



Shailesh Jha

# How to find out if Intel VT-x or AMD-V Virtualization Technology is supported in Windows 10, Windows 8, Windows Vista or Windows 7 machine

Are you interested in Virtual Machines, Virtualization, Hypervisor, whatever name you call it and not sure if your Windows box supports Intel VT-x or AMD-V? This post tell you how to find out for yourself.

**But, first the big question:**

# Do you need Intel VT-x or AMD-V based CPU to run Virtual Machines?

The answer is both Yes and No. Intel VT-x or AMD-V capable processors have inbuilt set of processor instruction that can handle virtualization effectively. To be able to use these instruction, they need to be enabled in BIOS. By default they are not enabled. Some say that enabling virtualization in BIOS slows down the performance of the CPU. But these days, the lag is hardly noticeable. My experience is that, enabling Inter VT or AMD-V did not slow down the performance of my computer.

So to give it to you straight, If you plan to run **64 bit virtual machines** on your computer, **you need a Intel VT-x or AMD-V..** But if you plan to **run 32 bit virtual operating system** as guest, **you don't need Intel VT-x or AMD-V CPU.** Any normal CPU would work just fine.

## How to check if your CPU has Intel VT-x or AMD-V?

You need to check for Intel VT-x if you are using Intel based CPU and AMD-V if you are using AMD CPU. They are the same technology offered by two different processor manufacturers.

You can check if your CPU has virtualization technology or not right from within Windows OS. All you have to do is to boot your computer if you have not done it already and follow any of the below methods.

For Windows 7 and Vista, follow from Method third onward. Method first and second is not applicable to Windows 7 and Vista. They work for Windows 8 and 10.

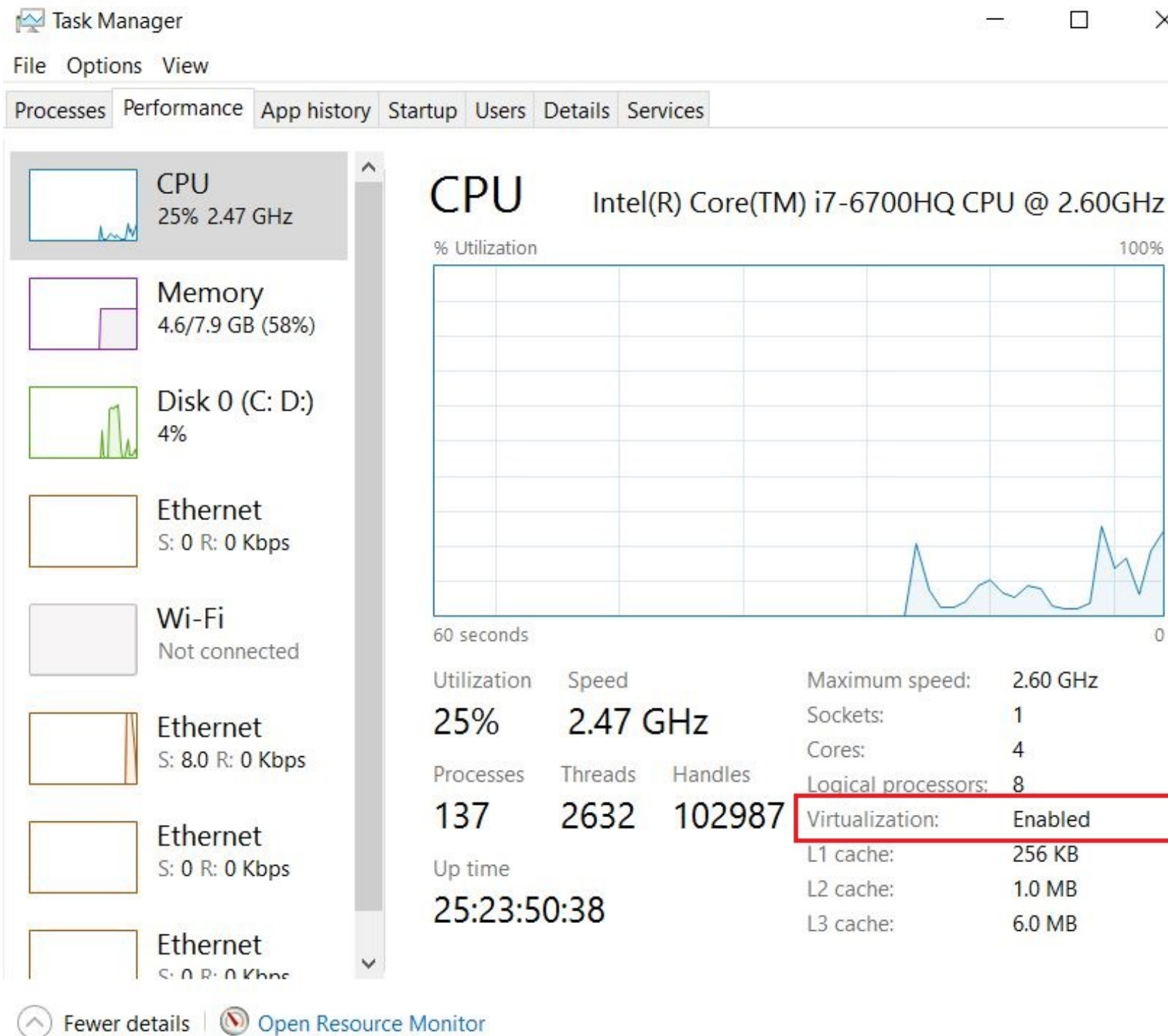
## First method – Easiest option- Check your Task Manager

