



MICHIGAN
DataHub

Enhancing State Reporting with Michigan DataHub & CEPI Connectivity

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Introduction

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Michigan DataHub

Over two decades in the education field with a focus on data analysis, integrations and state reporting.





Michigan DataHub

Turning Data Schools Have Into Information Schools Use

- Collaborative, statewide effort to address challenges in managing and using school data
- Centers around information exchange
- Based on Common Education Data Standards



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Agenda

- Define Michigan DataHub and what it means to your district
- Highlight the benefits of the ODS
- The MSDS Process in MiDataHub
- Student Data and Reports
- Additional MSDS tools and features
- CEPI Services



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Michigan DataHub Vocabulary

- [LaunchPad](#) - SSO landing page
- The Cockpit - the platform
- The ODS - the data
- The Hub - short speak for your district's cockpit
- Extracts - various reports that can be generated from the Cockpit

The screenshot shows the Michigan DataHub Management Portal interface. At the top, there is a navigation bar with the Michigan DataHub logo and the text "Management Portal". Below the navigation bar, there is a breadcrumb trail: "Michigan Data Hub > Anonymized Districts > MSDS Demo District". The main content area is titled "Manage District: MSDS Demo District". It displays various fields for district information, including "Region: Michigan Data Hub", "ISD/Intermediate District Code: Anonymized Districts", "District: MSDS Demo District, Id: 1043, Code: 900058", "District Type: LEA", "Address: . .", "URL: . .", "Current School Year: 2023-2024 (populated)", "SFTP Password: [password field]", "Integration Server: HUB-ETL306", and "District Status: Active". There are "Submit" and "Cancel" buttons at the bottom of the form. Below the form, there is a section titled "Manage Authorizations" with a "New Authorization" button. A table with columns "Name", "Email", and "Authorizations" is shown. The "Authorizations" column contains three categories: "Inbound Integrations (show all)" with a link "Add Integration", "Outbound Integrations (show all)" with a link "Add Integration", and "API Integrations (show all)" with links "Alert/Notification: Test System 101 - Alert 1" and "Add Integration".

MICHIGAN DataHub
Michigan Data Hub > Anonymized Districts > MSDS Demo District
Management Portal
Hello laura.caballero@kresa.org | Log off

Agreements ▾ Inventory ▾ Reports ▾ Utilities ▾ MSDS ▾ Features ▾

Manage District: MSDS Demo District

Region : Michigan Data Hub
ISD/Intermediate District Code : Anonymized Districts
District : MSDS Demo District, Id: 1043, Code: 900058
District Type : LEA
Address : . .
URL : . .
Current School Year : 2023-2024 (populated) ▾
SFTP Password : [password field] [eye icon] [District Folder]
Integration Server : HUB-ETL306
District Status : Active ▾

Submit Cancel

Manage Authorizations

New Authorization

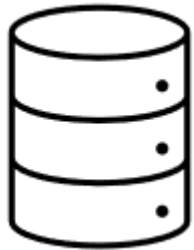
Name	Email	Authorizations
Inbound Integrations (show all)		API Integrations (show all)
• Add Integration		• Alert/Notification: Test System 101 - Alert 1 • Add Integration
		Outbound Integrations (show all)
		• Add Integration

The SIS Send

The student data starts with a person:

- Parent portal enrollment
- Office data entry

Once enrolled, the student data is sent from the SIS to the Michigan DataHub. This is a transaction.



SIS



ODS





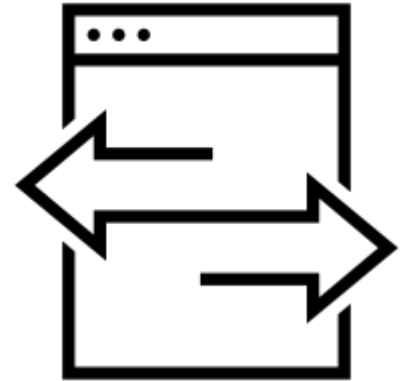
The SIS Send Continues

The student data in the SIS is updated and changed by people and systems:

- Teachers enter grades and attendance
- Assessment systems send to SIS
- Staff enter discipline, programs, final grades, cohorts, etc
- Special Education systems send to SIS

The Student Information System (SIS) is the data source that extracts the student data changes, and sends them to the district's DataHub (ODS).

