



Identity: Let's Secure and Operationalize That!

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July 2018

What we want to discuss

- Is identity an interoperability challenge? Why?
- Pain points and challenges for LEAs and SEAs
- FCPS perspective
- How can we operationalize and manage this?
- Best practices discussion
- What and where should we go next?

Student Experience

- Ensuring Awareness
- Visiting
- Applying
- Funding Application
- Register/Enroll
- Find Accommodat...
- Pay Fees
- Learning
- Socialising/Living
- Assess...
- Progr...
- Offer Feed...
- Admin & Info
- Career Options
- Graduate
- Work
- Alumni & Ambass...

Realities of the Data Center

- Comms Marketing and Recruitment
- Admiss... and Induction
- Recruit Staff
- Provel...
- Finance
- Support/Pastoral Care
- Accommo...
- Curriculum Development
- Scheduling
- Teaching
- Staff Review
- Assessing
- Progressing Students
- Admin & Info
- Graduation
- Careers
- Employer relationships
- Alumni Relationships

Administrative, Teaching & Management Points



Realities of Data Use in the Classroom

| | L | M | AT | AU | AV | AW | AX | |
|---------------|-----------|---------|----------|--|------------------|--------|---------|--------|
| | | | Homework | Test | Math Benchmark 2 | | | Unit 1 |
| Helper | [Mastery] | [Grade] | Grade | Grade | 0-59% | 60-79% | 80-100% | |
| | | | | 1.a. Compare and translate displays of data and justify the selection of the type of graph | | | | |
| | | | | 1.1 Describe rules that produce patterns found in tables, graphs, and models and use variables to solve problems or describe general rules | | | | |
| | | | | 4.1.c Convert basic measurements of volume, mass, and distance within the same system for metric and customary units | | | | |
| | | | | Use the general counting principle on sets with items to determine the number of combinations | | | | |
| Total Mastery | 100.0 | 92.5 | 100 | | | | | |
| Overall Grade | 50.0 | 85.3 | 95 | | | | | |
| Homework 1 | 100.0 | 92.0 | 100 | 87 | | | | |



User Stories Can Help You

- As a [Fill in User Type]
- I need [Functionality/Access/Permissions/etc...]
- So that [Impact]

Agency needs and approaches

- As a Local Agency (LEA)
- I need data systems and applications to be integrated
- So that I can manage the proliferation of applications and data systems, reduce data silos, and reduce the amount of time and effort needed to support my end users.

Agency needs and approaches

- As a State Agency (SEA) -
- I need consistent data sets and common interfaces
- So we can provide services and data, with/to/through my LEAs, to inform student and staff decision making, accountability, and policy-making.

How does your organization manage security roles across applications?

Active Directory/Active
Directory Federated Services

OpenID Connect

Manual/Homegrown
Processes

SSO Providers

Does your organization relate security roles to job titles or other data?

Yes

No

I'm not
sure

Total Results: 0

How does your organization manage security roles across applications that don't use standard group/role names?

Manual/Homegrown
Processes

Wild West

Data Dictatorship

Is this even possible?

How often does your organization discuss managing data roles in the context of a data asset?

Weekly

Quarterly

Annually

Does anyone
do this?

The Challenge

- In most of our organizations, you would likely observe several dozens of applications and data systems in operational use at the same time.
- In some cases authentication services may be available, but how are the permissions within applications managed?
- How do you manage permissions when integrating data across your ecosystem?

Context for FCPS

- Beginning in the Fall of 2016, FCPS released an RFP for a data warehouse that would be used for 40+ applications/data systems over time.
- Historically permissioning across applications was not centralized.
- When permissions are managed independently across multiple systems, how can you implement a permissioning structure in a centralized environment without usurping power from application managers/owners?

Strategy

- Sometimes you need to touch a hot stove in order to learn not to touch a hot stove.
- Our plan :
 - Leverage the data warehouse/dashboard deployment to drive the will to change.
 - Attribute roles/permissions to job type codes.
 - Use the Ed-Fi ODS to provide a central hub for security roles.
 - Roles should be abstractions.
 - Implementation of the roles should place in the individual applications.

