CASE STUDY

Leading Automotive Engineering Consulting Firm Gains Cloud Agility with BloxOne™ DDI

Transportation Powertrain Technology Software

SUMMARY

With more than 9,500 employees worldwide, this European-based engineering consultancy provides a broad range of services for automotive customers in the development, simulation and testing of powertrain systems (hybrid combustion engines, transmission, electric drive, batteries, fuel cell and control technology) for passenger cars, commercial vehicles, construction and large engines and their integration into vehicles.

The Challenge

A global business with offices worldwide, the engineering firm is aligning closely with its customer needs and future direction from a business perspective. As part of this initiative, it is migrating its business applications to the cloud with applications such as Microsoft Office 365. One of its concerns was the performance impact of employees accessing their business apps at an entry point to the cloud not closest to them, which can result in slow network performance and negatively affect productivity. Other concerns included the need to support location-aware services, the scalability of its business apps and securing remote employee access to cloud-based apps. The company was looking for a solution that would address these concerns and also align with its cloud-first business strategy.

The Situation

This engineering firm is a Microsoft shop that used Blue Cat Networks for DDI at headquarters, a system requiring white-box routers in each office worldwide to backhaul traffic to the main office in Europe. Among the issues the company faced were local language problems with its Internet pages. For instance, Japanese users were seeing German web pages.

To remedy the situation, IT decision makers at the firm decided to go with a distributed architecture instead of centralized backhaul, a solution that would provide direct local Internet access to its users for all applications. In addition, the firm wanted its network administrators to have full visibility with a clear view of DHCP lease information for endpoint clients on the same screen as its DNS security information.

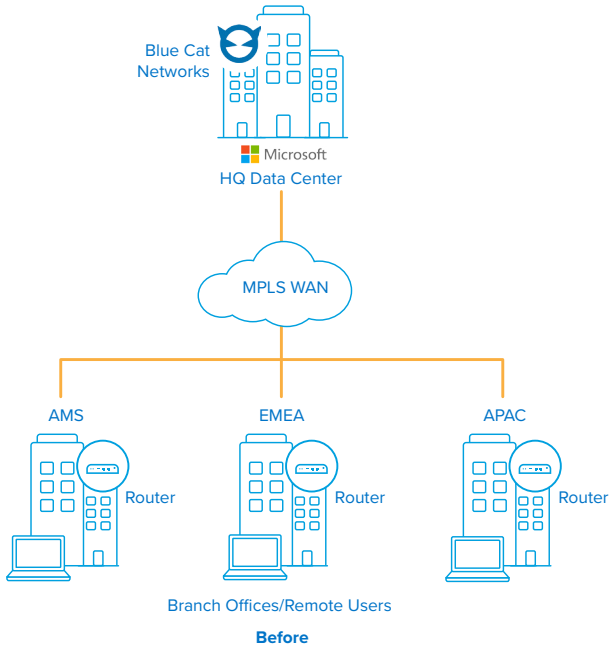

Figure 1: DNS architecture: previous mode of operation

The Solution

The engineering company's vision was always to be state of the art or a couple of steps ahead of it. For this leading technology software developer for powertrain engineering and simulation, this approach helps attract the best talent and enables a high degree of employee and customer satisfaction. With a cloud-native, microservices-based architecture, BloxOne DDI, which enables cloud-managed DDI, and BloxOne Threat Defense Business Cloud, which protects data and devices on premises, in remote and branch offices and while roaming, were completely aligned with the company's vision. BloxOne DDI moves the control and management functions of DNS to the cloud, placing a lightweight virtual appliance on the premises. This virtual appliance is available as a virtual machine or as a container. Cloud-based DDI management makes life easier for network administrators because it enables them to centrally and automatically provision, manage and control policy for all remote locations.

