OVERVIEW

What is Windows Thin PC?

Windows® Thin PC (WinTPC) is an upcoming Microsoft® Software Assurance (SA) benefit that provides a low footprint, locked down version of Windows 7 that enables organizations to repurpose existing PCs as thin clients, thereby reducing the need for new thin client hardware. And since these PCs retain their existing SA coverage, they do not need any additional Windows Virtual Desktop Access (VDA) licensing for VDI. WinTPC offers an excellent thin client experience by locking down the PC through write filters, while still providing users with a superior remote desktop experience through RemoteFXTM support. IT can deploy and manage WinTPC images to multiple PCs using System Center Configuration Manager (SCCM), and push updates to these PCs using Windows Update or Windows Server® Update Services (WSUS). Additionally, WinTPC leverages Windows Enterprise features such as BitLocker® and AppLockerTM to further secure the endpoint.

What kind of hardware can I run WinTPC on?

WinTPC is a locked down version of Windows 7, and hence, will be able to run on any device capable of running Windows 7. The recommended specifications for running Windows Thin PC are:

- 1 GHz or faster 32-bit (x86) processor
- 1 GB RAM, 16 GB available hard disk space
- DirectX 9 graphics device with Windows Display Driver Manager (WDDM) 1.0 or later version driver
- Bootable DVD-ROM drive

Can I install WinTPC on laptops, as well?

Yes, WinTPC leverages the extensive Windows 7 device driver framework, and has built-in support for wireless NICs. As long as the laptops have the configuration mentioned above, it will support WinTPC. However, the same use rights apply to WinTPC on a laptop as on a PC, and the remote desktop experience over a wireless network may not be as good as on a wired connection.

Can I run applications on WinTPC?

Yes, you can run applications that fall into one of the following categories:

- Security
- Management
- Terminal emulation
- Remote Desktop and similar technologies
- Web browser
- Media player
- Instant messaging client
- Document viewers
- .NET Framework and Java Virtual Machine

However, you cannot run any productivity applications, such as Microsoft Office or similar applications.

Can I run WinTPC in a virtual machine?

WinTPC has been designed to help customers repurpose existing PCs as thin clients. Since thin client OS's are not designed for or supported in a virtual machine (VM), WinTPC is not supported in a VM.

What languages does WinTPC support?

WinTPC supports only English at Release to Manufacturing (RTM). However, most international peripherals (such as keyboards) are supported. Even though WinTPC is not designed to run applications locally, users get localized experiences by remoting into a full Windows desktop running another language.

What is the difference between Windows Embedded Standard 7 and Windows Thin PC?

Windows Thin PC has been developed using the Windows Embedded Standard 7 (WES7) codebase, which in turn has been derived from the proven Windows 7 platform. Although both products look and feel very similar and share common features, there are some differences. These include:

1. **Availability:** WES7 is only available on thin client devices through the OEM channel, while WinTPC is available as an SA benefit through Microsoft Volume Licensing (VL).

2. **Pricing:** WES7 is sold to OEMs, and thin client devices are then purchased from the OEM. WinTPC is free of cost to SA customers, while non-SA customers will have to buy SA, Windows SA, or Windows Intune to get WinTPC.

3. **Image size:** WinTPC has a fixed image size, while WES7 images are flexible and can be configured by the OEM. This may result in WES7 images having either smaller or larger footprints than WinTPC devices, depending on the configurations defined by the OEM device.

4. **Hardware efficiency:** WES7 thin client hardware is usually more locked down and power efficient than WinTPC devices, which are repurposed PCs.

5. **Enterprise features:** Features such as BitLocker, AppLocker, and DirectAccess are built into the base image, while these features are available on request from OEMs.

What is Microsoft's recommendation to customers to adopt WinTPC?

1. Use Microsoft's Optimized Desktop strategy to determine the most appropriate use cases for server based desktops. For these use cases, determine which users would benefit most from thin clients (i.e. those users who need local desktops or applications). Customers who have already decided on thin client computing and want the benefits of thin client devices should consider buying Windows Embedded thin clients from Microsoft's OEM partners.

2. For customers who are evaluating the thin client experience for pure server based desktop scenarios, repurpose existing PCs using WinTPC. Customers will be able to evaluate the thin client experience without buying new thin client hardware, or paying the associated VDA licensing costs for VDI. WinTPC provides an excellent thin client experience, due to support for RemoteFX, as well as the ability to lock down writes to hard disk through write filters. WinTPC can also be managed using the existing desktop management infrastructure through support for System Center. In case customers decide they do not like the thin client computing experience, they have the option to repurpose the devices back as PCs.

3. Once customers have decided to move forward with thin client computing and the WinTPCs have reached end of life, they can replace them with new Windows Embedded thin clients from Microsoft partners such as HP and Wyse. Windows Embedded thin clients integrate with System Center, and hence customers can easily leverage all security and management investments made in WinTPC.

