



INCORPORATING CMP'S **storagepipeline**
ByteandSwitch
 Storage Networking and Beyond

JULY 25, 2006
Interview:
ReiJane Huai,
CEO, FalconStor

AUGUST 03, 2006
Mr. Rogers'
Neighbourhood
Blog: Big Bon...

JULY 27, 2006
Poll: HP: Hot
Prospects?

June 09, 2006 Discuss this story | Message Boards | Email article | Printer Format | Reprint Article

[Go to previous Byte and Switch News Analysis](#)

Microsoft Pitches Linux Cluster Buster

[Discuss >](#)

Microsoft today took the wraps off its new Windows Computer Cluster Server product, designed to drive high-end clustering out of research labs and into mainstream enterprises. (See [MS Releases Server](#).)

The software is Microsoft's first foray into the high-performance computing (HPC) market. The aim? To lay a foundation for data-intensive applications running across clusters of server and storage hardware.

[Cornell University](#) is already using Microsoft's new product in its Computational Biology unit. Ron Elber, a professor in the University's department of computer science, told *Byte and Switch* that the software is currently scheduling and running around 20 bioinformatic applications on Dell clusters. "Microsoft is providing the underlying operating system," he says.

Although most of the early adopters cited by Microsoft, such as Cornell and [Virginia Tech](#), are in the research sector, Elber predicts that enterprises will be next. "That's bound to change," he explains. "What Microsoft is trying to do is make the HPC cluster transparent to the end user, whether they are in industry or academia."

A key weapon in Microsoft's armory is that so many end-users are already conversant with the Windows operating system. "There's a lot of familiarity with the user interface," explains Patrick O'Rourke, Microsoft's lead product manager for the new cluster offering. "Our customers that have never tried high-performance computing can easily install this."

Over at Cornell, Elber admits that he likes the ease of use offered by Cluster Server. "We have a nice graphical user interface that can support all the bioinformatic applications."

A number of software and hardware vendors have already committed to support the new software, including Dell, IBM, HP, Fujitsu, Myricom, Voltaire, and Platform Computing. (See [Voltaire Unveils Solution](#).)

But Elber says there are still some hurdles for Cluster Server to overcome, most notably the fact that certain kinds of applications that run in HPC environments, like bioinformatic applications, are predominantly designed for

ADVERTISEMENT



Tech Resources: Information Lifecycle Management

Sponsored by PC Connection [CLICK HERE TO SIGN UP NOW! Brn's ILM Update](#)

Essential Storage Information

■ [Faster Backups, Greater Control with SAN](#)

White Papers

- [My First SAN Solution Guide 5/12/2006](#)
- [iSCSI Boot - Provided by PC Connection 5/12/2006](#)
- [Backup and Archive Storage Choices - Provided by PC](#)

SEARCH >

ADVANCED SEARCH

- HOME
- WEBINARS
- STORAGEPLUS
- BIG BYTES AWARDS
- BYTE AND SWITCH TV
- WHITE PAPERS
- MESSAGE BOARDS
- BLOGS
- DATA CENTER
- FINANCE
- ARCHIVE
- USER PREFERENCES
- LIGHT READING
- REGISTER
- ABOUT US
- INDUSTRY EVENTS



Linux clusters.

Clusters and grids, nonetheless, are slowly snaking their way out of universities and shadowy government research labs into enterprise data centers. A recent *Byte and Switch Insider* reports that enterprise grids will receive increasing volumes of traffic in the next three to five years from applications built by companies such as Microsoft, IBM, HP, and Oracle. (See [Insider Sees Data Center Crunch](#).)

As part of this push, Microsoft is also looking to exploit the ubiquity of Windows on high-end workstations, which are increasingly being used for HPC work. (See [Daimler Maps Grid Savings](#).)

"As [users] design, say, the wing of an airplane [on a desktop], they can easily roll that over to Windows Cluster Server," says Microsoft's O'Rourke. The cluster could do stress test analysis on the wing design and send the results back to the workstation.

O'Rourke argues that "it would take longer" and require a different set of skills to port applications from a Windows workstation to a Linux cluster, as opposed to the relatively straightforward migration from Windows workstation to Windows cluster.

Microsoft has also tied its Cluster Server product closely to the forthcoming release of Office Excel 12, which will be available later this year. The idea here is that users can take computational jobs that would previously have run on their laptops, such as Monte Carlo simulations used in the finance industry, and schedule them to run on the cluster.

By shifting the workload onto a cluster, says O'Rourke, Microsoft has already been able to slash the processing time for a mutual fund application from three minutes to 30 seconds. "We believe that Excel will be an important application to help bring HPC into the mainstream."

Pricing for Windows Computer Cluster Server 2003, which will be available in August, starts at \$470 per node, although this price will vary depending on users' volume licenses.

