

Human Longevity



Overview

Industry

- Healthcare & Pharma

Challenge

- Manages highly sensitive healthcare data
- Complex threat environment
- Needed to protect critical intellectual property
- Wanted to build a modern security strategy from bottom up

Results

- Real-time threat detection of abnormal activity or threats
- Complete network visibility
- Protection of both physical network and virtual data centers
- Better ability to proactively improve infrastructure and reduce risk

Business Background

Human Longevity, Inc., founded in 2013, is a biotechnology company dedicated to creating the largest, most comprehensive database of whole genome, phenotype and clinical data. Concurrently, the company develops large-scale computing techniques capable of cutting-edge genome sequence analysis in order to revolutionize medical practices.

Based in San Diego, the company has 250 employees, maintains partnerships with several other biotech companies and research institutes, and in January 2016 acquired LifebankUSA, a leader in placental and stem cell banking, furthering Human Longevity's work on newborn genome analysis.

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It's a huge help to have a second pair of eyes on our systems at all times.

Thomas Brandl, Senior Director, Information Security, ”

Challenge

Biotechnology research is changing the face of medicine, healthcare and biology as a whole. The digitization of biology, however, incurs risks. The modern cyber threat landscape is characterized by sophisticated cyber-attackers and rapidly evolving threats, often from inside sources. As a young, high-technology company, Human Longevity was keen to build a modern and resilient cyber security strategy from the ground up, with minimal overhead.

This strategy ultimately aims to safeguard the company's critical data assets, while maintaining a dynamic and flexible working environment for employees. Additionally, Human Longevity put emphasis on defending its integrity and maintaining its reputation as a responsible and cyber-aware biotech company, to the healthcare industry as well as its own partners, investors and customers. Human Longevity was keen to deploy new-age technology, as part of a layered approach, which would be capable of monitoring and protecting the internal activity of the network. The company also wanted to have better visibility overall of user and device behaviors, improve its ability to identify existing or emerging vulnerabilities.

Solution

Given this strategy, Human Longevity decided to trial Darktrace's Enterprise Immune System, a new approach, inspired by the human immune system. Using machine learning developed by mathematicians from the University of Cambridge, it establishes a 'pattern of life' by analyzing normal behaviors and activities within a particular network. Therefore, any deviation from the norm is flagged immediately, for investigation by the company's security team.

During a four-week trial (Proof of Value), the Dartrace appliance was easily installed into the company's servers in its San Diego headquarters. The self-learning technology quickly proved its value, detecting a large download of malware on its BYOD guest network, that would otherwise have gone unnoticed. Using the Threat Visualizer, the company was able to detect and investigate the threat quickly, proactively monitor other potential vulnerabilities and gain overall visibility of all its network activity.

Human Longevity decided to deploy Darktrace's Enterprise Immune System technology permanently across its networks, both its physical network and cloud environments. This has much improved their own understanding of employee behavior and normal activity. Furthermore, Human Longevity is utilizing the Enterprise Immune System's cloud capability, using Darktrace vSensors, to extend 'immune system' defense to its virtual data centers.

Benefits

Thanks to the Enterprise Immune System, Human Longevity is now benefitting from real-time threat detection and increased confidence in its cyber defense strategy's capabilities, having integrated Darktrace with the company's existing security solutions.

Without having to change the nature of its network or flexible working environment, Human Longevity is now alerted to any abnormality, which may be indicative of a cyber threat, as it occurs. The company's security team can watch potential threats as they progress using the Threat Visualizer interface.

"Darktrace's technology is invaluable to us," said Thomas Brandl, Senior Director, Information Security, Human Longevity, Inc. "At Human Longevity, we are dedicated to developing the most advanced technologies in genome sequence analysis, and security is a top priority. Darktrace supports that innovation because it can deal with constantly adapting environments – the 'immune system' technology moves with us, as we evolve as a company."

The security team also receives comprehensive Threat Intelligence Reports every week from Darktrace's threat analysts, which summarize and categorize the potential issues.

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**Thomas Brandl, Senior Director,
Information Security**

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