



Customer Success Story Payment Network- Large Scale Retail

IKEA-Successful implementation of NetAccess L1000 Transaction Concentrator

About IKEA

IKEA, the world's largest home-furnishing retailer, opened its new flagship in Mutiara Damansara, Malaysia in August 2003. Featuring 35,811 square meters of floor space (roughly the size of 5 football fields) with over 7,000 home furnishing products displayed in 54 settings, IKEA is the largest furnishing store in South East Asia. However, with just six weeks before its grand opening, IKEA was still lacking the credit card payment facilities necessary for operations.

Website

www.ikea.com.my

Key Challenges

Being located in a fairly new development area where the telecommunications infrastructure was still being developed, there was an urgent need to establish communications in the form of a leased line to the Bank to carry the payment transactions. Due to the challenges posed by a tight deadline and the general availability of infrastructure, the leased line to the bank was not going to be ready by the time the store was to be launched. There had to be a way to connect to the bank quickly with high bandwidth.

In addition to the external communications infrastructure, the in-store infrastructure had to be prepared as well. IKEA had over 30 checkout counters on the lower floor of the store in addition to the few counters used for food and beverage upstairs and they all needed to be able to accept credit card payments. Each counter had to be equipped with an EDC terminal. EDC terminals would normally be equipped with a phone line to dial-up to the bank directly. However, in a large merchant like IKEA, this would not be cost effective.

The EDC terminals had to be linked in a local area network to a transaction concentrator which would then send the transactions along the connection to the bank for processing, saving IKEA the cost of 36 six terminals dialing up to the bank each time a transaction was made.

The Solution

GHL Systems' NetAccess L1000 Transaction Concentrators were deployed to provide IKEA tactical options, in which to address its situation and circumstances and offer viable alternatives, thus ensuring that its business operations would continue without a hitch.

The Foundation

The VeriFone terminals used by IKEA supports the RS485 serial interface – allowing for wiring to stretch to 1200 meters in length. The local area network was configured to have all 36 terminals in IKEA connected to two separate NetAccess L1000 Transaction Concentrators in a double RS485 loop.

GHL System's proprietary ESLP protocol allows the transactions to be carried at high speed through the network without the attendant collisions inherent in serial communications protocols.

While awaiting the leased lines to be installed, the communications dilemma was resolved by using an ISDN dialup. ISDN dialup is the main method of backup for digital leased lines - most routers cater for the ISDN backup feature. The routers were configured as if the primary line was down, and the ISDN dialup link was setup, tested and commissioned.

For added measure, the NetAccess L100 transaction concentrator box featured an additional backup connectivity option that would connect to the bank via wireless data communications, or General Packet Radio Service (GPRS).



Today, GHL Systems' solutions are in place in many other large malls and retail outlets, working tirelessly behind the scenes ensuring that their complex payment infrastructure stays up and running.

Business as Usual

On its opening day, a record of almost 40,000 people visited the store with some customers lining up outside the store as early as 6 am to catch the Early Bird specials on offer. Disaster struck when the ISDN connection failed just 30 minutes before store opening and the leased line was not ready for operations for another month.

The implementation team quickly activated the GPRS backup and communications was re-established within 20 minutes. It was reported that this was the first IKEA store in the world that offered credit card facilities on opening day!

Within the first two days, an impressive total of RM 1.2 Million was transacted over this GPRS link. Eventually the ISDN link was restored and the leased lines were commissioned and have continued smooth operations till today.

Implementation Highlights

- GHL Systems was able to use its ESPL protocol and the RS485 interface to build a highly available network for the EDC terminals in IKEA
- Leveraging on existing mature technologies such as ISDN backup dialing to routers, IKEA was connected to the bank even without the benefit of leased lines.
- GPRS technology was utilized to extend the functionality of the system to provide a backup connectivity to the bank while both ISDN and the leased lines were down.
- GHL Systems managed to design a highly available, robust and dependable system that was capable of handling the heavy transaction loads generated during IKEA's first week of operations.

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