

When is Dedicated Infrastructure *not* Dedicated?

Remember that bit in Matilda where Danny Devito sells the piece-of-junk cars as good as new?

Yes, it might be a clever scam in a charming children's film but let's be honest: we would be horrified to find out we'd paid for something in good faith only to find out we're not getting exactly what we thought.

Take Dedicated Servers, for instance; you order something advertised online as a Dedicated Server, and expect you are paying for a physical racked server in the datacentre of your choice. But what if you're actually only getting a virtual server described to sound like a DS?

This can make vast amount of difference in the activity of your trading operations, as virtual servers have a limited access to a shared pool of resources at the same time, whereas Dedicated Server resources are yours and only yours. For example, on an NFP date, you don't want "Noisy Neighbours" all clamouring to access the same resources and significantly slowing your operations. This is why it is imperative to check that your DS is definitely a physical server.

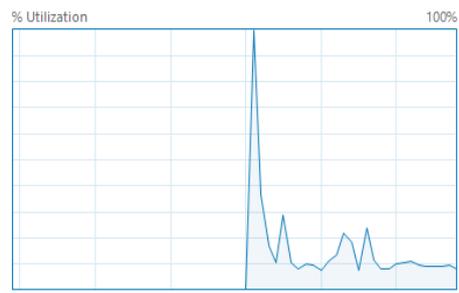
How can you ensure you're getting the DS that you paid for?

We've come up with a few key indicators that anyone can use to check if their server is in fact a Virtual Machine.

1. The first thing you can do to check if you have a dedicated or virtual machine is by opening the **Task Manager** and looking under the **Performance** tab.

If you have a physical server, the *Cores* and *Logical Processors* should be displayed here. If instead it says, *Virtual Processors* and *Virtual Machine*, then this is clearly a virtual server.

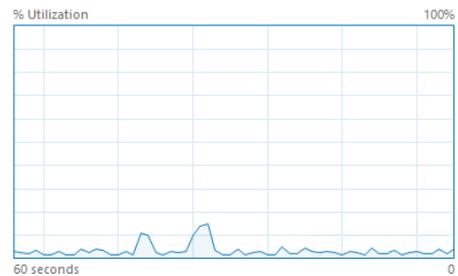
CPU Intel(R) Xeon(R) CPU E5-2699 v3 @ 2.30GHz



Utilization	Speed	Maximum speed:	2.29 GHz
8%	2.29 GHz	Sockets:	2
Processes	Threads	Handles	Virtual processors: 2
447	4100	53200	Virtual machine: Yes



CPU Intel(R) Xeon(R) CPU E3-1241 v3 @ 3.50GHz



Utilization	Speed	Maximum speed:	3.50 GHz
4%	3.50 GHz	Sockets:	1
Processes	Threads	Handles	Cores: 4
90	1244	64352	Logical processors: 8
Up time			Virtualization: Enabled
45:20:32:16			L1 cache: 256 KB
			L2 cache: 1.0 MB
			L3 cache: 8.0 MB



Virtual Machine

Physical Machine

2. Another simple indicator of a virtual machine is looking at the **System Information** in Windows, where the **System Manufacturer** and **System Model** are clearly highlighted. The System Manufacturer for a dedicated server will be listed as *IBM, Dell, HP, or Supermicro* for example, whereas a virtual server will show that it is a *Virtualization Platform* by *VMWare*. It will also note that “A hypervisor has been detected.”

