

TECHNOLOGY IN ACTION, LUPPRIANS COMPUTER EXPRESS



Extending the wan through broadband wireless

Challenges

- To provide cost-effective and reliable bandwidth extension services between the head office and a secondary logistics location;
- To allow users at the secondary location to access IT services and applications as if they were located within the head office;
- To eliminate the need for additional thin-client IT applications from the IT infrastructure that were deployed purely to overcome bandwidth issues between the two sites;
- Locations were not within line of sight – the 550m distance between locations was obscured by another business unit on the business park.

Solution

- An InfiLINK 2x2 solution was deployed between the two sites in a non Line-of-Site installation;
- An aggregate (bidirectional) throughput of 180Mb/s through non-line of sight (NLOS) was achieved, providing > 90Mb/s full duplex bandwidth between the sites.

Introduction

Established in 1977, Lupprians Computer Express (LCE) is a privately owned company and part of the Lupprians Logistics Group, a provider of global logistics services to a range of specialist customers and industries. With offices across the UK and Europe, and with partners throughout the world, LCE UK provide a full range of specialist hi-tech transport and logistics solutions with turnkey installation services to the computer and medical industries, offering customers the advantage of hi-tech modern warehousing facilities with comprehensive online "track-and-trace" capabilities.

LCE's UK Head Office in Ashford, Middlesex is located close to Heathrow Airport and a second site, serving LCE's warehousing functions, lies 550 metres distance from LCE's Head Office location. LCE's two sites were traditionally linked with a low-bandwidth ADSL VPN connection to allow communications between the two sites, but this solution meant that a common Wide-Area Networking application infrastructure between the two sites was difficult to implement and support given the bandwidth constraints. LCE's goal was to unify the two sites in terms of IT applications, services and common shared infrastructure, aiming to reduce overall cost and increasing the productivity of the staff and processes across the diverse locations.

Objective: Optimising the WAN Infrastructure

The key to achieving LCE's objective of improving the communications between the Head Office and the Warehousing location would be the ability to significantly increase the bandwidth between the two sites, whilst maintaining a stable and reliable link. Communication to the logistics and warehousing operations from administration centres is particularly important in a supply operation, since the systems between Head Office and the Logistics site are often inextricably linked, with the commercial departments of the business based in the Head Office location needing to know the status of orders, shipments and stock levels in the logistics centre. In addition, LCE's offering to their customers of their online "track-and-trace" functionality - allowing customers to query the exact status of their order and/or shipment - further adds to the infrastructure requirement and load.



Key benefits

- Significant bandwidth increase and stability between sites with significantly reduced cost;
- Massive productivity increase in terms of IT applications & services synergy between the two sites;
- Elimination of thin-client applications and extension of IP Telephony and DataCentre applications (e.g. remote automated backup) brings further savings to the implementation;
- Speed of deployment: operational within 3 days.

In order to optimize the use of bandwidth between the two sites, LCE had deployed thin-client applications to the warehouse location to minimise the bandwidth utilisation, and had also delayed the deployment of bandwidth-intensive applications such as IP Telephony and Remote Backup solutions until a higher-bandwidth solution could be found to link the two sites.

Key Business Challenge: seamlessly linking the two sites

Initially, LCE had provisioned an ADSL VPN connection between their warehouse and their main office location, but due to the distance-limited nature of ADSL - along with the unique geographic location of the two sites - the actual usable bandwidth provided through the circuit was far below the operational requirements needed to provide a usable inter-site WAN infrastructure.

Further trials with higher bandwidth DSL circuits did not provide significant improvement over the ADSL VPN solution in terms of consistent throughput, and with migration to a 100Mb/s leased line solution from a local Telco provider being prohibitively expensive, LCE approached their outsourced IT solutions partner, Technique, for an alternative solution. Working together on a technical proposal with their distribution supply partner, 802 Global, Technique recommended that LCE commission a point-to-point Broadband Wireless solution from InfiNet, which would offer a dedicated and cost-effective high capacity link directly between the two sites without the need to route back through the local exchange.