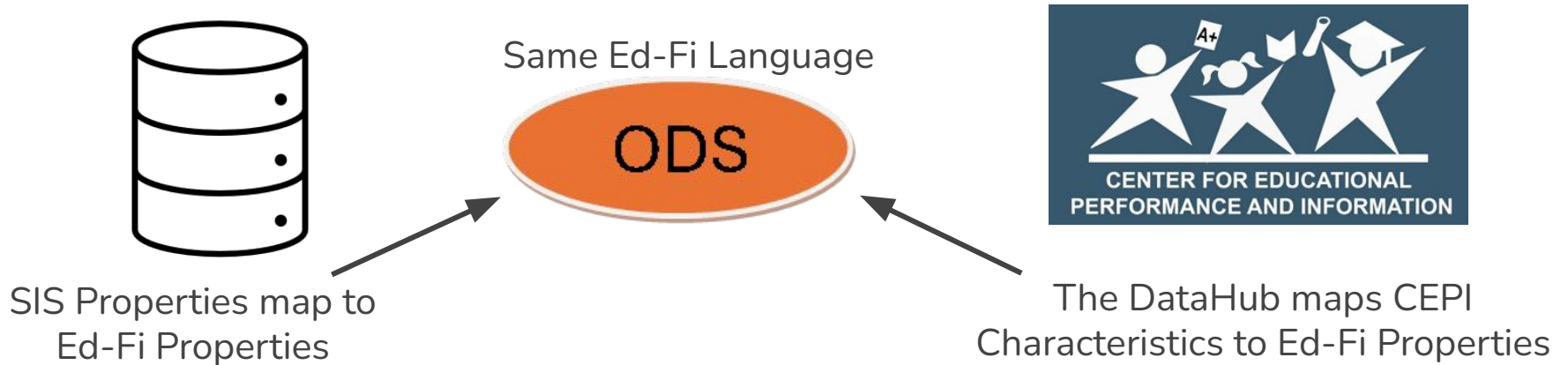
These data changes are **transactions**.



What is Ed-Fi?



- An initiative aimed at improving the collection and management of education data
- Standardized Data Model
- Integration and Interoperability





SIS Collects Required Student Data

Examples of MSDS Characteristics in the Enrollment Component:

- EnrollmentDate
- DistrictExitStatus
- DistrictExitDate

The Student Information System provides fields to collect the data:

- Date field for the MSDS Enrollment Date
- Dropdown for the MSDS District Exit Status
- Date field for the MSDS Exit Date

The image shows two UI components. The first is a date picker with a text input field containing 'dd/mm/yyyy' and a dropdown arrow. Below it is a calendar for February 2020. The second component is a color selection dropdown with the text 'Select a color' and a list of color options: Blue, Green, Purple, and Red.

Mon	Tue	Wed	Thu	Fri	Sat	Sun
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	1

