

Unified System Logs

The key to root cause

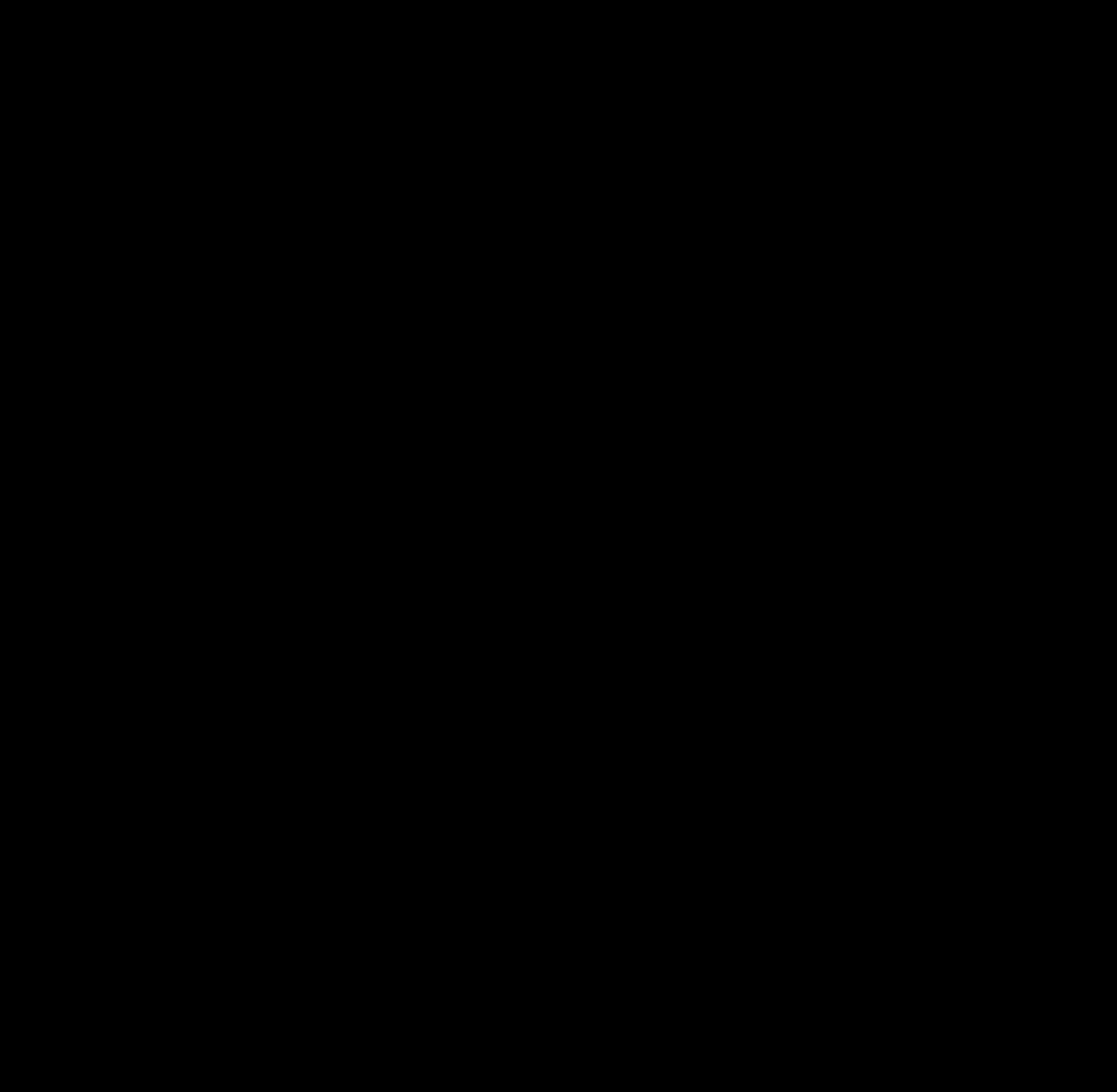
Bryce Carlson - PSU Mac Admins 2024

Agenda

- Intro and Background
- Background on Apple OS logging
- Tools
- Support Support
- Debugging & Streaming with a support perspective
- Filtering
- Real world examples
- Feedback to Apple
- Q&A


**PDF will be available from resources
with posted by conference staff**

<https://macadmins.psu.edu/conference/resources/>







A wooden award plaque with a glass figurine on top, sitting on a desk in an office. The figurine is a stylized character with large, round glasses and a green body. The plaque has a black label with white text that reads "Thanks for Doing Your Job SubZero 2016 JAMF Software". The background shows an office environment with desks, computers, and a person working in the distance.

Thanks for Doing Your Job
SubZero 2016 JAMF Software

Background on Apple OS logging

- Historical
 - macOS - /var/log/system.log
 - iOS - LemonJar iOS Console app
- Unified logging system
 - iOS 10.0 and later
 - macOS 10.12 and later
 - tvOS 10.0 and later

system.log Info

system.log 14 KB
Modified: Today, 7:02 PM

Add Tags...

General:

- Kind: Log File
- Size: 14,337 bytes (16 KB on disk)
- Where: Mac SSD > private > var > log
- Created: Sunday, July 7, 2024 at 12:30 AM
- Modified: Sunday, July 7, 2024 at 7:02 PM

Stationery pad
Locked

More Info:

Last opened: Sunday, July 7, 2024 at 7:02 PM

Name & Extension:

system.log

Hide extension

Comments:

Open with:

Console.app (default)

Use this application to open all documents like this one.

Change All...

Preview:

```
Jul 7 00:30:32 MacBook-Pro-9 syslogd[347]: ASL Sender Statistics
Jul 7 00:30:33 MacBook-Pro-9 syslogd[347]: Configuration Notice:
ASL Module "com.apple.cdscheduler" claims selected messages.
Those messages may not appear in standard system log files or in the ASL database.
Jul 7 00:30:33 MacBook-Pro-9 syslogd[347]: Configuration Notice:
ASL Module "com.apple.install" claims selected messages.
Those messages may not appear in standard system log files or in the ASL database.
Jul 7 00:30:33 MacBook-Pro-9 syslogd[347]: Configuration Notice:
ASL Module "com.apple.authd" sharing output destination "/var/log/asl" with ASL Module "com.apple.asl".
Output parameters from ASL Module "com.apple.asl" override any specified in ASL Module "com.apple.authd".
Jul 7 00:30:33 MacBook-Pro-9 syslogd[347]: Configuration Notice:
ASL Module
```

Sharing & Permissions:

Here's to the crazy ones. The rebels. The troublemakers. The round pegs in the square holes. The ones who see things differently. They're not fond of rules. And they have no respect for the status quo.

You can praise them, disagree with them, quote them, disbelieve them, glorify or vilify them. About the only thing you can't do is ignore them. Because they change things.

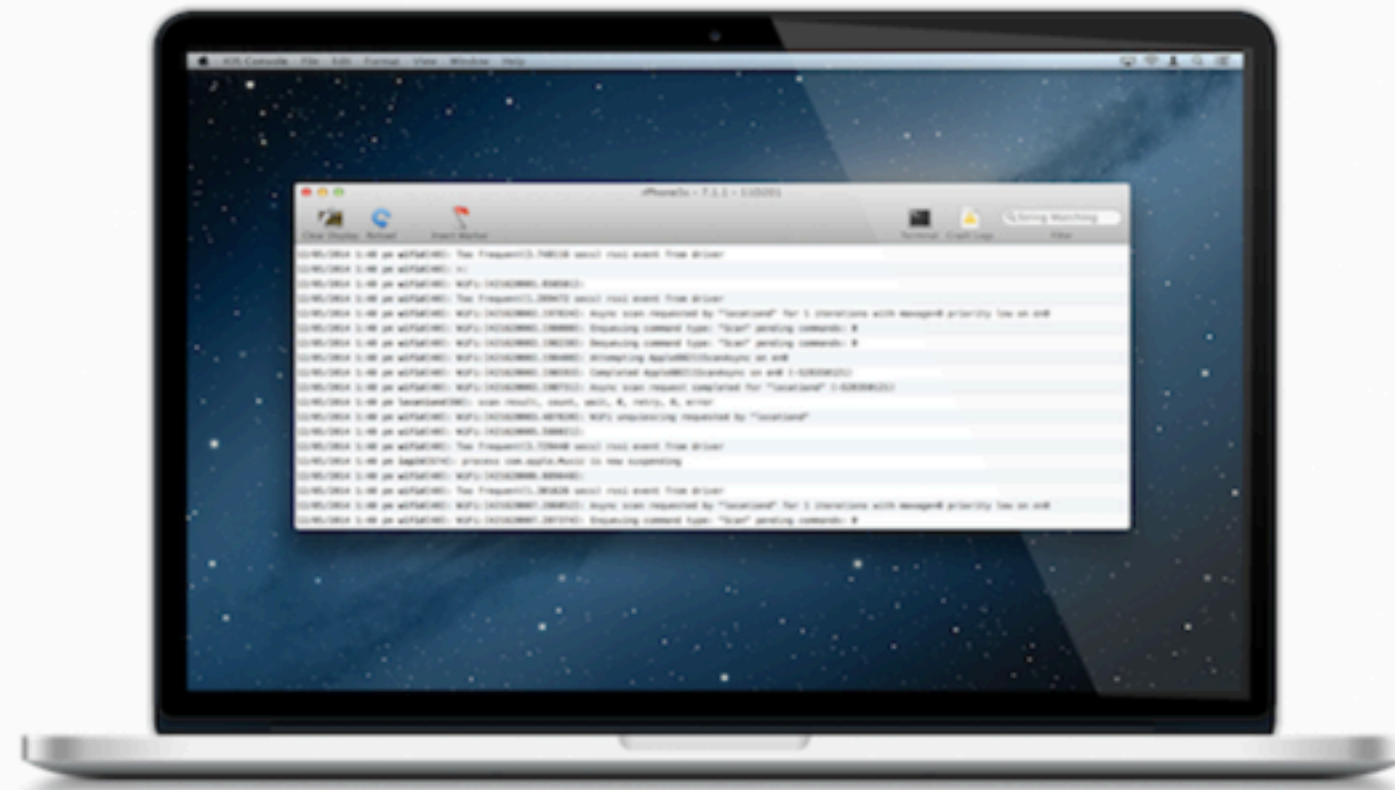
They invent. They imagine. They heal. They explore. They create. They inspire. They push the human race forward.

Maybe they have to be crazy. How else can you stare at an empty canvas and see a work of art? Or sit in silence and hear a song that's never been written? Or gaze at a red planet and see a laboratory on wheels?

system.log

Reveal Now Clear Reload Share

```
Jul 7 16:24:27 MacBook-Pro-9 loginwindow[380]: client 0x6000015717c0: phaseName = "IOKit Boot", show progress UI called
Jul 7 16:24:27 MacBook-Pro-9 loginwindow[380]: ISAP: Show progress UI called
Jul 7 16:24:27 MacBook-Pro-9 loginwindow[380]: client 0x6000015717c0: phaseName = "IOKit Boot" is done
Jul 7 16:24:27 MacBook-Pro-9 loginwindow[380]: ISAP: Done with Phase "IOKit Boot"
Jul 7 16:24:27 MacBook-Pro-9 loginwindow[380]: client 0x6000015717c0: phaseName = "IOKit Boot" is being released
Jul 7 16:24:27 MacBook-Pro-9 loginwindow[380]: Releasing Connection
Jul 7 16:24:27 MacBook-Pro-9 loginwindow[380]: client 0x600001571680: handler = 0x600000e6b420
Jul 7 16:24:28 MacBook-Pro-9 loginwindow[380]: client 0x600001571680: phaseName = "loginwindow Boot" is done
Jul 7 16:24:28 MacBook-Pro-9 loginwindow[380]: ISAP: Done with Phase "loginwindow Boot"
Jul 7 16:24:29 MacBook-Pro-9 loginwindow[380]: Calling completion handler for 0x600001571680
Jul 7 16:24:29 MacBook-Pro-9 loginwindow[380]: client 0x600001571680: phaseName = "loginwindow Boot" is already done
Jul 7 16:24:29 MacBook-Pro-9 loginwindow[380]: client 0x600001571680: phaseName = "loginwindow Boot", hide progress UI called
Jul 7 16:24:29 MacBook-Pro-9 loginwindow[380]: ISAP: hide progress UI called
Jul 7 16:24:29 MacBook-Pro-9 loginwindow[380]: client 0x600001571680: phaseName = "loginwindow Boot" is being released
Jul 7 16:24:29 MacBook-Pro-9 loginwindow[380]: Releasing Connection
Jul 7 16:24:29 MacBook-Pro-9 loginwindow[380]: The connection was interrupted, calling interruption handlers
Jul 7 16:24:29 MacBook-Pro-9 loginwindow[380]: USER_PROCESS: 380 console
Jul 7 16:24:29 MacBook-Pro-9 AMPDeviceDiscoveryAgent[4522]: tid:1a03 - This is here just to make sure we empty our found devices queue
Jul 7 16:24:29 MacBook-Pro-9 AMPDeviceDiscoveryAgent[4522]: tid:1a03 - (null)
Jul 7 16:24:29 MacBook-Pro-9 AMPDeviceDiscoveryAgent[4522]: tid:1a03 - Failed to subscribe for booted OS device notifications.
Jul 7 16:24:29 MacBook-Pro-9 AMPDeviceDiscoveryAgent[4522]: tid:103 - (null)
Jul 7 16:24:29 MacBook-Pro-9 loginwindow[380]: There is still an active connection
--- last message repeated 1 time ---
Jul 7 17:47:17 MacBook-Pro-9 syslogd[344]: ASL Sender Statistics
Jul 7 17:58:20 MacBook-Pro-9 syslogd[344]: ASL Sender Statistics
Jul 7 18:08:23 MacBook-Pro-9 syslogd[344]: ASL Sender Statistics
Jul 7 18:12:49 MacBook-Pro-9 MobileDeviceUpdater[95844]: Entered:_AMMuxedDeviceDisconnected, mux-device:1
Jul 7 18:12:49 MacBook-Pro-9 AMPDeviceDiscoveryAgent[4522]: Entered:_AMMuxedDeviceDisconnected, mux-device:1
Jul 7 18:12:49 MacBook-Pro-9 AMPDeviceDiscoveryAgent[4522]: Entered:___thr_AMMuxedDeviceDisconnected, mux-device:1
Jul 7 18:12:49 MacBook-Pro-9 AMPDeviceDiscoveryAgent[4522]: tid:5273 - BootedOS mode device disconnected
Jul 7 18:12:49 MacBook-Pro-9 MobileDeviceUpdater[95844]: Entered:___thr_AMMuxedDeviceDisconnected, mux-device:1
Jul 7 18:12:49 MacBook-Pro-9 MobileDeviceUpdater[95844]: tid:d307 - BootedOS mode device disconnected
Jul 7 18:18:24 MacBook-Pro-9 syslogd[344]: ASL Sender Statistics
Jul 7 18:29:20 MacBook-Pro-9 syslogd[344]: ASL Sender Statistics
Jul 7 18:40:59 MacBook-Pro-9 syslogd[344]: ASL Sender Statistics
Jul 7 18:51:27 MacBook-Pro-9 syslogd[344]: ASL Sender Statistics
Jul 7 19:02:47 MacBook-Pro-9 syslogd[344]: ASL Sender Statistics
Jul 7 19:13:59 MacBook-Pro-9 syslogd[344]: ASL Sender Statistics
```



iOS Console

The most awesome iOS console log viewer. Ever.

