IT managers may be feeling a bit of déjà vu these days. Shortly after meeting last April’s deadline to migrate desktop PCs off the stable, but outdated, Windows XP operating system (OS), they’re now facing a new deadline: Microsoft will no longer support the workhorse Windows Server 2003 R2 after July 14, 2015.

Following that date, users won’t receive patches or security updates, leaving machines open to new cyberattacks. Some experts estimate that as many as 10 million machines will still be running the OS when the deadline hits.

The problems are more serious for IT departments in industries that are highly regulated. Maintaining an outdated server OS may threaten an organization’s compliance status with regulations such as the Health Insurance Protection

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Act (HIPA) and the Payment Card Industry Data Security Standard (PCI DSS). And even for industries not affected by these regulations, providers of IT hosting services will ultimately force customers to migrate to fully supported platforms to maintain service-level agreements.

However, there’s good news for IT managers at organizations still running the 11-year-old server OS. In many cases, the upfront planning, application remediation and migration procedures for the Windows Server upgrade will be less daunting than for Windows XP.

But that assumes two factors: first, that an organization has already started or will immediately begin the migration process; and second, that it has a comprehensive plan for ensuring a smooth transition to Windows Server 2008 or Windows Server 2012 options.

**Beyond 2003**

“The biggest risks come when enterprises put off the migration process too long,” says Charles King, principal analyst at Pund-IT Research. “It’s one thing to keep a desktop system chugging along until it gives up its dying breath. But that’s not something you want to do with servers and applications that are critical to keeping your organization running effectively. If a company hasn’t already thought about how to make this change, they need to start now to create a viable migration strategy.”

A looming deadline isn’t the only reason to jettison Windows Server 2003 R2. Industry experts say the newer Windows Server operating systems offer a wide range of benefits, including comprehensive support for today’s most important IT imperatives, such as virtualization, cloud computing, mobile applications and sophisticated security defenses.

By contrast, Windows Server 2003 R2 was born when client-server architectures reigned, virtualization and cloud computing hadn’t reached the mainstream and mobility meant a notebook PC that connected to the Internet via a dial-up modem or Ethernet link.

“We now live in a very different world, and enterprises need an operating system that’s designed for today’s needs,” says Mike Schutz, general manager of product marketing in Microsoft’s Windows Server and management division, and a member of the team that planned and released Windows Server 2003 more than a decade ago.

Among those needs is technology that helps IT managers design infrastructures based on cloud computing and mobility, the latter characterized by lightweight notebooks as well as tablets and smartphones. “There are huge opportunities for future-proofing investments by modernizing Windows Server 2003 R2 servers to Windows Server 2012 R2,” Schutz adds.

“Just as importantly, today’s cyberthreat landscape is much different than a decade ago,” he says. “The majority of servers were connected to the internal local area network as opposed to today, when we live and work on the Internet. And the bad guys were much less sophisticated than they are today.”

Modern versions of the Windows Server OS also support 64-bit processors, which enables servers to access significantly larger amounts of memory than is possible with 32-bit Windows Server 2003 R2. “Look at what those extra bits will get you from a business perspective,” advises Greg Schulz, senior advisory analyst at The Server and StorageIO Group, a consulting firm. “They may enable your applications to run better and be more stable, as well as giving you room to grow.”

Organizations that currently run a mix of Windows Server versions may consider moving entirely to the 2008 RS or 2012 R2 editions. Standardization promotes data center efficiency while enabling organizations to take advantage of the latest technology innovations, manage fewer images and reduce ongoing maintenance and patching complexities.

**Why Procrastinate?**

The many benefits of migrating to a newer OS raise a serious question: Why are enterprises still running a proven but outdated OS? “The first logical question I would ask somebody who is still running Windows Server 2003 R2 is, ‘Why?’” says Anil Desai, an independent IT consultant who specializes in cloud computing and data centre technologies.

A common answer, he says, is that the organization relies on a specialized application written for the legacy OS that continues to support a current business process. But even in this case, IT managers should examine why they’re keeping one foot in the past.
“If you’re staying with 2003 because you either bought or developed a customer application, then the real issue may not be how you migrate from Windows Server 2003,” Schulz says. “Instead, it may be how you migrate from that application to a new or replacement version.”

Sticking with an old but still-valuable application isn’t reason enough to continue to run Windows Server 2003 R2. “Enterprises should look at these applications on a case-by-case basis to see how they can move these workloads to newer hardware or to a virtualized environment and a newer version of Windows Server,” Desai says. “The vast majority of the workloads can be moved relatively easily.”

