



Title:

Collaboration between the Commonwealth of Pennsylvania Department of Human Services (DHS) and Allegheny County DHS to Deliver Singular Face of Government Solution

Category:

Cross Boundary Collaboration and Partnerships

State:

Pennsylvania

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Project Initiation and End Dates:

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Executive Summary

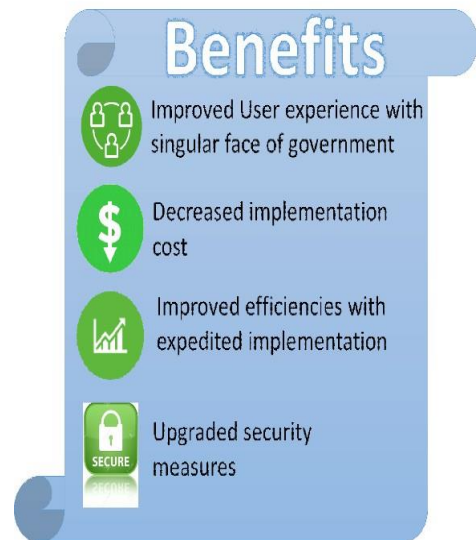
State and local government agencies are continuously trying to do more with less. While the technologies have evolved and information security regulatory requirements from the Center of Medicare and Medicaid Services (CMS), Health Insurance Portability and Accountability Act (HIPAA), and Internal Revenue Services (IRS) have become increasingly more important, government funding is limited with an expectation that this trend will continue. At the same time, cyber threats to the government continue to grow with numerous incidents of data breaches and unauthorized access to sensitive data across government agencies.

In a recent cybersecurity study¹ conducted by NASCIO, securing sufficient resources—both funding and talent—remains a top challenge for state leadership.

The Commonwealth of Pennsylvania’s Department of Human Services (DHS) administers services that provide care and support to Pennsylvania’s most vulnerable citizens. To support these services, the department manages access to sensitive information which is hosted via various business applications and systems within the organization.

In an effort to safeguard this data, the department has established an enterprise Identity and Access Management (IAM) security discipline. The comprehensive enterprise IAM solution took years to mature and benefits from continuous investment in process and technologies to keep up with the emerging security challenges and industry trends.

In order to optimize public resources and improve efficiencies, DHS leadership developed a plan to share its enterprise IAM technology infrastructure and services across government agencies. This shared IAM approach allows other government entities to realize outcomes more rapidly by focusing on business application integration leveraging an established IAM solution instead of spending years recreating a new foundational infrastructure. This case study highlights a partnership between two public sector agencies – the department and Pennsylvania’s Allegheny County Department of Human Services (ACDHS) – enabling a shared solution to address their Identity and Access Management security needs. Through this partnership, ACDHS has realized significant savings by integrating with the DHS shared IAM solution compared to traditional, standalone development and implementation timelines.



¹ 2016 Deloitte-NASCIO Cybersecurity Study – <https://www.nascio.org/Portals/0/Publications/Documents/2016/2016-Deloitte-NASCIO-Cybersecurity-Study.pdf>

Implementation savings are primarily driven by significantly reduced timelines and infrastructure costs. The shared IAM service has reduced taxpayer burden while improving delivery of benefits to Pennsylvania citizens.

Business Problem & Solution

Pennsylvania DHS seeks to assist and support Pennsylvania's most vulnerable citizens through various human services programs such as Medicaid, SNAP (food benefits), child care, child support, and employment & training services. Over the past several years, the department has leveraged federal funding to establish a mature enterprise IAM program consisting of advanced security functions, including:

- Identity Management
- Access Management
- Risk-Based Authentication
- Access Certification
- Privileged User Management

The IAM solution allows millions of citizens to gain access to many critical self-service programs, negating the need to be reliant on time-intensive, paper-based or in-person processing. The IAM solution leverages best-of-breed security technologies. On any given day, the DHS IAM solution supports over 1 million authentications and 7 million authorizations (application access) for over 100,000 employees, 350,000 business partners and 3.5 million citizen user base. With a state of the art IAM solution, the department is considered the IAM Center of Excellence for the Commonwealth and explored the idea of sharing the IAM solution with other government entities. The department leadership realized this as an opportunity to save taxpayers' dollars by reducing silos and individual infrastructure costs, while at the same time creating a seamless experience for constituents accessing government services. Based on this opportunity, the department developed a shared IAM as a service model where other consuming agencies will require minimal to no on premise presence of software or hardware. This affordable and services-based model, without costly upfront investments, was designed to provide substantial cost savings to the consuming agencies.

Starting in 2012, DHS began piloting the shared IAM as a service model with government agencies such as the State Employees' Retirement Systems (SERS) and Liquor Control Board (LCB). DHS incorporated lessons learned from the initial pilot and further strengthened the governance and technologies to prepare the solution to be ready for consumption at a larger scale.

In 2015, Allegheny County DHS, the second largest county in Pennsylvania for providing residents with human services programs at the local government level, was exploring an approach to implement an IAM solution to secure its IT systems. The various ACDHS IT systems contain sensitive Personally Identifiable Information (PII) and Protected Health Information (PHI) data that is accessed by employees, contractors, providers, as well as residents. ACDHS

sought to implement an IAM solution to manage user identities and streamline application access to ensure security, regulatory compliance, process efficiencies and improved user experience while reducing the overall security risk. As ACDHS explored options to build the solution from scratch – the infrastructure, implementation cost, and risk, coupled with the budget constraints, impeded the county’s ability to move forward.

