

# SIF (Iowa)

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This article explains how the Iowa SIF model has been set up, which objects and elements are being messaged and the Campus configuration required to successfully use SIF on IA versions of Campus.

This article explains the following items:

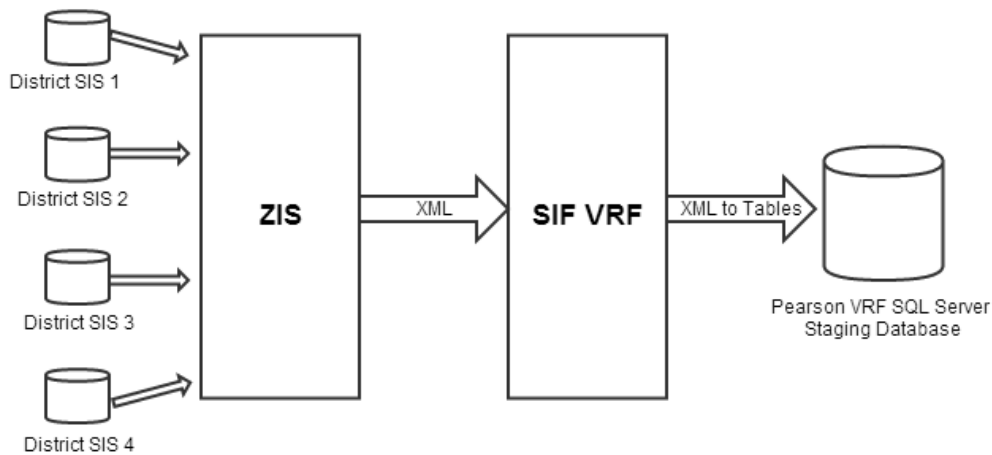
- [Business Requirements](#)
- [State SIF Model](#)
- [Version](#)
- [Architecture](#)
- [Objects](#)
- [State SIF Configuration](#)
- [Reporting Statewide MTSS](#)
- [FAQ](#)

## Business Requirements

The Iowa Department of Education is committed to helping districts and schools collect and report state mandated BEDS, EASIER, ITC, and Uniq-ID student data in a more timely and automated manner. The Schools Interoperability Framework (SIF) is the chosen medium by which to accomplish these goals.

## State SIF Model

**SIF DATA WORKFLOW**



## Version

The current active SIF version in Iowa is v2.4.

# Architecture

The Iowa Department of Education uses the Pearson VRF, a ZIS pool plus a staging (validation point) and warehousing setup with data mining tools.

## Objects

For a complete list of objects, elements, and extended elements used in IA SIF messaging, see the Excel document below (updated with Release Pack .2451):

- [ia-sif-objects \(2451\).xlsx](#) 

## State SIF Configuration

Campus configures the state SIF during SIF implementation. The following sections describe how Campus sets up each tool within the State SIF configuration process.

Due to the specific nature of each customer's SIF configuration setup, the Agent, Zone, and Data Access Right setup shown in the sections below are for **EXAMPLE PURPOSES ONLY**. If you have difficulty configuring these tools within Campus, please contact Campus Support.

### Agent Setup

Tool Search: Agents

A state agent is set up to ensure proper information communication between the Campus and the state ZIS (see Image 1).

The **URL for the zone to pull from** is provided by the State.

Field data shown in the image below is for example purposes only.

Once the Agent is set up, click the **Register** button to send a register message to the state URL. Once Data Access Rights are established, select the **Subscribe** and **Provide** buttons to send SIF messages to the state, letting them know how your access control list is configured.

### Agent Setup

+ New   Save   ✕ Delete   View Queue   ✕ Purge Queue   View Log   ✕ Purge Log

| Agent List   |  |
|--------------|--|
| Name         |  |
| AgentBradley |  |
| AgentDustin  |  |
| IA_FAST      |  |
| IA6039Campus |  |
| ICTEST       |  |

#### Agent Info

● The Campus Agent is running on this server.

\*Name: IA6039Campus   Queue: 0   Use Gzip On Send:

#### Incoming Host

Header Field:    IP Address:

#### Description

DIS/ZIS and SIS Agent

Registered: Yes    Sleeping: No

Status: Authorized to exchange data    Selective Blocking(SMB): false

Subscribe Mode: Push    Connection Type: Agent

XML Language: Infinite Campus    Max Buffer: 15000000

URL of zone to push to:

Note: The Campus Agent is built-in to the system and are not configurable using this interface.

