
Blackboard

Overview

The Blackboard product integration delivers user-specific Blackboard content to the campusM app. It also includes a customizable grid-style live tile that aggregates the same content on the app homepage.

Vendors

Not Applicable

Note

The Blackboard product integration is an LMS / VLE type product integration, which means that it is found under this category when adding a new product integration. Blackboard is the vendor, just as Blackboard, D2L Brightspace, and Moodle are the other LMS / VLE vendors currently supported.

User Experience

The following section describes information relating to the user experience for the Blackboard product integration.

User Activities

Users can manage their Blackboard accounts, including various academic activities (courses, grades, assignments, and calendar events), check and update personal information, and receive system and course-level announcements. Users can also benefit from a live tile that provides a count for various types of academic information, including courses, grades, assignments, announcements, and calendar events. Additionally, users can view due dates for Blackboard assignments in campusM calendars.

Authentication

The Blackboard authentication uses an OAuth Integration Profile (configured at [App Settings > Integration Profile > Add Integration Profile](#)). This must be configured before the Product Integration will work. See [Prerequisites](#).

The Blackboard API accepts Bearer Token authentication with the access token gained from the Integration Profile. This is not customizable.

The following is the authentication workflow:

1. The end user opens the Blackboard tile.
2. If the Live Tile is enabled, it requests a token immediately. If the Live Tile is not enabled, the main integration opens first before requesting a token (see next step).

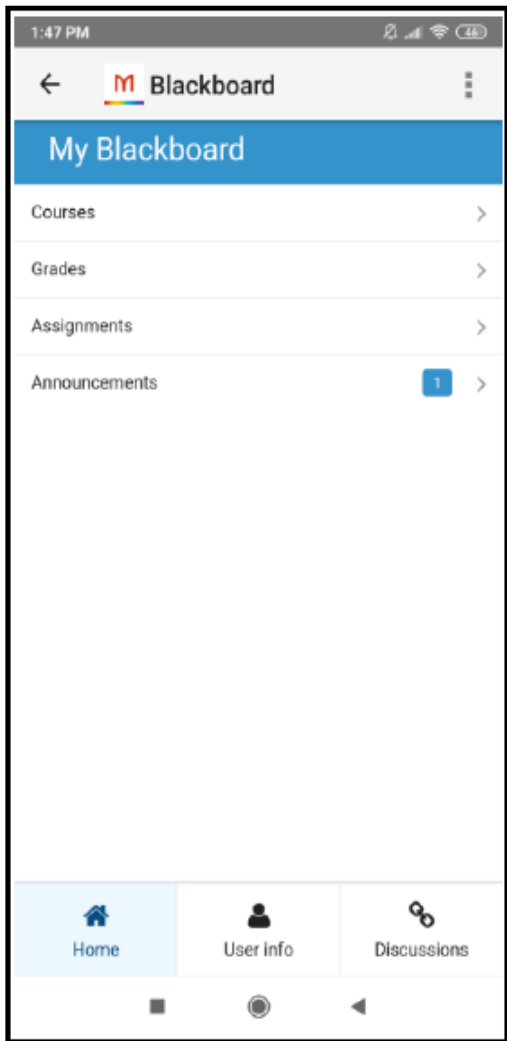
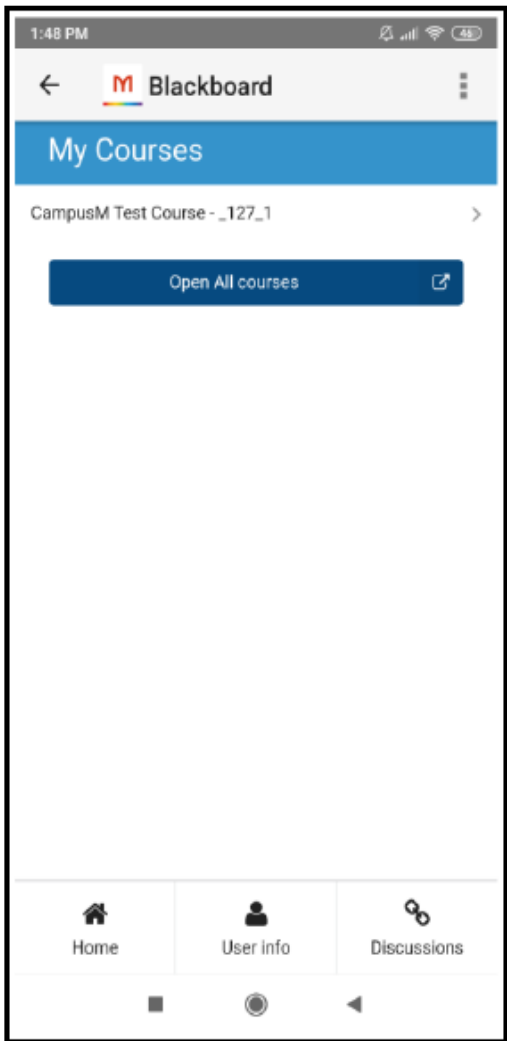
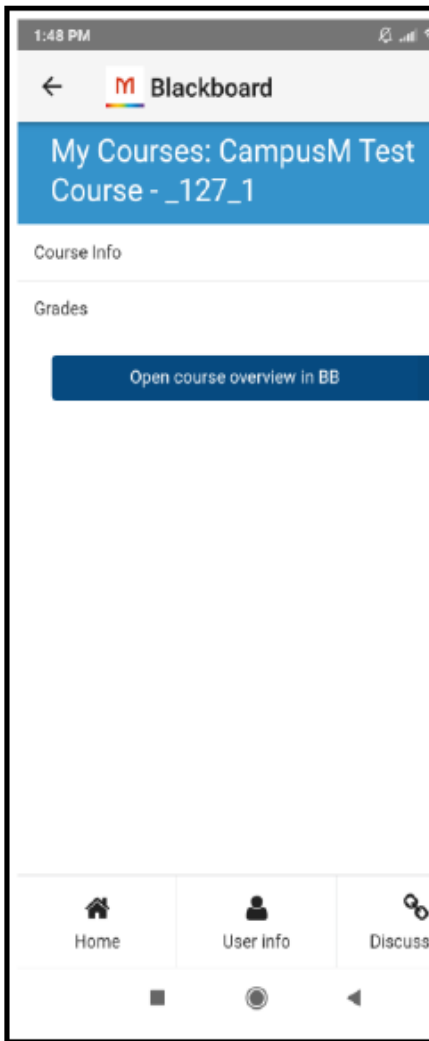
3. campusM requests a token from the Blackboard token API.
4. The user logs into Blackboard, if they have not already done so.
5. If valid, Blackboard send a response with user's access token.
6. campusM sends the access token with every Blackboard API request made. It is automatically refreshed on expiry, unless the user has logged out of the campusM app or their Blackboard session.