AVAILABILITY AND LICENSING

When will Windows Thin PC be available?

As of June 1st, WinTPC has been Released to Manufacturing (RTM), and we expect WinTPC to be available for customers to download starting July 1st, 2011. However, customers looking to evaluate the product until it becomes generally available can download the beta software from http://connect.microsoft.com, by joining the public beta program. (Please note, we have stopped accepting feedback for the beta software as of June 1st, 2011.)

How do I license Windows Thin PC? OR
What devices qualify for Windows Thin PC?

Windows Thin PC is an SA benefit. Customers with active SA coverage on their PCs will be able to install WinTPC on those devices. Customers without active SA coverage on their PCs can get SA by purchasing a Windows Virtual Desktop Access (VDA) subscription, which includes SA benefits such as WinTPC. However, only devices with an existing Windows client OS (Professional / Business, Enterprise, Ultimate) qualify for WinTPC.

Where can I get WinTPC from?

Windows Thin PC is an SA benefit. Hence, VL customers can download WinTPC from the Volume Licensing website.

Through which VL programs can I get WinTPC?

WinTPC is available through all VL programs that support SA and VDA, such as Open, Open Value, Select, Enterprise Agreement (EA), and Campus and Schools Agreement (CASA).

I do not have active SA coverage on my PCs. How can I get WinTPC?

Windows Thin PC is only available as an SA benefit. Hence, customers need active SA coverage on their PCs to qualify for WinTPC. If you do not have active SA coverage on your PCs, then you can get coverage in one of two ways:

1. Buy a Windows Virtual Desktop Access (VDA) subscription for the PC. Windows VDA includes SA benefits, including WinTPC.

2. Buy a Windows Intune subscription for the PC. Windows Intune also provides customers with SA benefits, including the rights to WinTPC.

However, please note that only devices with an existing Windows client OS (Professional / Business, Enterprise, Ultimate) qualify for WinTPC.

FEATURES AND FUNCTIONALITY

How can Windows TPC help lock down my device as a thin client?

WinTPC can help turn your existing PCs into thin clients through the following features:

1. **Small footprint:** WinTPC images are smaller than Windows 7 images, and hence have a lower attack surface.

2. **Write filters:** WinTPC has both file-based and enhanced write filters. Write filters can be enabled to prevent users and applications from writing to disk, and hence ensure that the OS returns to a pristine image on every reboot.

3. **BitLocker:** WinTPC disk drives and flash storage can be encrypted using BitLocker and BitLocker To GoTM technology, thereby ensuring that any data stored on disk is secure.

4. **AppLocker:** IT can prevent unauthorized applications form running on WinTPC.

Does WinTPC support RemoteFX out of the box?

Yes, WinTPC supports a rich user experience for the remote virtual desktop through RemoteFX technology. Customers deploying virtual desktops on Windows Server 2008 R2 SP1 with Hyper-VTM can enable RemoteFX to help deliver rich graphics and multimedia to WinTPC devices.

What are write filters?

WinTPC enables IT admins to lock down WinTPC devices by enabling the write filter functionality in the product. Write filters essentially block all writes to the WinTPC's hard drive by redirecting all writes to a virtual hard disk that is discarded when the machine is rebooted. This ensures that the WinTPC is restored to its pristine image on every reboot, thereby offering an additional layer of security. Write filters can be configured to either block writes to the whole hard disk, or allow for writes to specific files. Write filters can be enabled using the command line prompt, or through the Windows Embedded Device Manager (WEDM) product.

Does WinTPC support Internet Explorer 9 (IE9)?

At the time of release, the default browser shipping with WinTPC is IE8. However, WinTPC supports the install of IE9 after the OS install.

How can I manage WinTPC images? OR
Can I use System Center to manage WinTPC? Do I need Windows Embedded Device Manager (WEDM) 2011?

WinTPC integrates into your existing image deployment and management infrastructure, with built-in support for System Center Configuration Manager. SCCM can be used to deploy and manage WinTPC images to endpoint devices. Customers can also extend their investments in Powershell to WinTPC devices, as well. OS patches and updates can be delivered to WinTPC using Windows Update (WU) or WSUS.

Additionally, customers can use the Windows Embedded Device Manager (WEDM) product to manage WinTPC in addition to other Windows Embedded devices within their environments. WEDM helps manage updates and patches to devices that have the write filters enabled, simplifying the process for IT admins to update WinTPC devices. For more details on WEDM 2011, refer to the WEDM 2011 FAQ or the WEDM 2011 datasheet.

Is Forefront Endpoint Protection supported on WinTPC?

Currently, Forefront® Endpoint Protection (FEP) is not supported on any of the Windows Embedded platforms, including WinTPC. Microsoft has received feedback from customers that FEP support is a desired feature for the product, and hence this scenario is currently under investigation. We anticipate that WinTPC may have FEP support sometime in Q3 CY2011.