— James Rogers, Senior Editor, [Byte and Switch](#)

Organizations mentioned in this article:

- [Dell Inc.](#) (Nasdaq: [DELL](#) - [message board](#))
- [Fujitsu Ltd.](#) (Tokyo: [6702](#) - [message board](#); London: FUJ)
- [Hewlett-Packard Co.](#) (NYSE: [HPQ](#) - [message board](#))
- [IBM Corp.](#) (NYSE: [IBM](#) - [message board](#))
- [Microsoft Corp.](#) (Nasdaq: [MSFT](#) - [message board](#))
- [Oracle Corp.](#) (Nasdaq: [ORCL](#) - [message board](#))
- [Platform Computing](#)
- [Voltaire Inc.](#)

[Discuss >](#)

MESSAGE BOARDS

Byte and Switch Talk

[Connection](#) 5/12/2006

- [Perpendicular Recording: Powering New Levels of Disc Drive Capacity](#) - Provided by [PC Connection](#) 5/12/2006

Webinar

- [Security and Business Protection for Small and Medium Operations](#) 5/12/2006

Related Content

News Analysis

- [A Data Reduction Dossier](#) 8/4/2006
- [Summer Storage Survival](#) 8/2/2006
- [Users Rally Round Remote Solutions](#) 8/2/2006
- [RAID Rocks On](#) 8/1/2006

Research

- Heavy Reading: September 2005 Edition
[The Future of VOIP: A Heavy Reading Service Provider Survey](#)
- Heavy Reading: May 2005 Edition
[ROADMs and the Future of Metro Optical Networks](#)
- Byte and Switch Insider: March 2006 Edition
[Storage Encryption: State of the Art](#)
- Enterprise Data Insider: March 2006 Edition
[Data Centers and the Coming Power Crisis](#)
- Light Reading Insider: September 2005 Edition
[Ethernet in the First Mile: Who's Doing What](#)

Stock Quotes

- Nasdaq: [DELL](#), [6702](#), NYSE: [HPQ](#), NYSE: [IBM](#), Nasdaq: [MSFT](#), Nasdaq: [ORCL](#)

Columns

- [Remaining Relevant](#) 4/10/2006
- [Money for Nothing](#) 3/7/2006
- [Consolidation's Downsides](#) 2/27/2006

Reports

- [Building an Encrypted \(But Accessible\) Archive](#) 10/18/2005
- [Who Makes What: Security Appliances](#) 4/8/2005
- [Who Makes What - Updated](#) 1/21/2005



Briefing Centers

Powerful information at your fingertips (sponsored links)



- Get the right solutions for your increasingly complex IT infrastructure
- Best practices for protecting your corporate information
- Join the mesh networking revolution in anywhere, anytime connectivity

[Discuss this story >](#)[Search Message Boards](#) | [Message Boards Explained](#) | [Start Your Own Board](#)

This board does not reflect the views of Byte and Switch or Light Reading, Inc. These messages are only the opinion of the poster, are no substitute for your own research, and should not be relied upon for trading or any other purpose. The anonymity of the user cannot be guaranteed.

SPONSORED LINKS**Storage Networking Market Place****Gartner Research on Server Consolidation**

What's the true ROI on server consolidation? Gartner surveyed datacenter managers to learn the truth. Read this recent Gartner report for the real benefits of server consolidation. Access this report now... the answers will surprise you!

Intel Modular Communications Platforms

Enable efficiencies with modular communications platforms (MCP) by increasing flexibility, time-to-market, and cost benefits. Provide network equipment providers with reusable development / deployment platforms for innovative design.

Disaster Recovery Solutions

The NetStor WSS integrated with Storage Server 2003 and Double Take Software to provide economical continuous data protection. It combines asynchronous replication and automatic failover resulting in an effective Disaster Recovery solution.

World's Fastest Storage -Speed Applications 2500%

Faster enterprise applications support more concurrent users and handle more simultaneous transactions. Register for FREE whitepaper, Increase Application Performance With Solid State Disk. Texas Memory Systems - Makers of the World's Fastest Storage

IBackup - Online Backup and Storage

With IBackup for Windows, you can execute interactive or scheduled Online Backup of your critical data offsite. Features encryption, compression, advanced logging and more. Online Storage features include Network Drive, Sub-Accounts, WebFolders support, Drag-n-Drop via Browser!

[Buy a link now](#)

Copyright © 2000 - 2006 Light Reading, Inc. - All rights reserved.

