TEST REPORT

Tolly.

#225138

May 2025

Commissioned by Infoblox, Inc.

Infoblox Universal DDI™

Multi-Platform Management Evaluation

EXECUTIVE SUMMARY

Enterprises of all sizes typically augment their on-premises (on-prem) computing with one or more cloud services. While these hybrid environments can expand IT functionality and provide compute cost savings, they also increase management complexity for IT staff. To manage DDI for each cloud service requires that staff access separate portals for each service and navigate dissimilar management interfaces. This translates into increased management effort and decreased efficiency.

Infoblox Universal DDI™ eliminates these challenges by providing access to both on-prem DDI and cloud-based DDI management from within the Universal DDI management environment.

Infoblox commissioned Tolly to evaluate the benefits of its Universal DDI in managing both on-prem and cloud-based environments. Cloud DDI services included Amazon Route 53, Microsoft Azure DNS, and Google Cloud DNS.

The Infoblox Universal DDI solution was shown to be able to manage hybrid DDI environments from the Universal DDI management pane. Figure 1 shows how Universal DDI replaces separate, multi-step, cloud system access with single-system access to on-prem and all supported cloud systems.

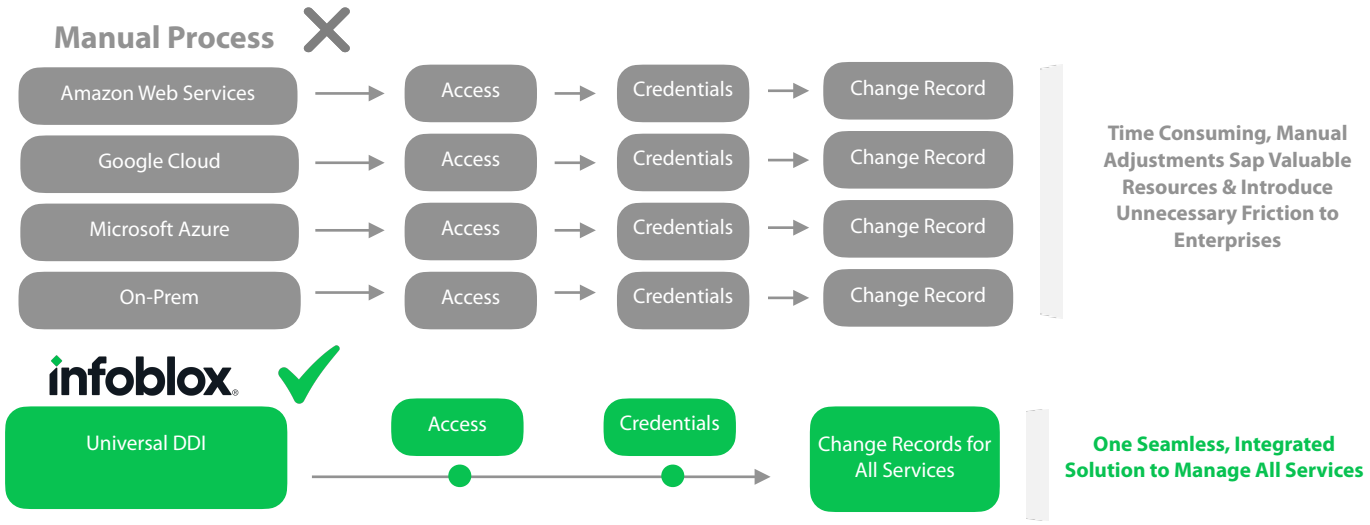
THE BOTTOM LINE

Infoblox Universal DDI provides:

1. Single-platform DDI management for on-premises as well as for Amazon Route 53, Microsoft Azure DNS, and Google Cloud DNS environments
2. Universal application programming interface (API) to "front end" on-prem and cloud-based DDI configuration
3. Significant time savings and simplified personnel requirements via unified platform, tests showed up to a 59.6% improvement in DDI task time

Multi-Platform Address Management: Manual Process vs. Universal DDI

Example Work Flow (e.g., Changing a Single DNS Record)



Note: Infoblox Universal DDI does not replace cloud DNS services, rather it provides a unified front-end interface to manage each service.

