

"SystemsUp have delivered a cloud friendly security solution that gives us protection without disrupting the way our users access the applications"

Enhancing Application Security for Highways England

SUMMARY

SystemsUp ensures that Highways England has a secure environment for the web applications it develops to be used by its workforce.

BENEFITS

- ◆ Secure application delivery and consumption
- ◆ Meets all the organisation's security requirements
- ◆ Does not affect application performance
- ◆ No disruption to user experience



Highways England is the government company that operates, maintains, and improves motorways and major A roads in England. Formerly known as the Highways Agency it became a government company in April 2015. It employs approximately 6000 staff across multiple locations.

SystemsUp has worked with Highways England on a number of projects over the past few years to help the organisation move to public cloud.

This case study looks at the work SystemsUp has done to ensure Highways England has a secure environment for the web applications it develops to be used by its workforce.

The Challenge

Highways England is responsible for maintaining more than 4,000 miles of major roads. It needs to keep road users informed and staff connected. As part of a government push for greater use of public cloud, in recent years it has migrated many of its workloads and applications in order to maintain cost efficiency and deliver a more modern workplace experience for its employees.

It was essential to ensure that the data flowing to and from the devices employees were using, was protected from known threats and that the best security tools were in place.

As a result of our previous work for Highways England and several government departments, plus our expertise in security management, SystemsUp was tasked with designing and providing a Proof of Concept for the best way to protect both its production and dev/test environments. On further investigation with Highways England our consultants assessed that a next generation firewall solution would provide more protection than the toolset available from the public cloud provider.



■ The Solution

Highways England uses multiple suppliers for its web applications and, because web apps remain one of the most commonly exploited threat vectors, it was important to have one appliance that could check all web traffic coming in from the internet.

The solution recommended by SystemsUp protects web, mobile and API applications from being compromised and prevents data breaches by taking suspicious traffic away and blocking malicious bots and automated attacks. Packets of data coming from the internet are analysed before they reach the firewall.

Nick Martin, Managing Director of SystemsUp, says, "This is edge defence, giving Highways England protection at the point where data leaves the devices and where the device connects to the application, without affecting the app's performance."

Highways England can see the firewall at work as it blocks potential malicious attacks.

There is a further level of protection at the network infrastructure level where the packets of data move between the subnets and their domain controllers.

Nick Martin explains, "It's like using a Swiss Army knife instead of a multi-tool. The solution gives control and protection at the most granular level allowing us to enforce policies across the different sites in the Highways England network while enabling access for appropriate users to their business critical applications."

Continuous pen testing by the Highways England team ensures the environment meets all the organisation's security requirements.

■ The Results

Highways England can now enjoy the same high level of protection that it would get from the most security conscious on-premises data centre against ongoing threats such as phishing, brute force and DDoS attacks. The new security architecture designed and maintained by SystemsUp provides enhanced protection against cyber threats while ensuring users enjoy high availability and a seamless experience.

Nick Martin from SystemsUp says, "What we've done is created an infrastructure that uses edge defence to provide protection between the device and the web app, meeting the security requirements of Highways England."

There is a managed and secure process for updates and patching, ensuring Highways England has a continuously robust security strategy in place.

Ivan Wells, Principal Architect at Highways England, concludes, "SystemsUp have delivered a cloud friendly security solution that gives us protection without disrupting the way our users access the applications each time Microsoft updates Office 365. We continue to work with SystemsUp because of their proven public cloud expertise."