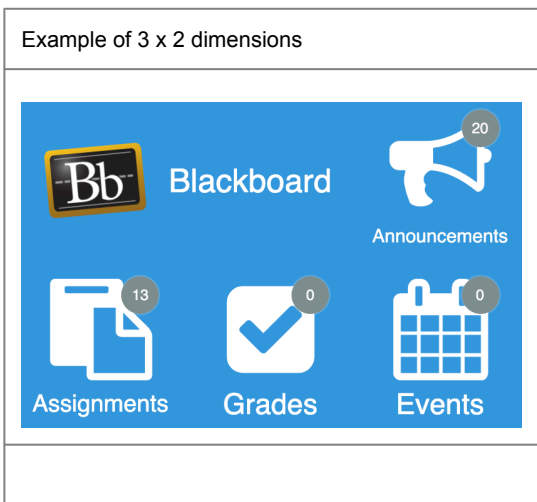
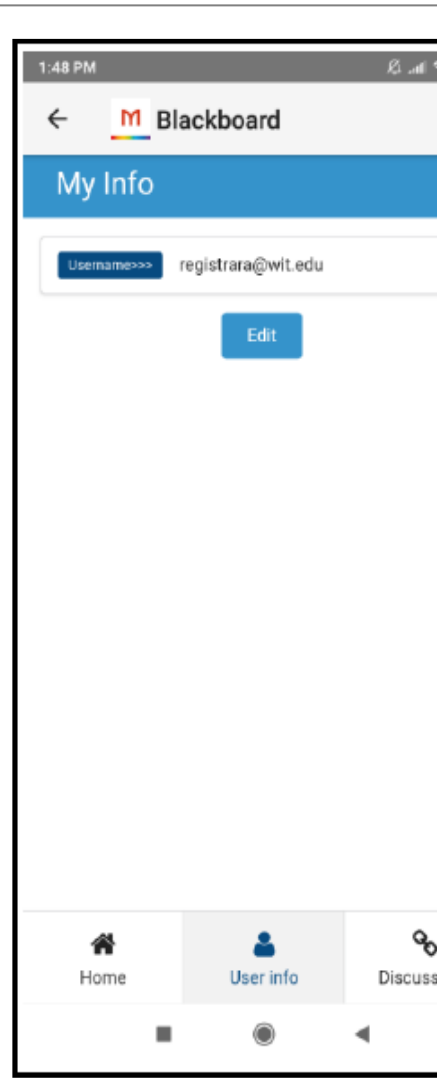
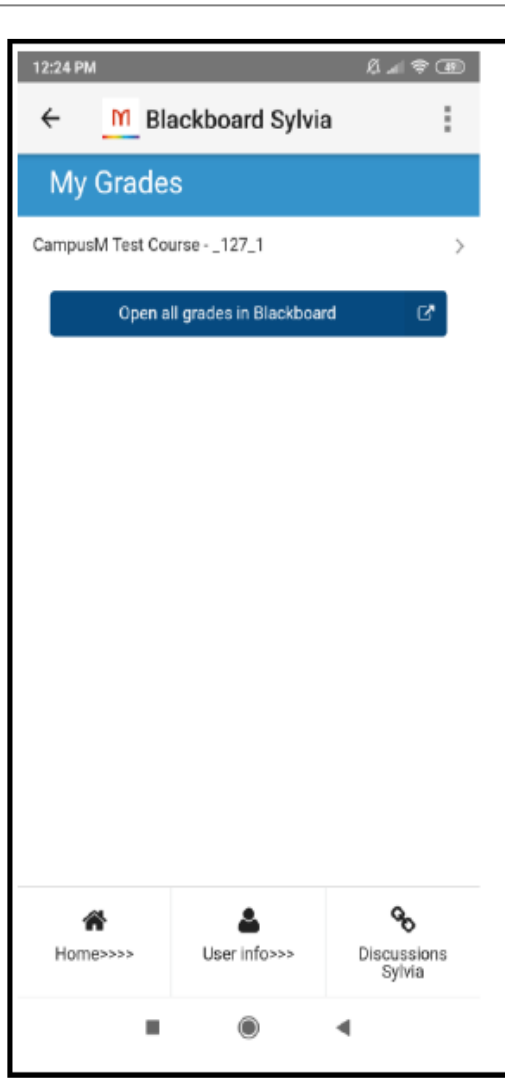
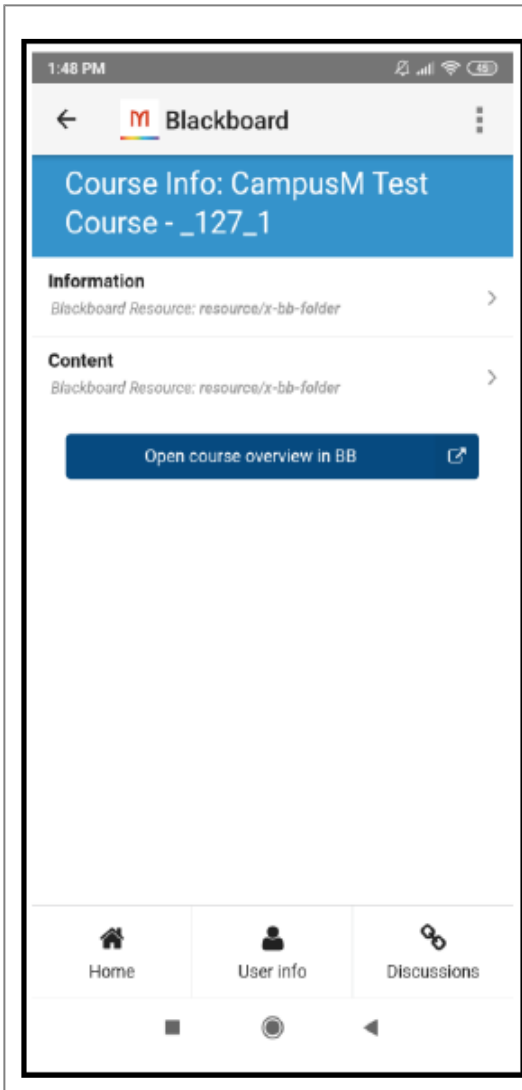
Offline Support

No offline support is available.

Screenshots

The following is an overview of the Blackboard product integration user interface for a reference when configuring it.

Homepage	Courses	Course Page
		
Course Info	Grades	User Info



By default, the live tile is designed to link to areas in main PI integration (shown in the screenshots above). Clicking Grades links you to the Grades view, for example. Areas of the live tile with no defined focus (the customizable header, if enabled, or any blank space on the tile) defer to the Action (URL) set in App Builder.

This setting is controlled by [Enable Integration Deep Linking](#) listed in the configuration. If disabled, the entire link defers to the Action (URL) defined in App Builder for the tile. This defaults to linking to the index page main PI integration, but this can be overridden.

Live Tile Configuration Rules

The Blackboard live tile is designed to work with the following sizes. The tile will attempt to display as many elements as possible regardless of the dimensions set, but we cannot guarantee the intended experience if you do not adhere to the following dimensions. The tile dimensions are set in the App Builder, while the widgets per row (and other details) are set in the Configuration page for this product integration.

- 1 wide x 1 high
 - This is a special case. The tile only displays one widget (the highest prioritized, enabled widget).
- 2 wide x 1 high
 - We recommend using 1 - 2 widget rows and using 1 - 3 widgets per row.
- 2 wide x 2 high
 - We recommend using 2 - 3 widget rows and using 1 - 3 widgets per row.
- 3 wide x 1 high
 - We recommend using 1 - 2 widget rows and using 2 - 4 widgets per row.
- 3 wide x 2 high
 - We recommend using 2 - 3 widget rows and using 2 - 4 widgets per row.

