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Major league Baseball club and Ball Park

Texas rangers win with Infoblox core network services at globe life field

SUMMARY

The Texas Rangers compete in the American League West division of Major League Baseball (MLB).

Founded in 1961 as the Washington Senators, the team moved to Arlington, Texas, in 1971. Globe Life Park served as its home from 1994 to 2019 until the club moved to its new 40,300-seat Globe Life Field in 2020. The new stadium was a joint $1.2B public/private venture featuring a retractable roof, synthetic turf field and state-of-the-art multi-use venue for professional baseball, college football, rodeo, concerts and more. The project faced multiple challenges—a compressed timeline, impacts from COVID-19, private and public infrastructure able to provision over 100K disparate devices on wired and Wi-Fi networks in minutes and connecting legacy, new and geo-diverse platforms and properties across the Rangers' organization. After an extensive technology assessment, the Rangers selected Infoblox for its DNS, DHCP and IPAM reliability, performance, scalability, ease of use, single control plane and over two decades of experience in supporting high-profile, mission-critical networks. Chris Hedrick, director of IT Infrastructure and Cybersecurity with the Rangers, said, "There are not a lot of core network vendors that can do what Infoblox does. It was a home run."

THE SITUATION

While virtually all pro-sports teams are sponsor-driven, this project was not sponsorship-dependent, so the Rangers' IT team could choose among the best technology solutions for the new venue. It began with an exhaustive technical assessment of all large venue OEM suppliers across core, wired and Wi-Fi networks. It inventoried legacy equipment and noted service gaps, looked at visibility and security needs and concluded that existing Microsoft DNS and DHCP with IPAM by spreadsheet just couldn't meet network speed, availability, performance and security requirements. With a small IT staff, the Rangers needed a single control plane, and a robust, reliable, force multiplier, set and forget DNS, DHCP and IPAM (DDI) solution that didn't require much ongoing IT engagement. The architecture had to accommodate continued on-premises

CUSTOMER PROFILE:

- Professional Major League Baseball team with new 40k-seat stadium

SITUATION:

- Globe Life Field stadium construction

- Corporate and public networks

- Connect legacy and modern networks

- Link affiliate locations in the United States and Dominican Republic

CHALLENGES

- Complete a 44-month project in 30 months

- Open to host the 2020 World Series with live fans and media at the peak of COVID-19

- Rapidly load 100k+ diverse devices onto corporate, public, wired and Wi-Fi networks

- Deliver fast, reliable public network name resolution, VLAN, scalable DHCP and IPAM

- Refresh the public network in <24 hours Solution

legacy deployments yet be fully modernized to support all major cloud providers in varying degrees. An on-premises, hybrid, vendor-agnostic multi-cloud solution was needed.

THE CHALLENGES

Any new major stadium project faces a myriad of challenges and the Texas Rangers' Globe Life Field venture was no exception. Starting with the schedule, initial project completion was estimated at 44 months, but due to scheduling the venue's first major high-profile sporting event—the 2020 World Series—the timeline was compressed to 36 and then to 30 months.

Making matters worse, reduced timelines were compounded by expanding COVID-19 delays, which impacted construction labor, suppliers and materials. Nonetheless, the venue had to be ready. Not only did the 2020 World Series promote and showcase MLB's newest stadium, but it was also the first major sporting event in North America with live fans (16,000) and media (25 percent occupancy) at the peak of the global pandemic.

Network scalability was also a challenge. The infrastructure had to support a private network for 500 corporate employees, integrate building automation technologies and deliver always-on, mission-critical public connectivity for over 40,000 fans—not including support staff and media. It had to handle the massive influx of devices and traffic, onboard individuals and groups and quickly enable over 100K disparate devices in minutes, including smartphones, tablets, laptops, the latest robotic cameras and recording devices—all without knowing these in advance—across wired, wireless, corporate and public networks. It also had to churn the public network for the next event, often within 24 hours.

Connectivity and performance were further concerns. The network had to be 100 percent available, reliable, resilient and lightning fast to support multi-platform media streaming across varied technologies. And it had to deliver crucial redundancy for a consistent private and public network experience, along with HVAC, power management, security, public safety and other building automation services.

