



Reliable Platforms for the SMB — IBM Introduces Asset Elasticity for *System i*

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Management Summary

Very few things in life expand to fit our needs as we grow. Socks come quickly to mind. We may have to replace our children's shoes every year, but their elastic socks expand, usually wearing out before they outgrow them. Automobiles and homes, on the other hand, cost significantly more than shoes and socks. Young newlyweds must make judicious decisions when investing in a new house or a new car. These are not elastic. You can only stretch a budget so far. A young family will often have to trade-in a perfectly reliable small car in order to have room to fit a growing family, losing value in the process. The same is true for their housing, as a comfortable two-bedroom apartment soon grows to a three or four bedroom house. Other families engage in major remodeling efforts, or sell one home to buy another. In each case, the ancillary charges, i.e. architect fees or broker fees, have a serious impact on the TCO of the asset. Wouldn't it be great if you could simply add two seats to that reliable car or drop in two new bedrooms to your home?

Similar decision-making occurs in the data center of every business as they try to balance the acquisition cost of a reliable mission-critical application solution against the capability of that platform to serve its users. Some larger enterprises are willing to over-provision the server today in order to ensure timely response in a growth environment tomorrow. They don't mind spending more today in order to prevent downtime and disruption in the data center from upgrades required to provide adequate response later, contributing to significant increases in the TCO of the IT environment. Unfortunately, the smaller enterprise, or SMB, cannot afford to overprovision. **The SMB must configure to their current needs and budget, often sacrificing reliability**, knowing that if they grow beyond the capability of the current platform, a forklift upgrade may be in their future. For the SMB, the struggle between cost, reliability, and elasticity is reality.

What the SMB is looking to deploy is a reliable, highly-utilized platform that expands as the enterprise grows, as hassle-free as a pair of socks, and reliable enough to enable the data center staff to go home at night without worrying about returning to the office to re-boot a crashed server. The SMB staff knows that reliable platforms do exist, however, just not within their price range. Until now. IBM has just announced two entry-models for their *System i* family, originally called the *AS/400*, priced to compete with Wintel systems, but with the trusted reliability of *i5/OS* ensuring against the "blue screen of death", a low entry price, and an on-demand expansion path. If you are an SMB with limited resources today but an unlimited view of tomorrow, please read on.

IN THIS ISSUE

- Realities of the SMB Data Center 2
- IBM's Changing Strategic Focus 2
- System i Entry-Level Systems 3
- Conclusion 4

Realities of the SMB Data Center

Despite the best of intentions of highly trained IT professionals, the typical enterprise data center today consists of a proliferation of under-utilized, unreliable servers, many deployed in mission-critical environments. Adhering to the recommendations of well-intentioned ISVs, the enterprise data center has implemented an environment where many servers run a single application, often utilizing less than 15% of the processor capability, wasting compute and natural resources. The situation is often worse in the smaller enterprise that lacks the IT staff and resources to evaluate alternatives.

The IT landscape has been changing over the past few years, evolving from an architecture consisting of a few proprietary servers engineered for scale-up operation, to an environment populated by many open-systems, x86 solutions deployed in a scale-out environment. The SMB *appears* to achieve significant savings because of lower acquisition costs, with multiple sources for hardware and software. Unfortunately, having different vendors for hardware, operating systems, database, and applications can add to the TCO of the IT environment through increased administration and maintenance complexity. Many of the anticipated savings from lower acquisition costs have also been eroded due to the inefficiencies inherent in implementing an environment where the enterprise deploys each server with a single application and 85% of the compute capability goes idle, while electrical energy is wasted at an alarming rate, again adding to the TCO.

The reliability of servers running the *Windows* operating system is also under a cloud. In order to achieve the reliability necessary for a mission-critical environment, some enterprise data centers often use a high-availability or fault-tolerant design, adding significantly to acquisition, deployment, and management costs. Unfortunately, the average SMB cannot afford such an expense, and their servers often operate exposed to the risks of a crash, which could disable their operation, costing thousands of dollars per hour.

Operational efficiency and scalability are the keys to growth and profitability, with both dependant upon the security, reliability, and resiliency of the IT infra-

structure. The SMB has the same IT needs as a larger enterprise, but with no IT staff available (except for the CEO's nephew!), it is more vulnerable to the dangers of complexity. Less complexity and more ease-of-use is the best enabler for growth.

IBM's Changing Strategic Focus

With a wealth of applications available, System i (including its predecessors) has been the solution of choice in thousands of enterprise data centers around the world for decades. In an effort to take advantage of significant product investments, IBM is working with a worldwide network of over 2,500 ISVs to reinvigorate their portfolio of 5,800 solutions and to attract new customers who, previously, may have been using an alternative platform, such as Wintel, that does not have the performance and reliability of System i. Over the past 2 years, IBM has added 1,100 new applications to that portfolio. Moreover, these applications have been focused upon a previously untapped resource for the System i, the small- and medium-sized business community, a demographic with at least one shared trait no matter where they do business – **the requirement for local support.**

Former Speaker of the House in the U.S. Congress Thomas "Tip" O'Neill once stated, "All politics is local." He was referring, of course, to how the concerns of cities and towns across the country affect the actions of their representatives and senators in Washington, D.C. When it comes to IT support for the SMB, the same sentiment applies: **all support must be local.** By nature, the SMB requires more handholding and TLC. In order to ensure that *local solutions* are available, IBM has implemented innovation centers around the world to assist ISVs in the porting and migration of their applications and thus enhance the value of System i. IBM is also paying more attention to the ISV who does not have global ambition, who simply wants to provide better service to his local customers.

Older System i models were optimized for traditional solutions and priced for performance based upon the CPW¹ rating. The

¹ CPW is a performance measurement of Commercial Processing Workloads, based upon an internal IBM benchmark using maximum configurations.

