



Nick Turnbull

Bridging the Gap between virtualisation and availability

Over the last few years the uptake of virtualisation technology has risen sharply and continues to prove to be very rewarding for the channel. To stay ahead of the game, resellers must now consider how businesses will protect their virtual environments from unplanned downtime. Nick Turnbull, director of sales, EMEA and Asia Pacific, Marathon Technologies, examines how the channel can reap the benefits.

The benefits of virtualisation have been well heralded; by consolidating servers in a virtualised environment businesses are seeing reductions in server capital expenditure, lower server management costs, increased IT agility and the opportunity to present a stronger 'green' CSR message. There is no doubt that businesses of all sizes can reap the benefits, which means big business for the channel, and with plenty of room for growth in this market, the channel will doubtless continue taking a large slice of the cake.

It all looks very rosy – businesses are basking in their virtualisation rewards, and the channel revelling in business growth. However, businesses are beginning to realise that there are risks associated with virtualisation. One of the more pressing effects, due to the complex architecture of virtualised environments, is an increased susceptibility to unplanned downtime. The risk is greater because server consolidation often results in a single point of failure for multiple applications.

For many businesses downtime of their critical applications is a risk they are not willing to take. Today, the cost of just a few minutes of unplanned downtime can be hugely detrimental. This risk, plus the cost and complexity of the most popular virtualisation software, is the reason, many businesses, especially SMEs, have been reluctant to adopt virtualisation.

Today's virtualisation technologies are particularly useful for protecting applications from planned downtime; outages necessary for administrative purposes. But protecting virtual environments from unplanned downtime is a different matter. In many cases, virtual environments employ traditional clustering and failover techniques, which use rudimentary heartbeat pings to check the status of a virtual machine. This approach suffers from several drawbacks:

- Clustering and failover add cost and complexity to the environment, requiring manual configuration, setup, scripting and testing to define the appropriate actions to take in case of failures. This additional administrative complexity can introduce errors, contributing to availability issues
- Heartbeat pings are unable to reliably determine the health of a virtual machine and may not distinguish between I/O path failures, server failures, and lack of system resource. In some cases, these limitations may result in unnecessary or false failovers. In other cases, discrete storage or network device outages are not identified as failures and the system does not fail over
- The failover process is far from certain; it assumes that the administrator has configured the standby system appropriately for the application and has maintained that

configuration. If the target system is not configured appropriately, then when a failover does occur, the application or virtual machine is inoperable on the standby system, causing a "failed failover". Given the sense of uncertainty, some refer to this approach as "ping and pray."

With this in mind, the channel needs to understand the key implications and be ready to provide the right mix of technology and services that can bridge the gap between virtualisation and availability. Emerging virtualisation technologies, are opening doors by removing existing barriers of entry; cost and complexity. By understanding these emerging technologies and introducing them in the right way, resellers can help companies protect their critical applications, preventing costly downtime and failures, while allowing them to virtualise their environments.

According to IDC, the server virtualisation market will grow from \$1.1bn in 2006 to \$3.1bn by 2010. In the same period, the availability market is predicted to grow from \$1.5bn to \$2.1bn, and fully half of all data centres will deploy availability solutions in their virtualised environments. The industry's growing concern for availability in virtualised environments is opening huge opportunities for the channel, as long as the channel understands the risks and the technology available to remedy them.

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