NC Education Cloud Identity Management Discussion
March 2, 2011
Cloud Plan Development Process

NC Education Cloud Proposed Plan
Some Initial Observations

- NCWISE student data populates disparate systems
  - manual and time consuming process
- Students have 4-6 accounts for accessing various learning resources
- Most LEAs have some form of directory system / ID Management
- Minimum user attribute usage
- LEAs have different username/password conventions
  - NCWISE IDs (9 digits) getting tough to remember

Are these initial observations accurate?
Identity and Access Management (IAM) System has 3 Major Components

1. **Central Data Repository**
   The central repository will be comprised of relevant user data from various authoritative data sources.

2. **Central Directory Service**
   The central directory will contain all user IDs, passwords, and other identity information. It will serve as master authentication and authorization point for all cloud-based services and allow syncing to LEAs.

3. **Federation Software**
   The federation software security extends identity information to cloud-based services providing end users with single sign on experience.
User Account Provisioning

Step 1  NCWISE and HRMS Coordinators manage users information as normal

Step 2  Student and HR data is propagated to IAM system

Step 3  User accounts are provisioned in IAM System and granted access to new Cloud Services and current LEA services
Local LEA and IAM Directory Integration

Local users log into devices and authenticate against Local LEA Directory Service as normal.

Local LEA Directory Service can sync to Central Directory Service for global user accounts.

Central Directory Service gets provisioned from Authoritative Data Sources.

Central Data Repository

Federation Software

Authoritative Data Sources
Local LEA and IAM Directory Integration

Local LEA Directory Service could be Open Directory, Active Directory, or eDirectory

Synced Global Users from Central Directory Service
- Local Users
- Local Applications
- Local Printers
- Local Workstations
- Local Servers
- Other local stuff

Local users log into devices and authenticate against Local LEA Directory Service as normal.
User Experience

1. User logs into a cloud service once

2. Cloud service passes user request to IAM for authentication

3. IAM passes user authorization information back to cloud service

4. User granted access to all relevant cloud services

Image Sources:
- Google Apps: http://www.google.com/events/mambo_apps/images/apps_ring_small.jpg
- Microsoft Live@EDU: http://www.microsoft.com/liveedu/AppsThemes/DefaultImageliveedu-logo.png
- NC Public Libraries: http://www.publiclibraries.com/pxsim1.png
- Blackboard: http://farm4.static.flickr.com/3119/2838216796_f68a7a1c48.jpg
- NC DPI: http://www.dpi.state.nc.us/images/pixel.gif
LEA Questions

• If such a system/service existed, would it be of value to the LEAs?

• What would be your preference for interacting with the central directory system?
  • I would like to maintain oversight of my local devices and applications but sync all users from the global directory service

• What would be the ideal process for managing end user accounts and access control?
  • I would like initial user information creation to be the same as now but would like access on the central directory system to grant/manage my LEAs access to cloud-based resources
• Gather resources.................1/15/2011
• Initial Site interviews........4/18/2011
• DRAFT plan.........................5/1/2011
• Approved Plan......................6/1/2011
  (Dependent on other Pillar schedules)
• Complete site interviews..7/1/2011
• RFPs........................................2nd half 2011
• Deploy services......................4Q2011-1Q2012
• Migrate and operate..........4Q2011-4thQ2014
Messaging

• **Community Meetings:**
  • **Internal:** Consistent and frequent updates at: webinars, Quarterly RESA & TD Regions, DPI leadership, Pillar initiative teams, NCTIES, NCET
  • **External:** Vendors, providers, partners, COSN, peer state education organizations

• **Web site—place for FAQ, Guidelines, Presentations, Organization, Team members, news, links to DPI & others:** [http://cloud.fi.ncsu.edu](http://cloud.fi.ncsu.edu)

• LEA Advisory Committee & Working Groups
• LEA site interviews
• Email Questions to [cloudhelp@ncsu.edu](mailto:cloudhelp@ncsu.edu)