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## Waukesha BB Scheduler 1.0 Users Guide

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## **1 Overview**

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The purpose of this document is to provide instructions for deploying, using, and updating the Waukesha BB Scheduler developed by Obsidian Solutions Consulting.

### **1.1 Version Changes**

1.1.1 Version 1.0.0 is the initial deployment of the BB Scheduler. This version has the initial requirements from the Waukesha Team.

### **1.2 Purpose**

This Application will allow The Waukesha School district to have a LTI-Based tool to assist admins and teacher in the creation of courses from Infinite Campus into BB Learn. Instructors will have a LTI tool that can be used to retrieve Infinite Campus courses/sections and to select them for integration and creation of Blackboard courses in real-time and the admins will have an enhanced LTI tool for managing all Infinite Campus course and Blackboard courses with the added ability for Admin functions and syncing snapshot integrations.

### **1.3 Infinite Campus Database Integration**

The BB Scheduler interfaces with the Infinite Campus application through a direct JDBC connection with their MS SQL database. Many of the SQL integrations have been provided by the Waukesha team from the previous VB based BB Scheduler application (1.0)

### **1.4 Blackboard Learn Integration**

The BB Scheduler interfaces with the BB Learn system is 3 separate integrations. Course integration is performed via the BB Learn REST APIs. Application integration is through using LTI 1.1 integration for the User Interface. Data Synchronization is done using the BB Learn Snapshot Data Integration Framework.

### **1.5 Backend Servers**

The BB Scheduler is built on a Spring Boot framework running on Tomcat 10.x. Production and Staging are connected to a corresponding Windows Server running this framework. The Windows Servers are provided by the Waukesha Team and are configured to support port 80/443 for all HTTP/HTTPS traffic.

## 2 Installation

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### 2.1 Pre-Requisites

Deploying the application

- 1) An account with system administrator rights to the backend Windows Server
- 2) An account with administrator rights to the system hosting the Blackboard application.
- 3) Tomcat Installation
- 4) The application \*.war file
- 5) A running instance of Blackboard Learn Ultra/Saas

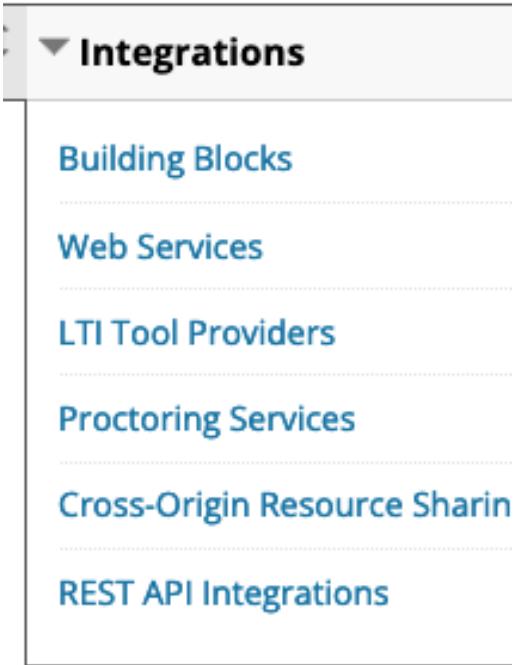
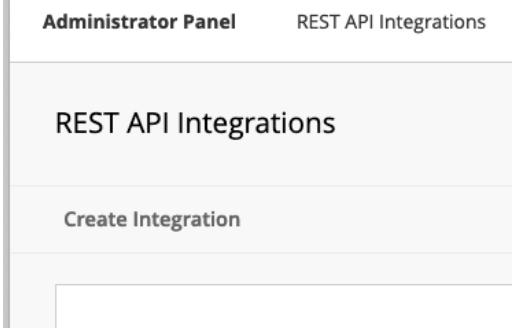
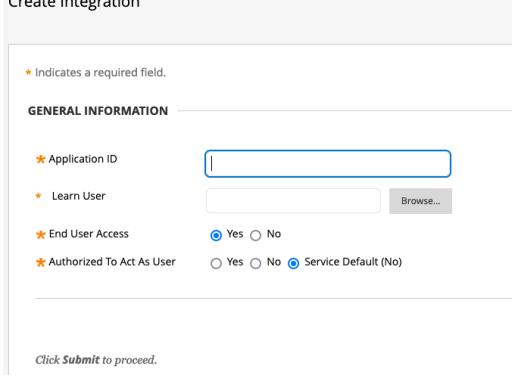
### 2.2 Installing the Tomcat Application

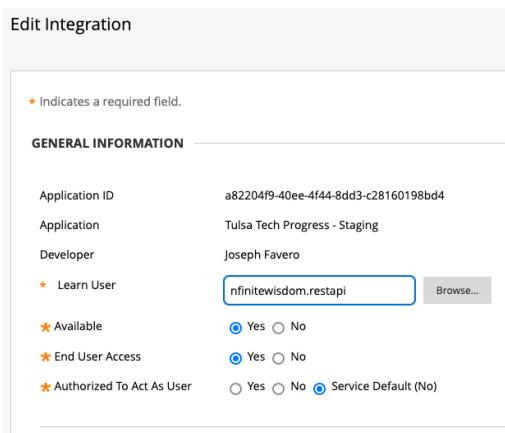
Installing Tomcat can be done utilizing the Tomcat binaries that can be found on the Tomcat download site. The version of Tomcat used for this application is version Tomcat version 9.

#	Step	Image
1	<b>Download and install the Tomcat 10.1.39 Release</b>	apache-tomcat-10.1.39.exe
2	<b>Download and Install Java JDK 23.0.2</b>	Open Java
3	<b>Configure the Tomcat Server to accept HTTP/HTTPS Connections over port 80/443</b>	conf/server.xml
4	<b>Get the latest Waukesha BB Scheduler Application and place into the Tomcat webapps directory. It should auto-deploy</b>	WaukeshaBBScheduler-x.x.x.war

### 2.3 Setting Up REST Integration

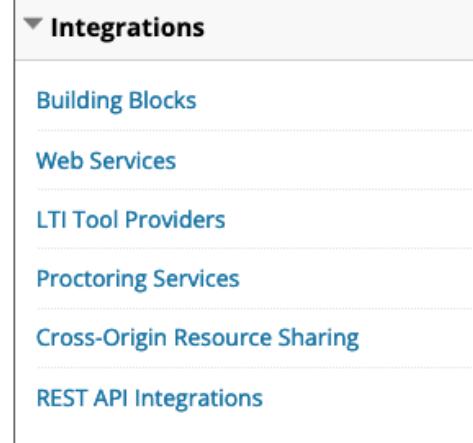
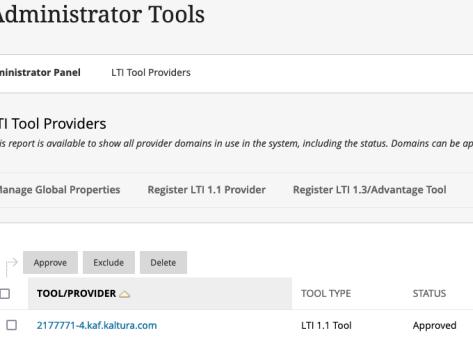
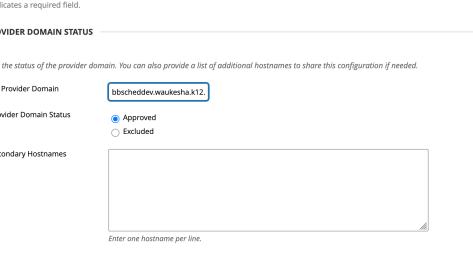
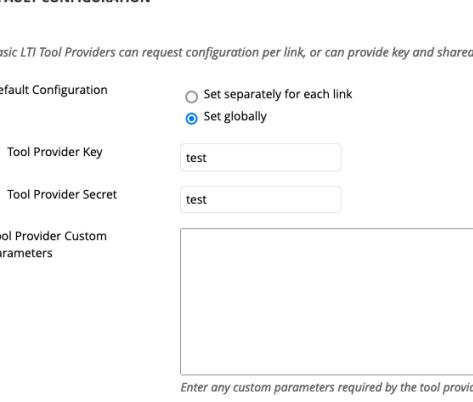
The REST Integration must be setup on the BB Learn Server. This is typically done by the System Admin. The following steps must be followed:

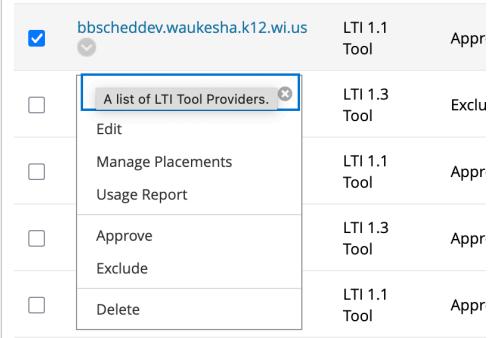
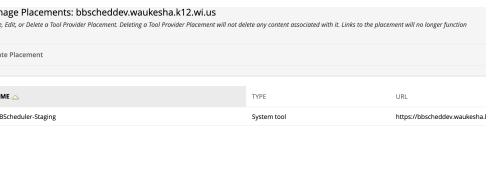
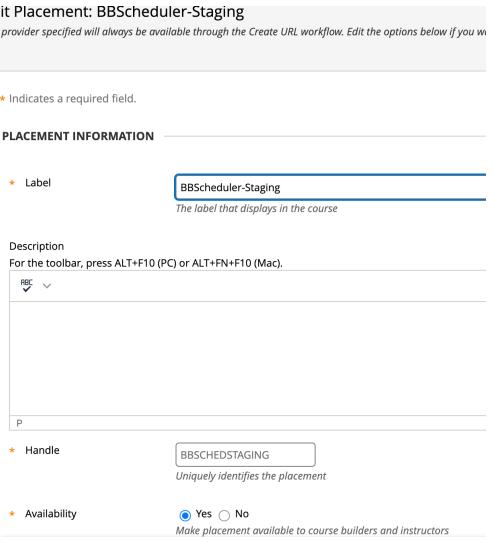
#	Step	Image
1	<b>Go to BB Learn Admin Page and find the Integrations Module and select REST API Integrations</b>	 A screenshot of a web-based administration interface. On the left, there is a vertical sidebar with several menu items: 'Building Blocks', 'Web Services', 'LTI Tool Providers', 'Proctoring Services', 'Cross-Origin Resource Sharin', and 'REST API Integrations'. The 'REST API Integrations' item is highlighted with a blue background.
2	<b>Create a New Integration</b>	 A screenshot of a 'Create Integration' form. At the top, it shows 'Administrator Panel' and 'REST API Integrations'. Below that is a large button labeled 'Create Integration'.
3	<b>Enter the Application ID provided by the Developer and associate to a BB Learn User that has the required privileges.</b>	 A screenshot of the 'Create Integration' form. It includes fields for 'Application ID' (marked with a red asterisk), 'Learn User' (with a 'Browse...' button), 'End User Access' (radio buttons for 'Yes' and 'No'), and 'Authorized To Act As User' (radio buttons for 'Yes', 'No', and 'Service Default (No)'). A note at the bottom says 'Click Submit to proceed.'

4	<b>This is an example</b>	 <p>The screenshot shows the 'Edit Integration' page with the following fields:</p> <table border="1"><thead><tr><th colspan="2">GENERAL INFORMATION</th></tr></thead><tbody><tr><td>Application ID</td><td>a82204f9-40ee-4f44-8dd3-c28160198bd4</td></tr><tr><td>Application</td><td>Tulsa Tech Progress - Staging</td></tr><tr><td>Developer</td><td>Joseph Favero</td></tr><tr><td>* Learn User</td><td><input type="text" value="infinitemisdom.restapi"/> <input type="button" value="Browse..."/></td></tr><tr><td>* Available</td><td><input checked="" type="radio"/> Yes <input type="radio"/> No</td></tr><tr><td>* End User Access</td><td><input checked="" type="radio"/> Yes <input type="radio"/> No</td></tr><tr><td>* Authorized To Act As User</td><td><input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Service Default (No)</td></tr></tbody></table>	GENERAL INFORMATION		Application ID	a82204f9-40ee-4f44-8dd3-c28160198bd4	Application	Tulsa Tech Progress - Staging	Developer	Joseph Favero	* Learn User	<input type="text" value="infinitemisdom.restapi"/> <input type="button" value="Browse..."/>	* Available	<input checked="" type="radio"/> Yes <input type="radio"/> No	* End User Access	<input checked="" type="radio"/> Yes <input type="radio"/> No	* Authorized To Act As User	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Service Default (No)
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* End User Access	<input checked="" type="radio"/> Yes <input type="radio"/> No																	
* Authorized To Act As User	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Service Default (No)																	

## 2.4 Setting Up LTI Integration

The BB Scheduler User Interface is integrated with BB Learn via LTI 1.1. System Admins must setup the LTI Endpoints in BB Learn and create the Placements to access the User interface. The following steps show the configuration of the LTI Endpoints in BB Learn

#	Step	Image
1	Create the LTI Endpoint in BB Learn. Select the LTI Tool Providers in the Integrations menu in the Administration Page.	
2	Select the “Register LTI 1.1 Provider” on the LTI Tool Providers page.	
3	Fill out the following Data: Provider Domain: bbscheddev.waukesha.k12.wi.us	
4	Set the Provider key and secret. This must be configured based upon the setting on the Server	

5	<p><b>Set the Institution Policies and Submit</b></p>	<p><b>INSTITUTION POLICIES</b></p> <p>Choose whether you want to override the institution policies for this specific tool provider domain.</p> <p>Send User Data</p> <ul style="list-style-type: none"> <li><input type="radio"/> Never</li> <li><input checked="" type="radio"/> Send user data only over SSL</li> <li><input type="radio"/> Send user data over any connection</li> </ul> <p>User Fields to Send</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Role in Class</li> <li><input checked="" type="checkbox"/> Name</li> <li><input checked="" type="checkbox"/> Email Address</li> </ul> <p>Allow Membership Service Access</p> <ul style="list-style-type: none"> <li><input checked="" type="radio"/> Yes</li> <li><input type="radio"/> No</li> </ul>
6	<p><b>Now set the Placements, Right Click on the bbscheddev.waukesha.k12.wi.us listing and select Manage Placements</b></p>	 <p>The screenshot shows a list of LTI Tool Providers. The entry for 'bbscheddev.waukesha.k12.wi.us' is selected, indicated by a checked checkbox and a dropdown arrow icon. A context menu is open over this entry, with 'Manage Placements' highlighted and surrounded by a blue box.</p> <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> bbscheddev.waukesha.k12.wi.us LTI 1.1 Tool Appr</li> <li><input type="checkbox"/> A list of LTI Tool Providers. LTI 1.3 Tool Excl</li> <li><input type="checkbox"/> Edit LTI 1.1 Tool Appr</li> <li><input type="checkbox"/> Manage Placements LTI 1.3 Tool Appr</li> <li><input type="checkbox"/> Usage Report LTI 1.1 Tool Appr</li> <li><input type="checkbox"/> Approve LTI 1.3 Tool Appr</li> <li><input type="checkbox"/> Exclude LTI 1.1 Tool Appr</li> <li><input type="checkbox"/> Delete LTI 1.1 Tool Appr</li> </ul>
7	<p><b>Placements can be anywhere in BB Learn where LTI Links are supported. Select Create Placement and fill out the form</b></p>	 <p>The screenshot shows the 'Manage Placements' form for the provider 'bbscheddev.waukesha.k12.wi.us'. It includes fields for 'NAME' (BBScheduler-Staging), 'TYPE' (System tool), and 'URL' (<a href="https://bbscheddev.waukesha.k12.wi.us">https://bbscheddev.waukesha.k12.wi.us</a>).</p>
8	<p><b>Provide the Label, Handle and set the Availability to Yes. The Handle must be unique for each instance.</b></p>	 <p>The screenshot shows the 'Edit Placement' form for the placement 'BBScheduler-Staging'. It includes fields for 'Label' (BBScheduler-Staging), 'Handle' (BBSCHEDSTAGING), and 'Availability' (Yes). The 'Handle' field is highlighted with a blue box.</p> <p>* Indicates a required field.</p> <p><b>PLACEMENT INFORMATION</b></p> <p>* Label: BBScheduler-Staging The label that displays in the course</p> <p>Description: For the toolbar, press ALT+F10 (PC) or ALT+FN+F10 (Mac). BBC</p> <p>* Handle: BBSCHEDSTAGING Uniquely identifies the placement</p> <p>* Availability: Yes Make placement available to course builders and instructors</p>

