



> IMPLEMENTING AN IP SERVICE DELIVERY INFRASTRUCTURE

NORTEL



> **Korean Automobile Manufacturers Association (KAMA)**

The Association produces best-selling automobiles worldwide, sourcing millions of parts and components annually from thousands of business partners locally and overseas, involving the management of multitudes of electronic data, applications and document transfers that characterise this massive supply chain

Case Study Secure Connectivity

Customer: Korean Automobile Manufacturers Association (KAMA)

Challenge: To implement a networking solution connecting remote users, branch offices, suppliers and customers, leveraging the advantages of shared IP networks and the security and control of private networks, to support Korea's major finished car manufacturers, and interconnect them to global automotive networks

Solution: The implementation of an IP service delivery infrastructure powered by Nortel VPN Routers and Secure Routing Technology (SRT)

Benefit: Cost savings and efficiencies by sharing applications, transferring electronic documents and managing B2B eCommerce dealings with suppliers and trading partners globally

“The flexibility of the network environment was a key factor in selecting Nortel’s VPN Routers. The Nortel VPN Routers offered superior compatibility - not only with different machines but also with other security technologies our manufacturers and trading partners use, like Check Point and VPNet.”

**>Woo-jin Oh
Manager of IT Strategic Planning
Hyundai and Kia Motors
Information Technology Centre**

The Challenge

For Korea’s Automobile Manufacturers Association (KAMA), producing its worldwide best-sellers involves sourcing millions of parts and components annually from thousands of business partners locally and overseas, as well as cost-effectively managing the multitude of electronic data, applications and document transfers that characterise this massive supply chain.

The challenge for KAMA was to implement a networking solution connecting remote users, branch offices, suppliers and customers - leveraging the cost and performance advantages of shared IP (Internet protocol) networks and the security and control of private networks.

The goal in deploying the network was to support global design, sourcing, and marketing for Korea’s major finished car manufacturers - Hyundai, Kia, Daewoo, Sangyong and Reno-Samsung, as well as to interconnect them to global automotive networks in the United States (ANX), Europe (ENX), Japan (JNX), Australia (AANX) and China (CNX).

The Solution

KAMA outsourced the operation and management of business partner, sales outlet and maintenance networks to a new, dedicated industry infrastructure developed by KAMA and powered by Nortel VPN Routers (formerly known as Contivity Secure IP Services Gateways), which employ the cutting-edge Secure Routing Technology (SRT) framework.

For KAMA, the Nortel VPN Router 1000 Series (formerly known as Contivity 1000 Series) - Nortel VPN Router 1010 and Nortel VPN Router 1050 - delivers a secure, cost-effective IP-VPN solution that offers remote access dial capability and branch office/ site-to-site capability as well as a robust firewall. The Nortel VPN Router also incorporates WAN (wide area networking) capability, routing and policies, tightly integrating them with VPN and firewall security features, as well as routing, firewall, bandwidth management, encryption, authentication and data integrity for secure tunnelling across IP networks and the Internet.

The Korea Network eXchange (KNX) began operation with some 350 Hyundai and Kia business partners as its first subscribers and another 750 partners will come online by the end of 2002. For the initial KAMA rollout, 1,800 Nortel VPN Router 1000s will be deployed in 2H02.

“KAMA was quick to see the potential in IP-VPN services, because they use Internet technology to extend private networking anywhere within the reach of the Internet,” said Woo-jin Oh, Manager of IT Strategic Planning at Hyundai and Kia Motors Information Technology Centre. “This makes it easy for automobile

manufacturers and their trading partners to reduce telecommunications costs because they can now do business with everyone on KNX in just one connection and without the significant expense of installing exclusive, point-to-point lines and wide area networks,” Oh stated. “Manufacturers can use KNX for business-to-business (B2B) eCommerce to transfer CAD/CAM data for new model development, to standardise their global purchasing and receiving systems, and to cost effectively manage their supply chain. KNX also opens the door for trading partners to streamline delivery operations and profit from the quality, security and price competitiveness of KNX in their own B2B eCommerce activities.”

