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Instant Insight
May 13, 2003

Back to the Future: IBM Introduces the eServer z990

By Charles King

IBM has introduced the eServer zSeries z990, the company's new flagship mainframe computing solution. According to IBM, the z990 offers significant enhancements over the company's eServer z900 mainframe including:

- On/Off Capacity on Demand (CoD) solutions, which allow IBM mainframe customers to power up and off available engines as they are needed.
- A new IBM multichip module (MCM) processing engine design providing the z990 up to twice the processor capacity and a 60% performance improvement over z900 solutions for Linux, ebusiness, and traditional workloads.
- Delivery of up to 11,000 Secure Socket Layer (SSL) transactions per second on a sixteen-way z990, a 57% improvement over a sixteen-way z900.
- Support for up to thirty logical partitions (LPARs), providing twice as many virtual servers as the z900.
- Provide for up to 512 I/O channels, double the number of the z900, and up to sixteen HiperSockets, or quadruple the number on the z900, for high-speed TCP/IP connectivity between virtual servers.
- Up to 256GB of memory, four times that of the z900.
- Software and services designed or enhanced specifically for the z990 from IBM TotalStorage, Tivoli, WebSphere, and DB2.
- Simplified product structure that reduces the number of mainframe models from forty-two to four. The z990 will be available in 8-, 16-, 24-, and 32-way configurations.
- New pricing and financing models, including changes in IBM's Workload License Charge (WLC) which lower the entry point for variable priced products, and IBM Global Financing options for On/Off CoD.
- Mainframe On Demand solutions provided by IBM Global Services. Which will provide mainframe capabilities in a utility model via IBM On Demand Data Centers.

Pricing/Availability

The IBM eServer z990 models A08 and B16 will be available on June 16, 2003, and Models C24 and D32 will be available on October 31, 2003. On/Off CoD functionality will be available in September 2003. No pricing details were included in the announcement.

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Originally conceived, developed, and deployed during the Jurassic era of computing, IBM mainframes beat the odds in avoiding both extinction and fossilization, and remain vital elements in enterprise datacenters worldwide. Most of IBM's competitors jumped out of the mainframe market years ago and like to claim that

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today mainframes belong in museums. Ironically enough, many of these same IT vendors vociferously claim that their own solutions offer "mainframe-like" capabilities, hoping to polish to their products by rhetorically buffing them with the considerable mojo mainframes possess in areas such as scalability, dependability, resilience, and security.

This is a natural enough, if largely inaccurate, response to a tough IT market where customers are increasingly demanding provable business value bang before they part with their hard-earned bucks. So given these circumstances, do the z990's numerous enhancements raise the stakes for its customers or drive a stake into the hearts of the competition? In a word, yes. But we believe a bit of historical perspective might cast some light on what IBM is up to with the z990.

IBM has had to walk a difficult tight rope with its mainframe products. At one end are the thousands of large enterprises that make up the bulk of the company's traditional mainframe client base while at the other stands a less certain host of new potential mainframe customers. The trick for IBM has been to develop solutions that enhance the lives of traditional clients and entice the imaginations and IT budgetary decisions of new customers. To successfully step across the heady drop separating the two groups, IBM developed signature zSeries solutions that significantly improved traditional workload performance while at the same time leveraging SSL-, Linux-, and LPAR-related technologies, allowing the company to promote the zSeries as a high-end solution for ebusiness and datacenter consolidation. Further, IBM introduced the z800 "mini" mainframe as a solution designed for smaller enterprises, Linux-specific applications, and traditional customers with more modest workload demands.

So what does the z990 offer that ups the stakes for IBM, its customers, and competing vendors? First, the z990 pushes the zSeries performance ceiling higher in virtually every category, an achievement that is likely to sit well with both traditional IBM enterprise customers and new clients who are utilizing mainframe solutions for key ebusiness applications. Additionally, enhancements to the z990's virtualization capabilities make the new server an even more compelling high-end server and datacenter consolidation solution, especially when one takes the performance/efficiency advantages mainframes offer over conventional servers into account. The z990's On/Off CoD solutions and WLC pricing changes are likely to be attractive among zSeries customers who are feeling pinched economically, and IBM's new On Demand offerings could drive the notion of and need for mainframe solutions into new industries, businesses, and applications.

Does this mean that the z990 represents the opening salvo of a mainframe assault that will drive conventional servers out of the datacenter and into the woods? Hardly, since mainframes remain, for now anyway, primarily a tool for enterprises that require and are willing to pay for the highest levels of IT stability, performance, and security. But this newest IBM zSeries solution demonstrates that a technology most IT vendors declared dead, buried, and gone to dust years ago remains vital, growing, and powerful today. The fact is that while mainframes are highly geeky solutions in the best of times, IBM has driven its continuing zSeries Renaissance by successfully translating mainframe-computing technologies into mainline business values. Like other zSeries products before it, IBM designed the eServer z990 to meet the needs and solidify the loyalties of existing mainframe customers while at the same time opening up new venues for mainframe solutions. For that reason, the new IBM eServer z990 may be the biggest, fastest, ablest mainframe currently on the block, but we believe it is wiser to view it as simply the latest chapter in an ongoing story that will continue for many years to come.

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