

CASE STUDY



OVERVIEW

Founded in 1936, the Ricoh Group provides an array of innovative image processing equipment and other products and services. This includes cloud services and network appliances, as well as digital cameras, thermal media, PC unit products, and semiconductor devices. It also has businesses across various customer segments in healthcare, eco-solutions, and others.

REQUIREMENTS

- Upgrade the network to meet current business demands
- A flexible and scalable network with future business growth in mind
- Consistent and solid coverage, fast Wi-Fi performance
- Visualization of in-house network systems
- Cost reduction, as well as improving cost performance

SOLUTION

- SmartCell Gateway 200
- Deployed a mixture of indoor and outdoor 802.11ac Ruckus access points (APs)
- Cloudpath Enrollment System

BENEFITS

- Deploying fewer APs, Ricoh has achieved better coverage and performance
- Easy setup and maintenance of APs has reduced on-site support costs
- A reliable, fast and secure network that is easy to manage
- A future-proof network that grows with changing business requirements

MODERNIZING INTERNAL SYSTEMS TO SUPPORT RAPIDLY EVOLVING BUSINESS ENVIRONMENT

The Ricoh Group operates in a variety of fields – from print and imaging products, to application and business processes, as well as communication services and industry solutions. The Ricoh Group consists of 15 companies (including Ricoh Japan) spread out over 500 locations in total across Japan.

As the Ricoh Group's business operations grew in Japan, so did the complexity of the network systems at each business location. Furthermore, the management and maintenance of each network was decentralized, with many of them using aging infrastructure. The tipping point came when a security team overseeing global Ricoh Group locations found that Japan's security levels were staggeringly low compared to overseas locations. As such, the Ricoh Group made the decision to update their networking infrastructure at all group locations in Japan from 2016.

CHALLENGE

In today's modern business environment, with more devices and applications connecting to the network, coupled with aging network infrastructure, the Ricoh Group's existing network was struggling to keep up with business demands. These demands are related to standardization, management, operation and security of internal Wi-Fi networks, as well as the need to reduce operational costs.

SOLUTION

Ricoh Group chose to construct a standardized network environment, with global-standard security and cost-effectiveness as key requirements. Replacing the existing network infrastructure would be a large-scale undertaking involving swapping out a variety of systems, including the authentication server, DHCP server as well as the access points (APs) and AP controller. The goal was building a system for maximum operational efficiency, with both minimal maintenance and customization for each device on the network.

Taking the above into consideration, Ruckus emerged as the clear choice versus six other vendors. Mr. Yuya Yamada, a supervisor with the Cloud Service Promotion Section, Information Infrastructure Control Department, Digital Transformation Division, Ricoh said, "Cost and performance relative to competing offers was an important factor; the Ruckus pitch was easy to understand."



"The response to the upgrade exceeded expectations, and we received many comments from colleagues saying that connecting to the network was now easier and quicker."

MR. SHINICHI FUKUMA

IT Management Unit, Facilities Management Operational Headquarters, Ricoh

"A major point was cost and performance relative to competing offers; the Ruckus pitch was easy to understand."

MR. YUYA YAMADA

Supervisor, Cloud Service Promotion Section, Information Infrastructure Control Department, Digital Transformation Division, Ricoh

On time and within budget, Ruckus deployed SmartCell Gateway (SCG) 200 controllers here, as well as a mixture of both indoor and outdoor access points (APs) as part of the first phase of upgrades.

With the outgoing infrastructure, Ricoh Group employees experienced frequent interference problems, restricting Wi-Fi use to the 2.4G band. Ruckus solved that issue with its patented BeamFlex™ antenna technology, which optimizes antenna patterns on a per-client, per-packet basis to yield the maximum possible throughput for each client. This reduced interference significantly, allowing use of both the 2.4G and 5G bands. As noted by Mr. Shinichi Fukuma, a supervisor in the IT Management Unit, Facilities Management Operational Headquarters of Ricoh, "Using the advantages of BeamFlex technology meant AP deployment was easier when setting up APs for a new or relocating branch – we no longer had to worry about the concentric reach of the signal when installing each individual unit."

The doubling of bandwidth (2G and 5G) helped simplify the installation of initial and subsequent APs, allowing for approximately 50 to 60 devices connected to each AP, compared to 30 units under the old system. The reduced need for APs has been noticeable at new group locations, especially at Ricoh Logistics and Ricoh Japan, which also helped reduce the overall cost due to the smaller number of APs required.

The introduction of the SmartCell Gateway (SCG) 200 controllers helped to simplify administrator roles significantly, thanks to the ability to visualize the status of internal networks and devices. Eventually, Mr. Fukuma hopes to eliminate the need for a dedicated system administrator at each site, leading to a decrease in employee workloads.

Furthermore, subsequent security assessments revealed that at each site, the security level had increased dramatically, and were now on par with overseas branches.

The Ricoh Group is reaping additional benefits through the introduction of the Ruckus network environment. For example, the group has been able to eliminate the need for a wired LAN system, thanks to the reliability and superior performance of the Ruckus Wi-Fi system. Additionally, the investment in a wireless network has also paved the way for the introduction of hot-desking, improving communications and professional relationships between employees.

Mr. Yamada has high expectations for future improvements to the group network environment. The next phase of network upgrades will involve deploying Cloudpath technology to manage accessibility as well as security for guest Wi-Fi users starting at the Shinagawa site, followed by the other group locations in the future. As Ricoh Group bases are spread out among multiple buildings, including Ricoh Creative Service, Ricoh Japan, and Ricoh – with each separated by distances of up to several thousand meters, – expanding reliable outdoor Wi-Fi access through the deployment of P300 APs will also be part of the next phase of upgrades.

The overhaul of Ricoh Group's legacy network environment continues to progress, but Mr. Yamada has unshakable confidence in Ruckus' ability to future-proof the group's infrastructure capabilities, and to grow alongside its business.