Solution Benefits

Nortel VPN Routers provide the perfect solution for KAMA:

- **Delivering security and intelligence to the network edge** - a single hardware switch at the network edge, Nortel VPN Routers deliver routing and policies, tightly integrating them with VPN and firewall, bandwidth management, encryption, authentication and data integrity for secure tunnelling across IP networks and the Internet. Incorporating intelligent awareness of application, content, users and resources gives the network much greater visibility into the traffic it is carrying and allows it to dynamically apply services, alter traffic paths, or prioritise based upon end-user profile, connectivity, or network conditions. This intelligence is a necessity for enforcing the performance and security requirements of KAMA’s Web applications, applying scalable

With some 22.23 million Internet users, Korea is one of the most online-active nations in the world

Statistics: September 2001
Korea Network Information Centre

> Solution Snapshot

- **Delivering security and intelligence to the network edge** - a single hardware switch at the network edge, delivering routing and policies and tightly integrating them with VPN and firewall, bandwidth management, encryption, authentication and data integrity for secure tunnelling across IP networks and the Internet
- **Cost-cutting performance** - meeting KAMA’s total cost-of-ownership requirements with a single, integrated device for the delivery of multiple IP services that can be enabled - as and when required - with the simple, flexible activation of software license keys
- **Extend geographical connectivity seamlessly and securely** - the solution not only improves internal KAMA communications, but also connects branch offices, telecommuters and mobile professionals, and supports remote access, site-to-site and extranet VPN applications - leveraging the cost and performance advantages of shared IP (Internet protocol) networks and the security and control of private networks
- **Access flexibility and ease of deployment** - delivers ubiquitous access to users by supporting connectivity for Microsoft Windows, Macintosh and UNIX systems

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Planning
Hyundai and Kia Motors
Information Technology Centre

traffic control and making the most efficient use of assets by managing traffic appropriately and cost-effectively

- **Cost-cutting performance** - the Nortel VPN Routers meet KAMA's total cost-of-ownership requirements with a single, integrated device for the delivery of multiple IP services, that can be enabled - as and when required by KAMA - with the simple, flexible activation of software license keys. At the remote access application level, the Nortel VPN Routers offer direct cost savings as compared to leased lines. Nortel VPN Routers deliver all the benefits of a dedicated private network - including performance, reliability and security, without the high costs. Cost savings can be as much as USD\$1,000 (1.29 million KRW) per year per user versus traditional “free call” dial-in solutions. Initial equipment investment can be recouped in a matter of months
- **Extend geographical connectivity seamlessly and securely** - the Nortel VPN Routers not only improve internal KAMA communications, but also connect branch offices, telecommuters and mobile professionals, and support remote access, site-to-site and extranet VPN applications - leveraging the cost and performance advantages of shared IP (Internet protocol) networks, and the security and control of private networks. The goal in deploying the network was to support global design, sourcing and marketing for Korea's major finished car manufacturers - Hyundai, Kia, Daewoo, Sangyong and Reno-Samsung, as well as to interconnect them to global automotive networks in the United States, Europe, Japan, Australia and China
- **Access flexibility and ease of deployment** - Nortel VPN Routers deliver ubiquitous access to KAMA users by supporting connectivity for Microsoft Windows, Macintosh and UNIX systems. Because an IP-VPN depends only on access to a local ISP (Internet Service Provider), Nortel VPN Routers can be deployed anywhere - providing secure site-to-site connectivity and increased flexibility, scalability and reliability. For KAMA, the Nortel VPN Routers are also extremely easy to use. A graphical user interface (GUI) enables intuitive set-up and configuration. A Web browser - accessible from any PC connected to the network - can manage any Nortel VPN Router using an HTML and Java design that even a non-technical user can readily understand. As well as offering unmatched security capabilities in a single box solution, a single Nortel VPN Router device can support up to 5,000 simultaneous connections from either individual remote access users or routed branch offices. This allows KAMA to provide a secure, scalable solution for private communications, commerce and collaboration among Hyundai, Kia, Daewoo, Sangyong, Reno-Samsung and their suppliers and trading partners, wherever they are located in Korea, Asia Pacific or around the world
- **Standards-based solution for interoperability** - “The flexibility of the

network environment was a key factor in selecting Nortel's VPN Routers," said Oh. "The Nortel VPN Routers offered superior compatibility - not only with different machines but also with other security technologies our manufacturers and trading partners use, like Check Point and VPNet. "And interoperability with certification agencies was another factor. Nortel VPN Routers easily interface with both domestic and foreign certification systems, such as Verisign, Entrust and Initech."

