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IBM's eServer p5-510 – Meeting SMB's Current and Future Business Needs

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It is ironic that small to medium sized businesses (SMBs) cast such a disproportionately large shadow. According to survey data collected by the U.S. Small Business Administration, such companies represent nearly 99.7% of all employers, and are responsible for nearly three quarters of the net new jobs added to the economy. Just as importantly, they account for over half of the country's private work force, and drive over 40% of private sales. Despite this muscular performance, SMBs are a group that can be difficult to get a fix on. They include companies ranging in size from home-based entrepreneurs to those with as many as a thousand employees, and inhabit and compete successfully in nearly every market and locale. Despite their sometimes overwhelming variety, most SMBs do share the common goals of wishing to both succeed and grow. From a technological perspective, those similarities are critical to understanding the IT challenges SMBs face, along with the IT solutions they need to ensure their success.

IBM's newest POWER5-based eServer offering, the 2U, 1- and 2-way rack-mounted pSeries p5-510, is such a solution. While classified and priced as an entry-level server, the p5-510 delivers true enterprise-class performance. In its basic configuration, the p5-510 offers considerable POWER5-enabled UNIX bang for SMB bucks, and provides notable server consolidation capabilities via IBM's optional Advanced POWER Virtualization features. In addition, the p5-510 Express (p5-510E) model is available in pre-configured Value Pak solutions designed to meet SMBs' critical current and future business needs. In this report, we will consider common business challenges faced by SMBs' and how IT solutions can help them address those issues. We will also discuss IBM's eServer p5-510 and how its specific capabilities and features can help SMBs and other companies meet essential IT and business goals.

Common Issues, Common Concerns

In most companies, business concerns tend to be complicated by issues of scale. Certainly that is the case with SMBs, which are considerably more cost-sensitive than larger organizations. Maximizing value is a common mantra among SMBs, and extends from the purchase and upkeep of necessary computing assets to engaging IT staff members who perform a broad range support and maintenance tasks. When businesses operate with fluctuating or limited cash assets, as is the case with many SMBs, virtually all expenditures have real world effects. Buying a critical software upgrade could influence the hiring of new personnel. Ballooning electrical costs might derail buying necessary server or storage assets, which then places additional pressure on an already overextended IT environment. To deal with short term financial pressures,

many SMBs follow an IT purchasing strategy of choosing price over performance, and relying on platforms that staff members are familiar with rather than alternatives that might offer features better suited to the company's actual business requirements. But while such a strategy can deliver short term financial benefits, it does so by compromising longer term strategic demands.

SMB IT staffing issues are both related to and entirely separate from those concerning IT resources. On one hand, managing IT resources internally can work initially for SMBs with employees who possess a modicum of technical knowledge. But management challenges and complexities tend to expand exponentially as a company grows, making it increasingly necessary and expensive to engage specialized assistance. Similar sorts of problems exist for traditional SMB IT solutions. Much of Microsoft's success is due to the Windows platform's well-publicized ease of use, but those qualities tend to diminish as installations grow and Windows' cost-effectiveness can dwindle amidst server sprawl. Despite such inherent problems, many SMBs stubbornly stick with the devil they know rather than consider a platform they don't, believing that retraining costs or hiring new staff will eat up any potential savings a new solution offers. The reality of the situation is that SMBs eventually pay for IT expertise in cash and time. However, if they ignore or avoid options that offer faster and more flexible IT performance, they can also miss opportunities to significantly improve IT processes, speed business execution, and enhance interactions with customers, partners, and the supply chain.

Adding to SMBs' headaches is the sheer variety of the marketplace in general and IT solutions in particular. While many vendors trumpet the benefits of their "Industry Standard" servers, the phrase is a misnomer. Sure, most of these solutions leverage the popular x86 architecture but some vendors also append the label to offerings based on the IA-64 (Itanium) platform, which is anything but Industry Standard. In addition, servers from different vendors which utilize similar x86 components often vary widely in overall performance and usability, as well as in memory, storage, and expansion options. Product guarantees and support are also anything but standard, adding to the confusion. Perhaps most importantly, the notion of Industry Standard does not take into account operating system issues that are critical to these solutions' overall TCO. Industry Standard server users who follow Microsoft's recommended upgrade path face a financially steep journey that can add layers of complexity to IT infrastructure management. For SMBs that fail to engage in long term IT planning, which describes most, such risky behavior often results in regular, often painfully expensive surprises.