9	<p><b>The Type is used to place the LTI Links into various locations in BB Learn.</b></p>	<p>Type</p> <p>Placement Type determines where this tool appears in Blackboard Learn. The tool can be placed in a course or in a user's profile.</p> <ul style="list-style-type: none"> <li><input type="radio"/> Deep Linking content tool           <ul style="list-style-type: none"> <li><input type="checkbox"/> Allow student access</li> </ul> </li> <li><input type="radio"/> Course content tool           <ul style="list-style-type: none"> <li><input type="checkbox"/> Allows grading</li> </ul> </li> <li><input type="radio"/> Course tool           <ul style="list-style-type: none"> <li><input type="checkbox"/> Allow student access</li> </ul> </li> <li><input checked="" type="radio"/> System tool</li> <li><input type="radio"/> Administrator tool</li> <li><input type="radio"/> Ultra extension           <p><small>Not all Ultra extensions are visible to your users</small></p> <ul style="list-style-type: none"> <li><input type="radio"/> Proctoring tool</li> <li><input type="radio"/> Base navigation tool</li> <li><input type="radio"/> Course navigation tool</li> <li><input type="radio"/> Cloud document</li> <li><input type="radio"/> Asset processor tool</li> <li><input type="radio"/> OpenBadge provider</li> </ul> </li> </ul> <p>Launch in New Window</p> <p>Icon</p> <p>Current Icon</p>  <p>Remove</p> <p>Upload a custom icon that will be shown in the course. The size of the icon should be 50 by 50 pixels.</p> 
10	<p><b>The Tool Provider Information is key to the Portal User Interface. The URL must point to the LTI Endpoint in the application. Use the following URL for Production.</b></p> <p><b><a href="https://bbsched.waukesha.k12.wi.us/WaukeshaBBScheduler/lti">https://bbsched.waukesha.k12.wi.us/WaukeshaBBScheduler/lti</a></b> or <b><a href="https://bbscheddev.waukesha.k12.wi.us/WaukeshaBBScheduler/lti">https://bbscheddev.waukesha.k12.wi.us/WaukeshaBBScheduler/lti</a></b> for Staging</p> <p><b>The Tool Provider Key and Tool Provider Secret should be automatically set if the LTI Global option was set.</b></p>	<p>TOOL PROVIDER INFORMATION</p> <p>Enter the Tool Provider Information. The Tool Provider URL must be located on one of the configured host names.</p> <ul style="list-style-type: none"> <li>• Tool Provider URL</li> <li>• Tool Provider Key</li> <li>• Tool Provider Secret</li> </ul> <p>Tool Provider Custom Parameters</p>  <p>test</p> <p>1234</p> <p><small>Enter any custom parameters required by the tool provider. Parameters must each be on their own line and be entered</small></p>
11	<p><b>Hit Submit to add the Placement. Multiple Placements can be added to support various configurations and locations.</b></p>	

## 2.5 Configuring the BB Scheduler Properties

After the Tomcat application is installed, there is an application.properties file used in the configuration of the Waukesha BB Scheduler application. This file can be managed via the BB Scheduler Admin application/User Interface. This should be accessible from the BB Learn Admin Page under Tools.

#	Step	Image
1	<b>Open the BB Scheduler in “Admin” mode</b>	
2	<p>Once on the Admin Screen, there is a left menu to access the various modules. The 56 modules are:</p> <ol style="list-style-type: none"> <li>1. REST Config</li> <li>2. LTI Config</li> <li>3. Portal Config</li> <li>4. Admin Config</li> <li>5. Snapshot Config</li> </ol> <p>Select the menu icon to configure each module. The UI is responsive can be accessed via a device with smaller real-estate.</p>	
2	<p>The REST Configuration Form is used to configure the application to connect to its corresponding BB Learn REST Server. This information is provided by BB Learn System admin once the REST Integrations has been completed.</p>	<p>Rest Configuration</p> <p>Host: https://waukesha-saastest.blackboard.com</p> <p>Key: 1a4ce350-db73-442b-a126-12c730ff0a39</p> <p>Secret: ..... BB REST Limit: 10000 BB REST Limit Remaining: 9994 BB REST Limit Reset: -1 PRT Version: 1.0.0</p> <p><b>Submit</b></p>
3	<p>The LTI Configuration Form is used to configure the LTI 1.1 integration to Blackboard. LTI 1.1 requires key/secret configuration to establish the LTI relationship with Blackboard. LTI is used to provide a SSO login from Blackboard to the Waukesha BB Scheduler.</p>	<p>LTI Configuration</p> <p>Key: test Secret: ....</p> <p><b>Submit</b></p>
4	<p>The Portal Configuration Form is used to configure Application specific information. This form has the following fields (All required)</p> <p>Logging Level – This dynamically set the log level of the application. The default is INFO. Adding log levels like DEBUG or TRACE will affect the performance of the application</p>	
5	<p>The ADMIN Configuration Form is used to configure the Email Server used for the application. These settings should be configured for the SMTP Email server used by the application. The Waukesha IT group will provide these settings.</p>	<p>Admin Tools</p> <p>Host: smtp.gmail.com Port: 465 Username: joefreero@gmail.com Password: ..... Note: This link is good for 5 days. Authenticate: <input checked="" type="checkbox"/> SSL: <input checked="" type="checkbox"/> Debug: <input type="checkbox"/></p> <p><b>Submit</b></p>

7	<p><b>The Snapshot Configuration Form</b> is used to support Snapshot file integration to Blackboard. The Blackboard Instance ID, Shared Username and Password from the Snapshot integration endpoint are required. The Email field is used to send the results of each integration run.</p>	
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## 2.6 Configuring the Statistics Database and SFTP configuration

After the Tomcat application is installed, there is a spring.xml file used in the configuration of the Waukesha BB Scheduler application. This file can be edited and is located in the webapps/WaukeshaBBScheduler/WEB-INF/spring directory of the Tomcat application server. To edit the file, open it up on Notepad.

### 2.6.1 Database Configuration

The bean that contains the database configuration is in this file. The below is what it looks like and the configuration parameters. Just edit and change the properties to match your configuration. A restart of the server is necessary after making a change.

```
<!-- database source to setup Statistics -->
<bean id="ds"
      class="org.springframework.jdbc.datasource.DriverManagerDataSource">
    <property name="driverClassName"
              value="com.microsoft.sqlserver.jdbc.SQLServerDriver" />
    <property name="url"
              value="jdbc:sqlserver://waukeshawi.infinitecampus.org:7771;databaseName=waukesha_sandbox;encrypt=true;trustServerCertificate=true;" />
    <property name="username" value="SDW_BBDEV" />
    <property name="password" value="dWU\0nxK9*9JwRGf" />
</bean>
```

### 2.6.2 Task Configuration

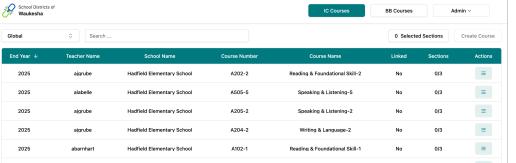
The bean that contains the Snapshot Task configuration is in this file. Just edit and change the properties to match your configuration. A restart of the server is necessary after making a change.

```
<task:scheduled-tasks scheduler="myScheduler">
  <task:scheduled ref="BBSchedulerTasks"
    method="syncUsers" cron="0 0 6 * * *" />
  <task:scheduled ref="BBSchedulerTasks"
    method="syncEnrollments" cron="0 0 7 * * *" />
</task:scheduled-tasks>
```

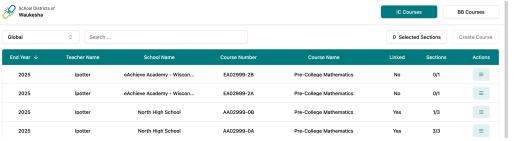
## 3 User Guide

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### 3.1 BB Scheduler 2.0 – Admin Mode

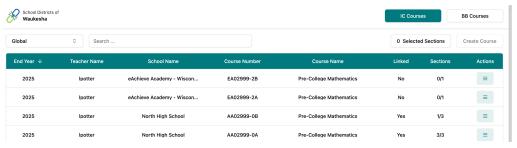
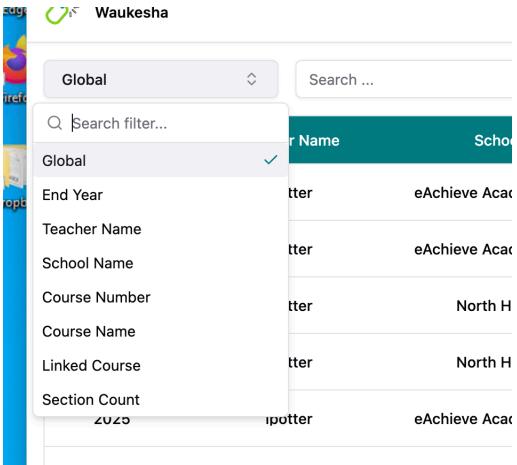
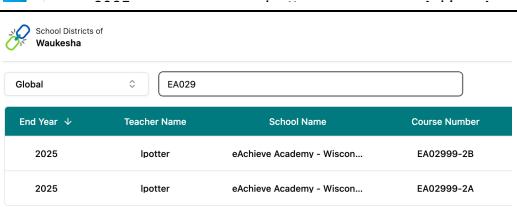
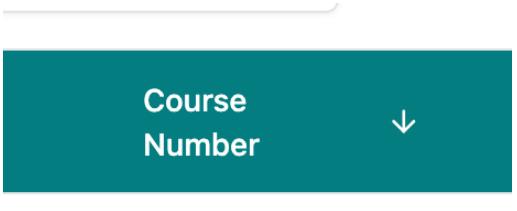
#	Step	Image
1	The BB Scheduler operates in 2 modes. There is an “Instructor” mode and an “Admin” mode. Admin mode is only enabled when the user has a System Role of “Course Creator” assigned to their Blackboard Profile	

