

## ***Frequently Asked Questions about API***

This document contains answers to some of the most common API questions submitted by districts. Note that these responses are subject to change over time as updates continue to be made to the system.

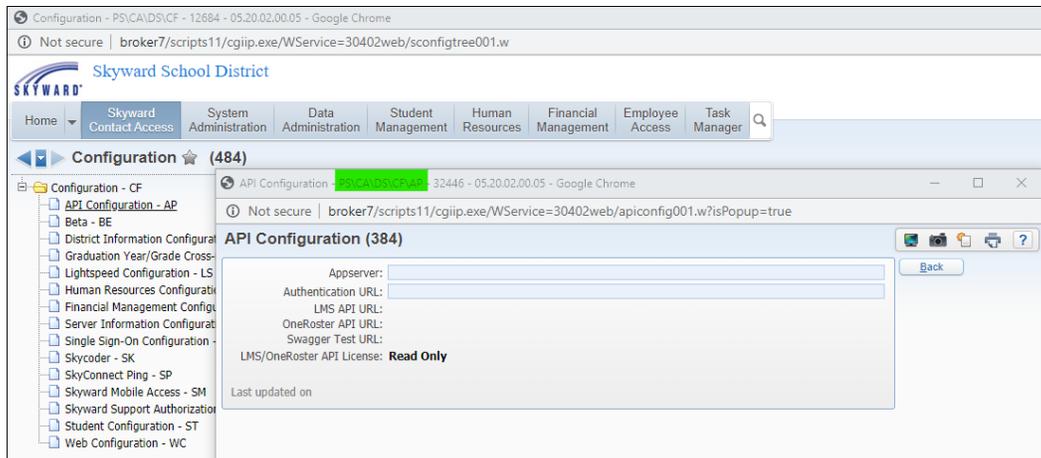
### **General API Questions**

1. What is API?
  - a. API (application programming interface) is a way for data to be shared between parties. In this context, it means that you can share data between Skyward and different third-party vendors. This can aid in accuracy and consistency of data while reducing data entry time.
  
2. I already export data to third parties through SkyBuild. What is the difference?
  - a. API allows for real-time sharing of data. Third parties will be able to access the most up-to-date information rather than only getting updates once a day with a scheduled task.
  - b. Once an integration is established, there is rarely maintenance needed for these connections. There is no updating of export file layouts or ranges.
  - c. The fields available in SkyBuild differ from those in API.
  
3. What are the different versions of the API?
  - a. LMS API: This is an API that was designed by Skyward. It was built with our databases and fields in mind, so it offers a lot of Skyward-specific fields from throughout our student software.
  - b. OneRoster API: OneRoster is a standardized way to format student data. Many educational software companies recognize and accept this format, so even if they do not officially partner with Skyward, it is possible that we can still share data.
  
4. I am coming across a lot of new vocabulary with this. Do you have any resources to help with this?
  - a. Yes! Here is an API Glossary that can help you to understand the different terms and vocabulary you may encounter when working with API.  
[API Glossary](#)
  
5. Is there an additional cost to use API?
  - a. If you would like to send information from Skyward to third parties, there is no additional license required. This is called the Read Only API.
  - b. If you are interested in sending assignment scores from a third party back to Skyward, you will need to acquire a license. This will allow teachers to use gradebooks within a different program and have the scores sent directly to Skyward, saving them time and ensuring accuracy.
  - c. If you are interested in acquiring this license, reach out to your district's sales representative.

6. What fields are available for third parties?
  - a. LMS API: [LMS API Data Dictionary](#)
  - b. OneRoster API: [OneRoster API Data Dictionary](#)
  
7. Can a field be added to the API for our district?
  - a. Since API is programmatically consistent for all districts, we are not able to add or alter the available fields for an individual district's API.
  - b. Changes to the overall API would potentially impact existing integrations for all districts using it and the parties with whom they share data.
  - c. If there is a change you would like to see, such as the addition of a field, you are welcome to submit a Product Idea for future consideration.
  
8. Can I choose which data is available to a third party?
  - a. There is no way to select which fields are shared via API; it is all or nothing. Once the third party has valid API credentials (key/secret), they can access any information they like on the API. Different parties consume different data depending on what they need for their software.
  - b. It is up to the third party to determine which data they will consume and what to do with that information once it is in their program. There are no filters within Skyward to limit or range for certain information.

