



DON'T BUILD YOUR TOMORROW ON YESTERDAY'S CRITICAL NETWORK SERVICES

Modernization, Automation and Security
Depend on Enterprise-Grade DDI





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THE HIDDEN COSTS OF DISPARATE CRITICAL NETWORK SERVICES

In today's hyperconnected enterprise, DNS, DHCP and IP address management (DDI) aren't just background services—they're the foundation of secure, scalable digital operations. And yet, many organizations continue relying on aging, fragmented infrastructure under the assumption that it's "good enough."

What's often overlooked is how much continuing with outdated solutions costs you—not just in dollars, but in downtime, risk exposure and lost productivity. According to recent research,* organizations using non-enterprise-grade DDI are significantly more vulnerable to operational disruption, experience longer recovery times after outages, face higher audit failure rates and suffer higher costs.



* 9 Pitfalls of Not Using Enterprise-Grade DDI, Enterprise Strategy Group, February 2025

**AS DEMANDS
GROW ACROSS
IDENTITY,
CLOUD AND
EDGE SERVICES,
ENTERPRISE-
GRADE DDI
ISN'T JUST AN
UPGRADE—IT'S A
MODERNIZATION
IMPERATIVE.**



**IF ENTERPRISE
DNS FAILS,
THE MODERN
WORLD STOPS:
NO TRADES,
NO FLIGHTS,
NO POWER.
EVERYTHING
FREEZES.**

KEY CHALLENGES WITH TRADITIONAL SILOED DNS, DHCP AND IPAM:

- ! Unplanned downtime
- ! Lack of visibility and control
- ! Lost productivity
- ! Higher costs
- ! Scaling issues
- ! Single points of failure
- ! Greater security vulnerabilities

CRITICAL NETWORK SERVICES ARE YOUR DIGITAL LIFELINES

Your organization may be modernizing at the application and cloud layer, but without enterprise-grade DNS and DHCP, the entire foundation is at risk. Nearly every modern application—from enterprise resource planning (ERP) systems to identity platforms—relies on DNS as its digital entry point. A single misconfigured DHCP scope can mean entire departments can't access the network.



THE REAL COST OF OUTAGES

DNS and DHCP outages are no longer just IT issues—they're business risks. The average cost of a network outage has inched to as much as \$9,000 per minute* for large organizations, and that figure balloons when outages affect customer-facing systems or mission-critical processes.

CASE IN POINT:

A global retailer relying on aging Microsoft DNS infrastructure experienced a sync issue that disrupted point of sale (POS) systems at over 100 stores for three hours.

» **ESTIMATED REVENUE LOSS? \$7.5 MILLION.
CUSTOMER TRUST? EVEN HARDER TO RECOVER.**

* The True Cost of Downtime, Forbes, David Flower, Forbes Technology Council, April 10, 2024

**DNS AND DHCP
FAILURES
CAN TRIGGER
NETWORK
OUTAGES
THAT MAKE
HEADLINES
AND REACH THE
BOARDROOM**



DIGITAL TRANSFORMATION WITHOUT FOUNDATIONAL ENTERPRISE- GRADE DDI IS LIKE BUILDING A SKYSCRAPER ON QUICKSAND

LEGACY NETWORK SERVICES CAN'T HANDLE TODAY'S NEEDS

Enterprises can't afford to gamble on legacy DNS and DHCP tools—especially as digital transformation accelerates. What worked a decade ago simply doesn't scale to today's needs.

OPERATIONAL RISK

Legacy systems often rely on brittle interdependencies—between DNS, DHCP and Microsoft Active Directory all deployed on the same Windows Server. And, as we noted earlier, a single point of failure can trigger cascading outages.

COST INEFFICIENCIES

Supporting legacy infrastructure often requires dedicated headcount for maintenance, patching and troubleshooting. Add to that expensive hardware refresh cycles and your DDI cost curve becomes unsustainable.

FRAGMENTED VISIBILITY

Most legacy DDI deployments lack a real-time, authoritative and consolidated view of IP address usage or asset status across hybrid and multi-cloud environments. This reduced visibility leads to delays in identifying and isolating compromised endpoints, manual tracking and reconciliation of IP addresses in spreadsheets, difficulty enforcing compliance and audit trails, and IP address conflicts and overlaps.

INNOVATION BOTTLENECKS

Legacy DDI systems slow down automation, limit integrations and force DevOps teams to rely on manual tickets or outdated scripts.

ALL IN ALL, LEGACY TOOLS CAN'T KEEP UP

Features like DNS sync delays, lack of a recycle bin and limited role-based access control (RBAC) make legacy systems unreliable at scale. Worse, many require one management console per server, creating operational silos and increasing the chance of configuration drift.

