

Transition From Legacy IdM Solution in Record Time

North Dakota State University needed to migrate from their in-house system to a sustainable IGA platform

Overview



Challenge: NDSU's custom engineered in-house IdM solution required a lot of effort to be maintained. That's why they decided to migrate to the new, more standardized and maintainable IGA platform midPoint.



Process: Thanks to midPoint's flexibility, the systems were migrated one by one without disrupting the standard operations.



Outcome: The migration of all 18 systems took only 1.5 years and brought significant automation, reliability, and new functionalities.



Future: NDSU plans to improve the configuration. This includes developing and deploying more connectors and setting up the next steps regarding the possibilities midPoint's feature set brings.



About North Dakota State University



North Dakota State University (NDSU) is a public land-grant research university based in Fargo, ND, that offers a variety of undergraduate, graduate, and doctorate programs within agricultural sciences, engineering, health professions, and more. NDSU is a Carnegie R1 research university, and it is a part of the North Dakota University System. Like other land-grant universities across the United States, an IT team at NDSU needs to manage the identities for extension offices (e.g., research, state forestry services). Overall, the in-house identity management team administrates 12,000 student and 3,000 staff identities across NDSU as well as the North Dakota State College of Science. The IdM team does not need to administrate any alumni identities.

The Objective

The aim was to migrate from NDSU's in-house custom legacy system to a new IGA platform that would offer more sustainability, higher education oriented functionality, and improvements to the NDSU IT team's flexibility to changes.

The Challenge

NDSU was using a custom engineered in-house IdM solution that dated back to the early 2000s. Since the solution had to interact with other standardized systems that are frequently used in academia, it needed to be updated and maintained constantly. That required a lot of effort from the in-house team. Moreover, the team that knew how to work with the solution had gradually left the university.

NDSU understood they needed to look for a better suited solution that would be standardized, well maintained, flexible, scalable, and most importantly, one that would fulfill the specific needs of higher education identities. Based on users' requests, NDSU realized there are many functionalities their in-house system was not capable of performing. They wanted to give their users more autonomy and options to manage their accounts. Furthermore, the in-house solution had been built on a commercial database that the university decided to migrate away from completely within a tight deadline.

Naturally, with such technological improvement, operation procedures should be upgraded as well. This can include, for example, how to maintain the development and production environment and manage the configuration in an organized way.

The Process

NDSU chose midPoint, the leading open source identity management and governance platform, to be a part of their new IAM infrastructure. Throughout the process, the university appreciated midPoint's characteristics, which helped the overall migration.

The process included the following highlights:

- MidPoint could be easily integrated with other systems commonly used in academia.
- NDSU was able to make the transition quickly thanks to midPoint's connector mechanism.
- MidPoint, in conjunction with its built-in DBTable connector, gave NDSU the flexibility to pull off the migration smoothly. MidPoint's configuration flexibility helped gradually migrate systems and deal with mutual dependencies.
- The aforementioned flexibility enabled the migration of the systems without disrupting the standard operations. Systems were migrated one by one (or in small dependent chunks) with only relatively short outages.
- All the systems were migrated only using midPoint's DBTable connector. The integration through the database was the easiest way to migrate from the legacy solution even though it was not technically ideal and might limit some functionality. Integration on the database layer was supported on all systems, and it minimized the number of unexpected technical issues.
- The midPoint resource feature acts as an abstraction layer for integration with external systems. The ability to read schema from external systems and easily map values to ones in the midPoint repository was a tremendous help in configuring all 38 resources used for the migration.
- MidPoint is also used for life cycle management. For now, the delayed delete functionality is used to smooth out off-boarding processes. In the future, life-cycle management will be expanded to help with additional processes.
- A new custom connector has been built and deployed to production to manage access to Google Analytics.

“With midPoint I am able to tell users we are capable of executing more things than we used to. In the past, I just had to say no to feature requests, and now I can do it.”



Richard Frovarp
Principal Software Engineer & Team Lead,
Enterprise Application Development at NDSU

The Tools

NDSU leverages midPoint's tools for their day-to-day administration.

MidPoint Studio helps NDSU keep an overview of their configurations and supports the process of creating, developing, and maintaining them. This approach to configuration maintenance is great in combination with typical tools used by system administrators like Grep, and it also enables version control, for example, by using Git.

In the future, NDSU plans on using midScribe, which is a midPoint tool for maintaining documentation within configuration files, making it easier to keep it up to date.

The MidPoint Community

The success of the migration process and continuous solution maintenance was also achieved thanks to several valuable public resources and attending midPoint training.

NDSU values Evolveum's transparency and involvement in the Internet2 community, as well as their contribution to the InCommon group.

"I like that Evolveum is involved in the community that's been created around midPoint. They are open to ideas and provide suggestions on how to integrate midPoint with other systems."

Richard Frovarp

Principal Software Engineer & Team Lead,
Enterprise Application Development at NDSU



The activities are as follows:

- Evolveum leads a **bi-weekly InCommon midPoint working group**, where integrations, use cases, challenges, and success stories are discussed.
- MidPoint debates can continue on the Internet2 Slack channel, which currently has over 300 members.
- Evolveum is also a trusted advisor to the Collaboration Success Program.

The Outcome

Richard Frovarp, the principal software engineer and manager of Enterprise Application Development group in Division of IT, performed the migration with the help of a colleague, and it took them approximately 1.5 years from start to finish. They covered the migration of 18 different systems, which were represented at the end by 38 resources.

NDSU got rid of the old system completely and the administration of identities is handled by midPoint. NDSU also appreciates the new functionalities that were not possible before deploying midPoint. The biggest difference is automation and reliability. Based on the configured rules and mappings that don't require any manual intervention, midPoint processes every change automatically.

Future Plans with MidPoint

NDSU plans to continue improving the configuration. They would like to develop and deploy more connectors, e.g., Zoom and DocuSign. The list of available open code midPoint connectors keeps growing and could help NDSU complete this feat.

The main goal of the migration from the legacy IdM solution was achieved, although the focus was solely on the migration without making any improvements. Despite this, there was huge improvement in automation, which is intrinsic for midPoint. What is to come will be to design the next steps and start using additional midPoint features to achieve them.

Evolveum is a globally recognized EU-based organization that was established in 2011. With its dedicated team of professionals, Evolveum is the creator and maintainer of the leading open source identity platform midPoint. MidPoint's feature and connector set, in addition to Evolveum's openness, values, and lively community, confirm that Evolveum has always had a strong connection to higher education. That's why Evolveum is proud to be one of the inaugural Catalysts in **InCommon Catalyst Program**, which has a goal of supporting higher education institutions, research organizations, and sponsored partners.

