



Best Technical Advancement – Runner up

Technical Team, National Vetting Center

Since September 11, 2001, agencies have sought to improve how they leverage sensitive intelligence and law enforcement information when vetting for homeland and national security missions. However, these processes were often bilateral, did not occur in real time, and were not adaptable for an all-threats landscape. The National Vetting Center (NVC) provides a single coordinating entity and platform to address these issues, ensuring that adjudicators receive national security partner vetting support in a timely manner. The NVC's technology platform streamlines the transfer of unclassified applicant information to classified environments, where it is compared against information held by national security partners, and provides responses back to the NVC for use by vetting analysts. For the first time ever, the NVC provides adjudicators with a single picture of all the "dots" of sensitive information to evaluate as a whole before making an adjudication decision.

The NVC's success lies in the rapid technological advances to develop a cross-domain, multiagency platform. In less than six months, using Commercial Cloud Services (C2S) services, the Department of Homeland Security (DHS) Office of Intelligence and Analysis designed, built, and deployed a common technology platform and process to support the NVC. This platform allows for a comprehensive review of relevant information to support adjudications. The NVC's system was DHS' first C2S environment to be fully deployed and operational, successfully integrating multiple cloud environments across the Intelligence Community (IC), including other agencies' C2S environments and the National Security Agency's IC-GovCloud. The NVC deals with high volumes of multiple streaming data sets that are routed through various architectural components to be processed, stored, and shared on the high-side network. DHS built and deployed redundant cross-domain solutions to deliver applications across fabrics to be routed for vetting support. DHS receives vetting results from multiple national security partners, which traverse across C2S environments. The NVC technology platform enables high-to-low responses to be delivered to vetting systems for automatic integration with unclassified vetting workflows within minutes from the application having been submitted for vetting. Prior to the NVC, there were independent systems for each national security partner, some taking hours or days to supply vetting responses. The use of C2S services allows the NVC to easily scale up to meet increased load during holidays or other high travel periods.

Over the past 12 months, DHS I&A has matured its technical solutions to include establishing a DevOps process that will allow for continuous integration/continuous delivery. The team also worked with the NVC and its customers to improve the user experience, resulting in updated design and workflow. The updated application also included backend enhancements built on micro services improving system performance, resiliency and redundancy. Further, they implemented Amazon's auto-scaling group capability which provides the NVC with a more cost-efficient solution that meets its evolving mission demands.



The NVC demonstrated the ability to drive interagency technical integration across more than six federal agencies. Additionally, the NVC’s technical innovation has further advanced the identity intelligence mission – providing new analytical and operational insights as well as new technical capabilities that can be applied to support other mission use cases. In addition to developing a capability to transmit tens of thousands of vetting requests across domains and between C2S environments, DHS designed and built the NVC’s flagship workflow management tool, allowing vetting responses to be centralized for analysts’ quick review. Currently, NVC technology supports the near real-time screening of approximately 40,000 applicants per day. The NVC enables rapid review of Electronic System for Travel Authorization applications. As national security partners provide responses to the NVC, new identity information and connections are automatically disseminated back to the national security community, consistent with law and policy requirements.