

# A COMPARISON OF “WINDOWS 7”, “WINDOWS 8” AND “WINDOWS 8.1”

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Web location for this  
presentation:

<http://aztcs.org>

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“Meeting Notes”

# SUMMARY

At the present time, you have a choice between running **"Windows 7"**, **"Windows 8"**, and **"Windows 8.1"**.

Your selection between these operating systems should depend on the differences in the features of these three versions of **"Windows.."**

# TOPICS

- Naming Of The Lowest, No-Frills Edition
- "Windows Media Center"
- "Extended Support" End Dates
- Hardware Requirements
- "Windows 8" and "Windows 8.1" Have "File History"

# TOPICS (continued)

- Bundled Hard Drive Imaging Backup
- Only "Windows 7" Has "XP Mode" For Running Old Software Applications
- The "Pro" and "Enterprise" Editions of "Windows 8" And "Windows 8.1" Have "Hyper-V"

# TOPICS (continued)

- "Windows 8" And "Windows 8.1" Are Faster Than "Windows 7"
- "Windows 8" And "Windows 8.1" Have Much Better Touch Screen Support
- Hardware Driver Improvements In "Windows 8" And "Windows 8.1"

# TOPICS (continued)

- "Spot Verifier" Service For Hard Drives
- "Windows 8" And "Windows 8.1" Have "Storage Spaces"
- Windows.. Product Time Line

**NAMING OF THE  
LOWEST,  
NO-FRILLS  
EDITION**

# NAMING OF THE LOWEST, NO-FRILLS EDITION

**WINDOWS  
7**

**"WINDOWS 7 HOME PREMIUM"**

**WINDOWS  
8**

**"WINDOWS 8"  
EDITION OF "WINDOWS 8"  
(= "CORE EDITION")**

**Windows  
8.1**

**"WINDOWS 8.1"  
EDITION OF "WINDOWS 8.1"  
(= "CORE EDITION")**

# Windows 8 (Product Name)

## Windows 8 (edition)

- Windows 8 upgrade box with 32-bit and 64-bit installation DVDs (all boxed copies of Windows 8 edition are for upgrading from XP, Vista, or Windows 7)
- Windows 8 OEM System Builder 32-bit (full version)
- Windows 8 OEM System Builder 64-bit (full version)

## Windows 8 Pro (edition)

- Windows 8 Pro upgrade (box or download) with both 32-bit and 64-bit installation DVDs
- Windows 8 Pro OEM System Builder 32-bit (full version purchased as download and/or installation DVD)
- Windows 8 Pro OEM System Builder 64-bit (full version purchased as download and/or installation DVD)

## Windows RT (edition)

(Full version that has to be preloaded by the manufacturer of tablet with an ARM processor. This edition of "Windows 8" will be discontinued soon.)

## Windows 8 Enterprise (edition)

- Windows 8 Enterprise 32-bit RTM (full version)
- Windows 8 Enterprise 64-bit RTM (full version)
- Windows 8 Enterprise Evaluation 32-bit (full version, time-limited trial)
- Windows 8 Enterprise Evaluation 64-bit (full version, time-limited trial)

# Windows 8.1 (Product Name)

## Windows 8.1 (=core edition)

- Windows 8.1 full version with both 32-bit and 64-bit installation DVDs in the same box
- Windows 8.1 OEM System Builder 32-bit (full version)
- Windows 8.1 OEM System Builder 64-bit (full version)

## Windows 8.1 Pro (edition)

- Windows 8.1 Pro full version with both 32-bit and 64-bit installation DVDs in the same box
- Windows 8.1 Pro OEM System Builder 32-bit (full version)
- Windows 8.1 Pro OEM System Builder 64-bit (full version)

## Windows RT (edition)

(Full version that has to be preloaded by manufacturer of tablet with ARM processor tablet. This edition of "Windows 8.1" will be discontinued soon.)

## Windows 8.1 Enterprise (edition)

- Windows 8.1 Enterprise 32-bit RTM (full version)
- Windows 8.1 Enterprise 64-bit RTM (full version)
- Windows 8.1 Enterprise Evaluation 32-bit (full version, time-limited trial)
- Windows 8.1 Enterprise Evaluation 64-bit (full version, time-limited trial)

**"WINDOWS MEDIA  
CENTER"**

# "WINDOWS MEDIA CENTER" ("WMC")

WINDOWS  
7

"WMC" IS BUNDLED IN  
WITH THE "WINDOWS 7  
HOME PREMIUM",  
"WINDOWS 7  
PROFESSIONAL",  
AND  
"WINDOWS 7  
ENTERPRISE"

# "WINDOWS MEDIA CENTER" ("WMC") (continued)

WINDOWS  
8

"WMC" CAN BE  
PURCHASED ONLINE  
FOR "WINDOWS 8 PRO"

# "WINDOWS MEDIA CENTER" ("WMC") (continued)

WINDOWS 8.1	"WMC" CAN BE PURCHASED ONLINE FOR "WINDOWS 8.1 PRO".
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## "WINDOWS MEDIA CENTER" (continued)

- If you have a copy of any edition "Windows 7" (that is not "Windows 7 Starter"), then it will have a bundled copy of "Windows Media Center" in it.

According to

[http://windows.microsoft.com/en-](http://windows.microsoft.com/en-us/window)

[m/](http://windows.microsoft.com/en-us/window)

[http://windows.m](http://windows.microsoft.com/en-us/window)

[\[\\[packs-8/feature-packs\\]\\(http://windows.microsoft.com/en-us/windows-8/feature-packs\\)\]\(http://windows.microsoft.com/en-us/windows-8/feature-</a></u></p></div><div data-bbox=\)](http://windows.microsoft.com/en-</a></u></p></div><div data-bbox=)

## **Add features to Windows 8.1 \***

If your PC is running Windows 8.1, you can get Windows 8.1 Pro Pack and enjoy all the features of Windows 8.1 Pro as well as Windows Media Center for \$99.99 USD ERP. To buy Windows 8.1 Pro Pack, follow the instructions on this page.

- If your PC is running Windows 8.1, you can get Windows 8.1 Pro Pack and enjoy all the features of Windows 8.1 Pro as well as Windows Media Center for \$99.99 USD ERP.

## **Add features to Windows 8.1 Pro \***

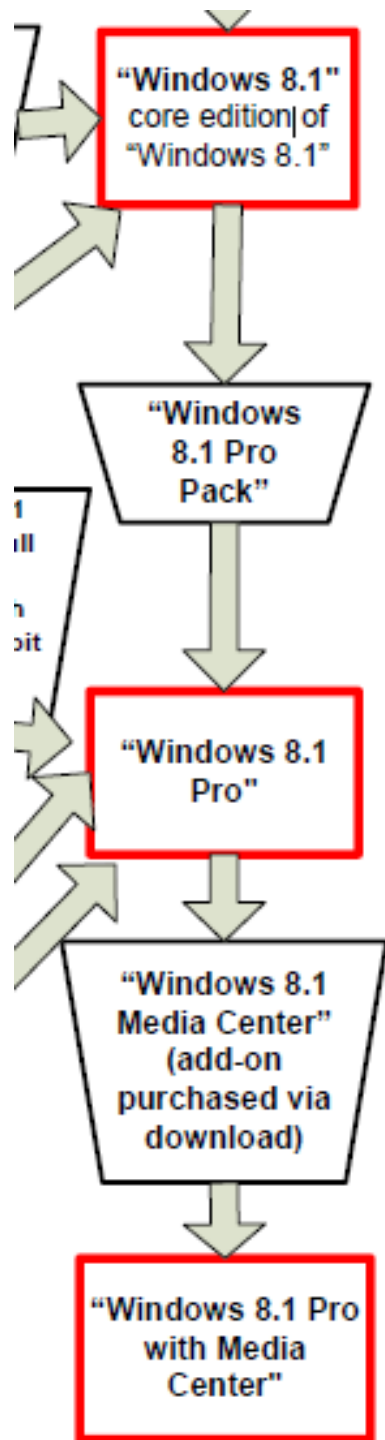
If your PC is running Windows 8.1 Pro and you'd like to watch and record TV with Windows Media Center, you can get Windows 8.1 Media Center Pack for \$9.99 USD ERP. To buy Windows 8.1 Media Center Pack, follow the instructions on this page.

- If your PC is running "Windows 8.1 Pro" and you'd like to watch and record TV with "Windows Media Center", you can get "Windows 8.1 Media Center Pack" for \$9.99 USD ERP.