IBM's eServer p5-510 – The Right SMB Solution

Do server solutions exist that help SMBs avoid such thorny problems? We believe so, and that one in particular is IBM's eServer p5-510, the company's new entry level POWER5 pSeries server. IBM designed the p5-510 to support all key applications typically deployed on small 2-way servers, and the new offering delivers a notable blend of traditional IBM capabilities with numerous business-friendly features. To begin, the p5-510 provides all the benefits of IBM's newest generation POWER5 processors (both 1.5 GHz and 1.65 GHz) in 1- and 2-way packages aggressively priced starting at \$3967 (excluding operating system). The p5-510 comes in a compact 2U rack mount design, but also provides notable expansion capabilities with three PCI-X slots and

four hot swap drive bays that support up to 584GB of internal storage. The p5-510 supports up to 32GB of internal memory, incorporates integrated networking support for Dual Gigabit Ethernet and external SCSI, and provides a pair of USB ports for peripheral connectivity. The p5-510 Express edition (p5-510E) is the company's lowest priced POWER5 server, which along with the p5-510, is available in four "Value Pak" models designed for economical quick configuration and purchase. Customers can buy the p5-510E through local IBM channel partners or directly from the company, speeding deployment and company productivity.

The p5-510 supports both AIX and Linux for increased application flexibility. The systems also offer enhanced RAS features for system security, including reliability-focused elements including First Failure Data Capture, DDR ECC Chipkill memory, and optional redundant fans and power supplies. For environments that need particularly high levels of availability the p5-510 offers support for HACMP. In addition, the p5-510 comes with a 3 year warranty that eclipses Sun's and HP's 1 year guarantees, which should appeal to risk- and cost-sensitive businesses. Along with notably aggressive pricing, p5-510 also delivers POWER5 performance. According to IBM, the p5-510E significantly outperforms the Sun V240 server and costs less than the Sun V240 and the HP rx2620 and the rp3410. Perhaps the most interesting element of the p5-510 is its optional Advanced POWER Virtualization feature which offers the ability to configure as many as 10 partitions per POWER5 CPU. By utilizing this feature, companies can consolidate multiple smaller server workloads onto a single p5-510 or p5-510E with shared disk, I/O adapters, and processors, thus reducing server clutter, simplifying IT management processes, and improving employee and business productivity.

Why the p5-510 is Ideal for SMBs

These features map well against common SMB business practices and processes, but it would be constructive to consider how the p5-510 relates to a few common IT guidelines we believe are critical for SMBs to follow:

- Learn from large enterprises – This is as simple to explain as watching a young athlete improve his or her game by emulating a favorite sports star. How effectively a company deals with current and future IT challenges indicates both its overall maturity and chances for ongoing success. Large companies develop IT skills because they understand that doing so offers tangible business and financial returns. More importantly, enterprise-class IT solutions are not just for enterprises any more, but have become increasingly available and affordable for all classes of businesses. How does the p5-510 fit in here? Simply put, it stands as the latest example of IBM's strategy of migrating enterprise-class features and technologies throughout all the company's product lines. The p5-510 is not 'just' a server for SMBs, but the entry-level member of a family of POWER5-based solutions that scale up to the highest levels of datacenter performance. As such, the p5-510 is a prime offering for SMBs that wish to develop an enterprise approach to improving business execution and productivity.
- Use solutions that can grow with your business – Ideal SMB solutions provide for today's business requirements while offering enough headroom for future expansion. As such, they tend to be designed not only for simply solving short term tactical challenges but to address longer term strategic requirements. That definition describes the p5-510 quite clearly. Is your company's IT environment severely over-provisioned,

or is your IT staff straining to keep up with demands? Does your IT infrastructure support essential business processes or is it a hodgepodge of ill-fitting, bargain basement components? Ideal SMB IT solutions offer significant flexibility that helps address and correct such problems as system redundancy and underutilization. The p5-510 can address these issues through server consolidation solutions executed via Advanced POWER Virtualization features, as well as with future deployments of additional integrated pSeries solutions.

