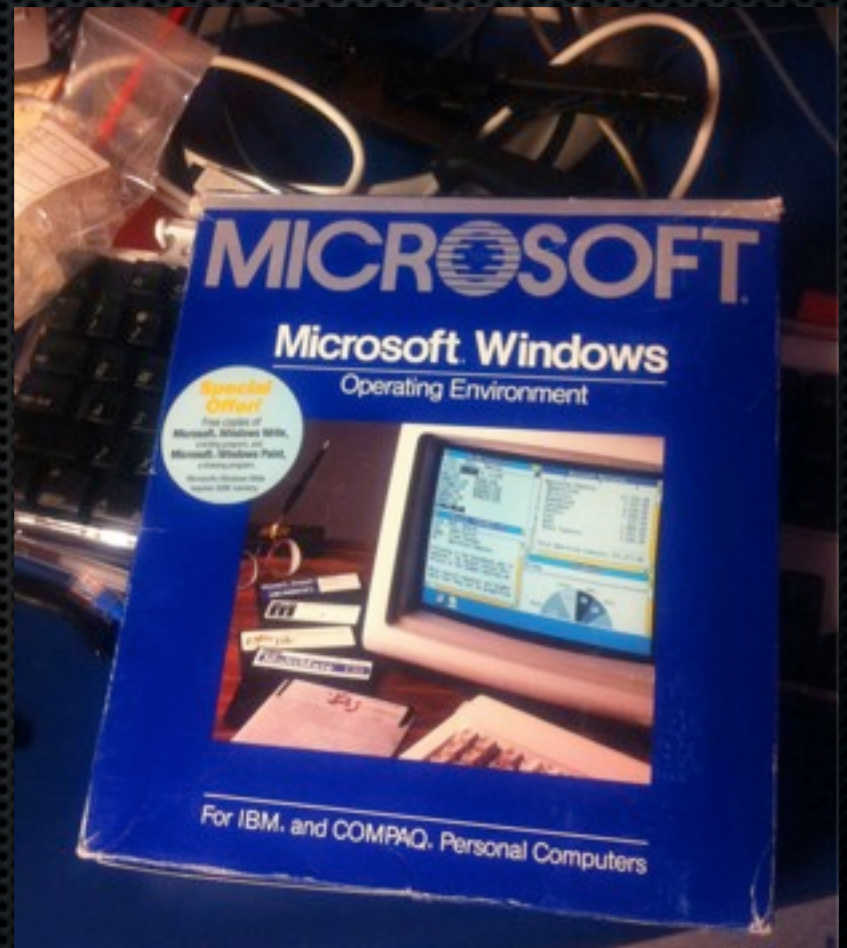


Windows Integration in a Mac Office



Why even bother with
Windows?

Negatives

- ✦ More to manage
- ✦ "I don't know it as well"
- ✦ Adds nontrivial levels of complexity

Positives

- ✦ A way to get your foot in the door
- ✦ Allows you to say "Yes" more frequently
- ✦ Lets you build a better solution for solving a problem
- ✦ Help your customer to reduce risk of switching



Supporting Macs in a Windows Server Environment

Planning makes Perfect

(well, as perfect as it's going to be)

- ✦ What network resources you want to access
 - ✦ Authentication?
- ✦ How you're going to administer the Macs
- ✦ Working with their IT Staff

Built into Snow Leopard

- ✦ SMB/CIFS file sharing client and server
- ✦ Directory support for Active Directory
- ✦ PPTP VPN
- ✦ Exchange support in Mail, Addressbook, iCal



Mac OS X Server

- ✦ Multi-directory binding
- ✦ Provides management via MCX
- ✦ For basic SMB/CIFS file sharing and other platform neutral protocols, works OK.
- ✦ Windows 7 or Windows 2008 R2 can't bind to a NT4 domain