## "WINDOWS MEDIA CENTER" (continued)

- If you have a copy of "Windows 8.1", it will probably be a copy of the "Windows 8.1" ("core") edition of "Windows 8.1":

To get "Windows Media Center" for it, you first have to purchase and install upgrade to "Windows 8.1 Pro" edition with the "Windows 8.1 Pro Pack". Then you have to purchase and install "Windows Media Center".



- Start with **"Windows 8.1"** ("core") edition of "Windows 8.1"  
Upgrade it with **"Windows 8.1 Pro Pack"** (\$100) so that it becomes **"Windows 8.1 Pro"** edition of "Windows 8.1"  
Then install **"Windows Media Center"** (\$10) by buying it in the online "Windows Store".

- For most "Windows 8.." computer users, the cost of installing "Windows Media Center" is \$110.
- Most "Windows 8.." computer users are better off using the free "VLC Video Player" which can be safely downloaded only from <http://www.videolan.org/vlc/index.html>

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- Most "Windows 8.." computer users are better off using the free "VLC Video Player" which can be safely downloaded only from <http://www.videolan.org/vlc/index.html>

- A detailed description of most of the features of the free "VLC Media Player" can be found at <http://www.videolan.org/vlc/features.html>  
To play Blu-Ray Discs in "VLC Media Player", you have to add a few drivers as described in great detail at <http://forum.notebookreview.com/windows-os-software/699817-playing-blu-ray-discs-windows-8-using-vlc-media-player.html>

- The only feature that the free "VLC Media Player" is missing is the ability to provide "Television Inside PC" with a USB, PCI, or PCIe television tuner. Maybe they will add in this feature in the future.

# "EXTENDED SUPPORT" END DATES

# "EXTENDED SUPPORT" END DATES

<b>WINDOWS 7</b>	<b>EXTENDED SUPPORT ENDS ON JANUARY 14, 2020</b>
<b>WINDOWS 8</b>	<b>JANUARY 12, 2016 ("UPGRADE TO WINDOWS 8.1" FROM THE "WINDOWS STORE" BECOMES MANDATORY)</b>
<b>WINDOWS 8.1</b>	<b>EXTENDED SUPPORT ENDS ON JANUARY 10, 2023</b>

# HARDWARE REQUIREMENTS

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## WINDOWS 7

**REQUIRES AT LEAST A  
1+ GIGAHERTZ PROCESSOR  
WITH AT LEAST 1 GB OF  
RAM**

## WINDOWS 8

**REQUIRES PROCESSOR  
WITH PAE, NX, and SSE2**

## WINDOWS 8.1

**REQUIRES PROCESSOR  
WITH PAE, NX, SSE2, and, if  
you have a 64-bit processor:  
CMPXCHG16b, PrefetchW,  
and LAHF/SAHF**

# HARDWARE REQUIREMENTS FOR OLD "PENTIUM 4" COMPUTERS

<u>WINDOWS 7</u>	REQUIRES A "PENTIUM 4" (OR HIGHER) PROCESSOR
<u>WINDOWS 8</u>	RUNS ON 30 PERCENT OF "PENTIUM 4" COMPUTERS
<u>WINDOWS</u> <u>8.1</u>	DOES NOT RUN ON ANY "PENTIUM 4" COMPUTERS

# HARDWARE REQUIREMENTS (continued)

- How to Determine If Your Older "Pentium 4" Computer Can Run "Windows 8"

See

[http://aztcs.org/meeting\\_notes/winhardsig/win8/old-computer-Win8.pdf](http://aztcs.org/meeting_notes/winhardsig/win8/old-computer-Win8.pdf)

# HARDWARE REQUIREMENTS (continued)

- To find out if an old computer will run "Windows 8.1", you can download a free time-limited copy of "Windows 8.1 Enterprise Evaluation" and attempt to install it. See [http://aztcs.org/meeting\\_notes/winhardsig/win8.1/win8.1enteval.pdf](http://aztcs.org/meeting_notes/winhardsig/win8.1/win8.1enteval.pdf)


**"WINDOWS 8"  
AND  
"WINDOWS 8.1"  
HAVE  
"FILE HISTORY"**




# "FILE HISTORY" APPLET




<u>WINDOWS</u> <u>7</u>	DOES NOT HAVE "FILE HISTORY"
<u>WINDOWS</u> <u>8</u>	HAS "FILE HISTORY" APPLET IN THE "CONTROL PANEL"
<u>WINDOWS</u> <u>8.1</u>	HAS THE "FILE HISTORY" APPLET IN THE "CONTROL PANEL"

"WINDOWS 8" AND "WINDOWS 8.1" HAVE  
"FILE HISTORY"

- The **"File History"** feature of "Windows 8" and "Windows 8.1" automatically stores "frozen" copies of changed data files at designated intervals of time.

F:\FileHistory\testuser\WIN8PRO64BIT\Data\C\Users\testuser\Desktop  Search De:

<input type="checkbox"/>	Name	Date modified
	2014-01-07 COA to NEA - Copy (2014_02_20 22_35_03 UTC).doc	1/7/2014 3:14 PM
	2014-01-07 COA to NEA - Copy (2014_02_20 23_11_45 UTC).doc	2/20/2014 4:08 PM
	2014-01-07 COA to NEA - Copy (2014_02_20 23_47_49 UTC).doc	2/20/2014 4:17 PM

-  2014-01-07 COA to NEA - Copy (2014\_02\_20 22\_35\_03 UTC).doc 1/7/2014 3:14 PM
-  2014-01-07 COA to NEA - Copy (2014\_02\_20 23\_11\_45 UTC).doc 2/20/2014 4:08 PM
-  2014-01-07 COA to NEA - Copy (2014\_02\_20 23\_47\_49 UTC).doc 2/20/2014 4:17 PM

/ (2014\_02\_20 22\_35\_03 UTC).doc 1/7/2014 3:14 PM  
/ (2014\_02\_20 23\_11\_45 UTC).doc 2/20/2014 4:08 PM  
/ (2014\_02\_20 23\_47\_49 UTC).doc 2/20/2014 4:17 PM



# File History

File History

Control Panel > All Control Panel Items > File History

Control Panel Home

Restore personal files

Select drive

Exclude folders

Advanced settings


### Keep a history of your files

File History saves copies of your files so you can get them back if they're lost or damaged.

#### File History is on

Copy files from: Libraries, Desktop, Contacts, and Favorites

Copy files to:


 ExternalHDDforFileHistory (F:)  
58.9 GB free of 59.8 GB

Files last copied on 3/10/2014 5:48 PM.  
[Run now](#)

[Turn off](#)

See also

Recovery

 System Image Backup

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[Run now](#)



Control Panel

Control Panel Home

[Restore personal files](#)

Select drive

Exclude folders

Advanced settings

Monday, March 10, 2014 5:28 PM | 4 of 4

File folder (3)



Contacts



Desktop



Favorites

Library (4)



Documents



Music



Pictures



Videos

7 items







Monday, March 10, 2014 4:01 PM | 1 of 4

Monday

File History view showing a list of files:

- File folder (3)
  - Contacts
  - Desktop
  - Favorites
- Library (4)
  - Documents
  - Music
  - Pictures
  - Videos

7 items

View options: list view, icon view.



BUNDLED HARD  
DRIVE IMAGING  
BACKUP HAS A  
DIFFERENT NAME IN  
EACH VERSION OF  
"WINDOWS.."

# BUNDLED HARD DRIVE IMAGING BACKUP

<u>WINDOWS 7</u>	= <b>"BACKUP AND RESTORE"</b> IN THE "CONTROL PANEL"
<u>WINDOWS 8</u>	= <b>"WINDOWS 7 FILE RECOVERY"</b> IN THE "CONTROL PANEL"
<u>WINDOWS</u> <u>8.1</u>	= <b>"SYSTEM IMAGE BACKUP"</b> INSIDE "FILE HISTORY" IN THE "CONTROL PANEL"

# BUNDLED HARD DRIVE IMAGING BACKUP

- In all three versions of "Windows.." the executable file that runs when you start the backup applet is **C:\Windows\System32\sdclt.exe**

# BUNDLED HARD DRIVE IMAGING BACKUP (continued)

- See [http://aztcs.org/meeting\\_notes/winhardsig/backup/hd-imaging-win7-8-8.1.pdf](http://aztcs.org/meeting_notes/winhardsig/backup/hd-imaging-win7-8-8.1.pdf)

# BUNDLED HARD DRIVE IMAGING BACKUP (continued)

- For the differences between "**Acronis True Image**" and the bundled hard drive imaging programs in **Windows 7**, **Windows 8**, and **Windows 8.1**, see [http://aztcs.org/meeting\\_notes/winhardsig/backup/WindowsBackup\\_vs\\_Acronis.pdf](http://aztcs.org/meeting_notes/winhardsig/backup/WindowsBackup_vs_Acronis.pdf)

# BUNDLED HARD DRIVE IMAGING BACKUP

(continued)

- Microsoft announced in 2012 that

**"Backup and Restore"**

(in "Windows 7")

**"Windows 7 File Recovery"**

(in "Windows 8")

**"System Image Backup"**

(in "Windows 8.1")

has been **deprecated**.

