

## **AMD's Pacifica Marks Another Advance for Virtualization**

**Martin Reynolds**

Gartner believes virtualization technology will transform the way PCs are used in this decade. AMD's Pacifica, scheduled to ship in 1H06, will join Intel Virtualization Technology (IVT) in driving this critically important trend.

## NEWS ANALYSIS

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### Event

On 25 May 2005, AMD announced that it will ship its Pacifica virtualization technology, which provides AMD's advanced processors with support for hardware virtualization, in 1H06.

### Analysis

The newly announced release plans for AMD's Pacifica technology advance the industrywide trend toward hardware virtualization — a trend that Gartner believes will transform the way PCs are used more than any other development in this decade. Virtualization on the x86 platform will clear the way for a new class of innovation, making the platform more flexible, manageable and secure. Both home and business users will benefit from the technology, which will rapidly proliferate across the entire x86 market. Virtualization technology will become critical to IT users in the server and desktop environments. The technology will also allow Intel and AMD to create platform innovations without affecting Windows, a key opportunity to increase the value of their technology to users. By 2007, most new PCs and servers will incorporate virtualization technology (0.9 probability).

Intel introduced its Vanderpool virtualization technology — now marketed as IVT — in January 2005, and plans to ship virtualization-enabled processors early in the second half of 2005. In a move that is unusual for the company, Intel will ship IVT before software that uses its capabilities is generally available. The availability of IVT will, however, spur software development.

Unlike the 64-bit enhancements, which are almost identical in the AMD and Intel implementations, AMD's Pacifica is significantly different from IVT in its implementation. Both technologies achieve the same results, but it is not clear where one will have material advantages over the other. At this early stage, both approaches will be sufficient for market needs. Any differences will be handled by a module in software that uses hardware virtualization.

**Recommendations for enterprise IT managers:** Recognize that virtualization technology will be in widespread use by 2008. Evaluate virtualization products such as VMware ACE, VMware ESX Server and Microsoft Virtual Server 2005 to gain insight into virtualization opportunities. Specific benefits include the ability to create secure, tightly managed virtual PCs on contractor- and employee-owned machines (VMware ACE) and to more efficiently manage server deployments and utilization (VMware ESX Server and Microsoft Virtual Server 2005).

**Analytical Source:** Martin Reynolds, Gartner Research

### Recommended Reading and Related Research

- "Key Technologies Needed on the Road to Tera-Architectures" — Tera-architectures are one way to build the large, scalable infrastructure required for next-generation business applications. But they will require new software and hardware components. **By Martin Reynolds**
- "Intel's Vanderpool Will Spark Virtualization Innovation" — The accelerated release of Vanderpool will advance critical virtualization efforts, but this technology must be carefully managed. **By Martin Reynolds**

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