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Yukio Matsumoto, Chief of System Management Group, Information System Office, Nishinippon Plant Engineering and Construction Co., Ltd.

Nishinippon Plant Engineering and Construction Co., Ltd. builds a new infrastructure for its mission-critical system, that runs on FUJITSU Server PRIMEQUEST.

At a glance

Country: Japan

Industry: Plant Engineering and Construction

Founded: 1954

Website: www.npc21.jp

Challenge

The goal of Nishinippon Plant Engineering and Construction Co., Ltd. (NPC) was to achieve stable and efficient operation of its mission-critical operations. It wanted to improve availability without increasing operational load, ultimately providing mainframe-like reliability with system redundancy, limiting the effect of any hardware malfunctions.

Solution

Consolidating 15 servers into FUJITSU Server PRIMEQUEST which has reliability on par with a mainframe. Automatic rapid hardware recovery thanks to hardware redundancy utilizing Reserved System Board. There is no hassle for administrators or advanced skill set needed since the functionality is all hardware-based.

Benefit

- Mainframe-level reliability, running stably since February 2016
- Less focus on reviewing operations, more on implementing improvements
- Increased efficiency - many computations now take less than half the time



Customer

In the more than half century since its foundation in 1954, NPC has strived to provide a stable supply of power as a member of the Kyushu Electric Power Group. In its dealings with the power plants which are to become customers' equipment, NPC's guiding principle is respect, and as such aggressively pursues technological improvements, adoption of new methods, personnel training, and the like. The company is active on a global scale, dispatching its employees as technical directors to other countries.

Products and services

- FUJITSU Server PRIMEQUEST 2000 series
- FUJITSU Storage ETERNUS NR1000 series*
- VMware vSphere virtualization software
- Oracle Database

*Only available in Japan

Challenge

As the Japanese energy market undergoes transformation, NPC has posted three ideals: the stable provision of power; improving the technologies and skills it has acquired through construction and maintenance of power plants; and meeting increasingly diverse customer needs. It therefore requires proactive IT when putting together the infrastructure to turn these ideals into reality.

"Our Data System Office is under the Management Planning Department," states Takayuki Ikemoto, who heads up Information System Office in Management Planning Department, part of Management Division, NPC. "Our office has undergone a major transformation, moving away from a system focused on development and maintenance of the mission-critical system, to a system that supports operational revamping. Operation of mission-critical systems has to be stable and efficient in order to focus on solution-based jobs." Building a forward-looking infrastructure was an important new task.

NPC's mission-critical system is an integrated operational system that centralizes purchasing, sales, accounting, project management, HR management, and other types of data. As such, it is an irreplaceable arrow in NPC's quiver.

In building the new infrastructure, the company insisted on two things: that there be no interruption to operations, and that business continuity be given top priority. Yukio Matsumoto, Chief of System Management Group in Information System Office reflects, "Our mission-critical system doesn't just support clerical operations – it's what runs our construction sites, too. We had to avoid any situations where a system interruption could significantly affect operations."

Solution

NPC adopted PRIMEQUEST due to its ability to deliver high availability with Reserved System Board and mainframe-level reliability.

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"Hardware redundancy using the Reserved System Board of PRIMEQUEST automatically recovers hardware in a short time in case of failure.

An administrator's workload and a high level of skills are not required," comments Naozumi Yamamoto, Chief of the System Development Group in Information System Office, NPC.

NPC started building the new infrastructure in June 2015, and operation started in February 2016. "With Fujitsu's help, the transition went smoothly," comments Mr. Yamamoto. In the new infrastructure, 15 servers have been integrated into a highly reliable virtualized infrastructure built on PRIMEQUEST.

"Operation management loads have been reduced by cutting the number of servers and using a simple configuration," comments Mr. Matsumoto. "The number of LAN cables and power sockets has also been reduced significantly, reducing the risk of malfunctions. It used to be that alarms would go off and we'd waste time dealing with things that didn't affect operation, but since we switched to PRIMEQUEST, there's been almost none of that. The required space has also been reduced to one third."

NPC deployed two ETERNUS NR1000 series to boost business continuity together with greater efficiency of operation thanks to the storage backup functionality. "We used to use backup software, but it was still a challenge for time-consuming settings and, to figure out what went wrong if there were problems with the backups. We now have high-speed backups using the snapshot function in each storage system."

Benefit

The mission-critical system built on PRIMEQUEST started running in February 2016 and has been running stably ever since. Responsiveness has also improved significantly. Computations which used to take around seven hours now take less than half the time, making operations more efficient.

Combining conventional PC servers with virtualization software for redundancy results in increased database licensing costs, but because Reserved System Board does not involve database licenses, costs have been kept down by using hardware redundancy. Mr. Ikemoto says this about the future, "Information System Office team can relax and focus on what they are supposed to be doing, now that we have built the new infrastructure with PRIMEQUEST. Because construction sites can be visited more often by our team, there are more demands coming from there, so now we are going to focus less on reviewing operations and more on implementing improvements and working on a new mission-critical system to improve worker productivity."

NPC is now moving forward with a work-style revolution using mobile devices. By expanding the scope of work that can be done on-site without returning to the office, the importance of PRIMEQUEST is growing by the day.

FUJITSU