STATUS QUO LEADS TO BUSINESS WOE

Siloed critical network services provide many challenges for network, cloud and security managers—and more opportunities for bad actors. No matter what business you're in, if you're still trying to build your digital future with outdated network services, you're asking for trouble.

How Ransomware Paralyzed Patient Care

- Ransomware gang targeted a leading hospital system
- DNS/DHCP and directory services shared the same server, cutting off access when troubleshooting was most urgently needed
- Single employee download led to critical servers being compromised
- Healthcare operations collapsed: records, phones and patient portals went down
- 5.6 million patient records affected with weeks of disruptions

**Total cost:
\$1.3 billion**

The Hidden Costs of Patching Servers

- Energy provider managed 400 servers requiring 4,800 patches per year
- With a 1% failure rate that meant 48 crashes per year
- Estimating approximately 50 employees down for four hours each time
- \$100 average hourly cost per employee

Annual downtime impact: \$960,000

A Crash in July 2024 Heard 'Round the World

- Largest IT outage in history
- Millions of servers went down
- Critical DNS/DHCP services down worldwide
- 10,000 flights grounded
- Countless hospitals disrupted

Thousands of businesses compromised

Based on recent Forrester research, enterprise-grade DDI saves serious time and money:

\$7.1M savings

moving from legacy infrastructure to modern DDI*

2 days to 1 hour

in time savings for virtual machine (VM) deployment across 1,000 sites**

14,000 hours

in time savings across network with modern DDI

WHY ENTERPRISE-GRADE DDI IS THE FIRST STEP IN IT MODERNIZATION

The journey to hybrid cloud, Zero Trust and edge computing doesn't start with new applications or shiny UIs. It starts with dependable, scalable and secure critical network services.

UNIFIED DNS, DHCP AND IPAM = DDI

To transform your network, you must first transform how it's deployed and managed. Enterprise-grade DDI combines the deployment and management of DNS, DHCP and IP address management (IPAM) into a single management workflow. This combination simplifies traditional network services complexity and streamlines business operations. It also creates better hybrid cloud and cross-cloud visibility, making it easier to automate processes while allowing you to run network services on-prem or in the cloud. It's purpose-built to deliver the resiliency, visibility and automation today's enterprises require.

In fact, organizations that use enterprise-grade DDI have reported a 60 percent-plus boost in DDI task productivity, with fewer manual steps and fewer configuration errors. One company was able to achieve 100 percent retirement of aging, non-Microsoft DDI tools and a 50 percent-plus reduction in total Microsoft infrastructure required.

* The Total Economic Impact™ Of Infoblox DDI, Forrester Consulting, October, 2023

** One company's results

ENTERPRISE-GRADE DDI IS THE FOUNDATION FOR MODERN IT



CENTRALIZED, UNIFIED MANAGEMENT

Enterprise-grade DDI solutions offer centralized automation and orchestration of DNS, DHCP and IPAM functions across diverse environments—on-premises, hybrid and multi-cloud. By unifying these core network services under a single management pane, IT teams gain:

- Simplified operations
- Improved policy enforcement
- Operational efficiency



ROLE-BASED ADMINISTRATION

Enterprise DDI platforms incorporate tighter access controls to support collaboration across NetOps, SecOps and CloudOps teams while maintaining accountability. This collaborative administration enables:

- Permission-based access
- Auditability and change tracking
- Delegated administration



GREATER VISIBILITY

An enterprise DDI platform provides real-time visibility into every IP-enabled device and service on the network, which is critical for both operational control and security. Key capabilities also include:

- Dynamic asset discovery
- Lease tracking and IP utilization
- Integrated analytics



STRONGER SECURITY POSTURE

Enterprise-grade DDI solutions strengthen security by using DNS as a foundational element of cybersecurity. This added security includes proactive blocking of traffic to malicious domains and stopping DNS-based attacks. With built-in security capabilities, modern DDI enables:

- Preemptive security
- Real-time visibility into DNS traffic and anomalies
- Consistent security policies across hybrid and multi-cloud environments



FLEXIBLE DEPLOYMENT OPTIONS

Enterprise-grade DDI lets you deploy services in a manner aligned with business goals and IT strategies, rather than being restricted by rigid product designs.