We also recommend keeping the header text and widget labels for the live tile short.

Technical Overview

The following section describes technical information for the Blackboard product integration.

Supported Versions

- 3300.0.0. or later for the full functionality
- 3100.7.0. or later for the functionality without grades

Prerequisites

The following must be done before you can configure the Blackboard product integration:

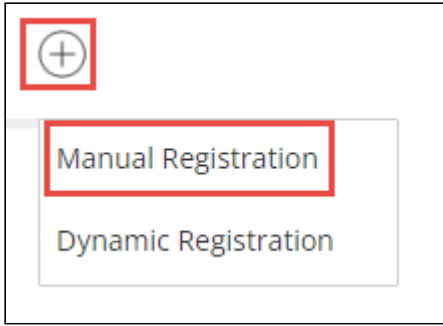
1. Register and/or log into <https://developer.blackboard.com/>. You should see these headings on the top-left of the page:



2. If you don't have a Group set up, select **My Groups**, and create a new Group.
If you are asked whether you require the use of Premium APIs, say that you do not.
3. Once you have a Group, select **My Applications** and then register your application, as follows:
 - If you do not yet have any registered applications, select **Register a REST or LTI application**.
 - If you already have registered applications, on the right side of the page, select



> **Manual Registration.**



A registration form opens.

4. Fill in the fields as follows:

- **Application Name** – Enter a name for the application, as appropriate in your environment.
- **Description** – Enter a description of the application.
- **Domain(s)** – List the Blackboard domains you want to use.
- **My integration supports LTI 1.3** – This option does not need to be turned on, as this integration does not require LTI 1.3 support.

A screenshot of a web form titled 'Register a new application'. Below the title is a small instruction: 'Enter your applications name and description. Users see this information when adding the application to their environment. Include a version number if there are multiple versions of the application.' The form contains several fields: 'Application Name' with the value 'campusM'; 'Description' with the value 'campusM app' and a '450 character limit' note; 'Domain(s)' with the value 'devcon.blackboard.com' and a 'Separate domains with commas' note; a 'Group' dropdown menu with 'LSB' selected; and a toggle switch for 'My Integration supports LTI 1.3' which is currently turned off. At the bottom are 'Cancel' and 'Register Application' buttons.

For more information about this form, see <https://docs.anthology.com/docs/developer-portal/creating-new-rest-or-lti-application>.

5. Select **Register Application**. The application is registered, and the **Application key**, **Secret**, and **Application ID** are shown.

A screenshot of a page titled 'campusM Key'. It features an 'Important note!' section stating: 'The secret is only shown once. Make note of the application key and secret and store them in a safe and secure location.' Below this are three rows, each with a value and a 'Copy' button: 'Application key' with the value '7c8a8588-71f5-46da-b9e3-5d57a13ab301'; 'Secret' with the value 'confidential string of text #f6s1z7ps3M0'; and 'Application ID' with the value '768cb2e7-d7eb-4009-91b5-f1e055a3d2a7'. A 'Done' button is located at the bottom left.

6. Make a record of the **Secret** (it is only shown once). You will have to enter this value into the **Client Secret** field in the

Integration Profile in the campusM App Manager.

Note

The **Application key** (not the **Application ID**) is the value to enter into the **Client ID** field in the Integration Profile in the App Manager.

7. In your Blackboard administration settings, in the Admin Panel, enable Cross-Origin Resource Sharing (CORS; see the [Cross Origin Resource Sharing](#) article in the Blackboard help portal). This requires Blackboard administrator access.
 1. Add an entry for each of your sandbox, preview, and production apps.
 2. If your Blackboard domain is HTTPS, under **Origin**, enter the HTTPS URL, not HTTP as the Blackboard help portal states.
8. Provision the following headers in the CORS settings: **Content-Type** and **Authorization (General Information > Allow Headers)**. These headers are case-sensitive and should be comma-separated.
9. In the campusM App Manager, configure an OAuth integration profile (**App Manager > App Settings > Integration Profile**). For a reference for filling in the form on that page, see [OAuth Integration Profile Configuration](#).

Configuring an OAuth integration profile can be completed by anybody with App Manager access, but you may need a Blackboard administrator to provide some of the information required.

API Configuration

If the Blackboard instance requires basic authentication, add the username and password to the configuration by selecting **Basic** as the authentication type under API Authentication on the Blackboard configuration page (in App Manager).

The default is **No Auth** (see [Configuration](#)). The username and password are encoded and sent as the appropriate header with all service requests.

Configuration

To configure the Blackboard product integration, first configure an authentication integration profile (subtype OAuth) that you then select in the **Product Integration** configuration section. Fill out the fields as listed in the [Integration Profile Configuration](#) table. If a field is not listed in the table, you can leave it blank.

OAuth Integration Profile Configuration

You add and edit integration profiles from **App Settings > App Settings > Integration Profiles > Add Integration Profile**.

The following table describes the configuration options available on this page. All values are exactly as-is unless otherwise specified. For example, the **OAuth Client Secret** is always `BLACKBOARD_CLIENT_SECRET`.

Configuration Option	Description
Name	This can be anything, for example, Blackboard OAuth

Configuration Option	Description
Description	Optional internal description that admins can use to explain what the Integration Profile is used for
Type	Authentication
Subtype	OAuth
Open in External Browser	<p>This option provides support for third-party authentications such as those of Google and Facebook. If set to Yes, the authentication runs on an external browser and not in the context of the application. This prevents the authentication from being blocked by the third-party authentication system (as it would be, for example, by Google ATM).</p> <hr/> <p>Note</p> <p>In order for this option to work, the Build Configuration of AppManager must be configured by customer support (the value of the Firestore Dynamic Associated Domain field in the Build Properties must not be <code>campus.com</code>). If you want to make use of this option, open a support case requesting that this field be configured as necessary.</p> <hr/>
OAuth Vendor	<p>Select the OAuth vendor from the dropdown list. Available options are:</p> <ul style="list-style-type: none"> • Facebook • Google • LinkedIn • Auth0 • Custom <p>Select Custom to use any other third-party vendor whose API supports OAuth2.</p>
OAuth Client ID	The client ID from your Blackboard Developer application; see Prerequisites , above
OAuth Client Secret	<p>The client secret from your Blackboard Developer application; see Prerequisites, above</p> <hr/> <p>Note</p> <p>This is Not the application ID.</p> <hr/>
Authorization Endpoint	<p><code>https://BLACKBOARD_HOST/learn/api/public/v1/oauth2/authorizationcode</code></p> <p>(BLACKBOARD_HOST is your Blackboard web hostname)</p>
Add re-authenticate prompt	When selected, the end-user is informed that they are logging in via a third-party authentication
Access Token Endpoint	<p><code>https://BLACKBOARD_HOST/learn/api/public/v1/oauth2/token</code></p> <p>(BLACKBOARD_HOST is your Blackboard web hostname)</p>

