



CASE STUDY

Global Semiconductor Company rapidly deploys hybrid services for quick access, scalability and cost control

OVERVIEW

This U.S. manufacturer of engineered materials, optoelectronic components and semiconductors was founded in the early 1970s.

It has a 50-year record of innovation in researching and producing application-specific materials, integrated components and advanced software for aerospace, defense, automotive, communication, consumer electronics, industrial, life sciences and semiconductor markets. The company employs over 24,000 workers in 18 countries and 73 global locations, including manufacturing, research and development, sales, service and distribution facilities in the United States and worldwide.

A long-term Infoblox customer, the company is focused on growth through mergers and acquisitions (M&As), and in 2019–2020, it acquired a global electronics firm. To meet strategic corporate initiatives, the company needed immediate connectivity and visibility into the acquired firm's geo-distributed operations. With a highly compressed timeline, it only had days to spin up and integrate the firm's DDI operations, while deferring a full network migration to a future date. The solution included deploying BloxOne® DDI in a hybrid Infoblox NIOS Grid to quickly connect virtual machines (VMs) at remote locations from the Cloud Services Portal (CSP). Infoblox helped the company build a new regional hub to establish geo-diverse data centers in the United States, Europe and Asia to furnish central visibility, local access, context and performance for mission-critical remote locations. The new hybrid architecture modernized existing NIOS DDI data centers and provided four tiers of service so that sites could be added to the appropriate tier based on service and redundancy requirements.

As a result, the company can now spin up its newly acquired and future locations in a matter of days, gain instant visibility into new sites, enable faster supply chain connectivity and use BloxOne DDI to achieve local, high-performing access at low cost for remote locations. The new architecture model will quickly realize the value of companies acquired through M&As.

CUSTOMER:

- A global semiconductor manufacturer with over 24,000 workers serving 18 countries and 73 locations worldwide.

CHALLENGE:

- Through M&A activity, the company absorbed another firm and had to quickly and affordably onboard geo-diverse locations while saving a full network migration for a future date.

SITUATION:

- The company needed to integrate the network infrastructure of two companies to obtain full network visibility and control but did not have the time to seek budget approval for a more extensive integration.

INITIATIVES:

- Quickly integrate global companies with distributed locations acquired through M&A initiatives
- Deliver affordable, secure, scalable, highly available and performing network services to remote locations
- Ensure continuous uptime and enable and simplify authoritative IPAM, internal and external DNS and DHCP failover and reporting

CHALLENGES

Rapid deployment, scalability, performance and alignment of newly acquired global locations

The company is actively engaged in acquiring and merging strategically aligned companies as a key global growth strategy. Between the fall of 2019 and summer of 2020, the company acquired a global electronics firm to expand its engineered materials, optical communications, 3D sensing, laser and integrated circuit capabilities. Strategic initiatives and opportunities required the company to rapidly integrate its new operations, which included significant remote locations in Asia. The highly compressed timeline did not allow a full data migration; the company had only days to onboard its new remote sites into its global network and supply chain operations.

It turned to Infoblox to quickly design a highly secure, available and reliable solution that could deliver full visibility into new sites. It needed dynamic scalability to accommodate its growing operations and the ability to unify a disparate, geo-diverse infrastructure. The company knew that Infoblox was platform agnostic and could simplify management for on-premises, private, public, hybrid and multicloud environments and help guide the acquired firm's data migration as time allowed. The company's existing architecture was a traditional hub-and-spoke design in need of an upgrade to keep pace with modern, cloud-managed technologies (see Figure 1). It also was keenly focused on cost reduction and gaining network efficiencies to deliver reliable, highly available services from the data center out to its smallest branch office.

SOLUTION

Hybrid architecture delivers immediate and ongoing value

The company urgently needed visibility and control of the acquired firm's globally distributed locations but did not have time to migrate its acquisition's Microsoft DNS/DHCP environment. To address immediate needs, the company team worked with Infoblox to design a cloud-managed BloxOne DDI solution that allows immediate spin-up of virtual machines from the Infoblox CSP. The process is fast and efficient—access the CSP, download the VM, provision the on-premises host and it's operational. The BloxOne DDI solution saves money, offers instant visibility and avoids the time and expense of sending engineers to deploy solutions at newly acquired sites. The new architecture includes two mini-hub sites in Europe, two in APAC, two in China and four in the United States to provide high-performing, local access DDI for distributed locations.