State Agent Setup

## Zone Setup

Tool Search: Zones

A state Zone is established with the values in the image below (Image 2). The Campus ZIA acts as the communication hub and manager of zones for data messaging. The ZIS controls the access, routing, and security of data messages from various types of **Agents** operating within its zones (e.g., **SIF Agents**, district/state-level agents, POS Agents, DIS Agents).

The ZIS allows zones to be scoped to specific years, schools, and/or calendars, eliminating the transfer of excess data. Messages are routed through the ZIS based on the **Data Access Rights** configured for the data objects allowed to be exchanged within each zone.

## Zone Setup

New
 Save
 Delete

| Zone List      |                                |
|----------------|--------------------------------|
| Name           | Scope                          |
| IA_FAST        | Sioux City Community 22-23     |
| InfiniteRouter | Sioux City Community All Years |
| WF             | Sioux City Community 18-19     |
| WFF            | 20-21 WFF                      |
| ZoneBradley    | 20-21 WFF                      |
| ZoneDustin     | 21-22 Dubuque Hempstead High S |

**Zone Info**

**\*Name**

XML Language

Allow HTTP

Description

School

Year

Calendar

URL for Communication

*State Zone Setup*

## Data Access Rights Setup

Tool Search: Data Access Rights

Data Access Rights need to be established for the Campus and State agent. Data access rights specify how certain data objects may be exchanged between Campus and State agents.

First, Data Access Rights are set for the Campus agent. The image below shows the Objects and rights given to each object. This ensures information is properly sent from Campus to the State agent.

### Data Access Rights

Save New Access Rights Authorize All

**Zone/Agent Access Control**

- district
  - Zone IA\_FAST
    - Agent IA\_FAST
    - Agent IA6039Campus
    - Agent ICTEST
  - Campus Zone InfiniteRouter
  - Zone WF
    - Agent IA6039Campus
    - Agent ICTEST
  - Zone WFF
    - Agent IA6039Campus
    - Agent ICTEST
  - Zone ZoneBradley
    - Agent AgentBradley
    - Agent IA6039Campus
  - Zone ZoneDustin
    - Agent AgentDustin
    - Agent IA6039Campus

**Access Control List for IA6039Campus in ZoneDustin**

| Object Name                       | Req OK                              | Sub OK                              | Resp OK                             | Prov OK                             | Add OK                              | Chng OK                             | Del OK                              |
|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| AttendanceCodeInfo (sif1.1)       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| StudentAttendanceSummary (sif2.0) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| StudentDailyAttendance (sif1.1)   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| StudentPersonal (sif1.1)          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

Add DISDataAccess

Second, Data Access Rights for the State agent are set. The image below shows the Objects and rights given to each object. This ensures the State agent can properly receive the information being sent from the Campus agent.

### Data Access Rights

Save New Access Rights Authorize All

**Zone/Agent Access Control**

- district
  - Zone IA\_FAST
    - Agent IA\_FAST
    - Agent IA6039Campus
    - Agent ICTEST
  - Campus Zone InfiniteRouter
  - Zone WF
    - Agent IA6039Campus
    - Agent ICTEST
  - Zone WFF
    - Agent IA6039Campus
    - Agent ICTEST
  - Zone ZoneBradley
    - Agent AgentBradley
    - Agent IA6039Campus
  - Zone ZoneDustin
    - Agent AgentDustin
    - Agent IA6039Campus

**Access Control List for AgentDustin in ZoneDustin**

| Object Name                       | Req OK                              | Sub OK                              | Resp OK                             | Prov OK                  | Add OK                   | Chng OK                  | Del OK                   |
|-----------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| AttendanceCodeInfo (sif1.1)       | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| StudentAttendanceSummary (sif2.0) | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| StudentDailyAttendance (sif1.1)   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| StudentPersonal (sif1.1)          | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Add DISDataAccess

## Exclude SIF Reporting for a Calendar

Tool Search: Calendar Information

Marking the **Exclude from SIF Exchange** checkbox on a calendar will exclude the SIF TermInfo and SchoolCourseInfo objects from generating or reporting records in SIF.

