**TEST REPORT**
Tolly.

#225139
May 2025

Commissioned by
Infoblox, Inc.

# Infoblox NIOS-X as a Service
## Distributed Environments vs. DIY Evaluation

## EXECUTIVE SUMMARY

Distributed environments are the rule and not the exception. Virtually every organization needs to support remote locations such as branches, stores, warehouses, and more. Most organizations centralize their IT staff at the headquarters location and have little to no IT support at distributed locations. Thus, providing services such as DNS, DHCP, and IP address management (DDI) to these locations can be time-consuming and costly if IT staff must physically visit locations to provision or maintain services.

Infoblox has expanded their offerings to include delivering critical network services as a cloud-native service with NIOS-X as a Service. This innovative, industry-first solution eliminates the requirement and maintenance overhead of supporting physical or virtual DDI appliances at remote locations.

Infoblox commissioned Tolly to review the provisioning of NIOS-X as a Service for remote, distributed environments and compare that to the alternative of using Microsoft Windows with DNS, DHCP, and AD, or BIND or related open-source solutions. The differences between the two approaches are enormous. Users need only provision an encrypted tunnel into NIOS-X as a Service from the branch router and everything else - configuration and service delivery - takes place from the central location. Figure 1 summarizes some of the key differences between the approaches.

## THE BOTTOM LINE

Infoblox NIOS-X as a Service deployments provide:

**1** Support for distributed locations without requiring any additional gear on the premises

**2** Centralized, cloud-based management of remote location services

**3** Beyond NIOS-X as a Service, the option to provision on-premises NIOS-X server as VM, container, or Zero-Touch NIOS-X appliance for local survivability

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### Distributed Site Deployment Comparison
#### Infoblox NIOS-X as a Service vs. DIY Solutions

| | infoblox Purpose-built, enterprise-grade DDI | DIY / DDI bundled with other systems |
|---|---|---|
| Centralized Management | ✔ Yes | ✘ No |
| Branch IT Staffing Requirement | ✔ None | ✘ High |
| Security Consistency | ✔ Enforced Everywhere | ✘ Variable |
| Scalability | ✔ Instant & Cloud-Native | ✘ Manual & Painful |
| Visibility | ✔ Unified View | ✘ Limited Per Branch |
| Policy Enforcement | ✔ Standardized | ✘ Inconsistent |

Source: Tolly, May 2025

Figure 1

# Test Results

## NIOS-X as a Service Deployment

Because NIOS-X is delivered as a service, there is nothing that needs to be deployed at any of the remote/distributed sites.

Deployment consists of the central-site admin configuring the appropriate services and parameters for each location via the cloud-based management platform.

All that is needed at the branch level is a router configuration update to establish an IPSec (VPN) tunnel between each branch and the cloud service where NIOS-X as a Service will be hosted.

DDI traffic from the clients will be related to the NIOS-X as a Service instance for processing with appropriate addressing information returned to the client station.

The left-hand side of Figure 2 illustrates the NIOS-X as a Service deployment visually and highlights some of the benefits. For organizations requiring local survivability in the event of the failure of the link to the

cloud service, Infoblox offers physical and virtual appliances for local deployment (discussed below). Figure 3 shows an example NIOS-X as a Service management screen.
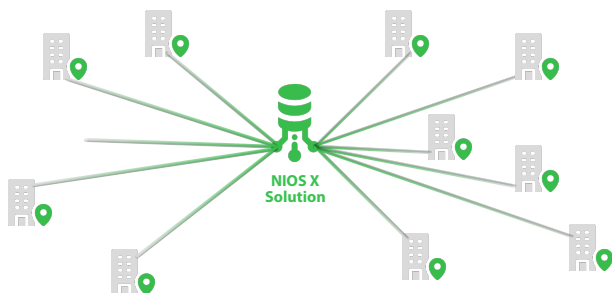
## DIY Deployment

While do-it-yourself DDI services might be implemented several ways, they all share similar downsides, as illustrated on the right-hand side of Figure 2.

The need for on-prem hardware of some type is a given. For many customers, this would likely be Microsoft Windows Server.



