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# Securing your virtualized environment

Protecting virtualized resources requires a mix of old and new security tactics.

By John Edwards

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Computerworld - [Virtualization](#) promises to make IT departments more flexible, more efficient and -- perhaps most crucial in these tough times -- more frugal. But one advantage the technology doesn't provide is an escape from the need for [strong security measures](#).

As soon as he began planning his Novell [virtualization project](#), Noah Broadwater realized that he was looking at an initiative that would require both a continuation of existing security practices and an analysis of any perils that might be created by the new technology.

"It was evident that [virtualization demanded a close look](#)," says Broadwater, who is vice president of information services at New York-based children's media producer Sesame Workshop. "Above all, we had to make sure that we would be secure on all fronts."

Neil MacDonald, an analyst at Gartner Inc., says that virtualization is opening new doors for IT departments as well as for people who seek to tamper with critical data and services.

"Adopters can expect that virtualized software, like hypervisor software, will be attack targets," he says. "Therefore, [virtualization security planning](#) should be addressed at a project's inception."

## Crash and Learn

With IT departments in today's [crashing economy](#) being asked to do more with less, virtualization's lure is becoming increasingly irresistible. But as some departments rush headlong toward the technology in an effort the stretch scarce dollars, the temptation arises to [skimp on security](#).

Many thrifty managers believe that the same technologies currently used to protect conventional physical servers can simply be extended to virtualized environments. But MacDonald says that's a potentially calamitous assumption. He notes that the unwary could be trapped by threats in several areas, including software, administration, mobility, the operating system and network visibility (see "Virtualization's Soft Spots," below). "There need to be policies to address these issues," he adds.

### Virtualization's soft spots

Gartner analyst Neil MacDonald identifies eight areas of potential weaknesses in virtualized environments:

- Virtualization software, such as hypervisors, which represent a new layer of

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privileged software that could be attacked and must be protected.

- Loss of separation of duties for administrative tasks, which can lead to a breakdown of defense in depth.
- Kludgy processes for patching, signature updates and protection from tampering for offline VM and VM "appliance" images. The process for developing, testing and certifying fixes is lengthy and cumbersome, leaving systems vulnerable.
- Patching and secure confirmation management of VM appliances where the underlying operating system and configuration aren't accessible, making it difficult for users to secure their environments without vendor help.
- Limited visibility into the host operating system and virtual network to find vulnerabilities and assess proper configuration.
- A restricted view into traffic among VMs for inspection by intrusion-prevention systems.
- Mobility. Mobile VMs will require security policies and settings to mitigate risk.
- Immature and incomplete security and management tools.

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### Magic Quadrant for Secure Web Gateway

Web 2.0 and associated malware threats continue to drive the secure Web gateway

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### Corporate Web Security - Market Quadrant 2011

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