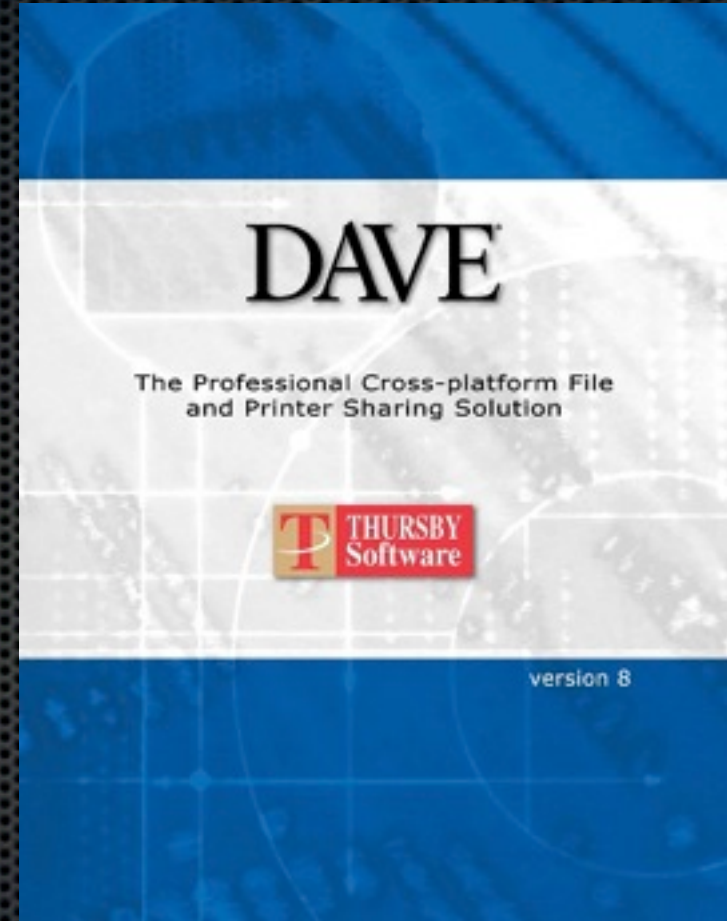


3rd party software

(even more at macwindows.com)

Thursby

- ✦ DAVE gives Mac OS X DFS support, and a better CIFS/SMB client
- ✦ AdmitMac = DAVE + Active Directory and Group Policy extensions



Centrify



- ✦ Group policy support, desktop management

GroupLogic



- ✦ Extreme-Z IP AFP server for Windows
- ✦ Allows native connections without client side changes

Exchange alternatives

- ✦ Kerio
- ✦ CommunigatePro
- ✦ Zimbra



Running Windows on a Mac

Boot Camp

- ✦ Requires a reboot to switch from one OS to the other.
- ✦ Tendency for people to just stay in their "comfortable" windows environment
- ✦ File transfer between OS's is somewhat problematic
- ✦ Great for things that need to run on "real" hardware.



Virtualization

- ✦ Runs Windows and Mac OS side by side without reboot
- ✦ VM's are just files on disk - can be moved around the network, etc.
 - ✦ Some vendors even offer an appliance VM image you can run
- ✦ File transfer facilitated by virtualization engine

Good candidates for virtualization

- ✦ Windows apps that have no Mac equivalent
- ✦ Running server apps that only run on Windows, but have a Mac client
- ✦ Testing environments

Bad candidates for virtualization

- ✦ Weird hardware peripherals
- ✦ Extreme performance needs
- ✦ People who want it to avoid the Mac interface

Parallels Desktop



- ✦ First to market on Mac
- ✦ Faster than the competition some cases, mainly 3D and gaming
- ✦ Graphics and gaming compatibility given more focus

VMware Fusion



- ✦ Has been shipping VM products for longer
- ✦ Fits into a VMware world of products in Enterprise, and shares code
- ✦ Somewhat more stable, in my experience

Parallels v. Fusion

- ✦ Fusion has fewer paid upgrades (1 vs Parallels' 5)
- ✦ Parallels better for playing games
- ✦ Easier to reinstall Fusion if you don't have a disc
- ✦ Fusion more compatible with non-Windows VM's

Niche Player: VirtualBox

- ✦ Open Source, free to use
- ✦ Future development somewhat up in the air after Sun was purchased by Oracle
- ✦ GUI is mainly focused on running a lot of VM's on one system
- ✦ Not end-user friendly, unless highly technical