OUTCOMES:

- Quickly scale and integrate geo-remote locations in days for single control plane visibility and management
- Deliver a smooth, seamless network migration and transition
- Modernize to a new global, secure, hybrid DDI on-premises platform with multi-cloud capabilities
- Gain simplified workflows, database redundancy, network resiliency and reliable uptime

SOLUTIONS:

- NIOS DDI with Failover
- BloxOne DDI
- Reporting and Analytics
- Infoblox 2215, 1425, 825, 815, 805, and B105 Appliances

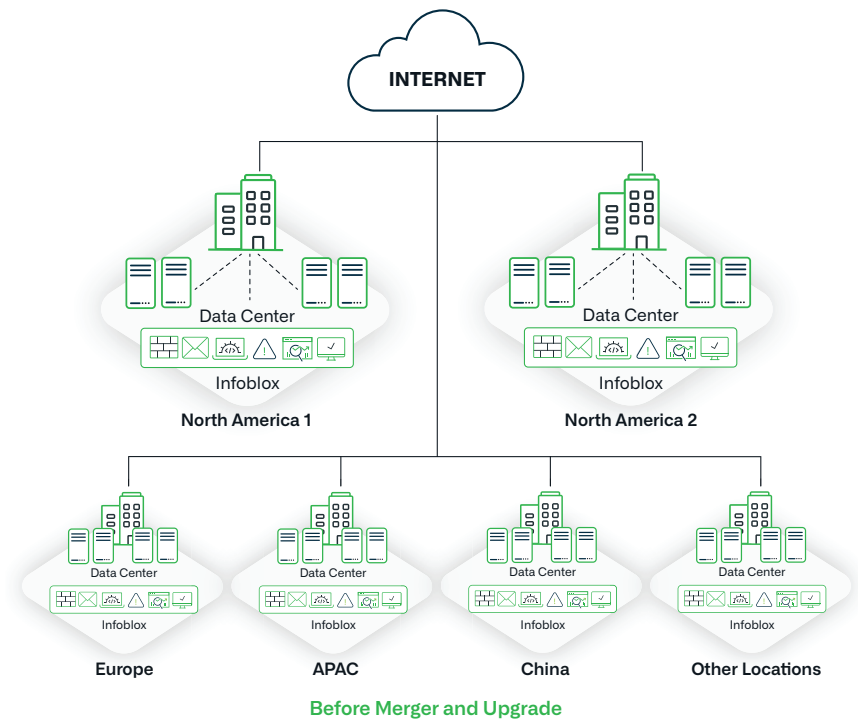


Figure 1: Pre-Merger Backhaul Infrastructure

Transition from freeware to Infoblox enterprise-grade DDI

Most of the acquired firm's employees joined the company and remained after the merger. The acquired firm was using Microsoft DNS/DHCP to manage network traffic at its global locations (see Figure 2). Because they had never experienced the benefits of a true enterprise-grade DDI solution, the acquired firm's employees were deeply loyal to existing Microsoft tools and workflows. However, IT decision makers at the parent company knew firsthand the visibility, reliability, automation and control that Infoblox DDI delivered. The company's IT team liked Infoblox's stability, role-based access control, tools, efficiency and the quality of work they supplied. As a result, it engaged Infoblox to show the acquired firm's teams how discovery, authoritative IPAM and centralized management could be expanded to improve security, simplify management and control costs.

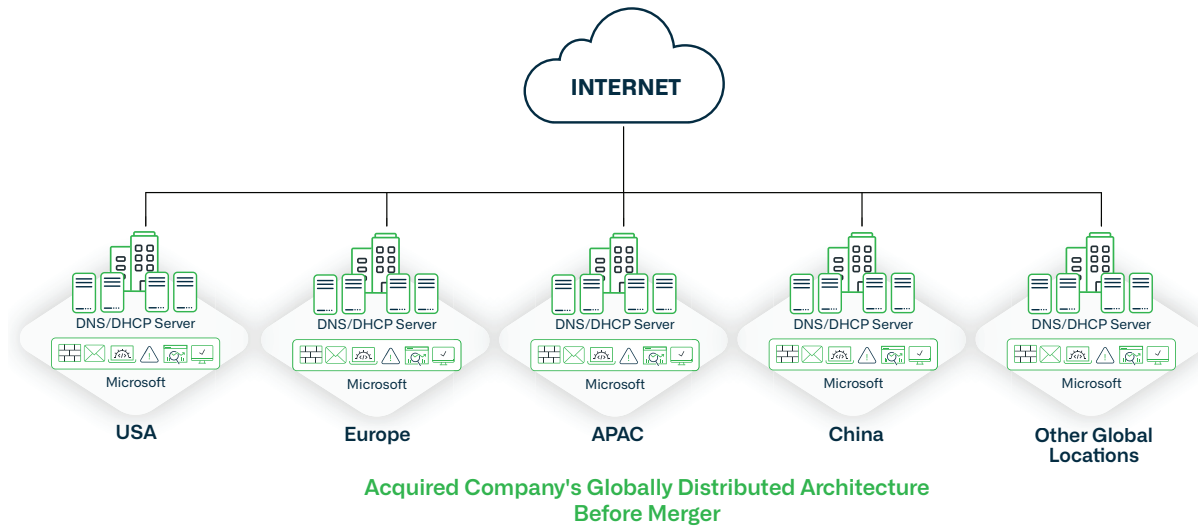


Figure 2: Pre-Merger Microsoft Infrastructure of Acquired Company

As expected with any merger, the complexities of international locations, system disparity and different personalities, mindsets and cultures delayed the migration of Microsoft DNS/DHCP systems and data considerably. In fact, teams engaged in deliberations for nine months, long after the initial BloxOne DDI deployment started returning value on investment. Teams continued internal discussions, international feedback, budgeting and decision cycles to gain alignment and cast the vision, leadership, staffing, design and production necessary to transition the firm's freeware network into its enterprise-grade DDI platform.

