



ED-FI REST API

The South Carolina Department of Education (SCDE) supports a statewide data system that integrates with the Ed-Fi data standard and includes an Ed-Fi operational data store (ODS) and application programming interface (API) for every district connected to a statewide central ODS/API. The Ed-Fi data standard allows data to be transferred from South Carolina school districts to the state-level Ed-Fi ODS using SCDE's Ed-Fi REST API.

Data is transferred from the vendor (e.g., PowerSchool) to the SCDE Ed-Fi ODS using a JSON format. Each JSON consists of a list of properties to describe and objectify the data.

ERRORS DISPLAYED IN THE POWERSCHOOL ED-FI DATA-PUBLISHING DASHBOARD

If you are working on diagnosing and resolving errors, looking at your PowerSchool Ed-Fi data-publishing dashboard and zeroing in on several error messages from the first few categories displayed is a good place to start (Start Page > Data Exchange > EdFi_XXXX_YYYY). Errors are signaled with red buttons on the dashboard that are typically dark blue if no errors occurred during data publishing for a given category.

Be sure to work from top to bottom when diagnosing errors. This is because there usually exists a hierarchy where errors in a top-level category tend to cascade down through lower-level categories. As an example, if an error prevents a student record from publishing, all of that student's course enrollments and grades in the lower-level categories will also fail publishing until the error with the student record is resolved.

To view error messages and API response codes, click the red button for a category, select the option from the first dropdown that includes the word "errors," and examine each "data view" category. Press the "Clear Cache" button when examining each category to ensure you see the most current data.

If there is an error, an "Error Code" (an API response code) will be displayed, and if the category was recently pushed, there will be a "Message Detail." If there are errors but no "Error Code" or "Message Detail," republish the data for that category, and then check again, as error messages are purged periodically.

Note that the compiled JSON payload that is sent from the source system (e.g., PowerSchool) to the target resource in the ODS can be viewed in most cases where an error occurs. The JSON payload is helpful for tracking down data quality issues and can usually be accessed using the following path:

Start Page > System Administrator > Data Exchange > Published Data

If you are attempting to locate the JSON for a particular error and cannot find it, reach out to the ORDA Data Collection Team for assistance: PowerSchool@ed.sc.gov. Note that JSON is not typically available for "dependencies" only "errors" that have an API response code.

API RESPONSE CODES

The following is a list of API response codes that district PowerSchool administrators may encounter when monitoring data publishing using the PowerSchool Ed-Fi data-publishing dashboard. This list is



provided as a quick reference to help districts begin investigating Ed-Fi error messages and resolving errors.

200 - Record exists, nothing happened – success.

201 - Record was created successfully.

204 - Record was updated successfully.

400 - Bad Request, the JSON payload is malformed, or request headers are incorrect.

- **Problem:** Usually this is a malformed JSON payload.
- **Recommendation:** Create a support case with PowerSchool that includes the JSON payload that was sent from PowerSchool to the target resource. It can be accessed using the following path: Start Page > System Administrator > Data Exchange > Published Data. To view the SC Ed-Fi API specifications go to SC's [Swagger](#) site and scroll to the resource in question; then look at the POST definitions.

401 - Authentication error or API Credentials are invalid

- **Problem:** This is usually an authentication error.
- **Recommendation:** Check that the API credentials are correct. See your district's Sharefile for the current year's credentials. If you have trouble logging into your district's Sharefile account, reach out to scedfihelp@edanalytics.org

403 - Relationship Error. Claim Set Authorization Error

- **Problem:** Earlier resources in the dependency tree were not POSTed correctly. As noted earlier in this document, upstream errors (e.g., Student record) must be resolved before proceeding to publish downstream records (e.g., Student enrollments).
- **Recommendation:** See if there is a relationship that you can identify to another error in a previously published, higher-level category. If you are able to resolve previous errors and then republish everything up to and including the category with the 403 error, the 403 error may be resolved. If not, reach out to PowerSchool@ed.sc.gov

404 - Resource is not found or does not exist

- **Problem:** The format of the requested resource end point is probably not correct.
- **Recommendation:** Reach out to PowerSchool@ed.sc.gov.

409 - Relation Error. A related resource was not found

- **Problem:** There is a related resource that does not exist for the record to be created successfully.
- **Recommendation:** Similarly to the 403 error, check to see that higher-level resources were pushed successfully.
 - **Note:** Sometimes, 409 errors occur when "Run All" is selected. If you know that you selected "Run All" and you are seeing 409 errors, first try simply republishing only those categories that have those errors (do this in order, from top to bottom, in the PS Ed-Fi data-publishing dashboard, and wait until one category has finished before kicking off another).

500 - Server Error



Ed-Fi Cheat Sheet: API Response Codes

- **Problem:** Something is not right on the API servers.
- **Recommendation:** Retry at another time, or if it re-occurs, reach out to scedfihelp@edanalytics.org