### Calendar Information

| Calendar Info   |   |  |
|---|---|--|
| Calendar ID<br>1105   | School<br>2222 WF (schoolID:77)                       | Sequence<br><input type="text"/>                 |
| *Name<br>22-23 WF 1   | Number<br>1   | Summer School<br><input type="checkbox"/>        |
| *Start Date<br>08/01/2022                                   | *End Date<br>06/01/2023                               | Exclude<br><input type="checkbox"/>              |
| Student Day (instructional minutes)<br><input type="text"/> | Teacher Day (minutes)<br><input type="text"/>         | School Choice<br><input type="checkbox"/>        |
| Whole Day Absence (minutes)<br><input type="text"/>         | Half Day Absence (minutes)<br><input type="text"/>    | External LMS Exclude<br><input type="checkbox"/> |
| Type<br>I: Instructional                                    | Exclude from SIF Exchange<br><input type="checkbox"/> |  |
| Require Student Assignment<br><input type="checkbox"/>      |   |  |
| Ignore Master Push<br><input type="checkbox"/>              |   |  |

## In-Progress Grades

Tool Search: System Preferences

The Send Final Grade Only system preference indicates whether only a final grade can be sent within the SIF StudentSectionMarks object or if an in-progress grade can be sent when no final grade exists.

### System Preferences

| District Preferences        |   |
|-----------------------------|---|
| Search Screen Field Order   | Student Number AFTER Name Fields  |
| Enrollment Overlap Behavior | Strict Prevent & Warn Non-Primary: Prevent any primary enrollment in any cale |
| Enrollment Start Status Typ | Display Fifth Year EL Monitoring No   |
| Enrollment End Status Typ   | Cascade Enrollment End Date to Blended Learning Group Assignment End Date No  |
| Allow GPA Bonus Points      |   |
| Turn on Federal Impact A    | Send Final Grade Only No  |

**Send Final Grade Only = No**

| <b>Send Final Grade Only = No</b>          |   |   |
|--|---|---|
| Final Grade Exists                         | <b>Send Final Grade Only</b> for that Grading Task (no in-progress grade) if: | <ul style="list-style-type: none"> <li>• Final Checkbox is marked on Grading Task</li> <li>• Grade has been entered for Grading Task marked as Final</li> <li>• Grading Task is marked as State Reported</li> </ul> |
| In-Progress Grade Exists                   | <b>Send in-progress grade</b> if:   | <ul style="list-style-type: none"> <li>• No Final Grade exists</li> <li>• Grade has been entered for in-progress grading task</li> <li>• In-progress grading task is marked as State Reported</li> </ul>            |
| Neither Final nor In-Progress Grade Exists | <b>Send No Record</b>   |   |
| <b>Send Final Grade Only = Yes</b>         |   |   |
| Final Grade Exists                         | <b>Send Final Grade</b> if:   | <ul style="list-style-type: none"> <li>• Final Checkbox is marked on Grading Task</li> <li>• Grade has been entered for Grading Task marked as Final</li> <li>• Grading Task is marked as State Reported</li> </ul> |
| No Final Grade Exists                      | <b>Send No Record</b>   |   |

## Reporting Statewide MTSS

MTSS data is reported in SIF via a set of values established within Campus. The following will describe how this data is reported and how it can be set up within Campus.

**This section is under construction and will contain more thorough steps in the near future.**

- District Employment and District Assignment records are both required to send the StaffPersonal and StaffAssignment SIF messages that report MTSS information.
- At a minimum, the District Employment and District Assignment records need a Start Date, and the District Assignment record will also need a calendar. This is the minimum required

setup to send the SIF message to report this person.

- If a person is both a teacher and a principal, the state would like to report two codes. The only way to do this is to create two District Assignment records for this person.
- If two District Assignment records are needed, please note that the Teacher check box should only be checked on one record. The teacher check box trumps all other setups and will always send the record as 1000, regardless of the title.

## Reporting Logic

1. Report an instance of Jobfunction (including Code and OtherCode) for the 1st criteria that are met and report the indicated OtherCode:
  - Report the entry in the Attribute/Dictionary 'Standard Code' column for the selection in (Census > People > District Assignments > Employment Assignment Information > Title).
  - When the Title field is null or when the Title selected has a Standard Code = Null:
    - When (Census > People > District Assignments > Employment Assignment Information > Teacher) = Checked:
      - Report "1000".
    - When (Census > People > District Assignments > Employment Assignment Information > Teacher) NOT = Checked:
      - Staff does not qualify to report this instance of OtherCode.
2. Report an instance of Jobfunction (including Code and OtherCode) and report the indicated OtherCode:
  - Report the entry in the Attribute/Dictionary 'Standard Code' column for the selection in (Census > People > District Assignments > Employment Assignment Information > FAST Group).
3. When staff doesn't qualify to report a Jobfunction based on either criteria, report the Jobfunction element as null.