In addition, the core platform needed to accommodate a variety of integrations. It needed to map VLANs for streaming media devices using Aruba, ClearPass, Airwave and Hewlett Packard Enterprise (HPE). In the process, it also had to resolve a mix of legacy Microsoft DNS and DHCP, old Palo Alto and other gear and roll Rangers' affiliates into the new platform to ensure speed, reliable uptime and resilient hosted network services.

Beyond Globe Life Field, geo-location support presented another critical consideration. The Rangers needed to connect its former home, Globe Life Park, with its old mix of Microsoft DNS, DHCP and IPAM. It also needed to support minor league affiliates, XFL, college and high school football, soccer, rugby and other events, along with the Rangers' spring training venues at Surprise Stadium in Arizona plus a new $12.5M Baseball Academy in Boca Chica, Dominican Republic.

SOLUTION:

- Infoblox DNS, DHCP and IPAM, Advanced DNS Protection, Network Insight discovery, Security Ecosystem and Reporting and Analytics (IPAM QuickStart)

RESULT

- Smooth, frictionless Microsoft DNS and DHCP migration to Infoblox DDI deployment

- Quick automated provisioning of 100k+ disparate devices in a matter of minutes

- Reliable, scalable, high-speed internet for corporate and public networks

- Visible, resilient infrastructure with redundant backups for service continuity

- DDI that's quick and easy to deploy, use and maintain by a small IT staff

- Unified, real-time visibility into DDI data, security feeds and reporting and analytics

THE SOLUTION

With these challenges in mind, the Rangers' IT team planned a traditional hub-and-spoke architecture on a modern platform with scalability for the future. The plan included backhauling affiliate location traffic to the Internet through the new infrastructure. The Rangers selected Infoblox DNS, DHCP and IPAM (DDI), Advanced DNS Protection (ADP), Network Insight asset discovery, Security Ecosystem, Reporting and Analytics and Professional Services. It was keenly aware of its need for rock-solid DDI, especially with the risk of quick DHCP range use in a high-profile, major league sporting venue. Running out of IP addresses and impairing network connectivity was simply not an option. This meant upgrading from legacy Microsoft DNS and DHCP and deploying an integrated, enterprise-grade infrastructure for reliable, scalable, private and public core network services. Building on a solid core also enabled the Rangers to meet their key objectives—redundancy, automation and security.

Redundancy was the top priority. Most sports venues deploy private and public networks that have a mix of parallel networks that often fight for address space. The Rangers took a different path to design and build a fully converged infrastructure including voice, data and video with zero parallel networks for all on-prem, cloud-based and communications services. The design included multiple power pathways, generators and mirrored, purpose-built, data center configurations and deployments to ensure continued business operations—no matter what.

Automation was also a key focus. It deployed Aruba's software-defined network (SDN) along with AirWave and ClearPass technologies to shuttle groups in and out of the venue and supply reliable, always-on private and public connectivity for staff, fans and media. IT director Hedrick noted, "Without automation, we could not handle the influx of the press. It's more than just connecting to Wi-Fi or a hardwired port. Sometimes they connect robotic cameras, Raspberry Pi devices that act as FTP servers and virtually any other conceivable device, previously seen or not. We successfully profile 99 percent of the devices that enter the building. Automation grabs the device's MAC address, drops it into a list, starts profiling and sets it in the right VLAN. It also enables robust policy enforcement and delivers true plug-and-play network connectivity. We never have to worry about what VLAN the port is on, why they can't get to a subnet, or connect to the right public versus private network—profiling handles it all automatically. Everything profiles, everything goes where it should, everything just works and that makes our jobs much easier."

Security was another essential objective, starting with extreme micro-segmentation, malware, virus, security and posture checks performed by gate staff for access to the corporate network. The public network is much more open. When a user starts a Wi-Fi session, they are placed in their own encrypted tunnel. They can be on the same subnet one IP away from their neighbor sitting next to them, yet their devices will never see each other, even though they still have full access to the Internet. This unique approach is not deployed on many public networks.