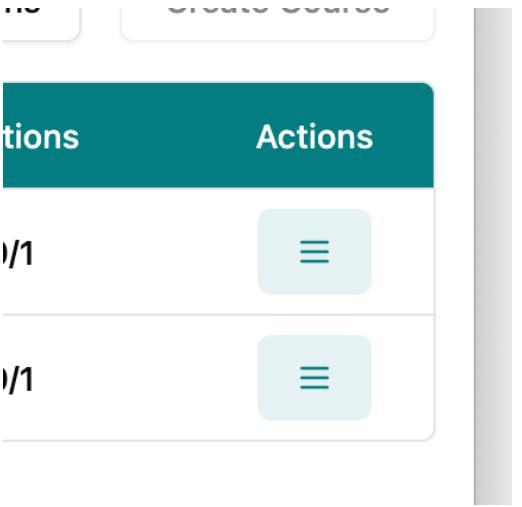
## 3.2 BB Scheduler 2.0 – Instructor Mode

#	Step	Image
1	The BB Scheduler will normally be in “Instructor mode and only show IC Course or BB Courses that they are instructors in. No Admin Button will be displayed	

## 3.3 BB Scheduler 2.0 – Features

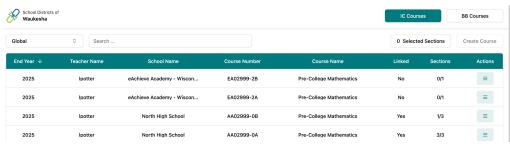
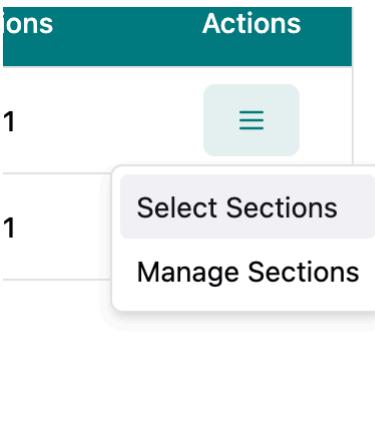
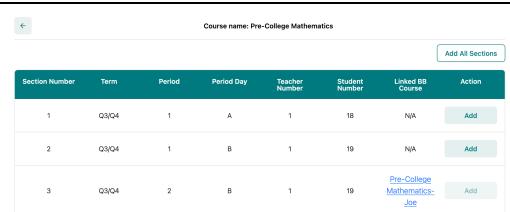
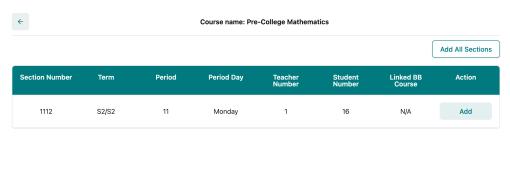
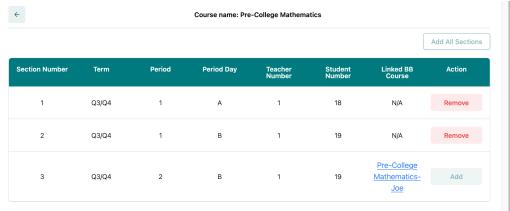
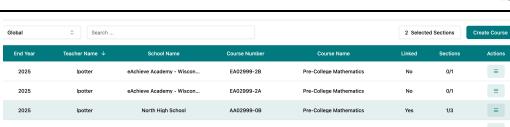
### 3.3.1 BB Scheduler – Main Page

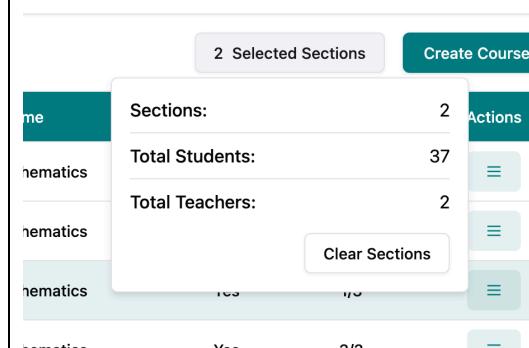
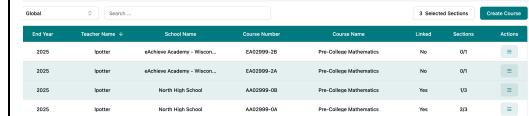
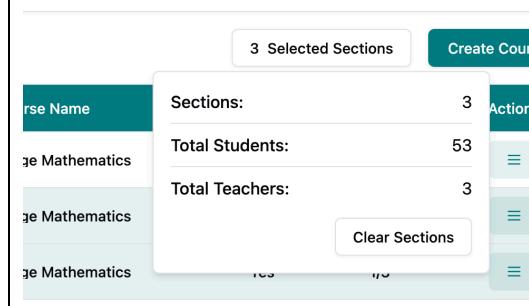
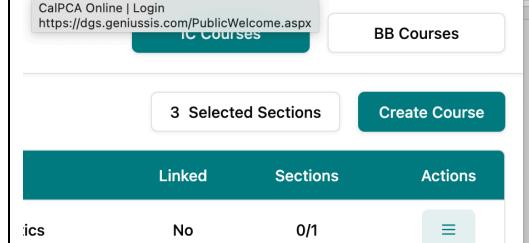
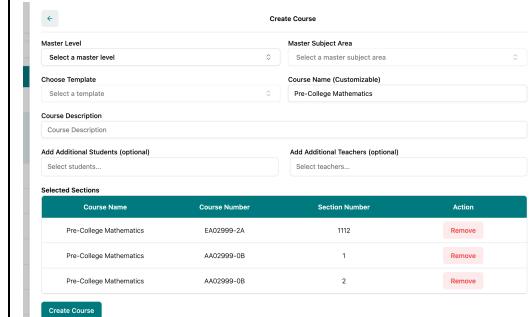
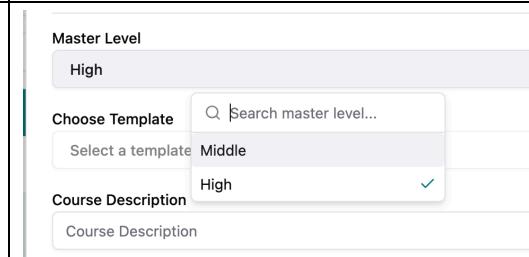
#	Step	Image
1	<b>There are 2 main screens for the BB Scheduler. "IC Courses" and "BB Courses". IC Course are used for viewing the Infinite Campus courses assigned to an Instructor. BB Courses will show the Blackboard courses assigned to an Instructor</b>	
2	<b>Both Screens provide the ability to Search globally for a value or on individual Columns. Type in the Search bar and the screen will update automatically as the filter is applied. To used individual columns, select the column and then type in the filter criteria in the search area</b>	
3	<b>Example of a search</b>	
4	<b>Each Column on the screens are sortable. Select the Columns and then the Arrow to the left can be used for ascending or descending</b>	