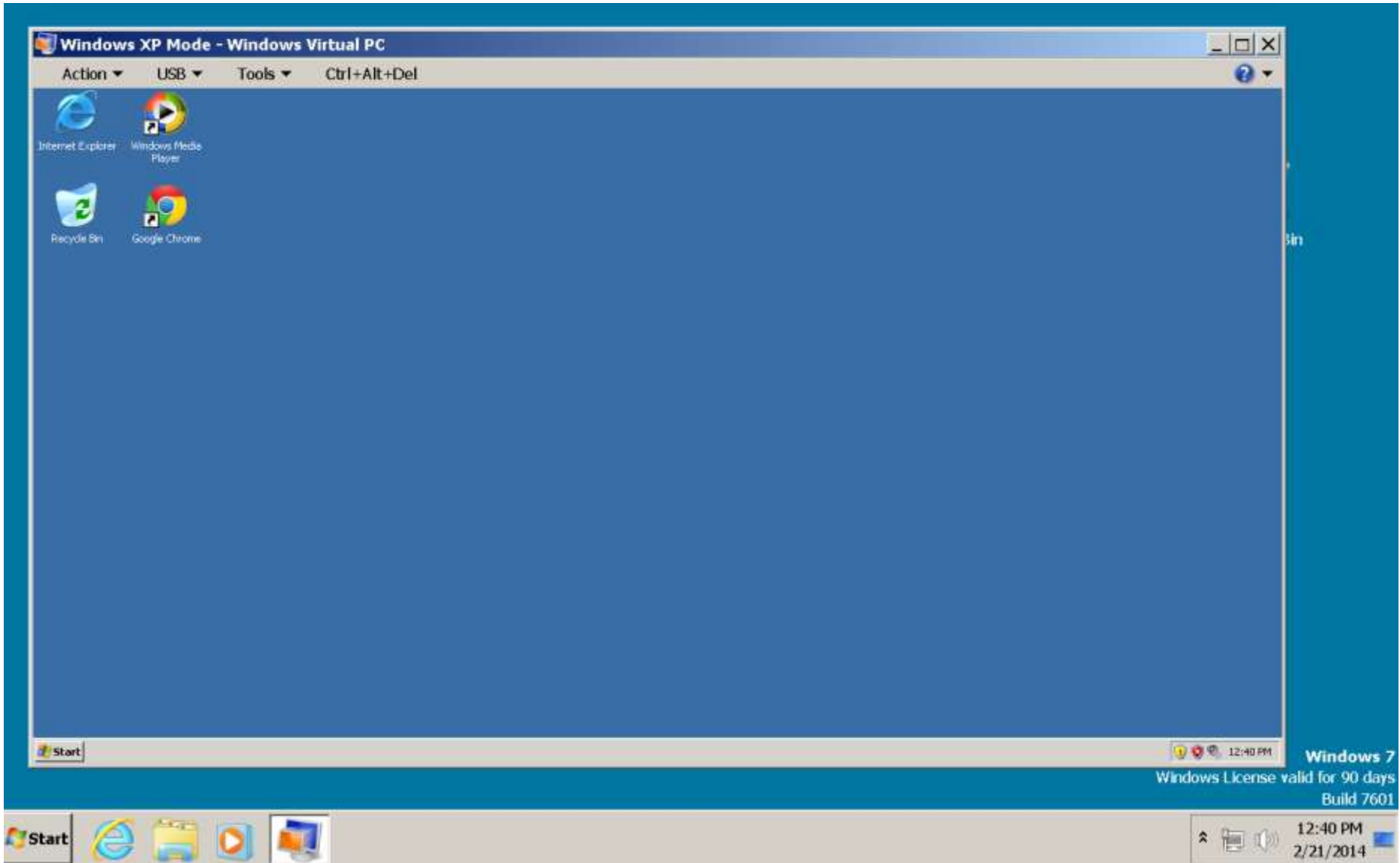
# BUNDLED HARD DRIVE IMAGING BACKUP (continued)

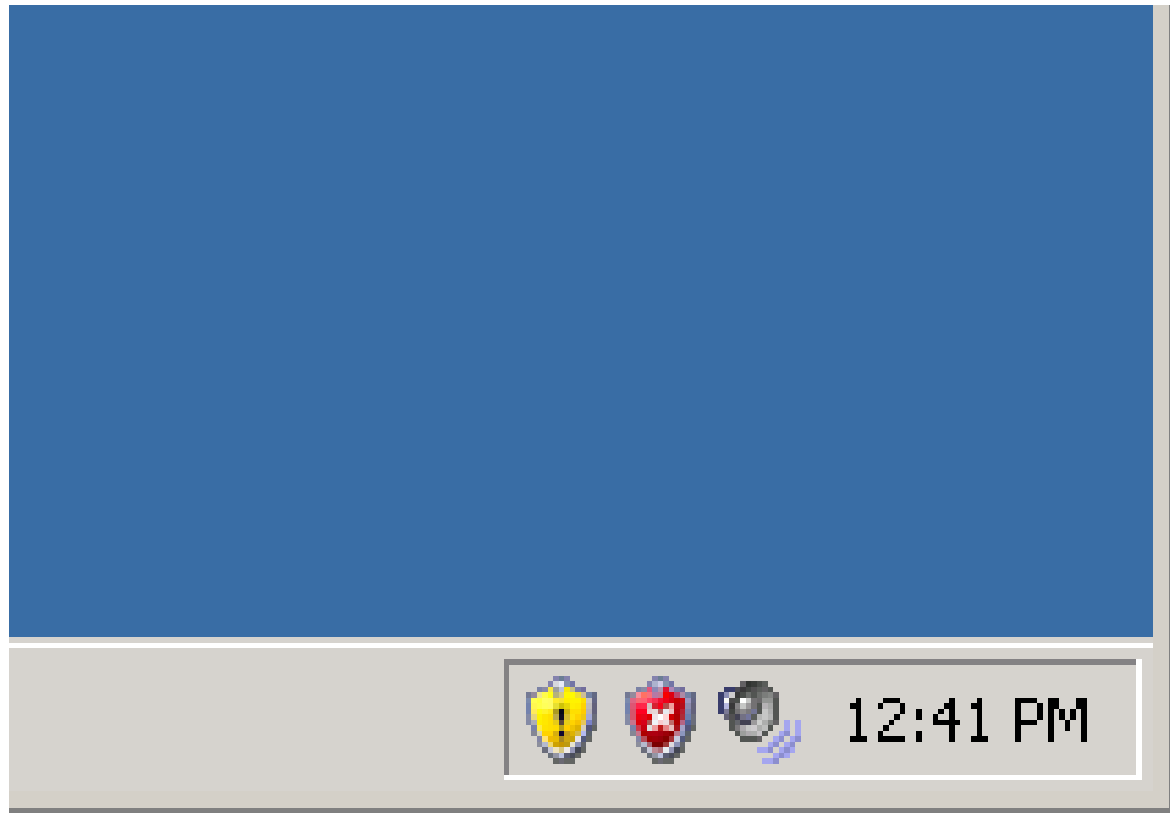
- "**deprecated**" means that this useful program will probably be missing from the future "Windows 9".

