The Challenge

Enterprises are increasingly adopting cloud-based SaaS applications like Office 365. These applications are often globally distributed services. As with all services delivered over networks, cloud-based applications require fast and efficient core network services—DNS, DHCP and IP address management, also known as DDI. Users in remote locations and branch offices frequently experience poor application performance due to inadvertent connections to geographically distant service endpoints in the cloud. The best user experience in terms of latency and reliability occurs by allowing the customer network to route users to the closest service entry point in the cloud.

Remote locations and branch offices generally have minimal or no IT staff. Often, they are managed individually on a per-site basis. Expensive service calls are usually necessary to fix on-site problems. Moreover, it is highly desirable for IT organizations to centralize management of remote sites along with having local instrumentation to enhance visibility into network devices and applications.

Finally, space is a premium at remote locations and branch offices such as retail stores, medical clinics and banks. A flexible and efficient form factor is nimbler and better suited for these environments.

The Solution

Infoblox, the industry leader in DDI, is the first to market with a cloud-managed DDI solution in a flexible virtual or physical form factor for remote locations and branch offices. It guarantees that user traffic is directed to the closest entry point to the cloud for SaaS applications, ensures local survivability and automates DDI provisioning and management of remote locations in the cloud.

Figure 1: DDI for branch offices
BENEFITS

End-User Benefits

**Enhanced end-user experience**
BloxOne DDI directs user traffic from retailers, remote locations and branch offices to the nearest point of entry in the cloud for SaaS applications. Local resolution of DNS for SaaS endpoints helps to ensure that the closest entry points are handling users’ connections to speed up their cloud experience.

**Locally survivable disaster recovery**
Local DNS resolution and DHCP services ensure that business operations can continue with minimal or no downtime if a disaster occurs and WAN services are disrupted.

Operator Benefits

**Simplified IT**
Our cloud-managed solution automates DNS, DHCP and IP address management at remote locations at any scale while centralizing policy control. The NIOS Grid Connector (NGC) feature lets users of the BloxOne Cloud Service Portal view IP addresses from multiple NIOS grids along with BloxOne DDI data, all in a single pane of glass.

**Flexible packaging**
BloxOne DDI comes in both physical and virtual form factors so future enhancements are not limited by hardware. In addition, subscription-based pricing enables a right-sized, predictable cost consumption model.

Features

**Virtual Appliance**
BloxOne DDI is available as a virtual machine (VM) on VMware and as a container on Docker.

**Hardware Appliance**
A hardware appliance is optionally available for purchase from Infoblox.

**Scale**
BloxOne DDI is horizontally scalable by hardware appliance, VM or containers.

**DNS**
The DNS server resolves host names to IP addresses. In addition, it supports recursion, forwarding, primary and secondary authoritative DNS, DNS server groups and access control list (ACL) templates.

**DHCP**
The DHCP server leases IP addresses. It also supports lease control for efficient use of IP leases.

**IPAM**
IPAM automates planning, tracking and managing the private and public network IP space, devices and associated data.

**Flexible APIs**
All UI features are supported through a customer-accessible API. API calls are made to the cloud, not directly to BloxOne DDI devices. User credentials are required to use the API and corresponding permissions apply.

High Availability
Two instances of BloxOne DDI at a remote location share information and responsibilities so that if for any reason one goes down, the other takes over responsibility for DDI services for that site.

DNS Anycast
BloxOne DDI supports multiple DNS Anycast IPv4 addresses. This provides load sharing across multiple DNS servers and improved reliability.

Automation Assists

**Zero-Touch Provisioning (ZTP)**
ZTP automates and vastly simplifies the deployment of BloxOne DDI at scale. BloxOne DDI appliances “phone home” to authenticate, download and deploy configurations globally across all remote sites.

**DNS/DHCP Server Configuration Profiles**
Scale-out, automatic DNS/DHCP configuration enables efficient handling of multiple locations.
Infoblox enables next-level network experiences with its Secure Cloud-Managed Network Services. As the pioneer in providing the world’s most reliable, secure and automated networks, we are relentless in our pursuit of network simplicity. A recognized industry leader, Infoblox has 50 percent market share comprised of 8,000 customers, including 350 of the Fortune 500.

Templates
- DNS Server Group Templates
- ACL Templates
- DNS and DHCP Superhosts grouping of interfaces with multi-homed, multi-network view
- IPv4 Filter Templates
- DHCP Option/Space Templates

BloxOne DDI Product Details

Licensing Tiers

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Pricing Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BloxOne DDI Essentials</td>
<td>Per License</td>
<td>• Entry level DNS, DHCP, IP address management and NGC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Entitlement for 500 QPS and 5 LPS</td>
</tr>
<tr>
<td>BloxOne DDI Business</td>
<td>Per License</td>
<td>• Core features for reliable DDI in branch offices</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Entitlement for 500 QPS and 5 LPS</td>
</tr>
<tr>
<td>BloxOne DDI Advanced</td>
<td>Per License or HA pair</td>
<td>• Full function DDI with advanced features</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Entitlement for 500 QPS and 5 LPS</td>
</tr>
<tr>
<td>BloxOne Appliance</td>
<td>Per Unit</td>
<td>• Physical appliance (optional)</td>
</tr>
</tbody>
</table>

Each license entitlement adds 500 QPS and 5 LPS. For higher performance, multiple licenses are required.

System Specifications

BloxOne DDI software runs on the BloxOne Appliance from Infoblox or any commercial off-the-shelf (COTS) hardware with the following specifications.

<table>
<thead>
<tr>
<th>System</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware</td>
<td>• CPU: 4 core</td>
</tr>
<tr>
<td></td>
<td>• Memory: 8 GB</td>
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<tr>
<td></td>
<td>• HDD: 64 GB</td>
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<tr>
<td>Operating System</td>
<td>• Red Hat Enterprise Linux 7.2</td>
</tr>
<tr>
<td></td>
<td>• CentOS 7.3.16</td>
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<tr>
<td></td>
<td>• Ubuntu 16.04.2</td>
</tr>
<tr>
<td>VM</td>
<td>VMware ESXi version 5.5, 6.0 or 6.5</td>
</tr>
<tr>
<td>Containers</td>
<td>Docker version 1.13.0 to 17.08</td>
</tr>
</tbody>
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