If you have Windows 10 or Windows 8 operating system, the easiest way to check is by opening up **Task Manager** - **>Performance Tab**. You should see Virtualization as shown in the below screenshot. If it is enabled, it means that your CPU supports Virtualization and is currently enabled in BIOS. If it shows disabled, you need to enable it in BIOS. If you don't see virtualization, it means that your CPU does not support virtualization.

## Second method – Check using systeminfo command in windows terminal

Open  
Windows  
terminal or  
command  
prompt

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type the following command:

`systeminfo`

Below is the `systeminfo` command screenshot in windows terminal. If you see "Yes" for Hyper V requirement properties, encircled in red box, it means that you have Virtualization capability.

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CPU which  
could either  
be AMD-V or

Windows 10 task manager – performance tab – virtualization enabled screenshot

Command Prompt

```
Microsoft Windows [Version 10.0.14393]
(c) 2016 Microsoft Corporation. All rights reserved.

C:\Users\Shailesh Jha>systeminfo
```

systeminfo command prompt screenshot

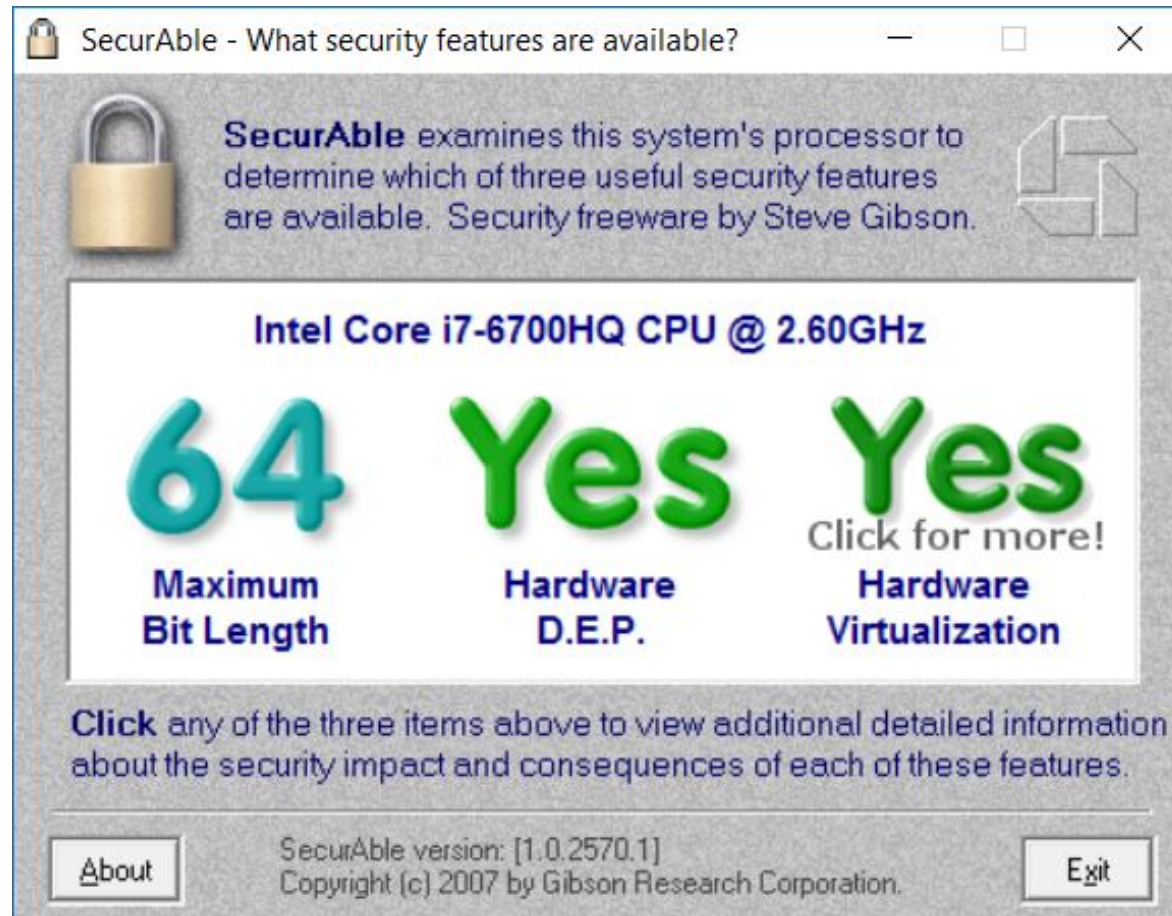
Intel VT-x. **Please note that this method does not tell you which class of CPU(Processor) is present in your computer.** All you can deduce from this is that, you have virtualization capable CPU, which could either be Intel VT-x or AMD-V.

```
[02]: fe80::14b1:40f8:3fe8:ceda
[02]: Intel(R) Dual Band Wireless-AC 3165
      Connection Name: Wi-Fi 2
      Status:         Media disconnected
[03]: VMware Virtual Ethernet Adapter for VMnet1
      Connection Name: VMware Network Adapter VMnet1
      DHCP Enabled:   Yes
      DHCP Server:    192.168.61.254
      IP address(es)
      [01]: 192.168.61.1
      [02]: fe80::a0e5:fd47:b45e:e544
[04]: VMware Virtual Ethernet Adapter for VMnet8
      Connection Name: VMware Network Adapter VMnet8
      DHCP Enabled:   Yes
      DHCP Server:    192.168.187.254
      IP address(es)
      [01]: 192.168.187.1
      [02]: fe80::2001:ec56:7484:fd2
[05]: Microsoft KM-TEST Loopback Adapter
      Connection Name: Ethernet 4
      DHCP Enabled:   No
      IP address(es)
      [01]: 192.168.1.20
      [02]: fe80::edb8:ad7:fd0:8fa8
Hyper-V Requirements:  VM Monitor Mode Extensions: Yes
                      Virtualization Enabled In Firmware: Yes
                      Second Level Address Translation: Yes
                      Data Execution Prevention Available: Yes
```

