A BT hosting and connectivity solution enables Tesco.com to reduce operating costs and provide improved customer service

Executive summary

The exceptional business growth enjoyed by Tesco.com was straining its network, and bandwidth needed to be regularly increased to cope with rising traffic. Network costs were becoming significant and peaks in traffic brought the prospect of customer service degradation. To resolve these issues Tesco.com decided that it needed to create a new resilient primary hosting centre, with a direct high bandwidth local connection to the internet.

Tesco.com issued a request for proposal (RFP) to a number of potential hosting and network service vendors before selecting the BT offer. The BT solution provides co-location hosting services at the BT St Albans Internet Data Centre (IDC) giving Tesco.com serviced rack accommodation in a secure, air-conditioned environment. The BT service also includes multiple high-speed connections to the internet together with BT LAN Extension Services linking its headquarters and back-up data centre.

The co-location hosting service has enabled customer service improvement with enhanced resilience and substantial reduction in operating costs. Financial projections conducted by Tesco.com show that the solution pays back within two years and has a ROI (return on investment) of nearly 110 per cent over three years. Tesco.com is now considering the closure of its back up hosting facility and the transfer of responsibility to BT, using a different IDC.

“We chose BT because they offered the best service for the lowest cost. The security and resilience of the BT hosting environment is most impressive and it is co-located with one of BT’s primary connection points to the internet.”

Jon Higgins
IT Director
Tesco.com
**Marketplace**

Once a UK-centric grocer, over the past decade Tesco has become a truly international retailer. With fast growing non-food lines and retailing services such as Tesco Personal Finance, Tesco has emerged as the market leader and the star performer of its sector. One of its most successful divisions is the Tesco.com home shopping operation. Launched in 2000 it is growing at a rate of 25 per cent per year, and is now taking over 200,000 orders every week. It is the most popular online service of its kind in the world, with coverage extending to more than 98 per cent of the UK, serviced through a network of nearly 300 local Tesco stores.

**Business opportunity**

Tesco.com had traditionally hosted its own website from two of its own locations. However, exceptional business growth was placing more and more demands on Tesco’s network. Bandwidth – to and from the internet – needed to be regularly increased to cope with rising traffic.

Jon Higgins, IT Director at Tesco.com, says: “We want to provide our customers with an excellent service but, with soaring traffic, we reached the point where the cost of increasing internet connectivity bandwidth was becoming prohibitive. In addition, at our busiest times, customer service was beginning to degrade, and this would only get worse as our business grew. This was not an outcome we were happy to accept.”

**BT solution**

BT provides Tesco.com with co-location hosting services at its St Albans Internet Data Centre (IDC), with additional space reserved for expansion and freestanding equipment. The solution provides Tesco.com with serviced rack accommodation in a secure, air-conditioned environment, with multiple high-speed connections to the internet. As well as providing high levels of physical security, environmental control and power regulation, the service is backed by 24*7*365 proactive monitoring of the hosting environment.

In order to sustain excellent customer service levels against business growth forecasts and at the same time control operating costs, the company reviewed its infrastructure. The review concluded that Tesco.com needed to create a new resilient primary hosting centre, with a direct high bandwidth local connection to the internet. Tesco.com issued a request for proposal (RFP) to a number of potential hosting and network service vendors before selecting the proposition from BT. Jon Higgins says: “We chose BT because they offered the best service for the lowest cost. The security and resilience of the BT hosting environment is most impressive, and it is co-located with one of BT’s primary connection points to the internet.”

Case study
Tesco.com

“There is a business improvement mantra within Tesco. We say things need to be better, simpler, and cheaper. With greater bandwidth the solution from BT is certainly better for our customers. Internally we no longer have the headache of managing the internet connections and the hosting environment, so it is simpler for our staff. The final bonus is that it is actually cheaper as well.”

Jon Higgins
IT Director
Tesco.com
BT also provides Tesco.com with its ‘Remote Hands’ service, which enables Tesco.com to direct BT staff to undertake physical tasks at the centre on its behalf at short notice. Connectivity between the Tesco.com hosted web servers and the internet is enabled by the BTnet Flex service. This provides high bandwidth connectivity with full scalability to meet projected traffic growth.

