon single sign on for new users.
- Synchronise Blackboard course members with an ATLAS workspace.
- Pass grades back to Blackboard.
- Create assets using Deep Linking and have them Auto Submitted to ATLAS.
- Support for multiple assignments in ATLAS – each assignment will only allow for a single grade.
- Map your Blackboard roles to ATLAS roles

The following limitations are in place:

- PebblePad instance only support connection to a single Blackboard Ultra install
- If LTI is the only method of authentication users will be unable to
 - Use PebblePocket app
 - Login via the main login page
- Unable to search for/share with users who haven't already logged into the system or had their accounts provisioned.
- Auto submit will pick the first workspace the learner is a member of when then content item has been added to multiple workspaces.
- Blackboard Ultras Gradebook will only show one grade per ATLAS tool link.
- Unable to synchronise Blackboard Ultra groups to ATLAS sets.
- You can only synchronise members / grades for workspaces created via Blackboard Ultra. It is not possible to link an existing workspace to a Blackboard Ultra course.
- Each created link is unique. Once a link has been deleted it is not possible to relink Blackboard Ultra back to its corresponding ATLAS workspace.

Prerequisites

- A Pebble+ account with resources
- Administrative access to PebblePad
- Administrative access to Blackboard Ultra
- Creator level access on a Region in ATLAS

Notes on Membership Synchronisation

- Membership syncs will be carried out whenever an Administrator or Instructor connects to PebblePad via a Blackboard Ultra course
- Students connecting from Blackboard Ultra to PebblePad initiate a membership sync if no synchronisation has taken place in the preceding hour
- An automatic, overnight memberships sync takes place if there were no synchronisations during the preceding day

LTI Express

LTI Express is alternative workflow that has been designed by us to help streamline the process that an Instructor uses to provision a workspace and roll out resources to their Learners. LTI Express is ideal for both single and multiple assignment workflows and handles the direction of flow through the system for a user in the following ways:

- If a workspace doesn't exist and an instructor with the Creator role in ATLAS clicks on the link they will be taken to the workspace wizard screen.
- If the workspace exists then they'll be taken to that workspace.
- If a Learner clicks on the link and no resource is present on the workspace then they'll be taken to the Pebble+ dashboard
- If a resource is associated with the assignment then they'll be taken to Pebble+ and the resource will be loaded for them. The link will honour the usage capability of the resource as well as auto submit if needed.

Adding a REST API Integration

As this integration uses Blackboard Ultras API you will need to add a REST API integration to your install.

1. Open the Blackboard Ultra **Administrator Tools**
2. In the **Integrations** section click **REST API Integrations**
3. Click **Create Integration**

Complete as follows choosing the correct Application Id for your territory.

Please note that only the options that are relevant to the tools configuration are detailed below.

General Information

Setting	Value
Application ID	Test: 0cb2bc8d-d95d-42e9-b7d4-46f5a75cfa53 UK: b5c590ab-2696-4695-955e-a7e11bf6b7d3 AU: 0c9e75ff-43f5-4310-ba40-cc7ea8c77053 CA: 67da58b7-560f-42cc-b4cb-f6b63895a0df US: be6a04a2-ab5f-4ca6-ba65-95f8ed5256f0
Learn User	Click the Browse button and search through the list of Blackboard Ultra users to find the user that the integration should act as. Typically, an integration acts as Administrator or some other user created for integration management. Ideally, the user has only the permissions that the integration needs to function properly.
End User Access	Set to Yes . End users will sign in with their own Blackboard Ultra ID to use the integration. Each user's access is then limited to his or her own permissions. If you set End User Access to No, the integration always has access as if it were the Blackboard Ultra user indicated on the form.
Authorised To Act As User	Set to Service Default (No)

4. Click the **Submit** button

Adding the Integration to PebblePad

1. Using your Global Administrator account log into the PebblePad Administration portal for your organisation
2. Click on the **Integrations** tab then click **Blackboard**
3. Enter your Blackboard Ultra domain into the box provided, for example: <https://bd-partner-a-ultra.blackboard.com/>
4. Copy the **Key** and **Secret** automatically generated by PebblePad

Blackboard

Settings for Grades and Memberships

Blackboard URL:

Settings for SSO

Key:

Secret:

The username parameters and regex are used for incoming OAuth requests (including Lti) and for Membership requests respectively, only set these if your service and PebblePad are not matching usernames correctly using the default behaviour

Username Parameter:

Username Regex:

Membership Username Parameter:

Membership Username Regex:

5. Click the **Save** button

Please note that if you find that usernames are not consistent between Blackboard Ultra and PebblePad then it may be possible to work around this issue by choosing a different OAuth/LTI parameter or even applying a regex, you can do this by completing the necessary fields as required.

