Birmingham Airport – International UK Airport

Overview

Industry

- Transport

Challenge

- High-risk profile as part of the UK's critical national infrastructure
- Wide range of potential cyber-attackers and sophisticated, rapidly-evolving threats
- Limited network visibility

Results

- Alerted in real time to any changes in user behavior that may be indicative of threat
- Transformed ability to respond to and handle incidents immediately
- Technology constantly evolves as the network changes
- 100% network visibility

Business Background

Birmingham Airport is an international airport located just outside Birmingham, England. In 2015, over 10 million passengers used the airport, making it the seventh busiest airport in the UK. As a base for a number of airlines, Birmingham Airport offers both domestic and international flights to a wide range of destinations across Europe, Asia and North America.

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Wayne Smith, Head of IT and Technology, Birmingham Airport

Challenge

Technological advancements, including user-friendly airline and airport websites, Wi-Fi networks, online check-in, automated checked baggage systems, electronic passports and un-manned border controls, have transformed the efficiency and organization of airports over the last decade.

But with technological innovation comes the need for extra defense against sophisticated cyber criminals who exploit large, noisy networks and increased connectivity. A pressing concern for airports, which are already a likely target for malicious attacks.

Birmingham Airport is part of the UK's critical national infrastructure and therefore has a profile of interest to hostile foreign intelligence services as well as a wide range of other potential attackers. As such, the airport was keen to bolster its cyber defense strategy with the most innovative cyber technology available.

The airport required complete network visibility in order to thoroughly survey its network, which is accessed daily by an extremely high volume of passengers passing through and over 140 businesses, with a permanent presence on site.

Additionally, the airport needed a security solution capable of detecting potential vulnerabilities and actual threats, inside and outside the network, that may aim to target its critical assets, including vital operating systems.

Solution

Birmingham Airport decided to deploy Darktrace's Enterprise Immune System technology into the core of its network, in order to enhance its ability to defend itself against potentially damaging cyber attacks from the outside world, and insider threat. The appliance was easily installed, in under an hour, into the airport's network and began to work straight away.

The airport's security team was struck by the unique, self-learning capability of Darktrace's Enterprise Immune System. Powered by machine learning and mathematics developed by specialists from the University of Cambridge, Darktrace's technology is able to detect potential cyber-threats in real time, which evade traditional security controls.

By modeling user, device and network behaviors on a continual basis, the technology builds a 'pattern of life' specific to the network and, therefore, can automatically spot any activity that deviates from the norm, without the need for manual input, rules or signatures. It reports any genuinely anomalous behavior to the airport's security team, allowing them to review and handle potential incidents quickly.

Benefits

Thanks to Darktrace's self-learning technology, Birmingham Airport's security team are alerted to any changes in employee and user behavior within the network, however subtle, that are judged to be potentially threatening.

In addition to this next-generation threat detection capability, Darktrace also provides a 3D graphical overview of all network activity, through its unique Threat Visualizer interface. The Visualizer enables the airport's security team to see, investigate and mitigate emerging threats, and gives them an overall understanding of how its devices and users are interacting, at any one time.

"We were looking for a security solution that would shine a light onto potential risks, whether internal or external, and no one tool seemed to fit the bill until we found Darktrace," said Wayne Smith, Head of IT and Technology, Birmingham Airport.

"We rely purely on Darktrace to highlight changes in behavior that we need to be aware of. The global visualization provided by the Threat Visualizer has been eye-opening. It is very easy to use and much more intuitive than lines of code in illustrating the communications between Birmingham Airport and the rest of the globe."