

# Packaging:

What all Mac Admins  
should know...

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# What is an Installer Package?

- .pkg file extension
- Copies files and runs scripts
- Applied using installer system binary
- These are not the apps that you simply drag from a disk image to the Applications folder
- A distribution package may contain multiple packages in one .pkg file



# What's in a package?

- Payload
  - An archive of files to be copied to the system
  - Includes path and permission information

# What's in a package?

- Scripts
  - preinstall - postinstall

# What's in a package?

- Metadata
  - Bill of materials
  - Version information
  - Distribution rules and custom branding

# Why do I need to know this?

- Package a bundle app for distribution
- Build your own package to place files on a system
- You can run a script with a double click of a package
- Fix a vendor supplied package

# Tools of the Trade

- Whitebox Packages - <http://s.sudre.free.fr/Software/Packages/about.html>
- Pacifist by CharlesSoft - <http://www.charlessoft.com/>
- pkgutil (included in Mac OS)
- pkgbuild (included in Mac OS)
- Composer by Jamf software - <http://www.jamfsoftware.com/products/composer/>
- The Luggage <https://github.com/unixorn/luggage>

# Package a bundle app

- Demo : Package Firefox using Packages

# Build a Custom Package

- Demo : Build a package to distribute a Launch Agent

# Package Script Guidelines

- Do not assume the target is the currently booted system
- Do not copy or move files (use package payload for this)
- Do not assume a user is logged in
- If checking OS version, consider future releases

# Build a payload free package example

- Custom script to modify a setting that is not exposed to the GUI
- Creating a package allows anyone to apply the setting with a double click
- Package can also be used in other deployment workflows
- Package signing considerations

# Repair a Vendor Package

- Adobe Reader violates some of our Script guidelines
- Distribution rules limit to currently booted system
- preinstall script that attempts to move previous versions of the app to the current user's trash

# Repetitive Repackaging?

- What about vendor packages that update frequently? (browsers, plugins)
- Enter AutoPkg : <https://github.com/autopkg/autopkg>
- Community Recipes for common Update/Repackaging tasks