Takeways

- Permissions/Security are the gatekeepers of the data.
- Scrutinize vendors and their products before making a purchase.
 - Here are questions you can use to get a better idea about what a product might be able to do/support before you buy: <https://bit.ly/2J60fZb>
- Get your organization involved with others to slay this dragon:
 - IMS Global (<https://www.imsglobal.org>)
 - Ed-Fi Alliance (<https://www.ed-fi.org>)
 - Project Unicorn (<https://www.projunicorn.org/>)

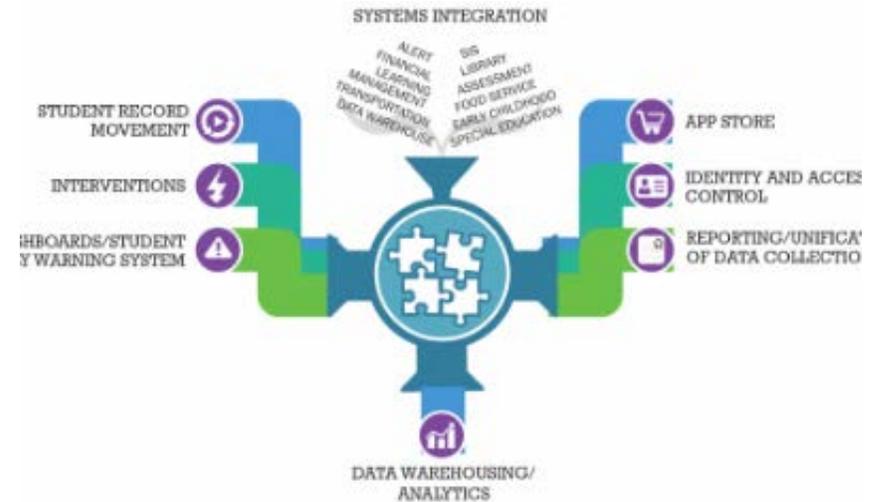
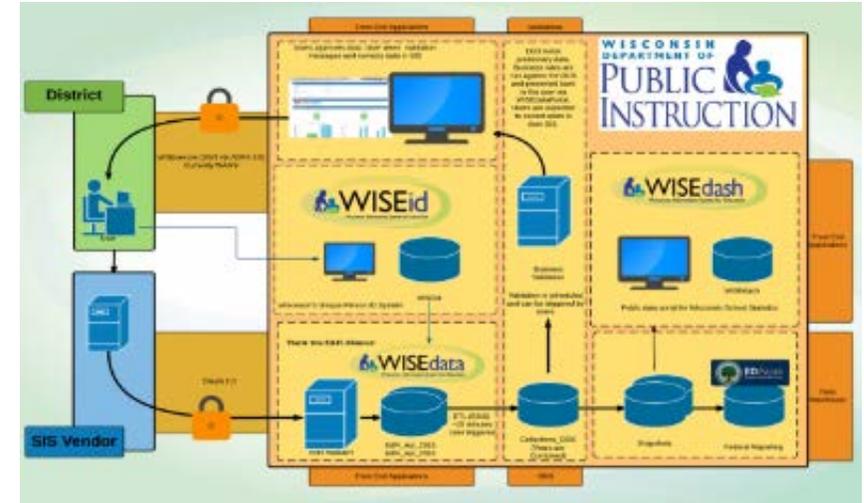
Other agency examples

