

Business News

■ 15 Gflops Linux PCI card

Imagine replacing a room of large computers used for high performance computing (HPC) imaging, rendering and scientific data acquisition and manipulation. It can now be done with any server or desktop computer with standard PCI slots and the new high performance Linux processor card.

Windjammer is a new product out from 45th Parallel Processing and they claim it features the highest performance per dollar in the smallest footprint available.

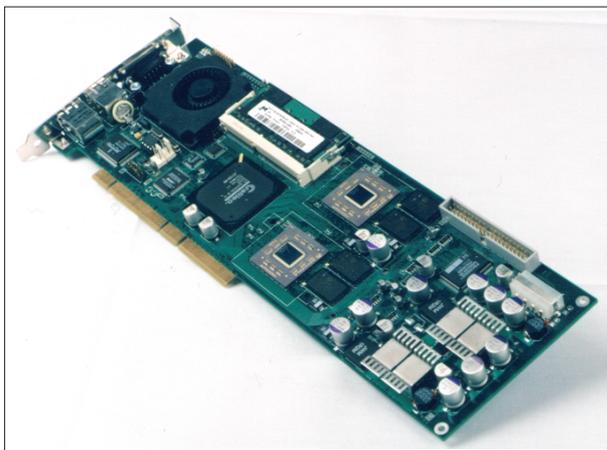
HPC cards such as this would allow you to run high performance Linux applications on much more humble computers with motherboards that only have PCI interfaces. You would also be able to use rack mounted systems in this instance, should you have the desire to pack many machines into a small space.

This could offer an alternative to cluster computing. The setting up of a cluster may not always be possible, powering a room full of

computers and making sure they get enough cool air can halt many projects. With Windjammer, you are able to fit more punch per machine.

45th Parallel sees medical, security, research labs and educational institutions as prime targets for their product, which features two IBM or Motorola PowerPC G4 745x processors running at 1,000 MHz, two SODIMM sockets support up to 1 gigabyte (GB) of PC133 SDRAM and full SMP functionality. The cards also have ATA-133 IDE controllers and two auto-switch 10/100 Ethernet ports. ■

<http://www.DualG4.com/>



■ Enterprise Grid Computing

Many hands make light work and so it is true of multiprocessor systems also. One of the many challenges faced in running a grid computer network is load balancing, an area where Platform Computing has been making their mark with their LSF software.

They recently won the contract for supplying software for the U.S. Department of Energy's PNNL installation, helping to create a \$24.5 million, 11.4-teraflop HP supercomputer.

Originally announced by HP in April 2002, the PNNL project is expected to create one of the world's most powerful Linux-based supercomputers, allowing

researchers to apply an advanced computational infrastructure to address "Grand Challenge" scale environmental research problems.

The Platform LSF will take on the responsibility to balance workload across the new HP supercomputer, which consists of 1,900 of the next generation of Intel Itanium processors.

Grid computing is making an impact in Japan too, where SGI Japan Ltd. has just delivered an SGI Onyx 300 visualization system to the Hokkaido University Computing Center in Sapporo, Japan.

■ Telco Software Enhanced

Once again MontaVista Software has been able to put their Linux Carrier Grade Edition software to good use, this time in partnership with Hughes Software Systems in the UK. Hughes Software Systems took advantage of the 'off the shelf' nature that the Linux Carrier Grade Edition affords its users, significantly reducing development and support costs – allowing users to bring infrastructure to market that much quicker.

Carrier Grade Edition (CGE) incorporates essential high availability features such as CompactPCI hot swapping, with redundant Ethernet and RAID1 controllers. CGE also delivers "hardened" driver and kernel architectures, resource monitoring and fault management services, and other carrier-grade capabilities. For the communications industry, up time is the only time.

MontaVista can claim some of the credit for helping Linux make a name for itself in the embedded market. A typical example of this is the recent work done on bringing the maximum amount of performance out of the new Intel network processors IXP420, IXP421 and IXP422 which will find themselves at home in cost-sensitive applications ranging from home gateways, small office/home office (SOHO) routers and wireless access points, and Integrated Access Devices (IADs), to industrial control and networked imaging applications. ■

<http://www.mvista.com/>

Its intended use is in the emerging field of visualization on the grid. Using the university's grid computing environment, Hokkaido University researchers will conduct various projects requiring large-scale data visualization, such as postgenomic, nanotechnology and environmental studies.

