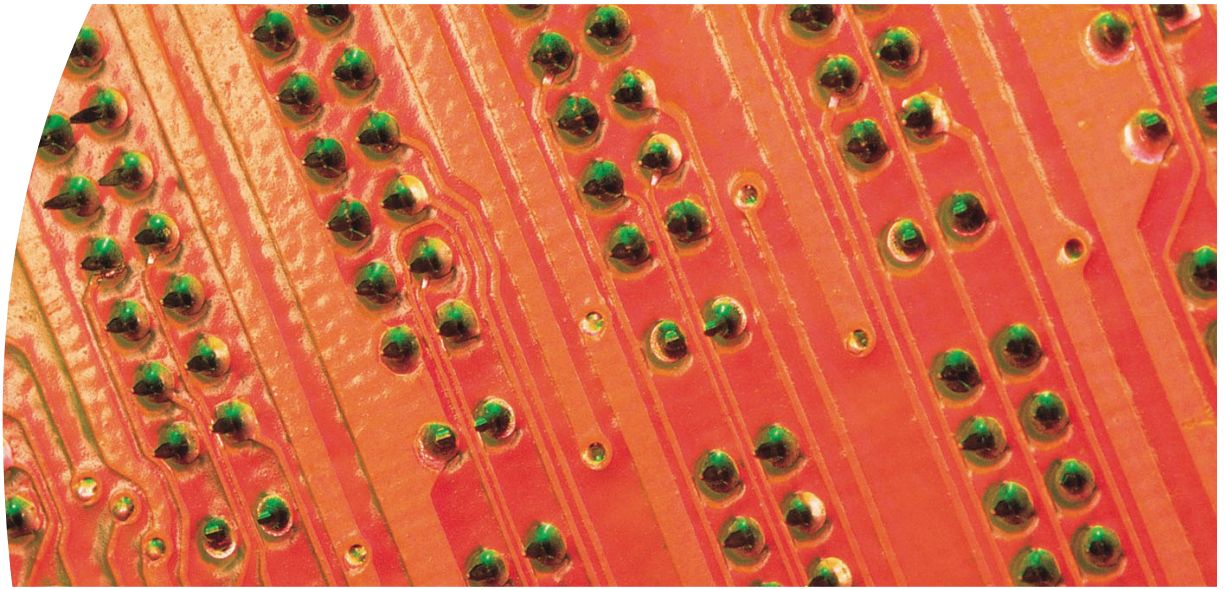




ENGINEERING
DataXpress



ENGINEERING DATAXPRESS SOLARIS 10 IN 10 DAYS

Company

- Engineering DataXpress, Inc.

Vertical Market

- Design and Manufacturing of Electronics

Key Challenges

- Qualify UNIX® products to Sun systems powered by the Solaris™ 10 Operating System (OS) and SPARC® and AMD Opteron™ processors in a month.
- Help identify an operating system of choice for the industry.

Business Results

- Qualified UNIX products to both platforms in ten days.
- Full regression suite reintroduced on the Solaris 10 OS.
- The Solaris 10 OS running on a Sun Java™ Workstation W1100z with a 2.4GHz AMD Opteron processor and 2GB memory is 33 percent faster than the Windows XP OS on a dual 3.2GHz Pentium 4 system with 1GB of memory.

Engineering DataXpress is a global leader in data interoperability solutions linking commercial electronic design automation (EDA) environments. Intrigued by the Solaris™ 10 Operating System (OS), the company qualified its UNIX® products to Sun systems with the SPARC® and AMD Opteron™ processors in just ten days.

UNIX application qualification for the Solaris 10 OS proved to be the easiest the company has ever done, taking 50 percent less time than budgeted. Additionally, the Solaris 10 OS running on Sun systems featuring the AMD Opteron processor are the fastest UNIX platforms the company has ever supported, and are now the company's platform of choice and industry recommendation.

Operating System Choice Impacts the Bottom Line

Founded in 1986, the San Jose California-based Engineering DataXpress provides 82 off-the-shelf data interoperability products including data transfer development tools and data translators for commercial EDA vendor environments. John Eurich, president and CEO of Engineering DataXpress, learned about the Solaris 10 OS earlier this year at the EDA Consortium during an OS roadmap meeting. "Every time another OS is supported, it costs the EDA developer community a significant amount of money," notes Eurich. "With all of the choices available, and the number of Linux versions increasing, we're trying to identify which platforms are the best ones for our industry, and commit to provide and support products on them. Because the Solaris OS has been key to our industry, I was interested in the Solaris 10 OS in combination with the AMD Opteron processor, so we decided to become early adopters of Sun's X64 product line."