[Download Now](#)

[Tweet](#)

Have you ever wished for new world order?
How about a better way to view iOS console logs?
Well, iOS Console can help with at-least one of these!

iOS Console allows you to view iOS console logs directly from your Mac, and now

rPhone5s - 7.1.1 - 11D201

Clear Display Reload Insert Marker
Terminal Crash Logs String Matching Filter

```

12/05/2014 1:40 pm wifid[40]: Too frequent(3.740116 secs) rssi event from driver
12/05/2014 1:40 pm wifid[40]: >:
12/05/2014 1:40 pm wifid[40]: WiFi:[421620001.858581]:
12/05/2014 1:40 pm wifid[40]: Too frequent(1.289472 secs) rssi event from driver
12/05/2014 1:40 pm wifid[40]: WiFi:[421620002.197824]: Async scan requested by "locationd" for 1 iterations with maxage=0 priority low on en0
12/05/2014 1:40 pm wifid[40]: WiFi:[421620002.198080]: Enqueuing command type: "Scan" pending commands: 0
12/05/2014 1:40 pm wifid[40]: WiFi:[421620002.198238]: Dequeuing command type: "Scan" pending commands: 0
12/05/2014 1:40 pm wifid[40]: WiFi:[421620002.198408]: Attempting Apple80211ScanAsync on en0
12/05/2014 1:40 pm wifid[40]: WiFi:[421620002.198593]: Completed Apple80211ScanAsync on en0 (-528350121)
12/05/2014 1:40 pm wifid[40]: WiFi:[421620002.198731]: Async scan request completed for "locationd" (-528350121)
12/05/2014 1:40 pm locationd[60]: scan result, count, wait, 0, retry, 0, error
12/05/2014 1:40 pm wifid[40]: WiFi:[421620003.487820]: WiFi unquiescing requested by "locationd"
12/05/2014 1:40 pm wifid[40]: WiFi:[421620005.588021]:
12/05/2014 1:40 pm wifid[40]: Too frequent(3.729440 secs) rssi event from driver
12/05/2014 1:40 pm iap2d[674]: process com.apple.Music is now suspending
12/05/2014 1:40 pm wifid[40]: WiFi:[421620006.889648]:
12/05/2014 1:40 pm wifid[40]: Too frequent(1.301626 secs) rssi event from driver
12/05/2014 1:40 pm wifid[40]: WiFi:[421620007.286052]: Async scan requested by "locationd" for 1 iterations with maxage=0 priority low on en0
12/05/2014 1:40 pm wifid[40]: WiFi:[421620007.287374]: Enqueuing command type: "Scan" pending commands: 0
    
```

< More Videos

System Frameworks

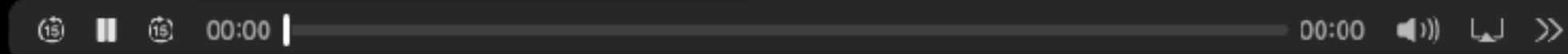
#WWDC16

Unified Logging and Activity Tracing

Logging for the future

Session 721

Steven Szymanski Core OS Engineering
Matthieu Lucas System Applications



Overview Transcript Related Videos



Unified Logging and Activity Tracing

The new Unified Logging and Tracing System for iOS and macOS uses Activity Tracing for performance, consolidates kernel and user-space logging, and has many other improvements. Learn how Logging and Tracing can help you debug and troubleshoot issues with your apps.

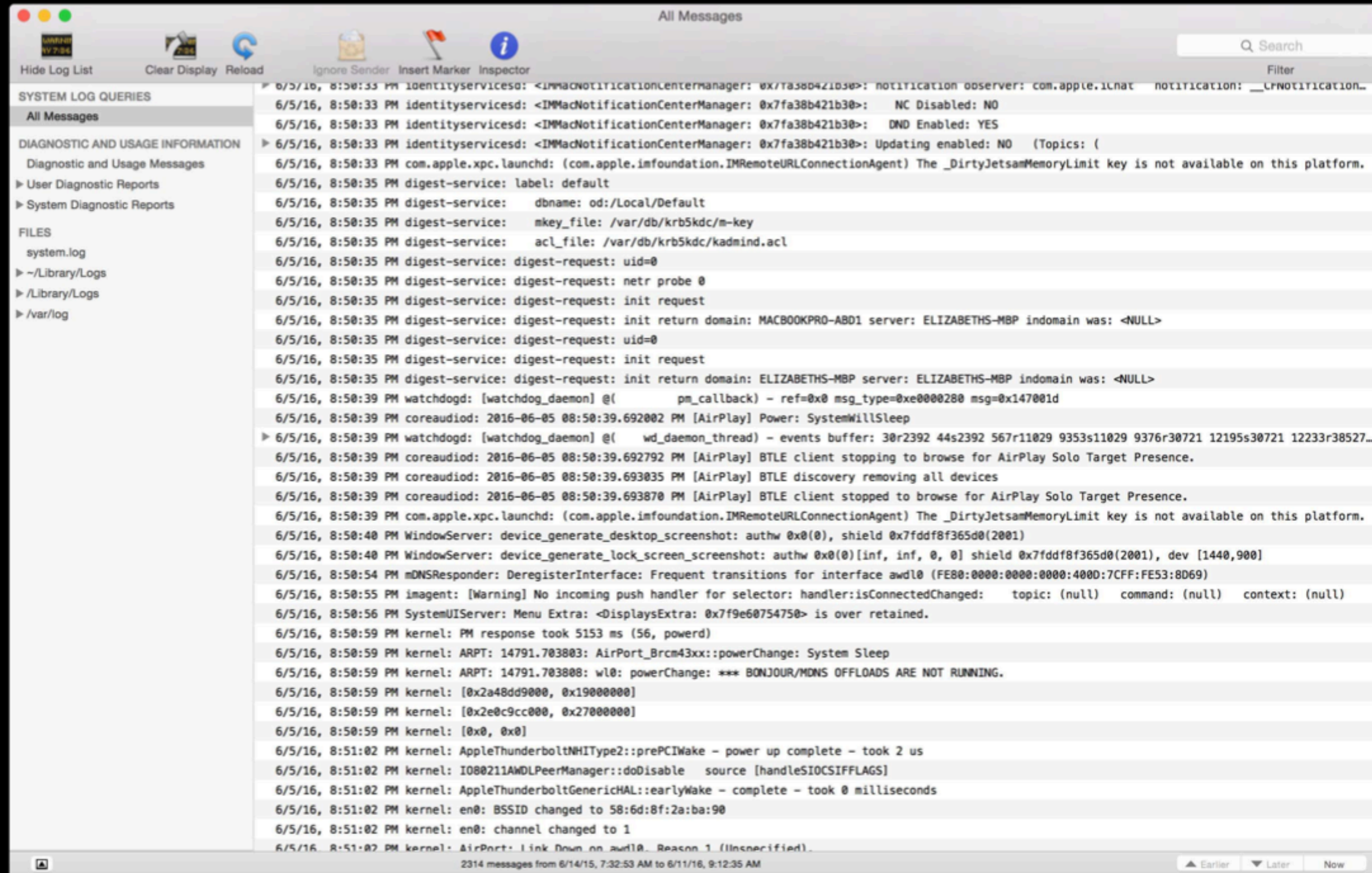
WWDC 2016 - Session 721 - iOS, macOS

Resources

- [Unified Logging Reference](#)
- [HD Video](#) | [SD Video](#)
- [Presentation Slides \(PDF\)](#)

Leave feedback for videos using the [WWDC app](#).

Current Console



The screenshot shows the macOS Console application window titled "All Messages". The interface includes a top toolbar with icons for "Hide Log List", "Clear Display", "Reload", "Ignore Sender", "Insert Marker", and "Inspector". A search bar is located in the top right corner. The left sidebar is expanded to show "All Messages" under "SYSTEM LOG QUERIES". The main pane displays a list of system log messages, including entries from "identityservicesd", "digest-service", "watchdogd", "coreaudiod", "WindowServer", "mDNSResponder", "imagent", "SystemUIServer", and "kernel". The messages are timestamped and provide details about system events such as network notifications, service updates, and power management.

```
6/5/16, 8:50:33 PM identityservicesd: <IMMacNotificationCenterManager: 0x7fa38b421b30>: notification observer: com.apple.ilnat notification: ___CFNOTIFICATION...
6/5/16, 8:50:33 PM identityservicesd: <IMMacNotificationCenterManager: 0x7fa38b421b30>: NC Disabled: NO
6/5/16, 8:50:33 PM identityservicesd: <IMMacNotificationCenterManager: 0x7fa38b421b30>: DND Enabled: YES
6/5/16, 8:50:33 PM identityservicesd: <IMMacNotificationCenterManager: 0x7fa38b421b30>: Updating enabled: NO (Topics: (
6/5/16, 8:50:33 PM com.apple.xpc.launchd: (com.apple.foundation.IMRemoteURLConnectionAgent) The _DirtyJetsamMemoryLimit key is not available on this platform.
6/5/16, 8:50:35 PM digest-service: label: default
6/5/16, 8:50:35 PM digest-service: dbname: od:/Local/Default
6/5/16, 8:50:35 PM digest-service: mkey_file: /var/db/krb5kdc/m-key
6/5/16, 8:50:35 PM digest-service: acl_file: /var/db/krb5kdc/kadmind.acl
6/5/16, 8:50:35 PM digest-service: digest-request: uid=0
6/5/16, 8:50:35 PM digest-service: digest-request: netr probe 0
6/5/16, 8:50:35 PM digest-service: digest-request: init request
6/5/16, 8:50:35 PM digest-service: digest-request: init return domain: MAC800KPRO-ABD1 server: ELIZABETHS-MBP indomain was: <NULL>
6/5/16, 8:50:35 PM digest-service: digest-request: uid=0
6/5/16, 8:50:35 PM digest-service: digest-request: init request
6/5/16, 8:50:35 PM digest-service: digest-request: init return domain: ELIZABETHS-MBP server: ELIZABETHS-MBP indomain was: <NULL>
6/5/16, 8:50:39 PM watchdogd: [watchdog_daemon] @() pm_callback) - ref=0x0 msg_type=0xe000280 msg=0x147001d
6/5/16, 8:50:39 PM coreaudiod: 2016-06-05 08:50:39.692002 PM [AirPlay] Power: SystemWillSleep
6/5/16, 8:50:39 PM watchdogd: [watchdog_daemon] @() wd_daemon_thread) - events buffer: 30r2392 44s2392 567r11029 9353s11029 9376r30721 12195s30721 12233r38527...
6/5/16, 8:50:39 PM coreaudiod: 2016-06-05 08:50:39.692792 PM [AirPlay] BTLE client stopping to browse for AirPlay Solo Target Presence.
6/5/16, 8:50:39 PM coreaudiod: 2016-06-05 08:50:39.693035 PM [AirPlay] BTLE discovery removing all devices
6/5/16, 8:50:39 PM coreaudiod: 2016-06-05 08:50:39.693870 PM [AirPlay] BTLE client stopped to browse for AirPlay Solo Target Presence.
6/5/16, 8:50:39 PM com.apple.xpc.launchd: (com.apple.foundation.IMRemoteURLConnectionAgent) The _DirtyJetsamMemoryLimit key is not available on this platform.
6/5/16, 8:50:40 PM WindowServer: device_generate_desktop_screenshot: authw 0x0(0), shield 0x7fddf8f365d0(2001)
6/5/16, 8:50:40 PM WindowServer: device_generate_lock_screen_screenshot: authw 0x0(0)[inf, inf, 0, 0] shield 0x7fddf8f365d0(2001), dev [1440,900]
6/5/16, 8:50:54 PM mDNSResponder: DeregisterInterface: Frequent transitions for interface awdl0 (FE80:0000:0000:0000:4000:7CFF:FE53:8D69)
6/5/16, 8:50:55 PM imagent: [Warning] No incoming push handler for selector: handler:isConnectedChanged: topic: (null) command: (null) context: (null)
6/5/16, 8:50:56 PM SystemUIServer: Menu Extra: <DisplaysExtra: 0x7f9e60754750> is over retained.
6/5/16, 8:50:59 PM kernel: PM response took 5153 ms (56, powerd)
6/5/16, 8:50:59 PM kernel: ARPT: 14791.703803: AirPort_Brcm43xx::powerChange: System Sleep
6/5/16, 8:50:59 PM kernel: ARPT: 14791.703808: wl0: powerChange: *** BONJOUR/MDNS OFFLOADS ARE NOT RUNNING.
6/5/16, 8:50:59 PM kernel: [0x2a48dd9000, 0x19000000]
6/5/16, 8:50:59 PM kernel: [0x2e0c9cc000, 0x27000000]
6/5/16, 8:50:59 PM kernel: [0x0, 0x0]
6/5/16, 8:51:02 PM kernel: AppleThunderboltNHIType2::prePCIWake - power up complete - took 2 us
6/5/16, 8:51:02 PM kernel: IO00211AWDLPeerManager::doDisable source [handleSIOCSIFFLAGS]
6/5/16, 8:51:02 PM kernel: AppleThunderboltGenericHAL:earlyWake - complete - took 0 milliseconds
6/5/16, 8:51:02 PM kernel: en0: BSSID changed to 58:6d:bf:2a:ba:90
6/5/16, 8:51:02 PM kernel: en0: channel changed to 1
6/5/16, 8:51:02 PM kernel: AirPort: Link Down on awdl0. Reason 1 (Unspecified).
```

2314 messages from 6/14/15, 7:32:53 AM to 6/11/16, 9:12:35 AM

Console Revisited...

The screenshot shows the macOS Console application with 779 activities. The main log list is filtered to show activities from the 'clouddd' process. The selected activity is 'clouddd (CloudKitDaemon)' with ID 99860. Below the main list, a detailed log for 'nsurlsessiond' is shown, with one entry highlighted in blue.