The researchers using the grid computer, will also work in conjunction with the National Astronomical Observatory of Japan and with research centers at other Japanese universities to make the most use of the system. ■

<http://www.platform.com/>

<http://www.sgi.com/>

■ OSS at school

Thanks to mPowerNet, a department of Anglia Polytechnic University in the UK, schools have been encouraged to consider using freely available software to ease tight fiscal budgets.

mPowerNet saw the virtue of promoting Open Source software as a viable alternative to more expensive computer programs and operating systems which were previously provided by major software houses. mPowerNet presented their views in a special conference, the Open Source in UK Education event.

This event had been set up in response to demand from ICT Advisors, school teachers and managers to evaluate the use and implementation of Open Source software in UK schools.

Representatives from BECTA, E-Envoy's office, DfES and LEAs were there, as well as many ICT teachers and managers from Primary and Secondary Schools.

The event also attracted a broad range of speakers, such as Stephen Heppell of Ultralab, Diana Laurillard (Head of e-learning at the DfES), Malcolm Herbert of Red Hat and Roger Whittaker of SuSE along with ICT teaching professionals who were already using Open Source to share their knowledge and experiences with the delegates. ■

<http://www.mpowernet.anglia.ac.uk/conference/>

■ Cool Ports

How does your network grow? Unless you are very lucky it's bound to grow out of all proportion to what you had originally planned.

Should you now find that have hit that network device conundrum, where you have no more ports left to plug stuff in to, then Coolport could very well be an answer to your needs.



■ What's in a name

What was once MobiliX, a project that had proved to be such a useful pivotal point for Linux developers has had to change its name after losing a trademark court case between the owners of the trademark Obelix, Les Éditions Albert René. It goes to show that in a crowded namespace environment you can't be too careful.

Tuxmobil.org, for that is what the project has now become, maintains mailing lists and support portals with particular emphasis on helping developers make the most out of their mobile computer systems, be they laptops and PDAs or, more frequently found, mobile phones and other embedded applications.

Werner Heuser is not giving up without a fight though, he is already asking the highest German court to permit an appellation against the decision of the latest instance in court. The appellation will take approximately four years.

Detailed documentation of the case, containing information about other projects under siege and the written statements of the lawyers is available online. ■

http://tuxmobil.org/mobilix_asterix.html



■ Aussie flight backup

Sidney Airport Corporation Limited, the busiest airport in Australia, has selected BakBone Software's NetVault products to supply and support their backup and recovery needs.

The winning criteria seem to have been flexibility, simplicity, application & platform support and lowest total cost of ownership.

The NetVault implementation includes multiple backup servers, being backed up across a SAN at each location, and also replicated to the server at the opposite terminal. This ensures protection from the effects of total system or infrastructure loss at either terminal.

For managers looking after network storage solutions, their key requirement does seem to be flexibility. Storage Area Networking is moving and developing at a terrific rate. Since no one can predict which way the market will turn options must be kept open, something that BakBone has always offered.

NetVault's modularity has found favor with IBM, having successfully completed interoperability testing utilizing the IBM TotalStorage Proven program, which includes NAS, Tape, Fiber Array Storage Technology and Enterprise Storage Servers, sometimes known as Shark servers. ■

<http://www.bakbone.com>

<http://www.storage.ibm.com/proven>

mountable Coolport patch panel via IDC connectors.

Coolports therefore provide an instant method for adding more devices to a single cable port – ideal in emergency situations where not enough network outlets are available, or when the cost or disruption caused by installing additional cabling is prohibitive. There are four different Coolport types available:

- 2 x 10/100Base T (Ethernet)
- 1 x 10/100Base T + 2Pr Voice (Analogue)
- 1 x 10/100Base T + 2 x 1Pr Voice (Digital)
- 3 x 1Pr Voice (Digital) ■

<http://www.htdata.co.uk/pdf/coolports.pdf>