



## CASE STUDY

# Leading Automotive Engineering Consultancy Gains Cloud Agility with BloxOne Platform

## THE CUSTOMER - LEADING AUTOMOTIVE ENGINEERING CONSULTANCY

With more than 9,500 employees worldwide, the 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

### Aligning Legacy DDI Solution with Cloud-First Business Strategy

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 business apps at an entry point to the cloud not closest to them, which can result in slow network performance and can 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 while aligning to its cloud-first business strategy.

This engineering firm is a Microsoft shop that used BlueCat 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.

**Customer:** Automotive Engineering Consultancy  
**Industry:** Information Technology & Consulting  
**Location:** Europe

#### OBJECTIVES:

- Ensure network performance and secure access to cloud-based applications
- Support location-aware services
- Align with overall cloud-first business strategy

#### RESULTS:

- Central and automated network operations for remote locations
- Local DHCP resolution for greater local survivability
- Protection for remote employees against malware and data exfiltration

#### PRODUCTS:

- BloxOne DDI
- BloxOne Threat Defense

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 users of all applications. In addition, the firm wanted 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.

## THE SOLUTION

### A Cloud-Native, Distributed, and Microservices-Based Architecture

The engineering company's vision was always to be state of the art or a couple 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, 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.

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 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 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.

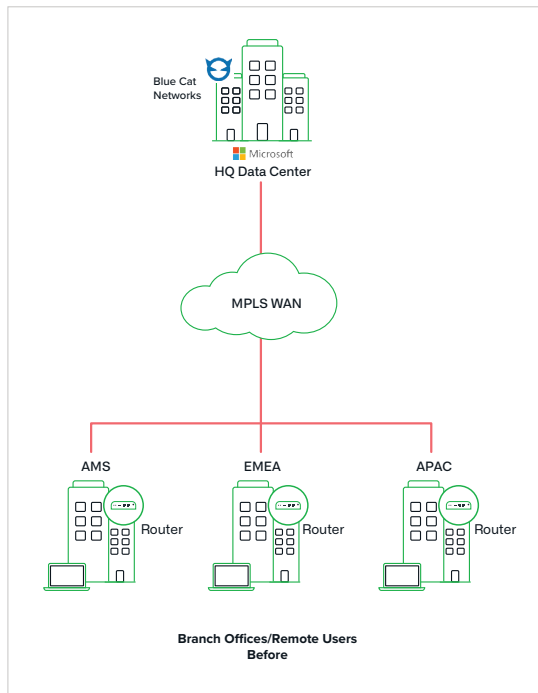


Figure 1: DNS architecture: previous mode of operation

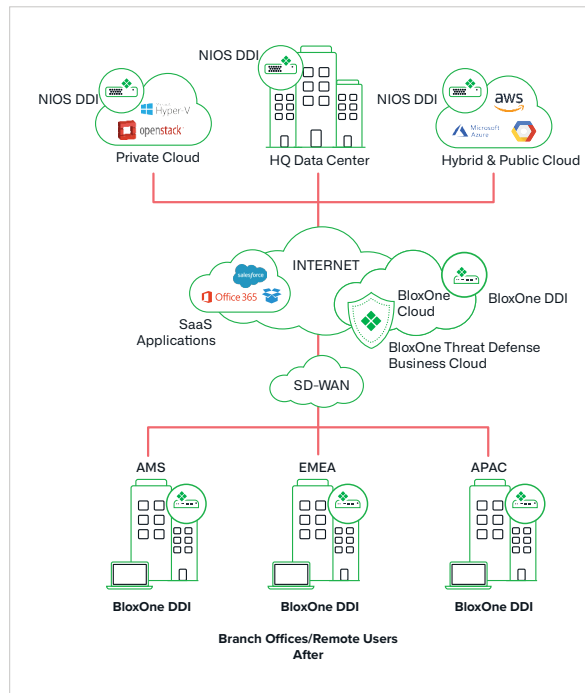


Figure 2: DNS architecture: mode of operation with BloxOne DDI and BloxOne Threat Defense

## THE RESULT

### Connecting and Protecting the Network Anywhere at Any Scale

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 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 BloxOne 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 of a cut off from headquarters.



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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