

CASE STUDY

NMHS delivers world-class health services through Infoblox with better network visibility, automation and control



SUMMARY

Nebraska Methodist Health System (NMHS) was established in 1982 as the first health system in the region.

NMHS engages four hospitals, more than 20 health clinic locations, a nursing and allied health college and more to deliver world-class and specialty healthcare services and resources to communities throughout Nebraska and western Iowa.

To support service delivery, the NMHS team managed IT operations through an opensource network change and configuration management (NCCM) tool for device management, software updates, backups and compliance. However, with limited IT staff to meet growing healthcare demands, it became increasingly difficult to keep its on-premises open source solution running. Keeping network gear updated was a priority, along with polling and configuration backups. Systems and devices were operationally and geographically distributed, making them harder to manage from a discovery, visibility, upgrade, audit and performance perspective. The NMHS team needed a more reliable device inventory, software update and deployment engine, policy enforcement and reporting solution to ensure security, performance and regulatory compliance.

THE CHALLENGE

Improve visibility into network resources

NMHS is a not-for-profit regional healthcare system delivering healthcare over several hundred square miles with plans for future expansion. To meet growing demands, it is essential to maximize network effectiveness and efficiency without adding additional IT staff to physically service distributed locations. However, device visibility, configuration and backups were a growing challenge.

CUSTOMER:

- Regional not-for-profit healthcare organization with over 10K employees delivering primary and specialty health services through 4 major hospitals and over two dozen clinics and urgent care facilities in Nebraska and Iowa.

CHALLENGE:

- Remove manual tools and processes, and upgrade a failing opensource solution for central network discovery, visibility, configuration, software updates, polling and device backups.

SOLUTION:

- Infoblox NetMRI Network Change and Configuration Management (NCCM) for network equipment and device inventory, software and system updates, continuing security audits, issue resolution, network policy and enforcement and reporting.

The small NMHS IT team originally relied heavily on manual spreadsheets for device inventory and code-level tracking, which was often error-prone, tedious and time-consuming. Data was only as good as the last manual update. Without fully automated discovery, there was no single source of truth for the network database, and the team could not trust its data for further automation to improve efficiency and reduce costs. Without visibility, NMHS often had to rely on guesswork to connect and configure cables, ports, switches, firewalls and other devices, and could not configure network alerts to signify device, policy or compliance issues. It was difficult to know which switch ports were assigned to which devices. Furthermore, IT needed to define a unified network configuration policy, set configuration rules for switches and software code compliance, and engage an enforcement engine to automatically identify non-compliant devices for prioritization and remediation. NMHS also needed a more efficient way to see end-of-life (EoL), end-of-service (EoS) and Product Security Incident Response Team (PSIRT) notifications to take corrective action and avoid service and security vulnerabilities.

RESULT:

- Network discovery, visibility, upgrade automation and control
- Device compliance validation and security management
- Operational policy enforcement and best practice deployment and management
- Compliance and audit validation

THE SITUATION

Evaluating Infoblox's network management tool

NMHS decided to evaluate Infoblox's NetMRI solution and underwent a comprehensive Proof-of-Concept (PoC) to determine whether the product would meet its needs. NMHS wanted to streamline network operations, elevate device and network visibility and simplify management for greater efficiency. NMHS needed to ensure network endpoints met security and regulatory requirements, improve device upgrade processes and quickly detect and resolve open audit findings.

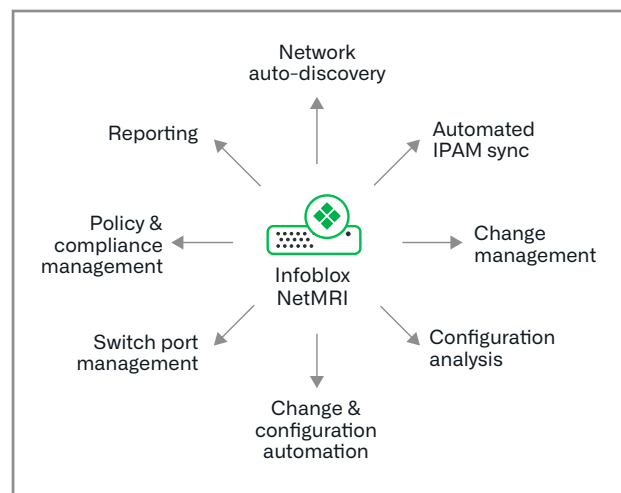
After a successful PoC, the NMHS team determined that Infoblox's NetMRI product with Advisor would be the perfect addition to its existing Infoblox deployment. NetMRI provided visibility, simplified and automated device updates, management and workflows, supplied device alerts, improved policy enforcement, and enabled audit and compliance to save costs associated with managing regionally dispersed network assets.

THE SOLUTION

Infoblox NetMRI

Infoblox's NetMRI product successfully helped the NMHS IT team automate and streamline network management. NetMRI also provides several other operational advantages:

- **Network auto discovery and IPAM sync:**
NetMRI automatically discovers, displays and synchronizes multi-vendor infrastructure, IP addresses, end hosts, network constructs (L2 physical data, L3 logical data, routes, VLANs, virtual forwarding and routing) and topologies with current and historical information through a single control plane.
- **Change management:**
NetMRI manages change tasks with powerful but simple methods for encoding change logic. NetMRI's automatic change detection saves considerable time, and delivers historical views, side-by-side comparisons and configuration search.



