

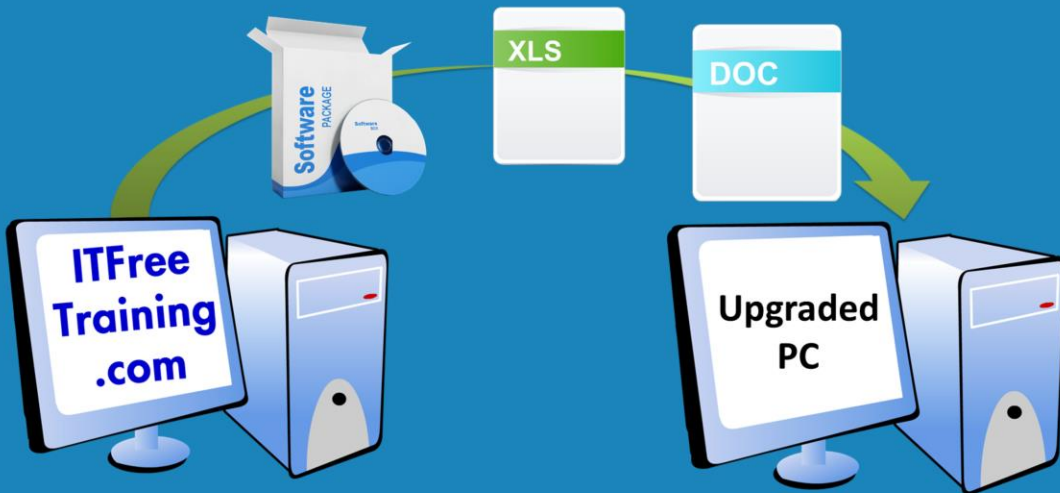
Planning an Upgrade to Windows Server 2012/R2

For the free video please see
<http://itfreetraining.com/server#plan-upgrade-2012>

This video looks at some of the planning required for upgrading to Windows Server 2012 or Windows Server 2012 R2. Different editions support different features, for this reason when you upgrade an operating system some features may no longer be available. This video also looks at some of the upgrade paths that are available.

In-Place Upgrade

- Keeps settings, applications and documents



In-Place Upgrade

An In-Place upgrade is when the upgrade is performed on an operating system and the upgrade process keeps all the settings, documents and applications. If the In-Place upgrade goes well, the computer should run much the same as the old computer, but be running a different operating system. It is important to check that when you purchase an upgrade that the operating system supports an in-place upgrade. In some cases, an upgrade is available from one operating system but an in-place upgrade is not. For example, an in-place upgrade is not available when the original operating system is running 32-bit and the upgrade version is 64-bit. When this occurs, you need to perform a clean install of Windows Server and then migrate the document and settings to the new install. The down side with an in-place upgrade is that any existing problems with the operating system are carried over to the new operating system.

In-Place Vs Migration

- Migration moves settings/files/roles between servers



In-Place Vs Migration

A migration is when the documents and settings are manually copied over and the applications are re-installed. Migration tools have existed in previous versions of Windows Server, however in Windows Server 2012 these migration tools have been improved. A migration also allows individual items to be migrated. For example, a single role can be migrated to any server. The advantage of a migration is that in some cases particular problems may be left behind and not migrated. For example, if the user profile on the server is causing performance problems on the server, migrating only the role to another server means the old profile is left behind and thus so is the problem.

In-Place Upgrades Not Supported

- No 32bit or 32bit to 64bit upgrade paths
- Must be licensed version
 - No pre-RTM, preview, evaluation editions
- Upgrade from Itanium
- Cross language upgrade. E.g. English to French
- Upgrade from before Windows Server 2008/R2
- Upgrades that switch interface. E.g. Core to full

In-Place Upgrade Not Supported

In order to perform an in-place upgrade you must be running the same architecture. Windows Server 2008 does not come in an Itanium or 32bit version so therefore no upgrade path is available. The version of Windows must be one that was released to manufacture and thus pre-releases, evaluations or preview editions are not supported. Also, it must be running the same interface, e.g. core or full. However the interface can be changed after the in-place upgrade. Also the upgrade must be in the same language. If you are upgrading to Windows Server 2012 you will need to be running Windows Server 2008 or above. If you are upgrading to Windows Server 2012 R2, you will need to be running Windows Server 2008 R2 or above.