ONLY "WINDOWS 7"  
HAS "XP MODE" FOR  
RUNNING OLD  
SOFTWARE  
APPLICATIONS

# "WINDOWS XP MODE" FOR RUNNING OLD SOFTWARE APPLICATIONS

<u>WINDOWS 7</u> (PRO, ENTERPRISE, and ULTIMATE)	YOU CAN DOWNLOAD AND RUN "WINDOWS XP MODE" FOR NO ADDITIONAL COST
WINDOWS 8	"WINDOWS XP Mode" IS NOT AVAILABLE
WINDOWS 8.1	"WINDOWS XP MODE" IS NOT AVAILABLE





**Windows 7**

**Windows License valid for 90 days**

**Build 7601**



## Windows XP Mode - Windows Virtual PC

Action ▼

USB ▼

Tools ▼

Ctrl+Alt+Del



Internet Explorer



Windows Media  
Player



Recycle Bin



Google Chrome



**Control Panel**

File Edit View Favorites Tools Help

Back Search Folders

Address Control Panel Go

Accessibility Options	Add Hardware	Add or Remove Programs	Administrative Tools	Automatic Updates	Date and Time	Display
Flash Player	Folder Options	Fonts	Game Controllers	Internet Options	Keyboard	Mouse
Network Connections	Network Setup Wizard	Phone and Modem Options	Power Options	Printers and Faxes	Regional and Language Options	Scanners and Cameras
Scheduled Tasks	Security Center	Sounds and Audio Devices	Speech	System	Taskbar and Start Menu	User Accounts
Windows Firewall	Wireless Network (Taskbar)					



# Control Panel

File Edit View Favorites Tools Help

Back Search Folders

Address Control Panel

Go



Accessibility Options



Add Hardware



Add or Remove Programs



Administrative Tools



Automatic Updates



Date and Time



Display



Flash Player



Folder Options



Fonts



Game Controllers



Internet Options



Keyboard



Mouse



Network Connections



Network Setup Wizard



Phone and Modem Options



Power Options



Printers and Faxes



Regional and Language Options



Scanners and Cameras



Scheduled Tasks



Security Center



Sounds and Audio Devices



Speech



System



Taskbar and Start Menu



User Accounts



# System Properties



System Restore    Automatic Updates    Remote  
General    Computer Name    Hardware    Advanced



## System:

Microsoft Windows XP  
Professional  
Version 2002  
Service Pack 3

## Registered to:

Windows XP Mode

76487-OEM-0011903-04006

## Computer:

Intel(R) Core(TM)  
i7-3770K CPU @ 3.50GHz  
3.27 GHz, 512 MB of RAM  
Physical Address Extension

OK

Cancel

Apply

System:

Microsoft Windows XP

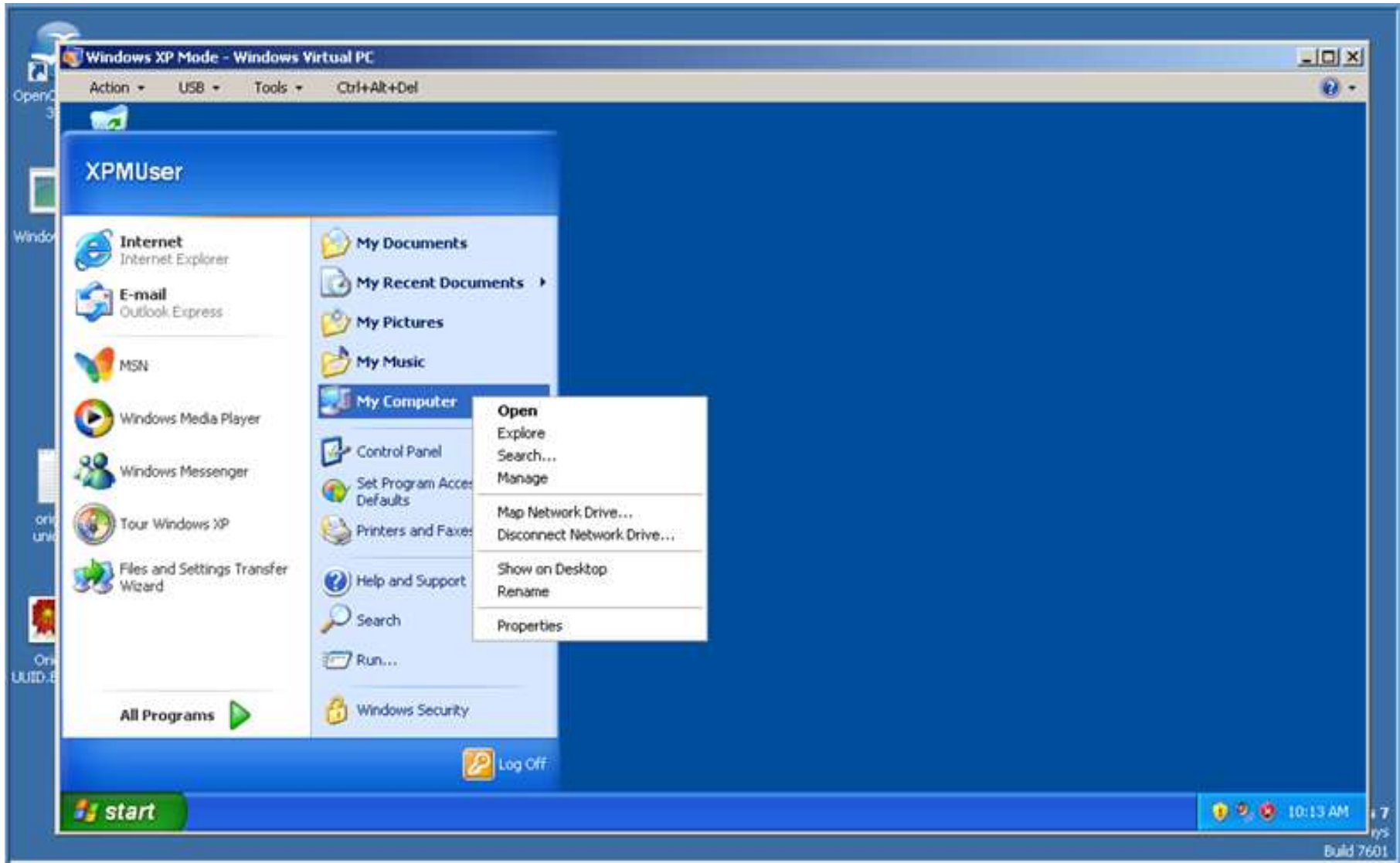
Professional

Version 2002

Service Pack 3

Registered to:

Windows XP Mode





# Windows XP Mode - Windows Virtual PC

Action ▼

USB ▼

Tools ▼

Ctrl+Alt+Del



Internet Explorer



Google Chrome



Windows Media  
Player

## "WINDOWS XP MODE" FOR RUNNING OLD SOFTWARE APPLICATIONS (continued)

- All editions of "Windows 8" and "Windows 8.1" do **not** have the ability to download and run "Windows XP Mode".
- "Windows 7 Professional", "Windows 7 Enterprise", and "Windows 7 Ultimate" all have the ability to download and run "Windows XP Mode" at no additional cost.

# "WINDOWS XP MODE" FOR RUNNING OLD SOFTWARE APPLICATIONS (continued)

- "Windows XP Mode" will no longer be safe to run after April 8, 2014 when Microsoft discontinues "Extended Support" for all copies of "Windows XP".

See

[http://aztcs.org/meeting\\_notes/winhardsig/winxp/WindowsXP-end.pdf](http://aztcs.org/meeting_notes/winhardsig/winxp/WindowsXP-end.pdf)

THE "PRO" AND  
"ENTERPRISE"  
EDITIONS OF  
"WINDOWS 8" AND  
"WINDOWS 8.1"  
HAVE "HYPER-V"

THE "PRO" AND "ENTERPRISE" EDITIONS OF "WINDOWS 8" AND "WINDOWS 8.1 HAVE "HYPER-V"

WINDOWS 7

**"HYPER-V"** IS NOT AVAILABLE

WINDOWS 8  
("PRO" AND  
"ENTERPRISE")

**"HYPER-V"** IS AVAILABLE AT NO ADDITIONAL COST

WINDOWS 8.1  
("PRO" AND  
"ENTERPRISE")

**"HYPER-V"** IS AVAILABLE AT NO ADDITIONAL COST

THE "PRO" AND "ENTERPRISE"  
EDITIONS OF "WINDOWS 8" AND  
"WINDOWS 8.1" HAVE "HYPER-V"

- **"Hyper-V"** is a virtual machine program that is bundled with the "Pro" and "Enterprise" editions of "Windows 8" and "Windows 8.1".

THE "PRO" AND "ENTERPRISE"  
EDITIONS OF "WINDOWS 8" AND  
"WINDOWS 8.1" HAVE "HYPER-V"

- The Microsoft-proprietary **"VMbus"** technology of "Hyper-V" lets you create faster virtual machines relative to any third-party virtual machine program.