**NIOS-X as a Service vs. DIY (Windows Server+DNS+DHCP)**
**Location of Hardware and Human Resource in Each Approach**

**infoblox**
**NIOS-X as a Service**

**NIOS X Solution**

**DIY / DDI bundled with other systems**

- On-Site Skilled Staff Required
- DNS, DHCP, AD Servers Locally Deployed

✓ Single Point of Control  ✓ Secured Encrypted Tunnels
✓ Minimal / No On-Site IT  ✓ Zero-Touch Provisioning

✗ Fragmented Management  ✗ Security Silos at Each Branch
✗ Hardware / Staff On-Site  ✗ Config Challenges / Visibility

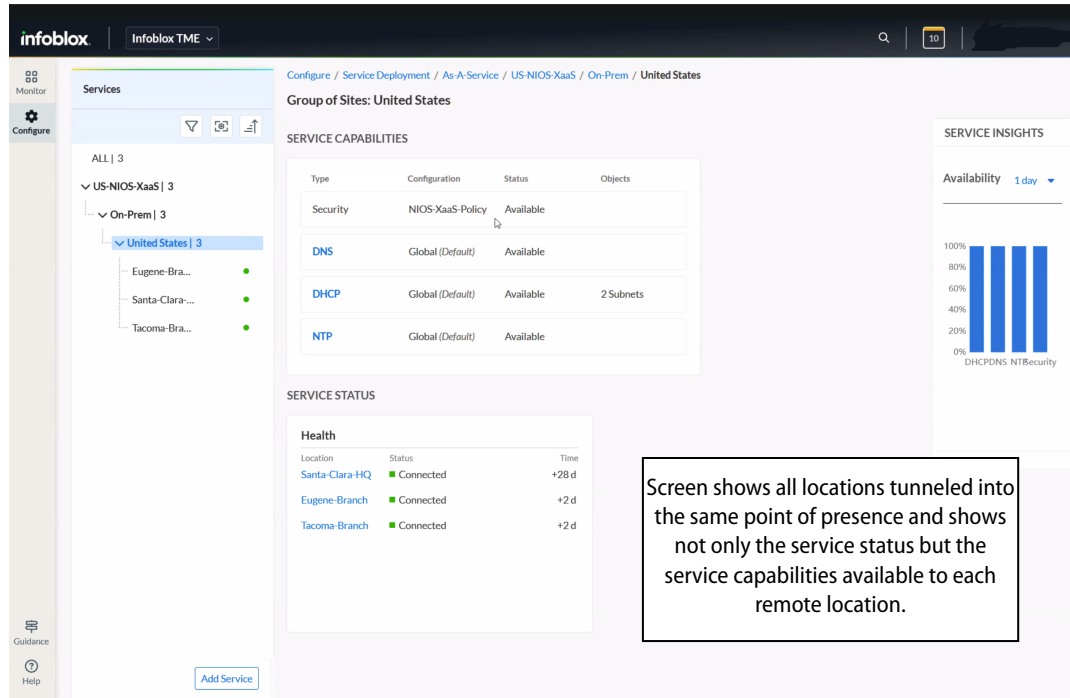**Cloud-Managed Solution Built to be Highly Scalable, Streamlined, and Secure**

**Branch-Dependent Architecture Challenging to Scale, Costly to Maintain, and Poses Security Risks**

Note: NIOS-X as a Service can be hosted either in AWS or Google Cloud at this time. Infoblox has localized PoPs to improve latency.

Source: Tolly, May 2025

Figure 2

**NIOS-X as a Service**
**Site Overview by Point of Presence**



Screen shows all locations tunneled into the same point of presence and shows not only the service status but the service capabilities available to each remote location.

Source: Tolly, May 2025

Figure 3

If remote access has been set up into an existing server, then it is possible for the Windows "DIY" DDI configuration to be done remotely. This would typically consist of adding DNS and DHCP services to the Windows Server. A reboot of the server might also be required.

In any case, the DIY approach requires manual services installation for each remote location as well as ongoing individual maintenance and configuration via the remote link. Should the Windows Server environment become unavailable for any reason, the DIY DDI services will also be unavailable and clients won't be able to reach internal or external networking resources until the Windows Server is again available and the Microsoft DNS and DHCP services started.