Time	Process	Library	Activity
15:34:15.083533	bird	QuickLookThumbnailing	!quicklook/thumbnail-retrieval
15:34:15.094374	bird	CloudDocsDaemon	upload
15:34:15.094950	bird	CloudKit	client/modify-records
15:34:15.109501	clouddd	CloudKitDaemon	daemon/modify-records
15:34:15.113061	clouddd	CloudKitDaemon	daemon/db-operation
15:34:15.121625	clouddd	CloudKitDaemon	daemon/db-operation
15:34:15.135751	clouddd	MMCS	mmcs-register-items
15:34:15.154190	clouddd	MMCS	mmcs-register-items
15:34:15.161521	clouddd	CloudKitDaemon	url-request
15:34:15.181657	nehelper	nehelper	NEHelperServer processing client message
15:34:15.216500	clouddd	CloudKitDaemon	url-request-transmission
15:34:15.286013	clouddd	MMCS	mmcs-put-items
15:34:15.287290	clouddd	MMCS	mmcs-chunking
15:34:15.295514	clouddd	MMCS	mmcs-authorize-put
15:34:15.375961	clouddd	MMCS	mmcs-put-container

clouddd (CloudKitDaemon)
Activity ID: 99860 Parent Activity ID: 99841 [Hide](#) Volatile
Thread ID: 0xc6d70 PID: 326 06-02-2016 15:34:15.161521

Type	Time	Process	Message
	15:34:15.181071	clouddd	Created DB, header sequence number = 13932
	15:34:15.181977	nsurlsessiond	CCDS: requirements { kConditionalConnectionActivityName = "Task <com.apple.clouddd>.<CKBackgroundSession:bID:com.apple.Deskto...
	15:34:15.182265	nsurlsessiond	activity [0x7f9d96552b00] <_DASActivity: "com.apple.CFNetwork-cc-331-4121-Task <com.apple.clouddd>.<CKBackgroundSession:bID:co...
	15:34:15.182309	nsurlsessiond	SUBMITTING: com.apple.CFNetwork-cc-331-4121-Task <com.apple.clouddd>.<CKBackgroundSession:bID:com.apple.Desktop:secondaryID:4/...
	15:34:15.182432	nsurlsessiond	TIC [0x7f9d965446c0]: DAS scheduler submitted activity 0x7f9d96552b00
	15:34:15.182814	DuetHeuristic-BM	Start network path monitoring for activity:com.apple.CFNetwork-cc-331-4121-Task <com.apple.clouddd>.<CKBackgroundSession:bID:c...
	15:34:15.183316	DuetHeuristic-BM	com.apple.CFNetwork-cc-331-4121-Task <com.apple.clouddd>.<CKBackgroundSession:bID:com.apple.Desktop:secondaryID:4/com.apple.cl...
	15:34:15.183359	DuetHeuristic-BM	Activity:com.apple.CFNetwork-cc-331-4121-Task <com.apple.clouddd>.<CKBackgroundSession:bID:com.apple.Desktop:secondaryID:4/com...
	15:34:15.183404	DuetHeuristic-BM	With com.apple.CFNetwork-cc-331-4121-Task <com.apple.clouddd>.<CKBackgroundSession:bID:com.apple.Desktop:secondaryID:4/com.app...
	15:34:15.183482	DuetHeuristic-BM	Running activities : ("com.apple.CFNetwork-cc-331-4121-Task <com.apple.clouddd>.<CKBackgroundSession:bID:com.apple.Deskto...
	15:34:15.183663	DuetHeuristic-BM	Stop network path monitoring for activity:com.apple.CFNetwork-cc-331-4121-Task <com.apple.clouddd>.<CKBackgroundSession:bID:co...
	15:34:15.183734	nsurlsessiond	STARTING: com.apple.CFNetwork-cc-331-4121-Task <com.apple.clouddd>.<CKBackgroundSession:bID:com.apple.Desktop:secondaryID:4/co...
	15:34:15.183771	nsurlsessiond	TIC [0x7f9d965446c0]: activity 0x7f9d96552b00 start handler called
	15:34:15.183794	nsurlsessiond	TIC TCP Conn Start [4121:0x7f9d965446c0]

Unified Logging

- Introduced at WWDC 2016
- Standardized logging format across apps
- Maximize information collected with minimal footprint
- Formatted at read back
- Coordinate log message life cycle (file limit)
- PII redacted

Unified Logging - Where?

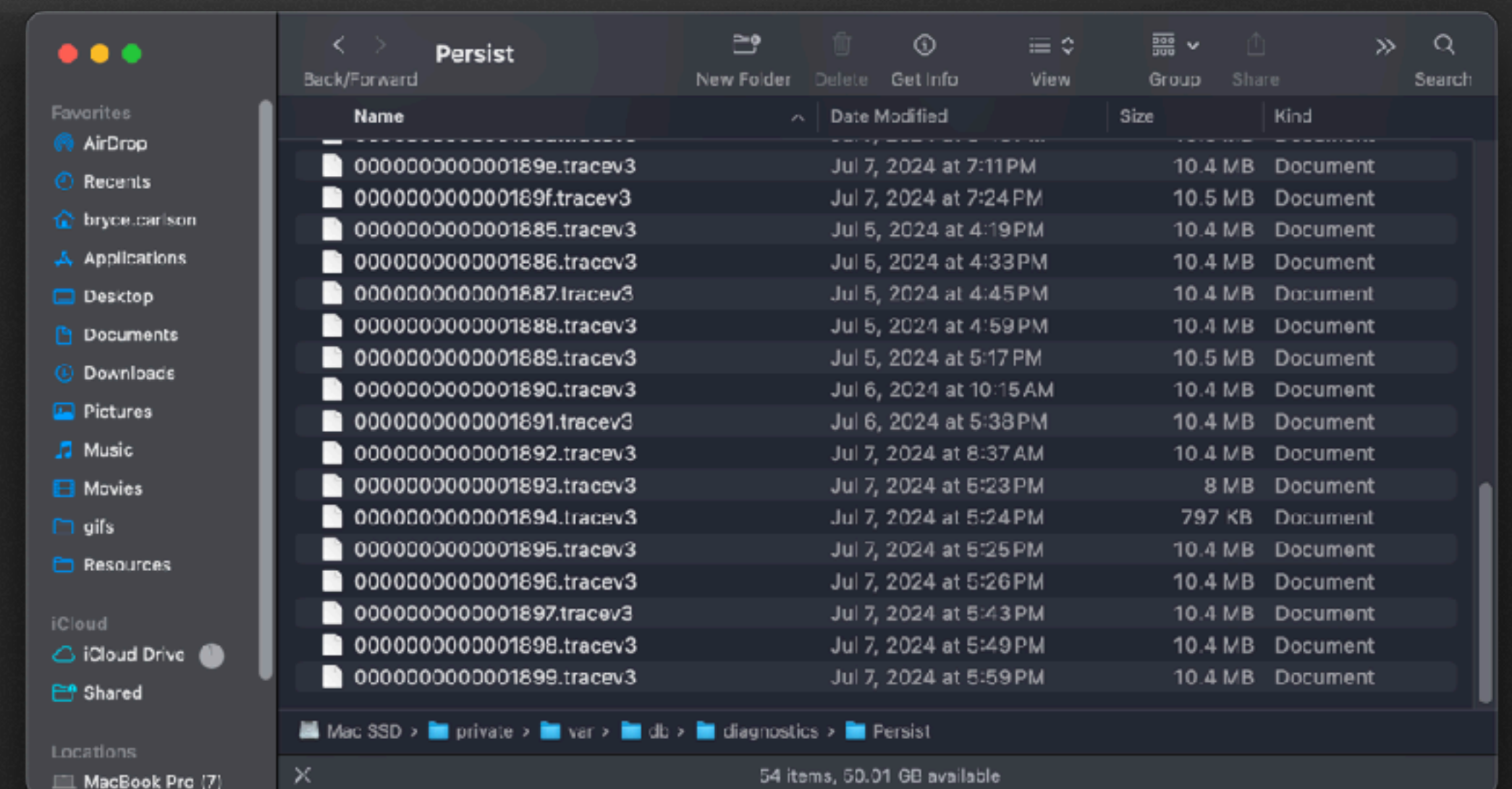
- .tracev3 files

- /var/db/diagnostics

- /var/db/diagnostics/persist

- ~50-55 files are maintained

- ~5-10.5 MB in size



Unified Logging - How?

- Use built-in tools
- Console.app
- `log` command line tool



Unified Logging - What?

Message	Level Enabled
Default	Always
Info	Yes, streaming
Debug	No
Error	Always
Fault	Always


Tools

- Console.app
 - GUI
 - Limited to streaming on device
 - Open archives
 - RIP Intel 🚀 go silicon 😎
- `log` command line
 - `show`
 - `stream`
- Fast and could be used in scripts





WARNING
AY 7:36

Loading archive 

WARNING
AY 7:36

Tools

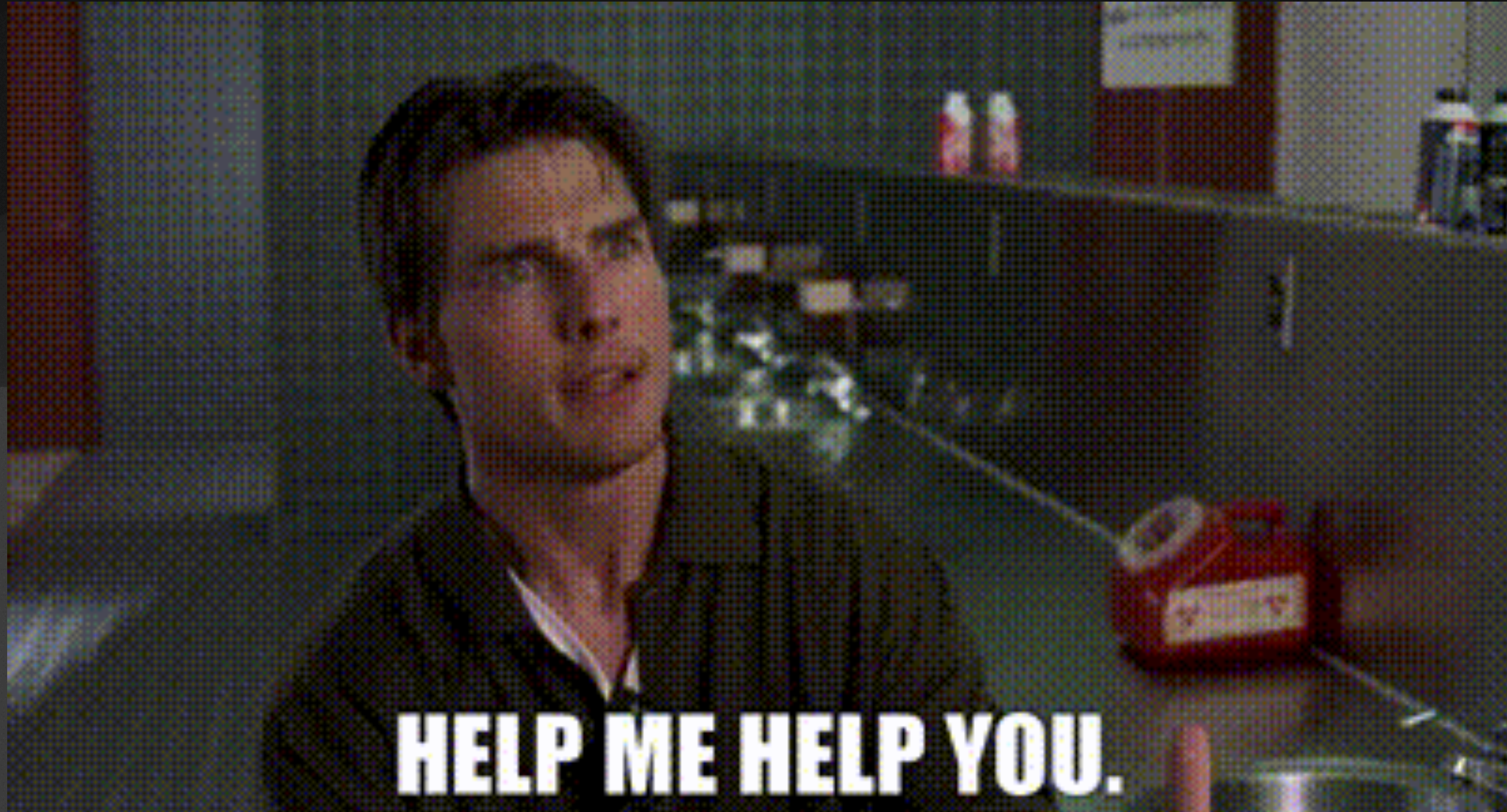
- Console.app
 - GUI
 - Limited to streaming on device
 - Open archives
 - RIP Intel 🚀 go silicon 😎
- `log` command line
 - `show`
 - `stream`
- Fast and could be used in scripts



Support Support

- Jamf Support historically has been built on the idea of ONIT
 - Objective
 - Not working
 - Investigated
 - Tried
- All support has levels of escalation it is the nature of what happens at scale
 - The more information and context you can provide
- How can you best state your case at opening of a ticket
- Be open and honest

Support Support



Debugging & Streaming

- Log level setting read

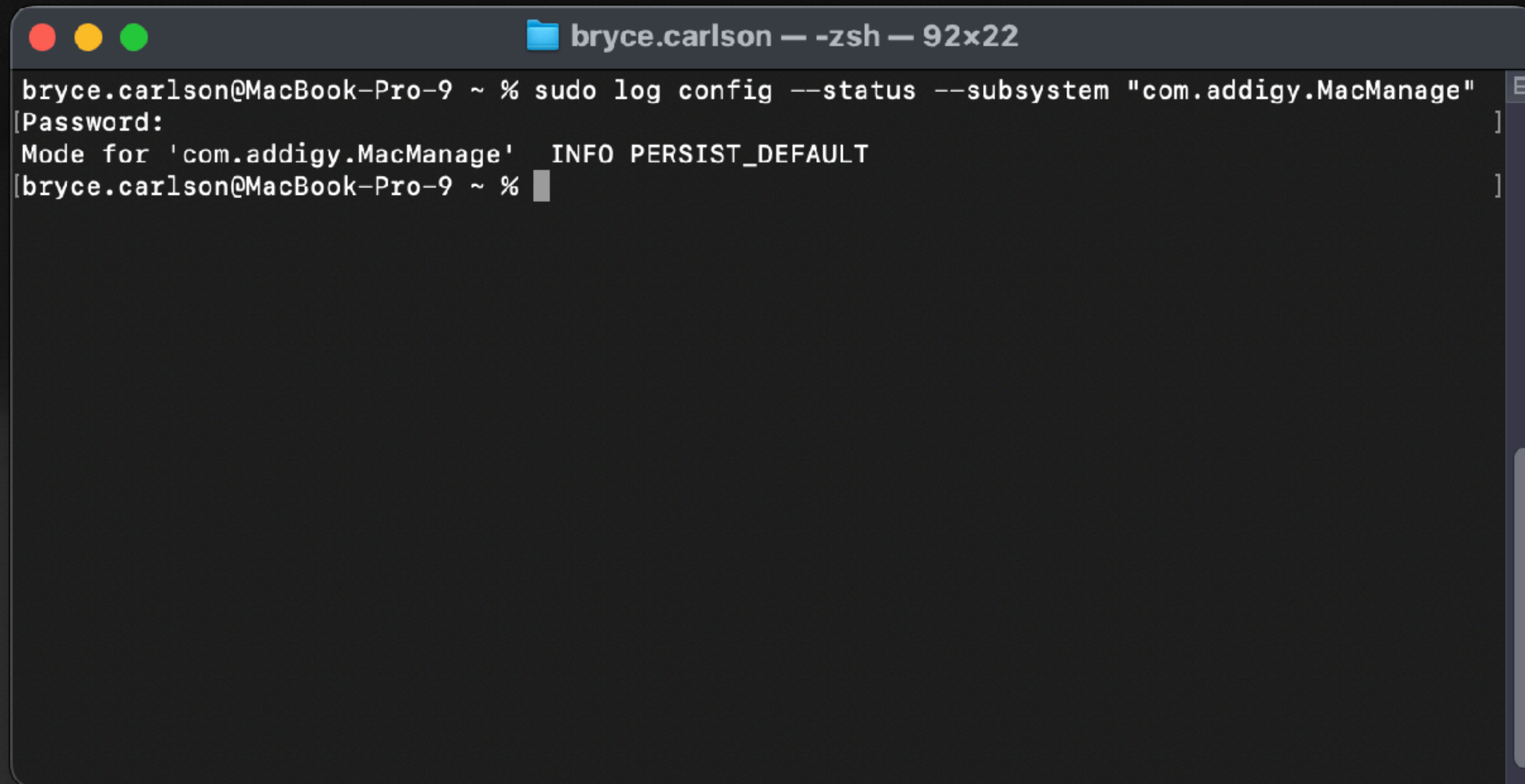
- `sudo log config --status --subsystem "com.vend.app"`