## FAQ

**How do SIF event messages work? What action will create a SIF event message?**

**A:** There are three types of SIF events: ADD, CHANGE, and DELETE.

1. An ADD event happens when data is created; for example when a new enrollment is saved for a student.
2. A CHANGE event happens when data is modified; for example when a comment is saved on a student enrollment.
3. A DELETE event happens when data is deleted; for example, when an enrollment is deleted.

A change event is the most common way to verify that SIF data is sent. The easiest way to test a change event would be to add a comment and save.

For example, a comment can be saved on a student enrollment record to verify the student will send a SIF message.

The following screens can trigger SIF event messages for the following SIF objects:

- CalendarSummary: System Administration > Calendar > Calendar > Calendar.



- LEAInfo: System Administration > Resources > District Information.
- RoomInfo: System Administration > Resources > Resources > Rooms.
- SchoolCourseInfo: Scheduling > Courses > Course.
- SchoolInfo: System Administration > Resources > School.
- SectionInfo: Section tab.
- StaffPersonal: Demographics tab in Census.
- StudentContact: Demographics tab for a student or their parent.
- StudentPersonal: Demographics tab. Enrollment. Address.
- StudentSchoolEnrollment: Enrollment tab.
- StudentSectionEnrollment: Schedule tab.

### **I see a NULL pointer error message in the error logs. What does it mean?**

**A:** Most often, the error is nothing to be concerned about. It likely indicates a temporary disconnect between the two servers, which has since been resolved. The Infinite Campus SIF agent is in constant communication (24 X 7 X 365) with the IA ZIS. The error message indicates the communication was temporarily lost. A server restart for a Windows update might cause this to happen.

### **Do we need to replace our current titles with the ones coded for IA Tier, such as 2200 for site user? If so, do we move the actual job titles like Eng 9/10 down to Teaching Assignment?**

**A:** There should be no need to replace existing titles. Only missing titles should be added, and if the title already exists, it should remain in the dictionary. You do want to be sure the 'Standard Code' contains the appropriate number for each title (2000 for Site User). The standard code is used by the SIF message. You should locate the current title, click on it, and make sure the standard code number is correctly filled in. If the standard code is empty, the number should be entered, and the record should be saved. All users currently associated with the title will now report correctly to TIER. The Teaching Assignment dictionary is locked and cannot be modified. This field is currently configured correctly.

### **The documentation says you should be putting a SIF code in for each school in the field labeled 'Standard Code (SIF Code)'. Do we need to do that? We do not have anything in those fields currently.**

**A:** The Standard Code on the school is used for other states. Iowa does not need to use it, because the regular State School Number is used. Certain states use two different values to report the state school number and so the standard code field will be used if two different school numbers need to be reported. Iowa only uses one school number, so the standard code can be left empty.

### **Does Campus use a single SIF Agent or multiple agents for differing types of data?**

**A:** Campus provides a fully functioning ZIS which allows multiple agents to be connected and can communicate with all of them.

### **Is Any Special Software/Hardware Required to Host the Zone Integration Server (ZIS)?**

**A:** No. Infinite Campus provides every customer with a free embedded ZIS.

## **How Does the Campus Data Integration Server (DIS) compare to the standard ZIS?**

**A:** DIS is how Campus sends XML messages for different purposes (State Edition, Food Service, National Records Exchange). SIF is a subset of DIS. Campus' ZIS is SIF certified, and we were the first company to receive SIF 2.0 ZIS certification.

## **Can I Modify and Customize Campus SIF Agent?**

**A:** No. The SIF Agent is hard coded and does not allow for modification or customization.

## **What SIF Agents is Campus able to Connect With?**

**A:** Campus can establish a SIF connection with every SIF agent that exists. Campus needs to know which objects should to be sent to the SIF vendor.

## **Is There a Way to Send Only Certain Elements of a SIF Object?**

**A:** No. When Campus sends information for a SIF object, all elements within that object are sent. There is no way to specify which elements within an object should be sent.

## **If a Student's Enrollment Record is Ended, Will SIF Messages Still be Sent for this Student?**

**A:** Yes. As long as the enrollment record is in the zone, it will send an SIF message that includes the Entry Date and Exit Date.