

**dataJAR**  
Beyond Device Management

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# Nudging Users

For fun and for profit

A photograph of a person's hands typing on a silver laptop keyboard. The person is wearing a black smartwatch on their left wrist. To the right of the laptop is a white smartphone lying on a wooden desk. In the background, there is a dark mug. The entire image has a dark, semi-transparent overlay.

# Challenges



## Tools of the trade

softwareupdate binary

MDM commands

MDM Profile to enable macOS's native behaviour.



Nudge





## Nudge - Components

Application

LaunchAgent

Logger (optional) - `/var/log/Nudge.log`

Preferences (Configuration Profile or JSON)



Getting ready to Nudge

[https://github.com/macadmins/nudge/blob/main/Example%20Assets/  
com.github.macadmins.Nudge.mobileconfig](https://github.com/macadmins/nudge/blob/main/Example%20Assets/com.github.macadmins.Nudge.mobileconfig)



Demo time!

# Using Nudge



# Nudge's Stages



Inactive

Initial

Approaching

Imminent

Elapsed



## Inactive

OS is up to date (matches or exceeds  
**requiredMinimumOSVersion**)

OS not defined in **targetedOSVersions**

Window not displayed

## Initial



OS not up to date and targeted (below **requiredMinimumOSVersion** and in **targetedOSVersions**)

**approachingWindowTime** hours greater than time remaining until **requiredInstallationDate**

Window refresh/deferral rate based on number of seconds set in **initialRefreshCycle**

Window is displayed with primary quit button



## Approaching

OS not up to date and targeted (below **requiredMinimumOSVersion** and in **targetedOSVersions**)

**approachingWindowTime** hours less than time remaining until **requiredInstallationDate**

Window refresh/deferral rate based on number of seconds set in **approachingRefreshCycle**

Window is displayed with primary and secondary quit buttons



## Imminent

OS not up to date and targeted (below **requiredMinimumOSVersion** and in **targetedOSVersions**)

**imminentWindowTime** hours less than time remaining until **requiredInstallationDate**

Window refresh/deferral rate based on number of seconds set in **imminentRefreshCycle**

Window is displayed with primary and secondary quit buttons



## Elapsed

OS not up to date and targeted (below **requiredMinimumOSVersion** and in **targetedOSVersions**)

**requiredInstallationDate** passed

Window refresh/deferral rate based on number of seconds set in **elapsedRefreshCycle**

