



Market Roundup

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[Apple and IBM Announce PowerPC G5](#)

By Charles King

Apple and IBM together have announced the PowerPC (PPC) G5, a new processor based on IBM's 64-bit POWER4 architecture that is optimized for personal computers. The new processor offers full support for 64-bit computing and also provides native support for 32-bit applications. The PPC G5 runs at clock speeds of up to 2GHz and incorporates a 1GHz processor interface that can deliver bandwidth to the processor at up to 8GBps. The processor sports a system controller designed by Apple to deliver maximum bandwidth throughout the system. The controller includes a processor interface at 1GHz, a 128-bit DDR memory interface running at 400 MHz, HyperTransport running at 800MHz, and an AGP Pro graphics interface. The PPC G5 will be utilized in Apple's new Power Mac G5 desktop systems.

Apple's PPC G5 announcement generated a good bit of attention for both its unique characteristics and the usual reasons having to do with Apple's long-term viability as an IT vendor. Concerning the G5's uniqueness, we believe some clarification might be in order. Though Apple pitched the G5 as the "world's first 64-bit desktop processor" the chip is largely the PowerPC 970 processor that IBM introduced last November. The PPC 970 is a stripped-down version of the POWER4 that removed one of two core processors, the L3 cache controller and the chip-to-chip fabric controller, and added AltaVec media enhancements IBM developed with Motorola. Like all POWER4 processors, the PPC 970 is a 64-bit architecture but the chip's native's 32-bit compatibility provides obvious comparisons to AMD's recently introduced Opteron processor. We are not trying to beat up on Apple here but to simply point out that the company has made good use of an OEM processor that IBM could also make good use itself should it so choose. IBM's Deep Computing group demonstrated an Opteron-based server at this week's ClusterWorld trade show, but the PPC 970 demonstrates that the company has a flexible, AIX- and Linux-friendly, 32-/64-bit compatible POWER alternative if Opteron falters.

So what will Apple make of the PPC G5? We would quibble with the company's 64-bit desktop claims, since the new chip's notable horsepower seems better suited to workstation and server applications. The fact is that the PPC G5 gives Apple products a number of new and largely unique capabilities, but the question remains whether the chip will make any real difference to a company that has become increasingly marginalized within the enterprise and forced further and further into a high-end consumer niche. On the plus side, the new processor's enhanced bandwidth capabilities and Apple-designed controller make it ideally suited for the publishing and graphics applications that are Apple's bread and butter, and offer an intriguing solution for graphics design and rendering applications. But it is not clear if the new processor will bring ISVs back to the Apple fold. The fact is that as Apple's market share has dwindled, developing or porting applications to the Mac has become an afterthought or non-starter for increasing numbers of developers. Traditional markets aside, we would speculate that alternatives exist for Apple in Linux. Since the company's new OS X operating environment is largely UNIX-based, it could be a friendly enough location for Open Source devotees to consider. More importantly, such relationships could provide Apple with some badly needed new blood in the application development arena and afford a cachet of cutting edge trendiness that the company has embraced in the past. Overall, we do not believe the PPC G5 will not

be a lifeline that will lead Apple to a place of safety, but it might serve as a lasso the company could use to rope in a new generation of partners.

IBM Enters Express Lane

By Jim Balderston

IBM has announced a portfolio of new “Express” offerings designed for the medium-sized enterprise market. These products, IBM said, were designed from the ground up, and include new hardware, software, services, and financing solutions targeted at companies with between 100 and 1,000 employees. Among the products announced were WebSphere Commerce Express for e-commerce sites and WebSphere MQ Series Express for messaging across applications. Also announced was the IBM eServer Integrated Platform Express for Employee Workplace, which is designed for enterprises between 250 and 1,000 employees. These new products join the existing IBM Express offerings: WebSphere Application Server Express, DB2 Express, and WebSphere Portal Express.

The company also unveiled its Express Program from the Personal Computing Division, offering aggressive pricing on PCs and laptops, and announced financing for IBM Express products. IBM said the new offerings were developed with input from its channel partners, and are designed to offer ISVs, VARs and consultants the ability to sell or recommend these products to their customers and receive compensation in pursuing either course. The company also reiterated that it is offering many of its Global Services solutions, including IBM managed Services, managed hosting, and application hosting to medium-sized businesses. IN addition, IBM said it would spend \$200 million over the coming year in demand generation focused at the medium-sized business market.

The SMB market has come under siege lately from the attention of IT vendors across the market. The list of suitors grows each day, as vendors increasingly recognize the need to serve a market that has received relatively short shrift in comparison to the larger enterprises which have been the traditional objects of affection for IT vendors large and small. While IBM is not alone in its courtship of the SMB market, in our eyes it continues to make tangible, concrete overtures to woo and capture a market that the company says accounted for some \$4.3 billion of sales in the last quarter alone. IBM noted that it is consciously trying to change a perception among smaller businesses that IBM is for large enterprises only. In our eyes, the company’s Express portfolio is a good solid move in that direction, though \$200 million in branding and promotion won’t hurt either.

