

Third-Party Integrations with Synergy via the OneRoster 1.1 API:

Admin Guide

Contents

Third-Party Integrations with Synergy via the OneRoster 1.1 API:	1
Admin Guide	1
About this Guide:	3
Background:	3
Synergy and OneRoster:	3
Synergy Setup:	4
Complete the OpenAuth Setup	4
OneRoster API Setup/Configuration:	6
Access OneRoster Setup	6
Select Schools for OneRoster API	6
Select Years for OneRoster API	7
Schedule the OneRoster Data Cache Job	7
Provide Information to the Third-Party App: (information needed varies by App)	8
Grade Pass Back (Assignment & Score Sync) Functionality:	9
From Third-Party Grade Book (TPGB) to Synergy:	9
Assignments Owned by the Third-Party Grade Book (TPGB):	9
Assignment Results (Scores):	9
Deleting Assignments from Third-Party Grade Book (TPGB):	9
Vendor Specific Notes:	10
Grade Pass Back Vendors:	10
Canvas:	10
Schoology:	10
Brightspace (D2L):	10
Blackboard:	10
Rostering Only Vendors:	11
ClassLink:	11
Houghton Mifflin Harcourt (HMH):	11

Savvas:.....	11
eDoctrina:.....	11
Microsoft Teams/School Data Sync (SDS):.....	11
Other OneRoster 1.1 API Compliant Rostering Vendors (with Synergy District integrations):	11
Limitations of the OneRoster API:	12
Modify OneRoster Settings	13

About this Guide:

This guide is intended to provide the steps that need to be taken within Synergy to configure the OneRoster API and make the data available for the Third-Party Application(s) your district may be partnering with. Once Synergy setup is complete, the Third-Party vendor will have additional setup on their side.

Background:

What is [OneRoster](#)?

- OneRoster is the standard specification for securely sharing class rosters and related data between a SIS and any other system.
- [OneRoster 1.1](#) is the current standard

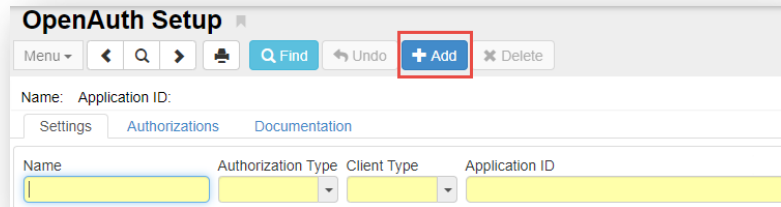
Synergy and OneRoster:

- While OneRoster provides standards for transferring data via CSV extracts or the OneRoster API, **Instructional Applications provides support for the API only.**
 - Contact your Account Manager or put a ticket into Help Desk if CSV extracts are needed.
- Synergy provides data, directly from the SIS, as required by the OneRoster specifications
- **“Rostering” Endpoints made available by Synergy:**
 - Can be found at OneRoster URL: <https://example.com/ims/oneroster/v1p1/>
 - Orgs (Organizations)
 - Schools
 - Terms
 - Grading Periods
 - Demographics
 - Students
 - Teachers
 - Users (only students and teachers)
 - Courses
 - Classes
 - Enrollments
 - Categories (Assignment Types)
 - Lineitems (Assignments)
 - Results (Scores)

Synergy Setup:

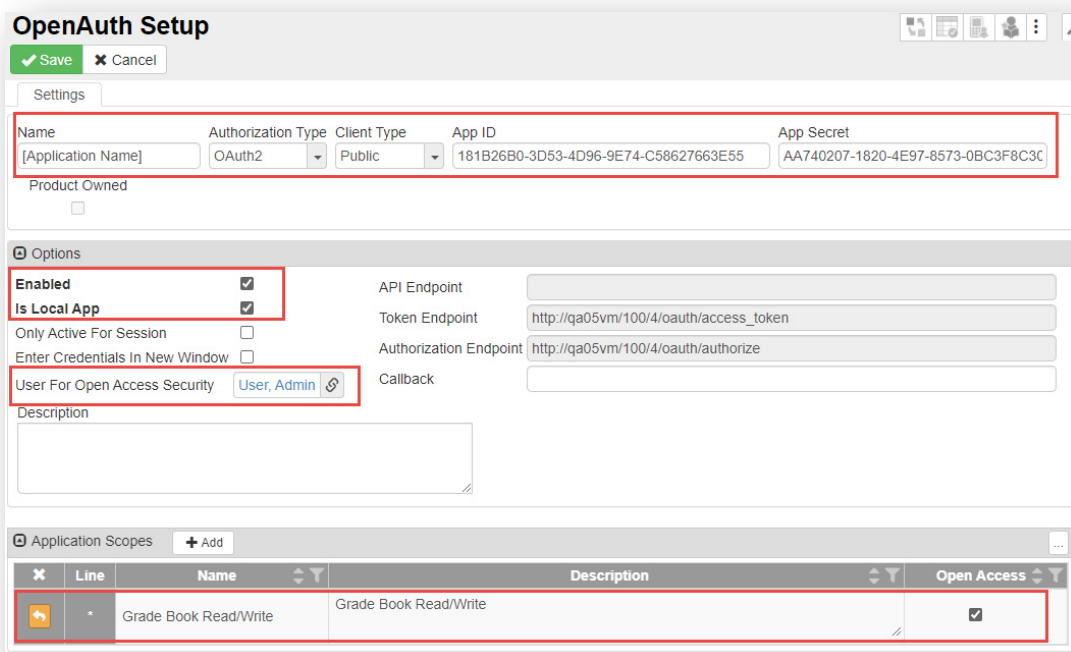
Complete the OpenAuth Setup

- Navigate to **OpenAuth Setup** screen (Synergy SIS > System > Setup)
- Select Add+



The screenshot shows the 'OpenAuth Setup' window with a toolbar at the top. The 'Add' button, represented by a blue square with a white plus sign, is highlighted with a red rectangular box. Below the toolbar, there are tabs for 'Settings', 'Authorizations', and 'Documentation'. The 'Settings' tab is active, showing fields for 'Name', 'Authorization Type', 'Client Type', and 'Application ID', all of which are currently empty.

- Complete all fields as shown below and "Save".



The screenshot shows the 'OpenAuth Setup' window with all fields filled out. The 'Name' field contains '[Application Name]', 'Authorization Type' is 'OAuth2', 'Client Type' is 'Public', 'App ID' is '181B26B0-3D53-4D96-9E74-C58627663E55', and 'App Secret' is 'AA740207-1820-4E97-8573-0BC3F8C3C'. The 'Product Owned' checkbox is unchecked. In the 'Options' section, 'Enabled' and 'Is Local App' are checked, 'Only Active For Session' and 'Enter Credentials in New Window' are unchecked, and 'User For Open Access Security' is set to 'User, Admin'. The 'API Endpoint', 'Token Endpoint', 'Authorization Endpoint', and 'Callback' fields are empty. The 'Description' field is also empty. In the 'Application Scopes' section, there is a table with one row: 'Grade Book Read/Write' with a description 'Grade Book Read/Write' and an 'Open Access' checkbox checked.

Line	Name	Description	Open Access
1	Grade Book Read/Write	Grade Book Read/Write	☒

- App ID** = Generate a GUID (<https://www.guidgenerator.com/>)
- App Secret** = Generate a GUID (<https://www.guidgenerator.com/>)
- User for Open Access Security** = can be any Synergy User
 - This user needs to have District Admin rights in Grade Book
 - This user will be listed in Audit Trails
- Token Endpoint** = will be prepopulated based on your Synergy URL
- Authorization Endpoint** = will be prepopulated based on your Synergy URL
- Application Scopes** = check with third-party vendor to see if they require scopes