Select a color

Select a color ▼

- Blue
- Green
- Purple
- Red

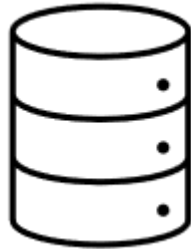
SIS Data Fields Map to Ed-Fi Properties

SIS Student Data Fields

- MSDS Enrollment Date
- MSDS District Exit Status
- MSDS Exit Date

Ed-Fi Properties

ext.MI.DistrictEntryDate
exitWithdrawTypeDescriptor
exitWithdrawDate



SIS

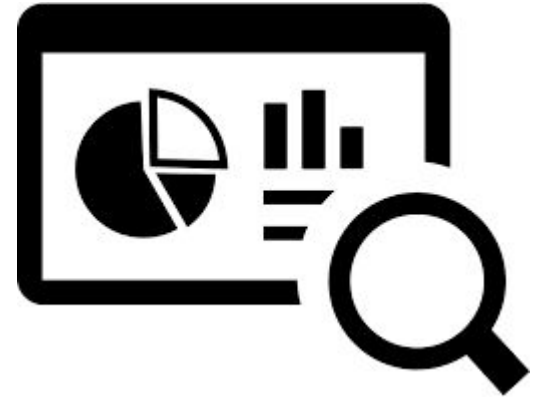


ODS



The Power of the ODS

- Real-time: SIS sends student data everyday
- Common Language: Ed-Fi
- MSDS Rules and Data Qualities: MiDataHub is creating the same data quality alerts provided by CEPI
- Analytics: allows examination of student data to find anomalies, issues and trends



What Exactly is MSDS in MiDataHub?

- View MSDS errors in near real-time
- Voluntary for most folks
- An additional view of student data
- Some pupil accounting reports
- Reports built on CEPI's MSDS Reports
- Weekly Workgroup Meeting
- District centric - each district has their own Hub





MSDS Sync

- Sync is short for Synchronization
- Cockpit ODS syncs to the MSDS ODS
 - The reason we need this is to convert and calculate data for MSDS. An example is attendance. The MSDS Sync has a function that calculates the Days Attended and the Total Possible Days.
 - This Sync can be scheduled once the MSDS Feature is activated for a district.



