

## Running Windows Server in Clustered VMs Carries Risks

By Christopher Barnett

Many businesses running virtual servers with shared physical infrastructures have encountered significant audit exposure arising from the fact that, according to Microsoft, the physical machines in a clustered arrangement may be “running” any number of Windows Server instances at any time. Therefore, Microsoft historically has demanded that a number of server licenses be assigned to each physical host sufficient for all VMs running in the cluster. As an example, if you have a cluster of 10 physical hosts using VMWare to provide shared resources for 5 Windows Server Enterprise 2008 instances and 15 Windows Server Standard 2008 instances, Microsoft likely would require:

- 150 Standard server licenses  
10 hosts x (15 Standard virtual instances per host / 1 virtual instance allowed per 2008 Standard server license)

...and:

- 20 Enterprise server licenses  
10 hosts x (5 Enterprise virtual instances per host / 4 virtual instances per 2008 Enterprise server license) [round up from 1.25]

The principal alternative for version 2008 was to use Datacenter-edition licensing, which, while significantly more expensive and measured per processor, allowed unlimited virtual instances. Under the example above, if each physical host was, for example, a dual-processor server then you would require 20 Datacenter 2008 processor licenses to cover the cluster. The “break-even” point for Datacenter licensing depended on the number of virtual instances of each edition hosted on the cluster and on the number of processors running in each physical host comprising the cluster.

Many businesses are aware that for version 2012, Microsoft has dispensed with server licenses in favor of a complete, processor-based licensing model for Windows Server. The only difference between the two principal Windows Server 2012 editions – Standard and Datacenter – is virtualization rights. Standard allows only two virtual instances (one per processor), while Datacenter allows unlimited virtual instances for each fully licensed physical machine. Thus, while the analysis is a little more straightforward now, in that the license type (server vs. processor) no longer is a relevant factor in determining the break-even point. However, businesses still need to be careful to avoid inadvertently over-deploying Standard edition in clustered environments.



### About the author Christopher Barnett:

Christopher represents clients in a variety of business, intellectual property and IT-related contexts, with matters involving trademark registration and enforcement, software and licensing disputes and litigation, and mergers, divestments and service transactions. Christopher’s practice includes substantial attention to concerns faced by media & technology companies and to disputes involving new media, especially the fast-evolving content on the Internet.

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