Niche Player: WINE



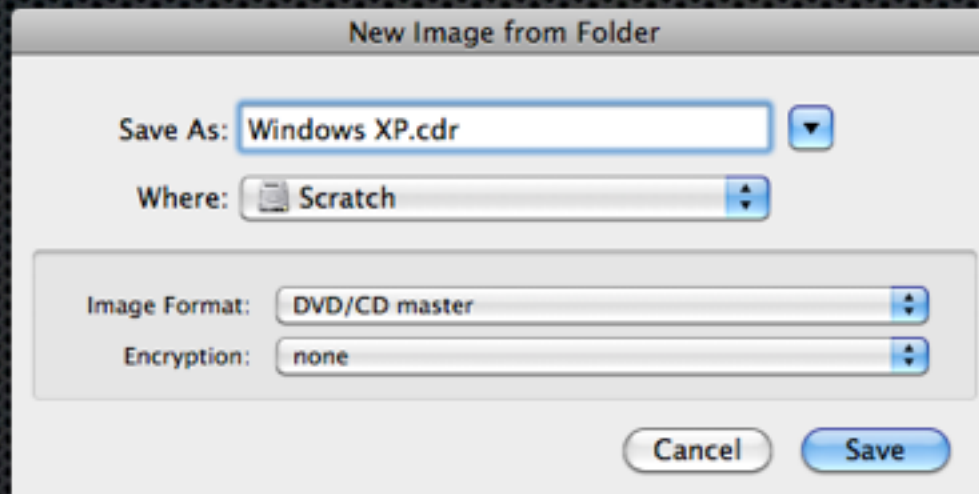
- ✦ WINE is an reimplementation of the windows API, allows you to run some Windows programs without Windows (or a license)
- ✦ Software support ranges for excellent to nonfunctional
- ✦ Crossover - commercially supported version, has more polish
- ✦ Winebottler - lets you wrap windows programs into self contained Mac apps.

Peripheral issues

- ✦ Best case scenario: Networked peripherals, networking set to bridge
- ✦ Second best: VM Passthrough
- ✦ Worst: USB passthrough

Installing a new VM

- ✦ Image the install media using Disk Utility, install from file:



- ✦ Store VM outside of Time Machine, but user data in TM
- ✦ Snapshot or copy after installation

Hardware for VM's

RAM



- ✦ On a desktop, VM's should only be allocated 1/3 to 1/2 of available RAM
- ✦ For a newer OS like Windows 7 64 bit - 4 to 6GB of Physical RAM for a 2GB VM
- ✦ Older OS's might require less - XP runs fine in 512MB
- ✦ On a server, make an list for sizing

Other hardware

- ✦ Fast disks, if you're running I/O intensive jobs
 - ✦ Multiple/dedicated VM disks
- ✦ More CPU cores are nice, but need is job dependent

VM Storage Needs

- ✦ Smaller is better
- ✦ Volume Shadow Copy will use up all available space
- ✦ Where performance is critical, pre-allocate the entire disk

Where to run your VM's

- ✦ If there's no Mac server, or USB hardware peripherals are needed, run on desktop
 - ✦ Deploying an image requires making modifications to that image.
- ✦ For larger offices and if no peripherals required, might run VM's on server with RDC

What version of Windows to run?

