

WHITEPAPER

BLOXONE® PLATFORM

THE TECHNOLOGY UNDERPINNINGS



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EXECUTIVE SUMMARY

The BloxOne Platform simplifies networking by enabling organizations to access critical networking capabilities in cloud-native formats, provided as applications managed through the cloud. Applications built on the BloxOne Platform are containerized, scalable and highly customizable. They enable organizations to easily extend functionality, including security and DDI applications, while controlling costs.

BACKGROUND

Enterprises are eagerly embracing the cloud for its agility, elastic scalability and cost efficiency. In order to reap those benefits, however, the core network services that make cloud interactions possible need to be as agile, scalable and efficient as the cloud itself.

THE BLOXONE PLATFORM

Infoblox drove the evolution of core network services (DNS, DHCP and IP address management, aka DDI) from a simple database to a distributed, grid-based, high-availability solution. Continuing on its path of innovation and market leadership, Infoblox has built the first scalable platform that simplifies networking by providing the foundation to offer DDI and security capabilities in the form of services and apps managed through the cloud. Organizations are no longer

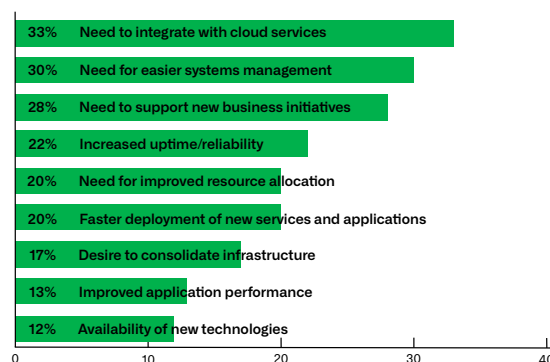


Figure 1: Factors driving IT infrastructure change (Interop ITX Survey, August 2017)

BloxOne Platform - Deploy Today, Grow Tomorrow

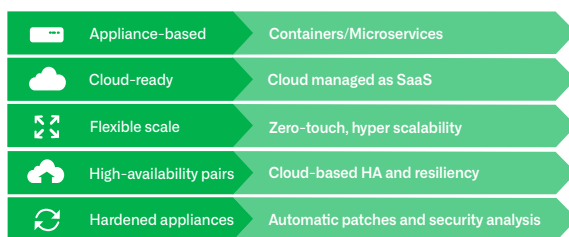


Figure 2: Benefits of cloud-native architecture

Built from the ground up following cloud-native principles of software development and a microservices-oriented architecture, it has been designed for agility, resilience and extensibility. The platform's flexibility can support the vast diversity of today's devices and endpoints as well as those expected in an increasingly cloud-driven future, such as those required in mobile, wearables and Internet of Things (IoT) scenarios.

The BloxOne Platform delivers numerous advantages. Among them are the greater administrative efficiency and elastic scalability of a cloud-managed platform. In addition, with the platform's modularity and flexibility, organizations can respond quickly to unexpected events and new opportunities today and for the foreseeable future.

constrained by factory-delivered hardware. They are instead empowered to consume services or personalize solutions as the circumstances dictate. We call this the BloxOne Platform.

The BloxOne Platform is a suite of modular, scalable and customizable services that communicate over standard protocols with well-defined interfaces.

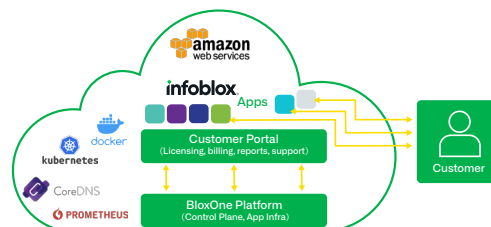


Figure 3: Deployment model for the Infoblox cloud

BloxOne Platform Architecture

At the infrastructure as a service (IaaS) layer, the BloxOne Platform is built in a cloud-native environment.

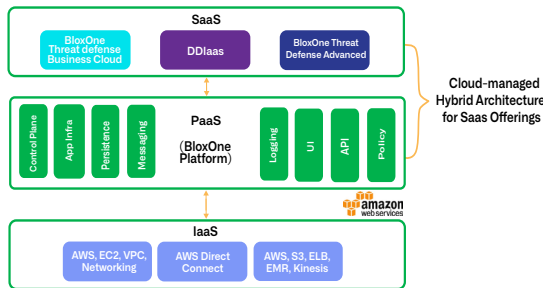


Figure 4: The BloxOne Platform architecture

BloxOne forms the platform as a service (PaaS) layer and is the foundation for Infoblox's cloud-managed and software as a service (SaaS) offerings. It consists of a control plane, the applications infrastructure and related services, such as event logging, messaging, programming interfaces and a UI. It is built using industry-leading open source technologies, such as Kubernetes (k8s), Docker and Core DNS¹, and is container-based for scale and extensibility.

