Success Story

Data Center Services Company Saves Time and Space While Staying Disaster-Proof

Yamato System Development Co., Ltd.

Yamato System Development Co., Ltd. provides data center services to client companies and to companies belonging to Yamato Group, including express carrier Yamato Transport Co., Ltd. CommandCenter® Secure Gateway and the Dominion® KX were installed to streamline operations in the company's Osaka data center by creating a secure remote access environment to centrally manage the divisional servers that were previously interspersed throughout the facility.

Yamato System Development Co., Ltd. (YSD), handles the design, development and operation of IT services for companies belonging to Yamato Group, perhaps best known for its express courier subsidiary, Yamato Transport. Through experience gained supporting the courier service, which delivers 1.1 billion parcels and 1.7 billion letters each year, YSD also offers e-logistics solutions, "e-Shop Solutions," hosting services, network monitoring and telecommunications solutions to third-party clients. At present, two thirds of the company's sales are to these external clients in manufacturing, retailing, finance and other sectors.

The measures that YSD takes to ensure secure, stable data center operation are as stringent as those used by many telecommunications carriers, and make use of lessons learned from two regional disasters: the 1984 underground cable fire in the Setagaya telephone exchange, and the Great Hanshin Earthquake, not far from Osaka, that destroyed much of the infrastructure of the city of Kobe in 1995. As part of these measures, YSD has created a disaster recovery data center in Tokyo, linked to the original Osaka data center using two separate, redundant routes from two different carriers.

Customer Snapshot: Yamato

Customer:

Yamato System Development Co., Ltd.; data center service provider, Tokyo

Challenges:

- For security reasons, administrators spread throughout the facility had to administer servers from a centralized Operations Center at night
- YSD was running out of space in its operations center to put more administration/monitoring PCs

Solution Components:

Dominion KX432 and KX416 KVM-over-IP switches

Dominion KX101 single-port KVM devices

CommandCenter Secure Gateway centralized management appliance.

The results :

Efficiency: IT staff saves time and space by administering company and customer servers remotely, frombrowsers anywhere on YSD's network.

Security: Access consolidated and secured under one Web-accessible interface, with finely specified user access policies enforced and proven through detailed access reports. The creation of separate maintenance and production networks also helped ensure security and network efficiency.

KVM to increase security and operational efficiency

The Osaka center went online in October 1992, with earthquake-tolerant construction, redundant air conditioning and power systems, as well as strict security measures against unauthorized network access or physical entry to the facility.

When the data center was built, each customer's network was maintained and monitored (except in cases where the server needed to be viewed directly) using a dedicated PC, located in the operation area. Hourly status checks required physically checking dozens of these PCs. Many of YSD's own servers were located in various divisions, spread throughout buildings in YSD's facility. IT administrators, typically working in shifts in the server room, and at servers spread among the divisions, had to move to the operation area housing the dedicated customer PCs to perform administration tasks during the night shift. This not only created security issues, but also decreased operational efficiency.

With a separate PC required for each client, Yamato Systems Development also found itself running out of space as its business grew. So they started working on ways to streamline the operating environment, while keeping security its top priority.

System consideration began in May 2005. KVM-over-IP was a clear technology choice for its ability to securely provide access to servers from anywhere on YSD's network, from any browser. Access over IP also made it possible to centralize all servers in the server room, while leaving the divisional administrators spread throughout the facility, among the people they served. With security uppermost in mind, YSD gave extra careful attention to the granularity and reliability of each user's access and operating rights. Individual access logs were a must, as was integration with external authentication servers.