- Enable debug logging per subsystem

- `sudo log config --mode "level:debug" --subsystem com.vend.app`

- Creates a plist in `/Library/Preferences/Logging/Subsystems`

Debugging & Streaming

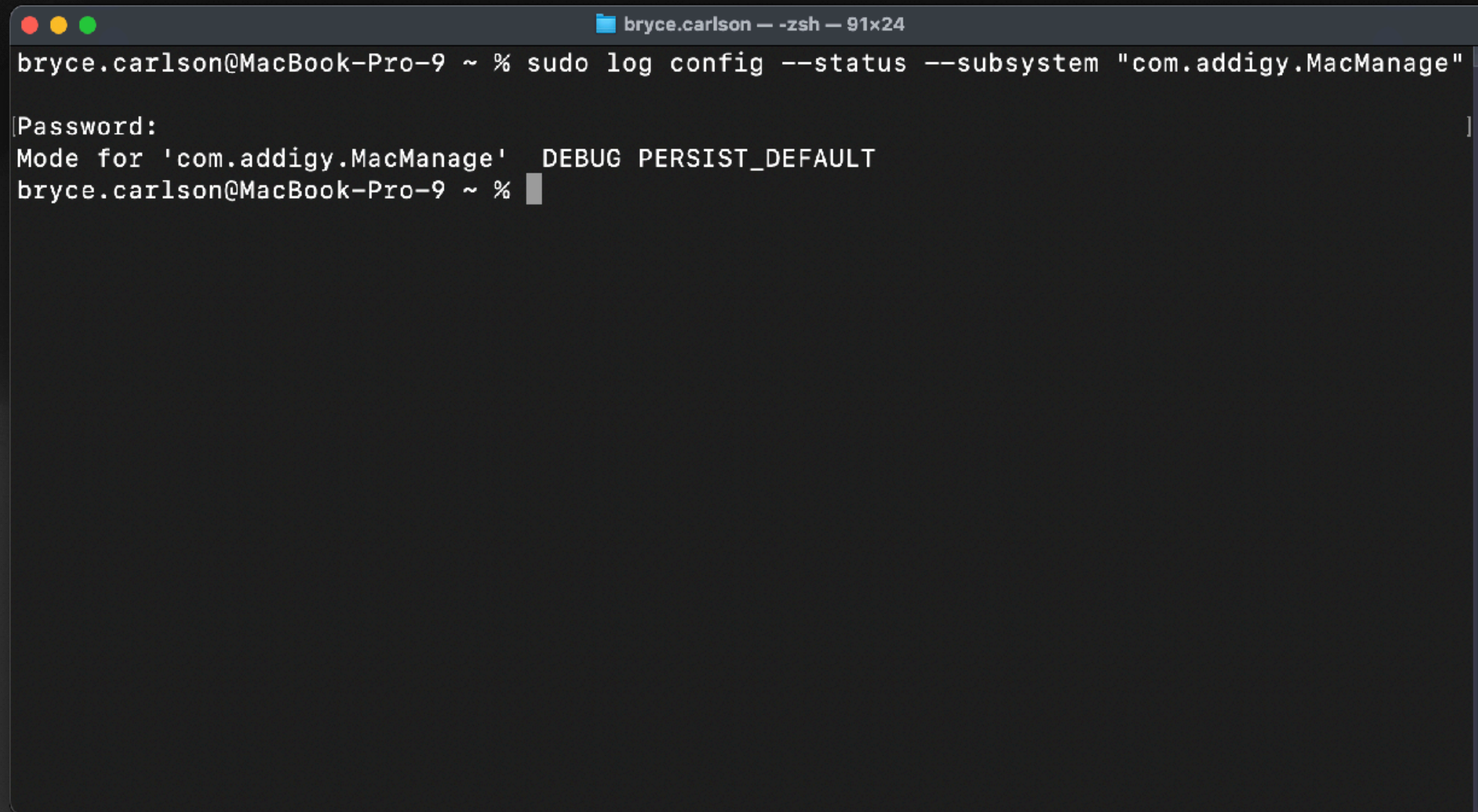


```
bryce.carlson@MacBook-Pro-9 ~ % sudo log config --status --subsystem "com.addigy.MacManage"  
[Password: ]  
Mode for 'com.addigy.MacManage' INFO PERSIST_DEFAULT  
[bryce.carlson@MacBook-Pro-9 ~ % ]
```

Debugging & Streaming

```
com.Addigy.MacManage.plist Open with Xcode-beta  
  
<?xml version="1.0" encoding="UTF-8"?>  
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.com/DTDs/PropertyList-1.0.dtd">  
<plist version="1.0">  
<dict>  
  <key>DEFAULT-OPTIONS</key>  
  <dict>  
    <key>Level</key>  
    <dict>  
      <key>Enable</key>  
      <string>debug</string>  
    </dict>  
  </dict>  
</dict>  
</plist>
```

Debugging & Streaming



```
bryce.carlson@MacBook-Pro-9 ~ % sudo log config --status --subsystem "com.addigy.MacManage"  
[Password:  
Mode for 'com.addigy.MacManage' DEBUG PERSIST_DEFAULT  
bryce.carlson@MacBook-Pro-9 ~ %
```

Debugging & Streaming

<https://developer.apple.com/bug-reporting/profiles-and-logs/>

The screenshot shows a web browser window displaying the 'Profiles and Logs' page on the Apple Developer website. The browser's address bar shows the URL `developer.apple.com/bug-reporting/profiles-and-logs/`. The page header includes navigation links for 'Developer', 'News', 'Discover', 'Design', 'Develop', 'Distribute', 'Support', and 'Account'. Below the header, the 'Bug Reporting' section is active, with sub-links for 'Overview', 'Profiles and Logs', and 'Feedback Assistant'. The main heading is 'Profiles and Logs', followed by a descriptive paragraph: 'These profiles and logs are for developers to use in order to provide information about bugs to Apple. Get details on providing logs, reproducible test cases, and other information that will help us investigate and diagnose reported issues.' Below this, there are filter tabs for 'All', 'iOS', 'macOS', 'tvOS', 'watchOS', 'visionOS', and 'Other', along with a search box labeled 'Search by name'. The main content area lists several profiles, each with an 'Instructions' link and, where applicable, a 'Profile' link. The visible entries are:

Profile Name	Instructions	Profile
3rd Party Apps for iOS	Instructions	
3rd Party Products for macOS	Instructions	
802.1X Logging for macOS	Instructions	
Accessory Setup Kit for iOS	Instructions	Profile
Accounts/AuthKit for iOS	Instructions	Profile
Accounts/AuthKit for macOS	Instructions	Profile
Accounts/AuthKit for tvOS	Instructions	Profile
Accounts/AuthKit for visionOS	Instructions	Profile

Debugging & Streaming

<https://developer.apple.com/bug-reporting/profiles-and-logs/>

The screenshot shows the Apple Developer website's 'Profiles and Logs' page. The browser's address bar displays the URL: `developer.apple.com/bug-reporting/profiles-and-logs/?name=mana&platform=ios`. The page features a navigation bar with links for 'Developer', 'News', 'Discover', 'Design', 'Develop', 'Distribute', 'Support', and 'Account'. Below this, the 'Bug Reporting' section is active, with sub-links for 'Overview', 'Profiles and Logs', and 'Feedback Assistant'. The main heading is 'Profiles and Logs', followed by a descriptive paragraph: 'These profiles and logs are for developers to use in order to provide information about bugs to Apple. Get details on providing logs, reproducible test cases, and other information that will help us investigate and diagnose reported issues.' Below the text is a horizontal menu of platform filters: 'All', 'iOS', 'macOS', 'tvOS', 'watchOS', 'visionOS', and 'Other'. A search input field to the right of these filters contains the text 'mana'. Below the filters, there is a section for 'Managed Configuration (MDM) for iOS' with links for 'Instructions' and 'Profile'. At the bottom, a breadcrumb trail reads 'Apple > Developer > Bug Reporting > Profiles and Logs'. A footer menu is organized into four columns: 'Platforms' (iOS, iPadOS, macOS, tvOS), 'Topics & Technologies' (Accessibility, Accessories, App Extensions, App Store), 'Resources' (Documentation, Tutorials, Downloads, Forums), and 'Programs' (Apple Developer Program, Apple Developer Enterprise Program, App Store Small Business Program, MFi Program).

Debugging & Streaming

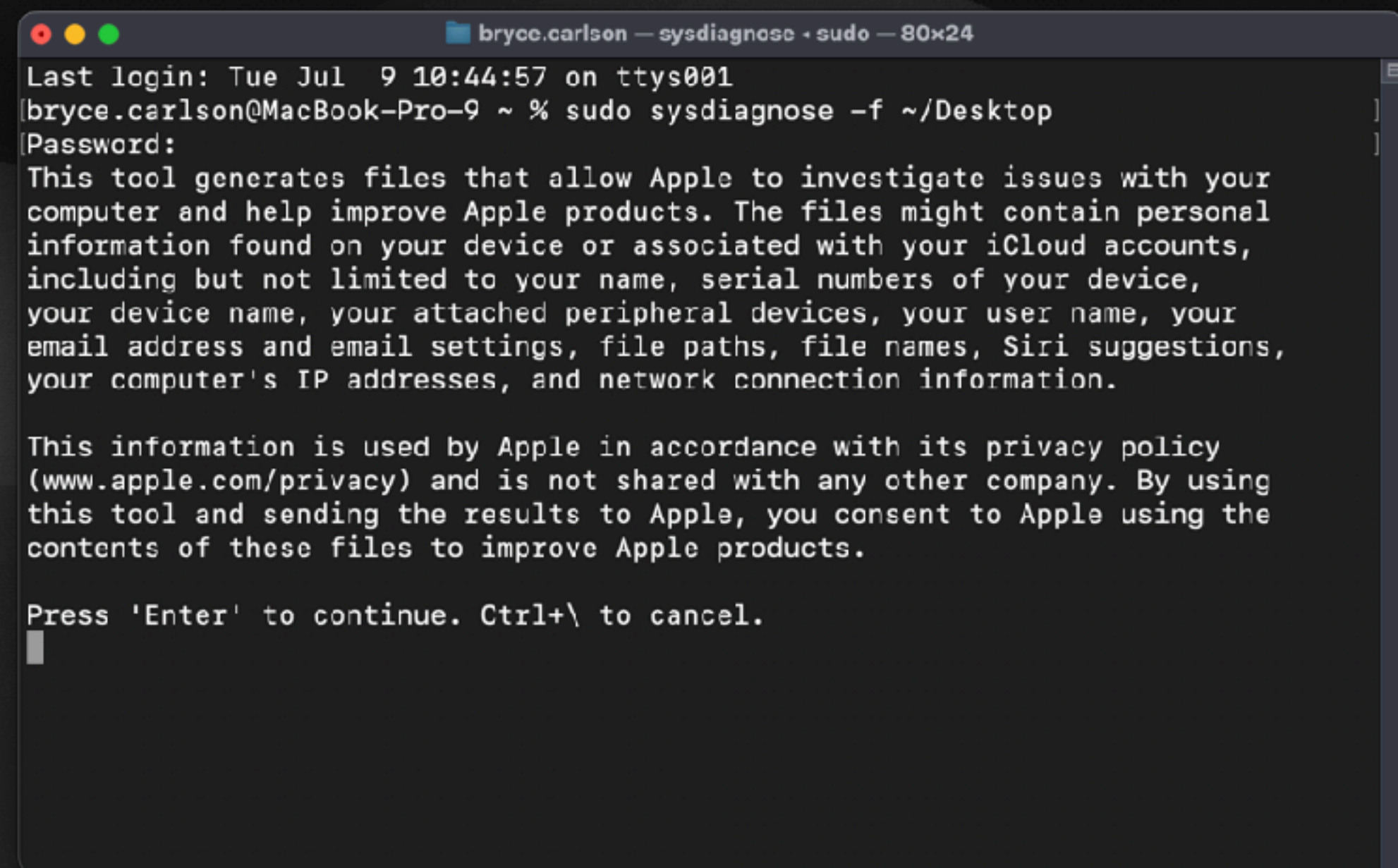


- Console.app
- Limited to streaming on device
- `log` command line
- Past as well as present



Debugging & Streaming

- sysdiagnose
 - MDM vendor support
 - Apple Support
 - ADE, VPP, or any testing workflow with flushing or multiple steps



```
bryce.carlson — sysdiagnose - sudo — 80x24
Last login: Tue Jul  9 10:44:57 on ttys001
bryce.carlson@MacBook-Pro-9 ~ % sudo sysdiagnose -f ~/Desktop
Password:
This tool generates files that allow Apple to investigate issues with your
computer and help improve Apple products. The files might contain personal
information found on your device or associated with your iCloud accounts,
including but not limited to your name, serial numbers of your device,
your device name, your attached peripheral devices, your user name, your
email address and email settings, file paths, file names, Siri suggestions,
your computer's IP addresses, and network connection information.

This information is used by Apple in accordance with its privacy policy
(www.apple.com/privacy) and is not shared with any other company. By using
this tool and sending the results to Apple, you consent to Apple using the
contents of these files to improve Apple products.

Press 'Enter' to continue. Ctrl+\ to cancel.
█
```

Debugging & Streaming

The image shows a macOS desktop environment. On the left, a terminal window titled "bryce.carlson — sysdiagnose - sudo — 80x" displays the output of the command `sudo sysdiagnose -f ~/Downloads/`. The terminal output includes a login message, a warning about data collection, and a prompt to press 'Enter' to continue.

```
Last login: Tue Jul 9 10:44:57 on ttys001
bryce.carlson@MacBook-Pro-9 ~ % sudo sysdiagnose -f ~/Downloads/
Password:
This tool generates files that allow Apple to investigate your
computer and help improve Apple products. The files might contain
information found on your device or associated with you, including
but not limited to your name, serial numbers, device identifiers,
your device name, your attached peripheral devices, your location,
your email address and email settings, file paths, file names,
your computer's IP addresses, and network connection information.

This information is used by Apple in accordance with its privacy policy
(www.apple.com/privacy) and is not shared with any other company.
If you do not consent to this tool and sending the results to Apple, you consent
contents of these files to improve Apple products.

Press 'Enter' to continue. Ctrl+\ to cancel.

```

On the right, a Finder window titled "PREsysdiagnose_2024.07.05_11-03-33-0500..." shows a file browser view of the generated files. The files are listed in a table with columns for Name, Date Modified, Size, and Kind. The file "system_logs.logarchive" is highlighted in blue.