Ultimately, DIY distributed DDI is an inferior choice versus NIOS-X as a Service for the following reasons: 1) Fragmented management - with each branch requiring separate configuration and maintenance, 2) On-site hardware requiring closet space, UPS backup, HVAC, and access control, 3) Creates security silos at each branch, again, because of the separate management required, 4) Difficulty to maintain over time as people familiar with each location's setup move on to other positions or leave the organization, 5) Placing DNS/DHCP on the same Windows Server as AD creates a security risk. If attackers gain access, they obtain both network control and authentication privileges simultaneously.

## Local Survivability

Having on-prem hardware does have one benefit for certain customers. By not depending upon cloud access for DDI functions, an on-prem DDI server implementation can continue to provide DNS and DHCP services in those infrequent instances where the cloud service might be unavailable. (If the link from the branch to the Internet is also down, then the DIY solution also cannot reach outside of the local area network in the branch.)

For customers that have multiple links from branch locations to the Internet and need to have "local survivability" for DDI services in the event of link failure, Infoblox also continues to offer several on-prem options that still provide the customer with enterprise-grade NIOS services (rather than DIY.)

Optionally, Infoblox customers can use existing, on-prem server environments to provision a local instance of NIOS-X. This can be done as a virtual machine under popular VM architectures such as Microsoft Hypervisor or VMware ESXi or as a container using Docker. It can run on any device that provides a Docker container. Figure 4, center, shows the various download/installation options for NIOS-X servers.

Additionally, customers have the option to purchase a NIOS-X appliance. This can be

identified by serial number and automatically provisioned by Universal DDI. This "zero touch provisioning" (ZTP) requires only that someone at the branch office plug the Infoblox appliance into a power outlet and connect its Ethernet network connection.

Thus, Infoblox provides a full set of functionality no matter what the specific needs of the organization might be.

**Infoblox, Inc.**

**Infoblox NIOS-X as a Service**

**Distributed Environments Deployment**

*Tested May 2025*

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**Infoblox Universal DDI**
**NIOS-X Local Survivability Virtualization Options**
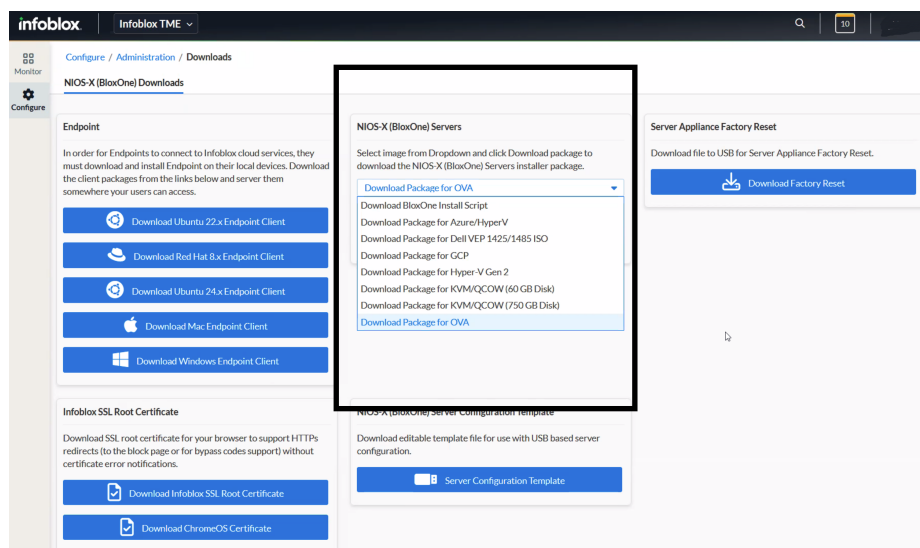


Source: Tolly, May 2025

Figure 4

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# Understanding Infoblox Universal DDI Product Suite
**Benefits:**

- Unmatched SaaS DDI - Industry's most comprehensive hybrid, multi-cloud DDI management solution
- Uniquely simple - Only unified hybrid multi-cloud DNS management from a single workflow
- IP address management - Unmatched features for policy-driven IP address allocation
- In-depth visibility - Industry's broadest range of discovery sources
- Elastic scalability - including the DDI industry's only as-a-service deployment model

For more information, go to:
https://www.infoblox.com/products/universal-ddi/

Source: Infoblox

## About Tolly…

The Tolly Group companies have been delivering world-class IT services for over 35 years. Tolly is a leading global provider of third-party validation services for vendors of IT products, components and services.
You can reach the company by email at sales@tolly.com, or by telephone at +1 561.391.5610.

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