THE RESULTS

With Infoblox, the Rangers' Globe Life Field opened on time to host the 2020 World Series with live fans and media at the peak of the COVID-19 pandemic. It compressed a 44-month project into 30 months, overcame a myriad of challenges and realized a smooth, frictionless Microsoft DNS and DHCP migration to Infoblox core network services. In the process, it established a scalable, secure, resilient infrastructure with redundant backups for reliable service continuity. Through its integrations, it could quickly provision 100k+ disparate devices in minutes and deliver a high-speed Internet experience for its corporate and public networks. Infoblox delivered a unified control platform with real-time DDI data visibility, DNS protection, security ecosystem threat feeds and on-demand reporting and analytics. It connected the Rangers' distributed venues and delivered a platform that was easy to deploy, use and maintain by a small IT staff.
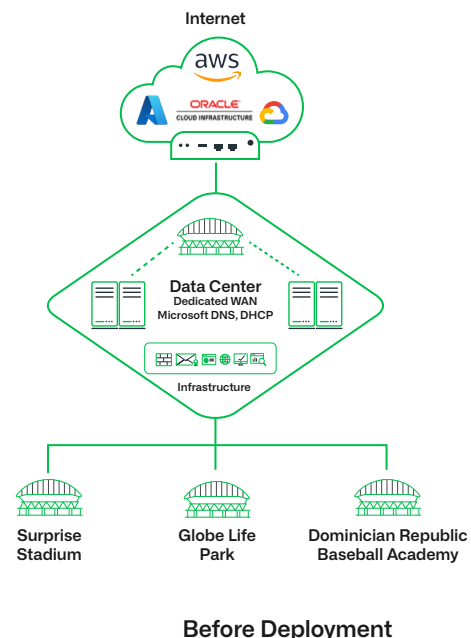

Before Deployment

Figure 1: Geo-location support was a critical consideration for the Rangers' network

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IT director Hedrick said, "There were no other real options. Without Infoblox, it would have been impossible to manage. We would not have been ready for the 2020 World Series without Infoblox stepping in to help get things done. The migration and switch-over from Microsoft to the Infoblox domain controllers worked like magic and the rollout was very smooth. Infoblox products are awesome, some of the best equipment we've deployed in our new stadium, and the local support has been outstanding."
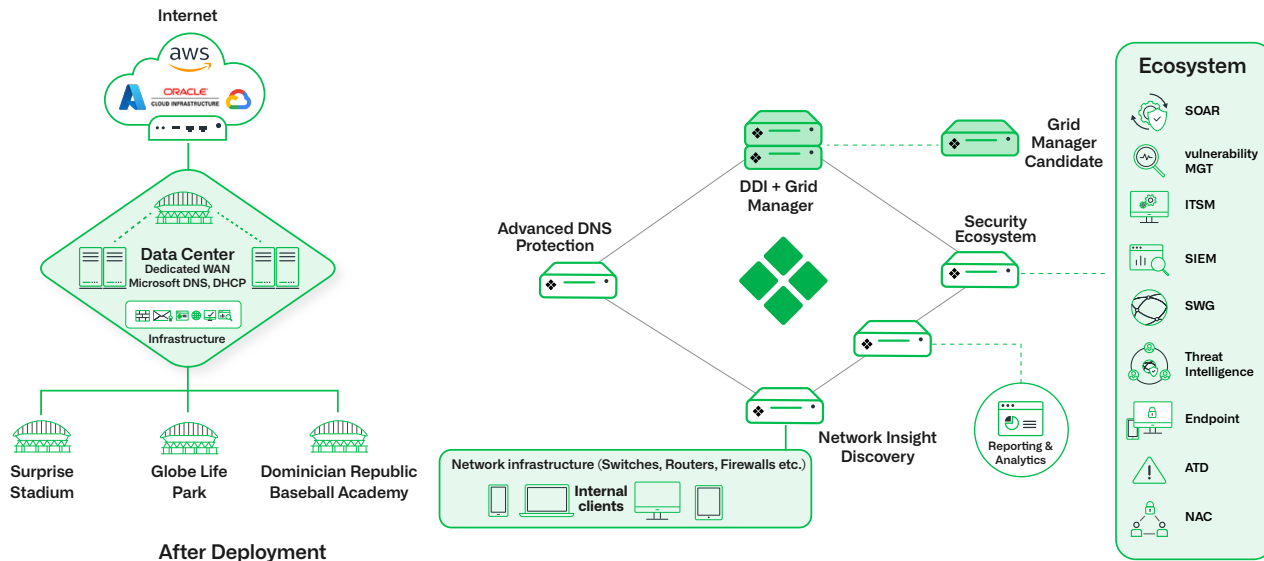
Figure 2: Infoblox technology is key to managing the Rangers' new networking systems and played a significant role in getting the team ready for the 2020 World Series

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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