THE "PRO" AND "ENTERPRISE"  
EDITIONS OF "WINDOWS 8" AND  
"WINDOWS 8.1" HAVE "HYPER-V"  
(continued)

- Instead of "Hyper-V", "Windows 7 Professional", "Windows 7 Enterprise", and "Windows 7 Ultimate" all have the ability to run the older "Windows Virtual PC" virtual machine program instead.

THE "PRO" AND "ENTERPRISE"  
EDITIONS OF "WINDOWS 8" AND  
"WINDOWS 8.1" HAVE "HYPER-V"  
(continued)

- Unlike the free third-party "virtual machine programs", Hyper-V has no direct "USB support" and difficult sound card support.  
In comparison the free "VMware Player" excels at these two features.

Hyper-V Manager

File Action View Help

Hyper-V Manager

- SWSB-W8PRO-VMW


### Virtual Machines

Name	State	CPU Usage	Assigned Mem...	Uptime
Ubuntu 13.10 64-bit	Off			
Windows XP Home ...	Running	2 %	3512 MB	00:08:05

### Checkpoints

The selected virtual machine has no checkpoints.



### Windows XP Home GA 32-bit

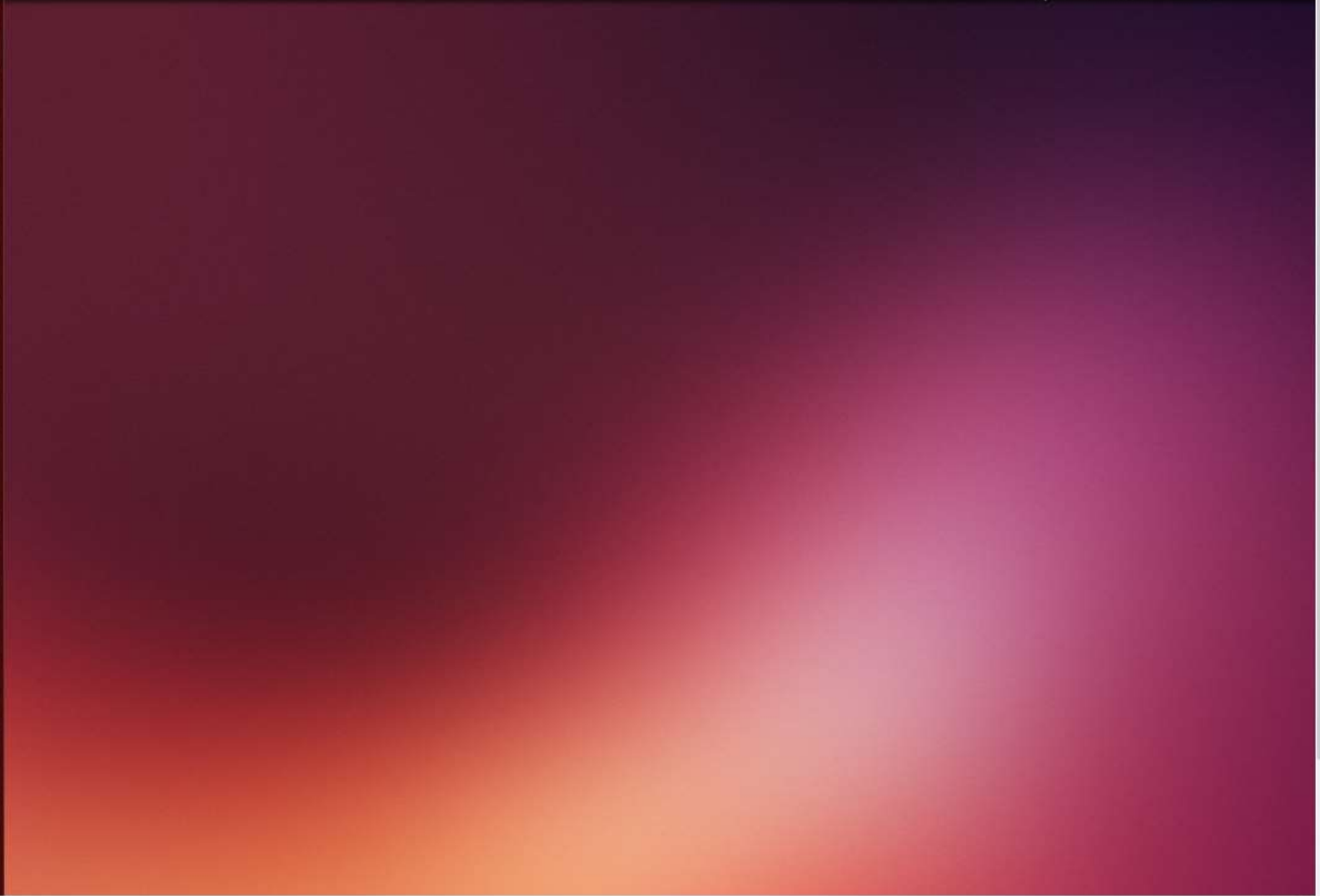
	<b>Created:</b> 2/21/2014 5:09:01 PM <b>Version:</b> 5.0 <b>Generation:</b> 1 <b>Notes:</b> None	<b>Clustered:</b> <b>Heartbeat:</b> <b>Integration Services:</b>
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### Actions

- SWSB-W8PR... ▲
- New ▶
- Import Virtual ...
- Hyper-V Setti...
- Virtual Switch ...
- Virtual SAN M...
- Edit Disk...
- Inspect Disk...
- Stop Service
- Remove Server
- Refresh
- View ▶
- Help
- Windows XP ... ▲
- Connect...
- Settings...

## Virtual Machines

Name	State	CPU Usage	Assigned Mem...	Uptime
 Ubuntu 13.10 64-bit	Off			
 Windows XP Home ...	Running	2 %	3512 MB	00:08:05
<				

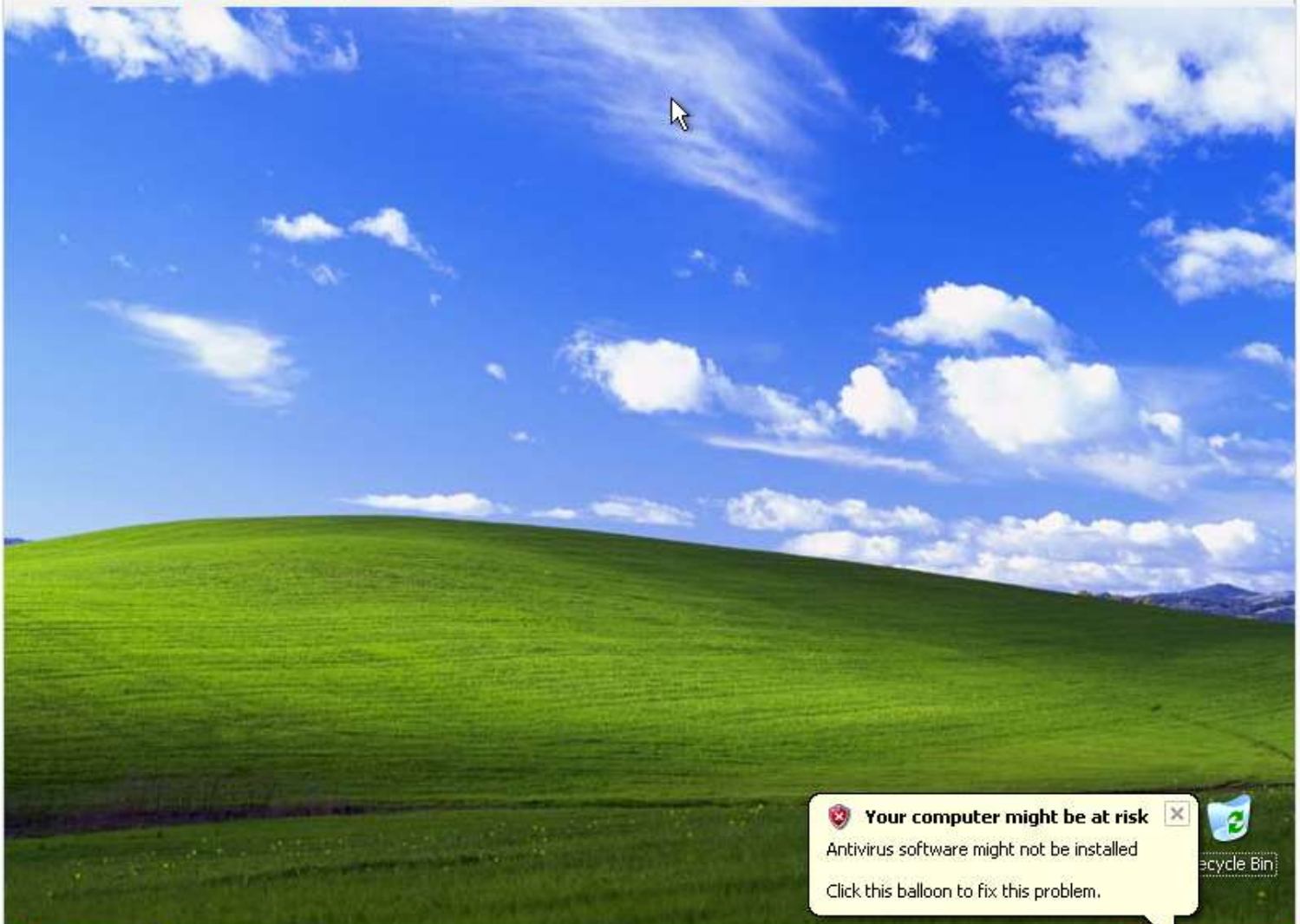




Screenshot

En ↑↓ ^





 **Your computer might be at risk** [X]  
Antivirus software might not be installed  
Click this balloon to fix this problem.