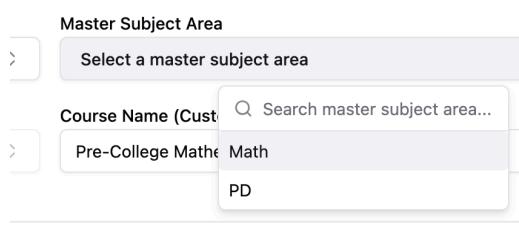
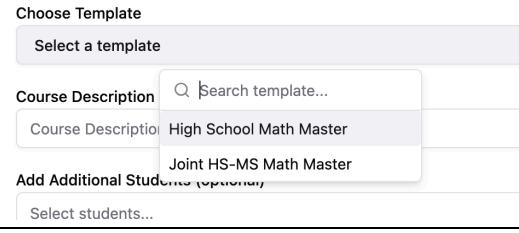
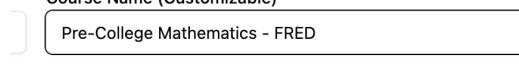
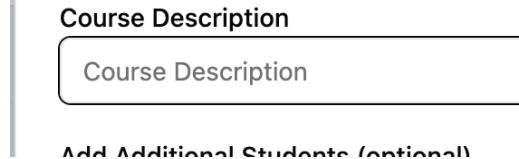
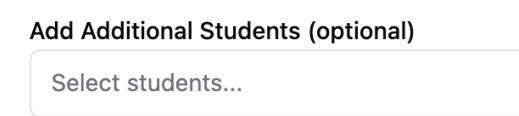
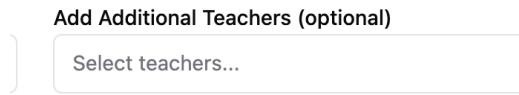
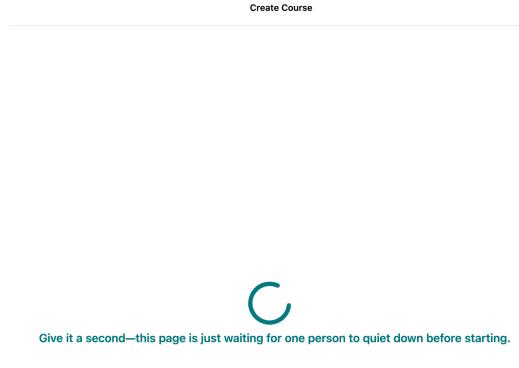
5	<p>There is an “Actions” button on each row to assist the user in their specific operations. There are 2 Actions. Select Sections and Manage Sections</p>	
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### 3.3.2 BB Scheduler 2.0 – Create Course

The Create Course flow is used to create new courses in BB Learn and to assign Infinite Campus sections to the BB Course. All enrollments from the sections will be added to the associated BB Course.

#	Step	Image
1	To create a new course in Blackboard Learn. The process begins with selecting the sections to be added to the new Blackboard course.	
2	Select Sections is using in creating new courses in BB Learn. Users can select Sections from Various courses to be combined into a single BB Course. Users can start the process by selecting section from a variety of courses. Once selected, a sheet will pop up to show the list of sections are available to be selected	
3	Sections that are available to be selected will have the Add Button enabled. If the Section is already linked, the Add button will be disabled. Users can select 1 or more sections or just select the Add All Sections button.	 
4	Once selected, the button will change to a Remove button. Users can remove sections they no longer wish to use. Once happy with the selections, select the Left Arrow to return.	
5	The course in which the section(s) were selected will now be highlighted in light Green.	

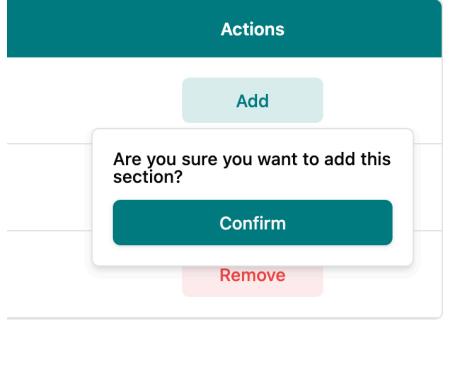
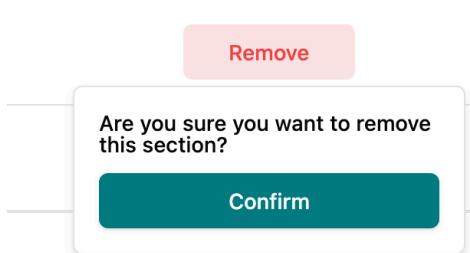
6	<p>The Selection button will also be updated to show 2 Sections selected. Click on the button to see the details</p>	 <p>A screenshot of a software interface for selecting course sections. At the top right, there is a button labeled "2 Selected Sections". Below it, a summary table shows "Sections: 2", "Total Students: 37", and "Total Teachers: 2". There are three course rows listed, each with a "Selected" checkbox. The first row is checked. A "Clear Sections" button is located at the bottom right of the summary area.</p>
7	<p>Follow the same process to add more sections from other courses. The Selection area will update as more sections are added.</p>	 <p>A screenshot of a software interface for selecting course sections. At the top right, there is a button labeled "3 Selected Sections". Below it, a summary table shows "Sections: 3", "Total Students: 53", and "Total Teachers: 3". There are four course rows listed, each with a "Selected" checkbox. The first three rows are checked. A "Clear Sections" button is located at the bottom right of the summary area.</p>
8	<p>To clear all selections to start over, select the Clear Sections button.</p>	 <p>A screenshot of a software interface for selecting course sections. At the top right, there is a button labeled "3 Selected Sections". Below it, a summary table shows "Sections: 3", "Total Students: 53", and "Total Teachers: 3". There are four course rows listed, each with a "Selected" checkbox. The first three rows are checked. A "Clear Sections" button is located at the bottom right of the summary area.</p>
9	<p>Once you have selected all Sections to be put into a Blackboard Courses, select the “Create Course” button</p>	 <p>A screenshot of a software interface for creating a new course. At the top right, there is a button labeled "BB Courses". Below it, a summary table shows "3 Selected Sections". There are three course rows listed, each with a "Selected" checkbox. The first three rows are checked. A "Create Course" button is located at the bottom right of the summary area.</p>
10	<p>This will bring up a new Create Course Sheet for building a new course to be submitted to Blackboard</p>	 <p>A screenshot of a detailed course creation form. It includes fields for Master Level (selected as "High"), Master Subject Area (selected as "Mathematics"), Course Name (selected as "Pre-College Mathematics"), and Course Description (selected as "High"). Under "Selected Sections", there is a table showing three sections: "Pre-College Mathematics" (Section 1112), "Pre-College Mathematics" (Section 1), and "Pre-College Mathematics" (Section 2). Each section has a "Remove" link next to it. A "Create Course" button is located at the bottom left of the form.</p>
11	<p>The first step is to choose a BB Learn template course to use as the course to be copied from. These courses exist in BB Learn and the new course will be an exact copy of this course to save instructors time in developing. There are 3 items needed to filter out the template list to choose the correct template. First select the Master Level.</p>	 <p>A screenshot of a simplified course creation form. It includes fields for Master Level (selected as "High"), Choose Template (with a dropdown menu showing "Middle" and "High"), and Course Description (selected as "High"). A "Search master level..." input field is also present.</p>

12	<p><b>Second, choose the Master Subject Area.</b></p>	
13	<p><b>Now choose the correct template course to use basis of the new course.</b></p>	
14	<p><b>The course name will be pre-populated with the name of the Infinite Campus Course used during the selection process. This course name can be customized to be whatever the instructor desires.</b></p>	
15	<p><b>The course description is an optional field that is helpful for managing the Blackboard Learn course. This is shown on the BB Courses page.</b></p>	
16	<p><b>Instructors may add additional students to the BB Learn Course. These students will not be added to any specified BB Group. They will simply be enrolled into the BB Course as a student.</b></p>	
17	<p><b>Instructors may add additional instructors to the BB Learn Course. They will simply be enrolled into the BB Course as an instructor. This will also allow these instructors to manage this course in the BB Course Page</b></p>	
18	<p><b>Once ready, select the Create Course button. This will start the course creation process. This may take up to 30 seconds to complete since this is happening in real-time.</b></p>	
19	<p><b>A status screen will be shown during this process with a random message. The course creation process consists of:</b></p> <ol style="list-style-type: none"> <li>1. Make an exact copy of template course</li> <li>2. Update IC Tables</li> <li>3. For each Section, add enrollments</li> <li>4. For Each Section Add Group and enroll section students</li> <li>5. Add Additional Students</li> <li>6. Add Additional Teachers</li> </ol>	

