Mako Networks Connects
FIX Convenience Stores

The FIX Convenience Store chain, owned by Star Metro Holdings, operates 12 locations in the central business districts of Auckland and Wellington. FIX is the new iteration of the previous Star Mart convenience stores, purchased by Star Metro and brought up to date with a brand refresh and new store fit-outs in 2009 to assist in the conversion to a modern, friendly store with the latest in shopping amenities and convenience.

Each FIX store uses a Mako 6500 appliance to securely connect to the Internet and prevent external network intrusions, while providing secure VPN communication to headquarters.

The FIX store concept has proven popular, with millions of customer transactions processed each month across the company's network. Grant Sutton, IT Manager for Star Metro, has been integral to the store conversion process, responsible for upgrading the systems used in FIX stores to provide better reliability, visibility and reporting.

"The transactions we process are low value, but high volume. People can buy anything from a pack of chewing gum to a bus pass at our stores, and we complete millions of these transaction types every month."

As part of the new store fit-out when Star Metro took over, the Point of Sale (POS) and computer systems at all FIX stores were upgraded and rebuilt to include the best technology on offer to assure network security and visibility across the franchise.

"We needed an upgrade to get the company up to speed," says Grant. "Moving the payment systems onto IP (Internet Protocol) was the first step, as that enabled us to get all our systems integrated. IP also offered better reliability and speed, which were very important to us. If our connection goes down, it's a real problem for store managers."

The new IP-based broadband Internet connections at each store location link via Virtual Private Network (VPN) to a central computer network at Star Metro headquarters. The upgrade also included new POS terminals and computers, in addition to all the routing and switching gear and network infrastructure.

Each store's payment network was carefully constructed at an offsite location where it could be tested and trialed, before reassembling each system at the FIX store and installing the network gear.

"We ended up building 27 POS systems all up for the stores plus one petrol station," says Grant.
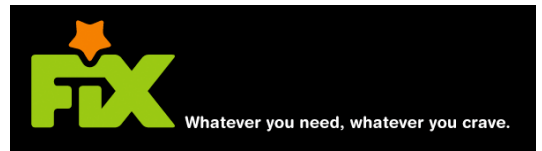
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Each FIX store uses a Mako 6500 network appliance as a primary connection to the Internet, with appropriate security measures and protocols implemented to prevent external network intrusions to the store systems. Inside each location, the Mako appliance splits the store's network between the payment system and the rest of the business computer network, so that payment information cannot be accessed from the computer systems of the business side.

It's very important that each FIX store has a secure connection to headquarters. The stores feed information back to Star Metro about sales and volumes, but also download pricing information and promotions from the central Star Metro systems. For example, a pricing special at headquarters can be entered into the computer system, then automatically pushed out to each store location by VPN connection using a 'pyramid' system. Each store will then automatically download that information, and include the pricing update in its POS systems. All the store employees need to do is update the labels on the shelves.

Back at Star Metro Headquarters in Auckland, an additional Mako 6500 unit collects all the inbound VPN connections and feeds that information back into the Star Metro computer systems for interpretation and analysis.

"The VPNs are valuable on their own – they're easy to set up with just a few clicks," says Grant. "Head office now has total visibility of transaction volumes and sales. The Mako System was plug and play. With all the devices preconfigured, we just had to plug them in on-site, and they were all set."

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Grant Sutton, IT Manager for Star Metro

The content filtering capability of the Mako System was also a major help for FIX stores to maintain the integrity of their security systems. Using the Mako Central Management System (CMS), administrators are able to restrict access to certain types of websites that may harbour Internet threats, or those that are not appropriate for the workplace. The Mako CMS includes detailed reporting functionality, supplying store managers with real-time reports of what websites are accessed, and enabling administrators to blacklist certain categories of websites or specific web addresses.

"The reports provided by the Mako System help our managers keep tabs on productivity and actually enhance the security of our stores by preventing access to potentially troublesome websites," says Grant.

The largest challenge for the new FIX store networks arrived in September 2011, when New Zealand played host to the Rugby World Cup. Hundreds of thousands of visitors flocked to the main city centres, with Auckland being especially hard hit. The Fix store on Quay Street near Auckland's trendy Viaduct district was right at the epicenter of the crowd onslaught, particularly around the opening and closing ceremonies, when well over 200,000 people crammed into Auckland's waterfront area for the celebration.

"We had queues of people 30 deep in the store for the Rugby World Cup. It was by far the busiest time we've ever had. We even had to set up a temporary POS terminal in the store to deal with the overflow. The Mako appliances and our POS system held up brilliantly under the load, which is a good testament to the reliability of the system."

Contact Mako Networks

Ph.   +64 9 448 1340
E.   sales@makonetworks.com
W.   makonetworks.com