

Best Practices Hardware, Software &

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About this Session

- ▶ Installing a New Mac
- ▶ Fundamental Networking Principles
- ▶ Deployment
- ▶ Q & A

What this Session is About

- ▶ **Sharing of My Best Practices**
- ▶ **Installation and not Troubleshooting**
- ▶ **Plan, Plan : Test, Test, Test : Deploy**
- ▶ **Modular or Monolithic Image Creation**
- ▶ **Networking Fundamentals**

Installing a New Mac

“boot” {noun}

*the process of starting a computer
and putting it into a state of
readiness for operation*

- ▶ **Preparing the Boot Drive**
 - ▶ Reformat or not reformat? Using base images
 - ▶ Purpose of partitions. How many and why?
 - ▶ Partition Map types (APM, GUID, MBR)
 - ▶ Partition types (HFS, HFS+, FAT, NTFS)
 - ▶ Journaling options



Installing a New Mac

“operating system” {noun}

the software that supports a computer's basic functions, such as scheduling tasks, executing applications, and controlling peripherals.

▶ Building a Clean OS

- ▶ Retail vs. machine specific build (compatibility)
- ▶ Custom install vs. standard install (trim printer drives, languages, fonts)
- ▶ Software updates (wait 24 hrs., use combo updaters). InstaDMG
- ▶ Users accounts (root, admin, standard, network, mobile, guest, sharing)



Installing a New Mac

“default” {noun}

a preselected option adopted by a computer program or other mechanism when no alternative is specified by the user or programmer

▶ Setting Default System Preferences

- ▶ Date & Time: set time zone and time server
- ▶ Network: set inactive ports, set port order, configure active ports
- ▶ Sharing: set hostname, remote management
- ▶ Print & Fax: configure default printers with proper drivers



Installing a New Mac

“utility” {noun}

a program for carrying out a routine function

▶ Utilities and Enhancements

▶ CLI Troubleshooting:

Media Players:

Player

Flash Blocker:

Browsers:

Text Editor:

Remote Access:

Utilities:

Stuffit Expander

AppleJack

Flip4Mac, Perian, VLC, Flash

ClickToFlash

FireFox, Opera, Chrome

TextWrangler

Microsoft RDC Client

Mouse Locator, EasyFind,



Installing a New Mac

“guide” {noun}

a book, document, or display providing information on a subject or about a place

▶ User Guides (/Users/Shared)

- ▶ Mac Basics: <http://www.apple.com/findouthow/mac>
- Switcher Tips: <http://www.apple.com/support/switch101>
- iLife Basics: <http://www.apple.com/ilife/tutorials>
- iWork Basics: <http://www.apple.com/iwork/tutorials>
- Keyboard Shortcuts: <http://support.apple.com/kb/>



Installing a New Mac

“application” {noun}

a program or piece of software designed and written to fulfill a particular purpose of the user

▶ Applications

- ▶ Install latest compatible versions. Install necessary updates
- ▶ Launch as admin user. Licensing and downloaded warning
- ▶ Use site licenses as much as possible or keep unlicensed



Installing a New Mac

“test” {noun}

a procedure intended to establish the quality, performance, or reliability of something, esp. before it is taken into widespread use

- ▶ Test, Test, Test, Tweak, Test, Test, Tweak, Test, Tweak
- ▶ Every little problem and tweak not fixed in image needs fix x times
- ▶ “Beta Test” image with users before deployment
 - ▶ Connectivity and printing
 - ▶ Authentication and authorization



Installing a New Mac

“tweaking” {verb}

improve (a mechanism or system) by making fine adjustments to it

▶ Tweaking Tips

- ▶ Migration assistant: Should one use it? Can bring problems with it
- ▶ Sharing local printers: Good idea? Do not reshare printers
- ▶ CUPS-PDF and PDF workflows
- ▶ DVD region code



Installing a New Mac

“cleanup” {noun}

an act of removing or putting an end to disorder

▶ Cleanup Image for Deployment

- ▶ `sudo rm -rf /Library/Caches/*`
- `sudo rm -rf /System/Library/Caches/*`
- `sudo rm -rf /System/Library/Extensions/Caches/*`
- `sudo rm -rf /etc/ssh_host*`
- `sudo rm -rf /var/db/Spotlight/*`
- `sudo rm -rf /var/db/.com.apple.iokit.graphics`
- `sudo rm -rf /Library/logs/*`
- `sudo rm -rf /.Trashes/*`



Installing a New Mac

“cleanup” {noun}

an act of removing or putting an end to disorder

▶ Cleanup Image for Deployment Continued...