Wisconsin -

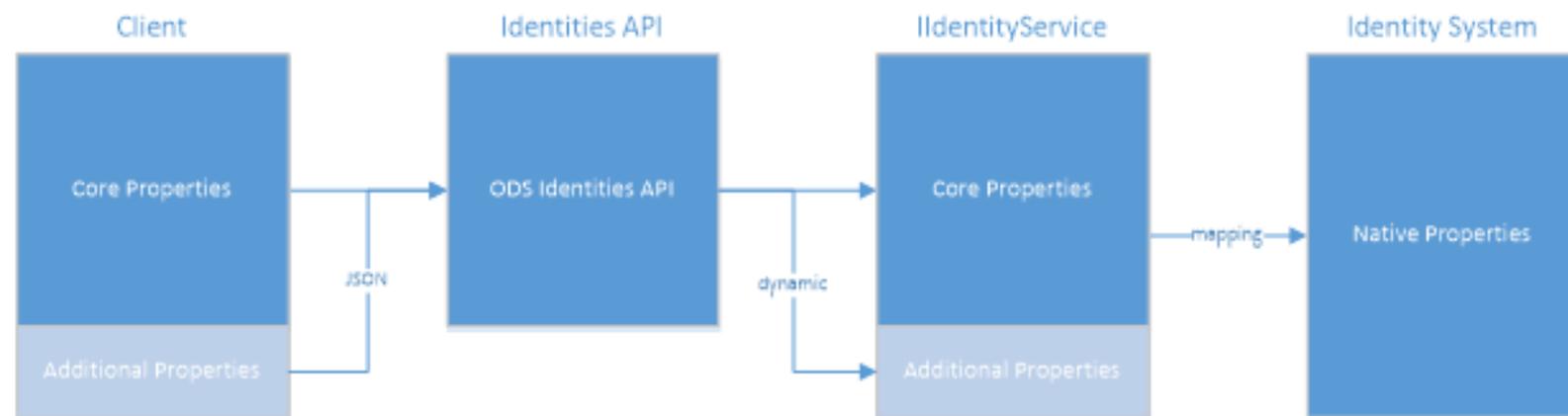
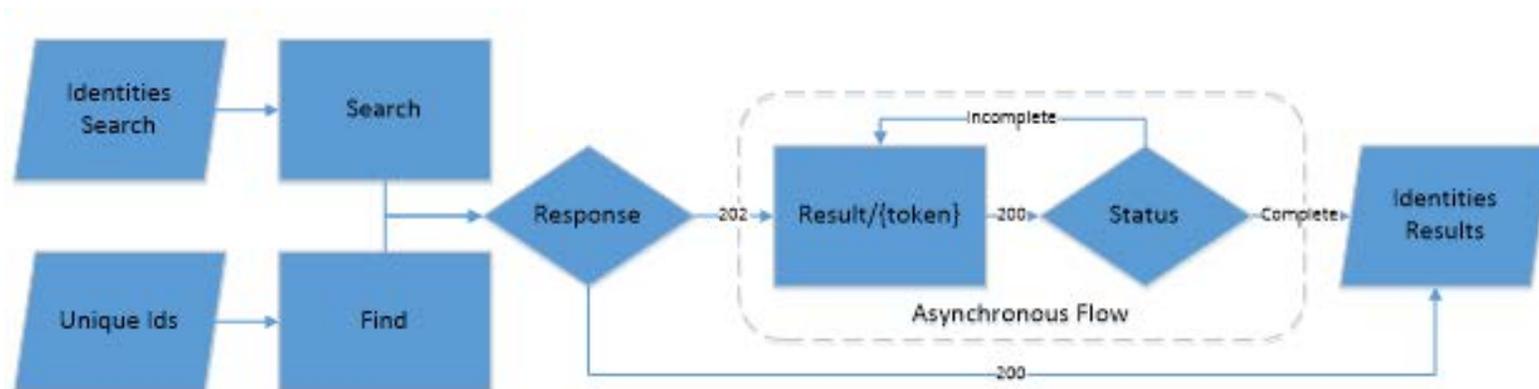
- Statewide identity matching & coordination
- Moving to statewide federated IAM