systeminfo result Hyper V requirements screenshot

## Third method – Use third party utility such as securAble

You can download a utility called [SecurAble](#). This is pretty old software but still it works. It works for both Intel and AMD CPU. All you have to do is to download and run this application. Below screenshot shown you result when you run this utility. If you see hardware virtualization as Yes, it mean that you CPU supports Virtualization.



securable utility run result screenshot

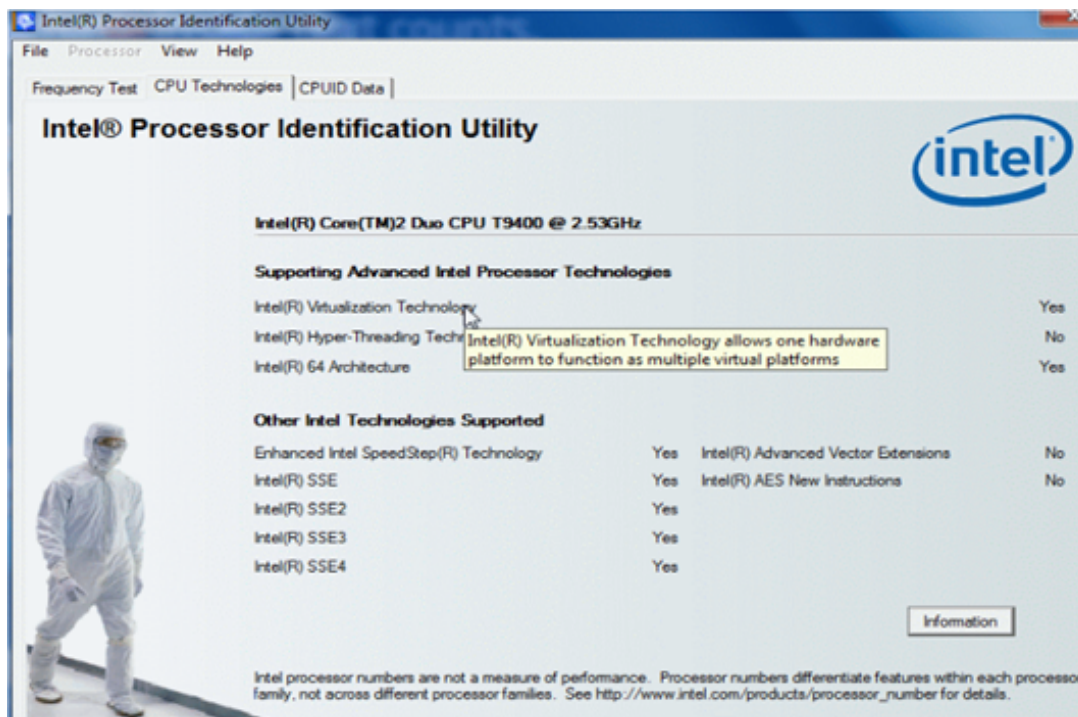
## Fourth method- Use utility tool provided by Intel or AMD