Name	Date Modified	Size	Kind
security-sysdiagnose.txt	Jul 5, 2024 at 12:04 PM	222 KB	Plain Text
sfttool.LSSharedFileList.FavoriteItems.txt	Jul 5, 2024 at 12:04 PM	2 KB	Plain Text
sfttool.LSSharedFileList.FavoriteVolumes.txt	Jul 5, 2024 at 12:04 PM	912 bytes	Plain Text
sfttool.LSSharedFileList.iCloudItems.txt	Jul 5, 2024 at 12:04 PM	796 bytes	Plain Text
smcDiagnose.txt	Jul 5, 2024 at 12:04 PM	25 KB	Plain Text
spindump.txt	Jul 5, 2024 at 12:04 PM	7.6 MB	Plain Text
summaries	Today at 2:01 PM	--	Folder
sw_vers.txt	Jul 5, 2024 at 12:04 PM	63 bytes	Plain Text
swutil_show.txt	Jul 5, 2024 at 12:04 PM	Zero bytes	Plain Text
sysctl.txt	Jul 5, 2024 at 12:04 PM	60 KB	Plain Text
sysdiagnose.log	Jul 5, 2024 at 12:05 PM	157 KB	Log File
system_logs.logarchive	Today at 2:01 PM	318 MB	Log Archive
SystemConfiguration	Today at 2:01 PM	--	Folder
systemextensionsctl_diagnose.txt	Jul 5, 2024 at 12:04 PM	105 bytes	Plain Text
SystemProfiler	Today at 2:01 PM	--	Folder
tailspin-info.txt	Jul 5, 2024 at 12:03 PM	46 bytes	Plain Text
talagent-501.txt	Jul 5, 2024 at 12:04 PM	4 KB	Plain Text
taskinfo.txt	Jul 5, 2024 at 12:03 PM	3.4 MB	Plain Text
taskSummary.csv	Jul 5, 2024 at 12:05 PM	22 KB	CSV Document
tbtDiagnose.txt	Jul 5, 2024 at 12:04 PM	151 KB	Plain Text
thermal.txt	Jul 5, 2024 at 12:04 PM	1 KB	Plain Text
TimezoneDB	Today at 2:01 PM	--	Folder
top.txt	Jul 5, 2024 at 12:03 PM	1.4 MB	Plain Text
transparency.log	Jul 5, 2024 at 12:04 PM	6 KB	Log File
uptime.txt	Jul 5, 2024 at 12:04 PM	59 bytes	Plain Text
var_run_resolv.conf	Today at 2:01 PM	--	Folder
vm_stat.txt	Jul 5, 2024 at 12:03 PM	11 KB	Plain Text
WiFi	Today at 2:01 PM	--	Folder
WindowServer.external.wininfo.plist	Jul 5, 2024 at 12:03 PM	121 KB	Property List
xartutil.txt	Jul 5, 2024 at 12:04 PM	168 bytes	Plain Text
zprint.txt	Jul 5, 2024 at 12:03 PM	108 KB	Plain Text

The Finder window's breadcrumb path is: Mac SSD > Users > bryce.carlson > Downloads > DDM Update Logs Example Archive > PREsysdiagnose_2024.07.05_11-03-33-0500_macOS_MacBookPro15-2_23F79 > system_logs.logarchive. The status bar at the bottom indicates "1 of 112 selected, 46.62 GB available".

Debugging & Streaming

- sysdiagnose

- macOS

- Terminal

- SHIFT + CNTRL + OPT + CMD + “.”

- Default location `/private/var/tmp`

- File path can be specified with `-f`

- iOS/iPadOS

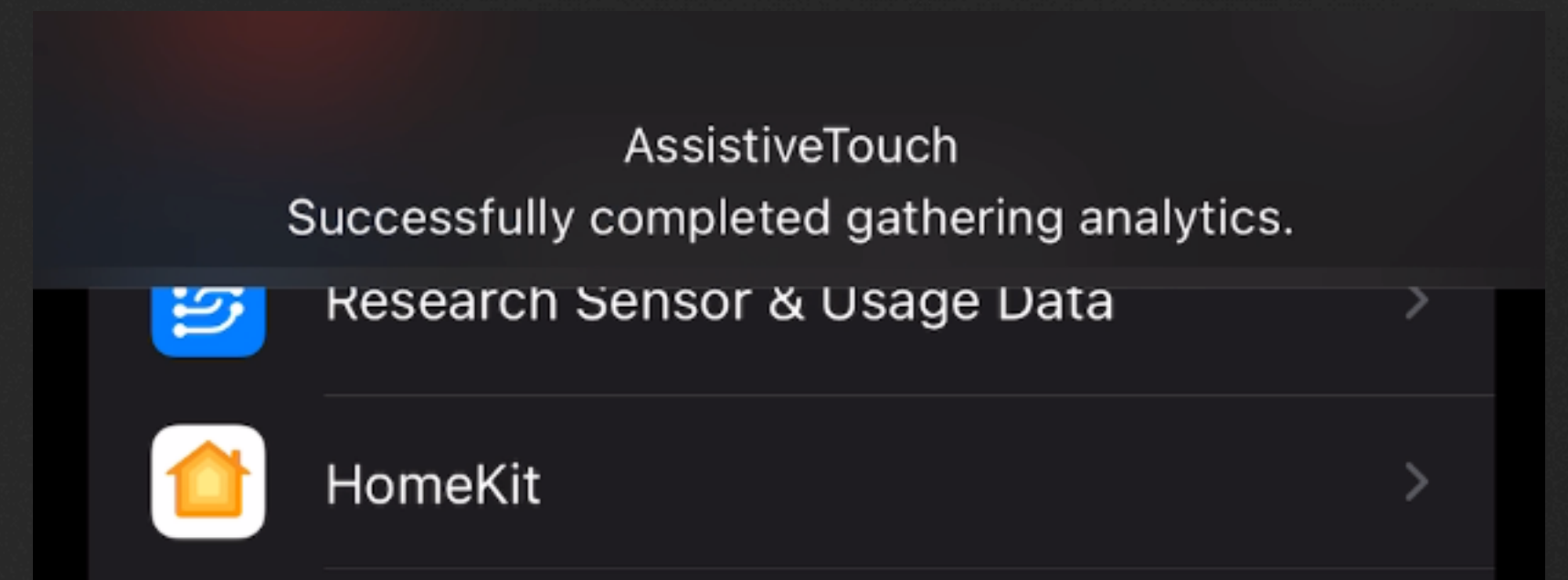
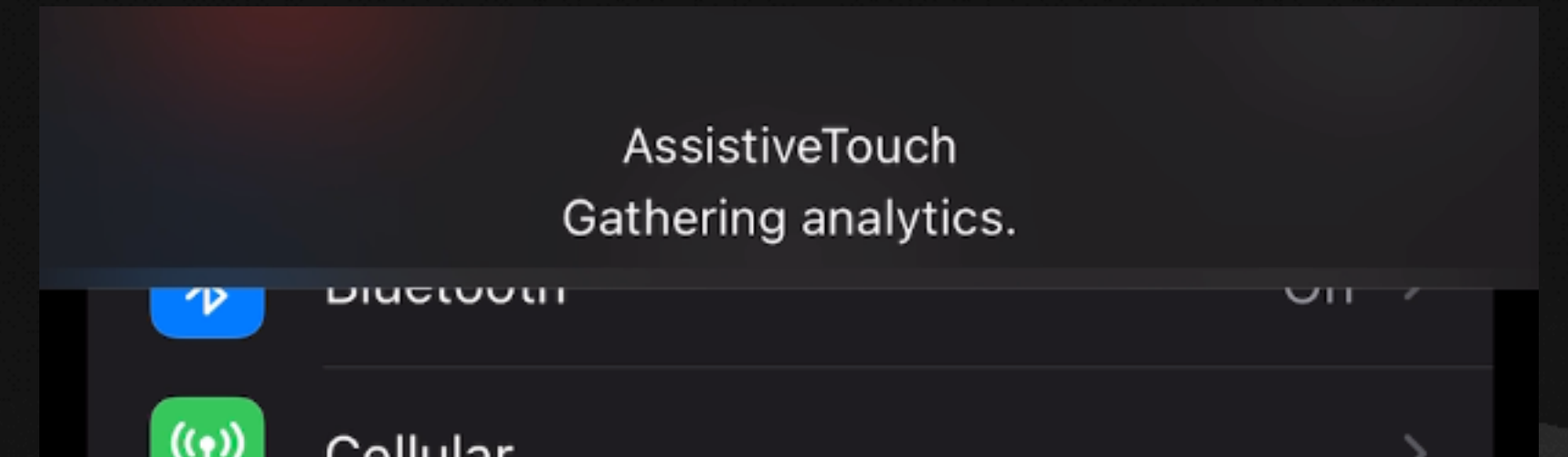
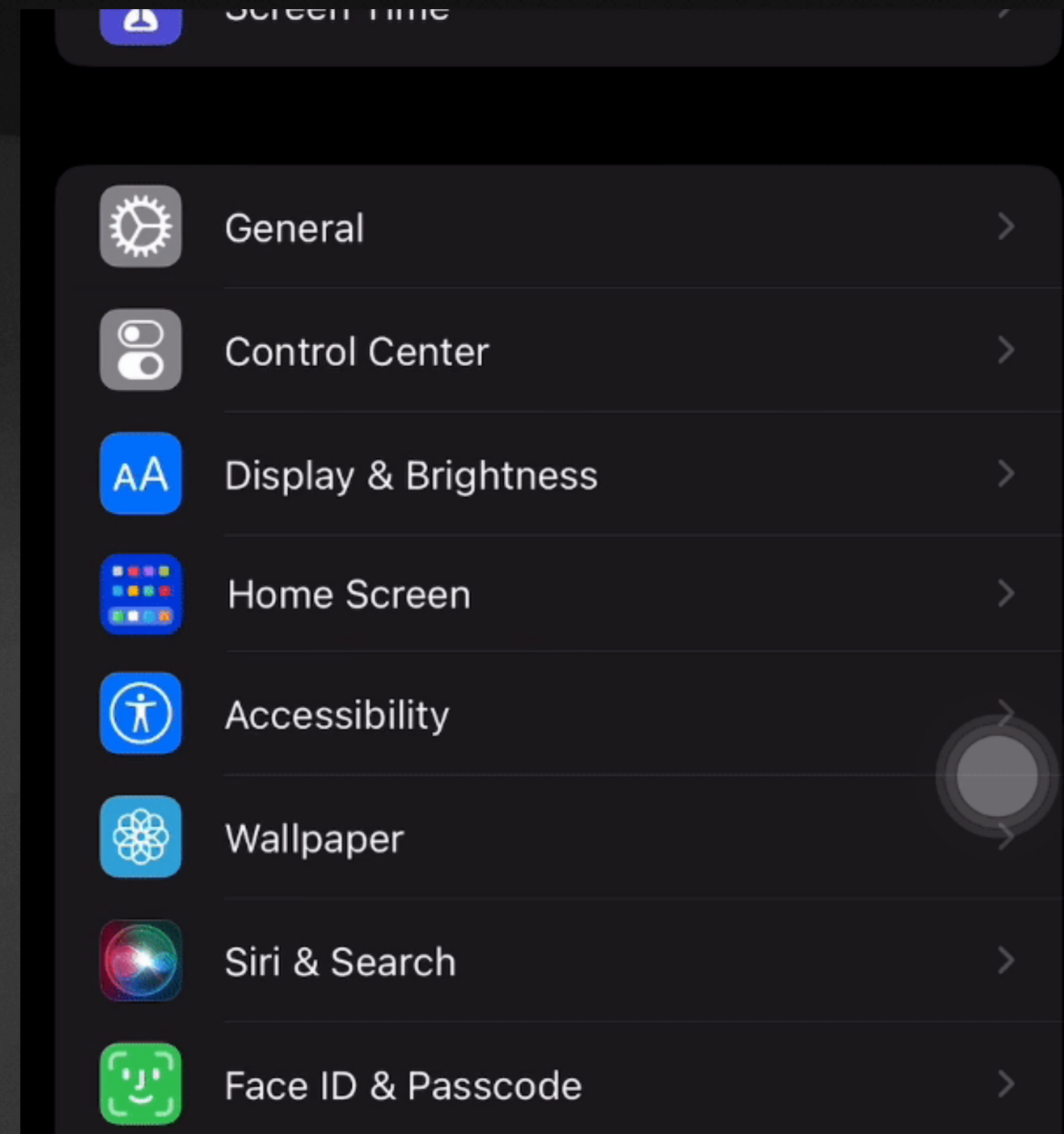
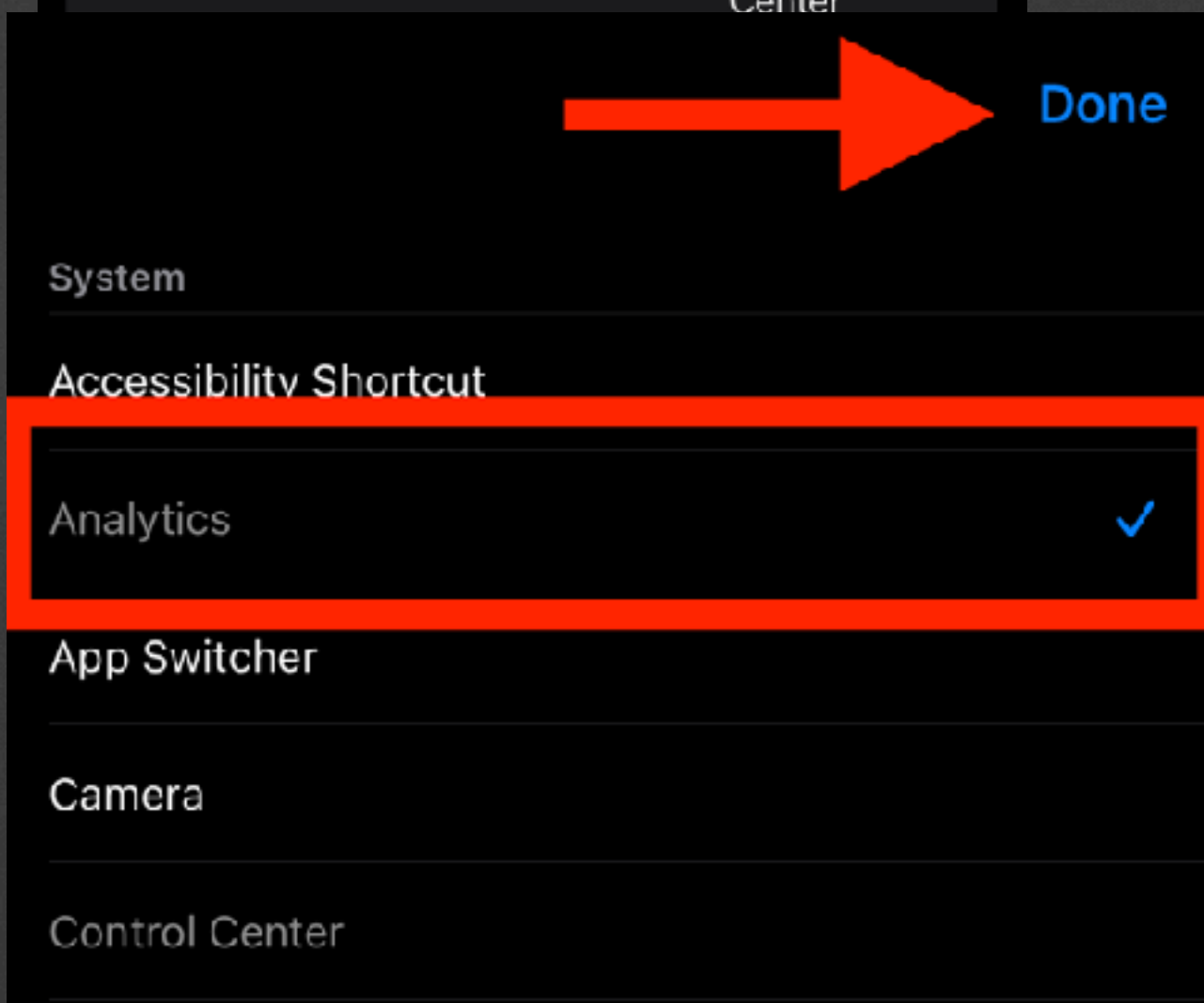
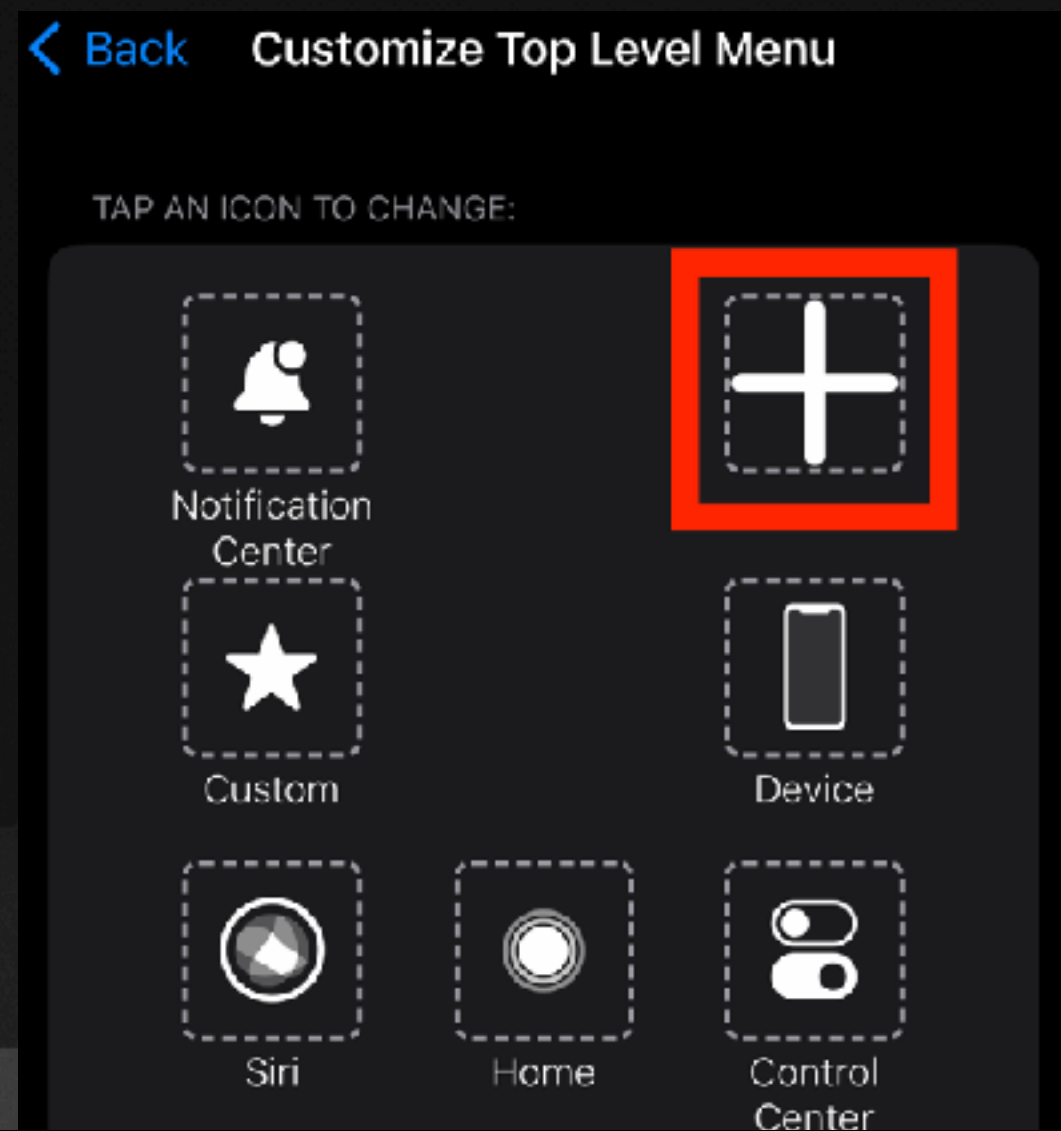
- Press and hold both volume buttons and the side or top button on device for 1 to 1.5 seconds to start sysdiagnose.