- ▶ `sudo rm -rf /var/db/SystemEntropyCache`
- ▶ `sudo rm -rf /var/db/volinfo.database`
- ▶ `sudo rm -rf /var/db/dhcpclient/leases/*`
- ▶ `sudo rm -rf /var/tmp/*`
- ▶ `sudo rm -rf /var/vm/*`
- ▶ `sudo rm -rf /var/log/*`
- ▶ `sudo rm -rf /var/folders/*`



Deploying Macs: Monolithic

- ▶ Reset Local KDC (do not restart after reset)
- ▶ Make .dmg of image. (Target Disk Mode & Disk Utility)
- ▶ Scan Image for Restore
- ▶ Restore .dmg to multiple Macs

“monolithic” {*adjective*}
formed of a single large block



Deploying Macs: Mo

“modular” {adjective}

employing or involving a module or modules as the basis of design or construction

- ▶ Format/Partition + Base OS + Updates + Host Name
OS Tweaks + Utilities + User Accounts + Applications + User Guides + Drivers + Binding
- ▶ Package Creation (Composer, PackageMaker)



Installing Networks

“network” {noun}

a system of connected electrical conductors

- ▶ **Networking Fundamentals**
 - ▶ IPv4 vs. IPv6. Prepare for the transition
 - ▶ IP numbers: Public vs. Private, Static vs. Dynamic
 - ▶ Subnet Mask. DNS Setting. DNS Server
 - ▶ MAC Address
 - ▶ 802.1X Authenticated Networking

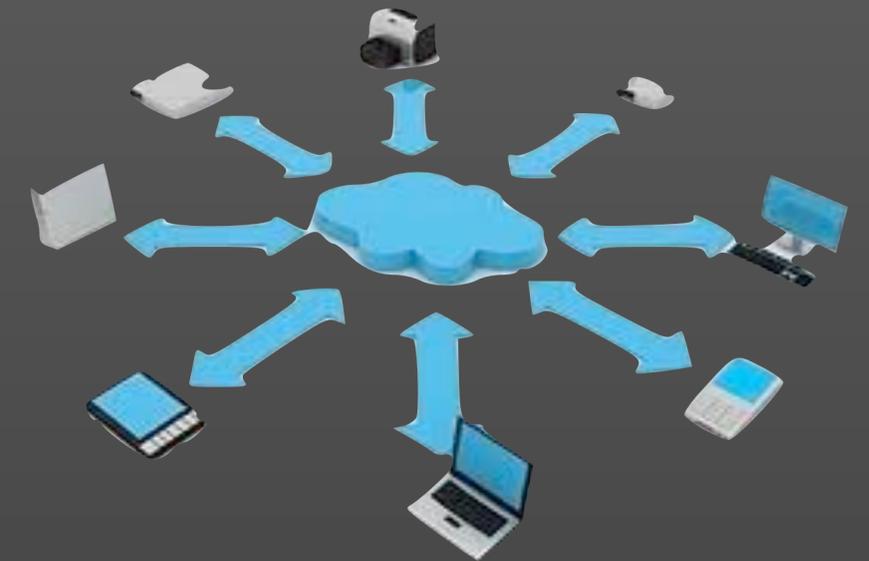


Installing Networks

“wireless” {noun}

computer networking, broadcasting, telephony, or telegraphy using radio signals

- ▶ **Wireless Networking Fundamentals**
 - ▶ Private and Guest Network
 - ▶ Avoid WEP. Use WPA
 - ▶ Tools: Airport Utility, AirRadar, KisMac, Wireless Grapher, AP Grapher
 - ▶ Bridge vs. Router Modes



Installing Networks

“vpn” {noun}

a method employing encryption to provide secure access to a remote computer over the Internet

- ▶ **VPN (Virtual Private Networks)**
 - ▶ **No Open Networks or Ports**
 - ▶ **Authentication Methods: Password, Password + Shared Secret, Certificate**
 - ▶ **VPN Clients: Built-In, VPN Tracker, IPSecuritas**
 - ▶ **Firewall and Port Forwarding**



Network Best Practice

“practice” {noun}

repeated exercise in or performance of an activity or skill so as to acquire or maintain proficiency in it

- ▶ Determine subnet size and mask. Pick IP number range
- ▶ Group IP ranges in subnet by type
- ▶ DNS Server with Forwarders
- ▶ Firewall & VPN
- ▶ DHCP for clients pointing to your DNS server
- ▶ Quality networking gear and cabling



Q & A

*“Q & A” {noun informal}
an exchange of questions and
answers.*

- ▶ Troubleshooting Mindset:
90% Diagnostics + 10% Remedy =
Effectiveness
- ▶ Soft Skills for Troubleshooting:
Be a Good Doctor
- ▶ Best Practice Methodology:
Listen to instinct and intuition along with
logic
- ▶ Troubleshooting Tools:



