NCSA and IlliniCloud

Overview of Quilt InCommon Pilot from Illinois

Pilot Summary, September 2015 (.pdf)

Presentation at 2014 Internet2 Global Summit (April 8, 2014)

Presentation at 2014 Quilt InCommon Federation Workshop

Pilot target constituents: (Community colleges or K-12 schools/districts)

Federated Services for K12 with a cohort of districts composed of the Illinois inBloom Pilot Districts and 35 additional Illinois school districts representing near 20% of the student population across the state.

Pilot Scope: (number of IdPs / size of constituents)

Data, IAM, and UI integration are three critical administrative and functional requirements and needs that must be fulfill for each school district participating. The cooperative approach adopted focuses on lowering thresholds for participation and adoption by employing a strategy to provide a set of central technologies for K12 school districts as federated services. The methodology and strategy focuses on an initial integration using a single pilot school district to establish implementation strategies and model(s) as template(s) for subsequent school district adaptation and implementation.

Initial Pilot Goals: (benefits and desired outcomes)

The **key functional goals** include three federated service integration point options:

- Data Service – interface district's "source systems" to produce School Interchange Format (SIF) data-model used to transform and propagate an appropriately EdFi data-model at inBloom;
- K12 IAM – interface district's directory services as the authoritative authentication for their affiliated user population and the administrative interfaces to manage meta-data, roles, and groups associated with federated applications and services; and
- K12 AppPortal – interface to support adaptation of Single Sign-On (SSO) for federated service providers and applications including both inBloom and InCommons.

The **key operational objectives** are to implement a sustainable model that enables a community of school districts to adopt federated applications and services using interfaces and implementation strategies supporting local systems and private/public cloud services focused on enhancing and enabling school districts to embrace the challenges of delivering personalized learning.

Targeted start and end dates for initial pilot:

As an on-going and perpetual endeavor, the IlliniCloud from inception to date, has lead efforts to forge ahead on a path to make technology "by K12 for K12" cost-effective and available to their community of educators and school districts. Their community orientated approach and philosophy has resulted in technology infrastructure and an organizational entity benefiting from a unique perspective and a role, leading a cooperative of schools districts. Illinois school district 87 (SD87) and school district unit 5 (SDU5) are founding members of the IlliniCloud cooperative and are the Illinois inBloom Pilot school districts, in this capacity as early adopters of federated service model (via inBloom), they have been actively engaged to implement three central services that enable cooperative peers to benefit from and integrate with focused on lower the threshold to adoption.

The Q/InC pilot the focus is specifically targeting federation-to-federation services and modeling identity access management for K12 school districts as a centralized collection of administrative interfaces enabling individual school districts to manage their relationships with federated services. The projected high-level milestone dates being targeted for the IAM service are as follows:

Fourth Quarter 2013:

1. **October 2013**: SD87, source systems integration with central federated identity service platform being deployed based on an implementation of Aegis Identity's Trident K12. The central implementation model will enable school districts to maintain their IAM services for federated providers and to integrate automated mechanisms to maintain integrity with their local directory and other primary source systems. inBloom and InC are the targeted federated service providers for this district.
2. **November 2013**: SDU5 source systems integration with central federated identity service platform to provide the basis for implementing K12 multi-tenancy refinements for client district administrative interfaces.
3. **December 2013**: Federated IAM operational for two school districts with functional and operational model implemented for one of these school districts for both the InCommon and inBloom service and all other school district(s) for only the inBloom services.

First Quarter 2014:

1. Based on site readiness and service viability up to half of the remaining school districts participating will be voluntarily targeted for onboard implementation staggering engagement over the three month time period.

Second Quarter 2014:

1. Based on site readiness and service viability the remaining school districts participating will be voluntarily targeted for onboard implementation staggering engagement over the three month time period.

Post-pilot longer term goals: (plans for expansion)

Beyond June 2014:

1. There are more than 860 school districts in Illinois, given this detail, it is expected that an ongoing process will be active in to the future to on-board the remaining school districts that are not included in the initial sample of participating districts.
2. Based on the experiences, lessons learned, and developments that impact how K12 entities will be able to take advantage of federation service through InCommon, it is envisioned as something that will expand the breadth and scope of potential opportunities for a K12 federation service model.

<u>Federation model selected for project</u>:

Federation-to-Federation

<u>InCommon Affiliate assistance/role in pilot</u>: (if applicable)

Two InCommon Affiliates have been engaged to help address requirements and implementation of solution components: 1) Aegis Identity has been selected to provide the essential central integration and implementation of the K12 Federated IAM service that will be constructed on the foundation if TridentK12; 2) Unicon has been engaged to help address the central AppPortal implementation that will provide a foundation for school districts to mash-up a variety of applications and services with a potential to provide a rich SSO user-experience.

<u>Targeted applications or cloud services</u>: (Canvas, InBloom, internal, etc.)

The potential embodied in the vision to establish an operational model that would allow K12 organizations to benefit from provisioning federated services is exciting and the IlliniCloud is positioned and well postured to expand an existing service portfolio designed to support and enhance K12 organization's capacity to realize the benefits of the cooperative model and founding principles. The spectrum of services potentially beneficial for K12 school districts is inclusive of most, but for this initial Q/InC K12 Pilot focus the targeted services are limited to a single K12 school district (SD87) and include services (ie., SIP), applications (ie., Canvas), and other federated service providers (ie., inBloom).