

Example Use Case for K-12 Federation

The North Carolina Education Cloud IAM Service and Discovery Education

The NCEdCloud IAM Service is a managed IAM service for all K-12 students, employees, parents and guests in the state of North Carolina. The purpose of the service is to provide a single user account to access multiple hosted (cloud) applications from either the North Carolina Department of Public Instruction or Commercial K-12 Application/Resource Vendors. The IAM Service vendor is Identity Automation of Houston, TX.

Discovery Education (DiscoveryEd), a digital media content provider, is used by many school districts (LEAs) in North Carolina. It was selected as one of five Target Applications to be integrated with the NCEdCloud IAM Service during the first year rollout.

Traditionally, LEAs that purchase this service would generate a file of student and teacher data that would be uploaded to DiscoveryEd every evening. Data elements that are required for users to access the application are listed in the table below.¹

LDAP Attribute	Description
givenName	First name
sn	Last name
department	Department
idautoPersonSchoolCodes	School/campus number
mail	Email address
idautoPersonGradeLevel	Grade
sAMAccountName	NCEdCloud Username
uid	Staff UID (or Pupil Number)
idautoPersonAppRoles2	Discovery education role assignment

A few other fields are carried in the internal DiscoveryEd accounts; however, we'll focus on the nine listed above.

In order to use the application, these nine user attributes must exist in the application, or be provided at the time the user logs in². Since the preferred method of accessing a Target Application in the NCEdCloud is via a SAML assertion, these nine attributes need to be provided by the SAML assertion, or already exist from a previously uploaded file.

Unfortunately, at this time DiscoveryEd cannot “update” existing records via a SAML login (it's currently being developed), so provisioning of user accounts by the NCEdCloud IAM Service is being handled by both SAML assertions (which will create a DiscoveryEd account for a new user) and file uploads (to ensure that *changes* to user accounts are applied).

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¹ *Users can be differentiated using only the NCEdCloud Username, which is a unique, alphanumeric, randomly generated identifier. However, DiscoveryEd uses the DiscoveryEd Roles to grant permissions to users, grade level to deliver appropriate content, and the school/campus codes to determine licensed users.*

² *The IdP for the NCEdCloud IAM Service runs in Amazon's AWS environment (along with the other servers that make up the IAM service (e.g. Person Registry, Central Directory, etc.). AWS provides “unlimited” scaling as well as a world-class high availability platform (across three east coast data centers). All user identity data is maintained in the Central Directory.*