

#COSN14

Federated Identity and Access Management for Cloud Services

Extending
InCommon
Federation Services
to K-12

Panel

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Agenda

- What is Federated Identity?
- InCommon & the K12 Federation Pilot Program
- Two Federation Pilots
 - Nebraska K-12 Identify Federation
 - Illinois Shared Learning Environment
- Questions

What is Federated Identity?

- A collection of organizations that have agreed to interoperate using a common framework for trust
- Participants use a common technology for the secure exchange (assertion) of agreed upon common attributes
- Federations include Identity Providers (IdP) and Service Providers (SP)
 - IdPs maintain identity databases and authenticate users
 - SPs have a protected online resource and authorize users

Benefits of Federated Identity Management

- Reduced Support
 - Reduces password resets and account creation
- Improved Security and Privacy
 - Passwords are not shared with provider
 - Providers receive only the data they need to provide appropriate access
- Potential Cost Savings
- Faster Integration of new services
- Shared Services (without creating new accounts)

Personal “Federated” Identity (OpenID, Oauth)

Google accounts

The application Khan Academy is requesting permission to access your Google Account.

Please select an account that you would like to use.

jfsiegl1@fcpschools.net

Google is not affiliated with the contents of **Khan Academy** or its owners. If you sign in, Google will share your email address with **Khan Academy** but not your password or any other personal information.

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Real World Federations



InCommon & the K12 Federation Pilot Program

- An organization of more than 600 Universities, Government and Nonprofits laboratories, research centers and sponsored partners (vendors).
- A common technical and business framework for trusted, shared management of access to on-line resources.

Nebraska P-20W Identity Federation



Educational Service Units of Nebraska
Higher Education of Nebraska and Work
Force Development

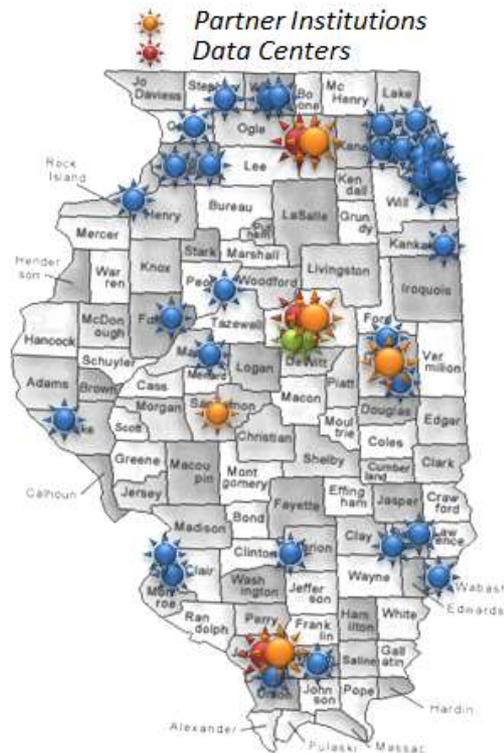


ISLE

K12 School Districts,
Partners, & Data Centers

Create, Find, Map, Use, and Visualize Data Linked to Content
and Standards enabling Personalized Learning and Career
Preparedness for All Illinois Learners (P-K12 & Life-Long).

Learning Maps & Learning Content



Dynamic Cloud Infrastructure

The composite image consists of four panels. The top-left panel is a colorful mind map with a central figure. The top-right panel is a document snippet titled 'EXPERIMENT II CHARACTERIZATION OF AN UNKNOWN & ASINO-ALIP' with a chemical structure. The bottom-left panel is a cloud infrastructure diagram with three layers: 'Apps' (represented by a server rack icon), 'DB' (represented by a cylinder icon), and 'Compute' (represented by a server rack icon). The bottom-right panel is a dashboard with various charts and data points.

Applications and Dashboards

Students, Educators, Parents, Researchers, Schools, Institutions
and Agencies empowered by the Middleware infrastructure and
Dynamic Self-Service Procurement Cloud Platform Services:
*Learning Maps *Applications *Dashboards *Portal Integration
*Databases *Collaboration Tools *Development Incubator
*Advanced Analytics *Shared Data Services *Enterprise Services

Partners:



Let's get started!

