

Wisconsin
Department of Public
Instruction

Division for Libraries and Technology



SIS VENDOR CERTIFICATION PACKET
Ed-Fi Integration
REST API Release - Choice Schools

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1.0 Quick Reference

1.1 Helpful Links

Please refer to the links below to help answer any questions:

- **WISEdata SIS Vendor Ed-Fi Integration Page:** <http://dpi.wi.gov/wisedata/ed-fi-integration>
- **Vendor Sandbox** – Where each vendor can validate the Wisconsin DPI REST API in a test environment.
 - To obtain access to Sandbox, please contact us at <http://dpi.wi.gov/wisedata/vendors> . Select 'Request Credentials to WISEdata sandbox'.
- **Assigning** unique student IDs
 - For initial go-live WISEids will not be obtained real-time via a RESTFUL API call. This is a future initiative.
 - Districts / Choice Schools will need to use the WISEid DPI application to obtain and match students to WISEids.
 - For Certification, SIS vendors will either need to use actual WSNs/WISEids or obtain a block of test ids from DPI. Level 1 validation will check ids against a WISEid database in our UAT environment.

1.2 Contact Information

Please refer to the contact information below to address any comments or concerns:

- <http://dpi.wi.gov/wisedata/vendors/contact-us>

2.0 Introduction

The Wisconsin Information System for Education (WISE) is comprised of multiple tools that support ID generation and data collection to meet all required district and school state and federal reporting mandates which will in turn inform education research and data analysis through dashboard and reporting tools to better understand and improve educational outcomes for Wisconsin students. These systems will maintain high data quality and security policies and standards to ensure data privacy.

The goal of the [WISEdata Ed-Fi integration project](#) is to make it easier for districts to report required data in a more timely fashion. Student information system (SIS) vendors will be able to use the [Ed-Fi Data Standard](#) and suite of technology to pass required data real-time using the [Ed-Fi REST API](#). The high-level objective is to provide a sustainable, cost-effective, integrated education analysis and reporting systems that supports:

1. Teachers and school administrators making informed decisions to improve educational outcomes and to help ensure every child graduates from high school prepared for both college and career.
2. Data-informed decision-making at the state, district, school, classroom, and student levels.
3. Accurate and timely data reporting to meet Federal, State, and local requirements, including [EDFacts reporting](#) in which State data is aggregated and reported as required by law to the U.S. Department of Education's national data sets.
4. Parents and community members, including media, legislators, and community groups, learning more about their schools.
5. Diagnostic and policy-relevant research.
6. High security standards that protect student privacy.

2.1 Involving Vendors

The WISdata Collections (WDC) team will be working one-on-one with vendors as needed to help them prepare for the certification of their respective student information systems. All vendors must successfully complete 'WISEdata Ed-Fi Integration' certification in order to transmit Choice and public school data to the Wisconsin DPI production environment Ed-Fi REST API.

3.0 Certification Overview

The following are the steps to the certification process:

1. Vendor already has credentials and is developing and testing against the WI DPI testing environment (UAT).
2. Vendor contacts WISEdata Collections (WDC) team for a Question/ Answer and Pre-Certification session.
3. WDC schedules a virtual meeting and sends vendor an invite via email.
4. Vendor and WDC discuss issues, comments, concerns.
5. Vendor and WDC plan the certification session and review test scenarios.
6. WDC schedules the certification session and sends vendor an invite via email
7. Vendor ensures that all programming is complete prior to certification, and calls WDC with any questions
8. Vendor executes certification tests to confirm that all programming is complete and correct. This involves executing tests as provided by WDC and WDC validating the results. All test parameters used, screenshots and videos are provided to WDC.

3.1 Pre-Certification Session

Vendors are encouraged to schedule a pre-certification meeting and a certification session as soon as they feel ready. Pre-certification meetings can last anywhere between 30 to 60 minutes, depending on vendor questions. During this meeting, WDC support staff will answer any questions and concerns, provide feedback, and go over certification test scenarios.

The goal of the pre-certification meeting is to make certification as simple and effortless as possible.