### 3.3.3 BB Scheduler 2.0 – Manage Sections

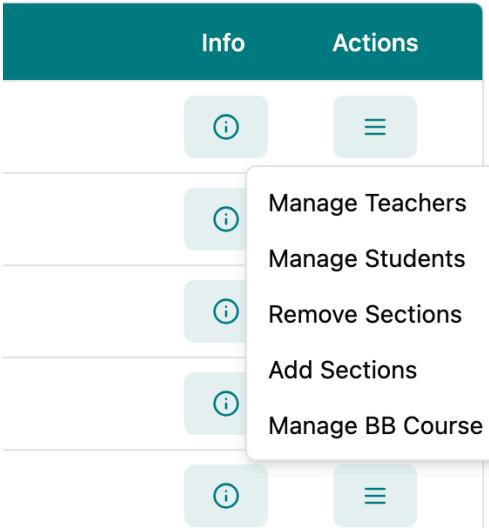
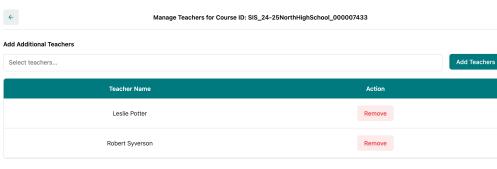
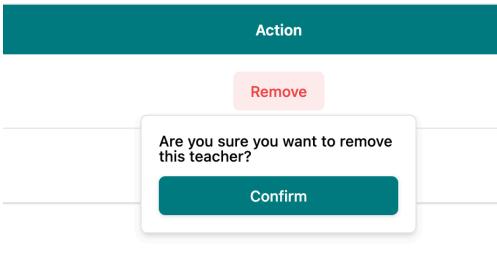
Manage Sections is used to remove or add sections to an existing BB Course

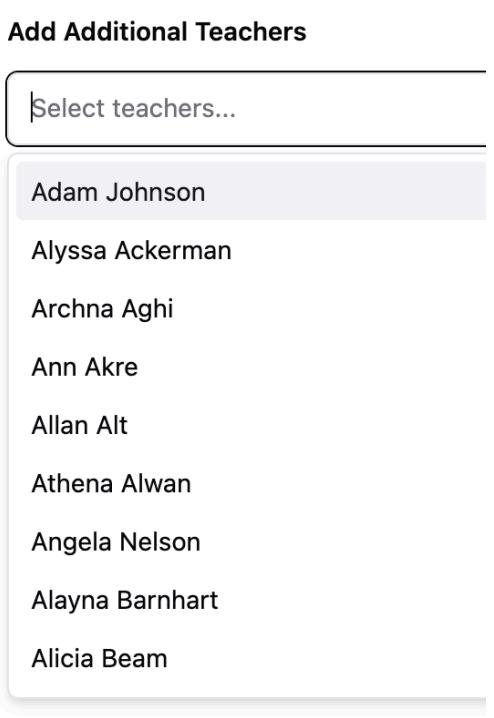
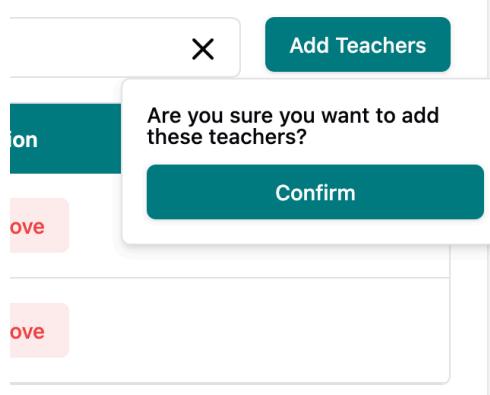
#	Step	Image
1	To Manage Sections that have already been assigned to a BB Course or to add them to a BB Course that has already been created, choose the Manage Sections.	
2	The sheet will show all sections for the Infinite Campus course. The sections that have been mapped to a BB Course will be shown with a Remove button on the row. Sections that have not been mapped to a BB Learn Course will be shown with an Add button.	
3	To see more information about any of the sections, select the info icon to see details.	
4	To add a section to an existing BB Course, select the BB Course from the dropdown list. This list is searchable. Once selected, the Add button will be enabled.	
5	Select the Add button to add the sections to the BB Course.	

6	<p>There will be a confirmation button to confirm. Select Confirm and the process will begin. This is a multi-tasking screen and while this is being done, the users can add/remove other sections.</p>	
7	<p>Select the Remove button to remove the sections from the existing</p>	
8	<p>There will be a confirmation button to confirm. Select Confirm and the process will begin. This is a multi-tasking screen and while this is being done, the users can add/remove other sections.</p>	

### 3.3.4 BB Scheduler 2.0 – BB Courses – Manage Teachers

Manage Teachers is Action under the BB Courses page for adding/removing teachers from an existing BB Course.

#	Step	Image
1	<b>To add/remove Teachers to an existing BB Course, select the Manage Teachers Action.</b>	
2	<b>The sheet will be display and show existing Teachers in the BB Course. This list is only Teachers that were added to the course via the BB Scheduler. If the Teachers were added in the BB Course via other mechanisms, they will not show up here. To remove any of the instructors, select the Remove button in the corresponding row.</b>	
3	<b>A confirmation button will be displayed to confirm the deletion. Select Confirm to initiate the Removal. These actions are all using the multi-task design. While the instructor is being deleted, other actions can be done at the same time.</b>	

4	<p>To add Teachers to a BB Course, select Add Additional Teachers field. This will show a dropdown list of teachers in the Infinite Campus system. Users can type in the name to filter the search.</p>	 <p>Add Additional Teachers</p> <p>Select teachers...</p> <ul style="list-style-type: none"> <li>Adam Johnson</li> <li>Alyssa Ackerman</li> <li>Archna Aghi</li> <li>Ann Akre</li> <li>Allan Alt</li> <li>Athena Alwan</li> <li>Angela Nelson</li> <li>Alayna Barnhart</li> <li>Alicia Beam</li> </ul>
5	<p>Multiple Teachers can be added in the list.</p>	 <p>Add Additional Teachers</p> <p>Camille Potter <span style="border: 1px solid red; padding: 2px;">X</span> Leslie Potter <span style="border: 1px solid red; padding: 2px;">X</span> Select teachers</p> <p>No results found.</p>
6	<p>When ready, select the Add Teachers button to add to the BB Course. A Confirmation dialog will be additionally displayed to confirm this action.</p>	 <p><b>X</b> Add Teachers</p> <p>Are you sure you want to add these teachers?</p> <p>Confirm</p>

### **3.3.5 BB Scheduler 2.0 – BB Courses – Manage Students**

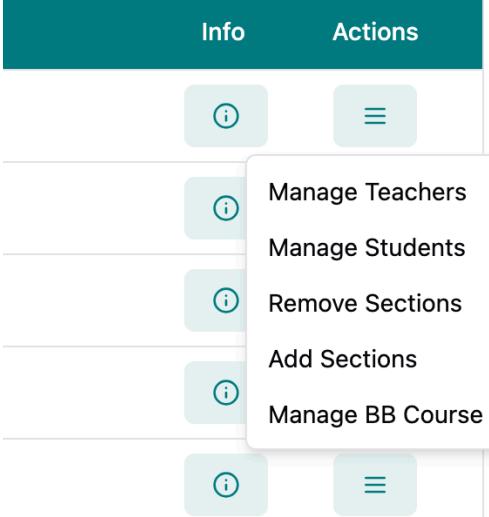
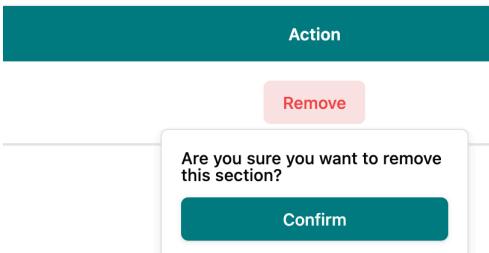
Manage Students is Action under the BB Courses page for adding/removing students from an existing BB Course.