- When you release the buttons, iOS sysdiagnose starts, and the iPad takes a screenshot. On iPhone, but not on iPad, you feel a short vibration when sysdiagnose starts.

- tvOS

- Press and holding PLAY/PAUSE and VOL- for 6 seconds, release the buttons and a dialog confirmation will appear on the TV screen.


Debugging & Streaming






Debugging & Streaming


[Back](#) Analytics & Improvements

Share iPhone & Watch Analytics

Analytics Data 

Help Apple improve its products and services by automatically sending daily diagnostic and usage data. Data may include location information. Analytics uses wireless data. [About Analytics & Privacy...](#)

2:20   

Q sys  Cancel

- co-sysdiag..._2023.01.02_17-47-48-0600... >
- co-sysdiagnose_202...01.02_18-12-19-0600.t... >
- sysdiagnose_...04.17_14-17-50-0500_iPh... >
- sysdiagnose_2023.04.17_14-19-06-0500_iPh... >
- sysdiagnose.diskwrites_resource-2023-01-0... >
- SystemMemoryReset-2022-12-07-011417.ips >
- SystemMemoryReset-2022-12-10-022824.ips >
- SystemMemoryReset-2022-12-13-022845.ips >
- SystemMemoryReset-2022-12-16-022907.ips >



"sys" sue system




q w e r t y u i o p


a s d f g h j k l



↑ z x c v b n m ↵





123 space search


2:20   


< sysdiagnose_2023.04.17_14-19-... 


 sysdiag...se_2023.04.17_14-19-06-0500... 
256.7 MB

AirDrop Messages Mail More

Copy 

New Quick Note 

Save to Files 

[Edit Actions...](#)

Filtering - Debugging

- Console.app
 - Process(s)
 - Time Dropdown
 - Look at Process(s) in question then peel back the filter and snap back in full logs
- `log` command line
 - Time range
 - Predicate in question

Filtering - Debugging

- `log` command line

- Time range

- `log show --last 1m`
- `log show --last 1h`
- `log show --last 1d`
- `log show --last boot`

- Show events from an start date

- `log show --start '2024-07-11 13:30:00'`

- Show events up to an end date

- `log show --end '2024-07-11 13:30:00'`

- Show range

- `log show --start '2024-07-11 13:30:00' --end '2024-07-11 14:30:00'`

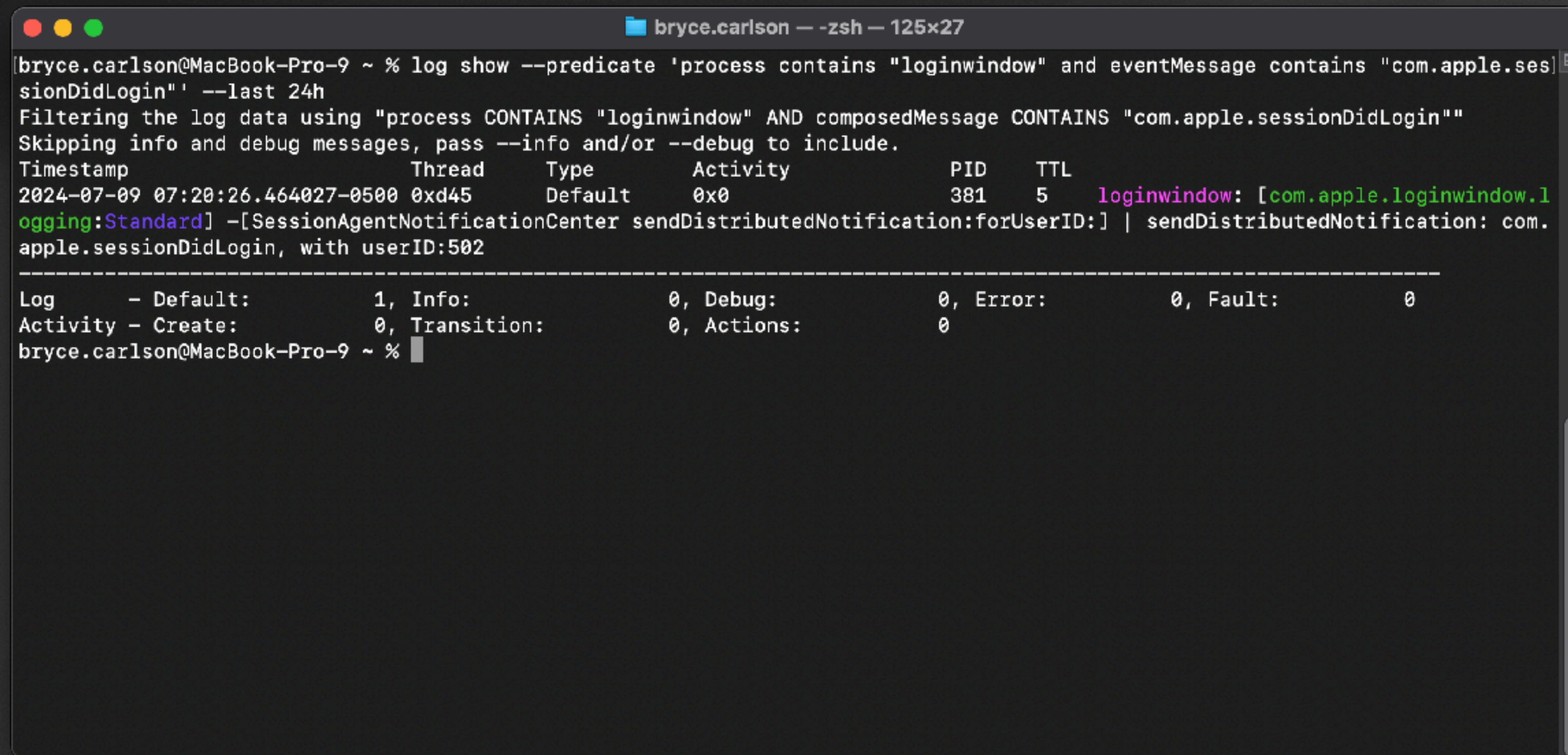


**SHOW
ME THE
MONEY!**

LOGS

Filtering - Debugging

- `log` command line
 - `log show --predicate 'process contains "loginwindow" and eventMessage contains "com.apple.sessionDidLogin"' --last 24h`



```
bryce.carlson@MacBook-Pro-9 ~ % log show --predicate 'process contains "loginwindow" and eventMessage contains "com.apple.sessionDidLogin"' --last 24h
Filtering the log data using "process CONTAINS "loginwindow" AND composedMessage CONTAINS "com.apple.sessionDidLogin"
Skipping info and debug messages, pass --info and/or --debug to include.
Timestamp          Thread            Type             Activity          PID    TTL
2024-07-09 07:20:26.464027-0500 0xd45           Default          0x0              381    5  loginwindow: [com.apple.loginwindow.1
ogging:Standard] -[SessionAgentNotificationCenter sendDistributedNotification:forUserID:] | sendDistributedNotification: com.
apple.sessionDidLogin, with userID:502
-----
Log      - Default:      1, Info:          0, Debug:         0, Error:         0, Fault:         0
Activity - Create:   0, Transition:   0, Actions:       0
bryce.carlson@MacBook-Pro-9 ~ %
```

Filtering - Debugging

- `log` command line
 - `log show --predicate 'subsystem == "com.apple.sharing" and category == "AirDrop"' --info`
 - `log show --predicate 'process == "sudo" and eventMessage contains "user NOT in sudoers"'`

Filtering - Debugging

- `log` command line
- `log show --predicate 'process == "sudo" and eventMessage CONTAINS "TTY"'`

```
bryce.carlson@MacBook-Pro-9 ~ % log show --predicate 'process == "sudo" and eventMessage CONTAINS "TTY"'
```

Filtering the log data using "process == "sudo" AND composedMessage CONTAINS "TTY"

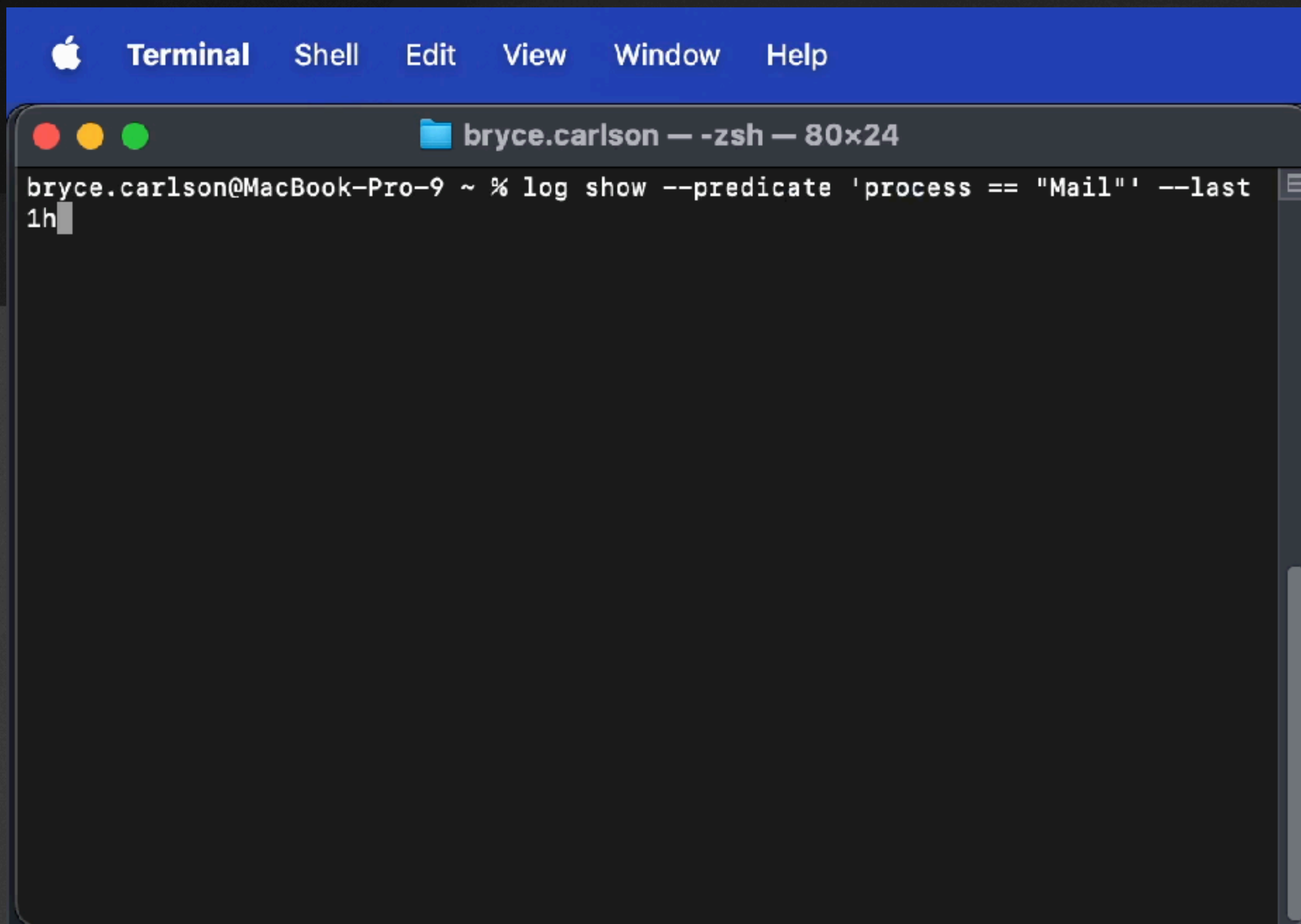
Skipping info and debug messages, pass --info and/or --debug to include.

