SESMI Uses NEC ExpressCluster to Minimize Critical Manufacturing System Downtime

Sumitomo Electric Semiconductor Materials, Inc. (SESMI), a member company of the global Sumitomo Electric Industries Ltd. group ($20B 2006 revenue), is a leading Gallium Arsenide (GaAs) semiconductor product manufacturer located in Oregon. The company relies on 24x7 operations to maintain the necessary productivity and efficiencies in this competitive industry. In this environment, any outage of the production support computer system could mean a costly interruption of the production process.

The Challenge

The production staff typically works in several locations within the plant depending on the production process stages. Some of the operators work in clean rooms so they can not get in or out quickly. When the production process is interrupted due to a system failure, finding out what has happened is complex and time consuming due to the physical location and communications logistics of the semiconductor production plant.

In addition, SESMI relies on technical support for system maintenance from its headquarters in Japan due to lack of appropriate IT staff in the United States. So, system repair can be delayed due to the time difference and sometimes language barriers.

With these challenges, SESMI needed to have a more

protection and recovery it needed for its production uʍʳqtv system running Tomcat™ application server, IBM® database server, and Novell® SUSE Linux® OS on IBM System x PC servers.

The ExpressCluster high-availability solution enabled fast recovery and continuous protection to maximize business critical application and data availability.

"Since deploying ExpressCluster, there have been no production process interruptions due to system failures and I would highly recommend ExpressCluster to any organization with similar high availability needs," said Mr. Takeshi Ueda, manager of Information Systems at Sumitomo Electric. In fact, since deploying ExpressCluster, SESMI has realized several benefits:

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> **-** Mr. Takeshi Ueda, Manager of Information Systems at Sumitomo Electric

efficient and effective way to deal with system failures without always requiring Japan-based IT personnel involvement.

The Solution

SESMI found NEC's award-winning ExpressCluster® to be the best solution to provide the automated uʏuʳgo "

- The primary production system did experience an anomaly but ExpressCluster was able to quickly failover to the standby system without causing any production process interruption. The recovery was so fast and transparent that operations staff only noticed a few seconds of transient system service pause during the failover to the standby system.

- Although ExpressCluster was deployed primarily to mitigate unplanned system downtime; SESMI has found ExpressCluster to be simple enough even for non-IT personnel to operate when the system needs to be temporarily shutdown for planned maintenance purposes.

- ExpressCluster performs comprehensive resource monitoring on the primary and standby systems so it can detect problems as early as possible. When problems are detected, warning notifications are sent by email to senior IT administrators in Japan so further analysis and repair could be started even before the work day starts in the United States.

In its search for the best solution, SESMI considered several factors and conducted rigorous due diligence including detailed product evaluations. SESMI tested another alternative product and found it was not able to properly resynchronize data between the primary and standby systems after a system failure. ExpressCluster was able to provide application recovery and continuous synchronous disk mirroring to ensure any data written to the primary system disk is also written to the standby system disk in parallel for maximum data protection. In addition, ExpressCluster is able to quickly and efficiently resynchronize data changes between the primary and standby systems during restoration of a failed system.

Another important decision factor in choosing ExpressCluster is that NEC is an established global technology solution provider with world-class innovation and customer support reputation backed by more than 100 years of history and worldwide operations.

Based on the success at SESMI, ExpressCluster is now being deployed at other Sumitomo Electric group companies.

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