Configuration Option	Description
Token Endpoint Auth	Basic
User Info Endpoint	<code>https://BLACKBOARD_HOST/learn/api/public/v1/users/uuid:USER_ID</code> (BLACKBOARD_HOST is your Blackboard web hostname)
OAuth Scope	For the default product integration functionality: <code>read offline</code> To enable users to edit their own personal information: <code>read write offline</code> (editing also needs to be enabled in Product Integration Configuration > User Information)
Logout URL	Specify the endpoint the app should call when the end-user logs out in order to verify they are also logged out from the authenticating service.
Token Verification Certificate	If the authenticating service signs the token with a custom certificate, enter the public certificate that should be used to verify that it was done on the actual service.
Extract OAuth Tokens	<i>Selected</i>
Username Mapping	The field from which to get the username (mandatory)
Mail Mapping	The field from which to get the email address of the user (mandatory)
First Name Mapping	The field from which to get the first name of the user (mandatory)
Last Name Mapping	The field from which to get the last name of the user (mandatory)
Additional Mappings	Optional. Add comma-separated keys that campusM should map from the external service information into the <code>cmAuthToken</code> , so that campusM can make use of them. Use this field for keys that do not require encryption. External keys that should be mapped to keys of the same name in campusM can simply be listed. For external keys that should be mapped to keys in campusM with other names, enter the keys as <code>key=value</code> pairs, where the key is the name in campusM and value is the original, external name. Example: <code>blackboardId=id,uuid,educationLevel</code>
Additional Mappings (Encrypted)	Optional. Add comma-separated fields that campusM should map from the external service information into the <code>cmAuthToken</code> , so that campusM can make use of them. Use this field for keys that require encryption. External keys that should be mapped to keys of the same name in campusM can simply be listed. For external keys that

Configuration Option	Description
	<p>should be mapped to keys in campusM with other names, enter the keys as <code>key=value</code> pairs, where the key is the name in campusM and value is the original, external name.</p> <p>Example: <code>blackboardId=id,uuid,educationLevel</code></p>
Attributes to Persist	<p>Optional. Add comma-separated fields that campusM should map from the external service information into the <code>cmAuthToken</code>, so that campusM can make use of them.</p> <p>Use this field for keys whose values should be saved in the campusM database for future use.</p> <p>External keys that should be mapped to keys of the same name in campusM can simply be listed. For external keys that should be mapped to keys in campusM with other names, enter the keys as <code>key=value</code> pairs, where the key is the name in campusM and value is the original, external name.</p> <p>Example: <code>blackboardId=id,uuid,educationLevel</code></p>
Token Lifetime (min 2h):	<p>Specify the time-to-live (TTL) of the token on our services. This generates an internal token that remains valid for the specified duration.</p> <p>By default, Same value for native and web is selected, and this TTL is used both for mobile apps and the web app. When this checkbox is cleared, the TTL is only applied for mobile apps. In this case, an additional field, Token Lifetime (Web) is added to the configuration settings.</p>
Token Lifetime (Web):	<p>When the Same value for native and web checkbox is cleared, this field appears. Use it to specify the TTL of the token for the web app.</p>

Product Integration Configuration

To configure the Blackboard product integration, select **Product Integrations > Add Product Integration**.

Select **LMS/VLE** and then select **Blackboard**. The following table describes the configuration options available on this page.

Configuration Option	Description	Mandatory	Data Type	Default	Example
Enable Product Integration	Select to enable the product integration on the user's campusM app.	Yes	Checkbox		Yes
Product Integration Description	A description of the product integration for internal use.	Yes	String		My Blackboard
Screen Title	The title that displays in the top header of the service.	No	String	Blackboard	
Vendor					
Integration Profile	The OAuth integration	Yes	String		

Configuration Option	Description	Mandatory	Data Type	Default	Example
	profile used by the end-user to authenticate with Blackboard.				
Text/Labels					
Text - "Redirecting..."	Displayed on the temporary redirect page, while the user is being redirected to Canvas.			Redirecting...	
Text - "This page should automatically redirect you to the login screen. Click the button below to go there now."	Displayed on the temporary redirect page, while the user is being redirected to Canvas.			This page should automatically redirect you to the login screen. Click the button below to go there now.	
Text - "Login"	Displayed on the temporary redirect page, while the user is being redirected to Canvas.			Login	
Text - "Oops, something went wrong"	Displayed on the temporary redirect page, while the user is being redirected to Canvas.			Oops, something went wrong	
Text - "Retry"	Displayed on the temporary redirect page, while the user is being redirected to Canvas.			Retry	
API Configuration					
URL to retrieve the information	The base URL for the Blackboard instance.	Yes	URI	https://myDomain.com/	
Advanced Settings	Contains all the advanced API settings that may be required if access to Blackboard is behind a proxy server. If you do not need this, please scroll down to General .	No	Checkbox	No	
URL Query Parameters					
URL Query Parameters	A customizable list of query parameters to forward with all requests.	No	Array		
Parameter Name	Enter the Parameter Name.	No	String		

Configuration Option	Description	Mandatory	Data Type	Default	Example
Parameter Type	Choose a parameter type that matches your needs; available options: 'Username', 'Token Property', Constant. For example, Select 'Username' to use the username attribute associated with the end-user.	No	String		
Token Property Name	Enter the property name to be retrieved from the token ({ USERNAME, MAIL, GIVEN_NAME, SURNAME, FULL_NAME } or as named in the integration profile).	No	String		
Constant Value	Option to add a constant value.	No	String		
URL Path Parameters					
URL Path Parameters	A customizable list of path parameters to forward with all requests.	No	Array		
Parameter Name	Enter the path parameter name as specified in the base URL, for example - if the URL is: <code>https://someHostName/serviceName/username</code> then the parameter name is 'username'.	No	String		
Parameter Type	Choose a parameter type that matches your needs; available options: 'Username', 'Token Property', Constant; i.e. Select 'Username' to use the username attribute associated with the end-user.	No	String		
Token Property Name	Enter the property name to be retrieved from the token ({ USERNAME, MAIL, GIVEN_NAME, SURNAME, FULL_NAME } or as named in the integration profile).	No	String		

Configuration Option	Description	Mandatory	Data Type	Default	Example
Constant Value	Option to add a constant value.	No	String		
General Headers					
General Headers	A customizable list of general headers to forward with all requests.	No	Array		
Header Key	Enter the header key.	No	String		
Header Value	Enter the header value.	No	String		
API Authentication					
Authentication Type	<p>Select one of the following options:</p> <ul style="list-style-type: none"> No Auth Basic Auth API Key Bearer token OAuth Using User App Authentication – select an OAuth integration profile (from the Integration Profiles configured in App Settings) and choose where the access token should be added, Header or URL. OAUTH Using Client Credentials – select this if you are using a preliminary token call to get the access token. 	No	String	No Auth	
Basic Auth (appears if Authentication Type is set to 'Basic')					
Username for Base64 basic authentication	This is encoded with the password and sent with the service request.	No	String		
Password for Base64 basic authentication	This is encoded with the username and sent with the service request.	No	String		
General					
Text - "My Blackboard"	Displayed on the index page for this integration.	No	String	My Blackboard	