Upgrade paths from Windows 2008/R2

Windows Server 2008/R2 Edition	Windows Server 2012
Windows Server 2008/R2 Standard or Enterprise	Windows Server 2012 Standard or Datacenter
Windows 2008/R2 Datacenter	Windows Server 2012 Datacenter
Windows Web/R2 Server 2008	Windows Server 2012 Standard

- Windows Server 2008 requires service pack 2
- Windows Server 2008 R2 requires service pack 1

Upgrade paths from Windows 2008/R2

The editions names used in Windows Server 2008 in some cases are different from that used in Windows Server 2012 or Windows Server 2012 R2. If you are running the Standard or Enterprise editions of Window Server 2008, this can be upgraded to the Standard or Datacenter editions of Windows Server 2012. Datacenter is available in Windows Server 2008 and 2012 so it is a straight upgrade. Web server does not exist on Windows Server 2012 so this needs to be upgraded to Windows server 2012 standard. Windows Server 2008 requires service pack 2 to be installed before the upgrade and Windows Server 2008 R2 requires service pack 1 to be installed before the upgrade.

Upgrade paths to Windows 2012 R2

Windows Server 2008 R2 Edition	Windows Server 2012 R2
Windows Server 2008 R2 Standard or Enterprise	Windows Server 2012 R2 Standard or Datacenter
Windows 2008 R2 Datacenter	Windows Server 2012 R2 Datacenter
Windows Web R2 Server 2008	Windows Server 2012 R2 Standard

- Upgrades from Windows Server 2008 not supported
- Windows Server 2008 R2 requires service pack 1

Upgrade paths to Windows Server 2012 R2

Upgrade paths to Windows Server 2012 R2 are the same as before, except the operating system must be running Windows Server 2008 R2 with service pack 1 installed. In other words, upgrades to Windows Server 2012 R2 are not supported on Windows Server 2008 or earlier.

Upgrade Paths 2012 to 2012 R2

Windows Server 2012 Edition	Windows Server 2012 R2
Windows Server 2012 Standard	Windows Server 2012 R2 Standard or Datacenter
Windows Server 2012 Datacenter	Windows Server 2012 R2 Datacenter
Windows Server 2012 Essentials	Not supported
Windows Server 2012 Foundation	Not supported

Upgrade Path Windows Server 2012 to Windows Server 2012 R2

There are only two in-place upgrades that are supported. These are standard to standard or datacenter and datacenter to datacenter. Upgrades from Essentials and Foundation are not supported.

Features Removed In Windows Server 2012

- Graphic support
 - No support for XDDM drivers
 - No native VGA support
- Management Tools
 - Storage Explorer snap-in for MMC
 - Storage Manager for SANs snap-in for MMC

Features Removed In Windows Server 2012

The following features have been removed. In most cases, other software or features make up for the feature being removed.

No support for XDDM graphics driver: This is the graphics device driver format that was first release in Windows 98. In Windows Vista a new graphics device driver format called WDDM was released. Windows Server 2012 does not provide support for XDDM drivers, however does come with a basic WDDM device driver that support basic VGA graphics cards.

No native VGA support: There is no longer any direct VGA support in Windows Server. For old video cards, the WDDM basic device driver should work fine.

Storage Explorer snap-in for MMC: Has been removed, however functionality is available in Server Manager.

Storage Manager for SANs snap-in for MMC: Has been removed, however functionality is available in Server Manager.

Features Removed In Windows Server 2012

- Networking
 - Support for Token Rings networks
 - NetDMA
 - Support for Static VMQ
 - VM Chimney in Hyper-V
- Command line tools
 - OCList
 - ServerManagerCMD

Support for Token Ring Networks: An old network system. Ethernet is now the market leader.

NetDMA: Removed but functionality available in other features of the OS.

Support for Static VMA: Removed but functionality available in other features of the OS.

VM Chimney in Hyper-V: Removed but functionality available in other features of the OS.

OCList: Shows a list of roles or features. Use DISM instead.

ServerMangerCMD: Use PowerShell instead.

Features Removed In Windows Server 2012

- Active Directory Federation Services
 - No Upgrade path from AD FS 1.0 to AD FS 2.0
 - Resource groups
 - NT Token Mode
 - AD LDS as an authentication store
- Microsoft SQL Server prior to 7.0
- 32-bit cluster resource DLLs
- Windows Help Executable (WinHlp32.exe)

Active Directory Federation Services: Windows Server 2012 comes with 2.1 of ADFS. Windows Server 2008 was shipped with version 1, however version 2 could be installed as an optional download. There is no upgrade path from 1.0 to 2.0. 2.0 to 2.1 is supported, however do your research first to see what is involved as some of the feature sets between the versions have changed.

ADFS Resource groups: These groups do not exist in ADFS 2.1 and thus before the upgrade they need to be removed.

NT Token Mode: This is an authentication system used with Windows NT and is no longer supported in ADFS.

AD LDS as an authentication store: AD FDS no longer supports AD LDS as an authentication store. You will instead need to use Active Directory.

Microsoft SQL Server prior to 7.0: These versions are not supported and you will need to upgrade.

32-bit cluster resource DLL's: There are 64bit versions of these DLL's. If you have software that uses 32-bit DLL's it will need to be upgraded to a version that uses 64-bit DLL's.

Windows Help Executable (WinHlp32.exe): This is an optional download from the Microsoft web site that allows old help files to be read. It is no longer available, however there are still downloads available for it for Windows 8.

Features Removed In Windows Server 2012 R2

- System Image Backup (Use file history)
- Recovery disk creation to CD/DVD
- Simgvr.vbs
 - Options /stao and /ctao
- ~~Windows Server Resource Manager~~
- Subsystem for UNIX-based Applications
- Winsock Direct replaced by Network Direct
- Support for NDIS 6 and above

Features Removed in Window Server 2012 R2

System Image Backup: This has been removed, use file history instead or a different backup system.

Recovery disk creation to CD/DVD: This can no longer be performed to optical, however USB is still supported.

Simgvr.vbs: This script has had the switches /stao and /ctao removed.

Subsystem for UNIX-based Applications: This software allows UNIX based software to be run on Windows. Microsoft recommends porting the software to Windows or using a different operating system to run it.

Winsock Direct replaced by Network Direct: This is software that allows memory to be accessed over the network. Generally would be used by high availability software. You only need to worry about this if you are a programmer or you have software that was written to use Winsock Direct.

Support for NDIS 6 and above: Previous NDIS standards before this is are no longer supported. If you are using old device drivers that NDIS this may be a concern.

Features Removed In Windows Server 2012 R2

- Active Directory Federation Service
 - AD FS v1 Web Agent
- ~~Windows Authorization Manager (AzMan)~~

AD FS v1 Web Agent: Listed on the Microsoft web site as not being available, however this could not be confirmed.

Points to consider

- Hardware compatibility
- Disk space
- Application compatibility
- Disable virus software
- Disconnect UPS device
- Perform a full backup

Points to consider

Before starting an In-Place upgrade there are some points to consider. Doing these will maximize the chances of your upgrade succeeding. Check your hardware to make sure it is compatible. Ensure there is enough free hard disk space, running out of hard disk space during the upgrade can cause the upgrade to fail. Check to make sure that any applications that are running on the operating system are compatible with the new operating system. Disable anti-virus software as this can affect the upgrade process. Unplug any management cables for any connected UPS devices. Setup will attempt to detect any devices during the install process and UPS devices can sometimes cause problems in the upgrade process. Before you start the upgrade make sure that you perform a full backup. If you have not logged into the new operating system, you can reverse the upgrade process. However once you have logged in for the first time, the only way that you can get back to the previous operating system is to restore the operating system from a backup.

See <http://YouTube.com/ITFreeTraining> or <http://itfreetraining.com> for our always free training videos. This is only one video from the many free courses available on YouTube.

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