

IBM Targets Security Issues With Its New Mainframe

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IBM has used recent industry developments to bolster its thesis that the mainframe is the ideal hub of the enterprise infrastructure. But we view the new IBM z9 mainframe as more evolutionary than revolutionary.

NEWS ANALYSIS

Event

On 26 July 2005, IBM announced the System z9 (or "z9-109") mainframe system, the follow-up to the zSeries z990 family. Five z9-109 models, offering between one and 54 configurable processor units, are planned for availability between September and November 2005. IBM keyed the announcement to its unveiling, on the same day, of its updated "collaborative computing" vision — wherein systems increasingly engage in real-time, shared processing. The company stresses that the mainframe's advanced security and virtualization capabilities make it the ideal hub for such future computing environments.

Analysis

Although IBM positions the z9-109 as the first in a new family of mainframe servers, we believe it represents more of an evolution of the zSeries. The z9-109 will be of major interest to IBM's largest mainframe customers — which have thousands of MIPS (millions of instructions per second) installed — and, in 2H05, it should reverse the recent shortfall in IBM's mainframe hardware revenue.

The z9-109 has more than double the computing capacity of the z990 T-Rex, largely due to an estimated 35 percent boost in processor performance and more available engines — 54, up from 32 for the z990. For now, the limit of 32-way single-system support remains, but the extra engines will be used for specialty processors and to support more logical partitions. Other new system maximums include 60 logical partitions, 512 gigabytes of memory, 1,024 channels and 336 FICON (Fibre Connection) channels. System I/O bandwidth has increased from 96 to more than 172 gigabytes per second.

This is a much larger system than customers would need if it were aimed only at traditional workloads and legacy application growth. But IBM continues to target new roles for the mainframe, along with emerging markets such as China. The recent rash of well-publicized corporate security breaches has influenced IBM's decision to emphasize the mainframe's inherent security strengths, and to build on these strengths with a number of security enhancements and statements of direction (such as encryption of data written to disks or tapes). IBM's \$1.2 billion three-year investment in the z9-109 sends a strong message that IBM still views the mainframe as a solid business opportunity.

Recommendations

- **Organizations with thousands of installed mainframe MIPS:** Seriously examine the z9 for the capacity it offers, weighing carefully the potential hardware, software and maintenance-pricing benefits.
- **Smaller organizations:** Expect the technical design of the z9 to trickle down to IBM's midrange mainframe offerings during the 2006-2007 time frame.
- **Organizations seeking to allay security concerns:** Look to the IBM mainframe as one significant piece of a comprehensive approach to safeguarding corporate data.

Analytical Sources: John Phelps and Mike Chuba, Gartner Research

Recommended Reading and Related Research

- "Survey Results Reveal Perceived Role and Use of the IBM Mainframe" — Feedback from a recent Gartner survey suggests that IBM's mainframe viability efforts need to be better communicated. **By Mike Chuba**
- "IBM zSeries Announcements Pursue Mainframe Charter Framework" — IBM continues to build on the Mainframe Charter, its plan to address concerns about the long-term viability of its zSeries platform. **By Mike Chuba and John Phelps**

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