1. If **not required by LMS**– Click +Add and type “Grade Book Read/Write” for Name and description and check the “Open Access” box
 2. If **required**:
 - a. add any/all of the scopes below (depending on what the third-party vendor requires) to the “Name” field and check the “Open Access” checkbox
- **<https://purl.imsglobal.org/spec/or/v1p1/scope/roster-core.readonly> -**
 - enables access to the getAcademicSession, getClass, getCourse, getEnrollment, getGradingPeriod, getOrg, getSchool, getStudent, getTeacher, getUser, getAllAcademicSessions, getAllClasses, getAllCourses, getAllEnrollments, getAllGradingPeriods, getAllOrgs, getAllSchools, getAllStudents, getAllTeachers and getAllUsers rostering endpoints
 - **<https://purl.imsglobal.org/spec/or/v1p1/scope/roster.readonly> -**
 - enables access to ALL of the rostering endpoints EXCEPT getDemographic and getDemographics
 - **<https://purl.imsglobal.org/spec/or/v1p1/scope/roster-demographics.readonly> -**
 - enables access to the getDemographics and getAllDemographics rostering endpoints
 - **<https://purl.imsglobal.org/spec/or/v1p1/scope/resource.readonly> -**
 - enables access to the getResource, getAllResources, ghetResourcesForClass and getResourcesForCourse resources endpoints
 - **<https://purl.imsglobal.org/spec/or/v1p1/scope/gradebook.readonly> -**
 - enables access to the getCategory, getAllCategories, getLinItem, getAllLinItems, getResult, getAllResults, getLinItemsForClass, getResultsForClass, getResultsForLinItemForClass and getResultsForStudentForClass gradebook endpoints
 - **<https://purl.imsglobal.org/spec/or/v1p1/scope/gradebook.createput> -**
 - enable access to the putCategory, putLinItem and putResult gradebook endpoints
 - **<https://purl.imsglobal.org/spec/or/v1p1/scope/gradebook.delete> -**
 - enables access to the deleteCategory, deleteLinItem and deleteResult gradebook endpoints

***If the Token/Authorization Endpoints do NOT show ‘https’, the following change needs to be made to the load balancer. (This is the most likely change needed to be made, but can vary by site).**



Advanced Properties

Content Switching Disabled **Enable**

HTTP Selection Rules **Show Selection Rules**

HTTP Header Modifications **Show Header Rules**

Response Body Modification **Show Body Modification Rules**

Enable HTTP/2 Stack ☐

Enable Caching ☐

Enable Compression ☐

Detect Malicious Requests ☐

Add Header to Request **X-Forwarded-Proto** **HTTPS** **Set Header**

Copy Header in Request To Header **Set Headers**

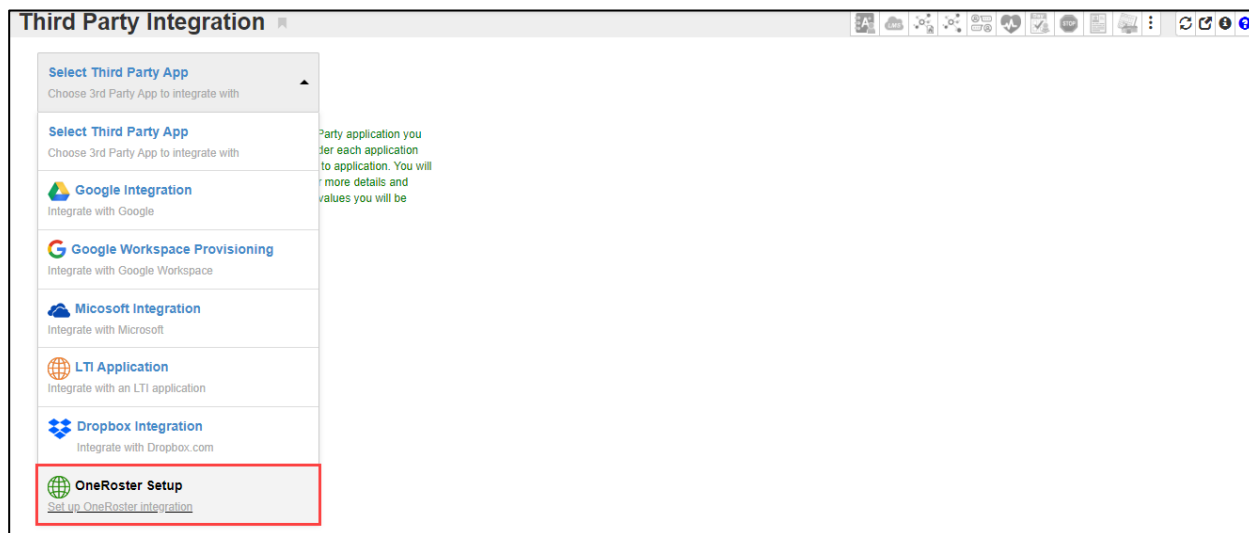
Add HTTP Headers **Legacy Operation(X-Forwarded-For)** **Set Server Address**