[Privacy Policy](#) | [Terms of Use](#) | [Editorial Disclosure](#) | [Help](#) | [RSS](#)**Companies**

[Baptist Memorial Healthcare](#) (8), [Brocade](#) (1338), [Cisco](#) (1477), [CommVault](#) (240), [Computer Associates \(CA\)](#) (558), [Dell](#) (885), [EMC](#) (2811), [Emulex](#) (536), [Falconstor](#) (388), [General Motors \(GM\)](#) (23), [Google](#) (49), [Hewlett-Packard \(HP\)](#) (1661), [Hitachi Data Systems \(HDS, Hitachi\)](#) (1144), [IBM](#) (3094), [Intel](#) (1104), [Iron Mountain](#) (127), [Maxtor](#) (221), [McData](#) (992), [Microsoft](#) (1733), [Network Appliance \(NetApp\)](#) (1163), [Overland](#) (216), [QLogic](#) (671), [Sun Microsystems \(Sun, StorageTek\)](#) (1882), [Symantec \(Veritas\)](#) (1323), [Wal-Mart](#) (16), [Xiotech](#) (222), [Xyratex](#) (116), [Yahoo](#) (36)

Content-Addressable Storage (CAS)

[Appliances](#) (115), [Archiving](#) (2104), [Backup](#) (192), [Backup](#) (2230), [Classification & Search](#) (31), [Compliance Assessment](#) (13), [Content-Addressable Storage \(CAS\)](#) (33), [Data Centers](#) (3099), [Disk Arrays](#) (817), [Document Management](#) (36), [Email Management](#) (21), [Equipment](#) (1448), [Fibre Channel](#) (70), [High-Speed Interconnects \(InfiniBand, etc.\)](#) (404), [IP SAN](#) (178), [IP Storage Networking](#) (122), [NAS](#) (1333), [NAS Management](#) (449), [Network File Management](#) (17), [Other Disk-Based Backup](#) (513), [Partnerships](#) (325), [Policy-Based ILM](#) (32), [Replication/Mirroring](#) (58), [SAN](#) (1917), [SAN Extension](#) (21), [SAS/SCSI](#) (47), [SATA/ATA](#) (80), [Services](#) (749), [Software](#) (1823), [SRM/SAN Management](#) (1273), [Switches](#) (507), [Tape Libraries](#) (731), [Virtual Tape Libraries](#) (61)

Data Security

[Compliance Assessment](#) (13), [Data Centers](#) (3099), [Data Security](#) (226), [Hardware/Appliances](#) (201), [Security](#) (1591), [Security](#) (16), [Services](#) (749), [Software](#) (179), [Software](#) (1823), [Storage Consulting](#) (15)

Grid Computing

[Appliances](#) (115), [Archiving](#) (2104), [Backup](#) (192), [Backup](#) (2230), [Classification & Search](#) (31), [Clustering](#) (10), [Data Centers](#) (3099), [Disaster Recovery](#) (94), [Disk Arrays](#) (817), [Document Management](#) (36), [Email Management](#) (21), [Enterprise](#) (55), [Equipment](#) (1448), [Fibre Channel](#) (70), [Grid Computing](#) (278), [Hardware/Appliances](#) (201), [HBAs](#) (726), [High-Performance Computing \(HPC\)](#) (184), [High-Speed Interconnects \(InfiniBand, etc.\)](#) (404), [Network File Management](#) (17), [Online Backup](#) (32), [Optical](#) (32), [Other Disk-Based Backup](#) (513), [Other Storage Services](#) (210), [Replication/Mirroring](#) (58), [SAN](#) (1917), [SAN Extension](#) (21), [SAN Management](#) (25), [SAS/SCSI](#) (47), [SATA/ATA](#) (80), [Security](#) (1591), [Security](#) (16), [Server](#) (99), [Services](#) (749), [Software](#) (179), [Software](#) (1823), [SRM/SAN Management](#) (1273), [Switch/Storage](#) (48), [Switches](#) (507), [Tape Libraries](#) (731), [Virtualization](#) (309), [WAFS](#) (65), [WAN Optimizers](#) (79), [WAN Storage](#) (12)

Information Lifecycle Management (ILM) (Sponsored by PC Connection, Inc.)

[Appliances](#) (115), [Archiving](#) (2104), [Backup](#) (192), [Backup](#) (2230), [Classification & Search](#) (31), [Clustering](#) (10), [Compliance](#) (1328), [Compliance Assessment](#) (13), [Data Centers](#) (3099), [Disaster Recovery](#) (94), [Disk Arrays](#) (817), [Document Management](#) (36), [Email Management](#) (21), [Equipment](#) (1448), [Fibre Channel](#) (70), [Hardware/Appliances](#) (201), [HBAs](#) (726), [High-Performance Computing \(HPC\)](#) (184), [High-Speed Interconnects \(InfiniBand, etc.\)](#) (404), [Information Lifecycle Management \(ILM\)](#) (521), [IP SAN](#) (178), [IP Storage Networking](#) (122), [Monitoring](#) (6), [Multi-Tier Storage](#) (6), [NAS](#) (1333), [NAS Management](#) (449), [Network File Management](#) (17), [Online Backup](#) (32), [Other Disk-Based Backup](#) (513), [Other Storage Services](#) (210), [Policy-Based ILM](#) (32), [Replication/Mirroring](#) (58), [SAN](#) (1917), [SAN Extension](#) (21), [SAN Management](#) (25), [SAS/SCSI](#) (47), [SATA/ATA](#) (80), [Security](#) (1591), [Security](#) (16), [Server](#) (99), [Services](#) (749), [Software](#) (179), [Software](#) (1823), [SRM/SAN Management](#) (1273), [Storage Consulting](#) (15), [Switch/Storage](#) (48), [Switches](#) (507), [Tape Libraries](#) (731), [Virtual Tape Libraries](#) (61), [Virtualization](#) (309), [WAFS](#) (65), [WAN Optimizers](#) (79), [WAN Storage](#) (12)

