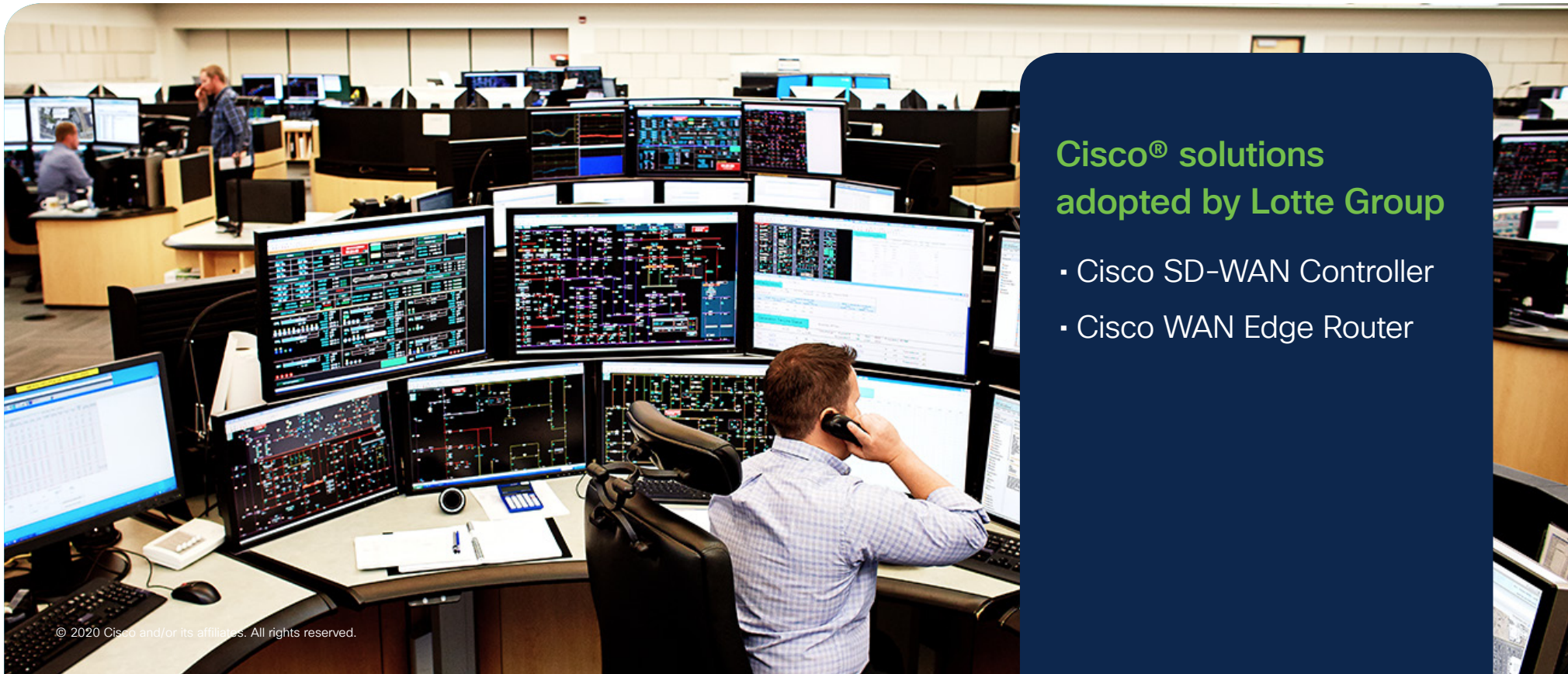ıllıllı
CISCO

The bridge to possible

Lotte Group Innovates Network Infrastructure with Cisco SD-WAN

Lotte Group is taking the lead in the multicloud era by improving its WAN while decreasing line costs

Cisco® solutions adopted by Lotte Group

· Cisco SD-WAN Controller

· Cisco WAN Edge Router

Challenge

- Demand for additional lines to accommodate increasing traffic and the high cost of network management for different sites

- The need to introduce an advanced network infrastructure that can detect and manage traffic on each line on a real-time basis

- The need to improve visibility across the entire network and to analyze the source of an error in real-time

- Performance degradation caused by growing utilization of cloud applications and services

Achievements

- WAN bandwidth more than tripled at less than half the line cost (Lotte Homeshopping)

- Visibility across the entire network secured, and the maintenance burden reduced thanks to improved centralized management and automation

- Performance of cloud and business applications accelerated, business continuity secured, and security strengthened

- Responsiveness to changes in business infrastructure heightened through flexible communications infrastructure

To take another leap forward, Lotte examined its existing WAN infrastructure and decided to adopt Cisco SD-WAN

With over 50 affiliates and R&D centers, Lotte Group operates businesses in diverse industries including food, retail, chemical/construction/manufacturing, and tourism/service/finance. This diversification makes investments in WAN to support the connections among different business sites critical to growth. All of Lotte Group's domestic and international affiliates, including in major Korean cities like Seoul and Busan, are now able to sustain their business innovation based on up-to-date network infrastructure.