## Initial API Setup

9. How do I get API for my district?
  - a. Read-Only API (data leaving Skyward)
    - i. If you are state-hosted, hosted by ISCorp, or Managed Services, your hosting provider will be able to set this up for you. Please contact us by creating an IT Services service call using [Support Center](#).
    - ii. If you are self-hosted, you can use our [Launch Kit](#) to set this up on your server.
    - iii. If you would like Skyward to set this up, it would be billable. Let us know if you would like to go this route by creating an IT Services service call using [Support Center](#).
  - b. Passback API (data coming into Skyward)
    - i. A license is required for the passback of assignments and assignment scores. Please contact your sales representative for more information.
  
10. How do I see if API is set up for my database?
  - a. Navigate to Product Setup > Skyward Contact Access > District Setup > Configuration > API Configuration. If the fields are empty (like below) you do not have API set up. If there is URL information, you are set up to share data with third parties. If you see an API Log, you are set up to pass back assignment grades.



11. My API is set up, now how do I connect with a vendor?
  - a. This document will give you the steps to getting the appropriate url, key, and secret to share with the third party.  
[API Quick Start Guide](#)
  
12. What should I name the secured user?
  - a. It is best practice to name the secured user after the company that you are connecting with.
  - b. If you are using API to pass back assignment scores to Skyward, this is the name that will display in API logs as having made updates.
  
13. Can I use the same key and secret for all the vendors connecting via API?
  - a. We recommend creating a separate secured user for every vendor you connect with.
    - i. This way you can change a key/secret for one vendor without having to inform every other vendor of the change.
    - ii. You are better able to troubleshoot why vendors are having issues if each vendor has a separate set of credentials.
    - iii. If using pass back, you can differentiate between the different parties that are syncing grades to Skyward.

## Testing your API and General API Troubleshooting

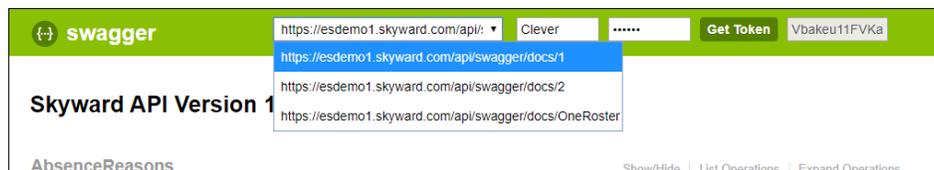
14. Where can I go to test my API to make sure it is working?
  - a. Locate Product Setup > Skyward Contact Access > District Setup > Configuration > API Configuration.
  - b. Click the Swagger Test URL to bring up your Swagger page.



- c. Once text appears in the field to the right of Get Token, you are logged in and able to access data.
17. My vendor says that they are not able to get any data from our API. What do I do?
- a. The first step is to confirm that they have the correct credentials (key/secret).
    - i. Locate the secured user in Skyward that is associated with that vendor and click the API button.
    - ii. Try logging into your Swagger test page with that key and secret to see if they work. If you enter them, click Get Token, and see text fill in in the field, that means that they should be working.
    - iii. Make sure that this is the key and secret that the vendor has on file.
    - iv. If that key and secret are not valid, you can choose to generate a new secret for the secured user. Just make sure that if you do this you share the new secret with the vendor.
  - b. Make sure that the vendor has the correct URL. This can be found in the API Configuration screen in PS\CA\DS\CF\AP. They should be able to tell you if they are using the LMS API or OneRoster API.
  - c. If you are using API with other vendors, confirm that they are still able to retrieve data from your API.
    - i. This can help determine if it’s an overall issue or if it’s specific to this one vendor.