File Action Media Clipboard View Help



**testuser**

- Internet**  
Internet Explorer
- E-mail**  
Outlook Express
- MSN
- Windows Media Player
- Windows Messenger
- Tour Windows XP
- Files and Settings Transfer Wizard

---

**All Programs**

- My Documents**
- My Pictures**
- My Music**
- My Computer**

---

- C**ontrol Panel
- Set Program Access and Defaults
- H**elp and Support
- S**earch
- R**un...

Log Off Turn Off Computer



**start**

5:48 PM

Status: Running



### System Properties

System Restore Automatic Updates Remote

General Computer Name Hardware Advanced



System:  
Microsoft Windows XP  
Home Edition  
Version 2002  
Service Pack 2

Registered to:  
testuser

76477-083-4275901-21820

Computer:  
Intel(R) Core(TM)  
i7-3770K CPU @ 3.50GHz  
3.50 GHz, 3.42 GB of RAM  
Physical Address Extension

OK Cancel Apply

- Date and Time
- Display
- Mouse
- Network Connections
- Scanners and Cameras
- Scheduled Tasks
- User Accounts
- Windows Firewall

# System Properties

System Restore

Automatic Updates

Re

General

Computer Name

Hardware

Ad



System:

Microsoft Windows XP

Home Edition

Version 2002

Service Pack 2

Registered to:

testuser

THE "PRO" AND "ENTERPRISE"  
EDITIONS OF "WINDOWS 8" AND  
"WINDOWS 8.1" HAVE "HYPER-V"  
(continued)

- For details about using the "Hyper-V" virtual machine program in "Windows 8" or "Windows 8.1", see [http://aztcs.org/meeting\\_notes/winhardsig/virtualmachines/Hyper-V/Hyper-V.pdf](http://aztcs.org/meeting_notes/winhardsig/virtualmachines/Hyper-V/Hyper-V.pdf)

**"WINDOWS 8" AND  
"WINDOWS 8.1" ARE  
FASTER THAN  
"WINDOWS 7"**

# "WINDOWS 8" AND "WINDOWS 8.1" ARE FASTER THAN "WINDOWS 7"

- Less than half the time to start up
- Less than half the time to shut down
- Runs about 5 percent to 10 percent faster than "Windows 7"

# HARDWARE DRIVER IMPROVEMENTS IN "WINDOWS 8" AND "WINDOWS 8.1"

# HARDWARE DRIVER IMPROVEMENTS IN "WINDOWS 8" AND "WINDOWS 8.1"

- Faster, sharper graphics and video rendering in both the "Windows Store apps" and legacy desktop application, with a greater improvement in "Windows Store apps" relative to legacy desktop applications.

# HARDWARE DRIVER IMPROVEMENTS IN "WINDOWS 8" AND "WINDOWS 8.1" (continued)

- Native USB 3 support instead of vendor-supplied drivers for "USB 3" adapters/controllers.
- V4 Printer Drivers—faster, smaller, fewer printer drivers

**"SPOT VERIFIER"  
SERVICE FOR HARD  
DRIVES:**

# "SPOT VERIFIER" SERVICE FOR HARD DRIVES

- "Windows 8" and "Windows 8.1" have a "Spot Verifier" service that keeps a real-time list of possible bad spots on your hard drives:

# "SPOT VERIFIER" SERVICE FOR HARD DRIVES

WINDOWS 7	DOES NOT HAVE "SPOT VERIFIER" SERVICE
WINDOWS 8	HAS "SPOT VERIFIER" SERVICE
WINDOWS 8.1	HAS "SPOT VERIFIER" SERVICE

## Error Checking (Local Disk (C:))



You don't need to scan this drive

We haven't found any errors on this drive. You can still scan the drive for errors if you want.



Scan drive

You can keep using the drive during the scan. If errors are found, you can decide if you want to fix them.

Cancel

## Error Checking (Store05A (E:))



### Scan this drive for errors

We found potential errors on this drive.

#### → Scan drive (recommended)

You can keep using the drive during the scan. If errors are found, you can decide if you want to fix them.

#### → Scan and repair drive

You won't be able to use the drive while Windows finds and repairs any errors. This might take a while, and you might need to restart your computer.

Cancel

# "SPOT VERIFIER" SERVICE FOR HARD DRIVES (continued)

- When you start "Error Checking" in a "Windows 8" or "Windows 8.1" computer, you get a notification that either says "We haven't found any errors on this drive." OR "We found potential errors on this drive."

# "SPOT VERIFIER" SERVICE FOR HARD DRIVES (continued)




- This is because Windows 8 new "Spot Verifier" service keeps a real time, constantly-updated record of the locations of any hard drive errors.

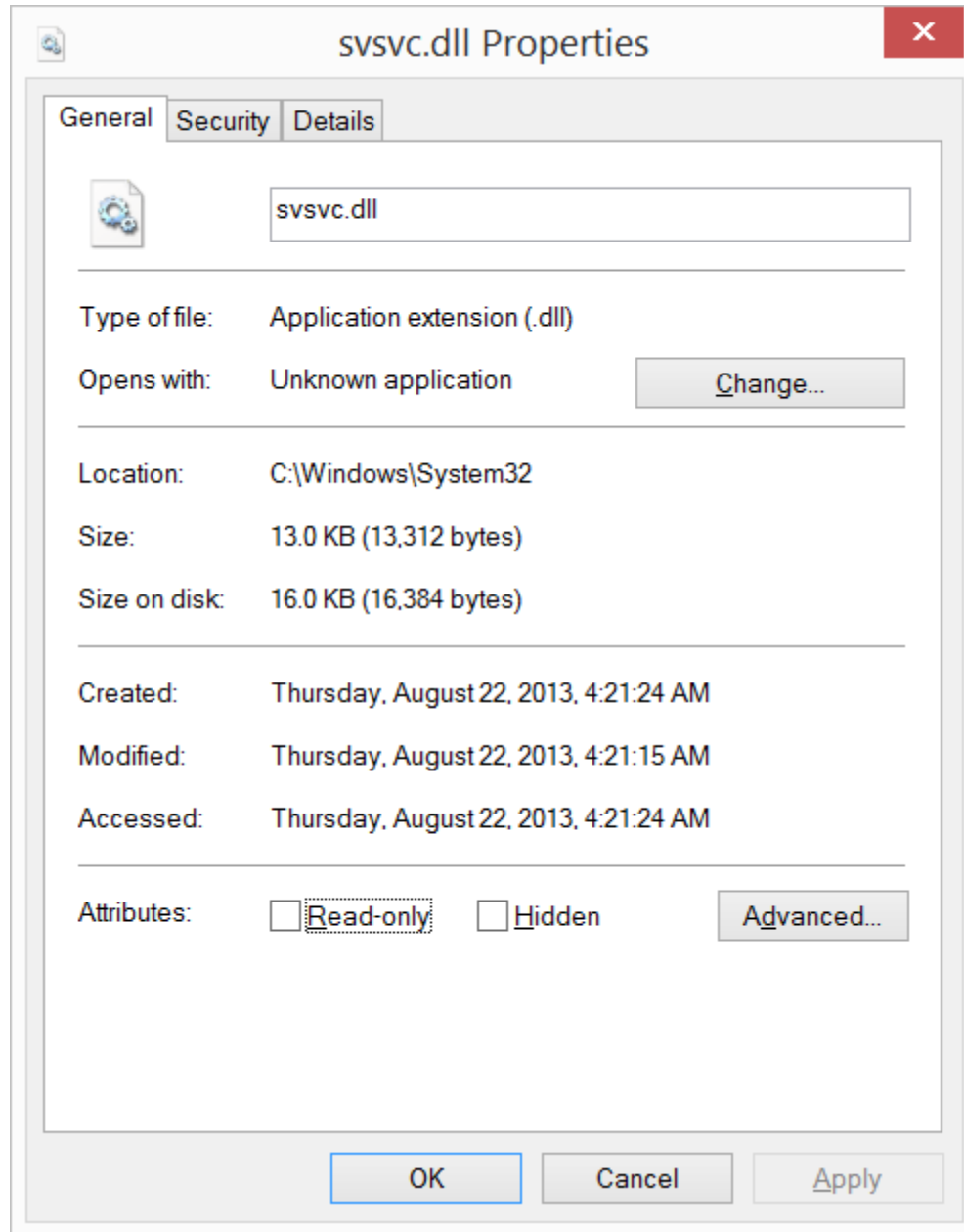
# "SPOT VERIFIER" SERVICE FOR HARD DRIVES (continued)