Window is displayed with no quit buttons



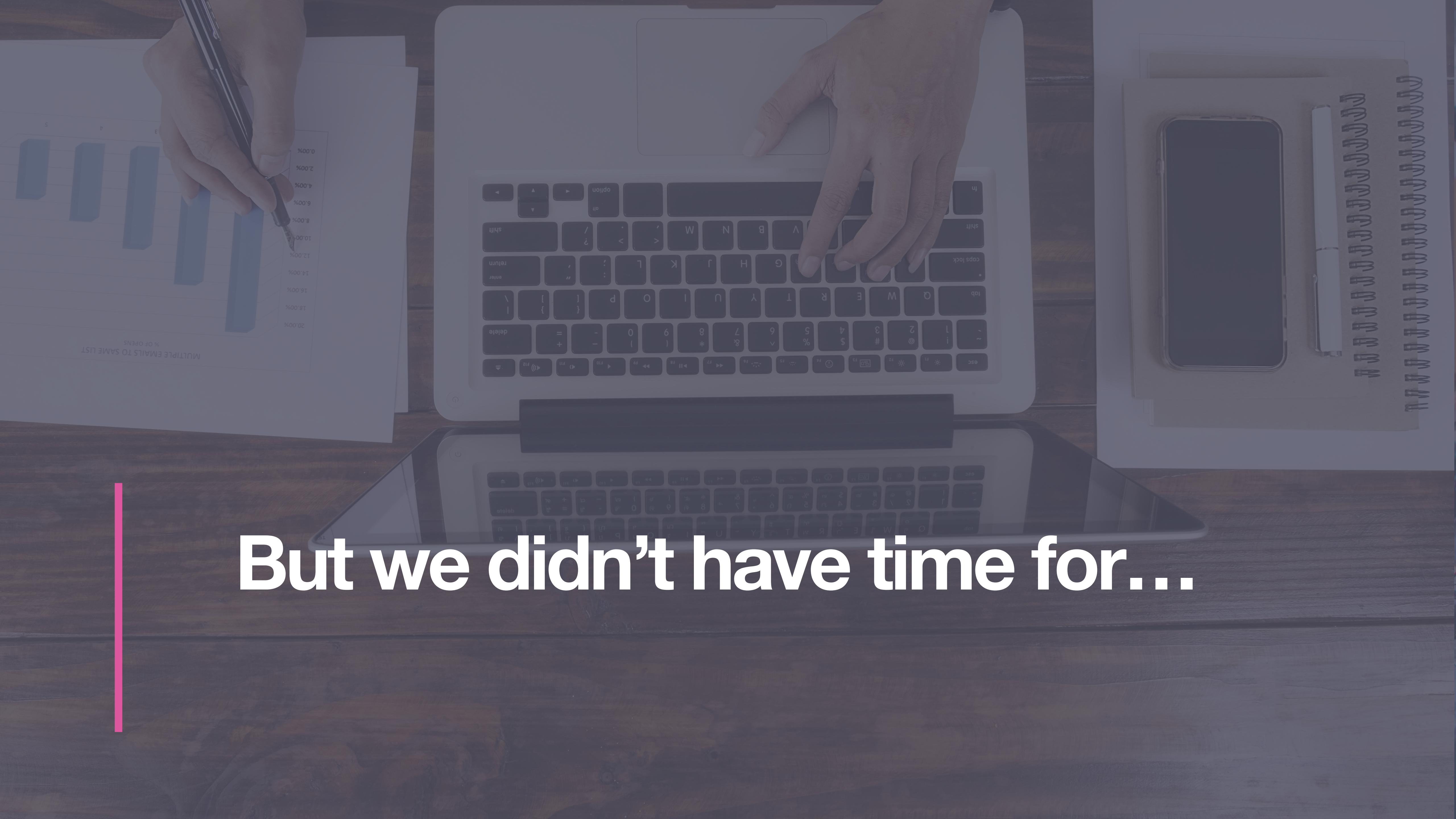
# Deferrals



## Deferral Levels

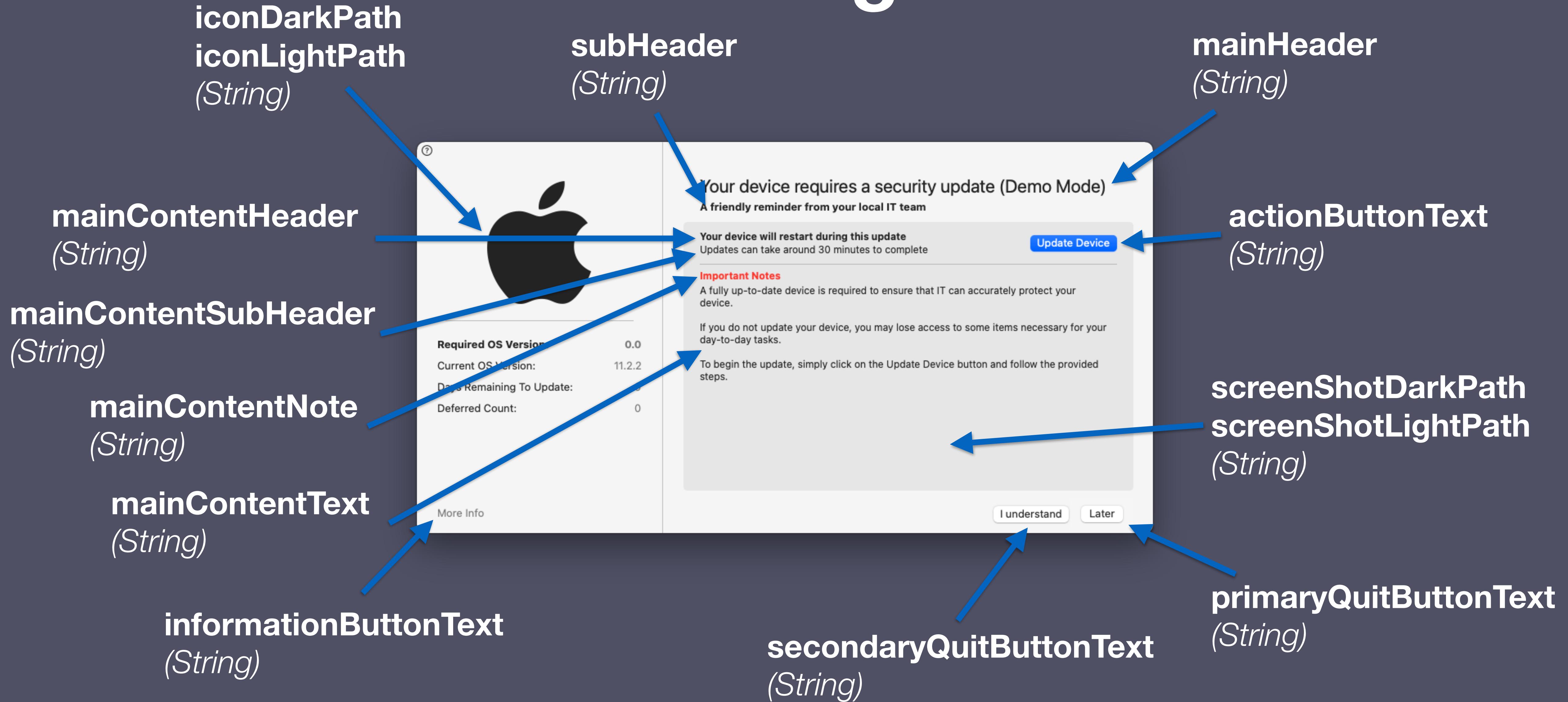
`allowedDeferralsUntilForcedSecondaryQuitButton`

`allowedDeferrals`



But we didn't have time for...

# Customising the UI





# Localisation

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<https://github.com/macadmins/nudge/wiki/updateElements>

# Simple Mode

/Applications/Utilities/Nudge.app/Contents/MacOS/Nudge \  
-simple-mode



<https://github.com/macadmins/nudge/wiki/userInterface#simplemode---type-boolean-default-value-false>



# Major macOS Upgrades (soon!)

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<https://github.com/macadmins/nudge/wiki/optionalFeatures#attempttofetchmajorupgrade---type-boolean-default-value-true>

<https://github.com/macadmins/nudge/wiki/osVersionRequirements#majorupgradeapppath---type-string-default-value--required-no>

# Resources

- **GitHub Repo** - <https://github.com/macadmins/nudge>
- **Wiki** - <https://github.com/macadmins/nudge/wiki>
- **Releases** - <https://github.com/macadmins/nudge/releases>
- **#nudge** on the MacAdmins Slack
- **Erik's Texas Apple Admins Talk** -  
<https://blog.eriknicolasgomez.com/2021/03/30/Nudge-Swift-Texas-macadmins-presentation/>

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