Another typical reason for procrastination is the perception that server upgrades are challenging to complete or hard to fund because of budget constraints. “In reality, what we find is that the return on investment is clear because of all the new capabilities that IT managers can take advantage of in newer versions of the OS,” Schutz says. “For many organizations, it’s not that they can’t afford an upgrade, it’s they can’t afford not to do it.”

Finally, some enterprises may balk at migrations because they fear the disruption that comes with running new software. But most organizations won’t be moving into uncharted territory. Few enterprises today solely run Windows Server 2003 R2. More likely, they use a mix of this OS with 2008, 2012 and perhaps the latest 2012 R2 editions.

As they realize that standing pat is a poor option, IT managers have two other choices to consider: to upgrade to a new server running a newer OS or to keep the current server and migrate to the newer software. Each option has its own benefits and drawbacks, and organizations must decide which is right for them.

Experts say the benefits of migration go beyond purely technological advances. The upgrade process encourages IT managers to rethink and consolidate the IT resources. “Whenever a fundamental change happens, it encourages people to re-examine their IT environments,” Desai says. “Many new capabilities have become available in server operating systems in the last decade,” he adds. “Re-evaluating application usage gives people a chance to consider how these new options can better serve the enterprise.”

Steps for Successful Migrations

With support for Windows Server 2003 R2 waning and a host of practical reasons for migrating, how can IT managers put an effective upgrade plan into practice? First, the good news: IT managers don’t have to do the project alone. Outside IT consulting organizations offer tools and expertise to ensure successful migrations.

When it’s time to act, experts say IT administrators should focus on four key steps:

1. **Inventory the existing IT environment.** To create a comprehensive and effective migration strategy, IT managers first must create a full inventory of all the relevant servers and applications.

A variety of tools can automate...
the auditing process, including the Microsoft Assessment and Planning Toolkit. “There are numerous tools that will show you everything that’s running on all your servers,” Desai says.

2. Assess and prioritize relevant applications. With an accurate inventory in place, IT managers should analyze their IT resources to determine which ones should be part of the migration.

“Some applications may need more extensive rewrites before they can be moved off of Windows Server 2003 R2, and that varies whether they’re a third-party application, a custom application or one from Microsoft,” says Schutz.

Microsoft provides guidance and tools for customers on Microsoft.com, including the Microsoft management planning assistant, which can help customers identify third-party solutions.

Security is another critical assessment consideration. Ranking the resources according to low, medium and high risk will help ensure organizations address the most significant vulnerabilities well before the 2015 deadline.

3. Target the right destination for existing applications. Newer Windows operating systems offer embedded technology for easily virtualizing existing applications, which can then continue to run internally or move to a hosted Infrastructure-as-a-Service (IaaS) environment, such as Microsoft Azure. Or IT managers may decide on Software as a Service (SaaS) for standard business applications, such as Office 365 for email and productivity. Both IaaS and SaaS can reduce capital expenses and increase IT agility.

The IT roadmap and advice from outside consultants can help administrators pick the best targets now and for the future.

4. Launch the migration. Detailed, upfront planning helps smooth the final step, the actual migration of servers from Windows Server 2003 R2 to versions of Windows Server 2008 or Windows Server 2012. Creating a separate server environment that parallels the production infrastructure can speed migrations and reduce disruptions to end users. “IT managers can run the same applications and services as in the existing environment to test and verify the upgrade process to get ready for a full cutover to production systems,” Desai says. “It’s cheap, quick and easy, and you generally don’t need to buy more hardware to support that,” he adds. “Also, if a big problem crops up after going to production, managers can fail back quickly with minimal disruption to business.”

With Windows Server 2003, many applications will still be running on physical hardware. Utilities are available from a variety of virtualization vendors to quickly create a parallel environment.

“You copy the entire configuration of a physical machine and pull it into a virtual machine in a process that’s referred to as physical-to-virtual, or P2V,” Desai explains. “With these utilities, people can address hundreds of machines at a time.”

Some of these tools also accommodate clouds. For example, with Microsoft Virtual Machine Converter, IT managers can go from physical to virtual to cloud, such as an IaaS platform, which then makes the resources available to end users.

Migrate Without the Drama

With the right plan in place, IT managers can optimize their infrastructures and create a foundation for today’s most important innovations — all with as little disruption as possible to end users.

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