SOLUTION NOTE

BloxOne™ DDI

Comprehensive Core Network Services for the Borderless Enterprise

SUMMARY

Mobile, IoT, and cloud solutions are sensitive to latency and are heavily dependent on reliable infrastructures. BloxOne DDI consolidates the visibility, administration, and control of distributed locations into single interface, directs traffic to the closest SaaS entry point to improve performance, and ensures survivability in the event of lost connections to datacenters. BloxOne DDI is based on an extensible, microservices and container-based architecture to simplify deployments, streamline operations and minimize overall total cost of ownership. The solution also supports a full set of native APIs, providing secure, programmatic access to all supported UI capabilities.

Enterprise Networking Has Changed

Today’s networks are changing. Mobile devices are a significant part of daily life, IoT growth continues to expand, business applications and services are rapidly shifting to the cloud, the number of distributed locations, and the devices within them are increasing dramatically, and users are demanding greater access, faster response times, and more reliable connections.

Much of this change is occurring at the edge, where distributed locations, and people in them are increasing dramatically. This is not only increasing the scope and complexity of management, but users are demanding greater access, faster response times, and more reliability, pushing the limits of today’s IT organizations.

This provides significant opportunities for solutions optimized to improve access, availability, performance, and security of distributed environments, that are also easy to deploy, use and extend.

Why Infoblox BloxOne DDI?

Infoblox, the industry leader in DNS, DHCP, and IP address management (or DDI) core network services, is the first to market with BloxOne™ DDI, an innovative, centralized cloud-managed provisioning, management, and control solution for the today’s borderless enterprises.

Mobile, IoT, and cloud solutions are sensitive to latency and are heavily dependent on reliable infrastructures. BloxOne DDI consolidates the visibility, administration, and control of distributed locations into single interface, directs traffic to the closest SaaS entry point to improve performance, and ensures survivability of distributed locations in the event of lost connections to datacenters.

BloxOne DDI also utilizes DNS server group, and ACL templates, and leverages an extensible microservices and container-based platform, to simplify deployments, streamline operations and minimize overall total cost of ownership. A full complement of APIs are also available for secure, programmatic access to supported features throughout the solution.
Use Cases

Centralized Administration & Enterprise Integration

In legacy implementations, DNS and DHCP services are deployed at across distributed locations using a local server, router, or firewall. Very often this is for cost reasons as enterprise-grade alternatives can be cost prohibitive.

However, this leads to a device-centric approach, where each site is individually managed. Provisioning, management, administration, policy control, and feature upgrades are all handled on a per site basis. At scale, this manual approach is cumbersome and error prone, leading to potential site-to-site inconsistencies.

As Figure 1 illustrates, the BloxOne DDI Cloud Service Portal (CSP) centralized management solution eliminates these issues. BloxOne CSP accessible from anywhere, and at any time, includes integrated templates, and automates provisioning to ensure policies are consistently and in a timely manner across all sites.

In addition, the BloxOne CSP also serves as a single pane of glass, integrating visualization and control of all distributed locations, with datacenter-based enterprise DDI through the NIOS Grid Connector (NGC). Providing the ability to view IP addresses from multiple NIOS grids along with BloxOne DDI data, all in one easy to use interface.
Use Cases
Optimization for SaaS and Cloud-Based Applications

DNS backhaul was originally designed to serve applications hosted in the headquarters data center and does not work for cloud-based applications.

Users in distributed locations with datacenter backhaul configurations are not guaranteed the best performance for SaaS and cloud-based applications. The regional or corporate datacenter DNS service will typically resolve and direct traffic to its closest PoP, rather than the one closest to the requesting. This could result in longer latency, and reduced application response times for users in distributed locations.

BloxOne DDI provides a local presence in a virtual or physical form factor, vastly improving the end-user experience when connecting to such cloud-based applications. BloxOne DDI ensures that users are served by their local or closest PoP rather than one further away. Additionally, the solution is locally survivable and does not depend on the WAN link to their headquarters data center.
**Use Cases**

**Local Survivability for Branch Offices & Remote Locations**

When distributed locations depend on a backhauled link to their enterprise datacenter, critical business activities can be interrupted if that link fails or slows down.

*Figure 3: Local Survivability for Distributed Locations*

In a DNS/DHCP backhaul architecture, a disaster effecting the datacenter link will disrupt all dependent locations and activities, including DNS/DHCP resolution with are required for all network operations. Since BloxOne DDI has local presence with a lightweight virtual or physical DDI appliance, remote sites are no longer dependent on their data center for DNS/DHCP resolution. So, local activities continue unaffected. Active-active, and active-passive DHCP instance pairing with automatic failover is also available for each site for seamless, uninterrupted operations.

**Conclusion**

Networks are changing, and organizations must change with them. Traditional DDI solutions are unable to keep pace with the rapid growth of today’s distributed environments. BloxOne DDI provides an efficient set of DNS, DHCP, and IP Address Management network services, delivering centralized administration & integration, optimized services for SaaS & cloud applications, and local survivability for distributed locations in the event of lost datacenter connectivity. Helping organizations deliver the reliable, efficient, and resilient connectivity for today’s mobile, IoT and SaaS-based environments and users demand.