

# Shikoku Electric Power Company strengthens communications with IBM Lotus Notes and Domino

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## Overview

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### ■ Challenge

To implement a communications system for knowledge sharing throughout the company, including critical information to enable rapid recovery from power outages during emergencies

### ■ Solution

Employ virtualization to deploy multiple IBM Lotus Notes and Domino servers on an IBM System z9 Business Class server, and use the resulting expanded software implementation as the basis for a new knowledge sharing system

### ■ Benefits

Extends the value of existing IT investments in IBM technology, simplifies operations and systems management, and enables cost-efficient scalability by using virtualization to add servers rather than buying new physical equipment



One of 10 electric utilities in Japan that generates and delivers power locally, Shikoku Electric Power Company supplies electrical service to more than 2.8 million people. As part of the Yonden Group, a multiple utility business group, the company has expanded beyond the electrical service infrastructure it originally developed and now offers new data communications services, including cable TV, Internet and phone service over fiber to the home (FTTH).

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– *Shinji Nakauchi, System  
Promotion Group Leader,  
Shikoku Electric Power  
Company*

### **Realizing the value of groupware as a communications tool**

Since 1997, Shikoku Electric has used IBM Lotus Notes® and Lotus® Domino® for the company's groupware—initially just for internal e-mail, but eventually on a larger and larger scale. Today, it has become indispensable for guaranteeing that the company can continuously provide service to customers—not just on an every-day basis, but also when there are emergencies.

“Lotus Notes/Domino has deeply penetrated the entire company, and is now indispensable for daily business. Today, knowledge is shared throughout the company, in the form of daily business manuals and recovery procedures for equipment problems, by using groupware. This ensures that even during an emergency such as a major earthquake, we can recover quickly from a power outage,” says Shinji Nakauchi, System Promotion Group Leader in the company's data systems department. “The outage therefore doesn't impact the customer, and we are able to fulfill our mission of providing electricity to people.”

### **Designing a new system based on existing technology strengths**

When Shikoku Electric began to look at setting up a new system for internal communications, the company's existing Lotus Notes/Domino implementation seemed a logical starting point. At the time, about 6,000 employees were already using Lotus Notes/Domino to send more than 14,000,000 e-mail transmissions annually. The system also included a database of about 6,500 documents, as well as a workflow system that was being used throughout the organization.

“We investigated the system with a focus on improved service levels and improved security management, including trace auditing,” says Haruo Kanetake, System Promotion Group Assistant Leader in the data systems department. To achieve improved service levels, the company took advantage of the wide-area high-speed network and data center operated by STNet, another member of the Yonden Group, to make it possible to provide service even in the event of a catastrophe such as an earthquake.

“When we were setting up the new system, we took into account preparations for such emergencies, believing that it was necessary to provide higher reliability than in the past,” recalls Nakauchi. “And we studied the requirements for continuous business operation.”

#### **Using virtualization to simplify and scale**

While Shikoku Electric has historically relied on a number of UNIX® servers to support the company’s groupware environment, the expanded Lotus Notes/Domino solution runs on an IBM System z9® Business Class (BC) server.

“We considered setting up multiple UNIX servers with a redundant configuration, but after studying the number of servers that would be needed at the backup computer center to handle problems, it appeared that both the cost and the operational load would be excessive,” Kanetake explains. “The IBM System z® uses open-source Linux® and virtualization technology to provide multiple copies of Lotus Notes/Domino in one machine. The reliability that the central system demonstrates is also realized in the open environment, making this an effective system structure.”

#### **Achieving a wide range of benefits**

Shikoku Electric’s new communications system connects redundant IBM System z9 BC machines in the main computer center and the backup computer center with 100 Mbps high-speed circuits, creating a Domino cluster that can synchronize data across the servers in real time. By minimizing unplanned outages during emergencies as well as planned maintenance outages, it is an infrastructure that prepares the company for emergencies over a wide area.

By deploying multiple virtual Lotus Notes/Domino servers on the IBM mainframe platform, the company simplifies operations and management and is able to better control both hardware and software expenses. “We value the virtualization technology highly because it is not necessary to purchase hardware in order to install a new server,” says Kanetake. “Rather, we simply add a virtual server.”

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#### **Solution Components**

- IBM System z9® Business Class server
  - IBM Lotus Notes®
  - IBM Lotus® Domino®
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In addition, through server consolidation, the data center space required for the system has been reduced to about one-third. The network equipment is also extremely simple. The System z9 BC installed at the main computer center uses five special-purpose Linux processors (Integrated Facility for Linux, or IFL). The System z9 BC at the backup computer center generally runs only one IFL, although when there is an emergency, a capacity backup (CBU) configuration provides four backup IFLs with the same processing ability as in the main environment.

### Evaluating the new system for future use

The new communications system at Shikoku Electric has provided better reliability and security. By strengthening basic access control and setting up a framework to address the issue of information leakage, including the capturing of logs for trace management, the company has created an environment of improved governance.

“We believe we have succeeded in deploying a system that is easy to use, with high reliability and security,” says Nakauchi. “It is currently centered on Shikoku Electric, but in the future, it will be expanded to the entire Yonden Group, with the goal of being able to provide better service to customers. We are also investigating a future portal configuration to more effectively use the knowledge that is being accumulated every day by the system, both within our company and throughout the Yonden Group.”

### For more information

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For more information about Shikoku Electric, visit: [www.yonden.co.jp/english/index.html](http://www.yonden.co.jp/english/index.html)

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