- ✦ Windows XP
- ✦ Windows 7
- ✦ Windows Server 2008 R2



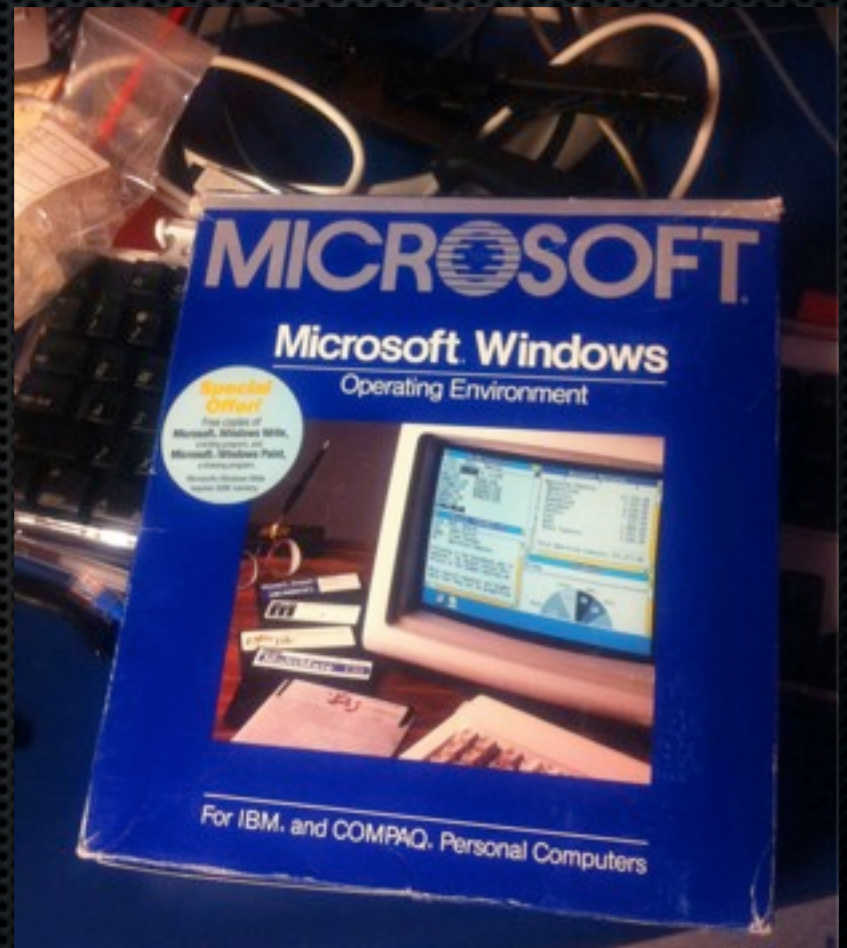
Licensing

- ✦ To run a copy of windows, you need a valid license
- ✦ OEM licenses aren't transferrable
- ✦ After hardware change, Windows may need validation
- ✦ Retail licenses generally can be transferred
- ✦ Physical to virtual tools
- ✦ Volume licensing

Training users

- ✦ Merged desktops can be confusing to users
- ✦ Startup/shutdown rather than suspend

The care and feeding of Windows



Dealing with Security/ Malware

- ✦ Antivirus/Anti-malware
 - ✦ Microsoft Security Essentials
 - ✦ "Free" might not mean "Free for commercial use"
 - ✦ The usual suspects, Norton, NOD, McAfee etc.
- ✦ No perfect preventative software - focus on speed of recovery
- ✦ Minimize attack surface - lock down the PC side

Updating the OS

- ✦ Updates come more quickly on PC, with periodic rollups or service packs
- ✦ Microsoft generally releases security updates on "Patch Tuesday"
- ✦ Opt into updates for other Microsoft products

Backup

- ✦ Make a snapshots or copies of your VM
- ✦ Data outside of the VM disk
- ✦ Cross platform backup
- ✦ VM's and Time Machine

Troubleshooting Virtual Machines

- ✦ "My screen won't change even after restarting"
- ✦ The VM won't boot

Supporting Windows for the Mac consultant

- ✦ Get good at using a search engine
 - ✦ Microsoft TechNet - <http://technet.microsoft.com/>
 - ✦ Serverfault - <http://serverfault.com/>
 - ✦ Petri.co.il - <http://www.petri.co.il/>
- ✦ Microsoft Training

Getting software from Microsoft

- ✦ Microsoft "Action Pack" Subscription
- ✦ Microsoft TechNet
- ✦ Bizspark



Useful Windows Tools

- ✦ 7-Zip
- ✦ Cygwin
- ✦ Sysinternals Suite
- ✦ Thunderbird
- ✦ Nirsoft's Utilities
- ✦ MWsnap
- ✦ Hijack This

Questions?

Thanks!

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