"Sorry" Server Port

OneRoster API Setup/Configuration:

Access OneRoster Setup

1. Navigate to **Synergy SIS > Grade Book > Setup > Third Party Integration**.
2. Select *OneRoster Setup* from the **Select Third Party App** drop-down menu.



Third Party Integration Screen

Select Schools for OneRoster API

1. Select each school that should show on the API or select *All* to include all schools on the list.
NOTE: Only those schools with a **School Code** on the Organization screen display here.
2. If you have completed making changes, click **Save** or **Save & Run Data Cache Now** at the bottom of the screen.

NOTE: Clicking **Save & Run Data Cache Now** saves any OneRoster setup you have made so far AND runs the OneRoster Data Cache Job immediately.

The screenshot shows the 'Schools to Include For OneRoster' section of the Third Party Integration screen. It features a list of schools with checkboxes next to them. The schools listed are: All, Adams Elementary, Bilingual Magnet School, Eisenhower Middle School, Hope High School, Jefferson Elementary, King High School, Lincoln K-12, Roosevelt Middle School, Stem Magnet School, and Washington Elementary. The checkboxes for Eisenhower Middle School, Hope High School, King High School, Lincoln K-12, and Roosevelt Middle School are checked, while the others are unchecked.

Third Party Integration Screen, OneRoster Setup

Select Years for OneRoster API

1. Select each school year that should show on the API.

NOTE: Only the active school year should be checked. As soon as a school year is completed and third party applications no longer need data for that year, the school year should be deselected.

2. If done making OneRoster setup changes, click **Save** or **Save & Run Data Cache Now** to save any changes made.

Years to Include For OneRoster

Only the active school year(s) should be checked. The OneRoster Data Cache Job must run after adding/removing Years in order to update the data on the API. Consult with vendor(s) before adding/removing years. NOTE: The years that show are dependent upon the Grade Book District Mass Synchronization; if the upcoming school year is not showing, complete the setup and run a Grade Book District Mass Synchronization for the upcoming school year.

☐	2019-2020
☐	2020-2021
☐	2021-2022
☒	2022-2023
☐	2023-2024
☐	2022-2023 Night
☐	2022-2023 Summer

Third Party Integration Screen, OneRoster Setup

Schedule the OneRoster Data Cache Job

1. Toggle **Save New Data Cache Job** to Yes.
2. Select or enter a **Start** and **Stop** time.

NOTE: It is recommended to run this job shortly after your Grade Book District Mass Synchronization job completes each day and BEFORE the third party application(s) run their sync. Any changes to User, Enrollment, and Class data in Synergy requires the OneRoster Data Cache Job to run in order to reflect those changes on the API.

WARNING: Be aware of other daily scheduled jobs and avoid scheduling the OneRoster Data Cache Job during a time that overlaps with other recurring jobs.

3. If you have completed making changes, click **Save** or **Save & Run Data Cache Now** at the bottom of the screen.

NOTES:

- Once saved, the scheduled job displays in the **Upcoming Data Cache Jobs** list.
 - All previously-scheduled jobs also display here.
 - All scheduled jobs also display on the Job Queue Viewer screen.
4. Repeat steps above to schedule more daily jobs.
 5. Click **[delete]** to delete any scheduled jobs.

WARNING: Clicking **[delete]** immediately deletes that scheduled job; save is not required.