Michigan -

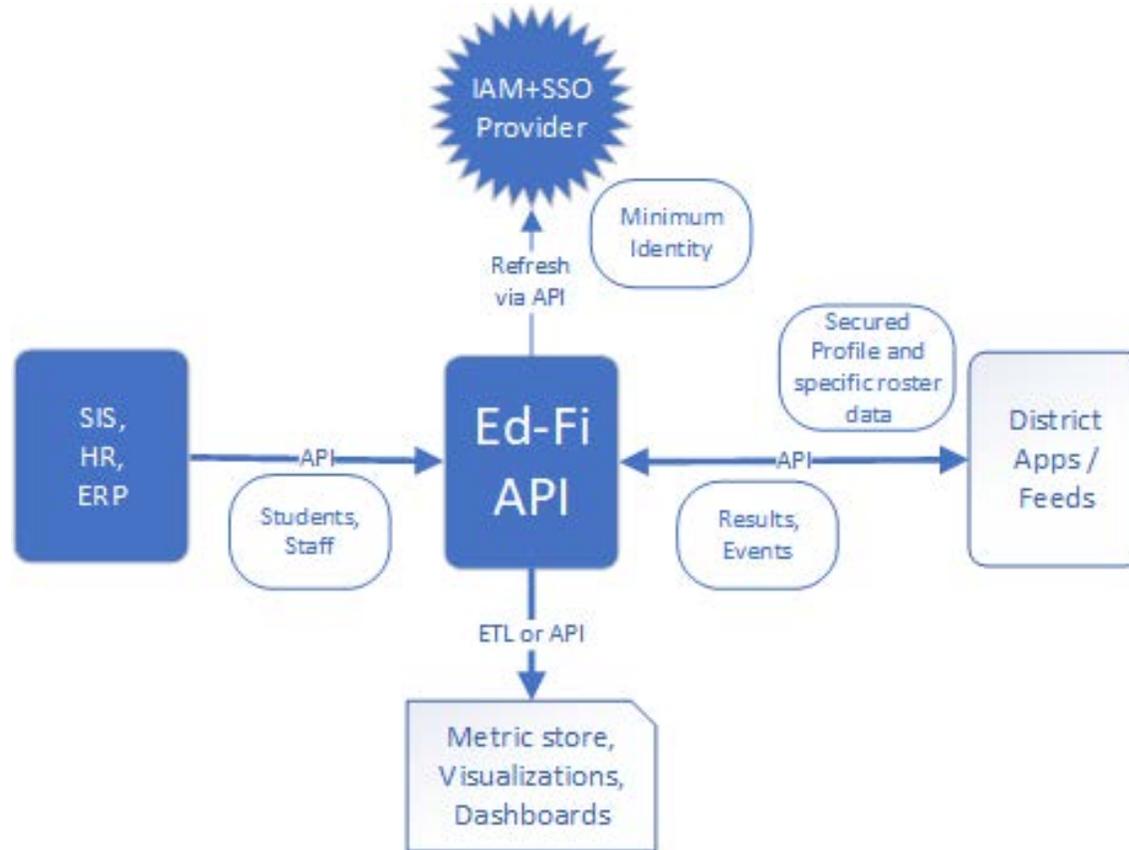
- District-managed, cross-state identity and access control
- Ready for federation at state level



