# ADAM - TRINITY

# STARTOSINSTALL FUNCTIONALITY

Is erase and install for macOS getting any closer?

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# WHAT IS STARTOSINSTALL AND WHERE CAN I FIND IT?

A command line tool that is an alternative method of installing macOS to a target volume.

Nested in with the macOS app - Install macOS High Sierra.app/Contents/Resources/startosinstall

# SESSION RUNNING ORDER

- Bit of background on the command why? what? how?
- A breakdown of parameters/switches
- Example scenario. How we actually use it, walk through
- How it could be useful to you, eg integration into your management tool/ MDM (you should be getting excited by now!)

# THE HISTORY

- This command was introduced with the OS installer way back with 10.11El Capitan
- It was there in Sierra 10.12 and was a introduced as a way of upgrading to 10.13
- 27th April 2018 10.13.4 the flag eraseinstall was added <a href="https://support.apple.com/en-gb/HT208488">https://support.apple.com/en-gb/HT208488</a>
- And then with 10.13.4 the world came crashing down with the death of imaging!
- Apple changing the landscape of how the Mac Admin / IT Staff re-purposing Macs

# SO THE END OF IMAGING?

- Internet access is now required in 10.14
- Ensuring the device gets the right firmware prior to install.
- ▶ t2 chips
- This was also tied in with moving to the new Apple file system APFS optional in 10.13 and enforced in 10.14

# IN SHORT

startosinstall is Apples way of giving something back to IT staff

# OK BUT WHY WOULD I NEED TO USE IT?

- Remotely erasing a Mac
- Remotely erase a whole bunch more
- Renaming volume names
- Ignoring volumes
- Installing additional packages
- You can automate and script this command! \*

# **ARGUMENTS - FLAGS 10.13**

- --applicationpath, a path to copy of the OS installer application to start the install with.
- --license, prints the user license agreement only.
- --agreetolicense, agree to license the license you printed with --license.
- --rebootdelay, how long to delay the reboot at the end of preparing. This delay is in seconds and has a maximum of 300 (5 minutes).
- --converttoapfs, specify either YES or NO on if you wish to convert to APFS. \*\*\*\*
- --installpackage, the path of a package to install after the OS installation is complete; this option can be specified multiple times.
- - nointeraction, this is not documented at all but allows you to script the command which is useful

# **ARGUMENTS - FLAGS 10.13.4**

 - - eraseinstall, lets you erase an APFS volume and install macOS note all volumes on the APFS container will be erased as part of this installation process.

# **ARGUMENTS - FLAGS 10.14**

- --license, prints the user license agreement only.
- --agreetolicense, agree to the license you printed with --license.
- --rebootdelay, how long to delay the reboot at the end of preparing. This delay is in seconds and has a maximum of 300 (5 minutes).
- --installpackage, the path of a package (built with productbuild(1)) to install after the OS installation is complete; this option can be specified multiple times. \*\*\*\*
- --eraseinstall, (Requires APFS) Erase all volumes and install to a new one. Optionally specify the name of the new volume with –newvolumename. \*\*\*\*\*\*
- --newvolumename, the name of the volume to be created with -eraseinstall. \*\*\*\*
- --preservecontainer, preserves other volumes in your APFS container when using -eraseinstall \*\*\*\*\*
- --nointeraction This is not documented at all but allows you to script the command which is useful

# REMEMBER THE GOTCHAS

- Note the differences using 10.13, 10.13.4 and 10.14
- eraseinstall ONLY works with APFS Filesystems 10.13.4 and above
- ▶ 10.14 you have to have an internet connection
- You cannot downgrade using the command eg 10.14 to 10.13