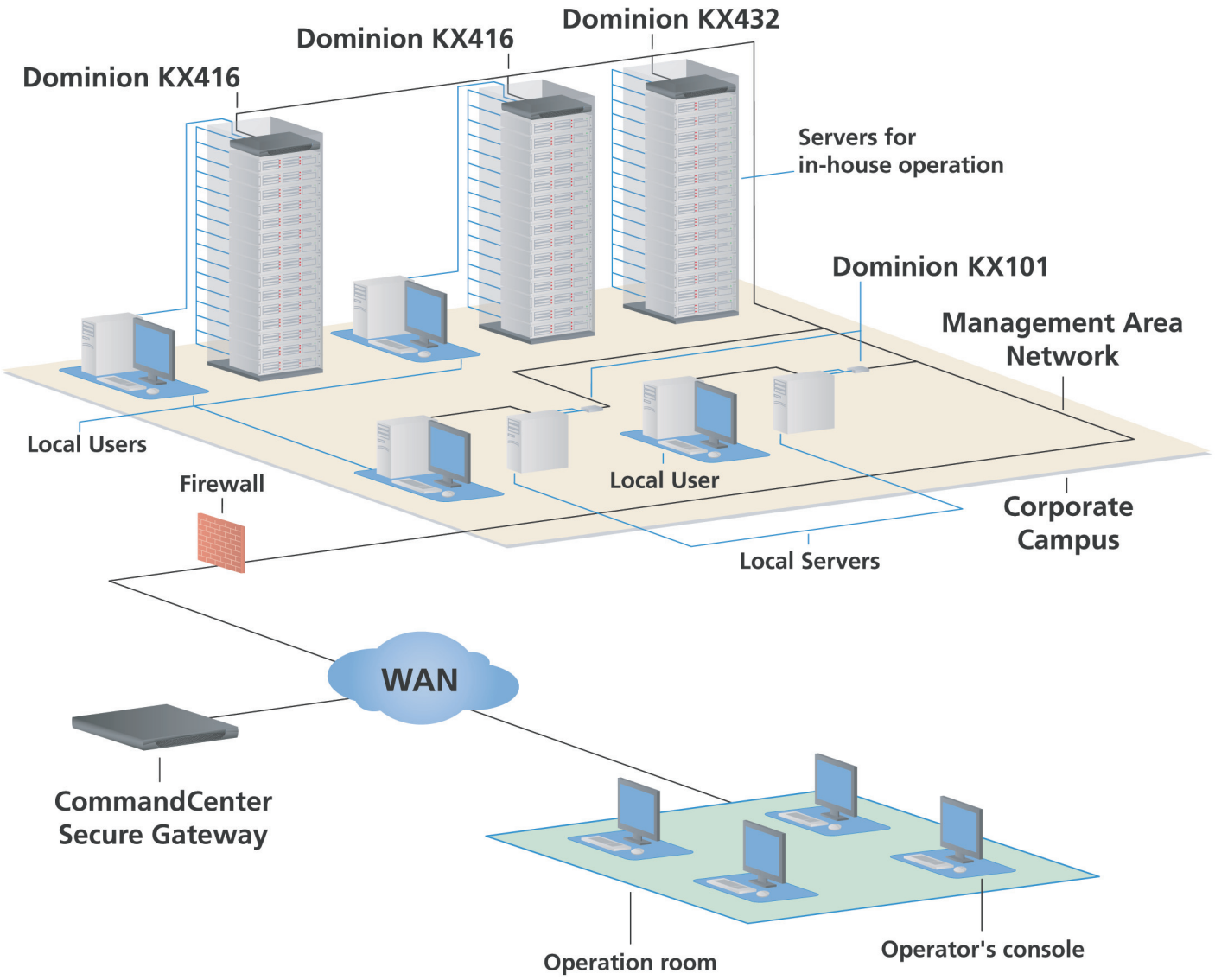
Side-by-side vendor comparisons

YSD installed several KVM vendors' equipment, carefully testing user-friendliness, configuration of access rights and security levels for each product. Side-by-side comparisons convinced them to choose Raritan's CommandCenter Secure Gateway centralized management appliance, along with Dominion KX432 and KX416 KVM-over-IP switches.

CommandCenter Secure Gateway's administration functions proved to be the deal-maker for YSD. The ability to monitor and operate all connected devices from a single IP address with a single sign-on, combined with the ability to configure detailed security policies, centrally, manage logs, and to show each user only those devices to which he or she has access rights, all helped Yamato Systems Development come to its decision. The Japanese language interface and being able to access a server with a simple click of the mouse combined with excellent manufacturer and distributor support also helped seal the deal.

The system was deployed in September 2005, with the help of Raritan Japan's Professional Services team. This fee-based service streamlined configuration, setting up and testing the connections between CommandCenter and the Dominion KX switches, and creating customized user groups, device groups, port groups and security policies for customized access.

CommandCenter Secure Gateway and Dominion KX



Separate maintenance and production networks

For extra fault resilience, YSD uses a separate maintenance network for its KVM traffic - insulating it from congestion and network outages that may occur in the production network. Previously, YSD had been using VNC (Virtual Network Computing) remote software for in-band remote maintenance, but in-band solutions only work when the target server's OS is running and healthy.
Because Dominion KX provides BIOS-level access, YSD can now access and restore servers even if the OS is hung or crashed.

Security has been improved by both the reduction of foot traffic in the server room, and by CommandCenter Secure Gateway's user-defined logical views, which can mask the IP addresses of the servers from the administrators who have access to them. Finally, eliminating the physical inspection of dozens of separate PCs has dramatically improved operational efficiency.

As part of the Raritan deployment, YSD also installed 10 Dominion KX101 single-port KVM-over-IP devices, also managed through the CommandCenter Secure Gateway. One-user-to-one-server KVM-over-IP devices, the Dominion KX101s provide dedicated paths to critical servers, ensuring against the blocking of switched architectures. To illustrate blocking, consider the Dominion KX416 switch, which allows remote access by four users. If four people are simultaneously logged in remotely, the fifth remote user is blocked; i.e., he or she must wait for a user channel to be free. While providing KVM control for a single user, the Dominion KX101 does allow that user to share monitor views with up to seven additional users, for online collaboration. YSD is now even considering offering the KVM solutions used in-house, such as the Dominion KX101, for sale to its clients.

As of April 2006, YSD personnel in specific clients' divisions can remotely access their clients' servers from their own offices. All remote access is logged with time of day, employee name and operations performed. As the holder of both Privacy Mark and ISMS (Information Security Management Systems) certifications instituted under guidelines from the Japanese Ministry of Economy, Trade and Industry (METI), YSD is looking to tighten its security even further, by working to build even more detail into its logs.

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Raritan is a leading provider of products for managing IT equipment and the mission-critical applications and services that run on it. Raritan's highly reliable and responsive IT management solutions - based on KVM (Keyboard, Video, Mouse) switches, serial console servers, management software and remote connectivity products - enable companies to proactively monitor and manage system health and vulnerability, as well as troubleshoot, access and repair faults from anywhere, at anytime. This simplifies and accelerates data center work processes – improving service uptime and staff productivity. Raritan's solutions are used to manage more than 50.000 data centers and other IT sites around the world. Raritan also serves the OEM market by developing advanced, hardware-based, remote-management components based on digital KVM-over-IP and IPMI technology. Founded in 1985, Raritan is celebrating over 20 years of technical innovation. Raritan has 36 offices worldwide, and its products are distributed in 76 countries. The European headquarters is located in the Netherlands. More information on the company is available at Raritan.info

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