Managing Global Properties

In order to allow the ATLAS tool to be able to post grades back to Blackboard Ultra you will need enable the **Allow configured tool providers to post grades** option. To do this:

1. Open the Blackboard **Administrator Tools**
2. In the **Integrations** section click **LTI Tool Providers**
3. Click **Manage Global Properties**
4. Select **Yes** for **Allow configured tool providers to post grades**
5. Click **Submit**

Adding an LTI Tool Provider

As this integration uses LTI you will need to add an LTI tool provider to your Blackboard Ultra install.

1. Open the Blackboard **Administrator Tools**
2. In the **Integrations** section click **LTI Tool Providers**
3. Click **Register Provider Domain**

Complete as follows

Please note that only the options that are relevant to the tools configuration are detailed below.

Provider Domain Status	
Provider Domain	Testing: apptest.pebblepad.com UK: pebblepad.co.uk AUS: v3.pebblepad.com.au US: pebblepad.com CA: app.pebblepad.ca
Provider Domain Status	Approved
Secondary Hostnames	For the UK you'll need to add the following secondary hostnames atlas.pebblepad.co.uk v3.pebblepad.co.uk

Default Configuration	
Default Configuration	Set globally
Tool Provider Key	Paste the Key copied from Admin
Tool Provider Secret	Paste the Secret copied from Admin
Tool Provider Custom Parameters	pebble_username=\$User.username

Institution Policies	
Send User Data	Send user data only over SSL
User Fields to Send	Check Role in Course, Name and Email Address
Allow Membership Service Access	No
Show User Acknowledgment Message	No

Click the **Submit** button

Managing Placements


1. Open the Blackboard **Administrator Tools**
2. In the **Integrations** section click **LTI Tool Providers**
3. Find the Tool/Provider URL for your territory
4. Click the dropdown arrow next to the URL and click **Manage Placements**
5. Click **Create Placement**

In order to use Pebble+ and ATLAS you will need to create a placement for each of these tools.

Setting up Pebble+

Complete as follows

Please note that only the options that are relevant to the tools configuration are detailed below.

Placement Information	
Name	PebblePad Pebble+
Description	Your Personal Learning Space
Handle	PLUS
Availability	Yes
Type	Select Course content tool
Launch in New Window	Unchecked (Recommended)
Icon	 http://tinyurl.com/ppplus


Tool Provider Information	
Tool Provider URL	Testing: https://apptest.pebblepad.com/login/login/sso UK: https://v3.pebblepad.co.uk/login/login/sso AUS: https://v3.pebblepad.com.au/login/login/sso US: https://pebblepad.com/login/login/sso CA: https://app.pebblepad.ca/login/login/sso
Tool Provider Key	This will be inherited from the LTI Tool Provider
Tool Provider Secret	This will be inherited from the LTI Tool Provider
Tool Provider Custom Parameters	This will be inherited from the LTI Tool Provider

Click the **Submit** button

Setting up ATLAS

Complete as follows

Please note that only the options that are relevant to the tools configuration are detailed below.

Placement Information	
Name	PebblePad ATLAS
Description	PebblePad's assessment tool
Handle	ATLAS
Availability	Yes
Type	Select Course content tool and check Allows Grading
Launch in New Window	Unchecked (Recommended)
Icon	 http://tinyurl.com/ppatlas

Tool Provider Information	
Tool Provider URL	Testing: https://apptest.pebblepad.com/ATLAS/Accounts/OAuth UK: https://atlas.pebblepad.co.uk/ATLAS/Accounts/OAuth AUS: https://v3.pebblepad.com.au/ATLAS/Accounts/OAuth US: https://pebblepad.com/login/ATLAS/Accounts/OAuth CA: https://app.pebblepad.ca/ATLAS/Accounts/OAuth
Tool Provider Key	This will be inherited from the LTI Tool Provider
Tool Provider Secret	This will be inherited from the LTI Tool Provider
Tool Provider Custom Parameters	This will be inherited from the LTI Tool Provider

Click the **Submit** button

Optional: If you wish to use LTI Express you'll need to go through the steps as above again but using the name **PebblePad (LTI Express)** instead (all other values will remain the same).


Under the **Tool Provider Information** section you will need to add the custom parameter `pebble_forward_learner_to_plus=true`

Finally click **Submit** to save.

Setting up Deep Linking

Complete as follows

Please note that only the options that are relevant to the tools configuration are detailed below.