. . .the full regression test used to take four hours... On a Sun Java Workstation powered by the AMD Opteron processor, the test took only 3.43 minutes.

accountable. When you have a problem with many Linux versions, who fixes it? The vendor sends an e-mail to a Linux user community asking if someone will take care of it.”

Engineers installed the Solaris 10 OS on existing 400MHz Sun Ultra™ workstations, and on new 2.4GHz Sun Java™ workstations featuring AMD Opteron processors. The qualification involved building 16 combinations of the company’s 63 UNIX products. Since it took half a day to configure the build for one combination using UNIX Makefiles, engineers found an alternative: Perforce’s Jam. Available only for previous versions of the Solaris OS, Engineering DataXpress easily ported the Jam source code, and it paid off. Using Jam and the Solaris 10 OS, a single build combination took less than a minute.

During the build cycles, engineers uncovered two bugs in the Sun™ Studio 10 software. Sun fixed the bugs in the product’s very next release. “I think if we had run into the same problem with another vendor, we would not have heard from them yet. The level of support is one of the technological advantages of doing business with Sun. They have always been a good company to work with. They’re

Minus the Jam learning curve, it took engineers approximately ten days to qualify all 63 UNIX products on the Solaris 10 OS. “It was the easiest port we’ve ever done,” said Eurich. “And transparency! It’s tremendous to run an operating system on different processors and have the environment be functionally identical. The Solaris 10 OS running on Sun systems featuring the AMD Opteron processor are the fastest UNIX platforms we’ve used.”

The company ran performance tests comparing the Windows XP OS running on a dual 3.2GHz Pentium 4 processor system with 1GB of memory—to the Solaris 10 OS running on a Sun system with a 2.4GHz AMD Opteron processor and 2GB of memory. The first test compared one build cycle on each system. The Solaris 10 OS build (at level 3 optimization using Jam and Sun Studio 10 software) took 46 seconds; the Windows XP OS build (at maximum optimization using the Visual C++ compiler) took 68 seconds.

Gates	Memory Used	Output File Size	2.4GHz AMD Opteron Processor running Solaris 10 OS	3.2GHz Pentium 4 Processors running Windows XP OS
500000	309MB	162MB	1.5 minutes	3.0 minutes
1000000	613MB	327MB	3.95 minutes	5.9 minutes
1500000	917MB	493MB	8.12 minutes	12.3 minutes*
2000000	1.22GB	659MB	13.5 minutes	38.2 minutes*
3000000	1.82GB	981MB	45.4 minutes*	111 minutes*
4000000	2.44GB	1.31GB	145 minutes*	**

The next test compared the systems running a netlist generator, designed to stress software. As shown in the table, the Sun system with the AMD Opteron processor ran 33 percent faster than the Pentium 4 processor system.

Learn More

For more information about Engineering DataXpress, visit DataXpress.com. For more information about Jam, visit Perforce.com. For more information about Sun, visit Sun.com.

The performance of the new platform has enabled the company to use regression suites not employed since the early 1990s. With one-fifth the number of test files than today, the full regression suite used to take four hours to run. On a Sun Java Workstation powered by the AMD Opteron processor, the full regression test took only 3.43 minutes.

Eurich describes other benefits: “We don’t have to be as careful with memory management using the Solaris 10 OS. It has always been good about going virtual. Other platforms use it and hang.” He later adds, “Engineering productivity on Sun workstations has also improved noticeably using the Sun Java Desktop System software. Our engineers used to switch between environments to do debugging, but they’ve been staying on the Sun Java Workstation. We are considering switching our development environment completely over to the Sun Java Desktop System software.”

“Speed, transparency, support, virtual memory, and the Java Desktop System software make Solaris 10 our operating system of choice,” concludes Eurich. “It’s lean, mean, and mature. From a business point of view, it makes sense for the electronic design community to use the Solaris 10 OS—especially EDA vendors who should deliver and support products for it. My recommendation to the industry is everyone should jump on it now.”



* Using virtual memory.

** Engineers could not run the 4M test on the Pentium 4 system due to the Window XP OS’s task memory limit of 2GB.



Sun Microsystems, Inc. 4150 Network Circle, Santa Clara, CA 95054 USA Phone 1-650-960-1300 or 1-800-555-9SUN Web sun.com

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