Intel and AMD provide their own utility which you will have to download and Run. One you run it, the result dialog box will have an entry for Vitalization. Below is the link for the utility tool for Intel and AMD and their corresponding result screenshot when you run it.



## 1. Intel

If you have Intel Chipset, download the utility [Intel® Processor Identification Utility – Windows\\* Version](#), its a .msi file, so you will have to install it and run. In Intel Technologies tab, under Supported Intel Advanced Processor Technology you should see Intel Virtualization Technology as Yes. If you see this, your CPU supports Virtualization as shown in the below screenshot.



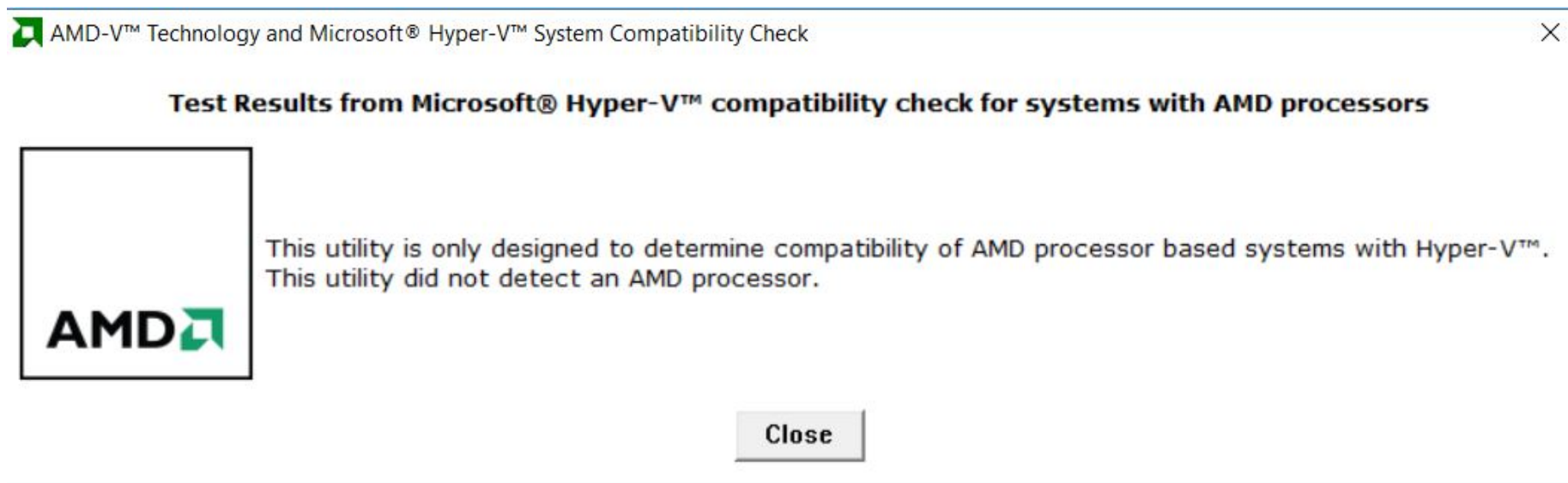
Intel processor identification utility

## 2. AMD

If you have AMD chipset, download the utility [AMD Virtualization™ Technology and Microsoft® Hyper-V™ System Compatibility Check Utility](#). Its a .zip file. Extract it and run the amdvhyperv.exe file. This will ask you to allow



extract files. Say yes and after the extraction is complete, run amdvhyperv.exe again from the extracted folder. You will see something like the below screenshot. **Since I ran this on the Intel CPU system, the results fails.** If you have AMD CPU and see something like this, it mean that you don't have AMD CPU that supports Virtualization. If you see a success page, it mean that your AMD CPU supports Virtualization.

