



## Vendor Spotlight — Have You Also Considered NEC?

Analyst: Michael Fisch

### NEC as an Enterprise IT Vendor

When you think of enterprise server vendors in the North American market, which ones come to mind? *Perhaps HP, Dell, IBM, and Sun?* How about enterprise storage vendors? *EMC, HP, IBM, NetApp, and HDS?* And network equipment vendors? *Perhaps Cisco, Juniper, Extreme, Nortel, Alcatel-Lucent, and Brocade/Foundry?* These companies have top-of-mind awareness because their significant market presence and product lines.

However, there is another IT vendor you may have overlooked, which has a significant product line and growing North American presence in all three areas – server, storage, and networking. It is NEC, the global IT, networking, and semiconductor company based in Japan. NEC is an established company with \$46 billion in revenue, 150,000 employees, and a history that stretches back over 100 years to the early days of telecommunications. While it is a market leader in Japan – even number one in certain IT product categories – it has traditionally sold into North America quietly through OEM channels. NEC was here but perhaps you did not realize it. This is changing now that NEC is pursuing a branded strategy in North America. It aims to grow and make its presence known.

### NEC Products and Technologies

To get a sense of what NEC brings to the table of information technology, consider this representative sample products and technologies.

#### *Servers*

- **NEC Express5800/1320Xf Enterprise Server** is NEC's flagship Intel Itanium processor-based mainframe-class server. This server was the first platform to enable support, and to be certified by Microsoft, for dynamic partitioning of the Microsoft *Windows Server 2008* environment. At 1,126 transactions per second (tps), the Express5800/1320Xf also holds the TPC-E SQL database performance record for a 32-processor dual-core Itanium server.
- **NEC Express5800/A1160 Enterprise Server** offers new Intel Xeon 6-core processors and represents NEC's latest enterprise server entry. Marketed in the U.S. as NEC's "Monster Xeon Server," it was the first server of any classification to post 1,400 tps SQL database TPC-E performance results. This midrange-class modular server is scalable up to four server nodes in a single system, making it a good platform for virtualization and consolidation.
- **NEC Express5800/300 Series Servers** offer cost-effective fault tolerance in Intel Xeon processor-based servers. These fault-tolerant servers deliver five 9s availability via two CPU, I/O, and disk drive modules running in lockstep, so if one fails, the system fails over transparently.
- **NEC Express5800/100 Series** of Intel processor-based servers come in rack, tower, and blade configurations. The NEC Express5800/100 blade server is an industry-leading design optimized for virtualization.<sup>1</sup>

<sup>1</sup> See **The Clipper Group Navigator** dated April 26, 2007, entitled *Fault Tolerance for the Windows Environment - When It Positively, Absolutely Has To Be There*, available at <http://www.clipper.com/research/TCG2007056.pdf>

- **NEC Virtual PC Center** provides thin client access Windows PC instances running on a central server. This alternative method for PC deployment is a more cost-effective, energy-efficient, secure way of protecting enterprise data.
- **NEC SX-9** vector supercomputer delivers as much as 839 teraflops of processing for applications with enormous computing requirements.

### Storage

- **NEC D-series** of enterprise modular storage spans the entry level to the high end with a single, upgradeable storage architecture. It scales from less than 1 TB to 1,536 TB non-disruptively and offers a customizable mix of performance and capacity by employing SAS and SATA drives. It has a unique set of data integrity features that reduces RAID rebuilds and protects against silent data corruption. The D-series is suitable for a wide range of enterprise environments.<sup>2</sup>
- **NEC HYDRAsTOR** is a grid storage system for online storage of backup and archive data. It performs data deduplication and scales performance and capacity, independently and non-disruptively, to 16,500 MB/s and 20+ PB of effective capacity. HYDRAsTOR load-balances across nodes to optimize utilization and self-heals in the event of a drive or node failure. It can also incorporate future nodes with new technology – a continuously evolving system. This is truly next-generation storage.<sup>3,4,5</sup>

### Networking

- **NEC SpectralWave** family optical carrier-class networking systems for deploying long-distance, high-capacity voice, data, and video

networks. The SpectralWave 160 can transport as much as 3.2 Tb/s per system.

