SIF Data Exchange

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> **This article is designed for advanced technical users only**
>
> and is relevant to districts using SIF communication for data exchange. Configuration and localized information is available:
>
> - SIF Configuration

SIF is a standard for data interchange that allows two, separate information systems to communicate with each other. SIF sets a standard messaging language and format that defines data objects commonly shared across student information systems and applications.

As long as both applications conform to the same SIF data interchange standards (such as those set by SIFA), communication is possible between two systems designed by entirely separate vendors.

Common Acronyms

The following abbreviations are used in relation to SIF:

Acronym	Definition
DIS	**Data Interchange Services** This is the process of data integration within Campus that involves a combination of servers, messaging, agents, the Campus ZIS and the Campus SIS. SIF is one, small branch of Campus DIS.
SIF	**Schools Interoperability Framework** As related to Campus, SIF messaging is the way that non-Campus applications communicate with Campus, per the guidelines outlined by the SIFA organization.
SIFA	**Schools Interoperability Framework Association** This is the organization that defines the SIF specifications, or the set of rules education software programs may adhere to allow data movement between vendors.
ZIS	**Zone Integration Server** The Campus ZIS controls the access, routing and security of messages. It is a communication hub where multiple zones setup for specific communication purposes are managed. The ZIS keeps track of agents registered in a zone, listening to and directing messages as specified between agents.

Campus/SIF Data Exchange

Campus has tailored its database elements to meet SIF compliance standards, allowing non-Campus systems to access Campus data for reporting and district operation purposes.

Campus Tools for SIF Messaging

The Campus interface contains tools that can be used for SIF setup. These tools are located within the Data Interchange folder of the System Administration module:

- Agents
- Data Access Rights
- Zones

Scoping and Exchanging SIF Data

SIF messaging defines sharing definitions for commonly used data objects but does NOT specify the official size or scope of a zone for information sharing. In addition, SIF only supports a limited number of data elements for exchange between applications. The result is that two SIF-certified applications may be unable to communicate with each other because they assume a zone is of a particular size and supports particular objects.

To combat this issue, SIF Zones with specific Data Access Rights can be created in Campus. When a SIF Zone is created, it can be scoped to exchange only certain data, based on district, school, year and/or calendar criteria. A SIF "agent" exists in the Campus system to represent the non-Campus application, handling communication between both systems.When a SIF Zone has been scoped, its agent(s) will further refine the allowed data set to the relevant objects defined on the Data Access Rights tool. All excess data is filtered from the SIF exchange process.

Campus comes with a built-in ZIS. The Campus ZIS and the SIF agent are tightly coupled for synchronous messaging. This allows Campus to immediately notify the SIF agent with data update messages.

SIF Vertical Reporting

In states that use SIF Vertical Reporting, setup modifications allow large, pre-specified data structures to move from one education entity to another, beyond minimally supported SIF specifications.

If the external state requires data sent to an agent, it is sent directly from the Campus ZIS. If the external state requires data be sent to a ZIS, Campus uses zone-to-zone communication accomplished by the Agent Emulation process.

The Campus SIS can plug directly into an existing SIF environment with a pre-configured ZIS and agents.

Vertical Reporting Objects

Campus supports these SIF vertical reporting objects:

- *ReportAuthorityInfo*
- *Report Manifest*
- *SIF_ReportObject*
- *StudentLocator*

SIF StateID Initiatives

Some states have specific stateID initiatives that use the SIF-based StudentLocator object to automatically assign a stateID to newly enrolled students. Some state Student Locator Frameworks (SLF) will use the StudentPersonal and StudentSchoolEnrollment objects.

In these states, a state agent subscribes to student data (SIS) within a district zone within a state-owned ZIS environment. The state framework application then publishes the StudentPersonal and StudentSchoolEnrollment object change events containing new or changed stateIDs. The Campus agent subscribes to the objects and updates the person record with the newly published stateID.

Configure Data Access Right for StateID Assignment

On the Data Access Rights tool:

1. Select the new district zone and mark the Campus Agent to **Provide/OK** and **Respond/OK** to the following SIF objects (* indicates it is optional):
    - *LEAInfo**
    - *School Info**
    - *StudentPersonal*
    - *StudentEnrollment*
    - *StudentContact**

2. In the new district zone, mark the Campus agent to **Subscribe/OK** to the *StudentPersonal* object.

    > When the Campus agent subscribes to *StudentPersonal*, only changes to the *stateID* will be written to the Campus database; all others will be ignored.

3. If the state's agent name/SourceId is known, it can be pre-registered and authorized. If the state's agent name/SourceId is unknown, wait for the agent to register, subscribe and provide before authorizing it.

OKLAHOMA ONLY:

In Oklahoma, the agent will likely be named "WaveAgent." It should be authorized to exchange data and allowed to **Subscribe/OK** and **Request/OK** to the following objects:

- LEAInfo
- School Info
- StudentPersonal
- StudentEnrollment
- StudentContact