

## Virgin Trains



### Overview

#### Industry

- Transportation

#### Challenge

- Protect customer information, brand reputation and sensitive train operating data
- Optimize customer experience while balancing business risk
- Monitor internal network 24/7
- Intelligently pinpoint and target security resources

#### Results

- Gained an understanding of how its users, devices and network operate
- Total visibility into what is happening within the network in real time
- Resilient defense of data and brand, while leveraging interconnectivity and human creativity
- Alerts to anomalous behavior that may indicate a threat

### Business Background

With over 12 years experience connecting Britain's major cities, Virgin Trains is one of the most highly-rated rail operators in the UK. Dedicated to providing a faster, greener and more comfortable service to customers, Virgin's trains travel at 125mph, effectively delivering customers to their destination at speed. As part of the Virgin Group, Virgin Trains sits within one of the world's most recognized and respected brands.

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Darktrace is a game-changer because now we have a baseline of how our users, devices and network operate and how that changes over time with our business.

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Louis Kangurs, IT Network Manager, Virgin Trains

### Challenge

As part of the renowned Virgin Group, Virgin Trains takes the protection of its customers' information, brand reputation and train operating data very seriously. The company wanted to find a new way to optimize customer experience, while balancing business risk associated with the complex cyber-threat landscape. As part of the UK's critical national infrastructure, Virgin Trains was looking for a proactive approach to cyber security to stay ahead of the curve.

Virgin Trains relies on a global partner network, consisting of various third-party organizations that connect to the company's network every day. It is also responsible for trains that are increasingly connected and vulnerable to external influences, ranging from the coffee machine connected to the internet, to passenger devices connecting to the train's public Wi-Fi. The company realized that a next-generation security solution was required to thrive in a hyper-connected environment while preempting potential security problems that could present themselves.

In particular, Virgin Trains was keen to gain absolute visibility into its network in real time, in order to understand and intervene early in any situations that had the potential to disrupt the customer experience, compromise commercial or sensitive data, cause criminal damage, or even result in physical safety issues.

## Solution

When Virgin Trains evaluated its cyber security investments, it chose to deploy Darktrace's mathematics-driven Enterprise Immune System technology, due to its unique ability to detect real threats that bypass other legacy security controls, and do this in real time, as they emerge on the network.

Based on machine learning and Bayesian probability theory, the Enterprise Immune System is a self-learning, cyber threat defense technology, which forms an adaptive, probabilistic understanding of 'self' within a network. With Darktrace, Virgin Trains is capable of detecting very subtle deviations from the organization's normal 'pattern of life' as they happen, and respond proactively to any anomalous behaviors that are uncovered.

Virgin Trains accesses the powerful technology of Darktrace through its Threat Visualizer, a 3D graphical visualization interface that immediately alerts analysts to any detected anomalies and potential issues, so that they can investigate in great detail. This enables the company's analysts to better understand what is happening within their information systems and focus on mitigating the most important risks to the business in real time.

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As opposed to SIEM-based retrospective approaches, Darktrace's cyber intelligence platform and Threat Visualizer interface provide us with absolute visibility into what is happening in real time.

Louis Kangurs, IT Network Manager, Virgin Trains

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## Benefits

In transitioning to this proactive model of cyber defense, Virgin Trains has succeeded in striking the balance between protecting its information and brand, and continuing to leverage global interconnectivity and human creativity. With early visibility and continuous monitoring of network activity, the company can effectively safeguard its data and interconnected systems, without damaging its ability to deliver world-class customer experience and remain a flexible and dynamic enterprise.

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Rather than wait for an engineer to spot something, we can get an automatic security alert and have someone tell you what needs to be done.

Louis Kangurs, IT Network Manager, Virgin Trains

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With Darktrace's adaptive, self-learning technology, Virgin Trains has acquired an unprecedented understanding of how its users, devices and network operate. Darktrace passively monitors the network on a 24/7 basis, which means that the company is able to rapidly resolve any developing issues before they result in a crisis, considerably reducing the risk of undergoing a debilitating attack or compromise.

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