Ed-Fi Identity API



Emerging Pattern



Auth standards

- OAuth
- OpenID Connect

Providers

- Google GSuite
- ADFS, AD and AzureAD
- Other cloud SSO

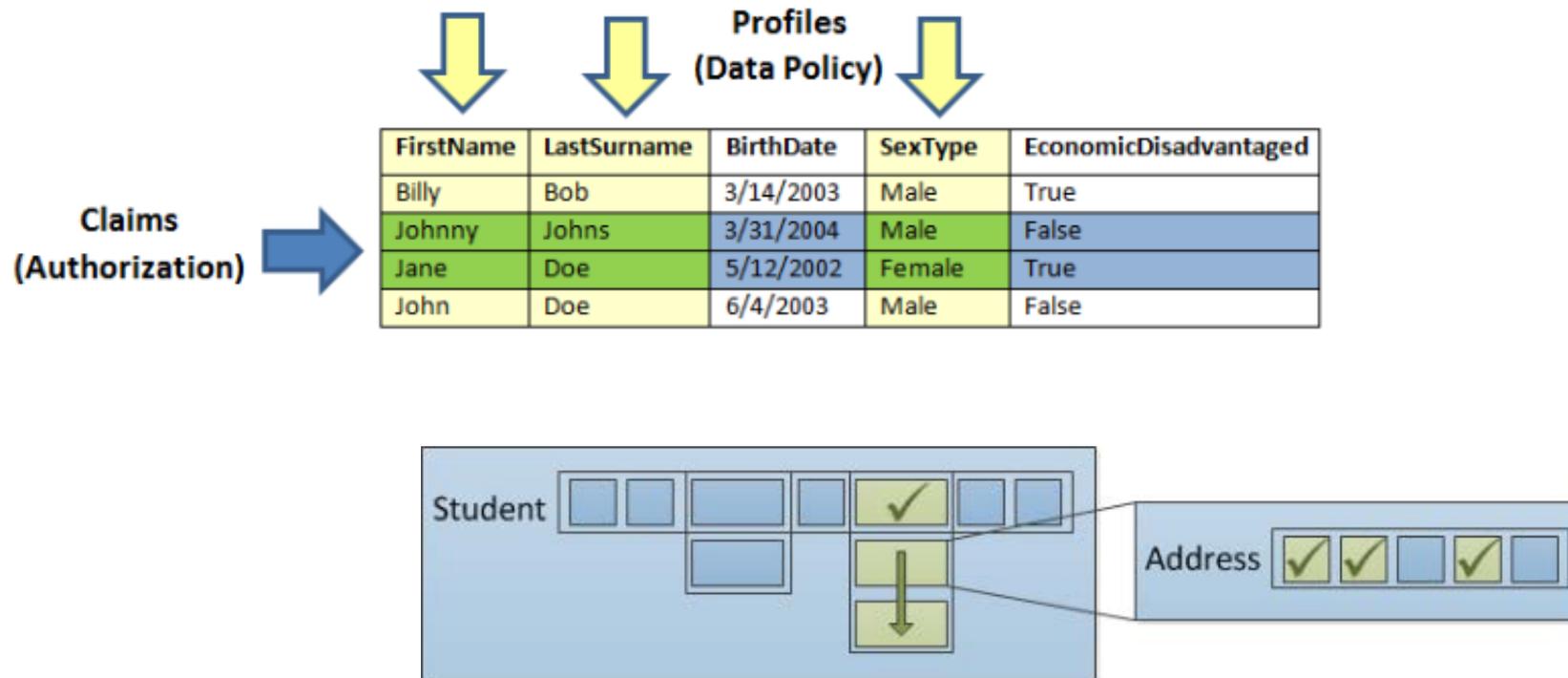
Roles, Scopes, Duties - groupings

Roles - For vertical, across organization types where location may vary

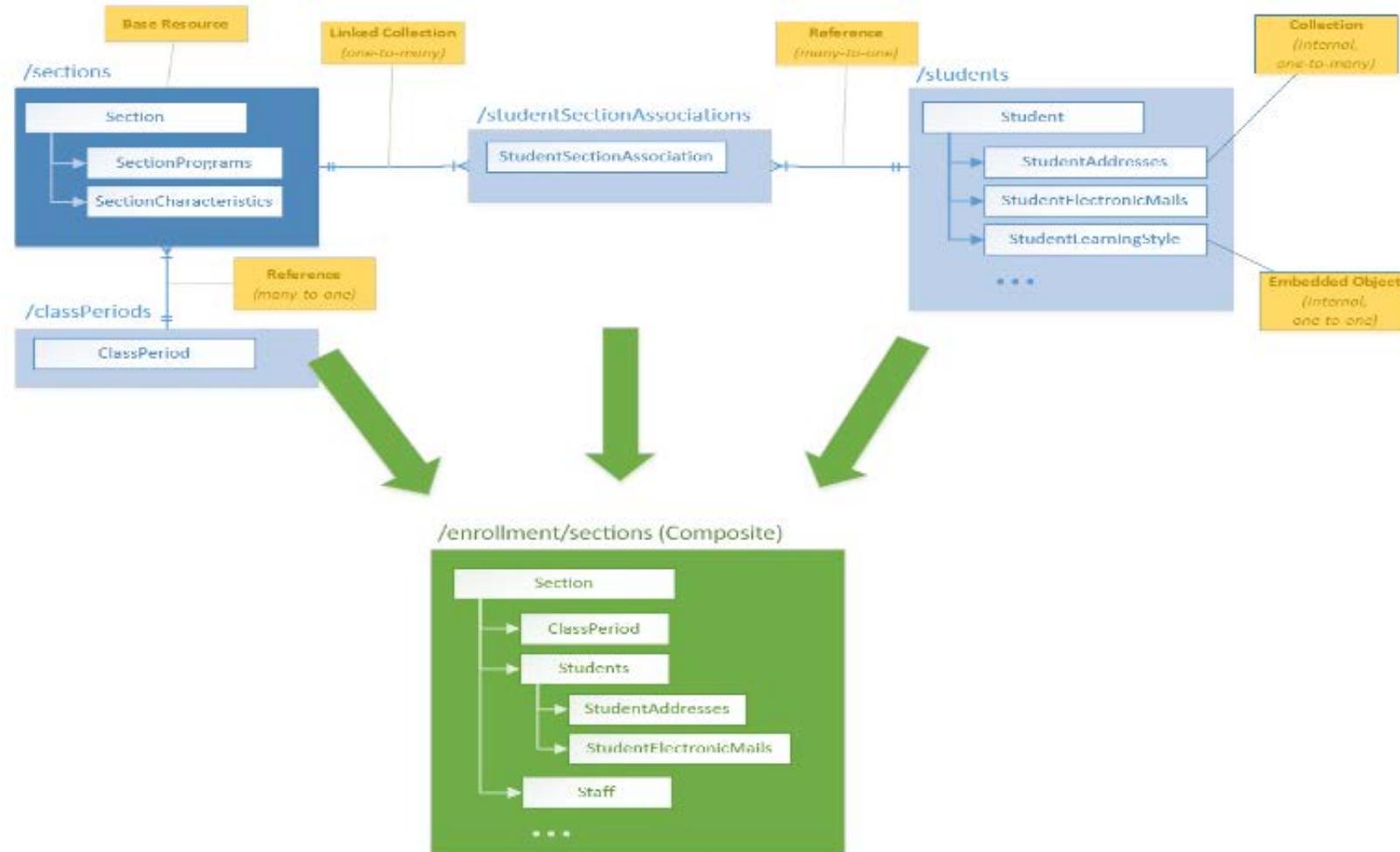
Caseloads across grade/building scopes - Are horizontal, each sub-org or site groupings to limit “row” access

Duties/Tags/Flags - Can be turned on or off quickly

Access control in Ed-Fi



Ed-Fi Enrollment API



What is happening, now & next?

- Publish field-implemented, documented patterns of Ed-Fi interoperability standards supporting IAM in the field today.
- Continue discussion & work at Ed-Fi Summit and Bootcamp.
- Share and collaborate:
 - What are your needs and priorities?
 - What are your thoughts re: standard roles and role types?
 - What privacy legislation/requirements are you facing?

How Can I Get Involved?

Contact Shannon.Kerlick@ed-fi.org

to share your IAM practices and needs

Attend the Ed-Fi Summit and Bootcamp

Join the Ed-Fi Community

<https://www.ed-fi.org/getting-started/>



Ed-Fi Summit & Bootcamp

OCTOBER 9 - 12, 2018

8:00 AM - 12:00 PM CDT

AUSTIN HILTON , AUSTIN , TX



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