ODS



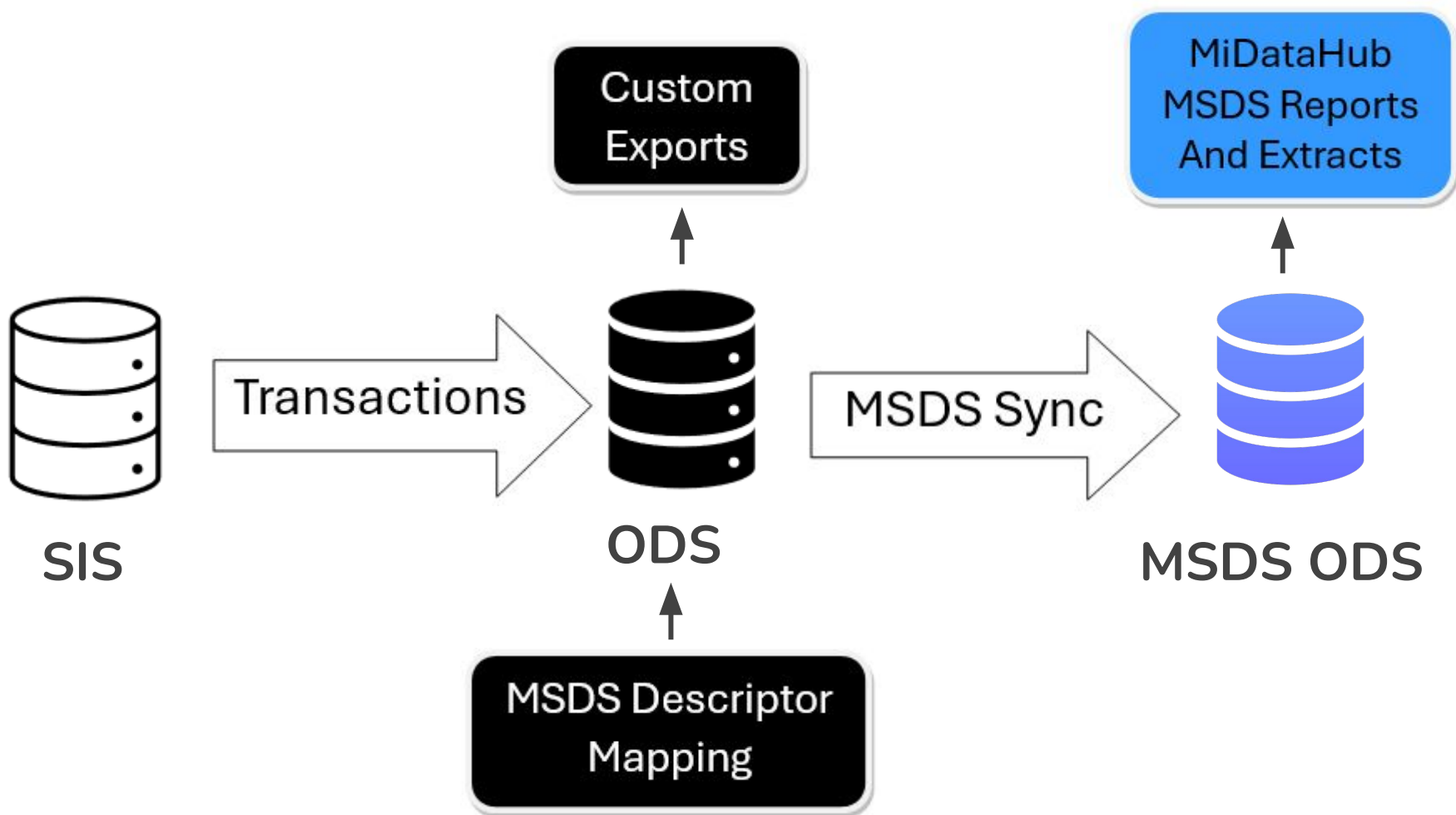
MSDS ODS

- Utilities ▾
- MSDS ▾
- Features ▾
- Activity Log
- Alerts
- Annual Rollover
- Application Username Management
- Audit Log
- Descriptor Mapping**
- District Parameters

MSDS Descriptor Mapping

Descriptors are “lookup code” values for things like Grade Levels, Languages, Program Participation Codes, Exit/Withdrawal Codes and more.

61a	Physical Violence without injury - without weapon	Physical Violence without injury - without weapon	61 (Physical Violence without injury)	<input type="checkbox"/>
61b	Physical Violence without injury - with weapon	Physical Violence without injury - with weapon	61 (Physical Violence without injury)	<input type="checkbox"/>
62	Tobacco	Tobacco	62 (Tobacco)	<input checked="" type="checkbox"/>
C1	Threat of Physical Violence	Student delivers a message of possible use of physical violence against another on or near campus.	56 (Other)	<input checked="" type="checkbox"/>
C1a	Threat of Physical Violence - without weapon	Student delivers a message of possible use of physical violence against another on or near campus, without weapon.	56 (Other)	<input type="checkbox"/>
C1b	Threat of Physical Violence - with weapon	Student delivers a message of possible use of physical violence against another on or near campus, with weapon.	56 (Other)	<input type="checkbox"/>



Data Scrubbing



VS

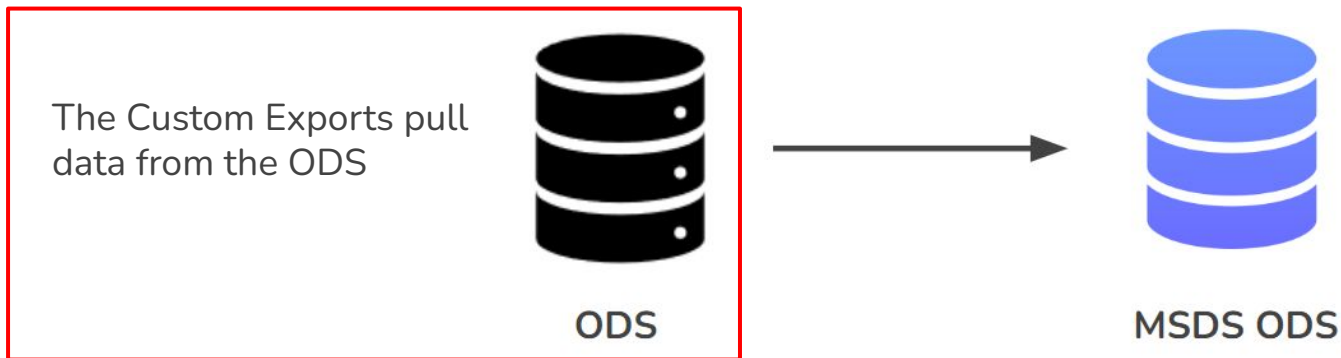


Custom Exports



Custom Exports use SQL Queries to provide access to the many tables of student data within the ODS.

