HOW THE WINDOWS SERVER 2003 END OF SUPPORT WILL IMPACT YOUR BUSINESS

A Comprehensive Guide to Upgrading Your IT Infrastructure, Before the July 14, 2015 Deadline

Dial a Nerd

EXECUTIVE SUMMARY

Windows Server 2003 is one of the world's most widely used operating systems, with approximately 24 million virtual and physical installations in operation as of July 2014. Nevertheless, the end of support for the operating system is rapidly approaching.

On July 14, 2015, Windows Server 2003 users will find themselves extremely vulnerable to cyber attacks. Many companies are still unprepared for the situation, which has a potential impact so significant that the U.S. Computer Emergency Readiness Team (US-CERT), a part of the U.S. Department of Homeland Security, issued a major alert.

This white paper will investigate the details surrounding the Windows Server 2003 end of support. It will answer the following questions:

- What does the term "end of support" mean, both objectively and within the context of Windows Server 2003?
- What will happen if a company continues to use Windows Server 2003 after the end of support?
- What are some up-to-date alternatives to Windows Server 2003?

It should be noted that this white paper is an introduction to the subject, and should be used in conjunction with advice from experienced IT professionals. Guidance from these professionals can help companies determine the correct course of action for moving away from Windows Server 2003.

http://redmondmag.com/articles/2014/09/18/server-2003-end-of-support.aspx

https://www.us-cert.gov/ncas/alerts/TA14-310A

THE LIFECYCLE OF AN OPERATING SYSTEM

All products released by Microsoft follow a standard lifecycle that includes both mainstream support and extended support. Microsoft's lifecycle offers at least 10 years of support for operating system products, including five years of mainstream support and five years of extended support.

During the mainstream support period, Microsoft makes product enhancements, provides updates for security and non-security issues, and offers both complimentary and paid support options. During the extended support period, Microsoft only provides its customers with security updates. However, in some cases, companies can purchase expanded support packages. At this stage in the lifecycle, paying for support is the only way to obtain Microsoft's assistance on non-security matters.

The lifecycle for Windows Server 2003 began with its debut in April 2003. A subsequent product, Windows Server 2003 R2, was released in 2005. There are multiple editions of the operating system, including the web edition, standard edition, enterprise edition, data center edition, and small business server edition. All of these support both 32-bit and 64-bit usage, except for the web edition, which only supports 32-bit applications. These products provide server support for services such as email, printing, and file sharing.

All versions of Windows Server 2003 are currently in the extended support period. After the support period ends on July 14, 2015, Microsoft will no longer provide security updates for the operating system. Although online self-help support may still be accessible after the support period ends, additional updates will only be available through custom relationships negotiated with Microsoft.

BUSINESS ISSUES RELATED TO THE END OF SUPPORT

Security Vulnerabilities

By far the biggest issue connected to the end of support for Windows Server 2003 is the lack of security updates. Without these updates, Windows Server 2003 users will be dangerously vulnerable to cyber attacks.

> *It is believed that some hackers are already planning to launch their attacks after the end of support.*

The use of third-party security programs is not a solution to this problem. While a fraction of major antivirus and anti-malware software companies may provide some limited support, this is not a suitable replacement for Microsoft’s security updates.

To put these updates into context, Microsoft issued 37 critical updates to Windows Server 2003 in 2013. These updates were essential for preserving the security of the system.

Unsupported operating systems are easier targets for cyber criminals, since they know that their attacks are more likely to succeed. Typically, the biggest threats to these systems are so-called zero-day vulnerabilities, which are security holes that have not beendiscovered by software makers and antivirus companies. This means that these companies have not developed patches for these vulnerabilities. Since there will no longer be updates for Windows Server 2003 after the support period ends, every new attack against the operating system will effectively be a zero-day attack indefinitely.

> ***Unsupported systems are prime targets for hackers because they know that their attacks and exploits are more likely to succeed against outdated security parameters.***

It is likely that cyber criminals are already looking for zero-day vulnerabilities in Windows Server 2003. They plan to hold off their attacks until after the end of support. After this point, the security holes uncovered in these zero-day attacks will remain open, since Microsoft will no longer be providing patches. Cyber security experts are aware of this technique, and have warned about it in the past.