- The "Spot Verifier" dramatically reduces the time that it takes to do the "Error Checking" maintenance procedure on a hard drive.

# "SPOT VERIFIER" SERVICE FOR HARD DRIVES (continued)

- The "Spot Verifier" service is implemented as  
`C:\Windows\System32\svsvc.dll`

 SVCNOSL....	8/22/2013 3:43 AM	Application	57 KB
 svsvc.dll	8/22/2013 4:21 AM	Application ext...	13 KB
 svsvc.dll	1/21/2014 1:06 AM	Application ext	700 KB





# svsvc.dll Properties

General

Security

Details



svsvc.dll

Type of file: Application extension (.dll)

Opens with: Unknown application

Location: C:\Windows\System32

Size: 13.0 KB (13,312 bytes)

Services

File Action View Help

Services (Local)

**Spot Verifier**

[Start](#) the service

Description:  
Verifies potential file system corruptions.

Name	Description	Status	Startup Type
SNMP Trap	Receives trap messages generated by local or r...		Manual
Software Protection	Enables the download, installation and enforce...		Automatic (Delayed Star
<b>Spot Verifier</b>	<b>Verifies potential file system corruptions.</b>		<b>Manual (Trigger Start)</b>
SSDP Discovery	Discovers networked devices and services that ...	Running	Manual
Still Image Acquisitio...	Launches applications associated with still ima...		Manual
Storage Service	Enforces group policy for storage devices		Manual (Trigger Start)
Superfetch	Maintains and improves system performance o...	Running	Automatic
System Event Notifica...	Monitors system events and notifies subscriber...	Running	Automatic
System Events Broker	Coordinates execution of background work for...	Running	Automatic (Trigger Start)
Task Scheduler	Enables a user to configure and schedule auto...	Running	Automatic
TCP/IP NetBIOS Helper	Provides support for the NetBIOS over TCP/IP (...)	Running	Automatic (Trigger Start)
Telephony	Provides Telephony API (TAPI) support for pro...		Manual
Themes	Provides user experience theme management.		Disabled
Thread Ordering Server	Provides ordered execution for a group of thre...		Manual
Time Broker	Coordinates execution of background work for...	Running	Manual (Trigger Start)
Touch Keyboard and ...	Enables Touch Keyboard and Handwriting Pan...		Manual (Trigger Start)
UPnP Device Host	Allows UPnP devices to be hosted on this com...		Disabled
User Profile Service	This service is responsible for loading and unlo...	Running	Automatic
Virtual Disk	Provides management services for disks, volum...		Manual
VMware Authorizatio...	Authorization and authentication service for st...	Running	Automatic
VMware DHCP Service	DHCP service for virtual networks.	Running	Automatic
VMware NAT Service	Network address translation for virtual networks.	Running	Automatic
VMware USB Arbitrati...	Arbitration and enumeration of USB devices fo...	Running	Automatic
Volume Shadow Copy	Manages and implements Volume Shadow Co...		Manual

Extended Standard

Services

File Action View Help

Services (Local)

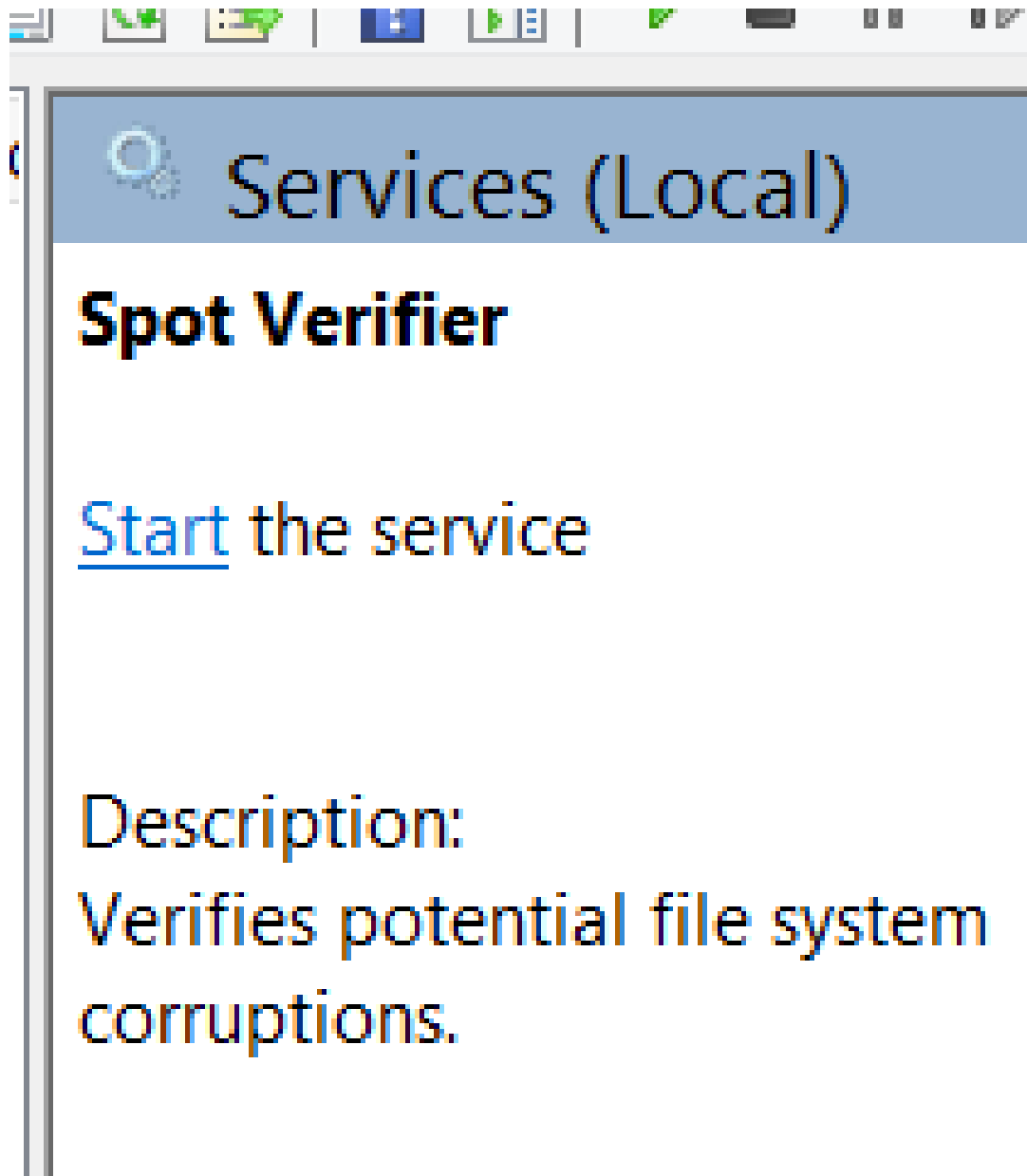
**Spot Verifier**

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VMware USB Arbitrati...	Arbitration and enumeration of USB devices fo...	Running	Automatic
Volume Shadow Copy	Manages and implements Volume Shadow Co...		Manual

Extended Standard



# Spot Verifier Properties (Local Computer)



General Log On Recovery Dependencies

Service name: svsvc

Display name: Spot Verifier

Description: Verifies potential file system corruptions.

