



What is NCEdCloud?

The North Carolina Education Cloud (NCEdCloud) is a service delivery platform for modern instructional and administrative support systems that has the infrastructure, tools and resources to support all NC Race to the Top (RttT) initiatives.

Rather than building new systems, the NCEdCloud has taken an innovative approach to facilitating shared services through collaborative procurements, pay-for-use statewide licensing arrangements, and shared support models. The Identity and Access Management (IAM) Service, one of the NCEdCloud's projects, is provided through a service contract with Identity Automation (IdAuto). IdAuto is a Houston, Texas based company that provides identity, data, and access management services.

What is the IAM Service?

The IAM Service is based on the principle that strong identity management is a foundational component for the IT paradigm shift toward cloud technologies. As more services move to the cloud, a centralized and standard way to manage accounts, roles, and permissions for these technologies is required for the successful deployment and ongoing management.

The goal of the IAM Service is for every student, teacher, staff member, parent or guardian, and school community member to have a single, unique username and password to access cloud-based learning resources in North Carolina. IAM will provide self-service capabilities to all

users and delegation capabilities to all LEA/Charter School administrators. The service will have three major components:

- A **centralized data repository** with all user identity information collected in a single location, which will create an opportunity for better reporting capabilities, data analytics generation, and access control management.
- A **central directory service** that provides a master authentication and authorization resource. It will also bring new options to local school district personnel with an automated mechanism for synchronizing global user information from the centralized directory service to local directory services.
- **Federation software that enables Single Sign-On functionality** for users, which is a single username and password that grants access to all of a user's relevant cloud services.

Overall, the IAM Service can bring new options and opportunities to the local school districts. It has the potential to reduce support costs through more effective account life-cycle management and create a better, more secure and productive user experience.

Why do we need IAM?

The purpose of the IAM project is to address the following challenges that K-12 stakeholders face:

K-12 users have too many accounts to manage.

The average student in NC currently has 4-6 accounts for accessing their learning resources, whether the resources are hosted on local LEA and Charter School systems or cloud-based services. Teachers and other

administrators on average have double that number. Most of these accounts have different usernames and passwords. As the number of accounts increases, it becomes more difficult for the users to effectively manage their information in a responsible way.

It is also challenging for technical personnel to manage and support setting and resetting passwords, and updating user account information for the various services.

Updating account information is a manual process.

LEAs and Charter Schools have often described the challenging process of getting user identity information from the student and human resources information systems into their local systems. There are two general parts to this process: (1) getting accurate, updated, and complete user information from student and HR information systems through an automated process and (2) transitioning this information into user accounts for the various disparate systems and services for end users. If a new application is added or user information changes, administrators must repeat this process. While some

districts have created automated processes to address this challenge, many still struggle with a tedious manual process.

The NCEdCloud proposes increasing the use of services in the cloud. For a successful migration of services to a hosted or cloud-based solution, there is a need for some middleware (“glue”) that connects the various components. A strong identity management service is a foundational step for a large cloud computing environment.

Who is involved?

As of January 2014, the IAM Service was being administered by the NCEdCloud program as a part of the RttT grant that was awarded to the state in 2010 by the ARRA federal stimulus funds. This grant was given to North Carolina to spur public school innovation and is a key component to continue school improvement. As the grant comes to an end, in order to ensure that the IAM Service continues to be supported and implemented, the NCEdCloud will transition the Service Manager role to MCNC. MCNC is currently providing the Help Desk for the IAM Service.

What will it look like for me?

The features available in the IAM service will differ for users and even each school depending on what applications they have and their roles in the system. However, all users will have a single account to access the available resources.

Students will be able to:

- See an Application Access window with shortcut icons to the applications they have access to
- View profile information about themselves
- Reset their password, using self-service capabilities

In addition to the student features listed above, **teachers** will have the ability to:

- View all of their students’ information
- Reset student passwords

In addition to the functions of students and teachers, delegated **administrators** may:

- View all the students and employees in the district
- Enable and disable accounts and passwords
- Create sponsored guest accounts
- Have access to user and audit data