In addition, because of similarities between Windows Server 2003 and Windows Server 2008, any vulnerability found in the latter may also exist in the former. However, while Windows Server 2008 is supported and would be patched in the event of an attack, the 2003 version would remain vulnerable. This means that a hacker can take a vulnerability found in Windows Server 2008 and use it to break into Windows Server 2003.

There may also be increased application-specific security vulnerabilities as well. Many application vendors discontinue support for their products on retired operating systems. Vulnerabilities within those applications, as well as the operating system itself, will remain unaddressed.

Security risks can be mitigated by actions such as disconnecting servers from insecure networks and adding additional antivirus and anti-malware programs. However, as Windows Server 2003 computers provide server functionality, they are generally highly connected machines and not easily isolated.

http://redmondmag.com/articles/2014/09/18/server-2003-end-of-support.aspx

http://www.wired.com/2014/11/what-is-a-zero-day/

http://www.computerworld.com/article/2483621/malware-vulnerabilities/xp-s-retirement-will-be-hacker-heaven.html

http://www.infosecurity-magazine.com/news/uscert-microsoft-server-2003-a/

http://blogs.wsj.com/cio/2014/11/13/homeland-security-sends-alert-on-windows-server-2003-risks/

The Costs of Staying With Windows Server 2003

There are costs that can be directly and indirectly attributed to the security vulnerabilities of an unsupported system. The Gartner research firm has stated that using Windows Server 2003 after the deadline could end up costing companies approximately R20, 000.00 per server per year.

Using unsupported software can also result in failing compliance audits. For example, the Payment Card Industry (PCI) has standards that require using supported software. Failure to meet these standards could result in a loss of business as well as significant fines.

Using Windows Server 2003 after the deadline can also lead to complications when trying to upgrade software from third-party vendors. These vendors often discontinue updates for unsupported operating systems. As a result, their products' new features may only be available in versions that are incompatible with Windows Server 2003.

LEARNING EXPENSIVE LESSONS FROM MICROSOFT XP

In early 2014, Microsoft ended support for its Windows XP operating system. The end of support affected millions of people. Many companies recognized that they would be vulnerable to major security risks, but failed to properly plan for the end of support. As a result, they ended up paying for expensive custom support contracts in order to keep their systems safe. Even though Microsoft reduced the cost of those contracts, some firms still ended up paying huge amounts of money.

It is possible that Microsoft will negotiate similar contracts when Windows Server 2003 support ends. However, even if a company is able to afford the cost of a custom support agreement, this does not remove the need to upgrade to a supported platform. These agreements will not continue indefinitely, and will require a specified end date for completing the process of moving away from Windows Server 2003.

Paying Microsoft for custom support ended up costing some unprepared companies hundreds of thousands of dollars.

THE BEST SOLUTION

The Windows Server 2003 end of support presents many companies with a complicated problem. The best solution to this problem calls for migration, a procedure that Microsoft defines as the act of transitioning from a soon-to-be-unsupported operating system to a newer operating system.

The migration process requires a considerable amount of time. Businesses need to analyze their current IT infrastructure, develop a workable plan for migration, and implement it.

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http://www.computerweekly.com/feature/Managing-risk-after-support-for-Windows-Server-2003-ends

HOW TO UPGRADE WINDOWS SERVER 2003

Microsoft has created a list of four steps for upgrading Windows Server 2003. The four steps in this list are “Discover,” “Assess,” “Target,” and “Migrate.” A brief overview of each step can be found below.

These steps describe the migration process in broad terms. However, business owners and executives should seek the guidance of qualified IT professionals for determining the details of their specific situations.

1 Discover

Ideally, companies should keep updated lists of their servers and the software versions that they are running. In reality, companies rarely have lists like these, and the lists that do exist are often out of date. Since a company is at risk if even a single server is using an unsupported operating system, it is necessary to review the inventory and make sure that all computers are correctly documented.

