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Introduction

I learn new things every day. Sometimes they're really totally new and, of course, occasionally they're things I had forgotten or kind of knew, but the new part casts new light on the idea. Then there are those rare moments in which I have a "blinding flash of the obvious" and get the big picture on something, like when the tenth time you visit a new city things really start to connect.

Here five things about Windows Server 2008 that are the less obvious, more esoteric, yet useful features or quirks. You probably knew that Windows Server 2008 is really Windows NT 6.0 so I'll save that for the "things you probably already know" list. The following is a brief list of some things that I tend to assume that many people know and am constantly amazed by clients and students who really don't know them. How many do you already know? Were any or all of these new to you? We'd love to hear from you.

1. Windows Server 2008 can be the prevailing central authority on which computers, devices, and people access your network via Ethernet, Wireless (e.g. 802.11), VPN, and dial-up.

Small businesses, medium-sized shops, and humongous enterprises could all potentially benefit from this network authentication feature which expands what was possible in Windows 2000 Server, Windows Server 2003, and Windows Server 2003 R2. With services such as 802.1x, EAP, TLS, PPPoE, Kerberos, X.509v3 certificate-based authentication, RADIUS, LDAP, and more, Windows Server 2008 provides a centralized way for administrators to choose by policy or individual specification which devices (Blackberry, iPhone, Palm, Windows Mobile, etc.), computers (Linux, Mac OS, Solaris, Windows, etc.), and people (employees, contractors, customers, guests) are allowed on the network.

But wait, there's more! Windows Server 2008 goes beyond the basics for who or what is allowed on the network from a sheer identity standpoint. State of health can be considered, too. No, the server isn't going to check each human's temperature or check their breath for contagious microbes and choose if they can be on the network right now, but Network Access Protection, Network Policy Services, and Health Registration Authorities are elements of a framework that can be used to ensure proper service packs, hot fixes, patches and such for certain operating systems. Non-compliant systems can be placed on a virtually isolated remediation network on which these systems can get the necessary updates or potentially even fixes for a nasty virus. It's a flexible, expandable, customizable framework, not just a one-size-fits-all kind of proposition.

Even if you knew all that, consider this. All of this is fairly easy and inexpensive to set up on Windows Server 2008, assuming you have the right firmware in your Ethernet switches and wireless access points. Windows can even provide the VPN and dial-in services as well.

2. There is an amazing new automation environment for administrations of Windows Server 2008 that can also be used on Windows Server 2003, Windows XP, and Windows Vista. It looks like Windows 7, and Windows Server 2008 will get a newer, snazzier version.

Of course, you might have known I'm referring to Windows PowerShell. Some people think it's just a new command line interface with different syntax than the classic Windows Command Prompt and old Disk Operating System (and virtual DOS machine of Windows ilk). And it is a hot little shell, but the automation and scripting capabilities are where it's at. There is such an incredible wealth of tools and utilities available for download to extend the reach and capabilities of Windows PowerShell. Did you know that Windows PowerShell version 1.0 does indeed work with XP, Server 2003, and Vista as well? All of those versions of Windows could be managed with one shell. One shell to rule them all – just think about it. And yes, there are certainly graphical interfaces for PowerShell. When PowerShell version 2.0 comes out of Community Technology Preview (CTP) and hopefully gets bundled with Windows Server 2008 R2 and Windows 7, we get even more remote administration capabilities built in to Microsoft's official shell.

3. Windows Server 2008-based servers that are installed with Server Core installation mode can still be managed in many ways across the network with Windows PowerShell.

Assuming that you knew about the existence and exciting capabilities of Windows PowerShell, did you know that you don't have to wait for Windows PowerShell version 2.0 to get many remote management capabilities? Good old PowerShell version 1.0, which is included as an addable feature for Windows Server 2008 Full Installation, has a lot of remoting built in.

Although there are ways around it, officially, Windows Server 2008, which is installed with the much-recommended-because-it-helps-to-reduce-attack-surface-and-updates-and-a-whole-lot-more Server Core installation, does not support the .NET framework, which is a prerequisite to install and run Windows PowerShell. So does that mean that, officially, there is no way to manage a W2K8 Server Core server? Hardly. Windows PowerShell comes with strong Windows Management Instrumentation (WMI) and some other remote administration features built in. For example, Windows PowerShell can be installed on a management workstation (or other server) and used to manage Server Core machines across the network. That's just one way PowerShell can help you do remote management today.