Built on a foundation of IaaS and PaaS, the SaaS layer offers network services and security functions that can be centrally administered and available worldwide in an elastic consumption model.

BLOXONE PLATFORM APPLICATIONS

The BloxOne Platform is the foundation for a range of network security and management applications. To date, two families of applications have been released, with no limitations on future extensions.

BloxOne Threat Defense

BloxOne Threat Defense is a suite of security applications. It enables organizations of any size to protect existing networks as well as digital imperatives like SD-WAN, IoT and the cloud. BloxOne Threat Defense (Fig. 5) powers security orchestration, automation and response (SOAR) solutions, slashes the time to investigate and remediate cyberthreats, optimizes the performance of the entire security ecosystem and reduces the total cost of enterprise threat defense.

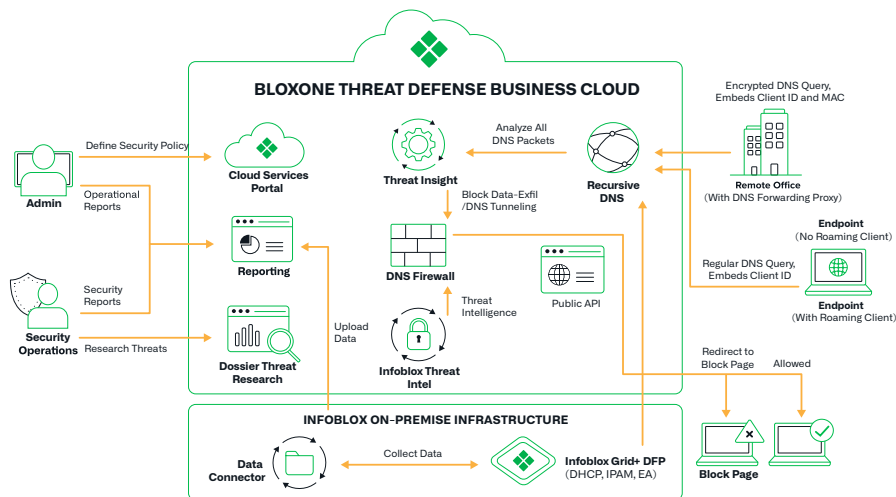


Figure 5: BloxOne Threat Defense

¹ CoreDNS is an open source project led by Infoblox in the Cloud Native Computing Foundation (CNCF).

BloxOne DDI

BloxOne DDI is the industry's first cloud-managed [DDI](#) solution. It lets organizations centrally and cost-effectively manage DDI for tens to thousands of remote sites. BloxOne DDI simplifies networking at remote locations by moving DDI control to the cloud while requiring only a lightweight physical or virtual DDI appliance on-premises. This architecture radically improves performance of cloud-based applications such as Microsoft Office 365 in branch locations by automatically directing user traffic to the nearest point of entry. It also ensures local application survivability in the event of a disruption in WAN connectivity to the headquarters datacenter.

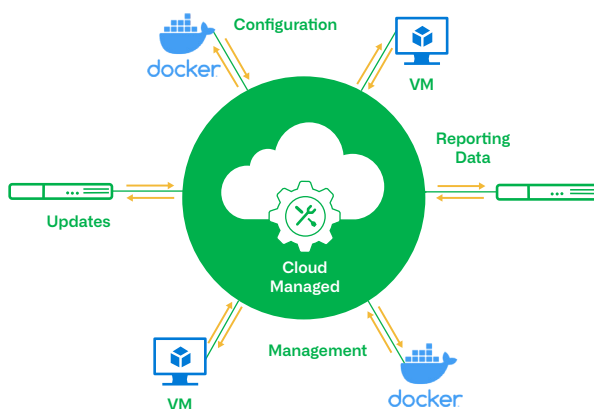


Figure 6: BloxOne DDI

CONCLUSION

Infoblox applications built on the BloxOne Platform give organizations the ability to deploy industry-leading security and network services with the speed and agility their cloud strategies demand, while substantially improving productivity and reducing capital and operating expenses. It enables solutions to be delivered in physical or virtual form factor or on a consumption basis completely in the cloud.



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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