Timestamp	Thread	Type	Activity	PID	TTL
2024-07-09 10:44:41.138813-0400	0x94e7a	Default	0x0	53111	0
2024-07-09 10:45:14.085025-0400	0x94fa8	Default	0x0	53126	0
2024-07-09 10:45:26.259407-0400	0x95053	Default	0x0	53156	0
2024-07-09 11:16:30.012364-0400	0xb75f1	Default	0x0	89116	0
2024-07-09 11:16:43.515795-0400	0xb7d6f	Default	0x0	89819	0
2024-07-09 11:29:56.459524-0400	0xd1e88	Default	0x0	18584	0
2024-07-09 11:30:53.984119-0400	0xd2356	Default	0x0	18686	0
2024-07-09 11:31:03.212041-0400	0xd25d9	Default	0x0	18688	0
2024-07-09 11:33:54.580698-0400	0xd420e	Default	0x0	20541	0
2024-07-09 11:34:11.025032-0400	0xd4789	Default	0x0	21048	0
2024-07-09 11:34:23.750734-0400	0xd4808	Default	0x0	21051	0

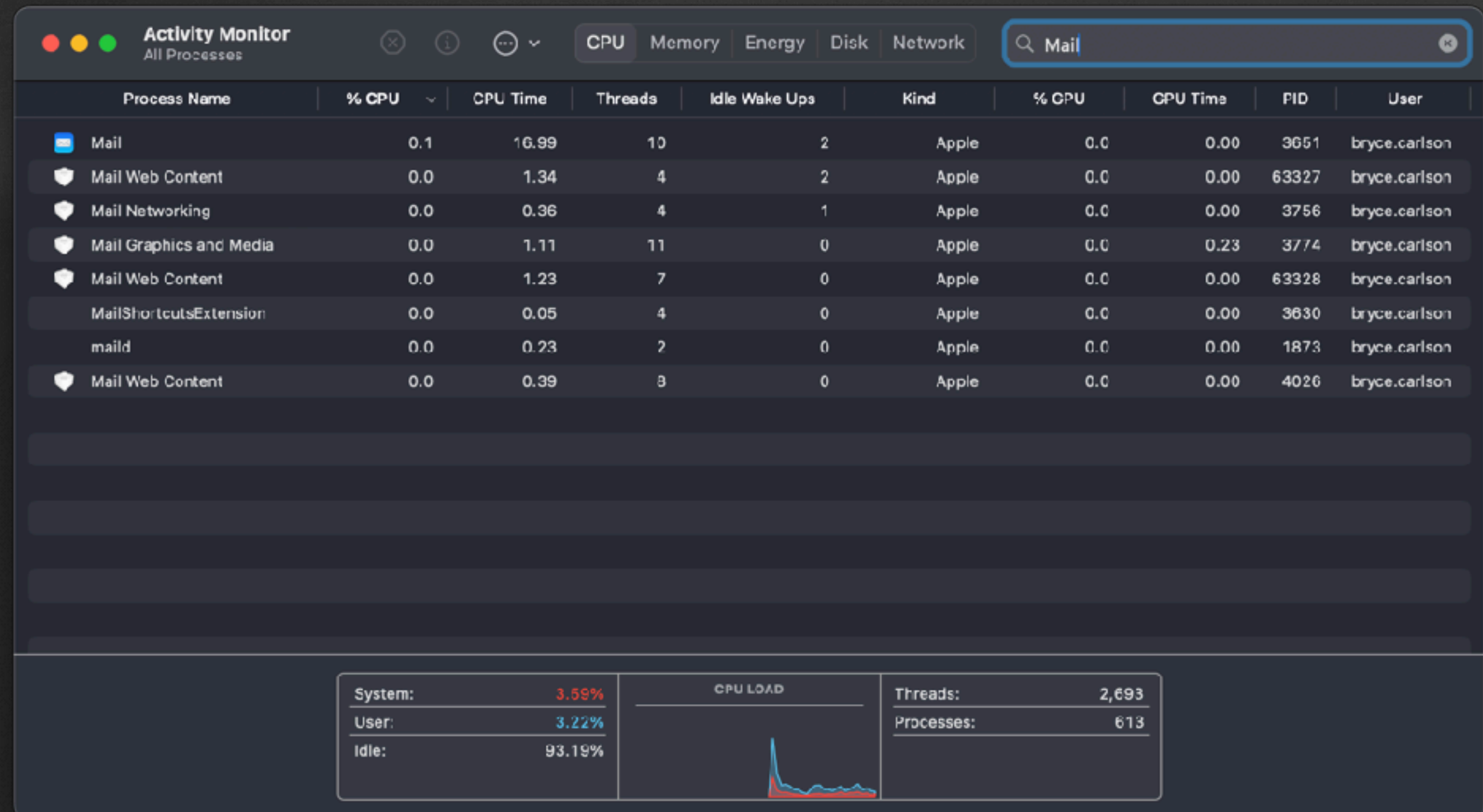
```
-----
Log - Default: 11, Info: 0, Debug: 0, Error: 0, Fault: 0
Activity - Create: 0, Transition: 0, Actions: 0
bryce.carlson@MacBook-Pro-9 ~ %
```

Filtering - Debugging

- `log` command line
 - `log show --predicate 'process == "Mail"' --last 24h`



```
Terminal Shell Edit View Window Help
bryce.carlson -- zsh -- 80x24
bryce.carlson@MacBook-Pro-9 ~ % log show --predicate 'process == "Mail"' --last 1h
```



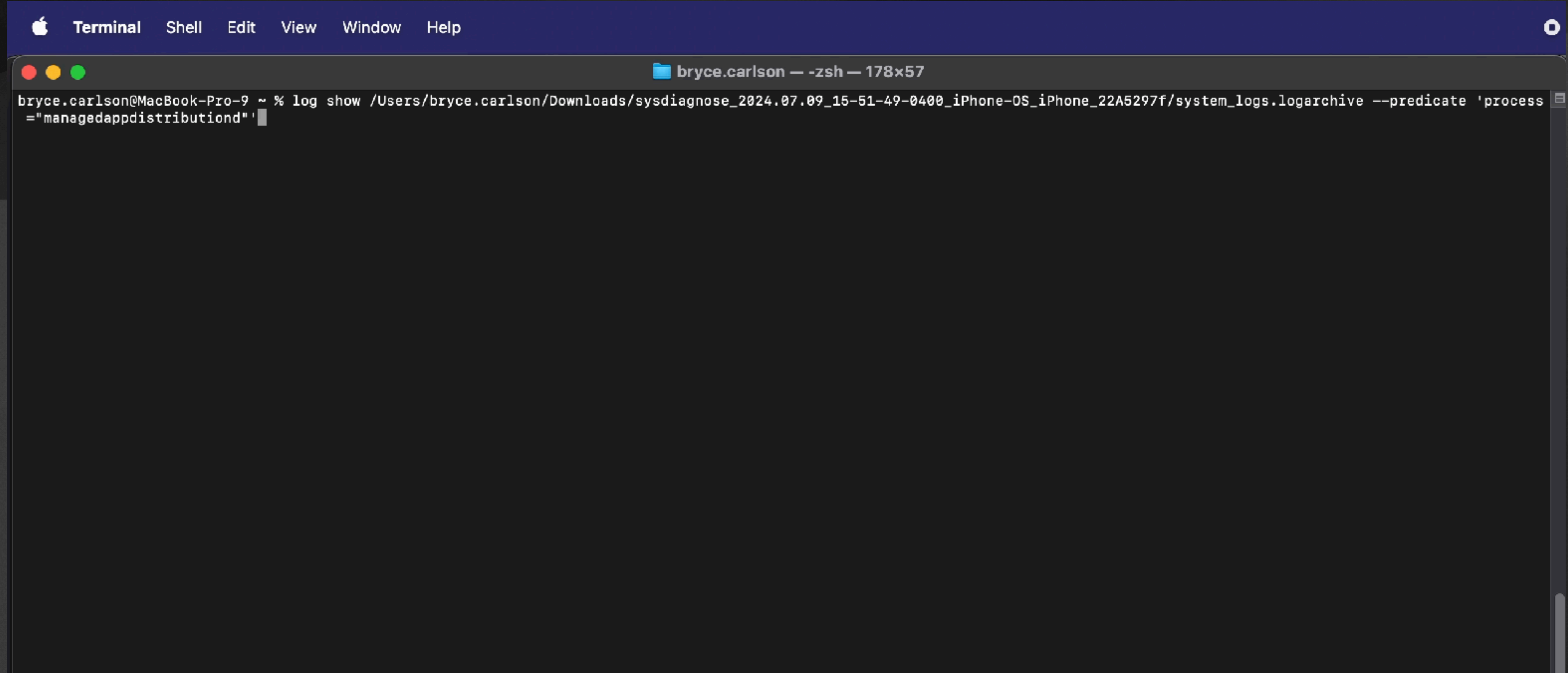
Activity Monitor All Processes CPU Memory Energy Disk Network Mail

Process Name	% CPU	CPU Time	Threads	Idle Wake Ups	Kind	% CPU	CPU Time	PID	User
Mail	0.1	16.99	10	2	Apple	0.0	0.00	3651	bryce.carlson
Mail Web Content	0.0	1.34	4	2	Apple	0.0	0.00	63327	bryce.carlson
Mail Networking	0.0	0.36	4	1	Apple	0.0	0.00	3756	bryce.carlson
Mail Graphics and Media	0.0	1.11	11	0	Apple	0.0	0.23	3774	bryce.carlson
Mail Web Content	0.0	1.23	7	0	Apple	0.0	0.00	63328	bryce.carlson
MailShortcutsExtension	0.0	0.05	4	0	Apple	0.0	0.00	3630	bryce.carlson
maild	0.0	0.23	2	0	Apple	0.0	0.00	1873	bryce.carlson
Mail Web Content	0.0	0.39	3	0	Apple	0.0	0.00	4026	bryce.carlson

System: 3.58% CPU LOAD Threads: 2,693
User: 3.22% Processes: 613
Idle: 93.19%

Filtering - Debugging

- `log` command line
 - `log show /Users/bryce.carlson/Downloads/sysdiagnose_2024.07.09_15-51-49-0400_iPhone-OS_iPhone_22A5297f/system_logs.logarchive --predicate 'process = "managedappdistributiond"'`



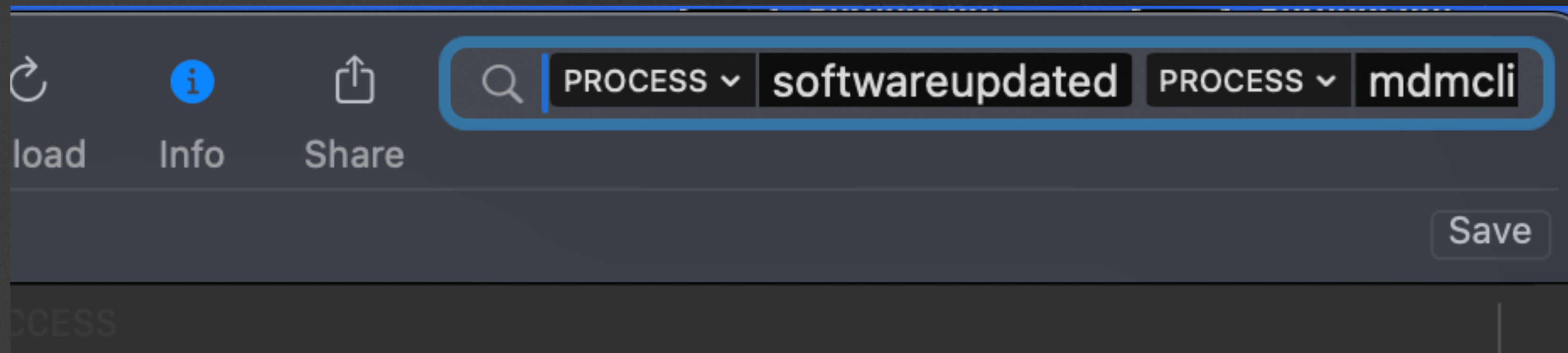
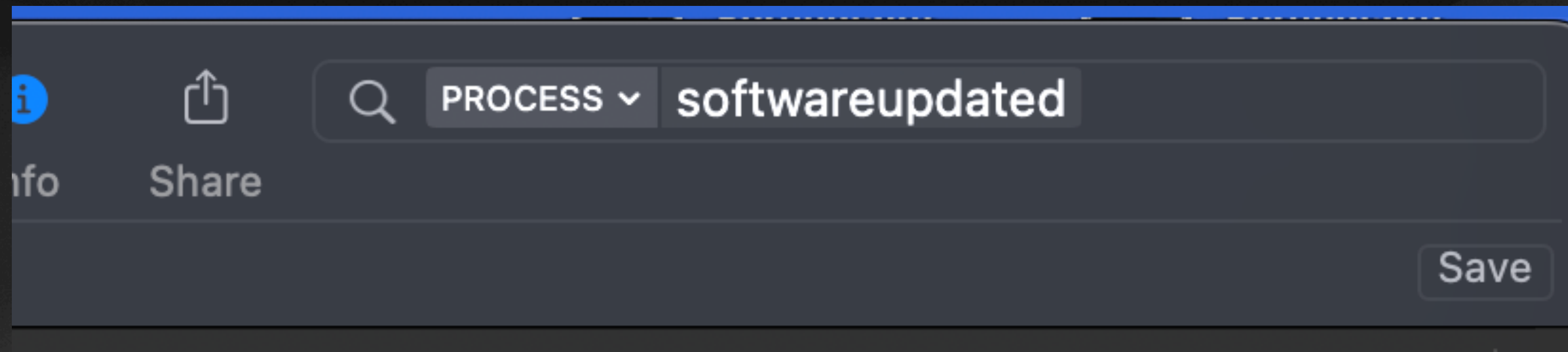
A screenshot of a macOS Terminal window. The title bar shows 'Terminal' with menu options 'Shell', 'Edit', 'View', 'Window', and 'Help'. The window title is 'bryce.carlson - zsh - 178x57'. The terminal content shows the command: `bryce.carlson@MacBook-Pro-9 ~ % log show /Users/bryce.carlson/Downloads/sysdiagnose_2024.07.09_15-51-49-0400_iPhone-OS_iPhone_22A5297f/system_logs.logarchive --predicate 'process = "managedappdistributiond"'` followed by a cursor.

```
bryce.carlson@MacBook-Pro-9 ~ % log show /Users/bryce.carlson/Downloads/sysdiagnose_2024.07.09_15-51-49-0400_iPhone-OS_iPhone_22A5297f/system_logs.logarchive --predicate 'process="managedappdistributiond"'
```