FALL

Ms. Bullen's Data-Rich Year

When teachers are empowered with data, students do better

Teachers have access to more quality data than ever, on factors like student performance, behavior, attendance, and more. When used along with pedagogy, content knowledge, and professional judgment, these data can be used to improve outcomes for kids. Follow one teacher, Ms. Bullen, and one of her students, Joey, through the school year to see how data help teachers, parents, and others make sure students are meeting education goals.

Produced by



dataqualitycampaign.org



1 Before school starts, Ms. Bullen looks at her students' past performance and sets goals and makes working groups for all of her students—including Joey.

2 She connects performance data with test items and standards to see where Joey has excelled or fallen behind, and designs an instructional plan just for him.

MS. BULLEN JOEY

PARENTS

WHO'S INVOLVED?

PRINCIPAL

TUTOR TRAINERS

SPRING



12 Ms. Bullen meets with Joey's parents to discuss how he is struggling and works with his other teachers to prepare a plan.

3 In the classroom Ms. Bullen observes Joey's interactions for more information, and adjusts instruction on the fly.



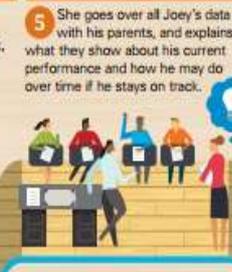
11 An early warning system flags Joey and tells Ms. Bullen that he is at risk of getting off track, falling behind, or even failing.

4 Ms. Bullen gauges Joey's progress with her formative quizzes, which show what Joey learned that day or week, and her summative tests, showing how he's improved over time.



10 Teachers use data together to solve problems and identify promising practices. Recurring meetings are set up by grade level, subject matter, or other useful ways.

5 She goes over all Joey's data with his parents, and explains what they show about his current performance and how he may do over time if he stays on track.



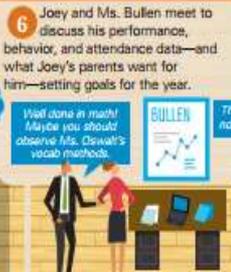
9 Since Ms. Oswald excels in an area where Ms. Bullen struggles, she observes her class.

SUMMER



17 After meeting with her principal, Ms. Bullen studies her own value-added score and evaluates how she did with different students, standards, and concepts.

6 Joey and Ms. Bullen meet to discuss his performance, behavior, and attendance data—and what Joey's parents want for him—setting goals for the year.



8 The principal reviews performance data with Ms. Bullen, using data to support and empower, not admonish. They note areas of strength and for improvement.

7 Throughout the year, data coaches and teachers work together to better understand and use different types of data.



13 With his parents' approval, Ms. Bullen reviews Joey's performance data with his after-school tutor. Together, they note areas for improvement.



18 During the summer Ms. Bullen and other district teachers meet to solve problems using data. They identify trends and promising practices from throughout the district.

14 Ms. Bullen meets with Joey to discuss how he needs to improve and set clear goals.

15 By the end of the year, grades and summative assessment data show Joey is back on track—though he will continue to need support in the future.

16 Ms. Bullen uses Joey's data to support her recommendation for his class placement next year. Her conclusion is based on objective—not anecdotal—data.

In 6th grade, 30% of students are falling off track. What do they have in common?

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Who Will Use the Presentation Service?

CASE 1: Non-Authenticated Users, Anonymous

Unknown User
May see only
informational content

Known User
No Affiliation &
Organization Domain
may use public
Applications

CASE 2: Federated IDP Other Than
IC IDP/P Authenticates User and
implicitly claims identity authority
for a user's logical session.