- Student Data
- New Reports Created Often
- Grouped by Set
 - MSDS
 - TSDL



Data Quality Reports

MSDS Data Quality Reports provide student data from the MSDS ODS

- The sync calculates and formats the student data to align with MSDS collections
- MSDS Sync stores the student data in the MSDS ODS



ODS



MSDS ODS

The MSDS Data Quality Reports Pull from the MSDS ODS



District Reports for MSDS Data

- Data Quality Reports for MSDS
- Early Childhood
- General Collection
- TSDL
- Early On
- Attendance

District Reports

- Cockpit Usage
- Outbound Integration Reports
- Data Hub Performance
- Data Quality**
 - At-A-Glance ⓘ
 - EEM Entity Mapping ⓘ
 - MiDX Population ⓘ
 - MSDS 10/30 Day Rule ⓘ
 - MSDS Collection Error Detail Report By Student ⓘ
 - MSDS Collection Error Summary Report (Flattened) ⓘ
 - MSDS Count Day Data Change Audit ⓘ
 - Role Validation ⓘ
- MSDS-Early Childhood
- MSDS-General
- MSDS-TSDL
- MSDS-EarlyOn
- Attendance



Actionable Data

Generate the MSDS General reports for the End of Year General Collection to find data that may need to be updated. Here are some examples of reports that will provide actionable data:

- Homeless Student Summary may not include a student that you were expecting
- Exit Status Count should include all graduating students after they have been graduated in the SIS
- Discipline and Consequence Summary should provide cumulative OSS, ISS and Expulsions for the school year
- Alpha List for Download should include the expected Seclusion and Restraint Data

These are some examples and there are plenty more reports to explore!





Schedule Alerts

Automated alerts can be scheduled to transmit information to you via email.

- Data Freshness
- MSDS Count Day Sync
- MSDS General Collection Error Check
- Readiness Check for EEM

Add Alert

Name:

Alert Type:

Scheduled Activity:

Condition:

Name	Operator
<i>An alert event will occur when the above condition is met.</i>	

Schedule

Run at next available cycle:

Schedule Type:

Start Date:

Start Time:

Subscriber(s):

Status:

- Data Freshness
- EEM Entity Mapping Count
- MSDS Early Childhood Error Check
- MSDS Early Roster Error Check
- MSDS General Collection Error Check
- MSDS General Teacher Student Data Link Error Check
- MSDS Migrant Teacher Student Data Link Error Check
- MSDS Student Record Maintenance Error Check
- MSDS Third Grade Retention Error Check
- MSDSMSDS CountDay Sync**
- MSDSMSDS CountDay Sync:Third Grade Retention
- No Attendance for School Day 0 (Full Year Incl Today)
- No Attendance for School Day 0-10 (10 Days Back Incl Today)
- No Attendance for School Day 1 (Full Year Not Incl Today)
- No Attendance for School Day 1-10 (10 Days Back Not Incl Today)
- Readiness Check For [Benchmark Assessment Mandate]
- Readiness Check For [EEM]
- Readiness Check For [MIDataHub Data Quality]



Collection Extractor

This tool allows you to create an XML file for the following collections that matches the current MSDS Schemas:

- Student Record Maintenance (SRM) Collection
- General Collection
 - Fall
 - Spring
 - End of Year
- Early Childhood
 - Fall
 - Spring
 - End of Program
- Early Roster
- TSDL
- Migrant TSDL