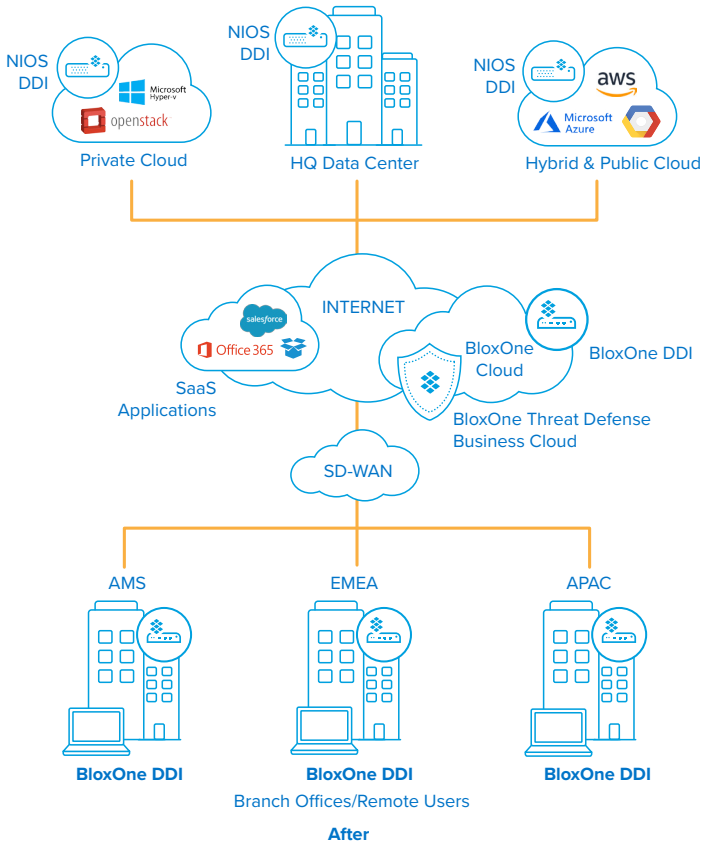

Figure 2: DNS architecture: mode of operation with BloxOne DDI and BloxOne Threat Defense Business Cloud

The on-premises virtual appliance is a secondary recursive DNS resolver with cache enabled but with no authoritative data on it. As Figure 2 illustrates, it forwards external DNS requests to the cloud for location-aware IP address resolution of its SaaS applications, such as Skype, MS Team, Office 365 and many more. BloxOne Threat Defense Business Cloud acts as a general resolver in the cloud. Besides location-aware resolution, it also protects remote users and traveling employees against malware and data exfiltration. Additionally, BloxOne Threat Defense Business Cloud aggregates threat intelligence from various sources and automatically informs other devices in the security infrastructure ecosystem of possible suspicious activity.

DNS requests for internal services, like an engine or transmission simulator, are forwarded to one of many local data centers over the engineering company's MPLS private WAN. The company's private data centers are located in Japan, China, Germany, Austria and the United States. DHCP requests are resolved locally. This approach gives each office local survivability.

The Result

As a pioneer in the field of innovative powertrain solutions, such as diverse electrification strategies, this engineering firm is increasingly taking on new tasks in the field of autonomous driving. Born in the cloud, BloxOne DDI and BloxOne Threat Defense Business Cloud from Infoblox meet the most demanding needs of today's agile business models to connect and protect applications and services anywhere at any scale. Together, these two forward-looking companies are making the most of the latest technology.

The benefits of the Infoblox solution are centralized cloud-based automation for provisioning, management and visibility, geo-local resolution of cloud-based applications and services and, last but not least, local survivability of remote sites in the event they get cut off from headquarters.

Infoblox
NEXT LEVEL NETWORKING

Infoblox is leading the way to next-level DDI with its Secure Cloud-Managed Network Services. Infoblox brings next-level security, reliability and automation to on-premises, cloud and hybrid networks, setting customers on a path to a single pane of glass for network management. Infoblox is a recognized leader with 50 percent market share comprised of 8,000 customers, including 350 of the Fortune 500.

Corporate Headquarters | 3111 Coronado Dr. | Santa Clara, CA | 95054
+1.408.986.4000 | 1.866.463.6256 (toll-free, U.S. and Canada) | info@infoblox.com | www.infoblox.com