Presentation
Service

Data

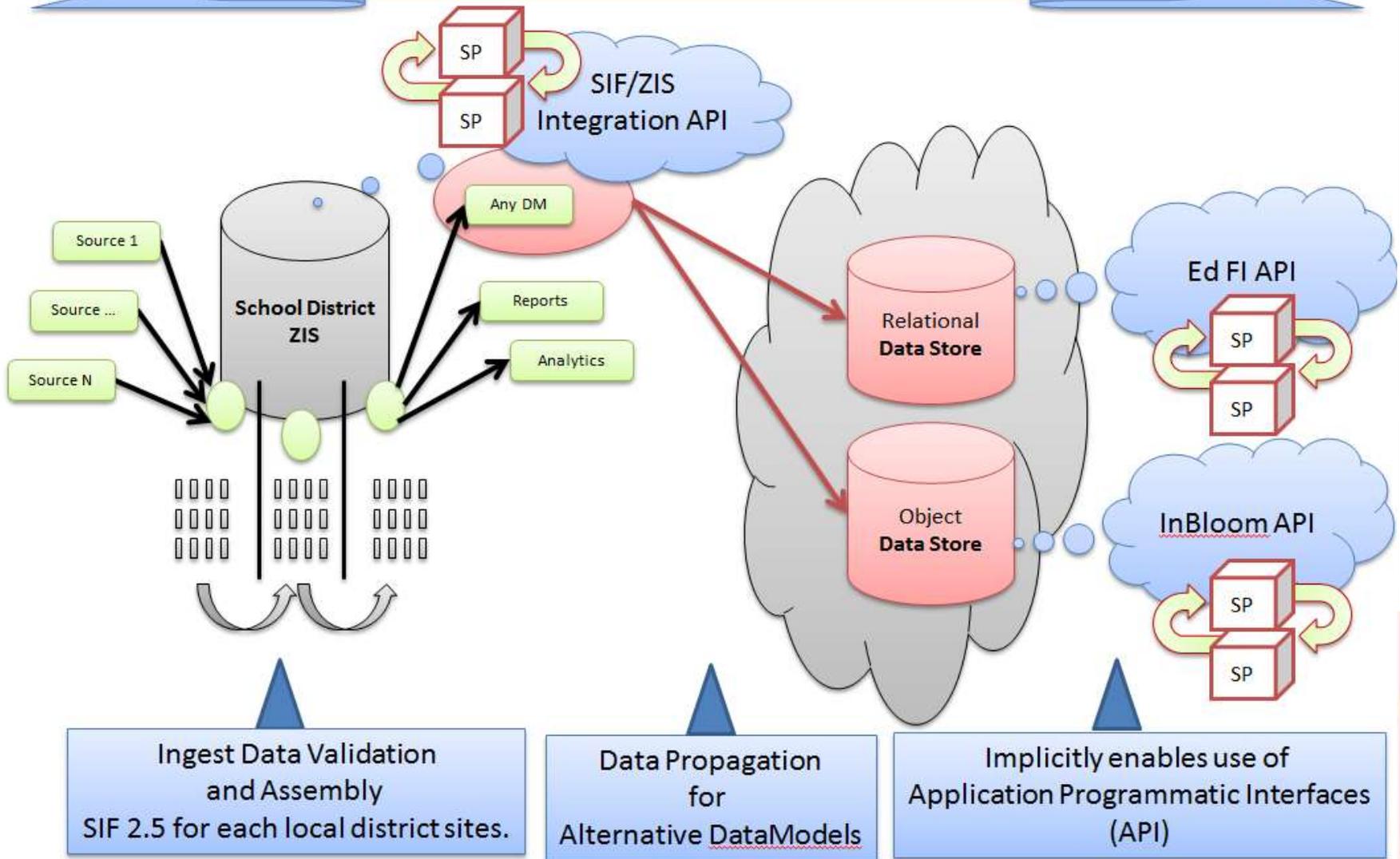
Identity

LEA Tenant

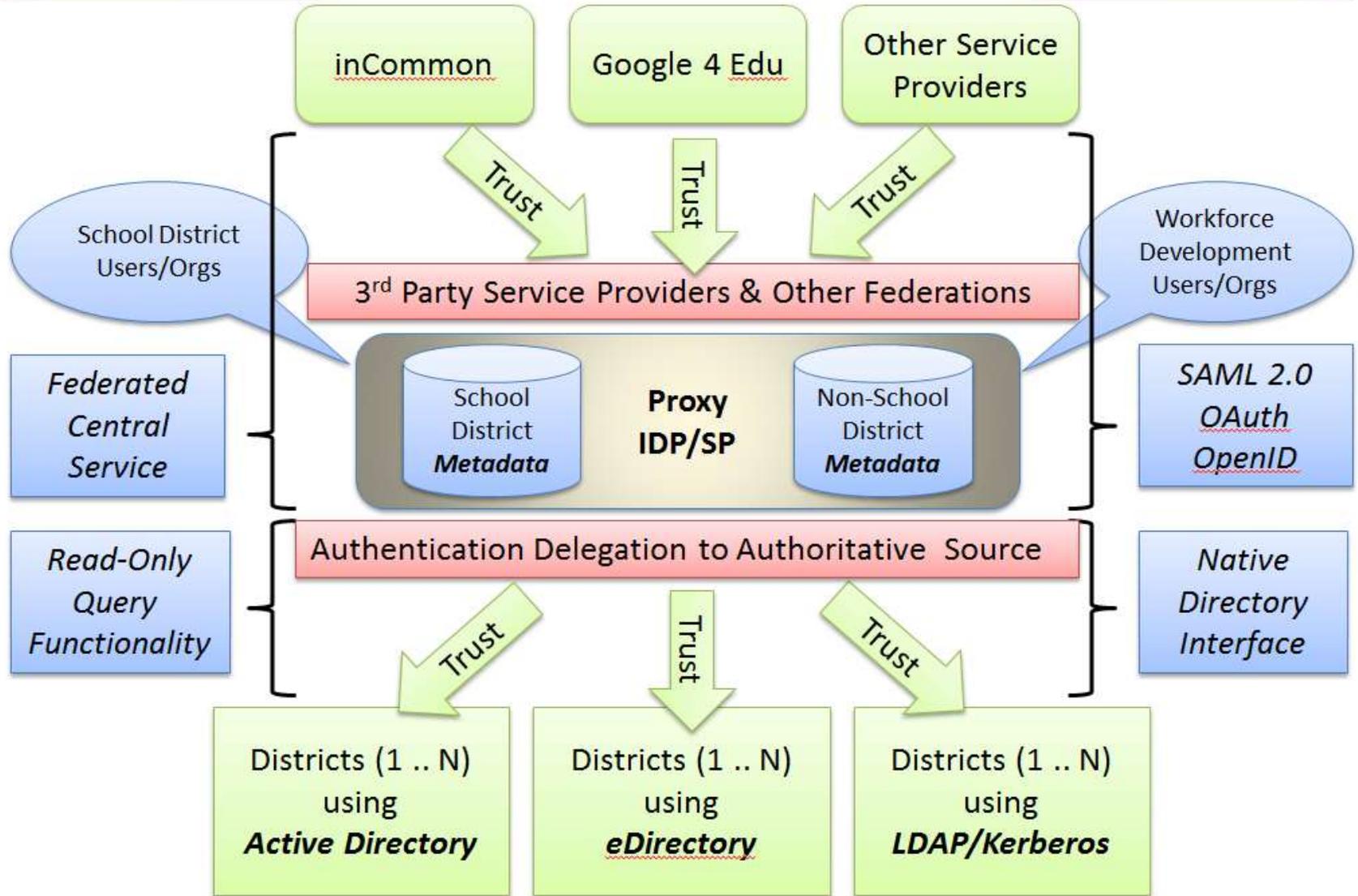
Known User with Affiliation
assigned may use
organizations informational
content, services, and
applications

CASE 3: Authenticated by IC IDP/P
implies defined Domain and Affiliation
with Authorities expressed in Entitlements

