

Nevada Department of Corrections

In Control: Facilities Require Full Network Visibility



Project Type:

- DNS-DHCP-IPAM replacement of Infoblox - focus on IPAM for Linux

Key Benefits:

- Product flexibility and customizability
- Cost-savings over incumbent vendor
- Newfound ability to manage all remote facility networks centrally
- Seamless implementation period

The Nevada Department of Corrections (NDOC) is a public safety government agency, responsible for the management of inmates in the state of Nevada. Headquartered in Carson City, they house over 13,000 inmates across 17+ facilities, which include Conservation Camps, Correctional Centers and Transitional Housing. Partnering with other Nevada state and local programs for vocational training, educational opportunities and treatment services, the NDOC mission is to ensure a safe environment that incorporates rehabilitative services to individuals prior to reintegration. They are supported by 2,400 employees, 30 of which are IT staff.

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Daniel Erlendson, IT Manager



The nature of the work of the NDOC IT team requires careful attention paid to all connected devices at a facility, for safety reasons. Everything from door locks to HVAC systems play an integral role in day-to-day functions, and their failure can result in very serious complications for inmates, staff and the public alike. NDOC's growing number of servers over the years required more effective network management, particularly due to half of their locations being stand alone and not integrated with the existing IPAM solution from their vendor at the time, Infoblox. Remote management failures, downtime and visibility issues could not continue to occur. As a state-run facility with set budgets, NDOC needed an all-in-one solution that would allow them to grow without emptying their pockets.

Daniel Erlendson, IT Manager, is responsible for all aspects of networking including core services such as DNS, DHCP and IP address management (IPAM) at NDOC. He helped lead the team in finding a new solution, to ensure the visibility of all facilities and maintain control of the entire network as a whole.

Project Overview

With a set of requirements in mind, NDOC began researching IP address management solutions specific to Linux. Several vendors and platforms were evaluated. "We couldn't leave certain facilities flapping in the breeze," Erlendson explained. "We needed a solution that could support all of our facilities together, on Linux, onsite. Our current solution was also becoming far too expensive to maintain."

When they came across the EfficientIP IPAM for Linux product, Erlendson and the team were impressed by the intuitive nature of the platform, and noted how fast and easy to use it seemed.

The NDOC overall solution consisted of 9 EfficientIP SOLID-server™ virtual appliances and 11 MVSM's (Multi Vendor Service Management licenses) designed to provide:

- A flexible IPAM solution and DNS/DHCP service management for existing Linux servers (eliminating the need for more appliances)
- Delegated DNS management
- Active/Passive DHCP failover

Transition Process and Key Benefits

Erlendson indicated NDOC chose EfficientIP for its ease of use, ability to support Linux, customizability, and exceptional pricing. NDOC also opted to receive both training and professional services for implementation and customization, and felt it gave them a huge step up in getting the product installed and working in their environment. Full implementation of the project took approximately four months, which according to Erlendson was excellent based on their needs timeline, with internal upper management particularly pleased with how quickly everything was rolled out.

"The work performed to get NDOC off of our old, unsupported solution and into the present on the EfficientIP platform was simply amazing," Erlendson summarized. "The IT Chief forwarded a note to our upper management, praising the essentially invisible transition that occurred within what is, without a doubt, the most critical system we have. Nothing works without IP address assignment and resolution of those addresses."

He went on to note, "Our users were not impacted in any significant negative way by this transition. Again I'll use the word amazing, as my entire staff knows that had we attempted this transition on our own, 'invisible to the users' wouldn't be on the table."



The benefits NDOC have experienced so far have been numerous. From the highest level, all camps and correctional centers are viewed and controlled on the same centralized platform. When a workstation moves from one location to another, the IP addresses are always correct. Erlendson and the team commented on the newfound ease of finding IP addresses, expressing that EfficientIP search features were superior to what they had prior. Additionally, they have noticed faster performance for certain tasks, for example, implementing static DHCP reservations very quickly.

Cost effectiveness and time savings are other huge wins. On top of a reduced total cost of ownership over Infoblox, non-IT staff no longer need to be involved in figuring out why a workstation isn't functioning onsite at a particular facility. As these employees are not always technically inclined, working through questions with them was time consuming and frustrating- they need to be focused on managing inmates, not troubleshooting the network.

Plans For The Future

In terms of the future usage of EfficientIP solutions, NDOC is focused on security and automation, as they foresee an increase in connected devices and IP addresses to be managed. "The concept of BYOD does not exist in our world...or at least it shouldn't from a security perspective," explained Erlendson. "Outside phones and laptops that show up on premises can become a major network security hazard, and push the boundaries of acceptable use." The EfficientIP 360° DNS Security suite will be reviewed to protect the NDOC network from potential internal and external threats while maintaining its availability.

The IT team is also looking to review the NetChange product, which automates the configuration and deployment of network switches. This will help to optimize their capacity planning by identifying unused network resources, provide full visibility through on-demand discovery of devices, as well as detect unauthorized devices and track changes.

NDOC Lessons Learnt

Erlendson and the team were not first-time users of a DDI platform, and therefore had knowledge of many of the basic functions that are similar across vendors. During their immersive training process with EfficientIP, they found themselves asking more granular questions on complex functions. NDOC would therefore suggest to other organizations who are migrating from a previous platform to SOLIDserver to invest in Advanced Configuration training.



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As one of the world's fastest growing DDI vendors, EfficientIP helps organizations drive business efficiency through agile, secure and reliable network infrastructures. Our unified management framework for DNS-DHCP-IPAM (DDI) and network configurations ensures end-to-end visibility, consistency control and advanced automation. Additionally, our unique 360° DNS security solution protects data confidentiality and application access from anywhere at any time. Companies rely on us to help control the risks and reduce the complexity of challenges they face with modern key IT initiatives such as cloud applications, virtualization, and mobility. Institutions across a variety of industries and government sectors worldwide rely on our offerings to assure business continuity, reduce operating costs and increase the management efficiency of their network and security teams.

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