Configuration Option	Description	Mandatory	Data Type	Default	Example
Text - "Home"	This appears on the navigation bar at the bottom of the page if the navigation bar is visible.	No	String	Home	
Text - "Failed to connect to Blackboard - please try again shortly."	Shown if no valid response is returned by the Blackboard API.	No	String	Failed to connect to Blackboard - please try again shortly.	
Display Discussions Link	Enables or disables the showing of a custom URL to your Blackboard instance's Discussions page. This appears on the navigation bar at the bottom of the page.	No	Checkbox	Yes	
Text - "Discussions"	This appears on the navigation bar at the bottom of the page. It is available for configuration if Display Discussions Link is selected.	No	String	Discussions	
Discussions Link URL	URL for link out to the Discussions page. It is available for configuration if Display Discussions Link is selected.	No	String		
Text - "All display items for Blackboard have been disabled in your PI configuration."	The fallback text if all the above options have been turned off, for any reason.	No	String	All display items for Blackboard have been disabled in your PI configuration.	
Display Resource Types	Enables or disables displaying the type of content for any content item in the integration, for example, Blackboard Resource: resource/x-bb-document'.	No	Checkbox	Yes	
Enabled Blackboard Web Link	Enables or disables a web app link out to Blackboard, as defined in the 'URL to retrieve the information', above. This is displayed on the index page.	No	Checkbox	Yes	
Text - "Link out to Blackboard"	A button only for the web app that enables users to	No	String	Link out to Blackboard	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	navigate directly to Blackboard.				
Enable Deep Linking	Enables or disables deep links through to the native Blackboard app, from the main integration, when using this PI on a mobile device.	No	Checkbox	Yes	
Additional Links					
Enable API Web Links	Enables links to the Blackboard website for each content item, if returned by Blackboard. The native apps prefer deep links if enabled.	No	Checkbox	Yes	
Always Prefer Web Links	If enabled, content items displayed in the PI on the native iOS and Android apps will prefer the API-based web links, instead of deep links. Has no effect if deep links are disabled.	No	Checkbox	No	
Blackboard Google Play Store Page URL	This is required for the fallback behavior in all deep links to third-party apps.	No	String	https://play.google.com/store/apps/details?id=com.blackboard.android.bbstudent	
Blackboard Apple App Store Page URL	This is required for the fallback behavior in all deep links to third-party apps.	No	String	https://itunes.apple.com/gb/app/blackboard/id950424861	
Courses					
Display Courses	Enables or disables the Courses list. Disabling this will not prevent API calls to the Courses API necessary for other functionality.	No	Checkbox	Yes	
Filter Courses By Term	If enabled, will restrict the courses in the PI based on the term provided in 'Term ID Or Name For Filter'. Will also affect the display of items related to the restricted courses (Grades, Course Announcements, etc).	No	Checkbox	No	
Term ID Or Name For Filter	Please enter a valid Blackboard term ID or term	No	String		

Configuration Option	Description	Mandatory	Data Type	Default	Example
	name. Term name matches are not guaranteed to be unique, while IDs are.				
Text - "Courses"	Displayed on the index page for this integration, if Courses are enabled.	No	String	Courses	
Sort Course List Alphabetically by Title (A-Z)	If enabled, sorts the course list alphabetically.	No	Checkbox	No	
Course Availability					
Course Availability Options	Controls course registration and content visibility.	No	Dropdown List	Display if both the course itself and the course registration are visible.	
Course List Page					
Text - "My Courses"	Header text for the course list page.	No	String	My Courses	
Text - "Open all courses in Blackboard"	The text for the button that links to the Course Base in the native Blackboard app, if deep links are enabled.	No	String	Open all courses in Blackboard	
Display Course Name	If all ' Display ' options are unchecked, the integration displays the Course Name provided by the API, by default.	No	Checkbox	Yes	
Display Course ID	Enables or disables the course ID, listed after the course name.	No	Checkbox	Yes	
Text - "Unknown Course"	The fallback text if no name can be found.	No	String	Unknown Course	
Text - "No available courses found."	The fallback text if no available courses can be found.	No	String	No available courses found.	
Course Details Page					
Display Title Prefix	If enabled, adds the prefix set below to the course name in the header for this page.	No	Checkbox	Yes	
Text - "My	Displayed in the header	No	String	My Courses	

Configuration Option	Description	Mandatory	Data Type	Default	Example
Courses"	bar, if Display Title Prefix is enabled.				
Text - "Open course overview in Blackboard"	The text for the button that links to the specific Course Overview in the native Blackboard app, if deep links are enabled.	No	String	Open course overview in Blackboard	
Text - "Course Info"	The text for the item that links to the general course content.	No	String	Course Info	
Text - "Grades"	The text for the item that links to the course grades.	No	String	Grades	
Text - "Course Announcements"	The text for the item that links to the course announcements.	No	String	Course Announcements	
Display Course ID	Wherever Course ID would be displayed on a page, excluding headers.	No	Checkbox	Yes	
Display Course Name	Wherever Course Name would be displayed on a page, excluding headers.	No	Checkbox	Yes	
Display Course Description	Shows or hides the course description, if returned by the API.	No	Checkbox	Yes	
Text - "Course Description"	Label for the course description field.	No	String	Course Description	
Display Course Term	If enabled, displays the course term, if returned by the API.	No	Checkbox	Yes	
Text - "Term"	Label for the term field.	No	String	Term	
Text - "No course details found."	The fallback text if the course has no detailed information.	No	String	No course details found.	
Text - "No content found."	The fallback text if any page has no Blackboard content to display.	No	String	No content found.	
Text - "Unknown Content"	The fallback text if no name can be found for a content item.	No	String	Unknown Content	
Text - "Blackboard Resource"	The prefix for any resource type in a Blackboard	No	String	Blackboard Resource	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	content item.				
Text - "No filename given"	The fallback text if no name can be found for a file item.	No	String	No filename given	
Text - "Unsupported Resource"	The prefix for any content items that lack a resource type.	No	String	Unsupported Resource	
Text - "Your Blackboard course contents have not been made visible yet. Please try again later."	Displayed if the user does not have permission to view all of the course content.	No	String	Your Blackboard course contents have not been made visible yet. Please try again later.	
Grades					
Display Grades	Enables or disables the Grades list. Disabling this will not prevent API calls to the Grades API necessary for other functionality.	No	Checkbox	Yes	
Text - "Grades"	Displayed on the index page for this integration, if Grades are enabled.	No	String	Grades	
Grades Page					
Text - "My Grades"	Shown at the top of the main Grades page.	No	String	My Grades	
Text - "Open all grades in Blackboard"	The text for the button that links to the Grades view in the native Blackboard app, if deep links are enabled.	No	String	Open all grades in Blackboard	
Text - "No grades found."	The fallback text if there are no grades available.	No	String	No grades found.	
Text - "Grades available, but some grade column information may be missing."	Displayed when there is no grade column information found.	No	String	Grades available, but some grade column information may be missing.	
Grade Details Page					
Display Title Prefix	If enabled, adds the prefix set below to the course name in the header for this page.	No	Checkbox	Yes	
Text - "My Grades"	Displayed in the header	No	String	My Grades	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	bar, if 'Display Title Prefix' is enabled.				
Display Name	If returned with the grades data.	No	Checkbox	Yes	
Display Feedback	If returned with the grades data.	No	Checkbox	Yes	
Text - "Open grades for this course in Blackboard"	The text for the button that links to the specific Course Grades in the native Blackboard app, if deep links are enabled.	No	String	Open grades for this course in Blackboard	
Text - "No grades found for this course."	The fallback text if there are no grades for a particular course.	No	String	No grades found for this course.	
Text - "Failed to retrieve grades data - please try again shortly."	Shown if no valid response is returned by the Blackboard API.	No	String	Failed to retrieve grades data - please try again shortly.	
Assignments					
Display Assignments	Enables or disables the Assignments list. Disabling this will not prevent API calls to the Assignments API necessary for other functionality.	No	Checkbox	Yes	
Text - "Assignments"	Displayed on the index page for this integration, if Assignments are enabled.	No	String	Assignments	
Assignments Page					
Text - "My Assignments"	Shown at the top of the Assignments page.	No	String	My Assignments	
Text - "Filter on assignment name"	Placeholder text in the filter widget near the top of the Assignments page.	No	String	Filter on assignment name	
Text - "No assignments found."	The text if the user has no assignments.	No	String	No assignments found.	
Announcements					
Display Announcements	Enables or disables Announcements, from the Index page. Disabling this	No	Checkbox	Yes	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	will not prevent API calls to the Announcements API necessary for other functionality.				
Text - "Announcements"	Displays on the index page for this integration, if 'Display Announcements' is enabled.	No	String	Announcements	
Display Course Announcements	Enables or disables displaying Course Announcements from the Announcements page. Disabling this does not prevent API calls to the Announcements API necessary for other functionality.	No	Checkbox	Yes	
Display Course Announcements In Course Details	Enables or disables displaying Course Announcements on the Course Details page. Disabling this does not prevent API calls to the Announcements API necessary for other functionality.	No	Checkbox	Yes	
Text - "System Announcements"	Displays as a tab on the Announcements page if 'Display System Announcements' is enabled.	No	String	System Announcements	
Text - "Course Announcements"	Displays as a tab on the Announcements page if 'Display Course Announcements' is enabled.	No	String	Course Announcements	
System Announcements Page					
Text - "Announcements"	Displays at the top of the Announcements page.	No	String	Announcements	
Sort Announcements	This list allows you to select how to order the announcements displayed on the page.	No	Array	By Date (descending)	
Display System Announcement Title	If all 'Display' options are unchecked, the page displays the System Announcement Title	No	Checkbox	Yes	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	provided by the API by default.				
Display System Announcement Text	If returned with the announcements data.	No	Checkbox	Yes	
Max Characters For The System Announcement Text Field	The user can still click on the announcement to view the full text.	No	Integer	100	
Display Date Created	If returned with the announcements data.	No	Checkbox	Yes	
Text - "No system announcements found."	The fallback text if there are no system announcements for the user.	No	String	No system announcements found.	
Text - "Error fetching system announcements from Blackboard - please try again shortly."	Shown if no valid response is returned by the Blackboard API.	No	String	Error system fetching announcements from Blackboard - please try again shortly.	
Course Announcements Page	Note: This applies to the Course Announcements Page under Course Details.				
Text - "Course Announcements"	Shown at the top of the Course Announcements Page.	No			
Sort Course Announcements	This list enables you to select how to order the announcements displayed on the page. <i>Also applies to the Announcements Page, if Course Announcements are visible.</i>	No	Array	By Date (descending)	
Display Course Announcement Title	If all Display options are unchecked, the page displays the Course Announcement Title by default as provided by the API. <i>Also applies to the Announcements Page, if Course Announcements are visible.</i>	No			
Display Course	If returned with the	No			