#	Step	Image
1	To add/remove Students to an existing BB Course, select the Manage Students Action.	<p>The screenshot shows a dark teal header with 'Info' and 'Actions' tabs. A white dropdown menu is open under 'Actions', listing several options: 'Manage Teachers', 'Manage Students' (which is highlighted with a light blue background), 'Remove Sections', 'Add Sections', and 'Manage BB Course'. Each option has a small info icon to its left.</p>
2		<p>The screenshot shows a page titled 'Manage Students for Course ID: SIS_3425eAchieveAcademy-Wisconsin_000008305'. It has sections for 'Add Additional Students' and 'Select students...'. Below is a table with columns 'Student Name' and 'Action'. Two student names are listed: 'Alejandro Paredes' and 'Nathan Perez', each with a red 'Remove' button next to it. A green 'Add Students' button is at the top right of the table.</p>
3	A confirmation button will be displayed to confirm the deletion. Select Confirm to initiate the Removal. These actions are all using the multi-task design. While the student is being deleted, other actions can be done at the same time.	<p>The screenshot shows a confirmation dialog box with a red 'Remove' button at the top right. The main text reads 'Are you sure you want to remove this student?'. At the bottom is a large green 'Confirm' button.</p>

4	<p>To add Students to a BB Course, select Add Additional Students field. This will show a dropdown list of students in the Infinite Campus system. Users can type in the name to filter the search.</p>	<p>Add Additional Students</p> <p>Select students...</p> <ul style="list-style-type: none"> <li>Nathan Perez - 101552</li> <li>Alejandro Paredes - 101948</li> <li>Joseph McDermott - 103262</li> <li>Nathan Meech - 103828</li> <li>Molly Mulhollon - 104220</li> <li>Elijah Grainger - 105309</li> </ul>
5	<p>Multiple Students can be added in the list.</p>	<p>Add Additional Students</p> <p>Nathan Perez - 101552   Alejandro Paredes - 101948   Select students...</p> <p>Caleb Stedman - 211966 Finley Waystedt - 224485 Alyssa Stedman - 224667</p> <p>Nathan Perez</p>
6	<p>When ready, select the Add Students button to add to the BB Course. A Confirmation dialog will be additionally displayed to confirm this action.</p>	<p>Action</p> <p>X Add Students</p> <p>Are you sure you want to add these students?</p> <p>Confirm</p> <p>Remove</p> <p>Remove</p>

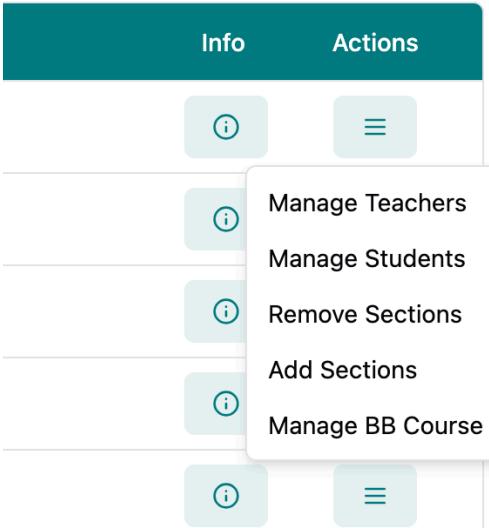
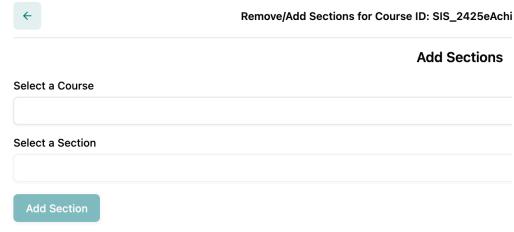
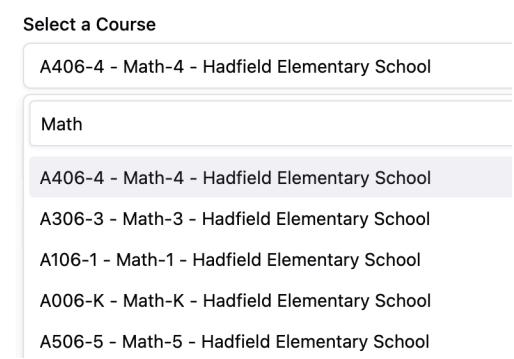
### 3.3.6 BB Scheduler 2.0 – BB Courses – Remove Sections

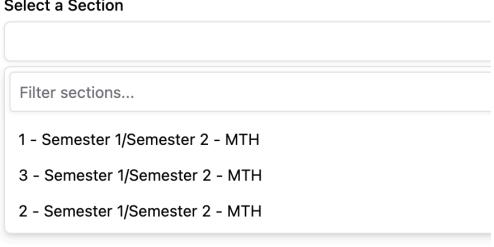
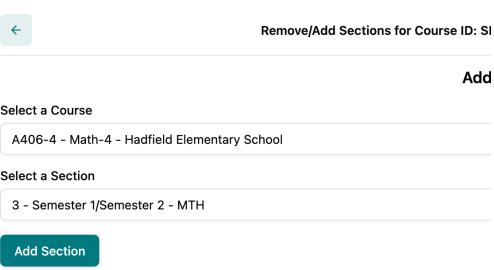
Remove Sections is Action under the BB Courses page for removing sections from an existing BB Course.

#	Step	Image
1	To remove a section from an existing BB Course, select the Remove Sections action	
	This will display a sheet of all sections that currently attached to this BB Course. Select the Remove button of the corresponding row to remove the section from the BB Course.	
	A confirmation dialog will pop-up to confirm the removal of the section and enrollments from the BB Course.	

### 3.3.7 BB Scheduler 2.0 – BB Courses – Add Sections

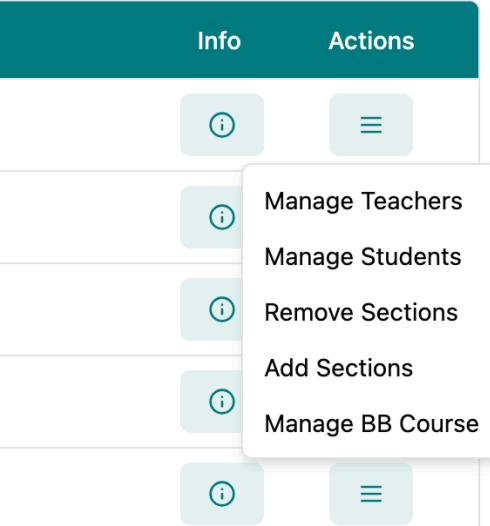
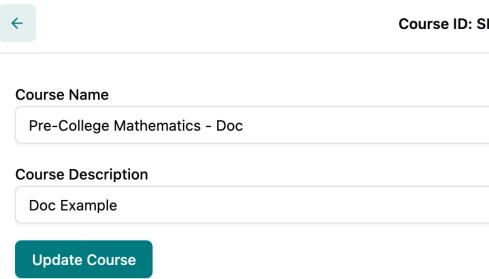
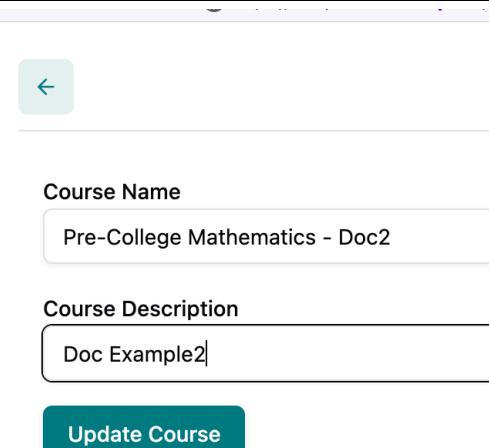
Add Sections is an Action under the BB Courses page for adding sections from an existing BB Course.

#	Step	Image
1	To add a section from an existing BB Course, select the Add Sections action	
2	The Add Section Sheet will be displayed for adding a section to the selected BB Course	
3	First Select the Infinite Campus Course. This must be done in order to find the correct section. The list is filterable.	

4	<p><b>Once the Infinite Campus course is selected, the section list will be selectable. Choose the desire section to add to the BB Course.</b></p>	 <p>Select a Section</p> <p>Filter sections...</p> <p>1 - Semester 1/Semester 2 - MTH 3 - Semester 1/Semester 2 - MTH 2 - Semester 1/Semester 2 - MTH</p>
6	<p><b>Once completed, the Add Section button will become available. Select the Add Section to confirm adding the section to the BB Course.</b></p>	 <p>Remove/Add Sections for Course ID: SI</p> <p>Add</p> <p>Select a Course</p> <p>A406-4 - Math-4 - Hadfield Elementary School</p> <p>Select a Section</p> <p>3 - Semester 1/Semester 2 - MTH</p> <p>Add Section</p>
7	<p><b>A confirmation dialog will pop-up to confirm the addition of the section and enrollments from the BB Course.</b></p>	

### 3.3.8 BB Scheduler 2.0 – BB Courses – Manage BB Course

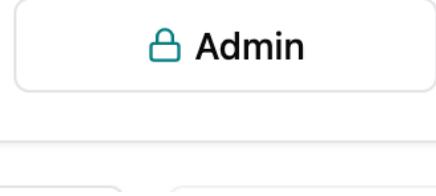
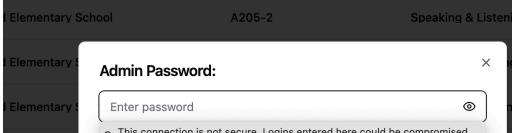
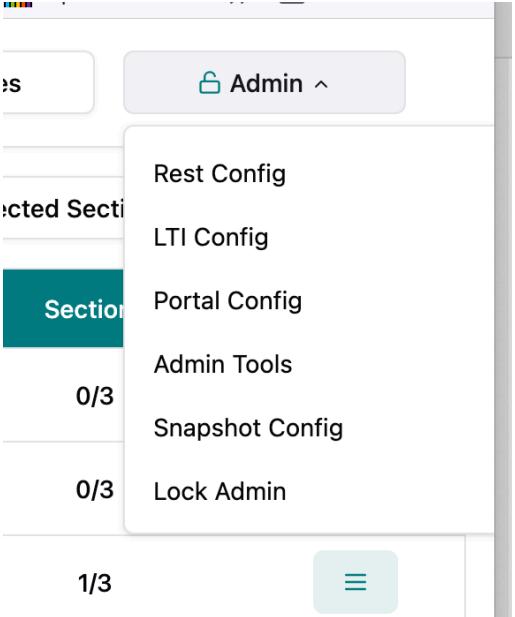
Manage BB Course is an Action under the BB Courses page for modifying information of an existing BB Course.

