

Packaging

What all Mac admins should know...

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