

Windows 2000 Based

Fault Tolerant Server

NEC Express5800/ft series

Case Study

Pharmaceutical
Discovery Corp.

Pharmaceutical Discovery Corporation was researching how to provide a high availability platform for their Windows®-based laboratory management software. A software cluster, the traditional solution for this issue, would not work since the laboratory software was not “cluster aware”. It was at this point that PDC read about the NEC Fault Tolerant server, the NEC Express5800/320La. PDC investigated and found the answer to their dilemma.

Pharmaceutical Discovery Corp Discovers Continuous Availability from NEC



Pharmaceutical Discovery Corporation (PDC) had a challenge on their hands. Like most biotech enterprises, their laboratories run complex laboratory procedures managed by computer applications. Today's laboratories are under extreme pressure to run 24 hours a day, 7 days a week, 365 days a year. It is important for these environments that systems perform continuously while still delivering the highest quality results, day in and day out. FDA regulatory requirements, training time, system uptime, and variance in results and data management are major concerns of IT departments in biotech enterprises. When computer servers responsible for handling the laboratory procedures experience downtime for any reason, all processing comes to a halt costing the

company valuable time and resources. PDC needed high availability for their laboratory computing resources.

They looked into the traditional method of implementing a high availability solution, joining two servers together in a software-based cluster. This strategy was not an acceptable option for PDC since one of their most important application, Waters Millennium32®, was not written for a clustered environment. Waters Millennium32 was designed to run on a single server because of its complexity and performance requirements. For PDC a software cluster to improve server reliability was not an alternative.

As leaders in the Pharmaceutical industry, PDC could not live with this issue. Founded in 1991 and located in Elmsford, NY., PDC developed and patented the proprietary Technosphere™ drug

delivery system. This system offers difficult to formulate compounds multiple routes of delivery into the human body including a highly effective pulmonary vehicle. PDC uses the Waters Corporation Millennium32 application for HPLC' for their liquid chromatography/mass spectrometry (LC/MS) procedures in QA, QC. Waters is the world's leading supplier of high performance liquid chromatography instrumentation and consumables, as well as thermal analysis and mass spectrometry products. The Millennium32 application is a key part of testing and certifying PDC products.

In November of 2001 PDC's Director of IT, Craig Brown, in researching for a way to provide uninterrupted server time, saw an ad for the NEC Express5800/320La Fault Tolerant server in InformationWeek magazine. The ad highlighted the server's delivery of fault tolerance or "Continuous Availability" computing within its unique modular hardware design. In addition, the server runs standard Windows® 2000 Advanced Server allowing any Windows-based application to run in fault tolerant mode with no changes to the application software required. Craig was intrigued and contacted NEC.

In January 2002, NEC provided PDC with a demo system for 30 days to test with the Waters application. The NEC FT Server provides complete redundancy of the system resulting in no single points of failure on the server. In the event of a hardware component failure, instantaneous fail over to redundant components is triggered with absolutely no impact on the application or user whatsoever. PDC tested their Waters software and

found that they could achieve full fault tolerance without having to modify the Waters software code in any way.

In March 2002, PDC implemented the FT server. "The FT has provided the 100% uptime that I need to provide to our laboratory applications. Without this technology, we would have had to plan for system downtime by putting in place costly and complicated service strategies." said Craig Brown of PDC. As a result of their positive experience, PDC plans to deploy three more NEC FT systems, one to host an Oracle document Management system handle GMP, another for their Laboratory information management system (LIMMS) and still another for their Clinical Data Management system.

The Waters Corporation was contacted by Craig Brown of PDC to validate the operation of their system on the FT Server. Waters, after seeing their application running in a continuously available platform now recommend the NEC fault tolerant technology to their customers who require simplified availability.

Please visit us: PDC at www.pdc-usa.com; Waters Corporation at www.waters.com; and NEC FT Server at www.necft.com or call 866-632-3226 to connect with an NEC rep.

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