Placement Information	
Name	PebblePad Pebble+ Resources
Description	Link to your resource templates and WorkBooks
Handle	RESOURCES
Availability	Yes
Type	Select Course content tool and check Supports deep linking
Launch in New Window	Unchecked (Recommended)
Icon	 http://tinyurl.com/ppplus

Tool Provider Information	
Tool Provider URL	Testing: https://apptest.pebblepad.com/alt/OAuth UK: https://v3.pebblepad.co.uk/v3portfolio/OAuth AUS: https://v3.pebblepad.com.au/alt/OAuth US: https://pebblepad.com/alt/OAuth CA: https://app.pebblepad.ca/alt/OAuth
Tool Provider Key	This will be inherited from the LTI Tool Provider
Tool Provider Secret	This will be inherited from the LTI Tool Provider
Tool Provider Custom Parameters	This will be inherited from the LTI Tool Provider

Click the **Submit** button

Custom Role Mappings

If your institution uses custom course/organisation roles within Blackboard Ultra you can map these to ATLAS roles from within the PebblePad Administration Portal.

1. Using your Global Administrator account log into the PebblePad Administration portal for your organisation
2. Click on the **Integrations** tab then click **Blackboard**
3. For each custom role that you would like to map, add the **Role ID** for that role to the corresponding ATLAS label, for example if you had the custom role **External Advisor** with the Role ID **E** and you wanted to map them as a Moderator your Role Mappings would look like the image below:

Role Mappings

The role mappings below allow you to convert any roles from your Blackboard instance to roles in ATLAS Workspaces (via standard Lti Roles). If a Blackboard role is mapped more than once, the lowest privilege mapped role will be chosen.

The boxes below accept a comma separated list of Blackboard roles, which will be mapped as per the label.

e.g. Custom Course Designer (Blackboard) -> Content Developer (Lti) -> Tutor (ATLAS)

Administrator -> Lead Tutor	<input type="text"/>
Instructor -> Lead Tutor	<input type="text"/>
Teaching Assistant -> Tutor	<input type="text"/>
Content Developer -> Tutor	<input type="text"/>
Mentor -> Moderator	<input type="text" value="E"/>
Learner -> Member	<input type="text"/>

Save Delete

4. Click the **Submit** button

Please note that if a Blackboard Ultra role is mapped more than once, the lowest privilege mapped role will be used.

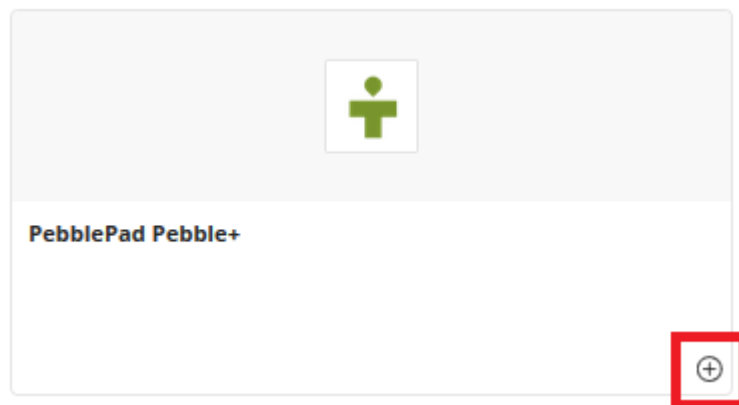
Testing the Configuration

Pebble+

1. Navigate to a course from the **Courses** menu
2. Click on the + button

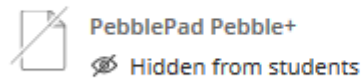


3. Click **Content Market**
4. Scroll down until you can see the **PebblePad Pebble+** tool and click the + button



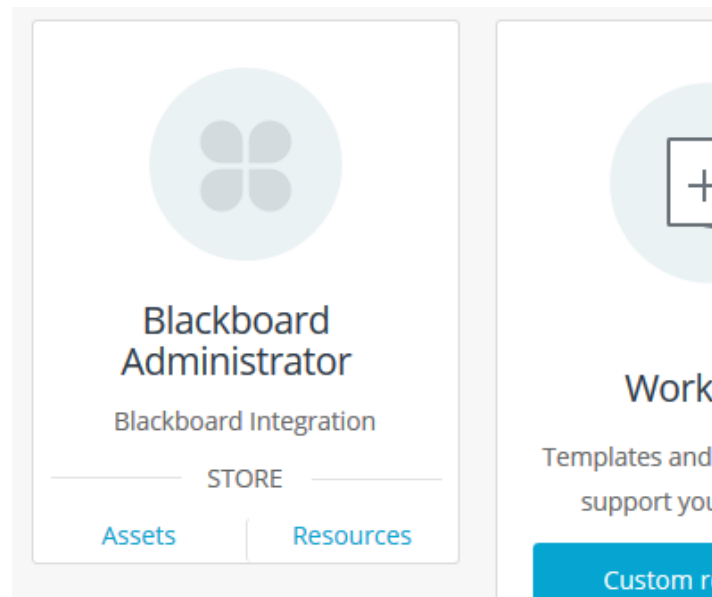
5. You will now see that the **PebblePad Pebble+** tool has been added to the course