Save New Data Cache Job

Frequency: **DAILY**

Start: 03/01/2023 11:01 AM

Stop (optional): mm/dd/yyyy

Upcoming Data Cache Jobs

- (new) Wednesday, 01 March 2023 11:01 AM [\[delete\]](#)

Third Party Integration Screen, OneRoster Setup

Provide Information to the Third-Party App: (information needed varies by App)

- App ID
- App Secret
- Token Endpoint
- Synergy URL

OpenAuth Setup

Name: D2L App ID: 944ECA1-FA1C-4B19-9F0A-BC9BFF7CDD6E

Settings | Authorizations | Documentation

Name	Authorization Type	Client Type	App ID	App Secret	Product Owned
D2L	OAuth2	Public	944ECA1-FA1C-4B19-9F0A-BC9BFF7CDD6E	1E02A7FB7ADA4CF8824673D2D94A08	☐

Options

☒ Enabled

☒ Is Local App

☐ Only Active For Session

☐ Enter Credentials In New Window

User For Open Access Security: ☐ User, ☒ Admin

Description:

API Endpoint:

Token Endpoint: https://.../oauth/access_token

Authorization Endpoint: https://.../oauth/authorize

Callback:

Grade Pass Back (Assignment & Score Sync) Functionality:

From Third-Party Grade Book (TPGB) to Synergy:

- Assignments and scores are a one-way transfer **FROM** TPGB **TO** Synergy.
- Synergy does NOT pass assignments or scores from Grade Book to TPGB.

Assignments Owned by the Third-Party Grade Book (TPGB):

- ***Assignments from TPGB are locked in Synergy and cannot be edited**
 - Locking the assignments in Synergy Grade Book prevents assignments from becoming 'out of sync' between the TPGB and Synergy.
- TPGB is considered the 'owner' of the assignments they create in Synergy Grade Book
 - Assignment changes should be made in TPGB and synced to Synergy
- Fields owned by TPGB: Title, Description, Date, Due Date, Score Type, Assignment Type, Max Points, Grading Periods.
 - **Grading Periods** are determined by assignment due date and begin/end dates in Grading Setup
 - Grading Periods are only set on initial sync and if/when due date changes
- Fields not owned by TPGB **can be edited** within Synergy Grade Book without needing to unlock the assignment: Subjects, Report Card Correlations, Standards, Grading Type (known as Assignment Category in Grade Book Classic), Units.

Assignment Results (Scores):

- Scores should be entered in TPGB and synced over to Synergy
- ***Scores cannot be entered/edited in Synergy on assignments synced from TPGB**
- Comment Codes can be applied to student results via the API but there are limitations. Synergy can apply comment codes three different ways:
 - **1) OneRoster uses "ScoreStatus"** for results that Synergy can leverage to apply comment codes on to student results in Synergy:
 - "ScoreStatus": "Exempt" will automatically apply the built in "excused" comment in Synergy
 - "ScoreStatus": "Not Submitted" requires district to set **Comment for "Not Submitted"** config value to the comment code you want it to map to in Synergy.
 - "ScoreStatus": "Partially Graded" requires district to set **Comment for "Partially Graded"** config value to the comment code you want it to map to in Synergy.
 - **2) Synergy will apply comment codes if TPGB includes "commentcode": "[Code Defined in Synergy]" in the metadata.**
 - **3) Synergy will apply comment codes if "comment": "[Code Defined in Synergy]" is received in the puResult JSON from TPGB.**

***Consult with TPGB on the method they use to send comment codes to Synergy.**

- Scores are not synced from TPGB in real-time (immediately), but is close
 - Could take a few minutes to see the results appear in Synergy Grade Book
 - "GB:OneRoster Recalc Processor" job runs in Synergy to take the putResult calls from TPGB and apply them in Synergy.

Deleting Assignments from Third-Party Grade Book (TPGB):

- At this time, no TPGB makes delete calls to the API to delete assignments from Synergy Grade Book.
- Synergy DOES support deleting assignments through the OneRoster API.

*"Third Party Read Only" switch can be toggled OFF on TPGB assignments in Synergy. While that switch is OFF, the assignment can be edited in Synergy and TPGB is blocked from syncing on that assignment.