Source: Tolly, May 2025

Figure 1

Test Results

Multi-Platform Management

As noted above, requiring the use of separate management portals for configuration of DNS and IP information is inherently inefficient - and also potentially problematic.

Tests showed that it required between 30 seconds and 80 seconds to update a single DNS record using individual cloud portals. Under Universal DDI, the tasks were completed in 20 - 33 seconds using the Infoblox Portal. Furthermore, the Universal DDI API enables instant DNS record updates across AWS, Azure, and Google Cloud. But the results for individual cloud portals represent a "perfect world" where one individual has access to all the cloud interfaces.

Figure 1 illustrates the basic problem - and how Infoblox solves that problem with a single workflow - but there are even more drawbacks to consider when dealing with separate management of cloud DNS and IP services.

For starters, many organizations may have multiple accounts set up for each cloud provider. This may have occurred over time with decentralized departments initiating their own accounts. For this common situation, then, the network admin must first find and login to the correct account in order to manage the IP resource.

Organizations might also delegate management of the different cloud services to different internal support groups. In such cases, service tickets might need to be opened with the group responsible for individual cloud services.

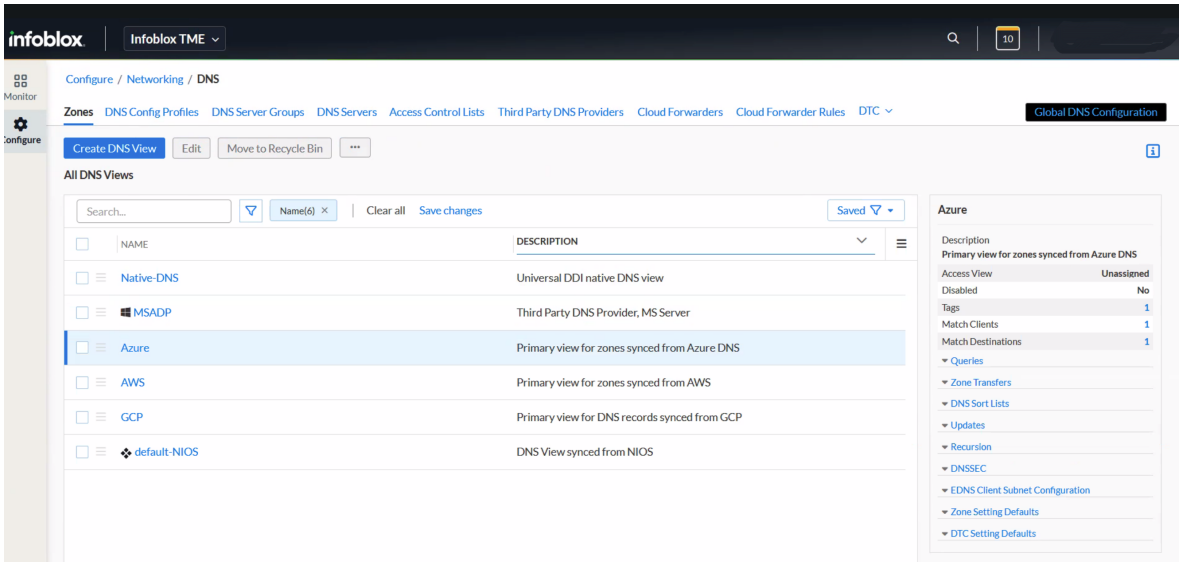
Having to deal with multiple technical support groups in order to have a single update made across multiple cloud environments not only invites errors but almost certainly extends the wait time until the resource is updated and available across all of the environments.

Infoblox Universal DDI eliminates these challenges and concerns as a single authorized network administrator can access all of the cloud environments from the Universal DDI console. See Figure 2 for an example console screenshot.

