SOLUTION NOTE

SIMPLIFY IP ADDRESS MANAGEMENT ACROSS HYBRID, MULTI-CLOUD ENVIRONMENTS

Get control, visibility and automation for modern enterprise networks

SUMMARY

Replace spreadsheets and silos with a unified IP address management (IPAM) solution that integrates seamlessly with DNS and DHCP.

Organizations should not rely on spreadsheets, manual updates or guesswork for IPAM. Infoblox replaces fragmented IPAM tools and processes, providing centralized control, visibility and automation across hybrid, multi-cloud networks. By simplifying IPAM operations and eliminating IP conflicts, Infoblox helps organizations transform at speed—without the risk of outages or wasted resources.

OVERVIEW & CHALLENGES

As organizations embrace hybrid and multi-cloud strategies, the complexity of managing IP addresses has grown dramatically. Every new platform—on-premises, cloud or SaaS—introduces more IP space to track and more tools to manage. What used to be a straightforward network function is now a critical challenge that directly impacts application delivery, network resilience and business agility. The main IPAM challenges include:

- **Overlapping IP Spaces:** Disparate systems and disconnected IP allocation processes result in overlapping or conflicts, which increase security risks and can cause costly outages.
- **No Centralized Visibility:** IP address data is scattered across multiple tools and NetOps lacks visibility into how IPs are used in the cloud, making it difficult to plan, troubleshoot or optimize network resources.
- **Forced Trade-Offs:** NetOps prioritizes control to prevent outages, while CloudOps pushes for speed. Siloed processes and relying on spreadsheets or ticketing systems to execute IPAM tasks introduces errors, slows provisioning and leaves businesses choosing between reliable IPAM control or fast deployment, but not both.

To overcome IPAM challenges in hybrid, multi-cloud environments, organizations need an authoritative IPAM solution that unifies on-premises and hybrid, multi-cloud management, provides centralized visibility into IP address utilization and integrates seamlessly with third-party and cloud-native systems.

KEY CAPABILITIES

CENTRALIZED CONTROL

Provides a unified platform for IPAM across hybrid, multi-cloud networks, eliminating manual tracking, enforcing consistent policies and preventing IP conflicts.

COMPREHENSIVE VISIBILITY

Delivers a real-time view of the entire IP space, helping organizations optimize utilization, accelerate troubleshooting and simplify compliance.

SEAMLESS AUTOMATION

Integrates with automation/orchestration tools and cloud-native IPAM systems, automating provisioning, avoiding overlapping IP addresses and increasing operational agility.

THE INFOBLOX SOLUTION

Infoblox Universal IP Address Management™ (Universal IPAM), a part of Infoblox Universal DDI™ Product Suite, addresses customer challenges and needs head-on. Universal IPAM centralizes visibility and delivers unmatched features for policy-driven network and IP address allocation across hybrid, multi-cloud networks. It improves IP address usage efficiency, streamlines management, reduces errors and eliminates overlapping IP addresses. Combined with Infoblox Universal Asset Insights™, it provides an authoritative IPAM solution for hybrid, multi-cloud networks.

It offers a unified, hierarchical view of the entire network—spanning all IP address spaces and IPAM providers. This ensures compliance with allocation policies while delivering more intuitive subnet visibility. It reimagines how IP addresses are managed in complex, distributed environments, providing a structured representation across hybrid, multi-cloud networks with three unique views to organize and manage addresses:

- **Network Perspective** organizes IP addresses to provide a unified view across the entire network, discovering and preventing overlapping of IP addresses.
- **Address Space Perspective** organizes IP addresses based on IP address spaces, allowing the management of IP address spaces across on-premises and cloud environments.
- **Location Perspective** organizes IP addresses by location (geographical region), making it easy to manage networks in specific regions or branch sites.