Configuration Option	Description	Mandatory	Data Type	Default	Example
Announcement Text	announcements data. <i>Also applies to the Announcements Page, if Course Announcements are visible.</i>				
Max characters for the Course Announcement Text field	Users can click the announcement to view the full text. <i>Also applies to the Announcements Page, if Course Announcements are visible.</i>	No			
Display Date Created	If returned with the announcements data. <i>Also applies to the Announcements Page, if Course Announcements are visible.</i>	No			
Text - "No course announcements found"	Fallback text if there are no system announcements for the user. <i>Also applies to the Announcements Page, if Course Announcements are visible.</i>	No			
Text - "Error fetching course announcements from Blackboard - please try again shortly."	Displays if no valid response is returned by the Blackboard API.	No	String	Error fetching course announcements from Blackboard - please try again shortly.	
Text - "Open announcements for this course in Blackboard"	The text for the button that links to the Course Announcements for this course in the native Blackboard app, if deep links are enabled. Only shown when viewing Course Announcements from Course Details.	No	String	Open announcements for this course in Blackboard.	
User Information					
Display User Information	Enables or disables the User Info page. Disabling this will not prevent API calls to the Users API necessary for other functionality.	No	Checkbox	Yes	
Text - "User Info"	This appears on the	No	String	User Info	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	navigation bar at the bottom of the page.				
User Info Page					
Text - "My Info"	Shown at the top of the User Info Page	No	String	My Info	
Text - "Open your profile in Blackboard"	The text for the button that links to the Profile view in the native Blackboard app, if deep links are enabled.	No	String	Open your profile in Blackboard	
Display Username	If all Display options are unchecked, the page will display Username by default.	No	Checkbox	Yes	
Text - "Username"	Label for the username field.	No	String	Username	
Display 'Full Name' Section	Enables or disables the Full Name block of the User Info Page.	No	Checkbox	Yes	
'Full Name' Section (available for configuration if Display 'Full Name' Section is selected)					
Display Full Name	If enabled, displays the user's title, given, middle and family names where available, including any suffixes. If unchecked, defaults to the fields below.	No	Checkbox	Yes	
Text - "Full Name"	Used as the label text regardless of how the name is displayed.	No	String	Full Name	
Fields to Display					
Title	Shows or hides the user's title, if returned by the API.	No	Checkbox	No	
Text - "Title"	Displayed when editing the 'Title' field, if enabled and editable.	No	String	Title	
Given Name	Shows or hides the user's given name, if returned by the API.	No	Checkbox	Yes	
Text - "Given Name"	Displayed when editing the 'Given Name' field, if enabled and editable.	No	String	Given Name	

