

# Virtual Desktop, Real Savings: Windows Licensing for Client Virtualization



## AT A GLANCE:

By following a few simple, cost-saving tips, you can run up to four virtual desktops under a single Microsoft volume license while leveraging the OEM license that came with your PC.

With its large product line and thousands of product numbers, Microsoft licensing can be challenging. This is especially true for virtualization, which adds an additional layer of complexity. But smart shopping and the right virtualization approach — as described in this whitepaper — can simplify your Windows virtualization options and save you money on each license.

Understanding the Microsoft licensing options for virtualization begins by determining the kind of virtualization you'll be using. There are three major types of desktop virtualization: *centralized desktop*, *client-hosted*, and *bare-metal*.

- **Centralized desktop** virtualization, or VDI, involves a client connecting to a server running a virtual machine to access the remote desktop. In this case, Microsoft requires Client Access Licensing (CAL) for each virtual machine and server. Alternatively, enterprise customers can purchase a non-perpetual, subscription license of Vista Enterprise Centralized Desktops (VECD), which is licensed per device accessing the remote desktop.
- In the **client-hosted** model, a client PC runs a virtual machine on top of a traditional operating system. This requires licensing of both the base OS and the virtual machines.
- In the **bare-metal** model, the hypervisor runs directly on client hardware, allowing the virtual machines to run without an underlying OS. Since there is no underlying OS and the virtual machines run directly on the PC, licensing is similar to traditional clients.

The following scenarios clarify OS licensing — and demonstrate ways to realize cost savings — for bare-metal virtualization products such as NxTop™ by Virtual Computer.

### Windows XP Volume Licensing

A single Windows XP Professional volume license grants use of up to two copies of the OS on the same physical hardware [1]. Since the bare-metal hypervisor does not require a base operating system, the owner can run two instances of XP Professional on the client with a single license.

### Windows Vista OEM Enrollment

To drive adoption, Microsoft has added premium features to the Software Assurance (SA) subscription-based maintenance plan for Windows Vista. One of the lesser-known options for SA is OEM license enrollment, which allows an organization to upgrade its pre-installed OEM Vista Business licenses to Vista Enterprise with Software Assurance within 90 days of purchase. The initial SA enrollment can be as few as five computers and can be done on a one-off, incremental basis afterward. This can save as much as 1/3 the cost of a standard enterprise volume-license upgrade and carries with it the same rights, plus upgrade protection and increased virtualization rights.

A client enrolled in SA can run up to four Windows Vista or XP virtual machines with a single license [2]. The virtualization right is perpetual, so a client enrolled in SA at any time retains it even if the SA subscription expires. This means a client running a bare-metal hypervisor with a single OEM enrollment license can run four Vista or XP virtual machines. Finally, SA upgrade protection offers the customer access to newly released Microsoft operating systems without charge (for instance, when Windows 7 is released, SA license holders will receive volume licenses for Windows 7 in addition to their existing licenses).

## Virtual Desktop, Real Savings: Windows Licensing for Client Virtualization (continued)



This OEM upgrade process is so new that many channel partners and resellers are not aware of it. Some also avoid it because of its extremely aggressive pricing (OEM Enrollment is ~\$95 vs. Standard Enterprise Upgrade at ~\$265). SA Enrolment SKUs are:

Dell SKU	A0767473	~\$95
WINDOWS VISTA BUSINESS ENG SA OLP NL W/VISENTERPRISE		
Microsoft SKU	66J-01128	~\$100
Windows Vista Business English SA OLP NL w/Vista Enterprise		

### Cost-Effective Microsoft Licensing for Virtualization

Windows XP	
<b>XP Professional</b>	A single XP volume license allows two instances of XP on the same physical hardware
Windows Vista (including XP downgrade rights)	
<b>Up to four of the following: Vista Business, Vista Ultimate, Vista Enterprise, or XP Pro</b>	Vista Volume License with SA: Vista OEM enrollment into volume licensing with Software Assurance within 90 days of purchase

### References

[1] Microsoft Licensing Product Use Rights - Worldwide English July 2006.  
<http://www.microsoft.com/volumelicensing.com/userights/Downloader.aspx?DocumentId=450>

*Windows XP Professional*

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[2] Licensing Windows Vista for Use with Virtual Machine Technologies. [http://download.microsoft.com/download/3/d/4/3d442bdc2-6725-4b29-b75a-a5b04179958b/licensing\\_vista\\_with\\_VM\\_technologies.docx](http://download.microsoft.com/download/3/d/4/3d442bdc2-6725-4b29-b75a-a5b04179958b/licensing_vista_with_VM_technologies.docx)

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