



Case Study 1200

High-Performance Computer Clustering Provider -- Linux NetworX

The Customer

Aberdeen research indicates that within the next three years, Linux will dominate approximately 80 percent of the high-performance-computing market. Capitalizing on this statistic, Linux NetworX, Inc. was formed in February 2000 by Alta Technology to focus solely on providing Linux clustering solutions. Alta Technology began developing Linux clusters more than three years ago and delivered the world's first commercial Linux cluster in September 1997. Today, Alta Technology functions as the research and development arm of Linux NetworX.

Linux NetworX brings its powerful clustering solutions to research, industry, government, ISPs, ASPs, and others demanding high availability and high performance computing systems with the use of cluster computer technology, a method of linking multiple computers through high-speed networks to form a single and more powerful system. The company has built some of the largest cluster systems in the world to date and has developed unique hardware and versatile software to facilitate overall system management. Linux NetworX clusters can match the performance of supercomputers for a fraction of the cost by taking advantage of standard computer components.

The Challenge

The critical needs of a single system are not diminished when linking multiple systems together. Instead, they are amplified, particularly the need for a pure power supply. Pure, abundant, constant power is essential for companies that function on high-performance computing. Fluctuations in power supply can cause potentially devastating loss of data and operations.

Business Week reported the following alarming figures from a study by the Power Electronics Applications Center (PEAC) of the U.S. electric utility industry:

- Half of all computer problems can be traced directly to the power line.
- One-third of all data loss is caused by power problems.
- Every hour of downtime for a typical mid-sized network costs its owner \$18,000.
- A typical computer system is subjected to more than 125 potentially devastating power disturbances each month.

Clark Roundy, Vice President at Linux NetworX, recognized the challenge and wanted to somehow integrate an uninterruptible power supply (UPS) within the Linux NetworX hardware packaging design. "Our customers want the professional look and feel of a supercomputer, and a UPS outside of the rack would detract from the aesthetics of a uniform appearance," said Roundy, "Additionally, with limited space to house their supercomputers, the power source would need to work in a standard rack."

Linux NetworX

INDUSTRY SERVED

Computer Equipment

CHALLENGE

Quality power is essential for companies that function on high-performance computing.

SOLUTION

The UPQ™ system enables Linux NetworX to offer its customers a pure, abundant, constant power supply, guaranteeing high performance and complete system management.

The Solution

During a power interruption, such as a brownout, if a standard UPS provides 30 minutes of backup power and the interruption lasts longer, the UPS has only delayed the destructive effects of an unclean power source. Roundy was looking for something more.

Linux NetworX found a new level of power generation to extend and enhance electric power within its hardware packaging. Power Innovations, a Utah-based company, has developed the next generation of solutions to generate, store, and manage power. Unlike a UPS, a Power Innovations Uninterruptible Power Quality™ (UPQ™) unit completely isolates impure and erratic input power from connected equipment. Via leading technology, a UPQ produces a reliable, consistent, pure, uncontaminated sine wave output that protects equipment and data from the devastating effects of “dirty” power.

Through the use of innovative design and state-of-the-art technology, UPQs are more efficient, smaller, and more reliable than any other power protection solution, allowing Linux NetworX to integrate the UPQ within its hardware packaging design.

According to Bill Claybrook of the Aberdeen Group, “Even during the economic downturn, high-performance-computing vendors are selling Linux-based clusters at a fast pace because they are well suited for hosting high-performance-computing applications in important and very competitive areas of research like oil/gas exploration, bioinformatics, and automobile safety. And the companies buying the Linux-based clusters are among the largest in the world.”

“We are confident that as we sell our product, we are selling a professional product that has been well thought through, and addresses the major issues of business—particularly the absolute requirement for 99.999% uptime including a perfect power supply,” said Rutledge.

With Power Innovations’ UPQ systems, Linux NetworX is able to offer its customers a pure, abundant, constant power supply, guaranteeing high performance and complete system management.

Power Innovations

Launched in 1997, Power Innovations has pioneered a revolutionary set of solutions to generate, store, and manage AC power. Power Innovations’ mission is to provide and manage continuous high-quality power in conjunction with, or even independent of, utility services worldwide. Power Innovations is helping forward-thinking companies accomplish this goal through a new class of technology called Uninterruptible Power Quality (UPQ).

Today, Power Innovations’ UPQ systems, coupled with its UPQnet-agent II™ IP management tools, assist organizations of every size in addressing the key issues surrounding power management.

Power Innovations’ long term strategy includes fully integrated power management and control, storage, and generation for total power independence. Power Innovations’ line of power management products is currently being marketed. The company is involved in the development of a spectrum of solutions for power storage. Currently Power Innovations offers a variety of alternative generation options. In the near future, Power Innovations plans to introduce the PowerWell™, a revolutionary solution to provide green renewable energy generation for homes and business, with or without grid interaction.

“ We are confident that as we sell our product, we are selling a professional product that has been well thought through, and addresses the major issues of business -- particularly the absolute requirement for 99.999% uptime including a perfect power supply.”

- Clark Roundy
Vice President
Linux NetworX



Contact Us:

Phone: 801.785.4123

Fax: 801.785.6999

333 South 520 West

Lindon, UT 84042

www.power-innovations.com

© copyright 2005 Power Innovations



Power Innovations
INTERNATIONAL, INC.