Vendor Specific Notes:

Grade Pass Back Vendors:

Canvas:

- Authentication Requirements (information found on OpenAuth Setup screen in Synergy):
 - App ID
 - App Secret
 - Endpoint URL
 - Ex: <https://example-edupoint.com/ims/oneroster/v1p1>

Schoology:

- Authentication Requirements (information found on OpenAuth Setup screen in Synergy):
 - App ID
 - App Secret
 - Synergy URL
 - Ex: <https://example-edupoint.com/>
 - Access Token URL (Token Endpoint URL on OpenAuth Setup Screen)
 - Ex: https://example-edupoint.com/oauth/access_token

Brightspace (D2L):

- Authentication Requirements (information found on OpenAuth Setup screen in Synergy):
 - App ID
 - App Secret
 - Synergy URL
 - Ex: <https://example-edupoint.com/>
 - Token Endpoint (AKA Access Token URL)
 - Ex: https://example-edupoint.com/oauth/access_token
- Needs the Departments included in the ORG endpoint
 - Set Include Departments to ON.
- Need the following 7 scopes added to the OpenAuth Setup screen > Application Scopes grid > Name column:
 - <https://purl.imsglobal.org/spec/or/v1p1/scope/gradebook.readonly>
 - <https://purl.imsglobal.org/spec/or/v1p1/scope/gradebook.createput>
 - <https://purl.imsglobal.org/spec/or/v1p1/scope/gradebook.delete>
 - <https://purl.imsglobal.org/spec/or/v1p1/scope/roster-core.readonly>
 - <https://purl.imsglobal.org/spec/or/v1p1/scope/roster.readonly>
 - <https://purl.imsglobal.org/spec/or/v1p1/scope/roster-demographics.readonly>
 - <https://purl.imsglobal.org/spec/or/v1p1/scope/resource.readonly>
 - Description Text doesn't matter
 - Open Access box should be checked for each scope/row

Blackboard:

- Authentication Requirements (information found on OpenAuth Setup screen in Synergy):
 - App ID
 - App Secret

- Endpoint URL
 - Ex: <https://example-edupoint.com/ims/oneroster/v1p1>

Rostering Only Vendors:

ClassLink:

- Needs the Organization included in the ORG endpoint
 - Set BOOL_ONEROSTER_INCLUDE_DISTRICT_AS_ORG = 'True'

Houghton Mifflin Harcourt (HMH):

- Need the following 4 scopes added to the OpenAuth Setup screen > Application Scopes grid > Name column:
 - <https://purl.imsglobal.org/spec/or/v1p1/scope/roster-core.readonly>
 - <https://purl.imsglobal.org/spec/or/v1p1/scope/roster.readonly>
 - <https://purl.imsglobal.org/spec/or/v1p1/scope/roster-demographics.readonly>
 - <https://purl.imsglobal.org/spec/or/v1p1/scope/resource.readonly>
 - Description Text doesn't matter
 - Open Access box should be checked for each scope/row

Savvas:

- Need the following scope added to the OpenAuth Setup screen > Application Scopes grid > Name column:
 - <https://purl.imsglobal.org/spec/or/v1p1/scope/roster-core.readonly>
 - Description Text doesn't matter
 - Open Access box should be checked for each scope/row

eDoctrina:

- No scopes required
- URLs required for connector:
 - API URL: <https://example-school.edupoint.com/ims/oneroster/v1p1>
 - Access Token URL: https://example-school.edupoint.com/oauth/access_token

Microsoft Teams/School Data Sync (SDS):