## Troubleshooting the LMS API

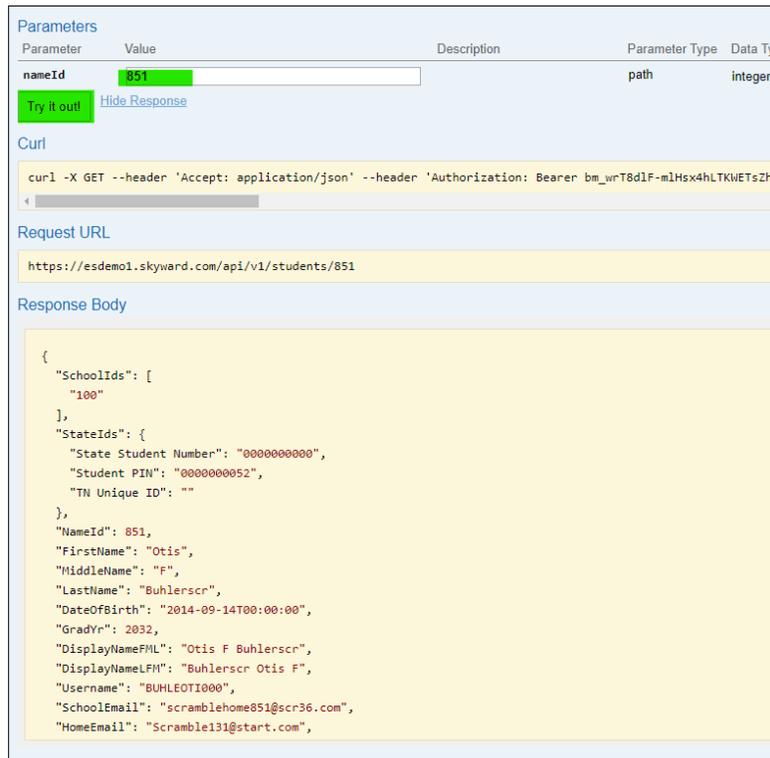
18. How can I locate information for a student on the LMS API?
- a. Within Skyward, locate the internal ID for the student you would like to test. (the following question explains where this is located)
  - b. Log into Swagger and select the first option from the dropdown menu to test the LMS API.



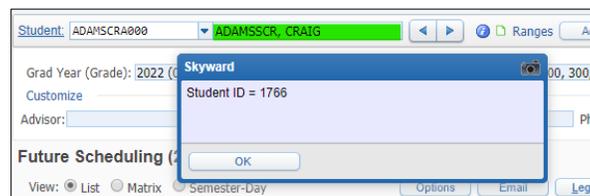
- c. Next, choose the appropriate endpoint (Students in this case). Expand the endpoint and select how you would like to search. I chose to get a student based on their unique ID.



- d. Enter the student’s ID and click Try it out! Keep in mind that depending on the endpoint you are searching, different criteria are required and will be noted as such.
- e. The text in the Response Body is what is pulling for that particular student for the endpoint. This will match what is in Skyward and is what is available to your third parties.



19. What Skyward ID is used to identify a student/guardian/staff member/course/class in the LMS API?
- a. Student: Internal ID
    - i. Double click the student’s name in the student profile.



- ii. Or go to the student information page.

**CRAIG ADAMSSCR** Grade: 09

639 7th ST  
SCRAMBLETON, WI 55555  
Primary Guardian:  
ANNA ADAMSSCR  
(555) 555-8553

No Image Available

Alert Info:  
Allergic to Olives

Note:

Second Phone:  
School Email:  
Student Access Login: CRAIG.ADAMSSCR

Third Phone:  
Home Email:  
Student Access Password: 3fixndqr

Student Id: 19023  
Internal Id: 1766  
Status: Active

Birthdate: 02/13/2004  
Age: 16  
Locker:  
Other Name:

Language: ENG  
Gender: Male  
Local Race: -  
Federal Race: 5 ?

[School Information](#)

- b. Guardian: Name ID. Edit the guardian record and check the URL to see their ID number.

Edit Guardian Information - Entity 300 - WS\ST\TB\FA\FA - 11314 - 05.19.10.00.09 - Google Chrome

localhost/scripts/cgiip.exe/WService=wsFin/sstudfamedit002.w?NAME\_ID=1766&vCurrentStudentID=1766&V\_STUDENT\_ID=1766&V\_FAMILY\_ID=504&vFa...

**Edit Guardian Information**

Enter Information for Guardian of CRAIG ADAMSSCR

**General Information**

\* First: ANNA Middle: Name Prefix: \* Last: Adamsscr  
 Name Suffix: Name Key: ADAMSANN000  
 Date of Birth: Age: 0 Gender: Marital Status:  
 SSN:  Custodial Parent  Emergency Contact  
 Relationship:  Pick Up  Criminal Background Completed  
 Family ID: 504

**Contact Information**

Primary Phone: (555) 555-8553 Ext: Category:  Confidential Phone Address: 639 7th ST  
 SCRAMBLETON WI 55555

Buttons: Save, Save and Email Account, Reset Link, Back

- c. Staff Member: Name ID/Staff ID.
  - i. Go to the picture tab on their staff record. (Number after "NS")