Course Content

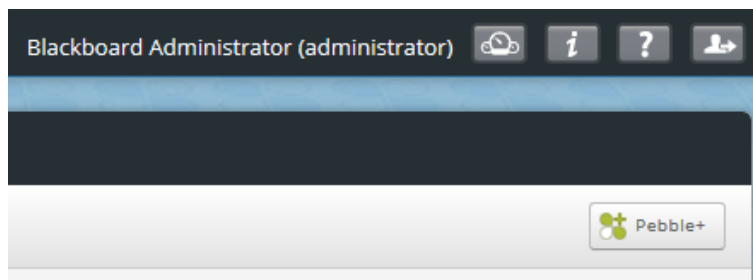


6. Click the  icon and choose **Visible to students**

- Click on the newly create link and you should be signed into Pebble+, if the tool has been configured successfully you should see your Blackboard Ultra Forename and Surname on the profile tile.



- Finally click on the ATLAS  icon to launch ATLAS and check that your username is correct.

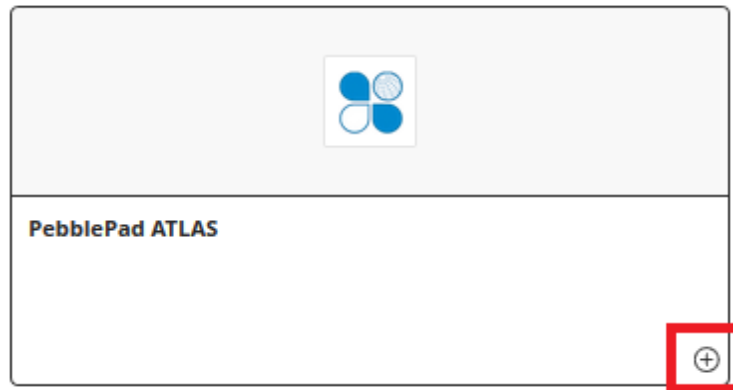


ATLAS

1. Navigate to a course from the **Courses** menu
2. Click on the + button

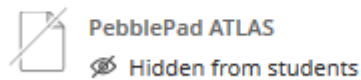


3. Click **Content Market**
4. Scroll down until you can see the **PebblePad ATLAS** tool and click the + button



5. You will now see that the **PebblePad ATLAS** tool has been added to the course

Course Content



6. Click the three dots for more option then click **Edit**
7. Change the display name to **My first assignment** and change the tool to **Visible to students**
8. Change the Grade using to your required method of grading. Blackboard Ultra supports either a **Letter, Percentage** or **Point** value for grade.

*Please note that if you select **Points** and enter a letter, on release the Gradebook will not show a value and will remain blank.*

- Click on the newly created **My first assignment** link and you should be signed into ATLAS. If the tool has been configured successfully you should see your Blackboard Ultra username at the top right of the screen and be presented with **Create a workspace** wizard.

As per the prerequisites you need to have at least Creator level access on a Region or be a Region Manager in ATLAS, if not you will be redirected to the ATLAS dashboard instead of seeing the wizard.

- Click **Continue** to create a brand new workspace.
- Notice that the **Title** of the workspace has been set to a combination of your Blackboard course name and link name and the **Description** has been set to Blackboard Ultras course code. Also notice that there is a **Managers** and **Members** tab. If you can see these then you know that memberships service connection is working.
- Click the **Managers** tab and check that you can see your course instructors.
- Click the **Members** tab and check that you can see your course leaners.

- From the **Basic Settings** tab change the workspace to start in 'Active mode' and Click 'Finish'.

15. Click the **Managers** tab under **Management** and check that your account has been added as a **Lead Tutor**

Display Name	Active roles
Blackboard Administrator	Lead Tutor, Tutor, Moderator, Personalise
Ida Aguilar	Lead Tutor, Tutor, Moderator, Personalise
Mathew Evans	Lead Tutor, Tutor, Moderator, Personalise

16. Click the **Members** tab under **Management** and check that a synchronised group has been created and all of the student accounts have been added.


Please note that the synchronisation of members will only occur when an Instructor clicks the ATLAS link.

