

# NETGEAR® Case Study

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## NETGEAR® Technology Boosts Productivity and Performance of Youth Charity

*NETGEAR's stackable switches helped tackle JDRF's network traffic load performance problem by leaving sufficient free ports for expanding operations without persistent network downtime.*

NETGEAR® has contributed a vital increase in performance at a time when having to work around the network was simply not an option.



### Profile

JDRF is the UK arm of a global charity dedicated to finding a cure for type 1 (juvenile) diabetes. JDRF pursues three main activities: fundraising through links with industry & commerce, supporting research into therapies & cures, and outreach to families & children with type 1 diabetes. Its UK operations are centred in London, with four branches around the country.

### Background

JDRF, in common with almost every registered UK charity, tracks donations and events with a sector-specific database. As is often the case with databases in every sphere of business, this is a simple file-based system, remotely accessed via Citrix Metaframe by the branch offices. The JDRF donations base is immense, arising from a long-standing fundraising model using sponsored walks by teams developed by volunteer "Walk Captains" in the business community. This success has meant that central network performance is a critical factor for the entire organisation. "Any liaison officer in any branch within the UK has to be able to find any donor record, in a matter of a few seconds," said Chris Askew, Director of Fundraising.

## Problem/Objective

2006 has been a year of intense change for JDRF UK. The organisation has re-vamped its fundraising approach to include greater use of its existing, devoted supporter base within industry, the entertainment business, and families affected by diabetes. The progress of diabetes research in recent years has been accelerating: in particular, building on the completion of the human genome project, significant advances in stem cell research, and the development of successful islet transplantation techniques. This last advance is the biggest breakthrough in the field since the discovery of insulin in 1922. JDRF has responded to these developments by gearing up to deliver more funds to researchers.

While the countrywide network was stable, an expansion of staff and activity in the head office was putting strain on an infrastructure last updated in 2003. Tracie Gardiner, Director of HR & ICT Operations, said: "Peak loads on the national network tend to arise before each 'Walk Weekend', with every branch needing to run database queries and reports at the same time, leading up to the walks themselves." Increasing performance in the head office, managing network traffic loads between the three principal servers and avoiding bottlenecks was becoming a priority.

## Solution

In co-operation with JDRF's IT advisory team from Dovetail Management Consultants ([www.dove-tail.co.uk](http://www.dove-tail.co.uk)), JDRF selected NETGEAR's new range of Smart Stackable Switches, in particular the FS728TS. The mix of Gigabit (1,000Mbps) and Fast (100Mbps) switch ports provided the solution to the expanding population in head office. What really made the difference is the smart stacking capability.

NETGEAR's FS728TS, and the larger FS752TS, have a unique edge for rapidly expanding small networks – the Gbit ports at the right-hand end of the port panel daisy-chain together. This may not seem unique; until you watch the network integration specialist taking the last port in the daisy-chain stack and connecting it back to the top port on the top switch. The switches spot this arrangement and automatically use it to create a 4Gbps, fault-tolerant dual ring interconnect. "We could see the speed advantage of the ring structure almost immediately," said Ruth Best, Data Quality Manager. "Database searches used to be heavily impacted by email traffic, especially sending final layouts for walk materials to our external printer. With the ring in place, provided by the FS728TS in the server room, we can now run all our tasks as fast as the servers can operate."

Traffic between member switches in the stack is routed automatically around the ring, taking the shortest path to its destination. With the FS728TS, the ring is the unique selling proposition, delivering throughput and tolerance traditionally reserved for networks with much larger budgets and much more time to tune and refine performance – sapping routing tables. Added features like Layer 3 prioritisation, optional Power over Ethernet capability and tight controls such as MAC address security per port and rate limits within the management interface, add to the overall appeal.

"We found another unexpected gain," comments Gardiner. "Our building wiring was inherited from the previous tenant, and we never really got to the bottom of some of our workstation problems. The inbuilt line-testing features of the FS728TS allowed us to cut back on external contractor testing of all our installed plant, and only re-run the five cables that the FS728TS identified as below standard."

Using the three FS728TS smart switches means that each server now has its own standard Gbit connection, and the 4Gbps ring makes every workstation perform like it is on the same backplane as the server it needs to talk to, while at the same time leaving sufficient free ports for future growth, and without persistent network downtime for updates or upgrades.

## Business Impact/Result

JDRF's campaign is moving forward at a rapid pace due to medical advances in recent years, national concern, handling media requests and taking care of the special needs arising from being a children's charity. NETGEAR® has contributed a vital increase in performance at a time when having to work around the network was simply not an option.

The ProSafe™ FS728TS  
Smart Stackable Switch



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