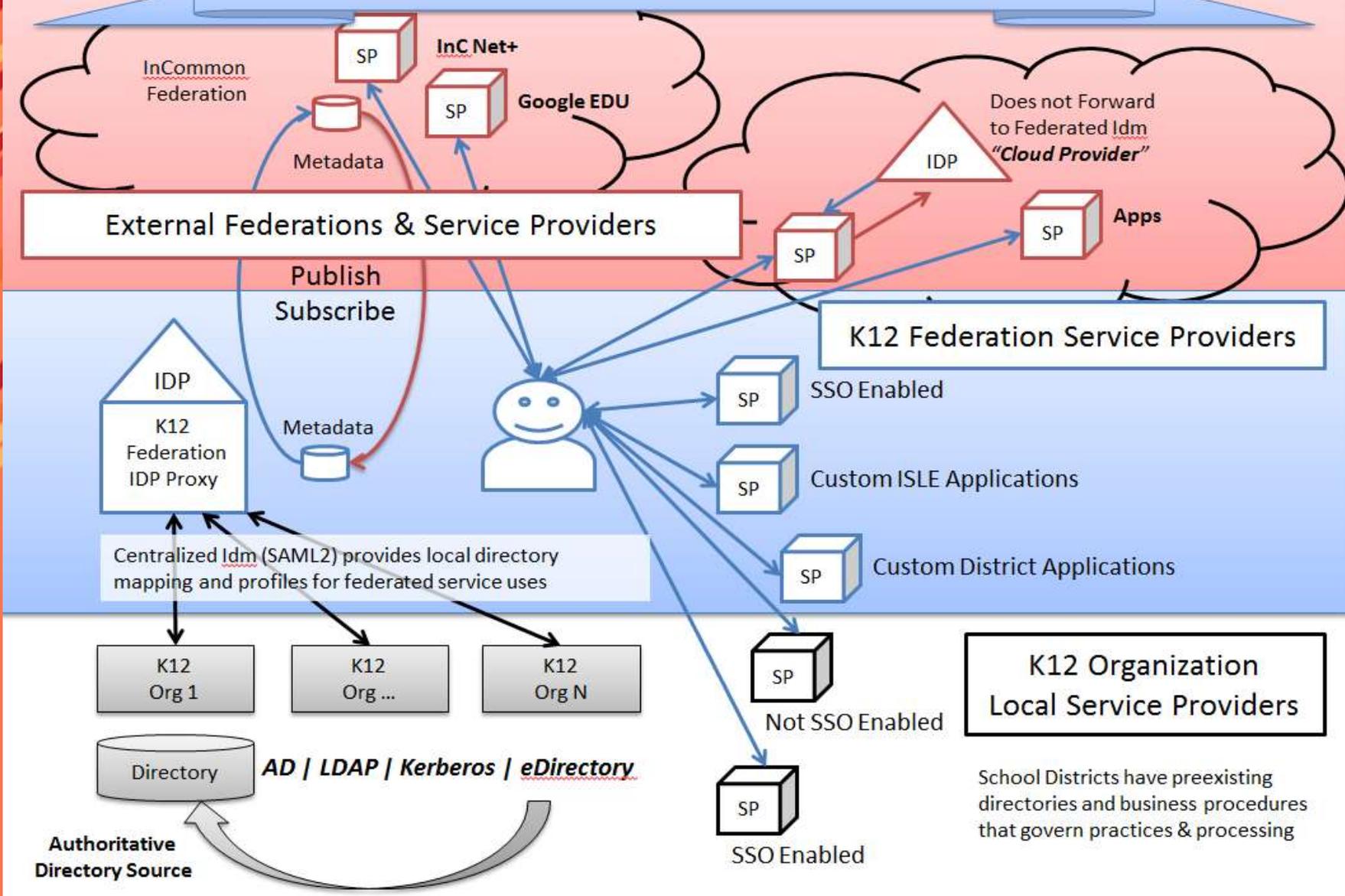
How Does Data Service Propagation Work for Apps?



What is the Federated Identity Service?



How Does the Federated Identity Service Work?



Questions

For More Information

Single Sign-On, Multiple Benefits

A COSN Primer on K-12 Federated Identity and Access Management

www.cosn.org/FederatedIdentity

Transforming Data into the Service of Learning

<http://www.setda.org/wp-content/uploads/2013/11/Data-to-Information.pdf>

http://www.setda.org/wp-content/uploads/2013/12/SETDA_standardsandinitiatives_May2013.pdf

A Day in the Life of Data....

<http://www2.dataqualitycampaign.org/files/Data-Rich%20Year%20Infographic.pdf>

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