Display Name	Username	Email
Alan Allen	student1039	Alan.Allen@digital-river.co.uk
Amal Chaney	student1037	Amal.Chaney@digital-river.co.uk
Amal Gilmore	student1003	Amal.Gilmore@digital-river.co.uk
Amanda Bush	student1024	Amanda.Bush@digital-river.co.uk
Anril Weeks	teacher1003	Anril.Weeks@digital-river.co.uk

17. Click **Assignments** under **Management** and **Allow direct file uploads** and click the **Save** button.

Allow direct file uploads

Submissions will be accepted by file upload and may be restricted to specific file types

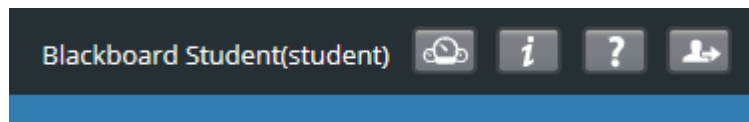
 File uploads are limited to 500MB per submission and may require downloading before being viewed

Accept all types of file

Restrict submissions to specific file types

Please note that enabling file uploads is a step that you will be taking as the Blackboard Ultra Administrator to test the integration is working correctly and isn't a requirement of the integration.

18. Now log into Blackboard Ultra as a student and click on the **My first assignment** link, you should be logged into ATLAS and land on the **About** page. You should be able to see your Blackboard Ultra username at the top right of the screen.



19. Click the **Submissions** tab and click **Upload a file**

20. Press the **Continue** button

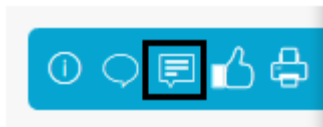
21. Click **Select file**, browse and select a file for upload

22. Enter a **Title**, check the **I am entitled to upload this file...** disclaimer and press the **Confirm** button

23. Once the file has uploaded switch back to your Admin account and log back into ATLAS.

24. Click the **Submissions** tab and open up the file submission.

25. Click on the leave feedback button and click **Add grade**



26. Enter a grade into the **Grade** textbox.

Feedback for My first submission

Add feedback
Add grade

Grade:

Release options:

Release grade now

Hold for later release

Save & close
Save & add comment
Cancel

27. Click the **Save & close** button to release the grade back to Blackboard Ultra.



28. From the Blackboard Ultra course click on the **Gradebook** icon and change the view to grid Notice that the grade you entered in ATLAS is now in the corresponding link column.

My first course
Gradebook

Students
My first assignment

12 Students
100 points

1 Graded | 1 Posted

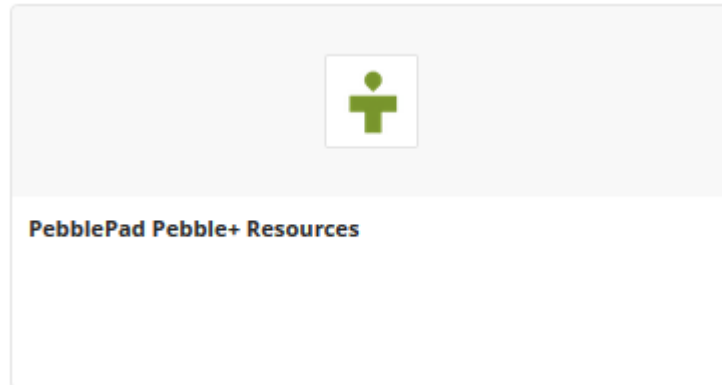
 Lilah Garcia	Grade Now
 Merrill Harmon	P Posted

Deep Linking

1. Navigate to a course from the **Courses** menu
2. Click on the + button



3. Click **Content Market**
4. Scroll down until you can see the **PebblePad Pebble+ Resources** tool and click

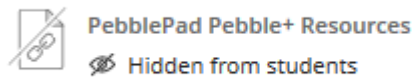


5. You will then see a list of all of your Pebble+ resources within your account. Click on **Select Resource** for the resource you would like to test with and you will automatically be redirected back to Blackboard Ultra.

Category	Type	Title	Created			
All Types ✓	Workbook	Workbook	07/02/2017	Select Resource		
Templates	Template	Template	07/02/2017	Select Resource		

Showing 1 to 2 of 2 | first | prev | next | last

6. You will now see that the **PebblePad Pebble+ Resources** tool has been added to the course



7. Click the three dots for more option then click **Edit**

8. Change the display name to **My first resource** and change the tool to **Visible to students**

Using a Resource

Log in as a student and click the **My first resource** link and you should be logged into Pebble+ and presented with the selected resource in edit mode.