That said, we think it is important for all large vendors going after the medium-sized enterprise to remember that the SMBs do not constitute a vertical market. Much of the noise surrounding the wooing of these enterprises sounds to us like IT vendors are in fact looking at SMBs as just another vertical, a perception that will undoubtedly lead to failed initiatives and lost opportunities in this crucial market segment. IBM’s strategy to let its channel and business partners do the reconnaissance, scouting, and decision making concerning which verticals to enter in the SMB market seems eminently wise to us, as the expertise needed to appraise and focus on such opportunities is something that remains largely in the hands of those closest to the companies and markets. IBM’s strategy to provide those scouts and pioneers the tools they need to develop appropriately designed and implemented offerings keeps IBM above the fray and without the need to undertake the daunting task of understanding the minute intricacies of dozens of discrete markets. Furthermore, this announcement should largely lay to rest speculation that IBM will one day seek to re-enter the business application space, a possibility that many seem to think remains distinct. Instead, we see the company’s Express portfolio offerings as further proof that IBM is willing to provide the tools and support to point product vendors, instead of cannibalizing them like many other large IT vendors seem so content to do.

TOP500 Announces 21st Supercomputer List

By Charles King

TOP500 announced findings this week from their bi-annual list of the world’s top performing supercomputers. The Earth Simulator built by NEC retains the top position on the list with a Linpack benchmark of 35.86 teraflops (Tflop/s) or trillions of calculations per second. The second position is held by the ASCI Q system at Los Alamos National Laboratory, which is based on HP’s AlphaServer SC technology with a Linpack rating of 13.88 Tflop/s. In

terms of numbers of systems, HP topped the list with 159, with IBM a close second at 158 systems, and SGI a distant third with 54. In terms of total performance, IBM was the clear leader with 34.9% of the total, followed by HP with 24.1% and NEC with 11.7%. The number of systems using Intel processors more than doubled in the last six months from 56 to 119. The number of clustered systems on the list also grew notably to 149, only 23 of which were self-made. In all, seven of the top ten systems, 51% of all systems, and 55% of the total performance are installed in the U.S. Additionally, 92% of all TOP500 systems are produced in the U.S.

Like any rating system, the TOP500 list provides list of bragging rights to a wide variety of vendors, often for the most obscure of reasons. The most interesting thing about the list is the sheer number of ways the data can be sliced, diced, minced, and otherwise interpreted; often, it seems, with the assistance of spiraling incense, mystical incantations, and the occasional unlucky chicken. The essential message of the list is that in supercomputing anyway, size (or at least speed) does matter. But to our way of thinking, the list provides a few somewhat obscure gems worthy of closer inspection. Though HP maintains the second position behind NEC's Earth Simulator, it does so with a system based on Alpha technologies acquired by HP in the Compaq merger that the company has pledged to replace with Intel's Itanium processors. In all, Alpha-based systems account for three of the top ten positions and four of the top twenty. Additionally, SGI's solid third-place ranking in terms of number of systems either contradicts conventional thinking that the company has become a largely marginalized IT player or suggests that supercomputing inhabits an airy realm with aims and concerns far and away from the muddy scrum of commercial computing. We expect the latter suggestion is more accurate.

The two most notable shifts in the list are the growth of Intel-based supercomputers and the growing popularity of clustered systems. The notable performance and headroom of Intel's Xeon chips have made them increasingly applicable in circumstances that require robust IT solutions. Additionally, some characteristics of the company's Itanium processors such as their floating point capabilities could portend the growing relevance of these systems in high performance applications. More impressive to us, though, is the growth in popularity of clustered systems and the importance they hold for IT vendors. The flexibility of clustered systems has made them increasingly attractive and affordable alternatives to traditional supercomputers, and is helping to drive these solutions further into the commercial space. More to the point, over 80% of the clustered systems on the list were assembled and sold by IT vendors. In other words, the fastest growing segment of the supercomputing market is also driving significant vendor revenues. We do not require incense, chanting, or nervous chickens to predict that this trend is likely to continue.

Linux Gets a Boost from Novell

By Jim Balderston

Novell announced this week that Nterprise Linux Services, which provides file, printing, messaging directory, and management services for the Red Hat Enterprise Linux and SuSE Linux Enterprise Server distributions would be made available later this year. The company said it would also make available the entire service stack of Netware 7 for these Linux distributions. Novell announced that it had signed agreements with IBM, Dell, and HP to offer Nterprise Linux solutions to its customers, and said it would also offer strategic consulting and technical support for its Linux offerings. The beta test for Nterprise Linux Service 1.0 will begin in July, and pricing and availability will be announced later this year.

While a simple product initiative – or that of a series of partner agreements – does not necessarily make news, we believe Novell's Nterprise roadmap announcement could have a potentially significant impact on the market for a wide range of vendors. Of course, for Novell, this initiative could drive its Netware solutions into more enterprises, thereby offering the company an opportunity to expand its traditionally loyal and ageing DOS/Windows customer base and reverse the steady market erosion caused by Microsoft's NT based server line. For Linux vendors, Novell is pursuing the idea that Netware and its notably seamless file, print, and management/directory services capabilities will make Linux much more palatable for enterprise IT decision makers who have shied away from the platform because of its air of geeky mysticism.

For Microsoft, which has had a hard time prying customers away from Netware, Nterprise Linux Services will not be greeted as good news. For one thing, the thousands of companies still running Netware that are looking for

reasonable alternatives to Windows now have one that combines the contemporary application environment and cost savings of Linux with Netware's user-friendly file sharing, printing, messaging, and directory capabilities. Furthermore, Netware's well-established management features offer IT managers who have been reluctant to take on the Linux learning curve a much lower slope to navigate. In fact, those with previous Netware experience may now have the opportunity to coast downhill. While Nterprise Linux Services is still largely announcement-ware, we believe that if Novell delivers it as promised, it should add momentum to the already accelerating Linux market and make those vendors who have invested sizably in Open Source initiatives and solutions look smarter and smarter each passing day.