**Staff Browse**

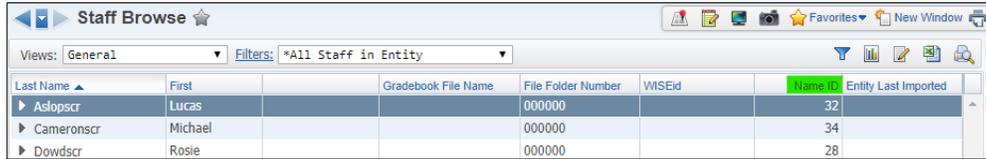
Views: General Filters: \*All Staff in Entity

Last Name	First	Middle	Staff Key	S	Emp. ID	Prima
Aslopscr	Lucas		ASLOPLUC000	A	867565	

Expand All Collapse All Modify Details (displaying 11 of 11) View Printable Details

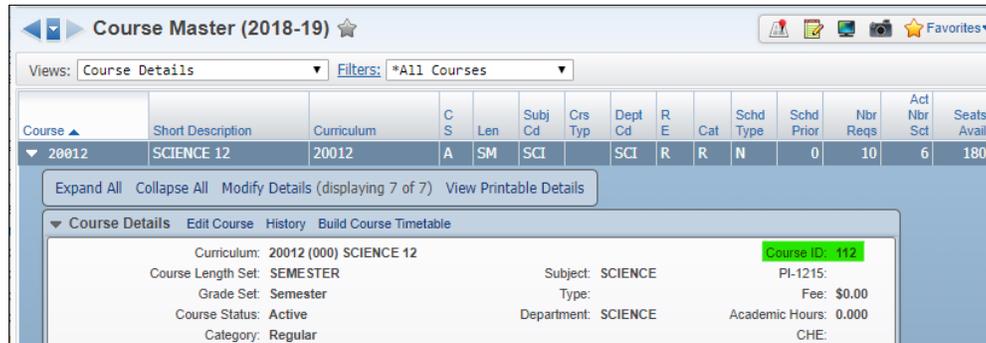
- General Edit General
- Address Edit Address Edit Mailing Address
- Schedule View Schedule Matrix for Current/Next Year and Edit 'Do Not Schedule' time
- Teacher Transactions
- Qualifications Add Qualifications View Historical Qualifications
- Staff Types Add Staff Types
- Conferences
- Entity
- Department Add Department
- Picture
  - No Picture Found
  - Staff ID: NS32
- Office Visit Add Office Visit Defaults Voided

- ii. Or scroll all the way to the right on the Staff Browse and look under Name ID.



Last Name	First	Gradebook File Name	File Folder Number	WISEid	Name ID	Entity Last Imported
Aslopscr	Lucas		000000		32	
Cameronscr	Michael		000000		34	
Dowdscr	Rosie		000000		28	

- d. Course: Course ID is visible on the Course Master in the Course Details area.



Course	Short Description	Curriculum	C S	Len	Subj Cd	Crs Type	Dept Cd	R E	Cat	Schd Type	Schd Prior	Nbr Reqs	Act Nbr Sc	Seats Avail
20012	SCIENCE 12	20012	A S	SM	SCI		SCI	R R	R	N	0	10	6	180

Expand All Collapse All Modify Details (displaying 7 of 7) View Printable Details

Course Details Edit Course History Build Course Timetable

Curriculum: 20012 (000) SCIENCE 12 Course ID: 112  
 Course Length Set: SEMESTER Subject: SCIENCE PI-1215:  
 Grade Set: Semester Type: Fee: \$0.00  
 Course Status: Active Department: SCIENCE Academic Hours: 0.000  
 Category: Regular CHE:

- e. Class: For the LMS API, the Class ID this is not something you look up within Skyward. You can figure out the Class ID if you know the Course ID and the section number.
  - i. Class ID = Course ID + .0. + Section Number
  - ii. Ex: Course 8945, section 03 would be 8945.0.03

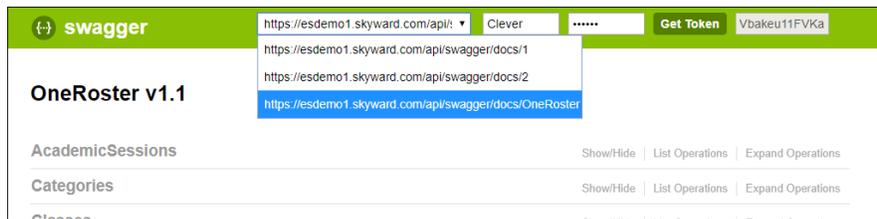
20. Which teachers and students will pull to the LMS API?