- **Configuration analysis:**

NetMRI auto-detects and audits network updates, receives detailed analysis, and performs configuration backup, search and date/time stamp correlation of network problems. Analysis and alerts on network performance, configuration and problems saves time and speeds resolution.

- **Change and configuration automation:**

NetMRI enables and embeds variable-based jobs and scripts, customizable templates, scripting (CCS, Perl and Python), user-based role access control and job scheduling for further time-saving automation.

- **Switch port management:**

NetMRI tracks free, available and unused ports. It also provides provisioning, remediates compromised endpoints, monitors connected wired and wireless end-hosts and supports capacity planning.

- **Policy and compliance management:**

Another helpful provision is automatic, continuous real-time and historical tracking of network changes against multiple security policies. Embedded compliance rules, best-practice templates, violation detection and remediation tools further assist in resolving conflicts.

- **Automated failover:**

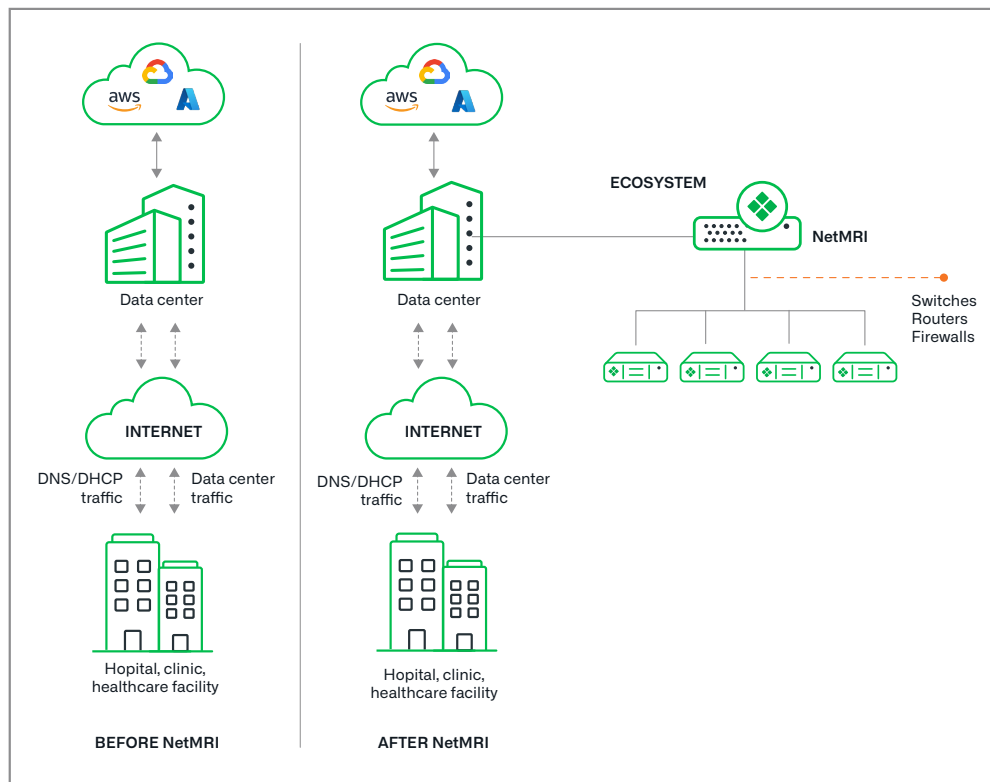
NetMRI provides redundancy and resiliency for data center collectors and appliances to support network availability requirements.

- **Advisor notifications:**

NetMRI Advisor automates continuous device security and lifecycle management, eliminates device vulnerabilities, supplies immediate, real-time PSIRT, CVE (Common Vulnerability and Exposure) and policy violation alerts, reduces security and compliance issues, provides contextual EoL and EoS insights, identifies obsolete devices and enables multi-vendor reporting and visibility.

- **Reporting:**

Finally, the single-click, pre-built and customizable executive and granular reports, filtering, on-demand, scheduled and role-based access enables IT management the visibility to see and share network information across the ecosystem.



NetMRI enables full discovery and visibility of network devices, network change and configuration management, automation and rapid deployment of network upgrades.

THE RESULT

Clear visibility, improved network management

NMHS successfully leveraged NetMRI discovery to provide visibility for all network devices. It enabled NMHS to streamline the software and device update process and efficiently manage device configurations without adding IT headcount. It also helped NMHS define and implement network and device policy, set, track, get alerts, prioritize and remediate non-compliant, EoS and EoL devices and provide out-of-the box and customizable reports for better network intelligence, audit support, issue resolution and control. Most importantly, Infoblox helped remove the manual elements from NMHS's network management process, and replaced it with automation and control, freeing staff time and resources for other critical assignments, saving time and money and enabling the organization to focus on what's most important—delivering the best healthcare to its communities and patients.



Infoblox unites networking and security to deliver unmatched performance and protection. Trusted by Fortune 100 companies and emerging innovators, we provide real-time visibility and control over who and what connects to your network, so your organization runs faster and stops threats earlier.

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