- Ride the cutting edge when appropriate – For many SMBs, the notion of innovation translates to excessive investment for uncertain returns. But while innovation is a term that occasionally borders on cliché in the IT market, it can be a transformative issue for businesses of every kind, allowing companies to work, compete, and pursue opportunities in entirely new ways. We would agree that cost-sensitive SMBs need to be careful about their IT purchases, but with careful planning they can still benefit greatly from innovative technologies. In particular, SMBs are best served by considering new solutions based on well-understood platforms with proven track records and significant vendor and ISV support. The p5-510 exemplifies this approach. Not only does it provide the latest IBM POWER5 features in a value-conscious package, but the p5-510 also allows SMBs to access multitudes of AIX and Linux business applications. In addition, POWER5 is not a new platform trying to prove itself to a skeptical market, but the latest generation of a technology that has demonstrated its worth for years in countless businesses.
- Think infrastructure, not just applications – For many SMBs, the application is all, and perhaps all too, important. This is neither surprising nor unusual, since small businesses tend to deploy IT solutions project by project as needs arise. But as SMBs succeed, a common growing pain is the intersection of application sprawl and IT manageability. As a result, IT-conscious SMBs keep a sharp eye on management issues, knowing that poor infrastructure management tends to result in poor business performance, increasing risks across the entire organization. IT management is a subject near and dear to the heart of IBM, as can be seen in the company's integrated tools and support offerings, as well as the self-managing and self-healing capabilities offered across the company's products, including the p5-510. In addition, the p5-510 offers features designed to further enhance system reliability including a pair of HMC management ports, a FSP service processor, and dual hot-plug power supplies. For SMBs short on IT management staff and skills, solutions with proven tools and self-managing or automated features such as those on the p5-510 can be invaluable business aids.
- ROI and TCO are not just pretty acronyms – All too many SMBs discuss price/performance by focusing on price alone, an approach which tends to result in limited, short changing benefits. The fact is that affordability is merely one element of ROI and TCO, and all too many companies chase after and catch short term IT saving that carry long term financial liabilities. This is another area where the p5-510 shines, in features ranging from three year product warranties that help protect customers' investments to consolidation capabilities that can measurably improve server utilization and IT management processes. We also believe that achieving ROI and TCO satisfaction requires SMBs to develop dynamic relationships with vendors who understand the way they do business, and provide solutions bolstered by solid support offerings and product reliability. We believe IBM's wide range of products, services, and support for businesses of every size provide a firm base for the sort of dynamic vendor relationships businesses need to succeed.

The p5-510 – SMBs and Beyond

We have discussed the strategic value of the p5-510 for SMBs, but how do its features and options translate in practical business terms? For SMBs, the p5-510E delivers enterprise class performance, reliability, and security in an aggressively priced entry level package appropriate for SMB IT and business processes including ERP, CRM, database, security, email, workgroup, ecommerce, Web serving, and application development. The p5-510E's OS flexibility provides SMBs the means to take advantage of proven AIX and Linux solutions, allowing companies to explore without risk vast new ways to improve business execution. In essence, the p5-510E fulfills the requirements for what we consider an ideal SMB solution, offering reliable enterprise class performance in a highly affordable, flexible, and innovative solution designed to support virtually all essential business and IT requirements.

But how does the p5-510 fulfill the needs of larger companies? First, the p5-510 provides a means for businesses to significantly simplify and improve the efficiency of their datacenter operations by working with fewer and smaller systems. In such circumstances, the p5-510 offers an ideal solution for branch server applications across a variety of industries, and is powerful and flexible enough to support applications in the financial, retail, industrial, media and entertainment, and public sectors. Additionally, the p5-510 is suitable for a range of industry-specific applications including HPC, service providers, and software publishers and ISVs. The p5-510's enhanced RAS and HACMP-compatibility also offer notable levels of security and availability for business-critical enterprise processes.

Finally, the optional Advanced POWER Virtualization features available for both the p5-510 and p5-510E qualify as the particularly tasty frosting on an already delicious cake, enabling notable improvement of server utilization and easing overall IT management processes. In other words, the p5-510 is a powerful and affordable solution for circumstances ranging from essential SMB business applications to demanding enterprise distributed computing processes.

Mission Accomplished?

Despite their sometimes overwhelming variety, most SMBs share many common goals including a desire to succeed and grow. Unfortunately, some also share bad habits that come from approaching and deploying IT solutions with little or no regard for long term business requirements. Overall, we believe that SMBs are best served by closely aligning their business and IT capabilities. In addition, following a few simple guidelines can help SMBs discover IT solutions that are best suited to meeting their strategic goals. While many SMBs have historically depended on Wintel-based servers, the inherent management and scalability challenges of these solutions make their value questionable for many growing companies. Fortunately, new competitively priced UNIX and Linux solutions offer compelling, powerful, flexible, and dynamic alternatives for even the most risk-averse and cost-conscious SMBs.

IBM's new eServer p5-510 combines reliable and innovative POWER5-based enterprise-class performance and features in a compact, aggressively priced package. The p5-510E incorporates features designed to help SMBs speed business execution and improve employee productivity, and also offers notable reliability and flexibility, provid-

ing small businesses an easily manageable means to address both current business needs and future requirements. In addition, the p5-510 is a cost-effective solution for numerous distributed applications and processes in larger enterprises, and also offers robust security and availability capabilities designed to support demanding availability requirements and business-critical applications. Both the p5-510 and p5-510E feature IBM's innovative Advanced POWER Virtualization, which can consolidate server workloads, improve utilization, and simplify IT management processes. Given its host of features and notable price/performance, we believe value-conscious SMBs and other companies looking for compact, powerful, and reliable business server solutions would do well to consider IBM's new eServer p5-510.

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