# DEMO SCENARIO

# EXAMPLES OF STARTOSINSTALL IN PRACTICE

10.13.6 single client which we erase to clean version of 10.13.6

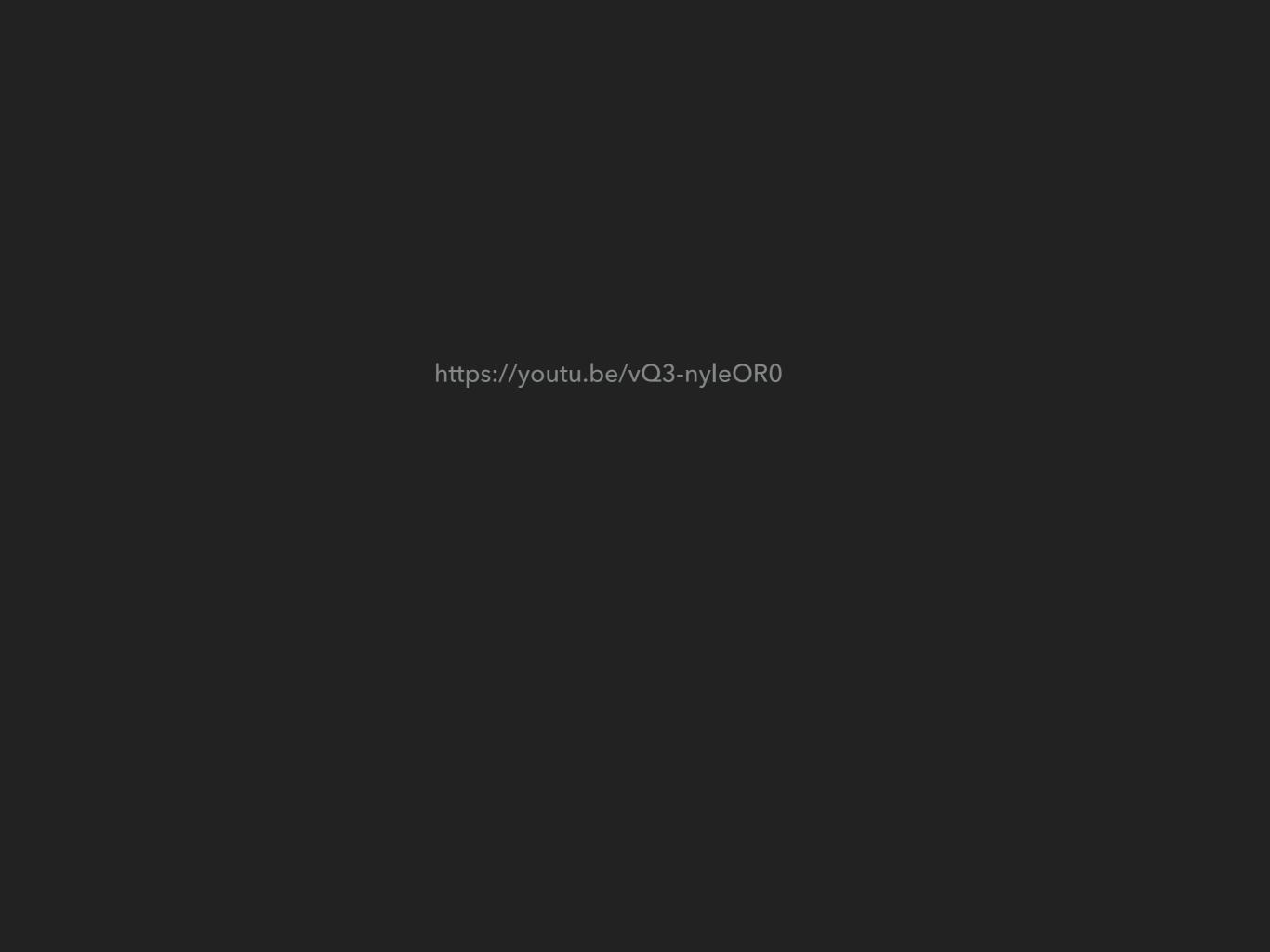
- Ensure you have the application install macOS High Sierra.app on the machine!
- Enter the command sudo /\$location\$/install macOS High Sierra.app/Contents/Resources/startosinstall –eraseinstall –nointeraction –agreetolicense

https://youtu.be/otbn6\_Fqezl

# **EXAMPLE 2 OF STARTOSINSTALL IN PRACTICE**

Using 10.13.6 and erasing disk and upgrading to 10.14, installing munki automatically

- Ensure you have the latest Mojave.app
- Run sudo ./wherever/Install Mojave.app/Contents/
   Resources/startosinstall –eraseinstall –nointeraction –
   acceptlicense –installpackage path/to/munkitools.pkg



#### **OK THATS SEEMS SIMPLE BUT....**

# HOW DO I SCALE THIS UP?

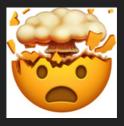
# **USE APPLE REMOTE DESKTOP?**

- Scenario of 10 Macs in a training/lab environment
- All machines have been heavily used and require eraseinstall
- Obtaining the latest version of macOS with installinstallmacos.py

# DEMO SCENARIO

# **USE A MAC MANAGED SOLUTION?**

- For example JAMF PRO
- Policy 1 The prep policy
  - Ensure you can silently copy the .app via a DMG to nominated machines
- Policy 2 Installer policy
  - Attach the DMG using hdiutil
  - Create a script that will run startostinstall with the flags you want eraseinstall
  - Consider a scope for inclusions and exclusions
  - What is the trigger? A button for IT Staff or for the end user?



# THANK YOU FOR SPENDING YOUR LUNCH BREAK WITH ME!

# USEFUL RESOURCES TO HELP YOU WITH STARTOSINSTALL

- Greg Neagles python script from GitHub
   installinstallmacos.py <a href="https://github.com/munki/macadmin-scripts/blob/master/installinstallmacos.py">https://github.com/munki/macadmin-scripts/blob/master/installinstallmacos.py</a>
- JAMF resources <a href="https://www.jamf.com/blog/reinstall-a-clean-macos-with-one-button/">https://www.jamf.com/blog/reinstall-a-clean-macos-with-one-button/</a>
- Rich Trouton as usual <a href="https://derflounder.wordpress.com/">https://derflounder.wordpress.com/</a>
- Graham Pughs blog <a href="https://grahamrpugh.com/2019/04/02/">https://grahamrpugh.com/2019/04/02/</a> erase-install-updates.html