BT LAN Extension Services (LES1000), with diverse routing, provides Gigabit Ethernet connectivity between the Tesco.com headquarters at Welwyn Garden City and the BT IDC. A LES100 circuit links the IDC with the Tesco.com data centre, which now acts as the back-up and remote storage area network (SAN) facility. The solution also includes the hosting of SAN facilities at the IDC using a BT-supplied EMC platform.

Implementation of the hosting solution began in June 2005. Jon Higgins says: “We worked very closely with the BT team and we were deeply impressed with the service. Such was their commitment it was almost as if they worked for Tesco.com themselves.”

Business continuity was of paramount importance for Tesco.com. Jon Higgins continues: “We carried out extensive testing and the implementation was completed in August 2005. It all went very smoothly and we achieved the changeover on schedule without a second of outage.”

**Results**

The co-location hosting service from BT has enabled customer service improvement with enhanced resilience and has provided the platform for a substantial reduction in operating costs. Jon Higgins says: “BT is providing a fantastic service and because we are there in the BT core network the incremental costs of increasing our bandwidth in response to customer demand is significantly less. So, the BT solution is great value for Tesco.com today and I know it will remain great value for years to come.”

The significance of the flexible bandwidth service to Tesco.com cannot be understated. Jon Higgins says: “The great thing about the BT solution is that it allows us immediate access to limitlessly scalable bandwidth. So a peak in customer demand, such as around Christmas, will never catch us out. We can sustain service levels to customers and just pay for the additional bandwidth that we use.”

Financial projections conducted by Tesco.com show that the solution pays back within two years and has a ROI (return on investment) of nearly 110 per cent over three years. That success means that Tesco.com is now considering the closure of its back up hosting facility and the transfer of responsibility to BT, using a different IDC.

The last word is reserved for Jon Higgins: “There is a business improvement mantra within Tesco. We say things need to be better, simpler, and cheaper. With greater bandwidth the solution from BT is certainly better for our customers. Internally we no longer have the headache of managing the internet connections and the hosting environment, so it is simpler for our staff. The final bonus is that it is actually cheaper as well.”

**Why BT?**

- BT provided the best service offer at the lowest cost
- Impressive hosting capability with co-located high bandwidth internet access backed by strong customer references
- BT is a trusted networking supplier with strong technical capability
- Willingness to work as part of the Tesco.com virtual team
Technology blueprint

BT hosts some of the world’s most demanding and mission critical web sites and applications. Server space is available in a variety of IDCs located across seven European countries, all of which provide the highest levels of physical and network security, resiliency and environmental integrity. Servers can be either rented from BT or customers can provide their own hardware for installation within the BT environment.

At the BT St Albans IDC, two dedicated power distribution units backed by standby generators and battery powered uninterruptible power supplies, feed electrical supply to standard 19” racks housing Tesco.com server equipment. The IDC is protected by a high quality aspirating fire detection system, with fixed-point sensors to provide early warning heat detection. Forced air cooling at 17°C is supplied to the bottom of each rack and extracted through natural and fan assisted convection at the top. Room temperature is maintained at 22°C within a tolerance of ±2°C. Humidity is maintained at 50 per cent ±10 per cent.

Internet connectivity is provided through BTnet Flex asymmetrical access, operating at 100Mbps to the internet and 30Mbps to Tesco.com, with full scalability to meet projected traffic growth. The BTnet service is delivered over the BT backbone network (Colossus) and provides national coverage of the UK (via 118 access nodes) using multiple 2.4Gbps circuits.

Main BT products and services

- BT co-location hosting service
- BTnet internet access services
- BT LAN Extension Services (LES)
- BT-supplied EMC storage area network solution

Offices worldwide

The services described in this publication are subject to availability and may be modified from time to time. Services and equipment are provided subject to British Telecommunications plc’s respective standard conditions of contract. Nothing in this publication forms any part of any contract.

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Registered in England No: 1800000

Designed by Westhill Communications