Future directions for KNX

With some 22.23 million Internet users - according to September 2001 statistics from the Korea Network Information Center - Korea is one of the most online-active nations in the world.

As a national industry with a significant influence on other key industries, Korea's automobile industry is leading the way with its IP-based KNX network. It is tangibly demonstrating the cost savings and efficiencies that can be generated by using leading-edge network switching technologies like Nortel's VPN Routers to share applications, transfer electronic documents and manage B2B eCommerce dealings with the suppliers and trading partners that comprise the Hyundai, Kia, Daewoo, Sangyong and Reno-Samsung global supply chains.

For KNX, there is a broader agenda. "Our long-term intent is to position KNX as the nation's representative B2B eCommerce provider," said Oh. "And we will do this by expanding our IP-VPN services from automobiles into other key industries, such as electronics and steel."

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Australia

1 Innovation Road
Macquarie University Research Park,
Macquarie Park NSW 2109
Australia
Tel: 61 2 8870 5000
Fax: 61 2 8870 5222

India

Salarpuria Adonis, Ground Floor
#3/1, Old Madras Road
Binnamangala
Bangalore 560 008
India
Tel: 91 80 5527 8000
Fax: 91 80 5527 8080

Indonesia

Graha Paramita, Level 8
Jalan Denpasar Raya
Blok D 2 Kuningan Jakarta 12940
Indonesia
Tel: 62 21 2553 5400
Fax: 62 21 252 2250

Japan

Gate City Ohsaki, East Tower 9F
1-11-2 Ohsaki, Shinagawa-ku
Tokyo 141-8411
Japan
Tel: 81 3 5740 1300
Fax: 81 3 5740 1852

Korea

16F, Haesung 2 Building
942-10 Daechi 3 Dong, Kangnam-ku
Seoul 135-283
Korea
Tel: 82 2 3707 4600
Fax: 82 2 508 2006

Malaysia

Level 2, Annexe Block Menara Milenium
8 Jalan Damanlela, Bukit Damansara
50490 Kuala Lumpur
Malaysia
Tel: 60 3 2080 8000
Fax: 60 3 2080 8100

New Zealand

Sofrana House
Level 16, 396 Queen Street
Auckland 1036
New Zealand
Tel: 64 9 309 9052
Fax: 64 9 357 0893

Pakistan

Ground Floor, Evacuee Trust Building
Agha Khan Road, F-5/1
Islamabad
Pakistan
Tel: 92 51 111 203040
Fax: 92 51 220 6589

Philippines

Wynsum Corporate Plaza
Level 29, 22 F Ortigas Jr Road
Ortigas Centre, 1605 Pasig City
Philippines
Tel: 63 2 580 5500
Fax: 63 2 580 5530

Singapore

151 Lorong Chuan #02-01
New Tech Park
Singapore 556741
Singapore
Tel: 65 6287 2877
Fax: 65 6380 8888

Sri Lanka

Residential Accommodation Unit 60/3/8
Sahasapura Housing Scheme
Baseline Road, Borella
Colombo 8
Sri Lanka
Tel: 94 7 533 1133
Fax: 94 7 533 1134

Thailand

1768 Thai Summit Tower,
24th Floor, New Petchburi Road
Bangkapi, Huaykwang
Bangkok 10320
Thailand
Tel: 66 2309 5500
Fax: 66 2309 5555

Vietnam

6th Floor, The Prime Centre
53 Quang Trung
Hanoi, Vietnam
Tel: 84 4 943 7955
Fax: 84 4 943 7957

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