In addition to identifying which computers are running Windows Server 2003, companies also need to identify the specific applications and databases on each server. These applications should be categorized into the following groups: Windows server roles, Microsoft applications, custom applications, and third-party applications. A comprehensive discovery effort will allow a company to accurately gauge the full extent of its migration process and allocate the right amount of resources for its completion.

2 Assess

Following the discovery phase, companies should assess the importance and sustainability of each application and workload. This will allow them to determine which applications are not being fully utilized and which ones are redundant.

Companies should determine which files and tools are of critical importance and which ones are less significant. Microsoft recommends categorizing these components by type, criticality, complexity, and risk. After this categorization, companies can create a migration plan that arranges these components in the most efficient order.

3 Target

There are multiple upgrade options, including migrating to Windows Server 2008, Windows Server 2008 R2, Windows Server 2012, or Windows Server 2012 R2. Companies can also choose to migrate to a non-Windows operating system, though this is often more challenging. At this stage, companies should also consider incorporating virtual machines or cloud-based platforms into their future IT infrastructures.

In some cases, new hardware will be necessary and must be purchased. In other cases, existing hardware can be reused. It may be necessary to upgrade components of existing hardware, such as adding memory or CPUs, to enable them to run the new software.

Each company's chosen alternative to Windows Server 2003 will impact its ability to operate and grow in the future, so this is a critical decision. Specific information about each option can be found in the following sections of this white paper.

3 Migrate

At this stage, companies should be ready to implement their plans. The actual migration process, however, is a technical endeavor that is best left to IT experts. Companies should coordinate with their service providers to execute the necessary procedures.

Before beginning the migration process, companies should create backup copies of their entire IT infrastructures. This will allow them to recover data and continue operations, should there be any problems during the migration process.

After completing the migration process, companies should set aside time for a post-migration review process. This period of a few days should be used to monitor the new environment and address any problems.

If the selected migration option calls for discarding obsolete hardware, then companies should be sure to erase all data stored on the hardware. An experienced IT service provider can help in the disposal process, and can guarantee that confidential data is not put at risk when the old hardware is discarded.

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ALTERNATIVES TO WINDOWS SERVER 2003

There are a few alternatives to Windows Server 2003. A brief overview of these alternatives is presented below, although each option should be explored within the context of a company's specific operational requirements.

Windows Server 2008 and Windows Server 2008 R2

For many companies, Windows Server 2008 presents the most straightforward migration plan. There is a direct migration path from Windows Server 2003 to Windows Server 2008, and the upgrade can be completed on the same hardware.

However, on January 13, 2015, Microsoft ended mainstream support for Windows Server 2008 and its successor Windows Server 2008 R2. In January 2020, extended support will end as well.   Companies that choose this migration path are only buying themselves a few years' reprieve. After those few years, those companies will have to address these end-of-support issues again.

Some versions of Windows Server 2008 support 32-bit applications. Migrating to this product may extend the life of those applications and delay the need for extensive redevelopment and testing of custom software. Windows Server 2008 R2, on the other hand, only supports 64-bit applications.

Windows Server 2008 R2 also includes the Hyper-V tool, which enables configuring virtual machines. A standalone version of Hyper-V can be installed on Windows Server 2008. This version provides most of the virtualization capabilities of the original software.

Windows Server 2012 and Windows Server 2012 R2

Windows Server 2012 and Windows Server 2012 R2 are Microsoft's latest server operating systems. These two operating systems will be supported until 2023, and they support more memory and failover nodes than Windows Server 2008.

There is no direct upgrade path from Windows Server 2003 to Windows Server 2012 or Windows Server 2012 R2.

Windows Server 2012 and Windows Server 2012 R2 only run on 64-bit servers. As a result, companies with older hardware may need to buy new equipment in order to use these systems.

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These operating systems also include Hyper-V. There are significant upgrades to the functionality of Hyper-V in these operating systems, primarily the elimination of constraints on resource usage. Since Windows Server 2012 R2 was released about one year after its predecessor, it has a few improvements. These include integrated support for Office 365 and faster deployment of virtual machines.