During Universal DDI setup, system administrators provide "back end" credentials for the various cloud systems in configuration profiles. This allows Universal DDI to interface into each system from the single Universal DDI management plane. This integration not only simplifies the job of the network administrator but enhances the speed at which changes and additions can be made to the cloud systems. A basic test of changing a single DNS record required 240 seconds across four separate

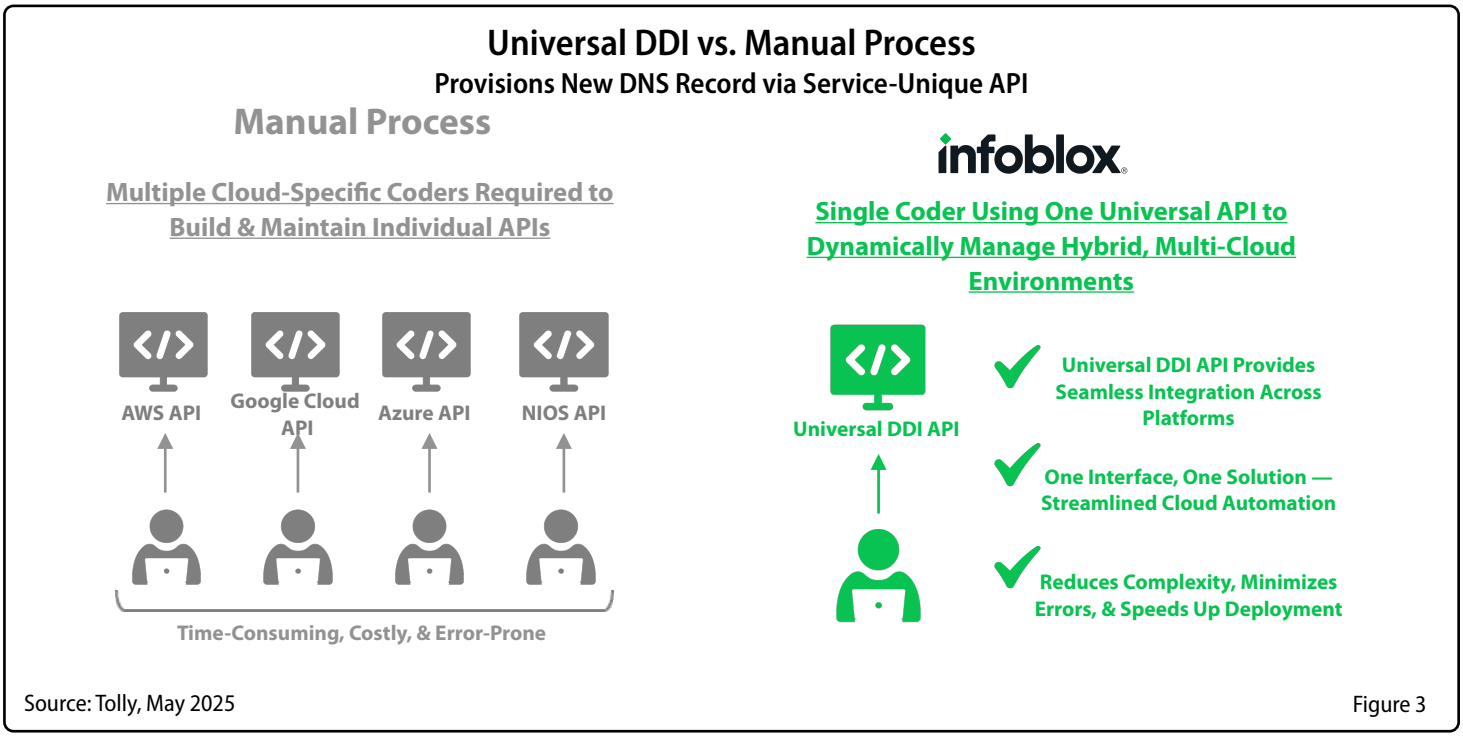
Multi-Platform Address Management: All Accessible via Single Management Plane

Example Universal DDI GUI showing on-prem and cloud resources



Source: Tolly, May 2025

Figure 2



Source: Tolly, May 2025

Figure 3

systems (3 cloud + NIOS-X) and only 97 seconds with Universal DDI, a 59.6% improvement.

Multi-Platform API - Programmed Access to DDI Services

Many organizations are faced with the need to make bulk and/or frequent updates to DDI resources. As volume updates or additions can be impractical to be done manually many companies employ custom-coded programs to make such changes.

These programs use a service-unique application programming interface, or API, to communicate with the service in question.