The screenshot shows the Michigan DataHub interface for the MSDS Extractor tool. The header includes the Michigan DataHub logo and the breadcrumb path: Michigan Data Hub > Anonymized Districts > MSDS Demo District > MSDS Extractor. The main content area prompts the user to "Select a collection for which to produce an XML extractor file:". Below this prompt, there is a "Collection:" dropdown menu with a "Select..." option highlighted. To the left of the dropdown is a "Query Timeout:" label. A "Produce E" button is visible below the dropdown. The dropdown menu lists the following options: Select..., Fall-EarlyChildhood, Fall-GeneralCollection, Spring-EarlyChildhood, Spring-GeneralCollection, EOY-EarlyChildhood, EOY-GeneralCollection, EarlyRoster, GeneralTeacherStudentDataLink, MigrantTeacherStudentDataLink, and ThirdGradeRetention. The footer of the interface displays the version number "2024.2.0".



Comparison Tool

The MSDS Comparison Tool allows districts to execute an automatic comparison of data values between the MiDataHub-generated MSDS XML file and one of the same XML files that was generated from another source.

1. Generate the MSDS XML file in the Cockpit - this is the MiDataHub-generated XML.
2. Create an XML file from another source (SIS or MSDS) and save it to computer with a valid name for identification.
3. In the Cockpit, navigate to MSDS > Collection Comparison
 - Select collection from dropdown
 - Click Import District Collection and wait for green message: “District collection successfully imported.”
 - Click Upload State Collection and click on Browse to upload the file you created above in step two.
 - Click Compare

Collection Comparison

Select Collection:

Import District Collection

Upload State Collection

Compare

How to Activate the MSDS Feature

Navigate to:

www.miservicedesk.com

Create a ticket requesting
MSDS Feature Activation for
your district



Application Support

The Michigan Data Hub is a collaborative, statewide effort to address the challenges in managing and using school data by creating an ecosystem where information is exchanged between the large number of disconnected data systems used by schools.

MiDataHub Support



<https://tinyurl.com/24y3h726>

CEPI Services

CEPI Services are made available through MiDataHub in collaboration with the primary Student Information Systems:

- Infinite Campus
- MISTAR-Q
- PowerSchool
- Skyward
- Synergy

Navigate to www.midatahub.org

Click on Product Catalog

Keyword(s) = CEPI



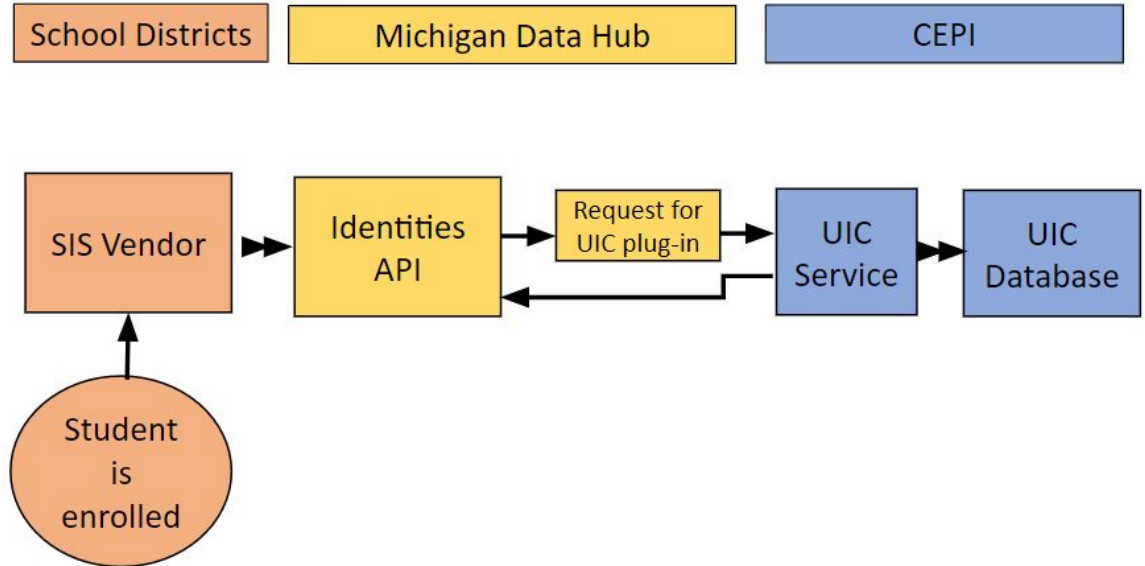


UIC Services

Allows users to do automated UIC searches, resolution, linking, and UIC requests.