### Management software

- **NEC SigmaSystemCenter** centrally manages multi-vendor virtualized environments, including VMware, XenServer, and Hyper-V.
- **ExpressCluster X<sup>6</sup>** clustering software provides high availability and reduces energy consumption by around 20% by controlling the CPU clock of standby servers.

This is not a complete list of NEC's enterprise IT products, nor does it mention the various industry solutions it can deliver based on these product building blocks. However, it does give a sense of the depth and breadth of NEC's enterprise IT portfolio, which is perhaps surprising in light of its low profile in North America. This is only possible because of its strength in its home-base market of Japan, which NEC now intends to leverage to a greater degree outside of Japan.

Another intriguing aspect of NEC is its experience in both computing and networking, including carrier-class networks. In an era moving rapidly toward web services, mobile applications, network convergence, cloud computing, and software as a service, the possibilities for innovation at the intersection of computing and networks are enormous. This will be a key area to watch for the industry as well as for NEC.

### Conclusion

Healthy competition that generations more options for enterprise consumers is a good thing. In case you were not aware, NEC is another significant player to consider for enterprise IT infrastructure – servers, storage, and networking. We expect its market awareness in North America will grow to match, eventually, the strength of its technology portfolio as it pursues its branded sales and marketing strategy. In the meantime, you may be very surprised by what it offers.



<sup>2</sup> See [The Clipper Group Navigator](http://www.clipper.com/research/TCG2007060.pdf) dated May 9, 2007, entitled *NEC D-Series Storage Line Spans Midrange through High End*, available at <http://www.clipper.com/research/TCG2007060.pdf>.

<sup>3</sup> See [The Clipper Group Navigator](http://www.clipper.com/research/TCG2008043.pdf) dated September 11, 2008 entitled *NEC Brings Vast Scalability to Tier-2 Storage*, available at <http://www.clipper.com/research/TCG2008043.pdf>.

<sup>4</sup> See [The Clipper Group Navigator](http://www.clipper.com/research/TCG2007088.pdf) dated September 14, 2007 entitled *NEC HYDRAsTOR - A Leap Forward in Online Backup and Archive Storage*, available at <http://www.clipper.com/research/TCG2007088.pdf>.

<sup>5</sup> See [The Clipper Group Navigator](http://www.clipper.com/research/TCG2007052.pdf) dated April 18, 2007, entitled *NEC's HYDRAsTOR Tames the Multi-headed Monster* available at <http://www.clipper.com/research/TCG2007052.pdf>.

<sup>6</sup> See [The Clipper Group Navigator](http://www.clipper.com/research/TCG2007086.pdf) dated August 29, 2007 entitled *NEC Takes Risk Out of Consolidation - Simplifies LAN Deployment, Reliability*, available at <http://www.clipper.com/research/TCG2007086.pdf>.

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- **The Clipper Group can be reached at 781-235-0085 and found on the web at [www.clipper.com](http://www.clipper.com).**

### **About the Author**

**Michael Fisch is Director of Storage and Networking for The Clipper Group.** He brings over ten years of experience in the computer industry working in sales, market analysis and positioning, and engineering. Mr. Fisch worked at EMC Corporation as a marketing program manager focused on service providers and as a competitive market analyst. Before that, he worked in international channel development, manufacturing, and technical support at Extended Systems, Inc. Mr. Fisch earned an MBA from Babson College and a Bachelor's degree in electrical engineering from the University of Idaho.

- **Reach Michael Fisch via e-mail at [mike.fisch@clipper.com](mailto:mike.fisch@clipper.com) or at 781-235-0085 Ext. 211. (Please dial "211" when you hear the automated attendant.)**

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