4. Branch office support has reached "significant" status with Windows Server 2008.

Well, it's true that many organizations have used Windows Server in small satellite offices for years. But often times, the tradeoffs of what services should/must be run in the headquarters versus a field office weren't all that effective for many organizations. But Windows Server 2003 R2 provided some truly useful "branch office" features, and Windows Server 2008 extends support for such needs to encompass several additional services.

Windows Server 2003 R2 offered a Print Management Console (PMC) and massively upgraded (well, completely redesigned is more apropos, perhaps) Distributed File System (DFS) implementation which both helped to unify, police, and centralize the management of file and print services hosted by Windows Server which are distributed across diverse and/or vast network topologies, geographies, or (organizational) political boundaries.

Windows Server 2008 includes all that and more. The most publicized branch office feature (which you may have heard of, but may not know enough about) is support for Read-Only Domain Controllers (RODCs). While they don't fully support local Exchange Server 2007 messaging servers, this sort of option for deploying additional domain controllers (DCs) is a boon for many management and security concerns. Compared with the staid "desktop" orientation of Terminal Services and Remote Desktop of the past, the new gatewaying and individual remote application extensions to the terminal services framework have substantial advantages not only for branch office scenarios, but even for single building deployments. There are many other features and roles in Windows Server 2008 that support this "branch office as a first-class citizen" treatment that's finally coming of age in Windows Server.

5. Windows Small Business Server (SBS) and Essential Business Server (EBS) licensing can potentially save small and medium businesses a lot of money and hassle.

For one price, Microsoft's Windows Small Business Server (SBS) 2008 includes Windows Server roles and features plus more:

- Windows Server 2008 Standard Edition
- Exchange Server 2007 Standard Edition
- Windows SharePoint Services 3.0
- Microsoft Forefront Security for Exchange Server
- Windows Server Update Services 3.0
- Microsoft Office Live Small Business

And not just all that which we get in the Windows SBS 2008 Standard Edition, but the Windows SBS 2008 Premium Edition also licenses you to install Windows Server 2008 Standard on a second server that can host them include (again, this is just in SBS 2008 PREMIUM):

- Microsoft SQL Server 2008 Standard for Small Business

Microsoft's Windows Essential Business Server (EBS) 2008 goes much farther than Windows SBS 2008 with:

- Windows Server 2008 Standard Edition on up to 3 servers (EBS 2008 Standard) or 4 servers (EBS 2008 Premium)
- Microsoft System Center Essentials 2007
- Windows SharePoint Services 3.0 (licensed for download [not on included media])
- Exchange Server 2007 Standard Edition (E2K7)
- Microsoft Forefront Security for Exchange Server
- Microsoft Forefront Treat Management Gateway Medium Business Edition

For example, the three servers could be:

- Management Server: W2K8 Server + SharePoint + System Center
- Messaging Server: W2K8 Server + Exchange 2007 Server + Forefront
- Security Server: W2K8 Server + Exchange 2007 Server + Threat Mgt.

And besides all that which we get in the Windows EBS 2008 Standard Edition, the Windows EBS 2008 Premium Edition also licenses you to install Windows Server 2008 Standard on a fourth server which can host the include (again, this is just in EBS 2008 PREMIUM):

- Microsoft SQL Server 2008 Standard Edition

(Note that on that 4th server (SQL), until the end of 2009, Microsoft allows Windows EBS 2008 Premium licenses to use Windows Server 2003 R2 and Microsoft SQL Server 2005 Standard as options.)

Consider adding all the licensing fees for these products separately. If you need several of these services, either the standard or premium editions of SBS or EBS 2008 versions could save quite a bit. Note that certain Enterprise edition features of Windows, Exchange, and SQL servers geared to big businesses – such as clustering – might be on the agenda of some small- and medium-sized businesses, and the Standard editions included in SBS and EBS 2008 wouldn't be sufficient in those settings. Even so, it's good to know the options.

Were all five of these things new to you? Did you know a few? Did you already know all five?

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