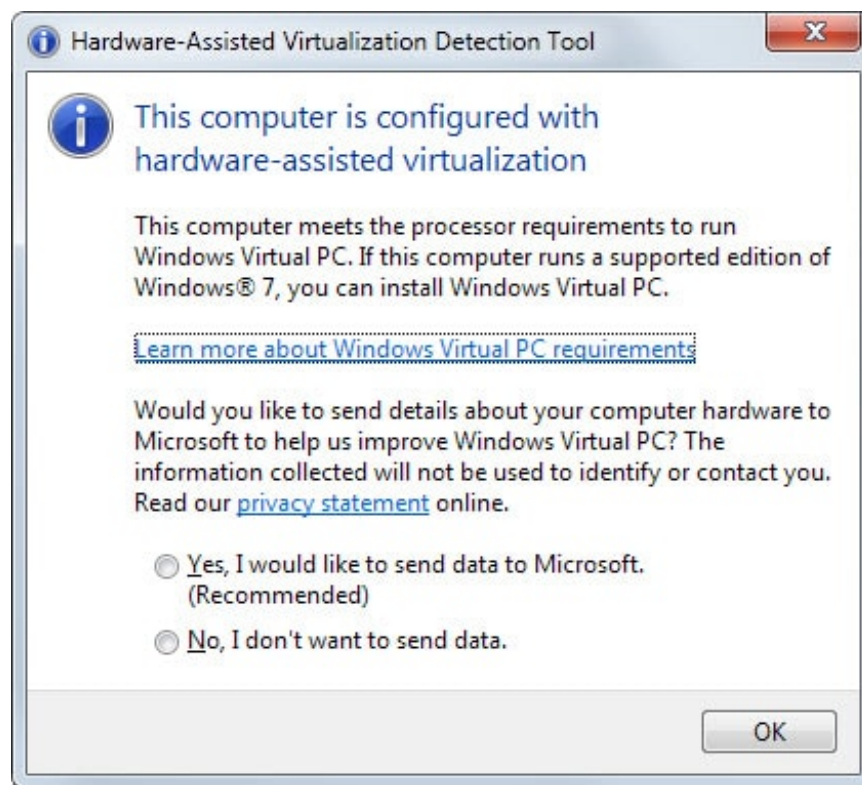


AMD Hyper -V compatibility check screenshot

## Fifth method – Use Microsoft® Hardware-Assisted Virtualization Detection Tool (Works for Windows 7 and Vista and not for Windows 8 or 10)

If you have Windows 7 or Vista, Microsoft provides a utility tool called [Microsoft® Hardware-Assisted Virtualization Detection Tool](#) to check if your CPU supports Hyper-V, which is a Virtualization software from Microsoft provided for free in Windows pro and above versions. Hyper-V is Microsoft's alternate to VMware Workstation or Oracle's Virtu

Box. Download this tool (havdetectiontool.exe) and Run it. If you see something like the below screenshot, it means that your processor supports Virtualization.



Microsoft hardware assisted virtualization detection tool  
screenshot

So, that's it in this post. Thanks for visiting my website. If you have any questions, please leave a comment below.

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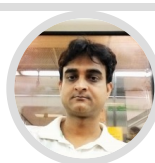
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## Shailesh Jha

Underneath a boring IT professional lies a passionate student of computer science. I love computers and this blog is about everyday computer issues that a common man faces. Through this blog I try to reconnect with my long forgotten self.

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### 8 COMMENTS



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cool. thanks. virtualization: enabled. docker here i come

**Shailesh Jha** [Link](#) [Reply](#)

Thanks

**kelvin** [Link](#) [Reply](#)

Please my Cup does not supported virtualization . Please how can i install Kali Linux it .

**Shailesh Jha** [Link](#) [Reply](#)

Try the 32 bit version. You can download it from <https://www.kali.org/downloads/>.

64 bit version requires virtualization not 32 bit version.

**Sukh** [Link](#) [Reply](#)

How to I enable vt-x? All I see is vt-d and my program I wanna run says to disable vt-d and enable vt-x

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Which program is that? VT-x or VT-d can be enabled or disabled through your BIOS only and its a Processor level feature. Check you processor manual to find if it supports VT-x or VT-d. If you laptop supports it, you will have the option to enable or disable it from BIOS.

**NitishArora** [Link](#) [Reply](#)

hii please help me my

Acer Aspire E1-421 laptop Virtualization is disable how to enable

in my bios is not show virtualization option

plzzzzzzzzzz help me 😞

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Try this:

bios -> config -> SVM enable.

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