- a. Students:
  - i. The LMS API will only return active students when looking in Students > Get Students for a School. This is how most third parties determine which students are currently active.
  - ii. The Students endpoint will return the student’s active schools in the “SchoolIds” array. If the array is empty, they are not active in the current year in any schools.
- b. Staff:
  - i. Within StaffMembers > Get Staff Members for a School, only active staff will be returned for the specified school. The “TeacherSchoolIds” array will contain the schools where the staff member is teaching at least one class.
  - ii. StaffMemberSchool will contain schools where the staff member is active in the current year -OR- teaching at least one class.
  - iii. Staff are identified as teachers, discipline officers, counselors, and substitutes with the checkboxes on the staff record. Each of these fields pulls as a separate value.

21. Which parents/guardians will pull for the LMS API?
  - a. Parents/guardians associated with at least one student that is set as current year active and/or next year active.

## Troubleshooting the OneRoster API

22. How can I locate information for a student on the OneRoster API?
  - a. Within Skyward, locate the internal ID for the student you would like to test. (instructions to locate this are in question 19 above)
  - b. Log into Swagger and select the third option from the dropdown menu to test the OneRoster API.



- c. Next, choose the appropriate endpoint (Students in this case). Expand the endpoint and select how you would like to search. I chose to get a student based on their ID.



- d. Enter `USRstudent + the student’s ID` and click Try it out! Keep in mind that depending on the endpoint you are searching, different criteria are required and will be noted as such.
  - e. The text in the Response Body is what is pulling for that particular student for the endpoint. This will match what is in Skyward and is what is available to your third parties.

Parameter	Value	Description	Parameter Type	Data Type
id	USRstudent851	Include only users for this UserID	path	string

Try it out! Hide Response

Curl

```
curl -X GET --header 'Accept: application/json' --header 'Authorization: Bearer Vbakeu11FVKaDzczjFzj153cK58e80kyv_T0yXx'
```

Request URL

```
https://esdemo1.skyward.com/api/ims/oneroster/v1p1/students/USRstudent851?api_key=Vbakeu11FVKaDzczjFzj153cK58e80kyv_T0yXx
```

Response Body

```
{
  "user": {
    "username": "BUHLEOTI000",
    "userIds": [],
    "enabledUser": true,
    "givenName": "Otis",
    "familyName": "Buhlerscr",
    "middleName": "F",
    "role": "student",
    "identifier": "52",
    "email": "scramblehome851@scr36.com",
    "sms": "",
    "phone": "5555551458",
    "agent": [
      {
        "href": "https://esdemo1.skyward.com/api/ims/oneroster/v1p1/users/USRguardian852",
        "sourcedId": "USRguardian852",
        "type": "user"
      }
    ]
  }
}
```

23. What Skyward ID is used to identify a student/guardian/staff member/school/course/class in the OneRoster API?

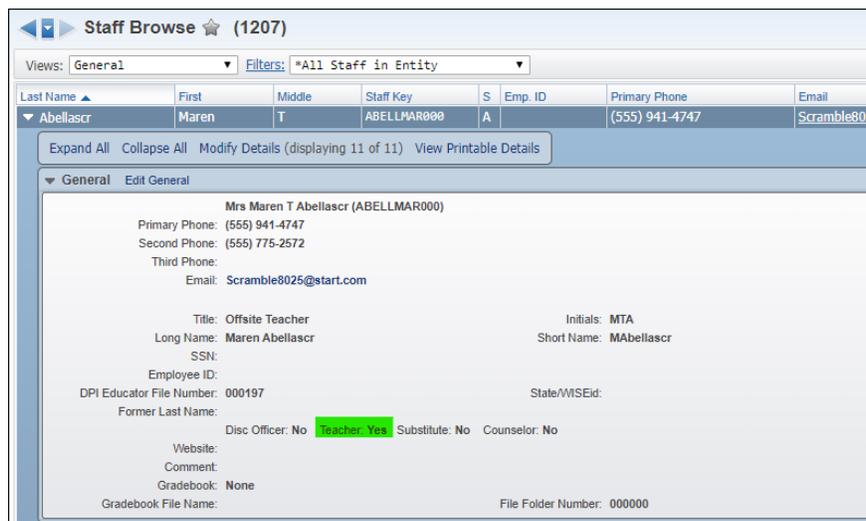
- a. Most of these use the same ID numbers listed above for the LMS API. The main difference is that all ID numbers in OneRoster will have a prefix. You must know how to construct an ID to search for it on Swagger.
  - i. Student: USRstudent + Internal ID (ex: USRstudent1776)
  - ii. Guardian: USRguardian + Name ID (ex: USRguardian1767)
  - iii. Teacher: USRteacher + Name ID/Staff ID (ex: USRteacher32)
  - iv. School: ENT + Entity Number (ex: ENT400)
  - v. Course: CRS + Course ID (ex: CRS112)
  - vi. Class: CLS + Class ID (ex: CLS402)