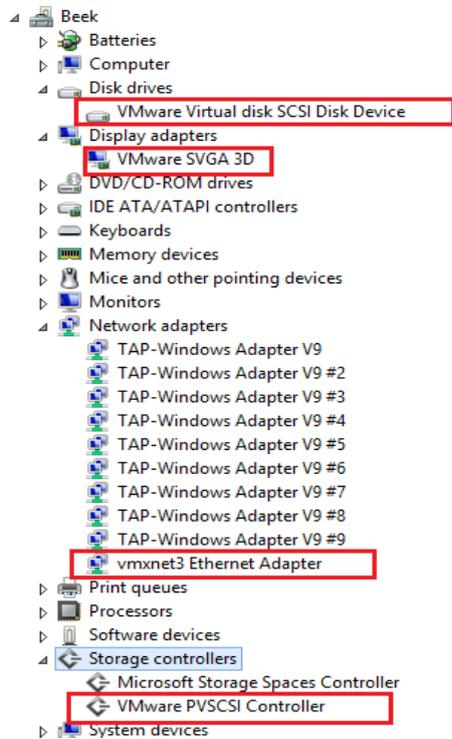
Item	Value
OS Name	Microsoft Windows Server 2012 R2 Standard
Version	6.3.9600 Build 9600
Other OS Description	Not Available
OS Manufacturer	Microsoft Corporation
System Name	TYVMBCK01
System Manufacturer	IBM
System Model	System x3550 M3 -[7944J4G]-
System Type	x64-based PC
System SKU	X000000
Processor	Intel(R) Xeon(R) CPU X5650 @ 2.67GHz, 2793 Mhz, 6 Core(s), 12 Logical P
Processor	Intel(R) Xeon(R) CPU X5650 @ 2.67GHz, 2793 Mhz, 6 Core(s), 12 Logical P
BIOS Version/Date	IBM Corp. -[D6E162AUS-1.20]-, 07/05/2014
SMBIOS Version	2.5
Embedded Controller Version	0.00
BIOS Mode	Legacy
BaseBoard Manufacturer	IBM
BaseBoard Model	Not Available
BaseBoard Name	Base Board
Platform Role	Enterprise Server
Secure Boot State	Unsupported
PCR7 Configuration	Not Available
Windows Directory	C:\Windows
System Directory	C:\Windows\system32
Boot Device	\Device\HarddiskVolume1
Locale	United Kingdom
Hardware Abstraction Layer	Version = "6.3.9600.18969"
User Name	Not Available
Time Zone	Tokyo Standard Time
Installed Physical Memory (RAM)	144 GB
Total Physical Memory	144 GB
Available Physical Memory	139 GB
Total Virtual Memory	165 GB
Available Virtual Memory	157 GB
Page File Space	21.0 GB
Page File	C:\pagefile.sys
Hyper-V - VM Monitor Mode E...	Yes
Hyper-V - Second Level Address...	Yes
Hyper-V - Virtualization Enable...	Yes
Hyper-V - Data Execution Prote...	Yes

Physical Machine

Item	Value
OS Name	Microsoft Windows Server 2012
Version	6.3.9600 Build 9600
Other OS Description	Not Available
OS Manufacturer	Microsoft Corporation
System Name	
System Manufacturer	VMware, Inc.
System Model	VMware Virtual Platform
System Type	x64-based PC
System SKU	
Processor	Intel(R) Xeon(R) CPU E5-2699 v3
Processor	Intel(R) Xeon(R) CPU E5-2699 v3
BIOS Version/Date	Phoenix Technologies LTD 6.00, 1
SMBIOS Version	2.4
Embedded Controller Version	0.00
BIOS Mode	Legacy
BaseBoard Manufacturer	Intel Corporation
BaseBoard Model	Not Available
BaseBoard Name	Base Board
Platform Role	Desktop
Secure Boot State	Unsupported
PCR7 Configuration	Not Available
Windows Directory	C:\Windows
System Directory	C:\Windows\system32
Boot Device	\Device\HarddiskVolume1
Locale	United States
Hardware Abstraction Layer	Version = "6.3.9600.18895"
User Name	Not Available
Time Zone	GMT Daylight Time
Installed Physical Memory (RAM)	8.00 GB
Total Physical Memory	8.00 GB
Available Physical Memory	2.10 GB
Total Virtual Memory	11.0 GB
Available Virtual Memory	4.90 GB
Page File Space	3.04 GB
Page File	C:\pagefile.sys
A hypervisor has been detected. Features required for Hyper-V will not be displayed.	

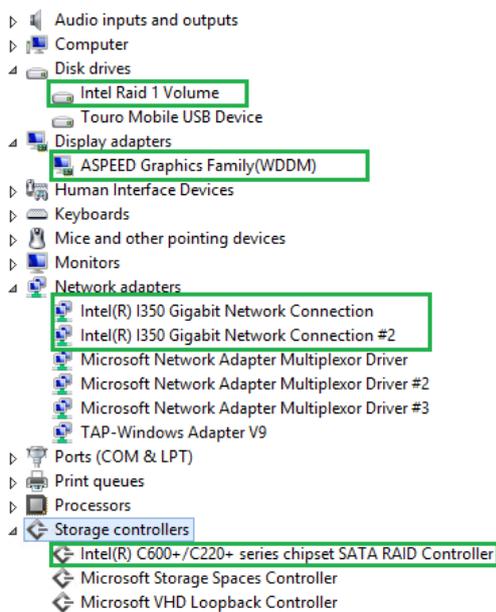
Virtual Machine

3. Finally, checking the **Device Manager** in the **Control Panel** can show whether or not VMWare drivers are installed:



Virtual machine

Or if the drivers are part of a physical installation:



Physical machine

At Beeks, we offer Virtual Machines as Virtual Private Servers, and we also offer Bare Metal Dedicated Servers – clearly distinguishing the *Virtual* (the VPS) from the *Physical* (DS).

We are not resellers either; all of our infrastructure is owned and managed by Beeks. If you call one of our engineers, this is the person who is actually handling your machine. We operate and oversee everything ourselves.

When you order a Dedicated Server with anyone, make sure you check these indicators so that you can be positive you're getting what you pay for. Don't get Devito-ed.