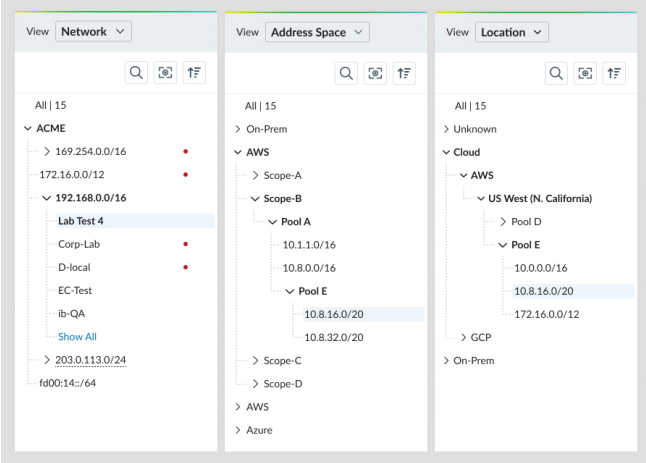


Figure 1. Hierarchical view of entire network

USE CASE: ELIMINATE MANUAL TRACKING WITH CENTRALIZED CONTROL

Managing IP addresses across hybrid and multi-cloud environments often involves juggling multiple tools and manual processes, which increases the risk of errors and outages.

Infoblox provides a centralized platform for IPAM integrated with DNS and DHCP, enabling organizations to identify and prevent overlapping or conflicting IP addresses before they cause costly disruptions. By eliminating manual IPAM operations in spreadsheets or ticketing systems, Infoblox automates IP tracking and allocations, and reduces human error and operational overhead. By enforcing consistent policies across distributed environments, Infoblox ensures reliability and improves efficiency at scale.

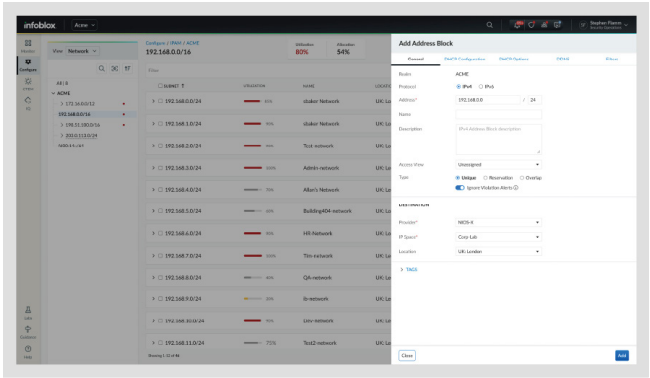


Figure 2. Centralized management of IP addresses

USE CASE: GAIN REAL-TIME VISIBILITY WITH AUTHORITATIVE IPAM

Without comprehensive visibility into IP addresses and usage, IT teams struggle to troubleshoot issues and often waste valuable resources through suboptimal allocation.

Infoblox delivers enhanced visibility into IP address usage and subnet utilization, giving organizations a real-time, authoritative view of their entire IP space. This insight helps optimize resource utilization, accelerate troubleshooting and simplify compliance and governance. By eliminating blind spots and enhancing visibility into utilization, Infoblox empowers IT teams to resolve problems faster and optimize resource allocations across hybrid, multi-cloud environments.

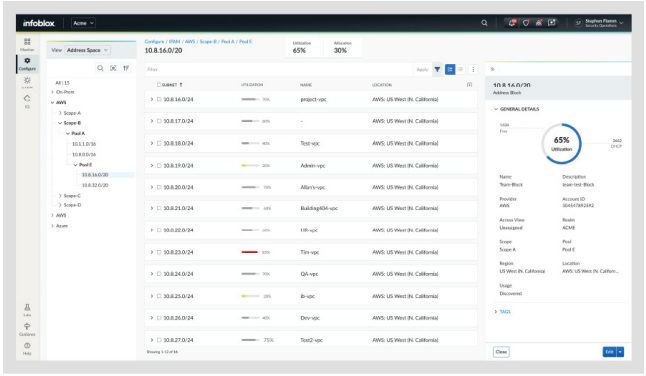


Figure 3. Complete visibility into IP utilization

USE CASE: AUTOMATE IP ADDRESS PROVISIONING WITH INTEGRATIONS

Hybrid and multi-cloud environments demand agility, but traditional IPAM workflows often rely on manual coordination between NetOps and CloudOps. This creates forced tradeoffs between control and speed, resulting in either a slower provisioning or a higher risk of conflicts.

