

EDUPERSON MOVES TO REFEDS



The eduPerson scheme started nearly twenty years ago, “before there was a mechanism for moving attributes around” according to Ken Klingenstein of Internet2. With its transition to REFEDS, the focus will be on improving the internationalisation of the schema and continued support for its adoption around the world.

Why is this a big deal?

In order for services to interoperate and tools to develop along commonly supported lines, having a common attribute schema is critical. Most federations within eduGAIN support and

“eduPerson is a Lightweight Directory Access Protocol (LDAP) schema designed to include widely-used person and organisational attributes in higher education. The eduPerson object class provides a common list of attributes and definitions, drawing on the existing standards in higher education.”

<https://wiki.refeds.org/display/STAN/eduPerson>

use several of the key attributes within eduPerson, helping to set a baseline for interoperability between the entities within the federations.

A little Directory Services history

Directory services play an important role in developing intranet and internet applications by enabling information sharing about resources such as users, systems, networks, services, and applications throughout the network. Each resource is considered an object by the directory server that includes a collection of attributes associated with that resource. By 1997, LDAP (Lightweight Directory Access Protocol) was a well-established standard from IETF for accessing and maintaining directory information services over an IP network.

The ‘un-standard’ standard - “It’s a person Jim, but not as we know it”

In late 1998, Internet2 launched the Middleware Initiative to promote the standardisation and interoperability of, and to support deployment of, middleware services. Their work included identification, authentication, authorisation, security services and directories.

Universities started making use of LDAP and the related directories middleware services being developed and refined. However, it soon became

clear that the lack of established patterns for building general-purpose institutional directories meant that each institution had to start from scratch when building out their directories – despite very similar use cases. As a result, no two directories looked alike. It wasn’t possible to share resources, exchange information, or even query resources even though the institutions were using the same LDAP standard.

By early 2000, Keith Hazelton and others were advocating for the formation of the eduPerson Working Group that would work on an eduPerson object class. This object class would draw on the standards work done in higher education to provide a common list of attributes and definitions and provide a common LDAP representation for each of them. Early adopters included the “Middleware Directory of Directories” led by Michael Gettes, a project to enable “anonymous access to library resources” led by David Wasley, and an effort to provide “digitally signed financial aid applications” led by the Net@Edu PKI Working Group.

This new working group which eventually evolved to be the MACE-DIR group had the ambitious goals to quickly complete the initial version of the eduPerson object class, including a definition of the object class along with documentation, a process for maintaining and updating the class definition, and a process for promoting this new object via schema registration bodies and IETF channels.

Words
Laura Paglione (right) and Heather Flanagan (far right) of Spherical Cow Group



A new standard is born

The eduPerson 1.0 Specification was published in February 2001 by the Internet2/Educause eduPerson Working Group. The group also prepared files that enabled direct import of the new object class and its attributes into an LDAP server, enabling straight forward adoption.

This release marked the possibility of several inter-institutional applications that today are commonplace, for example;

- Web pages related to a course at one campus could be easily and securely opened to students in another class at another institution with just a simple configuration.
- An institution could agree to license a database for only business students, using eduPerson attributes to implement the access controls.
- Scientific researchers could reserve specialised computing resources at distant locations using local services.
- A directory of directories could enable a user to search multiple institutional directories in parallel to find public information for a particular person.

The eduOrg Object Class quickly followed with its first specification being released in October 2002 along with an update to eduPerson. The purpose of this new object was to represent

institutions of higher education. The Object Classes incrementally evolved through 2016. The small, deliberate changes made during this period were a testament to the object class adoption rate. Two additional object descriptions were included during this timeframe.

eduCourses was explored for describing courses and course enrollments. By 2007, the IMS Global Learning Consortium took on similar work as part of their portfolio of standards for student records and learning management systems. The other object description was for groups with the eduMember object, which migrated into the Grouper project in 2009, an open source toolkit for managing groups and access to resources. The migration of each of these projects led to renewed energy and innovation, and ultimately increased standardisation and utility.

What next for eduPerson?

One of the best gifts of standards work is the plentiful documentation, not just of what was adopted, but also of what people felt were challenges, missed opportunities and huge successes. In looking back at the history of eduPerson, we were struck by how many conversations from 15-20 years ago still continue today. With this transition to REFEDS, the focus will be on improving the internationalisation of the schema and continued support for

its adoption around the world. Of course, the debates will continue, though the balance point between interoperability and institutional schema use sovereignty are likely to change as considerations are made primarily for global use cases, and perhaps with a broader set of views. This transition provides an opportunity to sunset items no longer used (pager attribute, anyone?), revisit old debates from a new vantage point, and innovate to enable new uses that we can’t even imagine today.

It has taken significant inspiration, vision, effort, and dedication from an amazing group of people in the MACE-DIR working group over the last 19 years to make the absolute impossibility of interoperable information exchange about people across institutions so commonplace today, that the uninitiated might casually dismiss the accomplishment. The new group will have their work cut out for them, but we’re sure they will be up for the challenge.

To find out more about eduPerson visit <https://refeds.org/eduperson>.