Path to executable:

C:\WINDOWS\system32\svchost.exe -k LocalSystemNetworkRestricted

Startup type: Manual

Service status: Stopped

Start

Stop

Pause

Resume

You can specify the start parameters that apply when you start the service from here.

Start parameters:

OK

Cancel

Apply

**"WINDOWS 8" AND  
"WINDOWS 8.1"  
HAVE BETTER  
TOUCH SCREEN  
SUPPORT:**

# "WINDOWS 8" AND "WINDOWS 8.1" HAVE BETTER TOUCH SCREEN SUPPORT

- A great video demonstration of how to use a touch screen with "Windows 8" or "Windows 8.1" can be viewed at <http://liliputing.com/2012/03/list-of-windows-8-touch-based-gestures.html>

"WINDOWS 8" AND  
"WINDOWS 8.1"  
HAVE  
"STORAGE SPACES"

# "WINDOWS 8" AND "WINDOWS 8.1" HAVE "STORAGE SPACES"

WINDOWS 7	<b>"Storage Spaces"</b> is not available.
Windows 8	<b>"Storage Spaces"</b> is available from inside the "Control Panel"
Windows 8.1	<b>"Storage Spaces"</b> is available from inside the "Control Panel"

"WINDOWS 8" AND "WINDOWS 8.1"  
HAVE "STORAGE SPACES" (continued)

- The "**Storage Spaces**" feature of "Windows 8" and "Windows 8.1" lets you mirror two hard drives for redundancy (= "software RAID 1").



# Storage Spaces

# Storage Spaces

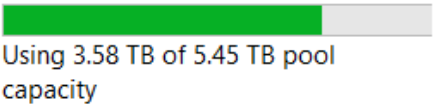
Control Panel > All Control Panel Items > Storage Spaces

[Change settings](#)

## Manage Storage Spaces



Use Storage Spaces to save files to two or more drives to help protect you from a drive failure. Storage Spaces also lets you easily add more drives if you run low on capacity. If you don't see task links, click Change settings.

### L Storage pool



- [Create a storage space](#)
- [Add drives](#)
- [Rename pool](#)

#### Storage spaces

	L Storage space (L:) Two-way mirror 2.71 TB Using 3.58 TB pool capacity	 OK	<a href="#">View files</a> <a href="#">Change</a> <a href="#">Delete</a>
---	--	--	--

#### Physical drives

[Control Panel Home](#)

[Create a new pool and storage space](#)

- [See also](#)
- [File History](#)
- [BitLocker Drive Encryption](#)



Control Panel ▶ All Contro

Control Panel Home

Manage S



Create a new pool and storage space

Use Storage drive failure. capacity. If y

protect you from a  
s if you run low on

 Change settings

OK



Create a storage space

Add drives

Rename pool

View files

Change

Delete

## L Storage pool



Using 3.58 TB of 5.45 TB pool capacity

### Storage spaces



L Storage space (L:)

Two-way mirror

2.71 TB

Using 3.58 TB pool capacity



OK

### Physical drives

## Physical drives



ST3000DM 001-9YN166 U...



OK

Attached via USB

65.7 % used

Providing 2.72 TB pool  
capacity



WDC WD30 EZRX-00MM...



OK

Attached via USB

65.7 % used

Providing 2.72 TB pool  
capacity

# "WINDOWS 8" AND "WINDOWS 8.1" HAVE "STORAGE SPACES"

- Using "Storage Spaces in  
"Windows 8.." for Real-Time  
Automatic Backup of Data Files  
and Folders":

[http://aztcs.org/meeting\\_notes/winhardsig/win8/StorageSpaces-howto.pdf](http://aztcs.org/meeting_notes/winhardsig/win8/StorageSpaces-howto.pdf)

# "WINDOWS 8" AND "WINDOWS 8.1" HAVE "STORAGE SPACES" (continued)

- "Storage Spaces" Successes  
and Failures

See

[http://aztcs.org/meeting\\_notes  
/winhardsig/win8/StorageSpaces  
es-successesand.pdf](http://aztcs.org/meeting_notes/winhardsig/win8/StorageSpaces-successesand.pdf)

**"WINDOWS.."  
PRODUCT  
TIME LINE**

# WINDOWS PRODUCT TIME LINE

- October 22, 2009--General availability release of **Windows 7**.
- October 17, 2013--General availability release of **Windows 8.1**
- October 17, 2013--Availability of non-mandatory, free upgrade called "**Update To Windows 8.1**" for existing **Windows 8** computers.

# WINDOWS PRODUCT TIME LINE (continued)

- April 8, 2014--End of Extended Support for **Windows XP**

# WINDOWS PRODUCT TIME LINE

## (continued)

- April 8, 2014--**Update for Windows 8.1** (= "Update 1 for Windows 8.1" = "KB 2919355") for existing **Windows 8.1** computers was released by means of "Windows Update"

# WINDOWS PRODUCT TIME LINE

## (continued)

- May 13, 2014--**Update for Windows 8.1** (= "Update 1 for Windows 8.1" = **KB 2919355**) became a "mandatory" "important" update for existing **Windows 8.1** computers.

# WINDOWS PRODUCT TIME LINE

(continued)

- July 14, 2015--End of updates for "Microsoft Security Essentials" installed into "Windows XP"

# WINDOWS PRODUCT TIME LINE

## (continued)

- Summer 2014—Possible first public beta release of **Windows 9** ("Threshold")
- Fall 2014—Possible second public beta release of **Windows 9** ("Threshold")

# WINDOWS PRODUCT TIME LINE

(continued)

- Winter 2014—Possible third public beta release of **Windows 9** ("Threshold")
- April 2015—Probable general availability release of **Windows 9** (= "Threshold")

# WINDOWS PRODUCT TIME LINE

(continued)

- July 14, 2015--End of updates for "Microsoft Security Essentials" installed into "Windows XP"

# WINDOWS PRODUCT TIME LINE

(continued)

- January 12, 2016--For existing **"Windows 8"** computers, **"Update to Windows 8.1"** via the **"Windows Store"** becomes a mandatory important update

# WINDOWS PRODUCT TIME LINE (continued)

- April 11, 2017—End of Extended Support For **Windows Vista**
- January 14, 2020—End of Extended Support For **Windows 7**
- January 10, 2023—End of Extended Support For **Windows 8.1**

# WINDOWS PRODUCT TIME LINE (continued)

- There is no super urgency or justification to upgrade existing "Windows Vista" and "Windows 7" computers up to "Windows 8" or "Windows 8.1":

# WINDOWS PRODUCT TIME LINE

(continued)

- There is no rush to upgrade existing **Windows 8** computers to **Windows 8.1** since you can do it for free from October 17, 2013 to January 12, 2016.

# CONFUSION BETWEEN "UPDATE TO 8.1" AND "UPDATE FOR 8.1"

- Please do not confuse **"Update for Windows 8.1"** (= **"Update 1 for Windows 8.1"** = KB **2919355**) which was released on April 8, 2014 with the **"Update to Windows 8.1 from Windows 8"** which was released on October 17, 2013:

# CONFUSION BETWEEN "UPDATE TO 8.1" AND "UPDATE FOR 8.1" (continued)

- **"Update for Windows 8.1"**  
(**"Update 1 for Windows 8.1" =  
KB 2919355**) is a free update for  
"Windows 8.1" which makes  
cosmetic and usability changes to  
"Windows 8.1" and which becomes  
a "mandatory" "important" update  
for "Windows 8.1" computers on  
May 13, 2014.

# CONFUSION BETWEEN "UPDATE TO 8.1" AND "UPDATE FOR 8.1" (continued)

- **"Update to Windows 8.1 from Windows 8"** is a free upgrade for "Windows 8" which takes you from "Windows 8" up to "Windows 8.1" and which becomes a "mandatory" "important" update for "Windows 8" computers on January 12, 2016.

# REFERENCES

- [http://en.wikipedia.org/wiki/List\\_of\\_features\\_removed\\_in\\_Windows\\_8](http://en.wikipedia.org/wiki/List_of_features_removed_in_Windows_8)
- [http://en.wikipedia.org/wiki/Features\\_new\\_to\\_Windows\\_8](http://en.wikipedia.org/wiki/Features_new_to_Windows_8)
- [http://en.wikipedia.org/wiki/List\\_of\\_Start\\_Menu\\_replacements\\_for\\_Windows\\_8](http://en.wikipedia.org/wiki/List_of_Start_Menu_replacements_for_Windows_8) (Jim Evans recommends "Start8".)