#	Step	Image
1	To manage an existing BB Course select the Manage BB Course action	
2	This will display a sheet where you can change both the Course Name and the Course Description. Simply type in the changes.	
3	Once the changes are done, select the Update Course button to update the data.	

4	<b>A confirmation dialog will pop-up to confirm the changes to the BB Course.</b>	
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### 3.4 BB Scheduler – Admin

The Admin Tool is only available when in Admin Mode. The user must have a System Role of Course Creator to be able to see this option. Once this is available, a user must unlock the Admin tool to see all options.

#	Step	Image
1	The Admin Tool. Once selected, user must enter the Admin PW to enable all functions	
2	Enter the Admin Password	
3	Once enable, the full menu will be displayed.	

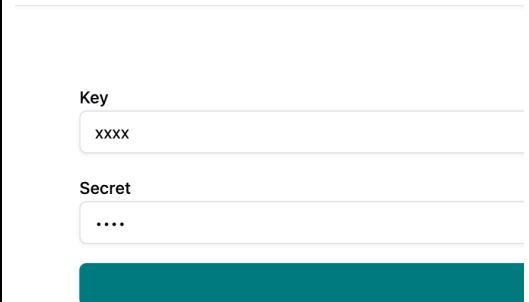
#### 3.4.1 BB Scheduler 2.0 – Admin – REST Config

The REST Configuration tool allows for the configuration to the BB Learn REST API. This should not be changed unless coordinated between the BB Admin and the BB Scheduler. These values will come from the BB Developer site where the REST Endpoint must be configured.

#	Step	Image
1	<p><b>Change the values to the corresponding BB Learn REST Endpoint. This must be coordinated with the BB Learn Admin.</b></p> <p><b>The REST information provides insight to the Rate-Limiting features in BB Learn. If the Limit Remaining is 0, all REST Request will stop until the next day.</b></p>	<p>Host https://waukesha-saastest.blackboard.com</p> <p>Key 5538e8f1-5444-4c9e-a261-309881bf6ccb</p> <p>Secret .....</p> <p>BB REST Limit: 1000000</p> <p>BB REST Limit Remaining: 999569</p> <p>BB REST Limit Reset: -1</p> <p>PRT Version: 1.0.1</p> 
2	Select Submit to change the values.	

### 3.4.2 BB Scheduler 2.0 – Admin – LTI Config

The LTI Configuration tool allows for the configuration to the BB Learn LTI Integration. This should not be changed unless coordinated between the BB Admin and the BB Scheduler. These values will come from the BB Admin that configures the LTI Endpoints.

#	Step	Image
1	<b>Change the values to the corresponding BB Learn LTI Integration. This must be coordinated with the BB Learn Admin.</b>	
2	<b>Select Submit to change the values.</b>	

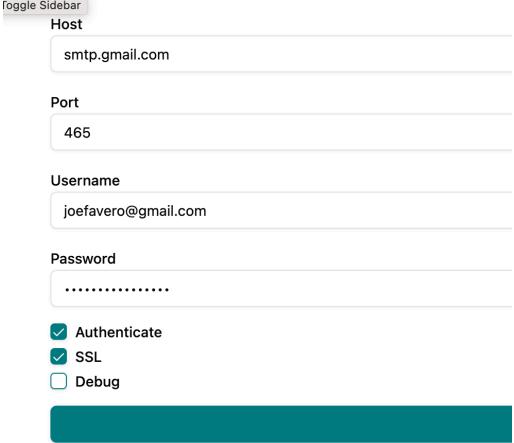
### 3.4.3 BB Scheduler 2.0 – Admin – PORTAL Config

The PORTAL Configuration tool allows for the configuration to the BB Scheduler. This should not be changed unless coordinated with the BB Scheduler Admin. These values are used to control access to the Admin Tool in the BB Scheduler and controlling the logging and custom messages.

#	Step	Image
1		
2	<b>Select Submit to change the values.</b>	

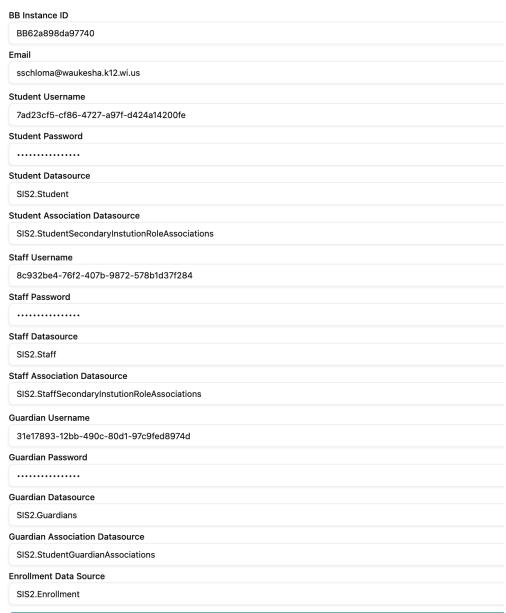
### 3.4.4 BB Scheduler 2.0 – Admin – ADMIN Config

The ADMIN Configuration tool allows for the configuration to the SMTP Email Server. This should not be changed unless coordinated between the IT Admin and the BB Scheduler. These values will come from the IT Admin that manage the SMTP Servers. This information is used to send email notifications from the BB Scheduler.

#	Step	Image
1	<b>This page contains the SMTP Server connection information used to send Email Notifications from the BB Scheduler. Obtain this information from your IT Admin.</b>	
2	<b>Select Submit to change the values.</b>	

### 3.4.5 BB Scheduler 2.0 – Admin – SNAPSHOT Config

The SNAPSHOT Configuration tool allows for the configuration to the BB Learn Data Integration. This should not be changed unless coordinated between the BB Admin and the BB Scheduler. These values will come from the BB Admin that configures the Data Integration Endpoints. These endpoints are used for the data synchronization that takes place between the BB Scheduler and BB Learn.

#	Step	Image
1	<p><b>There are 3 Data Integration endpoints in BB Learn for the synchronization.</b></p> <ol style="list-style-type: none"> <li>1. Student Data</li> <li>2. Staff Data</li> <li>3. Guardian Data</li> </ol> <p><b>Each of these endpoints support PERSON and ASSOCIATION endpoints. The Enrollment Datasource utilizes the Student Data endpoint. These values should be coordinated between the BB Admin and the BB Scheduler Admin.</b></p>	<pre>BB Instance ID BB62a898da97740  Email sschloma@waukesha.k12.wi.us  Student Username 7ad23cf5-cf86-4727-a97f-d424a14200fe  Student Password .....  Student Datasource SIS2.Student  Student Association Datasource SIS2.StudentSecondaryInstitutionRoleAssociations  Staff Username 8e932ba4-76f2-407b-9872-578bf1d37f284  Staff Password .....  Staff Datasource SIS2.Staff  Staff Association Datasource SIS2.StaffSecondaryInstitutionRoleAssociations  Guardian Username 31e17893-12bb-490c-80d1-97c9fed8974d  Guardian Password .....  Guardian Datasource SIS2.Guardians  Guardian Association Datasource SIS2.StudentGuardianAssociations  Enrollment Data Source SIS2.Enrollment</pre> 
2	<b>Select Submit to change the values.</b>	

### 3.5 Snapshot File Integration

In this version, Blackboard Snapshot/SIS flat file integration was added. The BB Scheduler can be used in Admin Mode to manually start a sync in the following areas:

1. Student Sync
2. Staff Sync
3. Guardian Sync
4. Group Sync
5. Enrollment Sync

The application also provides automated Tasks that can be executed at various time to perform these BB Learn Snapshot refreshes.