



VM Deployment Tuning Guide for vSpace®

Configuration and Tuning Guide for a Hyper-V Based Deployment

Introduction

Deploying NComputing vSpace desktop virtualization in parallel with Microsoft's Hyper-V can deliver a more powerful and flexible user desktop environment than either technology alone. This guide compiles tips and tricks to help you implement NComputing vSpace and Microsoft Hyper-V technologies in the most effective way. However, before you begin, you should familiarize yourself with one the L300 deployment guides to get a basic understanding of how to install the NComputing vSpace products.



For a quick and effective deployment please follow one of our deployment guides.

[Quick Setup Guide for Windows Server 2008 R2](#)

[Quick Setup Guide for Windows Server 2003](#)

This VM deployment tuning guide assumes you have a basic working knowledge of Microsoft Windows and Hyper-V. You can find the appropriate documentation on Microsoft's web site – and to help get you started, some example links are provided below:



Microsoft maintains numerous guides, tutorials, and how-to videos on their website which can be accessed by the links below.

[http://technet.microsoft.com/en-us/library/cc753637\(Ws.10\).aspx](http://technet.microsoft.com/en-us/library/cc753637(Ws.10).aspx)

<http://www.microsoft.com/windowsserver2008/en/us/hyperv-faq.aspx>

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Hyper-V Host Configuration

Disable CPU Core Parking

Hyper-V doesn't allow "parked" CPU cores to have any processing threads scheduled on them, and thus the cores can drop into a lower power state. The remaining or "unparked" cores are then responsible for the entire workload (unless you have the unlikely situation where you're running a specialized application that sets its own processor affinity). Core parking is intended to increase power efficiency during lower usage periods, but it can limit the quality of user experience in a multi-user environment.

1. Launch Windows Registry Editor – Click **Start, Run** (or press **Windows key + R**) and type **regedit**
2. Press **Ctrl + F** and search for "**0cc5b647-c1df-4637-891a-dec35c318583**"
3. Within this key locate the value "**ValueMax**" and change its value to **0**

Note: This changes the percentage of cores that windows will "park" to 0%

4. Do the same for "**ValueMin**"
5. Repeat steps 2 – 4 until you have changed this value for every instance of "**0cc5b647-c1df-4637-891a-dec35c318583**" that you find in the registry.
6. Your computer will need to be restarted for this change to take effect.

Virtual Machine Settings

Virtual Machine Image Creation

If you haven't already done so, familiarize yourself with Microsoft's documentation for both image creation and guest OS setup. Direct links are provided below for your convenience.



Microsoft's step-by-step virtual machine creation guide can be found at:
<http://technet.microsoft.com/en-us/library/cc772480.aspx>



For OS-specific tips and configuration advice for creating VMs, see
Microsoft's Guest OS recommendations at:
<http://technet.microsoft.com/en-us/library/cc794868.aspx>

Increase Virtual CPU Allocation

When fine tuning the resource allocation of a given virtual machine, it may become necessary to increase the number of Virtual CPUs the virtual machine can utilize. Microsoft outlines this process at: [http://technet.microsoft.com/en-us/library/cc732470\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc732470(WS.10).aspx)

A portion of this process is excerpted below:

To configure memory or processors for a virtual machine

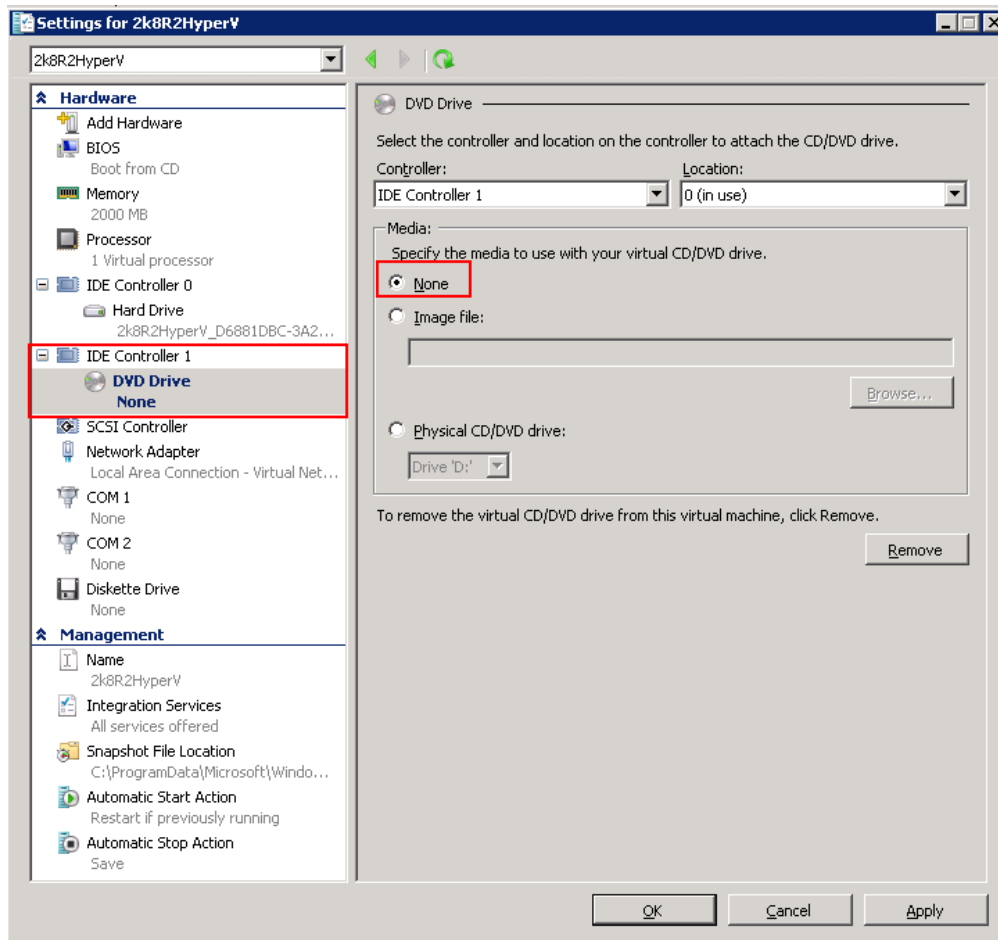
1. Open Hyper-V Manager. Click **Start**, point to **Administrative Tools**, and then click **Hyper-V Manager**.
2. In the results pane, under **Virtual Machines**, select the virtual machine that you want to configure.
3. In the **Action** pane, under the virtual machine name, click **Settings**. Then, in the navigation pane, click the appropriate hardware setting as described in the following steps.
4. To configure the memory, click **Memory**. On the **Memory** page, specify the new amount of memory.
5. To configure the processor, click **Processor**. If multiple processors are supported by the guest operating system, specify the number of processors to assign to the virtual machine. Then click **OK**.

Enable USB Support within the Virtual Machine

To enable USB support on L-series devices, you must have installed Service Pack 1 on your Windows Server 2008 R2 system

Disable Auto Connect for CD-ROMs

You should disable the virtual machine auto connection feature that causes the VM to associate itself with the host's CD-ROM. This prevents the virtual machine from running a number of extraneous processes and eliminates resource overhead. A screen shot showing the virtual CD/DVD media set to "None" is included below:



Configure and Tune the Windows OS inside the VM

Windows Tuning Guide for vSpace 6

At this point, you should follow NComputing's standard Windows Tuning Guide for vSpace 6 to configure the Operating System itself for optimal use with NComputing vSpace.



Below we've linked our Windows Tuning Guide for your convenience:
http://www.ncomputing.com/kb/Windows-Tuning-Guide-for-vSpace-6_297.html

Image Cloning and vSpace Registration



Note: When deploying multiple cloned Virtual Machines from a pre-built Master Image, DO NOT REGISTER vSpace inside the Master Image. Instead, register vSpace in each individual Image after it has been deployed.

If you wish to simply clone a tested, known working Master system Image, be sure that you do NOT register the vSpace instance inside the Master Image itself. Doing so can cause authentication problems for vSpace.

Instead, first deploy each Image into its own Virtual Machine, and then register vSpace in the Image once it is operational.

NComputing L300 Guides

Customers using our new L300 network access devices should review the selection of L300-specific configuration guides that can be found by searching for keyword “L300” in our online Knowledge Base.



Follow the link below and search for keyword “L300” for additional L300 configuration and feature information.

<http://www.ncomputing.com/kb/>