How It Works

1. SIS sends student core data and whether or not to auto-create a UIC if none found (permission-based)
2. Identity API formats the request and sends to plug-in
3. Request for UIC plug-in calls the appropriate service to send to CEPI
4. CEPI UIC Service – returns an exact match, potential matches, or a new UIC (if auto-create parameter exists)
5. Identity API returns the results to the SIS



Snack-Pack



Portable Student Records Service (Snack-Pack) student record service offers essential student data to efficiently onboard newly enrolled students, enabling educational staff to ensure timely support.

Version 1 (implemented November 2019)

- As of Date
- Attendance (Days Attended / Total Possible)
- CEP School
- District Exit Status (Entry Type / Exit Withdrawal Type)
- Economically Disadvantaged
- EL Instructional Program
- English Learner Eligible
- Foster Care Eligible
- Grade
- Homeless Eligible
- Migrant Eligible
- Previous School District (code)
- Program Participations
- Special Ed IEP/Plan Date
- Special Ed Primary Disability
- Special Ed Program Service

Version 2 (implemented October 2021)

- District Exit Date
- Early Childhood Program*
- EL Exit Date (District)
- EL Exit Date (State)
- EL Home Language
- EL Primary Language
- End of Term Status*
- General Ed FTE
- Previous School District (name)
- Reading Deficiency Identified
- Special Ed Exit Date
- Special Ed Section 52 FTE
- Special Ed Section 53 FTE
- Total Days Removed (Discipline)



Direct Certification Integration

Streamlines the lookup process in the SIS for Food Service System users, enabling real-time determination of students' eligibility for free/reduced meals. It eliminates manual data handling, enhances data security, and facilitates seamless integration with SIS and food service systems, ensuring immediate eligibility assessment upon enrollment.

Considerations:

- Automatic retrieval of DC status upon UIC match (enrollment into SIS) through connection to MiDataHub
- Permissions - role authorizations within the SIS
- Notifications for staff from SIS via scheduled reports, alerts, email, etc.
- Automate your direct cert import process - get the data through MiDataHub instead of an import file



Michigan DataHub Newsletter

Subscribe to the MiDataHub Newsletter



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<https://tinyurl.com/2dkcg7bn>



The Vocab

- Student Data
 - Fields - SIS
 - Elements - SIS and MiDataHub
 - Properties - SIS and MiDataHub
 - Characteristics - MSDS
- API - Application Programming Interface. An API is the basis of interoperability, allowing other programs to receive data (GET), write data (POST), update data (PUT) and remove data (DELETE) from or to the Michigan Data Hub in a secure manner. It is the most flexible of all integration types and can be put into place very quickly with just a few pieces of information.
- Ed-Fi - The Ed-Fi Alliance (www.ed-fi.org) is a non-profit funded by the Michael and Susan Dell Foundation out of Austin, TX. The Ed-Fi Alliance produces a free, open, standards-based toolset which is leveraged by the Michigan Data Hub.
- EEM – Educational Entity Master. This is the official CEPI database of all of the school entities in Michigan such as districts, buildings, and programs, along with numerous details about each.
- Michigan Data Hub – Represents the overall interoperability initiative as well as a collective representation for MiDataHub.
- ODS – Operational Data Store. The database where district data is housed. Each district has an ODS with their own data for each school year. All integrations and interoperability are provided for a district from their ODS.
- XML – eXtensible Markup Language. A very flexible, and generic data format. It can describe data in a very comprehensive manner. Format used for MSDS Student Data Uploads.

Thank You!



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