With the demands on WANs soaring through increasing traffic, and networks becoming more complex with the introduction of multicloud environments, Lotte Group leadership tasked Lotte Data Communication Company (LDCC) with a broad examination of its entire WAN infrastructure. LDCC determined that Lotte Group would have to continue to add costly lines to accommodate expanding traffic if the company stayed with their existing WAN infrastructure. Furthermore, since each affiliate was using an increasing number of cloud applications and services while still going through the data center in the existing WAN, performance issues would remain even with additional lines. Management was limited in its ability to process priority data and to immediately identify causes of errors due to the lack of visibility across the network.

Rather than just continuing to expand existing WAN, LDCC quickly recognized the advantages of replacing WAN with SD-WAN, and also the benefits of separating the transmission and control functions for network data based on software that could improve management and operations. Since this would be an entirely new system, the clear choice for a backbone was Cisco SD-WAN with its proven track record of technology and performance based on numerous global success stories. This solution could be applied serially to affiliates according to their respective natures and needs.

Lotte Homeshopping improved application connectivity at less than half of the previous line cost

Lotte Homeshopping was the first affiliate to adopt SD-WAN. Under its previous structure, even product analysis by merchandisers required dedicated lines, and even more so major business applications such as ERP and groupware, leading to heavy monthly line costs. The demand to expand the WAN was constant, and a more fundamental solution was desperately needed. LDCC designed a network for Lotte Homeshopping and Lotte Group's core datacenter based on Cisco SD-WAN and spent several months testing it before starting operations. The network functions were meticulously verified since this would be the first iteration. Business was launched on the SD-WAN environment starting in the fall of 2019 and has been producing visible outputs ever since.

Lotte Homeshopping currently enjoys three times the WAN bandwidth at less than half of the line cost by maintaining dedicated lines for core applications such as ERP and groupware, while other work such as analyzing external data is performed through the Internet. In addition, the ability to monitor and manage WAN operations in real-time has led to substantially greater reliability.

"Lotte Group has multiple subsidiaries, including 50+ affiliates, R&D centers, and business headquarters in food, retail, chemical/construction/manufacturing, and tourism/service/finance. These business sites are scattered around the globe and clustered in major Korean cities such as Seoul and Busan. Accordingly, the group has to pay close attention to its investments in WAN to support connectivity among these sites.

To streamline IT line costs and secure the management of the entire network, Lotte Group and LDCC chose Cisco SD-WAN. As a result, Lotte Homeshopping was able to triple its WAN bandwidth at less than half the cost, while Lotte Chilsung Beverage gained flexible infrastructure with three-layered safety and improved WAN bandwidth to support its shift to a cutting-edge smart factory environment. Lotte Hotels and Resorts was able to centralize control of its 17 domestic locations while gaining both flexibility and greater reliability"

Wang-seok Han, Head of IDC, Lotte Data Communications Company

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Lotte Chilsung Beverage gains flexible network infrastructure with three-layered safety for its smart factory

Lotte started preparations in the second half of 2018 to convert the Lotte Chilsung Beverage Anseong plant first built in 2000 into a smart factory through an investment of approximately KRW 122 billion. To ensure a cutting-edge beverage plant where all business processes, from forecasting, production, and inventory management to retail, can be automated using advanced digital technologies, the traffic on each line must be overseen and managed in real-time in the network environment. Cisco SD-WAN was able to double the bandwidth of the existing WAN and ensure that the substantial traffic added by automation could be easily processed. Also, by separating dedicated lines and ISP lines, and by connecting to the Daejeon Disaster Recovery Center, the group now boasts a flexible and secure network infrastructure with three-layered safety procedures.

Lotte Hotels centralized management of its 17 domestic locations

With 17 branches around the major cities of Korea, it has always been critical for Lotte Hotels and Resorts to ensure transparent and efficient management across its entire network. A dedicated workforce was required to support reliable network operations, which led to high management costs. To address this, Lotte Hotels strengthened centralized management and automation and adopted SD-WAN technology to ensure visibility across the network and allow flexible utilization of the group's dedicated lines, ISP lines, and the Internet. As a result, it can now manage all of the networks at its 17 domestic locations within a single fabric despite its seemingly complex structure. It can now apply uniform security policies to all of its branches and address any issues on its network in an agile manner through real-time detection. At the same time, it managed to reduce line costs by more than 20%.

Lotte Group and LDCC working to apply SD-WAN to all Lotte affiliates

Lotte Group and LDCC are planning to expand the visible benefits of SD-WAN already achieved at several affiliates to the entire group. They are also ensuring that the unique requirements of each affiliate are fully taken into account in the new solutions. SD-WAN can improve WAN performance and ensure visibility on the entire network while providing outstanding opportunities for cost reduction and business continuity by supporting connections without any performance degradation when cloud applications and services are applied. Therefore Lotte Group plans to expand the adoption of SD-WAN and seize the initiative in the multicloud era.