As APIs are typically proprietary, it is no surprise to find out that AWS, Google Cloud, and Azure each provides a unique API which must be coded to separately.

This can create a significant burden as a company using three cloud services would need to write and maintain three separate programs or scripts addressing each API - and a fourth for use with on-prem address management.

This, of course, presupposes, that the organization can find a programmer skilled in writing to the different APIs of all three services. And, like any programming environment, APIs are extended with new features while old features are deprecated (effectively "deleted") requiring maintenance to each environment's program or script when such changes occur.

Infoblox Universal DDI solves this problem by providing a universal API. Universal DDI presents a single, cloud-vendor-neutral API to the organization's programmer. One API to learn, one API to program that provides transparent access to AWS, Google Cloud, and Microsoft Azure resources.

Infoblox provides the interface and conducts the interaction between the Universal DDI API calls and the proprietary interfaces provided by each cloud services. Those differences - and that complexity - are invisible to the organization's Universal DDI API programmer.

For this test, engineers programmed a work flow that would provision a new DNS record in each cloud service using the same API calls.

Prior to the test, engineers confirmed that the resource did not yet exist. After running the program against each service, engineers once again viewed each service and confirmed that the resource had been defined - and defined correctly.

Figure 3 provides a visual depiction, on the left, of the people-intensive and work-intensive approach required to interface

with each API manually. On the right, is a depiction of the simplified process made possible by Universal DDI API. Figure 4 illustrates the process flow used to provision DDI services on all three cloud platforms in a simple and transparent fashion.

The network technician or programmer specifies the task via Universal DDI. Then, the database update made by the call prompts a separate, vendor-specific API call to the cloud to make the change.

The Universal DDI API can also be used to modify NIOS-X environments (not shown in figure.) Infoblox also notes that Universal DDI supports automation tools such as Terraform and Ansible.

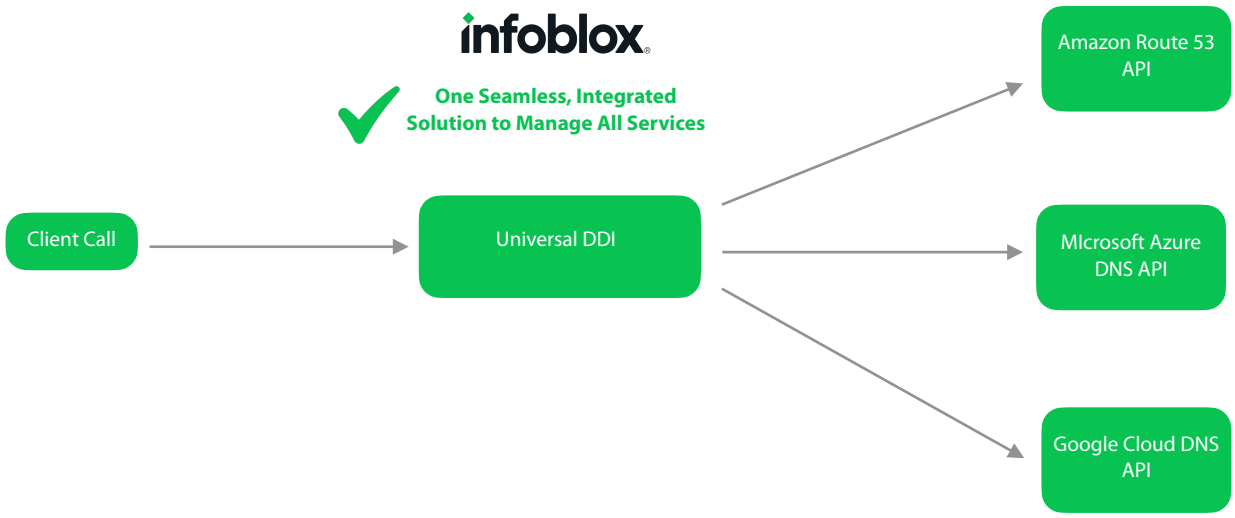
Infoblox, Inc.

Infoblox Universal DDI

Multi-Platform Management

Tested May 2025

Universal DDI to Cloud API Process Flow



Source: Tolly, May 2025

Figure 4

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…

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