This flexibility allows:

- Cloud-native and hybrid support
- Infrastructure-free DNS/DHCP delivered as a service
- Virtual and physical appliance options
- Scalable architecture

**MODERNIZATION ISN'T ABOUT
CHANGE FOR CHANGE'S SAKE.
IT'S ABOUT RESILIENCE, VISIBILITY
AND OPERATIONAL SANITY.**



INFOBLOX UNIVERSAL DDI™ PRODUCT SUITE DELIVERS UNMATCHED ENTERPRISE-GRADE CRITICAL NETWORK SERVICES



Infoblox Universal DDI™ Product Suite is the industry's most powerful enterprise-grade DDI solution due to its combination of centralized management and control, automation, scalability and security across hybrid, multi-cloud and on-premises environments. It unifies DNS, DHCP and IPAM into a single, integrated platform that delivers real-time visibility, intelligent automation and high availability for mission-critical network services running on-prem or across cloud-native DNS systems, like AWS, Google Cloud and Azure. It also lets organizations continue using their cloud-native DNS while using Universal DDI for management.

Infoblox's cloud-native architecture also enables flexible deployment options that align with modern enterprise IT strategies, while advanced features like threat intelligence integration and API-driven extensibility empower organizations to streamline operations, enhance security posture and support digital transformation at scale. With proven reliability and global enterprise adoption, Universal DDI is the gold standard for managing and securing today's complex, dynamic networks.



UNIFIED, CENTRALIZED MANAGEMENT ACROSS CLOUDS AND ON-PREM

At its core, Universal DDI consolidates DNS, DHCP and IPAM into a unified control plane, enabling streamlined management of these critical network services across on-premises infrastructure and all three major cloud providers—AWS, Azure and Google Cloud. By centralizing control, Universal DDI:

- Eliminates silos
- Simplifies operations
- Enhances security
- Reduces risk of misconfigurations
- Enables faster provisioning of network services



IN-DEPTH VISIBILITY ENABLES BETTER SECURITY AND COMPLIANCE

With real-time visibility into configured IP ranges, usage, lease status and more, IT teams can proactively detect anomalies, enforce policy and avoid costly surprises. Some companies have achieved:



»»» **60%**

faster identification of compromised devices during security incidents

»»» **70%+**

drop-in time spent preparing compliance reports



FLEXIBLE DEPLOYMENT OPTIONS TO FIT YOUR ARCHITECTURE

Whether you need an as-a-service, physical or virtual on-prem, or hybrid DDI model, Infoblox adapts to your requirements. Roll out services at the edge, in the cloud or both—with policy management of distributed services with consistency and automation built in.

»»»

PROOF POINT: A global logistics firm reduced edge site provisioning from seven days to two hours with Infoblox automated deployment templates.



ROLE-BASED ADMINISTRATION SIMPLIFIES GOVERNANCE

Easily assign roles based on function, geography or compliance scope. No more all-or-nothing access or risky manual overrides.

»»»

PROOF POINT: One U.S. federal agency used Infoblox RBAC to support over 1,200 users while maintaining strict separation between classified and unclassified networks.



DNS SECURITY THAT STOPS THREATS EARLIER

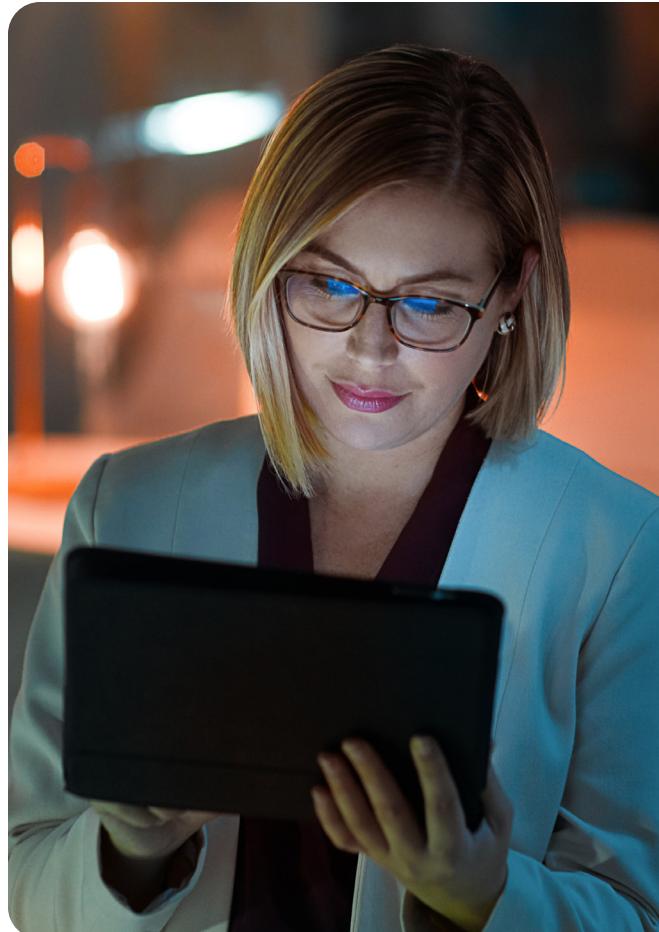
Infoblox Universal DDI delivers built-in, enterprise-grade security via Infoblox Threat Defense™. By integrating Protective DNS capabilities with DNS, DHCP and IPAM into a unified platform, security teams can stop threats preemptively—on average, more than 63 days before other solutions. Universal DDI:

- Preemptively blocks traffic to malicious and phishing domains
- Blocks DNS-based threats including command and control (C2), data exfiltration and domain generation algorithm (DGA) in real time
- Identifies lookalike domains to protect brand reputation
- Enforces consistent security policies from endpoint edge to cloud
- Accelerates incident response with DNS-event prioritization and endpoint attribution

DECOUPLING MISSION-CRITICAL SERVICES MEANS MORE RESILIENCE



Enterprise-grade DDI decouples network services from identity, ensuring uptime, visibility and security across hybrid environments. Infoblox modernizes critical network services by delivering resilient DDI that is purpose-built for enterprise scale, role-based access control, security and automation.



NIST

National Institute of Standards and Technology SP 800-81

2.3.1. Dedicated DNS Services: Cybercriminals and other actors will seek to amplify and maximize the disruption of any cyber incident by attacking mission-critical systems, especially targets that host multiple critical components.

To ensure cyber resiliency, the coexistence of multiple mission-critical services on a single system should be limited (i.e., separation of duties).

<https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-81r3.ipd.pdf>

INFOBLOX UNIVERSAL DDI ENABLES THESE CORNERSTONES OF MODERNIZATION



IDENTITY MODERNIZATION



Challenge:

An enterprise was migrating to hybrid identity management platforms (Okta and Azure AD), but their DNS and DHCP were still tied to on-prem Microsoft Active Directory.

Solution:

Infoblox Universal DDI decoupled critical network services from legacy infrastructure and delivered cloud-native, scalable DNS and DHCP—with unified visibility and management.

Outcome:

- ✓ Seamless hybrid identity management platform migration
- ✓ Increased uptime and manageability
- ✓ Reduced dependency on legacy Microsoft Active Directory

Universal DDI ensured a smooth, secure and scalable identity transformation—without disruption.

CLOUD TRANSFORMATION



Challenge:

A large healthcare provider moved workloads to AWS and Azure but struggled to manage DNS across fragmented on-prem and cloud environments.

Solution:

Infoblox Universal DDI provided a centralized platform for managing DNS across multiple cloud providers and private infrastructure.

Outcome:

- ✓ 360-degree visibility across hybrid environments
- ✓ Increased uptime and manageability
- ✓ Simplified automation for DevOps
- ✓ Secure, resilient service delivery

100%
30%+ retirement of legacy DNS security tools
SOC productivity gain

EDGE SERVICES MODERNIZATION



Challenge:

With the rise of remote work, IoT and edge processing, a logistics company needed dependable DNS/DHCP across dozens of edge nodes—without IT presence.

Solution:

Infoblox Universal DDI automated DNS/DHCP provisioning at the edge with resilient, remotely managed services.

Outcome:

- ✓ Instant site setup with zero-touch provisioning
- ✓ 70% fewer outages at remote sites
- ✓ Stronger security posture with centralized control

Infoblox brought enterprise-grade network services to the edge—without sending IT boots on the ground.



**BECAUSE IF
DNS FAILS,
YOUR BUSINESS
STOPS.
IT'S THAT SIMPLE.**

infoblox[®]

INFOBLOX UNIVERSAL DDI BUILD FOR WHAT'S NEXT

For enterprises navigating digital transformation who need reliable, secure, scalable critical network services, Universal DDI is a cloud-native DDI platform that unifies management, automates operations and secures the edge. Unlike legacy, siloed DNS and DHCP tools, Infoblox delivers modern network infrastructure that enables business agility, resilience, security and cost savings.

Infoblox Universal DDI isn't just an upgrade—it's a foundational requirement for the modern enterprise. It's how you build a network that's resilient, responsive and ready for anything.



READY TO MOVE ON FROM THE STATUS QUO?
Learn more at: infoblox.com/networkmodernization



Infoblox unites networking, security and cloud to form a foundation for operations that's as resilient as it is agile. We seamlessly integrate, secure and automate critical network services so businesses can move fast without compromise.

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