

Nominee: Cancer Research UK/FireHost

Supporting Vendor: FireHost

Nomination title: Cancer Research UK uses FireHost to support its Stand Up To Cancer fundraising campaign

Cancer Research UK (CRUK) is the world's leading cancer charity dedicated to saving lives through research. In 2012, CRUK and Channel 4 joined forces to launch the 'Stand Up To Cancer' (SU2C) campaign in the UK, culminating in a six and a half hour show, broadcast live on Channel 4 on Friday 19th October. The campaign successfully raised over £8m, with many of the donations coming through a fundraising page hosted by secure cloud provider FireHost, during the live event.

To support the donations page for SU2C, CRUK needed a specialist cloud hosting provider which complied with PCI DSS (Payment Card Industry Data Security Standard) regulations governing the security of credit card user information as it couldn't take any risks when it came to the protection of confidential payment data. It also required a platform which could demonstrate its resilience even during extreme spikes in visitor numbers, a potential challenge from both an operational and security perspective. Given the high profile nature of the campaign, particularly with Channel 4's live TV fundraising push, the bulk of SU2C donations were expected to be pledged during the live show itself. As a result, it was imperative that the donations page performed optimally throughout this short period. Any downtime for the payments site caused by a hacker attack would have severely hampered its fundraising efforts, especially since CRUK anticipated seeing a great number of transactions processed online.

Security/compliance features

CRUK developed an online donation application for the campaign which integrated WorldPay and PayPal. By default, the application handled authorisations for card payments in real time, but was also capable of storing card details and queuing them to re-submit in the event of an issue with the payment gateway, hence the need for a PCI compliant, secure environment. When handling payment card data in any volume, PCI DSS (Payment Card Industry Data Security Stand) compliance is very much an issue of security. Only if operating with a fully compliant solution can you guarantee the security of customer card data. FireHost's PCI compliant Infrastructure as a Service (IaaS) guaranteed all payment data stored on the SU2C site was protected at all times.

FireHost also provisioned the platform with numerous best-in-class enterprise security features to ensure all payment details stored on the site were fully secured. This included web application firewalls to monitor traffic up to the application layer and block potential threats; DDoS mitigation, a must have for any organisation looking to protect itself against the ever growing threat of distributed denial of service attacks which can flood a user's server and compromise the security of its applications; and VPN access with SSL encryption, a solution that provides complete security and reliability for VPN connections.

High performance security

The security demands of a project of this scale involve much more than just best-in-class enterprise security features. CRUK needed a solution that could scale quickly to handle transaction peaks expected following broadcast calls to action, and which could scale down again after the fundraising event. Such high volumes of traffic can put entire IT infrastructures under stress and this includes any security features. The whole infrastructure could be at risk, including the payment card data stored on the site, for example, if an under-provisioned firewall was to fall over due to heavy traffic. CRUK needed a secure solution which could also demonstrate extreme levels of resiliency, performance and scalability, and with FireHost, it had a hosting provider well experienced in such projects.

SU2C raised over £8m in total and during the live show, the site processed 16,000 credit card and 14,000 PayPal transactions in just six and a half hours, with a total of 38,000 transactions processed throughout the whole campaign. The IT infrastructure and security features were well provisioned to withstand this demand as prior to the event, CRUK had rigorously reviewed site performance under strain; including load testing that ensured the infrastructure could process a minimum of 50 transactions per second. Testing showed the FireHost infrastructure could support 300 transactions per second (18,000 per minute).

During the Stand Up To Cancer campaign, FireHost was able to provide a secure portal and make comprehensive resources available to CRUK. Because the FireHost environment is elastic and resources can fluctuate up or down, the Stand Up To Cancer payments page was able to flex with demand during the night. This meant that the highest standards of project management were required to support the process as resources were monitored and scaled up or down accordingly.

Being able to react in real time was essential for a project like this, not only in terms of scalability, but also security. A FireHost team was on hand at all times during the event and worked inside the SU2C network operations centre alongside CRUK and Channel 4 teams to monitor the performance of the systems, protecting against any and all incoming cyber attacks.

Return on investment

As with all cloud services, hosting its payment platform online gave CRUK a much lower total cost of ownership. The charity only paid for the resources it required, when it required them. Furthermore, CRUK now has a re-usable system for employing an online donation solution in the future, and for running the Stand Up To Cancer campaign again – adding even further value.

The project itself was completed on time and to budget. The cloud infrastructure was set up in a matter of months and performed flawlessly throughout the campaign.

Fundamentally, return on investment for this project boiled down to whether the payment platform was able to cope with the high volume of visitors and process every single donation. In this case it did so without issue. FireHost was able to protect the payment website throughout the campaign and CRUK saw no deterioration to performance and experienced no downtime due to hacker attacks.

Why nominee should win:

- The project highlights how cloud computing can be utilised for a good cause, deliver meaningful business benefits and address the biggest IT challenges facing organisations today
- It demonstrates the core advantages of cloud computing eg. cost reductions, scalability, performance
- It also demonstrates how the biggest challenges in the cloud can be overcome using specialised solutions eg. security, compliance, unpredictable traffic spikes
- The project was well planned, swiftly delivered and managed efficiently. Despite the technical complexities and high profile nature of this campaign, the site saw no deterioration to performance and experienced no downtime