Configuration Option	Description	Mandatory	Data Type	Default	Example
Middle Name	Shows or hides the user's middle name, if returned by the API.	No	Checkbox	No	
Text - "Middle Name"	Displayed when editing the 'Middle Name' field, if enabled and editable.	No	String	Middle Name	
Family Name	Shows or hides the user's family name, if returned by the API.	No	Checkbox	Yes	
Text - "Family Name"	Displayed when editing the 'Family Name' field, if enabled and editable.	No	String	Family Name	
Suffix	Shows or hides the user's suffix, if returned by the API.	No	Checkbox	No	
Text - "Suffix"	Displayed when editing the 'Suffix' field, if enabled and editable.	No	String	Suffix	
(end of Fields to Display)					
Edit Name	Allows the end-user to edit the name fields displayed in the integration.	No	Checkbox	No	
Text - "Editing your name from this page has been disabled."	Shown when the user switches the My Info page to Edit Mode, if Edit Name is false.	No	String	Editing your name from this page has been disabled.	
Display 'Contacts' Section	Enables or disables the Contacts block of the User Info Page.	No	Checkbox	Yes	
'Contacts' Section (available for configuration if Display 'Contacts' Section is selected)					
Display Home Phone	Shows or hides the user's home phone, if returned by the API.	No	Checkbox	Yes	
Text - "Home Phone"	Displayed in both the My Info view and when editing the field, if enabled.	No	String	Home Phone	
Display Mobile Phone	Shows or hides the user's mobile phone, if returned by the API.	No	Checkbox	Yes	
Text - "Mobile Phone"	Displayed in both the My Info view and when editing	No	String	Mobile Phone	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	the field, if enabled.				
Display Email Address	Shows or hides the user's email address, if returned by the API.	No	Checkbox	Yes	
Text - "Email Address"	Displayed in both the My Info view and when editing the field, if enabled.	No	String	Email Address	
Edit Contacts	Allows the end-user to edit the contact fields displayed in the integration.	No	Checkbox	No	
Text - "Editing your contact information from this page has been disabled."	Shown when the user switches the My Info page to Edit Mode, if Edit Contacts is false.	No	String	Editing your contact information from this page has been disabled.	
Display 'Address' Section	Enables or disables the Address block of the User Info Page.	No	Checkbox	Yes	
'Address' Section (available for configuration if Display 'Address' Section is selected)					
Display Full Address	If enabled, displays the user's complete address, including zip or postal code (if provided). If unchecked, defaults to street, city, and zip or postal code.	No	Checkbox	Yes	
Text - "Address"	Label for the Address block.	No	String	Address	
Fields to Display					
Street	Shows or hides the street, if returned by the API.	No	Checkbox	Yes	
Text - "Street"	Displayed in both the My Info view and when editing the field, if enabled.	No	String	Street	
Street #2	Shows or hides additional street information, if returned by the API.	No	Checkbox	No	
Text - "Street #2"	Displayed in both the My Info view and when editing the field, if enabled.	No	String	Street #2	
City	Shows or hides the city, if returned by the API.	No	Checkbox	Yes	

Configuration Option	Description	Mandatory	Data Type	Default	Example
Text - "City"	Displayed in both the My Info view and when editing the field, if enabled.	No	String	City	
State, County or Province	Shows or hides the state, county or province, if returned by the API.	No	Checkbox	No	
Text - "State, County or Province"	Displayed in both the My Info view and when editing the field, if enabled.	No	String	State, County, or Province	
Zip or Postal Code	Shows or hides the zip or postal code, if returned by the API.	No	Checkbox	Yes	
Text - "Zip or Postal Code"	Displayed in both the My Info view and when editing the field, if enabled.	No	String	Zip or Postal Code	
Country	Shows or hides the country, if returned by the API.	No	Checkbox	No	
Text - "Country"	Displayed in both the My Info view and when editing the field, if enabled.	No	String	Country	
(end of Fields to Display)					
Edit Address	Allows the end-user to edit the address fields displayed in the integration.	No	Checkbox	No	
Text - "Editing your address information from this page has been disabled."	Shown when the user switches the My Info page to Edit Mode if Edit Address is false.	No	String	Editing your address information from this page has been disabled.	
Text - "Editing is enabled, but no available fields are editable."	Shown in the case that the only fields left visible aren't editable.	No	String	Editing is enabled, but no available fields are editable.	
Text - "Edit"	The text for the Edit button, if editing is allowed.	No	String	Edit	
Text - "Cancel"	The text for the Edit button when Edit Mode is active.	No	String	Submit	
Text - "Submit"	The text for the Submit button if the user has made changes to My Info.	No	String	Cancel	
Text - "Failed to	Displayed when updating	No	String	Failed to update My Info	

Configuration Option	Description	Mandatory	Data Type	Default	Example
update My Info"	My Info fails, or there is no valid response returned.				
Text - "Failed to connect to Blackboard - please try again shortly."	Shown if no valid response is returned by the Blackboard Users API.	No	String	Failed to connect to Blackboard - please try again shortly.	
Calendar Events					
Display Calendar Events	Enables or disables Calendar Events from the navigation bar. Disabling this does not prevent API calls to the Calendars API necessary for other functionality.	No	Checkbox	Yes	
Text - "Calendars"	This displays on the navigation bar at the bottom of the page if the navigation bar is visible.	No	String	Calendars	
Text - "ddd Do MMMM Y"	Determines the display of the current date in any Calendar view. The default formats the date as follows: Mon 1st January 2020.	No	String	ddd Do MMMM Y	
24 Hour Time Format	Enable to display a 24-hour clock for any times displayed. If disabled, the integration displays times in a 12-hour format.	No	Checkbox	No	
Text - "Error fetching calendars from Blackboard - please try again shortly."	Displays if no valid response is returned by the Blackboard Calendars API.	No	String	Error fetching calendars from Blackboard - please try again shortly.	
Text - "Calendar service interrupted - click to try again."	Shown if the calendar service is interrupted for any reason.	No	String	Calendar service interrupted - click to try again.	
Calendar List Page					
Text - "My Calendars"	Displays at the top of the Calendar List Page.	No	String	My Calendars	
Text - "Unknown Course"	Fallback text if no name is detected for a course.	No	String	Unknown Course	
Text - "No	The text displayed if no	No	String	No calendars found.	

Configuration Option	Description	Mandatory	Data Type	Default	Example
calendars found."	calendars are returned for the end-user.				
Text - "Open all due dates in Blackboard"	The text for the button that links to the Due Dates view in the native Blackboard app, if deep links are enabled.	No	String	Open all due dates in Blackboard	
Course Calendar Page					
Display Title Prefix	Displays at the top of the Course Calendar Page.	No	Checkbox	Yes	
Text - "Calendars for"	If enabled, adds the prefix set below to the course name in the header for this page.	No	String	Calendars for	
Text - "Unknown Calendar"	The fallback text if no name is found for a specific calendar, displayed both on this and on the calendar detail page.	No	String	Unknown Calendar	
Text - "No calendars found."	The text displayed if no calendars are found for this course.	No	String	No calendars found.	
Text - "Open course calendars in Blackboard"	The text for the button that links to the Calendars for this course in the native Blackboard app, if deep links are enabled.	No	String	Open course calendars in Blackboard	
Calendar Events Page					
Display Title Prefix	If enabled, adds the prefix set below to the subpage title in the title bar.	Checkbox	Yes	Display Title Prefix	
Text - "My Calendar"	If enabled, adds the prefix set below to the calendar name in the header for this page.	No	String	My calendar	
Text - "Filter on event title"	Placeholder text in the filter widget near the top of the Calendar Events page.	No	String	Filter on event title	
Text - "Unknown Event"	The fallback text if no name can be found.	No	String	Unknown Event	
Display Start Time	Enables or disables displaying the start of the	No	Checkbox	Yes	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	event.				
Display End Time	Enables or disables displaying the end of the event.	No	Checkbox	Yes	
Display Event State	If enabled, indicates if an event is in the past, starting soon, or in-progress.	No	Checkbox	Yes	
Duration Of Event Start - 'Starting Soon'	The number of minutes in the future up to which 'Starting Soon' events are scheduled.	No	Integer	60	
Text - "Finished"	Text for the "Finished" event state.	No	String	Finished	
Text - "Starting Soon"	Text for the "Starting Soon" event state.	No	String	Starting Soon	
Text - "In-Progress"	Text for the "In-Progress" event state.	No	String	In-Progress	
Display Location	Enables or disables the location of the event, if available.	No	Checkbox	Yes	
Text - "No Events"	The text displays if the calendar has no events to display for the time period selected.	No	String	No Events	
Calendar Event Details Page					
Display Event Title	Enables or disables setting the event title at the top of the page.	No	Checkbox	Yes	
Text - "Event Details"	To be displayed at the top of the panel if 'Display Event Title' is disabled.	No	String	Event Details	
Display Start Time	Enables or disables displaying the end of the event, if available.	No	Checkbox	Yes	
Text - "Start Time"	The label text if "Start Time" is enabled.	No	String	Start Time	
Display End Time	Enables or disables displaying the end of the event, if available.	No	Checkbox	Yes	
Text - "End Time"	The label text if "End Time"	No	String	End Time	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	is enabled.				
Display Location	Enables or disables displaying the event location, if available.	No	Checkbox	Yes	
Text - "Location"	The label text if "Location" is enabled.	No	String	Location	
Display Description	Enables or disables displaying the event description, if available.	No	Checkbox	Yes	
Text - "Description"	The label text if "Display Description" is enabled.	No	String	Display Description	
Display Type	Enables or disables displaying event type, if available.	No	Checkbox	Yes	
Text - "Type"	The label text if "Display Type" is enabled.	No	String	Display Type	
Display Calendar Name	Enables or disables displaying the calendar this event belongs to.	No	Checkbox	Yes	
Text - "Calendar"	The label text if "Display Calendar Name" is enabled.	No	String	Display Calendar Name	
Due Dates Calendar					
Show Due Dates in Calendar	Enables Due Dates in the Calendar feed.	No	Checkbox	Yes	
Due Label	The label text that appears before the name of the assignment in the calendar.	No	String	Due:	
Date Format	The date format that appears in the event description.	No	String	EEE, MMM, d, yyy	Wed, Jul 2021
Time Format	The time format that appears in the event description.	No	String	HH:mm	15:45
Due Date Event Description	The description of the event. Use %title, %date and %time to insert the relevant data for the specific event.	No	String	%title is due on %date at %time.	Philosophy Essay is due on Wed, Jul 2021 at 15:45.