iSCSI

[Appliances](#) (115), [Backup](#) (192), [Disk Arrays](#) (817), [Equipment](#) (1448), [IP SAN](#) (178), [IP Storage Networking](#) (122), [iSCSI](#) (1418), [NAS Management](#) (449), [SAS/SCSI](#) (47),

[SATA/ATA \(80\)](#), [Software \(1823\)](#), [SRM/SAN Management \(1273\)](#)

[Storage Virtualization](#)

[Appliances \(115\)](#), [Backup \(192\)](#), [Disk Arrays \(817\)](#), [Enterprise \(55\)](#), [Equipment \(1448\)](#), [Fibre Channel \(70\)](#), [Network File Management \(17\)](#), [SAN \(1917\)](#), [SAN Extension \(21\)](#), [SAS/SCSI \(47\)](#), [SATA/ATA \(80\)](#), [Server \(99\)](#), [Software \(1823\)](#), [SRM/SAN Management \(1273\)](#), [Switch/Storage \(48\)](#), [Virtual Tape Libraries \(61\)](#), [Virtualization \(309\)](#)

[Thin provisioning](#)

[Appliances \(115\)](#), [Archiving \(2104\)](#), [Backup \(192\)](#), [Backup \(2230\)](#), [Data Centers \(3099\)](#), [Disk Arrays \(817\)](#), [Document Management \(36\)](#), [Equipment \(1448\)](#), [Fibre Channel \(70\)](#), [High-Performance Computing \(HPC\) \(184\)](#), [High-Speed Interconnects \(InfiniBand, etc.\) \(404\)](#), [Metro Storage \(2\)](#), [Network File Management \(17\)](#), [Online Backup \(32\)](#), [Optical \(32\)](#), [Other Disk-Based Backup \(513\)](#), [SAN \(1917\)](#), [SAN Extension \(21\)](#), [SAS/SCSI \(47\)](#), [SATA/ATA \(80\)](#), [Server \(99\)](#), [Services \(749\)](#), [Software \(1823\)](#), [SRM/SAN Management \(1273\)](#), [Switch/Storage \(48\)](#), [Switches \(507\)](#), [Thin Provisioning \(48\)](#), [Virtualization \(309\)](#), [WAN Storage \(12\)](#)

[Virtual Tape \(VTLs\)](#)

[Archiving \(2104\)](#), [Backup \(192\)](#), [Backup \(2230\)](#), [Classification & Search \(31\)](#), [Data Centers \(3099\)](#), [Email Management \(21\)](#), [Equipment \(1448\)](#), [Hardware/Appliances \(201\)](#), [Network File Management \(17\)](#), [Policy-Based ILM \(32\)](#), [Replication/Mirroring \(58\)](#), [Security \(1591\)](#), [Software \(1823\)](#), [Switch/Storage \(48\)](#), [Tape Libraries \(731\)](#), [Virtual Tape Libraries \(61\)](#), [Virtualization \(309\)](#)

[WAN Optimization/WAFS](#)

[Appliances \(115\)](#), [Backup \(192\)](#), [Data Centers \(3099\)](#), [Disk Arrays \(817\)](#), [Equipment \(1448\)](#), [Hardware/Appliances \(201\)](#), [High-Performance Computing \(HPC\) \(184\)](#), [High-Speed Interconnects \(InfiniBand, etc.\) \(404\)](#), [Metro Storage \(2\)](#), [Online Backup \(32\)](#), [Other Disk-Based Backup \(513\)](#), [Other Storage Services \(210\)](#), [SAN Extension \(21\)](#), [SAN Management \(25\)](#), [SAS/SCSI \(47\)](#), [SATA/ATA \(80\)](#), [Security \(1591\)](#), [Services \(749\)](#), [Software \(179\)](#), [SRM/SAN Management \(1273\)](#), [Switches \(507\)](#), [Tape Libraries \(731\)](#), [WAFS \(65\)](#), [WAN Optimizers \(79\)](#), [WAN Storage \(12\)](#)