Recognizing the Pennsylvania gubernatorial vision of services transformation by consolidation and sharing, the ACDHS leadership contacted DHS leadership to explore possibilities of reusing its enterprise IAM solution. In 2016, leadership for both ACDHS and the department partnered together to move forward and use the shared IAM enterprise solution to enable ACDHS to achieve their goal. Using this shared IAM solution, ACDHS was able to focus on a limited set of challenges leading up to implementation, thus saving time, money and resources, while achieving the desired objective.

Initial cost benefit analysis predicted implementation savings of over 66 percent for the ACDHS. Operationally, the shared IAM as a service solution is projected to save the ACDHS another 50 percent over five years. In this example, ACDHS realized significant cost avoidance by leveraging the **IAM as a service**. These implementation savings are due to reduced infrastructure costs and lower implementation and operational costs. The following table illustrates the cost avoidance using this shared enterprise approach versus a traditional ground up IAM implementation.

Initial Implementation Savings

Entity	Estimated Traditional* IAM Implementation Cost	Estimated Shared IAM Cost (including licenses and shared)	Shared IAM Cost Avoidance
Allegheny DHS, SERS, LCB, etc.	\$14M - \$15M	\$4M	66% reduction

**A traditional IAM implementation serving over 100K users and over dozens of integrated applications.*

Five-Year Operational Savings (Projected)

Entity	Estimated Traditional IAM Operation Cost	Estimated Shared IAM Operation Cost	Shared IAM Cost Avoidance
Allegheny DHS, SERS, LCB	\$6M - \$7M	\$2M - \$3M	50% reduction*

** The operational savings will be realized over the period by sharing the costs of IAM operations across multiple entities.*

Reduced Timelines - Savings

Entity	Estimated Traditional IAM Implementation	Shared IAM Integration Duration	Shared IAM Savings Amount
Allegheny DHS, SERS, LCB, etc.	8 months – 12 months	4 months – 5 months	50% reduction in duration – enables expedited application

In summary, the shared IAM as a service model is expected to provide more efficiencies as it scales to include more government entities and the costs are further distributed. Although the expansion of the shared IAM as a service model will require additional software procurement and infrastructure upgrades, the net savings will be realized by sharing the costs and economies of scale among multiple entities.

Significance

The department IAM solution brings consistency and reuse of secure access management process across a complex set of disparate government services. The solution serves millions of benefit recipients by providing them with secure access to both apply for and view their benefits electronically 24/7.

The department has established itself as a technological pioneer with state of the art IAM technologies, serving millions of authentication and authorization transactions per year. The shared IAM solution between DHS and Allegheny DHS has resulted in a successful, first of a kind intergovernmental partnership overcoming technological, legal, and policy barriers which often come into play when multiple government entities are involved. However, the commonwealth's shared IAM enterprise solution had the necessary tools and techniques through the funding from various federal programs, including CMS and NSTIC, to achieve a successful partnership collaboration.

In addition, the shared approach was simplified by stakeholders from both the commonwealth and Allegheny County entities working together to realize cost savings and achieve efficiencies. Once the objectives were clear, stakeholders were able to focus their energy on establishing an effective charge back model, product licensing agreements, and stakeholder motivation to address the policy and legal challenges. Ultimately, this shared approach reduces time, cost, and risk. Perhaps the most significant aspect of the shared IAM solution is its capacity to expand to incorporate other state and local government entities and realize additional cost savings and efficiencies.

The shared IAM as a service solution aligns with the Commonwealth of PA's goal to provide "a single face of government" by enabling residents of Pennsylvania to seamlessly access various government services.

Benefits

ACDHS and DHS collaborated to leverage the IAM solution to streamline and accommodate ACDHS's needs. Leveraging the solution in a shared capacity provides numerous benefits, including:

- **Improved user experience through a singular “face” of government:** Pennsylvania residents who use both ACDHS and commonwealth applications are able to use a common user ID, password and registration process amongst various applications, resulting in increased user adoption through a common self-service process. Expected outcomes include less reliance on paper-based and in-person transactions, decrease in the number of duplicated account data, and faster access to services.
- **Decreased implementation cost by 66 percent:** Through the reuse of the existing infrastructure, solutions, and shared resources, implementation timelines, scope and expenditures were significantly reduced.
- **Reduced implementation risk and timelines:** Existing, production- IAM workflows and processes were leveraged for ACDHS to limit the risk associated with building these processes from scratch. Failure rate of IAM projects nationally is currently 50 percent.
- **Affordable and quickly elevated security measures:** The IAM as a service solution exceeds enhanced audit and regulatory compliance, pertinent to HIPAA and other subjected regulations, to ensure citizen data is securely maintained by rationalizing over 4,000 controls into a manageable set of requirements that the county can meet in an expedited manner.

The shared IAM as a service model has the capability to expand to multiple agencies and counties resulting in the savings of millions of dollars. In addition, this expansion of IAM as a service model will create a single face of government that provides seamless benefits to state and local benefits recipients.

Project Completion Date

The successful integration of the shared IAM solution with the Allegheny DHS' citizen facing “ClientView” application went live in February 2016. The ACDHS and DHS are planning for a series of other programs to be integrated in the next 12-18 months.