Configuration Option	Description	Mandatory	Data Type	Default	Example
Link to Assignment Label	The text that appears in the calendar event, linking to the Canvas assignment itself.	No	String	Open Blackboard	
Use Blackboard Ultra URLs	Controls whether the links to in the due date event description target Blackboard Classic or Ultra.	No	Checkbox	False	
Live Tile					
Enabled	Enables or disables the live tile.	No	Checkbox	Yes	
Badge Color	The color applied to the "badge" on each of the live tile items that counts the content (except the header).	No	Color Code	#FFFFFF	
Tile Error Background Color	Used when the tile displays an error.	No	Color Code	#AD0000	
Update Rate	Frequency of updates from Blackboard to the live tile (in minutes). Has a minimum of 20 (minutes).	No	Integer	60	
Enable Integration Deep Linking	Enables or disables links through to the main Blackboard PI from this live tile. If this is disabled, the tile falls back to the 'Action (URL)' property set on the tile from App Builder.	No	Checkbox	Yes	
Live Tile Items					
Show Live Tile Header	If disabled, the live tile header text will not be shown.	No	Checkbox	Yes	
Show Live Tile Header Logo	If disabled, the header logo will not appear on the live tile.	No	Checkbox	Yes	
URL for Header Logo	Displayed if 'Show Live Tile Header Logo' is enabled.	No	URI		
Customise Live Tile Header Padding	If enabled, enables you to customize the blank space around the header block. All values have a minimum of 0.	No	Checkbox	No	

Configuration Option	Description	Mandatory	Data Type	Default	Example
The First Widget(s) Should Display on the Same Row As the Header	If disabled, the first widget row starts below the header.	No	Checkbox	Yes	
Widgets Per Row	This sets the number of widgets to display per row. There is a minimum of 1 and a maximum of 5.	No	Integer	3	
Show Announcements	If disabled, the announcements widget does not appear on the live tile. Counts system announcements by default.	No	Checkbox	Yes	
Include Course Announcements	Only displayed if 'Show Announcements' is enabled. Enable to include all Course Announcements in the overall Announcements total.	No	Checkbox	Yes	
Show Courses	If disabled, the courses widget will not appear on the live tile.	No	Checkbox	Yes	
Show Assignments	If disabled, the assignments widget will not appear on the live tile.	No	Checkbox	Yes	
Show Grades	If disabled, the grades widget will not appear on the live tile.	No	Checkbox	Yes	
Show Calendar Events	Displays a count of calendar events that have not yet finished. If disabled, the events widget does not appear on the live tile.	No	Checkbox	Yes	
Always Display Widget Count	Always Display Widget Count	No	Checkbox	Yes	
Prioritize Live Tile Items					
Priority	The item at the top of the list denotes the first item that will appear on the live tile (after the header, if enabled), and so on.	No	Array	Announcements, Courses, Assignments, Grades, Events	
Icons					
Use Custom Icons	If enabled, replaces all	No	Checkbox	No	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	default icons with the icons listed in the following "URL for" fields.				
URL for Announcements Icon	If enabled, displays instead of the default icon for the Announcements widget.	No	URI		
URL for Courses Icon	If enabled, displays instead of the default icon for the Courses widget.	No	URI		
URL for Assignments Icon	If enabled, displays instead of the default icon for the Assignments widget. Displays a blank space if the URL is missing or invalid.	No	URI		
URL for Grades Icon	If enabled, displays instead of the default icon for the Grades widget. Displaces a blank space if the URL is missing or invalid.	No	URI		
URL for Events Icon	If enabled, displays instead of the default icon for the Calendar Events widget. Displays a blank space if the URL is missing or invalid.	No	URI		
Text/Labels					
Live Title Header Text	Displayed if Show Live Tile Header is enabled. It is recommended to keep this text short.	No	String	Blackboard	
Text - "Announcements"	Displayed underneath the Announcements widget, if enabled.	No	String	Announcements	
Text - "Courses"	Displayed underneath the Courses widget, if enabled.	No	String	Courses	
Text - "Assignments"	Displayed underneath the Assignments widget, if enabled.	No	String	Assignments	
Text - "Grades"	Displayed underneath the Grades widget, if enabled.	No	String	Grades	
Text - "Events"	Displayed underneath the	No	String	Events	

Configuration Option	Description	Mandatory	Data Type	Default	Example
	Calendar Events widget, if enabled				
Text - "Error fetching courses from Blackboard"	Displayed if Blackboard doesn't return all of the required content needed for the live tile.	No	String	Error fetching courses from Blackboard	
Look and Feel					
Primary Theme Color	Select a color for the main elements on the page.	No	Color Code	#444444	
Secondary Theme Color	Select a color for the secondary elements on the page.	No	Color Code	#6f8ea4	
Use Basic Labels	If enabled, instructs all labels in this integration to use a lighter style.	No	Checkbox	No	
Import/Export Configuration					
You can configure product integration and then export it to another campusM environment, for example, from sandbox to production or from preview to production.					
Import your configuration file here	To import the configuration settings from a JSON file of a previously exported product integration, select Choose File to choose the file to load. Then, select Import Configuration to import the settings.	No			
Import Configuration	After selecting the JSON file to import, select this option to load the configuration settings from the file.	No			
Export Configuration	To export the current settings of the product integration as a JSON file, select this option.	No			