*System i 520*², for example, was configured to utilize only 20% of CPU performance in order to achieve a transactional performance metric of 600 CPWs, facilitating an easy in-cabinet growth to 3800 CPWs. Today's application set, however, does not conform to yesterday's environment. New solutions are being developed based upon *Java* and *WebSphere*, which require the full CPU performance available from today's advanced CPUs. Based upon IBM's POWER5+ processor, new models of the System i can utilize 100% of their CPU – up to a six-fold performance gain – making better utilization of the platform and the energy required to run it and cool the data center. POWER5+ and other technological advancements are a material example of IBM's innovation. To the SMB, however, the only innovation that matters is the innovation that makes their job easier.

System i innovation enables SMB users to transition from the do-it-yourself Wintel space to an integrated solution. This is innovation that matters. With an all-in-one platform with built-in operating system and database, built-in web services, a tool set for backup/recovery and performance tuning, the IBM channel can deliver a single point of contact for hardware, software, support, and maintenance. It is the ideal platform for business solutions. In fact, it always has been, except for the small matter of pricing, which, unfortunately, is not a small matter to the SMB. IBM is now addressing even that rather sticky issue.

IBM's new pricing strategy is now more compatible with SMB requirements. System i Express with two new models, the *System i 515* and *System i 525*, is not only easy to deploy and easy to manage, but it is also highly reliable, making it much more attractive to the SMB.

System i Entry-Level Systems

Both new systems, the i515 and i525 use the same infrastructure, based on IBM's highly successful *POWER* architecture. In this case, they use the latest revision of the microprocessor, the *POWER5+*, the same

CPU that IBM uses in their *System p* family of *AIX* servers. Small businesses of less than 40 users are the target market for the i515, while the scalability of the i525 makes it attractive to the mid-sized business requiring an elastic platform with a target utilization of several hundred users. The reliability of the System I is another attraction. With built-in virus resistance and security tools, the System I can be counted on to be there, without the complexity of weekly updates to fix bugs. Both of these markets are significantly smaller than the usual IBM customer profile. For this reason, and others, IBM is depending on the ISV channel for distribution.

System i 515 Express

The System i 515 is made to order for the smallest businesses, with just the right amount of performance, storage, and expandability to replace the six, or more, Wintel servers that would be required to perform the same functionality, without the complexity. Furthermore, the reliability of System i and the i5/OS provides the relief that overworked SMB IT “staffs” has been looking for. Configured with a 1.9GHz POWER5+ microprocessor, the i515 can start with 1GB of memory with a 36MB L3 cache, a pair of mirrored disk drives, and a five-user i5/OS license included. It can grow to two processors, 16GB of memory and 8 drives, with mirroring or RAID-5. The entry i515 has a CPW rating of 3800, 7100 with the second CPU, and carries an entry price of only \$8,500. Additional licenses are available at \$250 per user. This compares quite favorably with Wintel pricing, considering the number of x86 servers that would be required to meet the functionality of the i515.

The i515 comes with a standard three-month software warranty and a basic 9-by-5 next-business-day hardware maintenance agreement, with an optional upgrade to 24-by-7. Dynamic logical partitioning for i5/OS, AIX, and Linux is also available as an option.

System i 525 Express

The System i 525 is designed for a mid-sized business, with the scalability and performance necessary to provide support for a growing enterprise, **again without the complexity.** The i525 has all of the reliability of an enterprise-level System i, with i5/OS

² See **The Clipper Group Navigator** dated March 8, 2006, entitled *IBM Introduces On-Demand Scalability for System i5 520*, available at <http://www.clipper.com/research/TCG2006015.pdf>.

providing the functionality required by the data center team. Configured with two 1.9GHz POWER5+ microprocessors, one active, the i525 starts with 1GB of memory with a 36MB L3 cache and grows to 32GB. An Express configuration with a pair of mirrored disk drives can expand to 278 devices, mirrored or RAID-5, to support the largest database. An entry-level i525 comes with a 30-user i5/OS license included, with additional licenses available at \$250 each. As with the i515, the i525 can grow to two processors, increasing CPW performance from 3800 to 7100. The i525 has an entry price of only \$34,500. Activation of the second processor through Capacity on Demand provisioning, along with an additional 30 licenses, carries an upgrade cost of \$15,600. As with the i515, the i525 compares quite favorably with Wintel pricing when you consider the simplicity of an integrated i525 solution.

The i525 comes with a one-year software warranty standard, along with a 24-by-7 hardware maintenance agreement. Dynamic logical partitioning for i5/OS, AIX, and Linux is included as a standard function of the system.

Conclusion

Complexity, more than any other factor, is the element that adds to the TCO of the IT environment. While the acquisition cost of a Wintel platform may be lower, finding the right horizontal applications, keeping the operating system current and operational, and coping with upgrades drives the TCO up and up. System i provides an integrated entry solution with a smooth transition for growth rather than the “rip and replace” strategy mandated when the SMB outgrows its x86 tower. With over 5800 solutions from 2500 ISVs around the world, any System i customer can find a local ISV with solution support!

IBM has applied their greatest strength, the ability to innovate, to enhance the IT experience by making it easier for those who need it the most, the SMB with little or no staff to, with no capability to cope with the complexities of an “open” environment. Most, if not all SMBs envision the day when they will be larger and more profitable. They simply dread, however, the complex IT infrastructure required to achieve it. With

System i in place, the SMB can look forward to spending more time building its business, and less time managing updates and fighting one virus after another.

If you are a small or medium-sized enterprise looking for a while to implement a flexible, integrated IT solution that grows with you – on demand – look at the System i 515 and 525. Your life may be easier for it.



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