Infoblox removes these bottlenecks by automating IP address provisioning through automation plugins for automation/orchestration tools, Terraform and Ansible. In addition to delivering an enterprise-grade IPAM solution for hybrid, multi-cloud networks, Infoblox seamlessly integrates with Amazon VPC IPAM and Google internal range. By reducing manual effort and eliminating silos, Infoblox accelerates application provisioning, prevents IP conflicts and enables seamless collaboration across teams and environments.

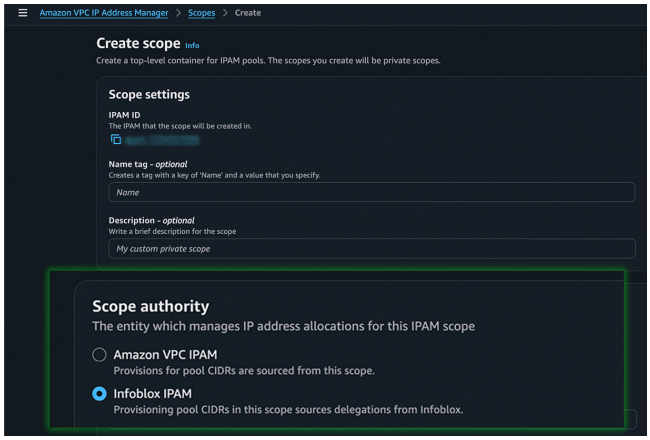


Figure 4. Infoblox integration into Amazon VPC IPAM

CLOUD-NATIVE INTEGRATIONS

Amazon VPC IPAM Integration: Infoblox is integrated in Amazon VPC IPAM and automates assigning IPv4 address blocks to Amazon VPC top-level pools—by reading from and writing to Amazon VPC IPAM. It enables cross-team collaboration, allowing CloudOps teams to request IPv4 address blocks directly from Infoblox using familiar AWS interfaces—AWS Management Console, AWS Command Line Interface (CLI) or AWS Software Development Kits (SDKs), while NetOps teams retain centralized control via the Infoblox Portal. It automatically validates IPv4 blocks for uniqueness before assigning to AWS, which prevents potential service disruptions that could be caused due to overlapping IPs across on-premises and AWS. It enables visibility into IPv4 address assignments to Amazon VPC IPAM top-level pools, enabling efficient resource allocation.

Google Internal Range Integration: Infoblox seamlessly integrates with Google internal range, enabling the enforcement of enterprise IPAM policies across Google Cloud, Google Kubernetes Engine (GKE) and cross-cloud networks. The integration simplifies IPAM by eliminating conflicts and providing a unified platform to manage IP resources consistently across hybrid, multi-cloud environments.

FEDRAMP MODERATE CERTIFIED

Network teams access Universal IPAM, along with Infoblox Universal DNS Management™ and Infoblox Universal DHCP Management™, through Infoblox Universal DDI™ Management. Now, Universal DDI Management and Universal Asset Insights have received a FedRAMP certification at the Moderate baseline. FedRAMP provides the standardized federal approach to security and risk assessment for cloud products and services. For U.S. federal government agencies, this certification creates an approved route to adopt these services while supporting procurement and compliance requirements.

CONCLUSION

Organizations increasingly struggle to manage IP addresses across hybrid, multi-cloud environments where siloed tools and manual processes slow transformation and increase risk. Infoblox Universal IPAM gives organizations the centralized control, authoritative visibility and seamless automation they need to manage IP addresses across hybrid, multi-cloud environments. By replacing fragmented tools and manual processes, Infoblox eliminates conflicts, reduces risk and optimizes IP utilization. The result is faster application rollouts, simplified operations and resilient networks that scale with business needs.

With Infoblox, organizations not only simplify IPAM but also unlock the agility and resilience needed for critical business initiatives. They can confidently modernize their networks, drive cloud adoption, accelerate mergers and acquisitions, and transform at speed without compromising reliability or security.

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Infoblox unites networking, security and cloud with a protective DDI platform that delivers enterprise resilience and agility. We integrate across hybrid and multi-cloud environments, automate critical network services and preemptively secure the business—providing the visibility and context needed to move fast without compromise.

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