There is no direct upgrade path from Windows Server 2003 to Windows Server 2012 or Windows Server 2012 R2. Upgrades are supported from Windows Server 2008 and Windows Server 2008 R2, and some companies may choose to migrate to Windows Server 2008 as an intermediate step in their migration process.

Cloud-based Solutions

Instead of using a company's in-house computers, a cloud-based solution uses remote infrastructure and software accessed via the Internet. These solutions can be very cost-effective, since companies only pay for the resources they actually use.

In contrast, companies with in-house solutions typically pay for unused server capacity. These companies often have unused server space on hand in case they need it in the future. The scalability of cloud-based solutions, on the other hand, lets companies add or subtract server space as their needs change.

Companies can choose to store only some of their files in the cloud. This hybrid configuration lets them maintain essential data on local, physical infrastructure and non-essential data in the cloud. In essence, these hybrid cloud-based solutions combine the security of an in-house solution with the flexibility and scalability of cloud computing. Companies that opt for a hybrid cloud-based solution will still need to upgrade to one of the newer server operating systems mentioned above.

Cloud-based solutions offer companies a quick, cost-effective way to tailor their server situations so that they line up with the changes in their businesses.

Windows Azure is Microsoft's cloud computing platform, and it has many different features and services associated with it. As part of one service package, Microsoft manages a company's servers, virtualization, storage, and networking while the company manages the applications, data, middleware, the operating system, and the runtime.

A second service package adds the runtime, middleware, and operating system to Microsoft's list of responsibilities. This leaves the company to manage the applications and data. A third package will include the data as well, leaving the company with just the applications to look after.

Microsoft is not the only option for companies with Windows operating systems. Both Google and Amazon, for example, provide cloud-based environments that support these systems.

In addition to these major firms, there are also many other cloud-based service providers. While there are several differences between these providers, cyber security and data recovery are two of the most important factors to consider when comparing their services. Your IT service provider can offer specific recommendations based on their experience with different solutions.

THE NEXT WINDOWS SERVER PRODUCT

Microsoft typically releases its client and server operating systems at roughly the same time, but this will not be the case with the next two products from the company. The latest client operating system, Windows 10, is scheduled for a release sometime in late 2015. In contrast, the company's next server operating system was pushed back to 2016.

According to a Microsoft statement given to a journalist at the ZDNet online technology news outlet, the delayed release relates to the need for "adequate customer and partner feedback and participation." In order to generate this feedback, the company will release several preview editions of the product throughout 2015. As a result, the end product will only be ready in 2016.

In all likelihood, Microsoft wants to keep its clients focused on migrating their servers through one of the options currently available. Debuting a new product in 2015 would only introduce another variable into an already complicated situation.

However, the delay may also be linked to the end of support for Windows Server 2003. It is possible that Microsoft postponed the release of the latest server operating system in order to avoid confusion among those looking to upgrade their IT infrastructure. Rather than introduce a new element to the discussion, the company presumably wants its clients to focus their migration efforts on Windows Server 2008, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, or Windows Azure.

http://blogs.technet.com/b/server-cloud/archive/2015/01/30/windows-server-and-system-center-roadmap-update.aspx

http://www.zdnet.com/article/microsoft-pushes-windows-server-next-back-to-2016/

FINAL THOUGHTS

The approaching end of support for Windows Server 2003 is a daunting challenge. But it can also be seen as an opportunity.

Companies can take this time to evaluate their current and future IT needs. They can then create long-term plans for incorporating IT into their overall business agendas.

Migrating to a newer server operating system comes with a wealth of benefits. However, because of the complex and critical nature of this process, companies must take the time to do the appropriate research and preparation.

Dial a Nerd

Johannesburg, 260 Surrey Avenue, Randburg, 2194. Tel. 0100070012

Cape Town, Unit 11 Vine Park. Vine Road, Woodstock 7915. Tel. 0212001460

www.dialanerd.co.za email info@dialanerd.co.za National Phone 0861 4 NERDS (63737)