Hybrid, data center modernization

Once the BloxOne DDI solution was delivered, and network merger and transition plans were defined, the company upgraded its NIOS DDI on-premises infrastructure for existing locations using a hybrid, four-tier design to expand visibility, scalability and performance. The company used a mix of new and existing hardware and virtual machine technologies to meet its global and regional business needs. It deployed a combination of Infoblox 2215, 1425, 825, 815, 805 and B105 physical and virtual appliances and software bundles.

Tier One modernizes existing data centers for high availability and redundancy. DHCP failover enables high availability and distributed DHCP services and improves business value by increasing disaster recovery capabilities. Should an outage occur in an active data center, the IT team can easily restore a mirrored network image from the disaster recovery site and quickly bring service back online.

Tier Two delivers services for mission-critical manufacturing plants. Tier Three focuses on the firm's WAN coverage and extending BloxOne DDI through the CSP and B105 virtual appliances to additional sites. Tier Four deploys BloxOne DDI and B105s to cover small remote sales and distributed offices. The company also added Reporting and Analytics for on-demand network visibility, templated and customizable dashboards and reports, search, predictive analytics and graphical visualizations for endpoint, performance, security forensics, access logging, audit and compliance (see Figure 3).

RESULTS

Hybrid On-Prem and Cloud-managed network services solidify industry leadership

The company used Infoblox's hybrid architecture with BloxOne DDI and the CSP to quickly provision newly merged sites and deliver instant visibility, faster supply-chain connectivity, and high-performing access at remote sites, with time for a more comprehensive data and infrastructure migration in the future. Not only did the Infoblox solution exceed expectations for challenging timelines, but it also provided modern, efficient, highly available hybrid core network services capabilities. It simplified and centralized network visibility and consistent DDI management and ensured automated DHCP failover for redundancy and resiliency on-premises, in the cloud and to existing and future remote locations. It also established the ideal networking model for the company's future mergers and acquisitions to empower its technology leadership and boost its standing as leader in the global semiconductor industry.

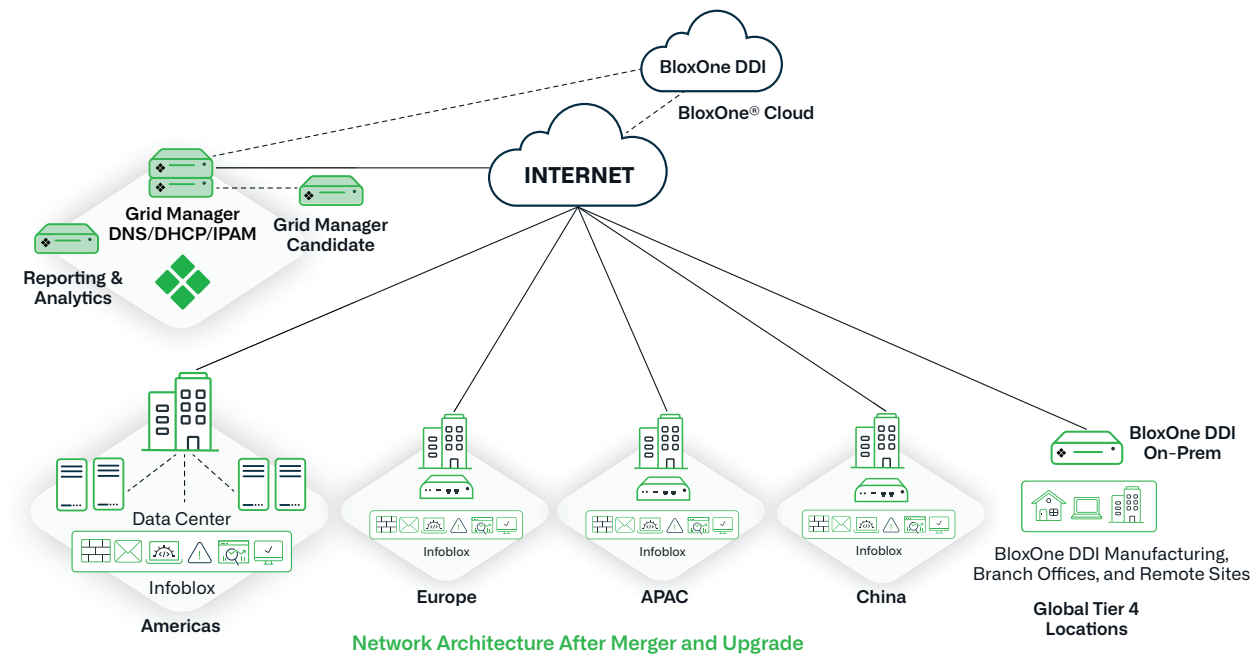


Figure 3: Hybrid, data center and cloud managed DDI for rapid provisioning, visibility, scalability, local access and cost control.



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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