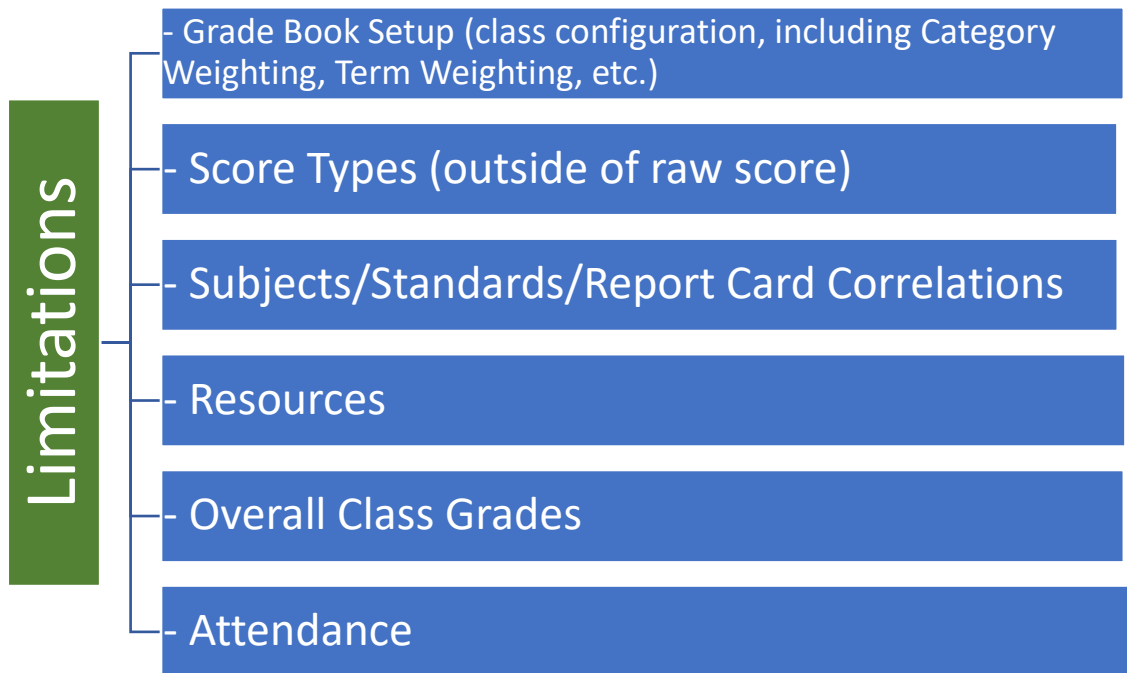
- Authentication Requirements (information found on OpenAuth Setup screen in Synergy):
 - App ID
 - App Secret
 - Endpoint URL
 - Ex: <https://example-edupoint.com/ims/oneroster/v1p1>
 - Access Token URL (Token Endpoint URL on OpenAuth Setup Screen)
 - Ex: https://example-edupoint.com/oauth/access_token
 - The email address of a Teacher user

Other OneRoster 1.1 API Compliant Rostering Vendors (with Synergy District integrations):

- Claris Connect
- McGraw-Hill
- Rapid Identity
- Global Grid 4 Learning (GG4L)

Limitations of the OneRoster API:

The following data is not able to be passed through the API. These are limitations of the OneRoster 1.1 specifications and not limitations of Synergy or Third Part Vendors.



Modify OneRoster Settings

WARNING: Modifying any of the Config Value options impacts third party application(s) connected to the API. Consult Synergy and/or third party application(s) before making changes.

NOTE: Click the  button next to each setting label for more information about the setting.

1. Enter text or numeric value for the text box fields and/or toggle the ON/OFF switch for the settings that need modification.
2. If you have completed making changes, click **Save** or **Save & Run Data Cache Now** at the bottom of the screen.

Comment for "Not Submitted" 	Comment for "Partially Graded" 
Mi	La
Default: [BLANK]	Default: [BLANK]
Default Points Value 	Use District Comment Code 
	☐ OFF
Default: [BLANK]	Default: [ON]
Set SOURCEDID to GUIDs 	Set Identifier to SOURCEDID 
☒ ON	☒ ON
Default: [ON]	Default: [ON]
Unlock Points Field 	Use Synergy Section ID as ClassCode 
☐ OFF	☐ OFF
Default: [OFF]	Default: [OFF]
Include ALL Synergy Sections 	Include District as Org 
☐ OFF	☐ OFF
Default: [OFF]	Default: [OFF]
Block Assignments with Invalid Types 	Allow Assignment Date Override 
☐ OFF	☐ OFF
Default: [OFF]	Default: [OFF]
Include Departments 	Allow Assignment Deletion without Unlocking 
☒ ON	☐ OFF
Default: [OFF]	Default: [OFF]
Allow Teachers to Unlock Assignments 	
☐ OFF	
Default: [OFF]	
Save & Run Data Cache Now ☒ Save	

Third Party Integration Screen, OneRoster Setup