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Windows Terminal Services (which was renamed Remote Desktop Services in Windows Server 2008 R2) has been around for many years. But lately, I've seen an increase in the number of organizations that use it. Here are a few reasons why.

1: The hardware has finally caught up

When Terminal Services debuted with Windows NT, server hardware was hard pressed to support multiple server sessions. Furthermore, 10 Mbps networks were still the standard at that time and could easily become saturated by network-intensive applications, such as Terminal Services. Today, server hardware is far more powerful than it has ever been, and running multiple operating system instances on a server is the norm. Today's servers are well equipped to handle the demands of hosting Terminal Service sessions.

2: Windows Server 2008 R2 offers a full VDI solution

Windows Server 2008 R2 allows administrators to deploy a full virtual desktop infrastructure (VDI) solution. This means that the terminal server can be configured to host virtual desktop operating systems. When users log off, any changes they made are rolled back, and the virtual hard drive is left in a pristine condition, ready for the next user.

3: You can create dedicated virtual desktops

Normally, a virtual desktop pool is designed so that every virtual desktop within it is identical. Because users are not allowed to make changes to the virtual desktop, each VDI session begins with a pristine virtual machine. Although this technique works well, the business needs of some organizations require users to be able to make certain changes to their desktops. In these types of situations, Windows Server 2008 R2 allows you to dedicate a specific virtual desktop to an individual user. That way, the user has his or her own virtual desktop to configure as needed.

4: You can host individual applications rather than entire sessions

One of my favorite new features in Windows Server 2008 is RemoteApp. RemoteApp allows you to virtualize individual applications, as opposed to virtualizing an entire desktop. Not only is this approach less resource intensive for the server, it allows administrators to centralize application management without having to commit to a full-blown thin client environment.

5: Desktop hardware has a longer lifespan

The economy has seen better days, and everyone is looking to make the most of their IT budget. By using Terminal Services, organizations can squeeze more life out of their desktop computers. Because all the processing occurs at the server end, the desktops are essentially acting as dumb terminals. This means that using existing desktop hardware remains a viable option for much longer than it would if applications were run locally. Likewise, running applications on a terminal server may allow organizations to purchase lower-end desktop hardware than they otherwise would, resulting in cost savings.

6: Users can access their "work computer" from anywhere

Supporting users who need to work from outside the office is nothing new. But if you've ever supported remote users, you know that keeping mobile computers up to date can be challenging. And if they use one computer at work and a different computer away from the office, they may be less productive when working remotely unless the two computers are configured identically. Implementing a Terminal Services environment allows remote users to have a consistent experience regardless of whether they are working in the office or on the road.

7: Application maintenance becomes easier

In a Terminal Services environment, applications are installed on a terminal server rather than on individual desktops. As a result, application patching becomes much easier because there is only one copy of each application. You no longer have to make sure that application-level patches are applied to every desktop in the organization. It is worth noting, though, that each desktop retains its own operating system, which must still be kept up to date.

8: Desktop PCs have a smaller attack surface

Because Terminal Services involves applications or desktop sessions that are centrally hosted, there's no need to install applications on individual desktops. This helps to reduce the attack surface of the desktops in your organization. Typically, the desktop computers will require an operating system, some antivirus software, and a Terminal Services client (which is included with Windows). Everything else can be run on the server.

9: Desktop provisioning becomes easier

Once an organization has adopted Terminal Services, desktops can be configured to run a minimal configuration. This makes the process of provisioning desktops a lot easier. Image files become smaller and can therefore be deployed much more quickly, and the issue of application compatibility testing (at the desktop level) goes away.

10: You may be able to give up your desktop management software

I have seen at least one real-world example of an organization that decided to give up its desktop management software after implementing Terminal Services. It had purchased the desktop management software primarily to maintain hardware and software inventories across the organization. Because the vendor required an annual maintenance contract, ongoing costs were associated with using the software. Switching to a Terminal Services environment eliminated the need for software management at the desktop, thereby allowing the organization to reduce expenses by getting rid of its desktop management software.

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