

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 10.11 El Capitan
- It was there in Sierra 10.12 and was introduced as a way of upgrading to 10.13
- 27th April 2018 10.13.4 - the flag eraseinstall was added <https://support.apple.com/en-gb/HT208488>
- 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`

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