

# Best Practices: Hardware, Software and Network Deployment

# What to Expect

- Best Practices
- Deployment Techniques (not troubleshooting)
- Network Fundamentals
- Q & A

# So You have a Client Mac



- Preparing the Boot Drive
- To Format or Not to Format: That is the Question?
- Drive partitions: Purpose, types, and how many?
- Partition Map Options: APM, GUID, MBR
- Partition Types: HFS, HFS+, FAT, NTFS
- Journaling Options



# Preparing the Boot Drive

- Booting off the Install CD
- Booting off External Drive
- Network Boot
- Disk Utility



# To Format or Not to Format

- Advantages
- Control of what types of partitions you use
- Options, Options, Options





# Drive partitions maps

- OS X (PPC) - used APM for boot
- OS X (Intel) - Requires GUID for boot
- Windows (MBR) - only used in pure windows setups



# Partition Map Options

- Apple Partition Map - Legacy
- GUID - Current Intel hardware partition
- Master Boot Record (Windows)





# Partition Types

- HFS: Pre OS 8 format
- HFS+: In Use Since OS 8.1
- FAT32: Windows format (OS X R/W)\*
- NTFS: Windows format (OS X Read only)\*\*

\* <http://support.apple.com/kb/HT3764>

\*\* <http://support.apple.com/kb/HT3777>





# Journaling Options

- Journaling Options
- Mac OS Extended (Journaled)
- Mac OS Extended (non Journaled)
- Mac OS Extended (Case-sensitive, Journaled)
- Mac OS Extended (Case-sensitive, non Journaled)



# Partitions: what would you choose

- One Partition: OS, Applications, Data
- Two Partitions: OS and Applications, Data is separate
- Two Partitions: Mac Side, Windows Side (BootCamp)
- Three Partitions: OS and Applications, Data, BootCamp





# Installing the client OS



- Retail vs. Hardware specific build (compatibility)
- Custom install vs. Standard install
- Software Updates
- User accounts

# Installing the client OS



## Default System Preferences

- Date & Time
- Network
- Sharing
- Print & Fax
- Security



# Installing the client OS



## Applications

- Check for latest compatible versions and update
- Verify applications by launching as both admin and non-admin user
- When possible, use site licenses software or only license software upon deploy

# Installing the client OS



## Test your progress

- Test your system, and test again
- Every issue you fix before final deployment reduces support needed later (reduces downtime for clients)
- Beta test Release Candidate with the intended client before final deployment
  - Network Connectivity and printing
  - Authentication and authorization to network shares



# Installing the client OS

## Tips & Tweaks

- Migration Assistant
- File Sharing
- Printer Sharing
- Screen Sharing or Remote Management
- Remote Login
- Internet Sharing



# Installing the client OS



## Final Cleanup

- Terminal cleanup of the following files
  - > sudo su - (logs you in as root, be careful)
  - rm -rf /Library/Caches/
  - rm -rf /System/Library/Caches/
  - rm -rf /System/Library/Extensions/Caches/
  - rm -rf /etc/ssh\_host
  - rm -rf /var/db/Spotlight/
  - rm -rf /var/db/.com.apple.iokit.graphics
  - rm -rf /Library/logs
  - rm -rf /.Trashes/



# Now that we have a good system

- Create monolithic disk image for deployment
- Disk Utility (can do it all)
- Boot Client into Target Disk Mode, Capture Image, Scan for Restore
- Restore this image from an external boot drive to multiple systems
- Deploy Studio for larger environments
- JAMF Casper for Small Business to Enterprise Clients



# Network Fundamentals



- IPv4 vs. IPv6
- IP Addresses (Public vs. Private) and (Static vs. Dynamic)
- Subnet Mask, DNS
- Mac Address
- 802.1x



# Network Fundamentals

- Wireless Network
- Private vs. Guest Networks
- Security (WEP vs. WPA)
- Tools (Airport Utility, KisMac, AirRadar)
- Switches/Routers (Bridge vs. Route)



# Network Fundamentals



- VPN (Virtual Private Networks)
- Securing the Network and Ports
- Authentication (Password, Password with Shared Secret, Certificate)
- VPN Clients (Built-in, VPN Tracker, Cisco AnyConnect)
- Firewall and Port Forwarding



# Network Best Practices

- Determine Subnet Size and mask.
- Choose your IP numbering
- DNS Server(s)
- Firewall & VPN
- DHCP
- Network Gear (Quality counts)



# Questions & Answers



- Troubleshooting (diagnostic mindset)
- Interview client (asking questions)
- Narrow the focus, too broad leads to long diagnosis
- Tools (Diagnostic Boot Drive)
- Good Backups
- Wipe and Restore



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