3.2 Certification Test Execution

Vendors should have all programming complete and have testing credentials before the certification session begins. During the certification window, SIS vendors will work through test scenarios provided by WI DPI. Typical scenarios include:

- Attempting an Add, Update, Delete within each JSON resource independent of sending full collection recordset (where a JSON resource can be sent independently)
- Adding a new student with a WISEid; without a WISEid
- Adding a student with multiple studentschool associations
- Updating student resource data (economicDisadvantaged, hispanicLatinoEthnicity, etc.)
- Update student data by removing one of the studentSchoolAssociations
- Attempting to send in invalid descriptors and types
- Attempting to send in invalid WISEids
- Attempting to send resources through without required data (not required by Ed-Fi, but needed for collection)

In order for Wisconsin DPI to completely validate SIS vendors:

- Vendors will record data/property values that WDC will need to validate.
- Vendors will be required to take screenshots or a video clips when applicable using tools like Jing (<https://www.techsmith.com/jing.html>).
- Procedure for video / screen-shot capture as well as parameters

AUTHENTICATION AND AUTH TESTS

1. Provide a JING video, **with recording on so you can explain what you're doing**, for each test and provide the test case # in the video name. Naming convention for videos **SISvendor+testcasenumber+date** (ccyymmdd). Example: Skyward3621520151021

DESCRIPTOR AND TYPE TESTS

1. Provide screen shot of values appearing in SIS for selection. Provide the test case # in the screen shot. **Same naming convention as used for videos.**

RESOURCE TESTS

1. **Provide JING video for each Resource test (e.g. /student). For each test provide the test case # in the video name.**
2. For each test record the parameters used for the resource as follows:

/student: provide the studentUniqueid

/studentSchoolAssociation: provide the studentUniqueid, schoolId and entryDate

/studentSchoolAssociationWisconsinExt: provide the studentUniqueid, schoolId and entryDate

/studentAcademicRecord: provide the studentUniqueid, educationOrganizationId, schoolYear, termDescriptor

- Upload all test documents, videos and screen shots to Accellion site (DPI will set this up)
- Once WDC staff finishes validating results, the SIS vendor will be notified.
 - If an error occurs, or inaccurate information lands in the database, WDC staff will work with the vendor to resolve the issue and continue on with the certification.
 - If validation finds no issues, the SIS vendor will be flagged as eligible for production credentials.

4.0 Certification Tests

A certification test document is separate from this document. The tests should be executed in the order in the test plan. The document will reference descriptor and type values but not list all of them in the document. Use Swagger to look up these values as it is the most up to date resource for these values.

Overview

Key test suites must be executed during certification to validate that a SIS vendor has met requirements for production implementation of passing data to the WI DPI Ed-Fi API.

The SIS Certification test plan is broken down into the following test areas:

1. Authentication
2. Descriptor and Types
3. Resources
4. Use Case Scenarios

WI DPI will be performing in-house performance and load testing to make sure the WI DPI implementation can handle expected volume.

Authentication Tests

The goal here is to validate SIS authentication to the WI DPI Ed-Fi API is working as expected.

Descriptor and Types Tests

The test performed here included:

1. Make sure SIS can retrieve values from the WI DPI Ed-Fi API for all Descriptors and Types being utilized for implementation.
2. Make sure SIS cannot create, update or delete descriptors or types.
3. Make sure SIS can pass all descriptor and types values for applicable JSON properties.

Resource Tests

The tests performed here are targeted at create, update, read and delete functions of a specific resource (e.g. /student). A number of positive and negative functional tests will be included. **Examples** of tests include (for the /student resource):

1. Create a /student with all required Ed-Fi and DPI properties with valid descriptors and types.
2. Attempt to create a /student already created.
3. Attempt to create a /student with an invalid WISEid.
4. Attempt to delete a /student that already has a /studentschoolassociation

Use Case Scenario Tests

These tests will involve real-world scenarios that district users will encounter. The tests will often involve the create / update of multiple resources. One example would be the beginning of the school year enrollment which would involve the passing of multiple resources and their associated properties:

Student Enrolls In School

- /student
- /studentschoolassociation
- /studentschoolassociationWisconsinExtension

Other use cases examples may include:

- weekly attendance is submitted by district
- student graduates
- student transfers to another school
- student exits school without graduating
- student demographics change
- student was entered by mistake and needs to be deleted

Appendix A

WI DPI Ed-Fi Integration Resource Site

<http://dpi.wi.gov/wisedata/ed-fi-integration>

WI DPI Mapping Document

Use this document to see the required resources and properties that need to be sent for the collection:

http://dpi.wi.gov/sites/default/files/imce/wisedata/pdf/WISEdata_Ed-Fi_Integration.pdf

Descriptors and Types

Use the mapping document above to determine descriptors and types that will be used. Use Swagger to find the valid values:

<https://uawisedataapi.dpi.wi.gov/EdFiSwagger/>