OneRoster does not use the same Class ID as the LMS API above. To find the Class ID, go to the class’s gradebook, click the class information at the top of the screen, then in the popup window double-click the class name again. You can also data mine and use Skybuild to export this number.

24. Which teachers and students will pull to the OneRoster API?
  - a. Students:
    - i. The OneRoster API will only return active students when looking in Students and searching by School ID.
    - ii. All Student OneRoster API Endpoints will only return students if they have at least one active entity.
  - b. Staff:
    - i. Teachers need to be active in the current year, flagged as a teacher and teaching an active class to pull. This is the same as with the OneRoster export in SkyBuild.

### Missing Staff Members

25. A staff member is not appearing in our third-party program. What should I check to get them to pull correctly?
  - a. Are they flagged as a teacher?



- b. Do they have a default entity?



- c. Do they teach a current year class?
  - i. If your librarians or other non-teaching staff members need access in your third-party program, consider adding them to a current year class as a teacher. It even could be a course/class created solely for this purpose.
- d. Are they a secured user?
  - i. Make sure that the staff member is an active secured user in Product Setup.

## Passback API

- 26. What kinds of information can be sent back to Skyward from other programs?
  - a. With the license, you can pass back assignments and assignment scores to Skyward to make updates in teacher gradebooks.
  - b. Grades will still be calculated within the Skyward gradebook based on Skyward configurations.
- 27. How does Skyward know where to put the synced assignment scores?
  - a. Skyward looks in the specific class’s gradebook for an assignment with the same description, due date, and category to determine a match. If those fields all align, scores will be synced.
- 28. Where do teachers enter their grades then?
  - a. Teachers will work exclusively in either the gradebook in the third-party program or the Skyward gradebook. They must choose one or the other and be consistent.
  - b. Assignments and assignment scores entered in a third-party program will be sent to Skyward and will overwrite any records in the class’s Skyward gradebook. If scores are entered in Skyward, they will be overwritten by the synced data from the third party.

29. Can a school with standards-based grading use passback?
  - a. Scores can be passed back for those using standards-based grading.
  - b. If this is the case, the academic area for Standards Gradebooks that plan to use the API needs to be set to manually enter grades. This is set in WS\EA\GB\ST\AA - Grade Calc Option Maintenance. It is not recommended they be changed to manual during the school year, as data in the gradebooks will be lost.
  
30. How can I see what information has been synced from a third party to Skyward?
  - a. In PS\CA\DS\CF\AP there is an LMS/OneRoster API Log you can use to see what assignments and assignment scores have been updated in Skyward and locate errors if they are occurring.
  - b. When teachers look at assignment details within their Skyward gradebook, they will be able to see when changes to scores were made for their students and the name of the secured user associated with the API connection.
  - c. Teachers will also have an API Log within each individual gradebook that has synced grades under the Display Options tab. This will have a record of every update made in the gradebook via API.
  - d. Click [here](#) for more details about locating and understanding API Logs.
  
31. What are the additional configuration options for the passback API?
  - a. Click [here](#) for a detailed explanation of the options within the API Configuration screen in PS\CA\DS\CF\AP.
  
32. When are assignment scores synced back to Skyward?
  - a. Assignment scores will be synced if the assignment is associated with an active grading period or falls within the grade input window for the grading period.
  - b. After the grade input window is closed for the respective grading period, assignment scores would need to be updated manually in Skyward as they will no longer be synced from the third-party gradebook.
  - c. If you are auto-posting grades in Skyward, ensure that the final auto-post takes place after scores are done syncing to Skyward for the grading period. This way the posted grades might not reflect the most recently synced assignment scores.
  
33. Can we connect with more than one third party with the same passback license?
  - a. Once your district has purchased the license to use the passback API, you are able to use that with any combination of third parties you choose. You do not need to purchase a separate license for each third party.