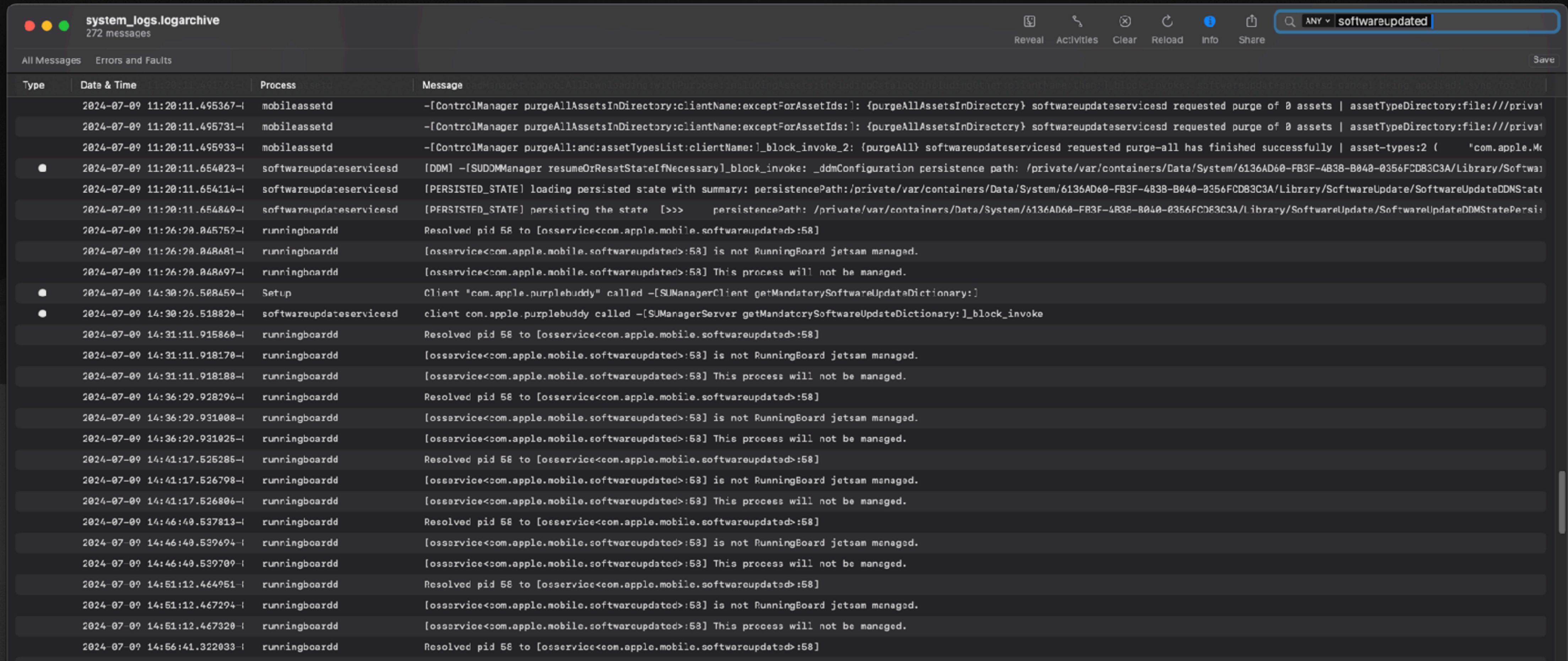
Filtering - Streaming

- Console.app
 - Process(s)
- `log` command line
- Predicate in question

Filtering - Streaming



Filtering - Streaming



The screenshot shows a macOS system log viewer window titled 'system_logs.logarchive' with 272 messages. The search filter is set to 'softwareupdated'. The log entries are as follows:

Type	Date & Time	Process	Message
	2024-07-09 11:20:11.495367-I	mobileassetd	-[ControlManager purgeAllAssetsInDirectory:clientName:exceptForAssetIds:]: {purgeAllAssetsInDirectory} softwareupdateservicesd requested purge of 0 assets assetTypeDirectory:file:///privat
	2024-07-09 11:20:11.495731-I	mobileassetd	-[ControlManager purgeAllAssetsInDirectory:clientName:exceptForAssetIds:]: {purgeAllAssetsInDirectory} softwareupdateservicesd requested purge of 0 assets assetTypeDirectory:file:///privat
	2024-07-09 11:20:11.495933-I	mobileassetd	-[ControlManager purgeAll:and:assetTypesList:clientName:]_block_invoke_2: {purgeAll} softwareupdateservicesd requested purge-all has finished successfully asset-types:2 ("com.apple.Mc
	2024-07-09 11:20:11.654023-I	softwareupdateservicesd	[DDM] -[SUDDMManager resumeOrResetStateIfNecessary]_block_invoke: _ddmConfiguration persistence path: /private/var/containers/Data/System/6136AD60-FB3F-4B38-B040-0356FCD83C3A/Library/Softwa
	2024-07-09 11:20:11.654114-I	softwareupdateservicesd	[PERSISTED_STATE] loading persisted state with summary: persistencePath:/private/var/containers/Data/System/6136AD60-FB3F-4B38-B040-0356FCD83C3A/Library/SoftwareUpdate/SoftwareUpdateDDMState
	2024-07-09 11:20:11.654849-I	softwareupdateservicesd	[PERSISTED_STATE] persisting the state [>>> persistencePath: /private/var/containers/Data/System/6136AD60-FB3F-4B38-B040-0356FCD83C3A/Library/SoftwareUpdate/SoftwareUpdateDDMStatePersi
	2024-07-09 11:26:20.045752-I	runningboardd	Resolved pid 58 to [oservice<com.apple.mobile.softwareupdated>:58]
	2024-07-09 11:26:20.048681-I	runningboardd	[oservice<com.apple.mobile.softwareupdated>:58] is not RunningBoard jetsam managed.
	2024-07-09 11:26:20.048697-I	runningboardd	[oservice<com.apple.mobile.softwareupdated>:58] This process will not be managed.
	2024-07-09 14:30:26.508459-I	Setup	Client "com.apple.purplebuddy" called -[SUManagerClient getMandatorySoftwareUpdateDictionary:]
	2024-07-09 14:30:26.518820-I	softwareupdateservicesd	client com.apple.purplebuddy called -[SUManagerServer getMandatorySoftwareUpdateDictionary:]_block_invoke
	2024-07-09 14:31:11.915860-I	runningboardd	Resolved pid 58 to [oservice<com.apple.mobile.softwareupdated>:58]
	2024-07-09 14:31:11.918170-I	runningboardd	[oservice<com.apple.mobile.softwareupdated>:58] is not RunningBoard jetsam managed.
	2024-07-09 14:31:11.918188-I	runningboardd	[oservice<com.apple.mobile.softwareupdated>:58] This process will not be managed.
	2024-07-09 14:36:29.928296-I	runningboardd	Resolved pid 58 to [oservice<com.apple.mobile.softwareupdated>:58]
	2024-07-09 14:36:29.931008-I	runningboardd	[oservice<com.apple.mobile.softwareupdated>:58] is not RunningBoard jetsam managed.
	2024-07-09 14:36:29.931025-I	runningboardd	[oservice<com.apple.mobile.softwareupdated>:58] This process will not be managed.
	2024-07-09 14:41:17.525285-I	runningboardd	Resolved pid 58 to [oservice<com.apple.mobile.softwareupdated>:58]
	2024-07-09 14:41:17.526798-I	runningboardd	[oservice<com.apple.mobile.softwareupdated>:58] is not RunningBoard jetsam managed.
	2024-07-09 14:41:17.526806-I	runningboardd	[oservice<com.apple.mobile.softwareupdated>:58] This process will not be managed.
	2024-07-09 14:46:40.537813-I	runningboardd	Resolved pid 58 to [oservice<com.apple.mobile.softwareupdated>:58]
	2024-07-09 14:46:40.539694-I	runningboardd	[oservice<com.apple.mobile.softwareupdated>:58] is not RunningBoard jetsam managed.
	2024-07-09 14:46:40.539709-I	runningboardd	[oservice<com.apple.mobile.softwareupdated>:58] This process will not be managed.
	2024-07-09 14:51:12.464951-I	runningboardd	Resolved pid 58 to [oservice<com.apple.mobile.softwareupdated>:58]
	2024-07-09 14:51:12.467294-I	runningboardd	[oservice<com.apple.mobile.softwareupdated>:58] is not RunningBoard jetsam managed.
	2024-07-09 14:51:12.467320-I	runningboardd	[oservice<com.apple.mobile.softwareupdated>:58] This process will not be managed.
	2024-07-09 14:56:41.322033-I	runningboardd	Resolved pid 58 to [oservice<com.apple.mobile.softwareupdated>:58]

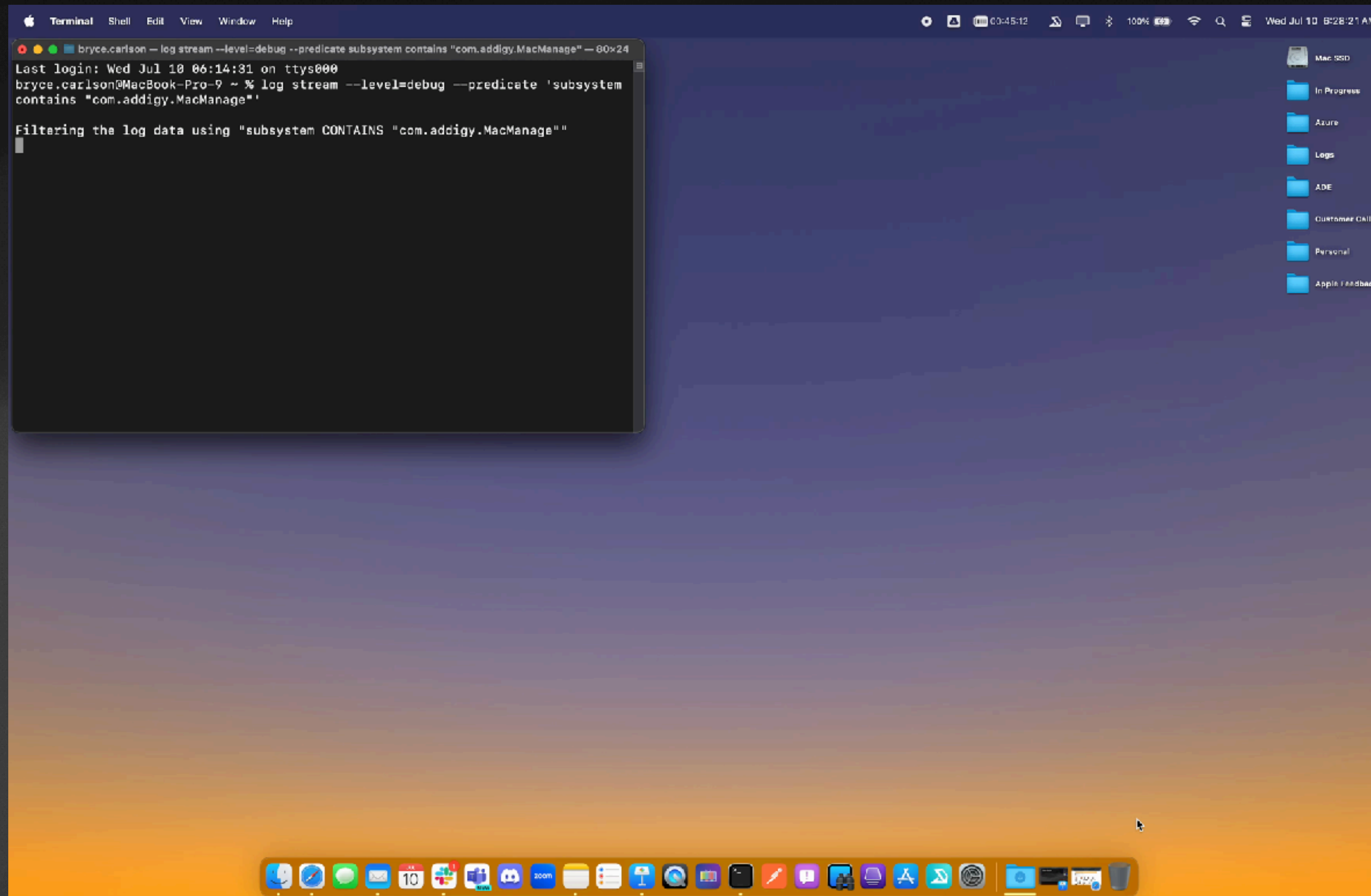
Showing: All Messages

Subsystem: -- Category: -- Details

Filtering - Streaming

- `log` command line
 - `log stream --level=debug --predicate 'subsystem contains "com.addigy.MacManage"'`

Filtering - Streaming



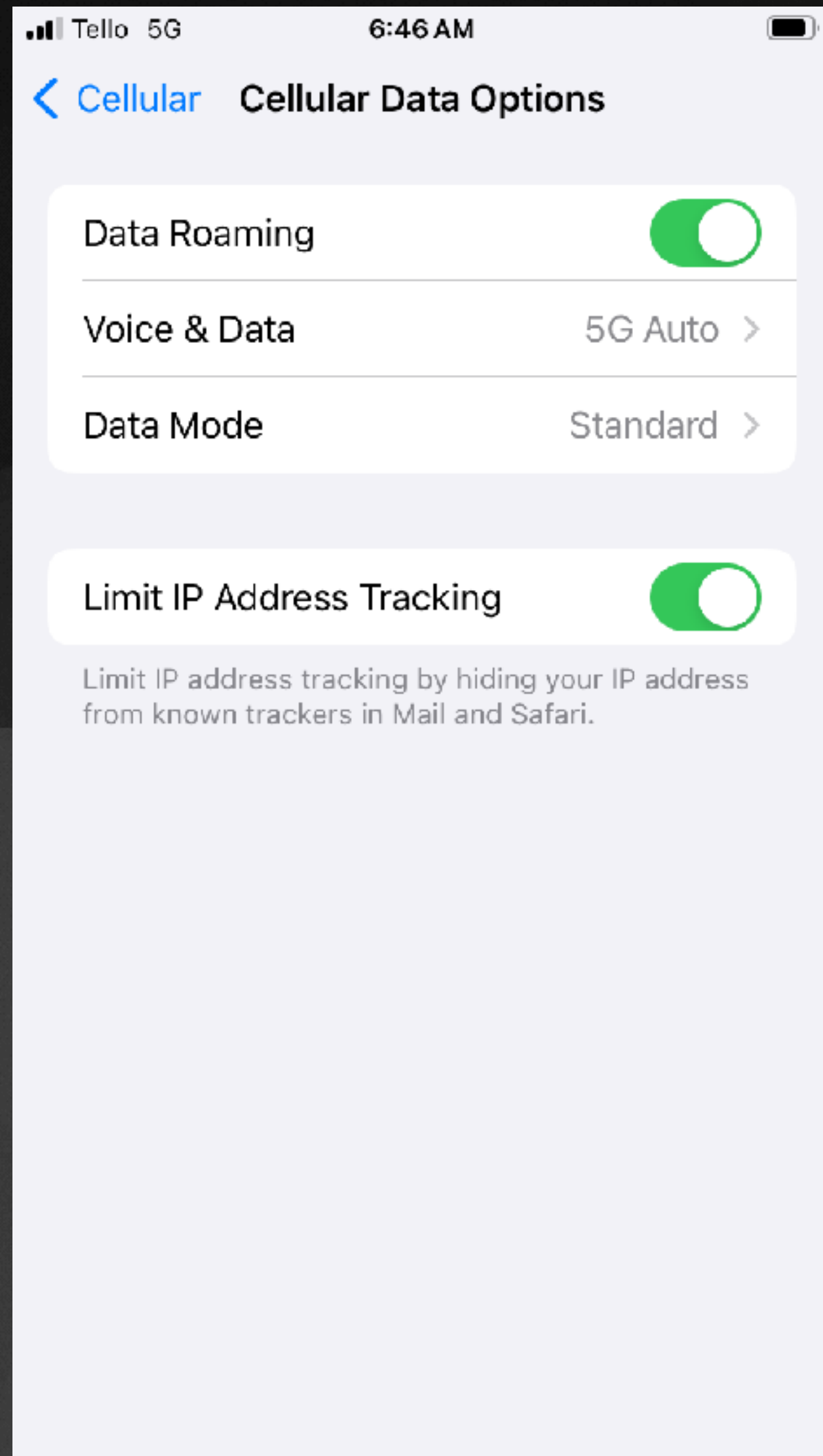
Filtering

What	macOS	iOS/iPadOS/tvOS
Apple Push Notification Service (APNs)	process: apsd	process: apsd
Content caching	subsystem: com.apple.AssetCache	N/A
OS Installer and Software Update	process: softwareupdated	process: softwareupdated
MDM/ADE	process: mdmclient com.apple.ManagedClient	process: mdmd process: profiled
Network	subsystem: com.apple.network	process: wifid process: AssetCacheLocatorService subsystem: com.apple.network
User login	process: loginwindow com.apple.login	N/A
VPP Apps	process: mdmclient com.apple.ManagedClient process: appstored	process: managedappdistributiond process: appstored

Real world examples

- iOS Cellular Investigation
- DDM Managed App Install

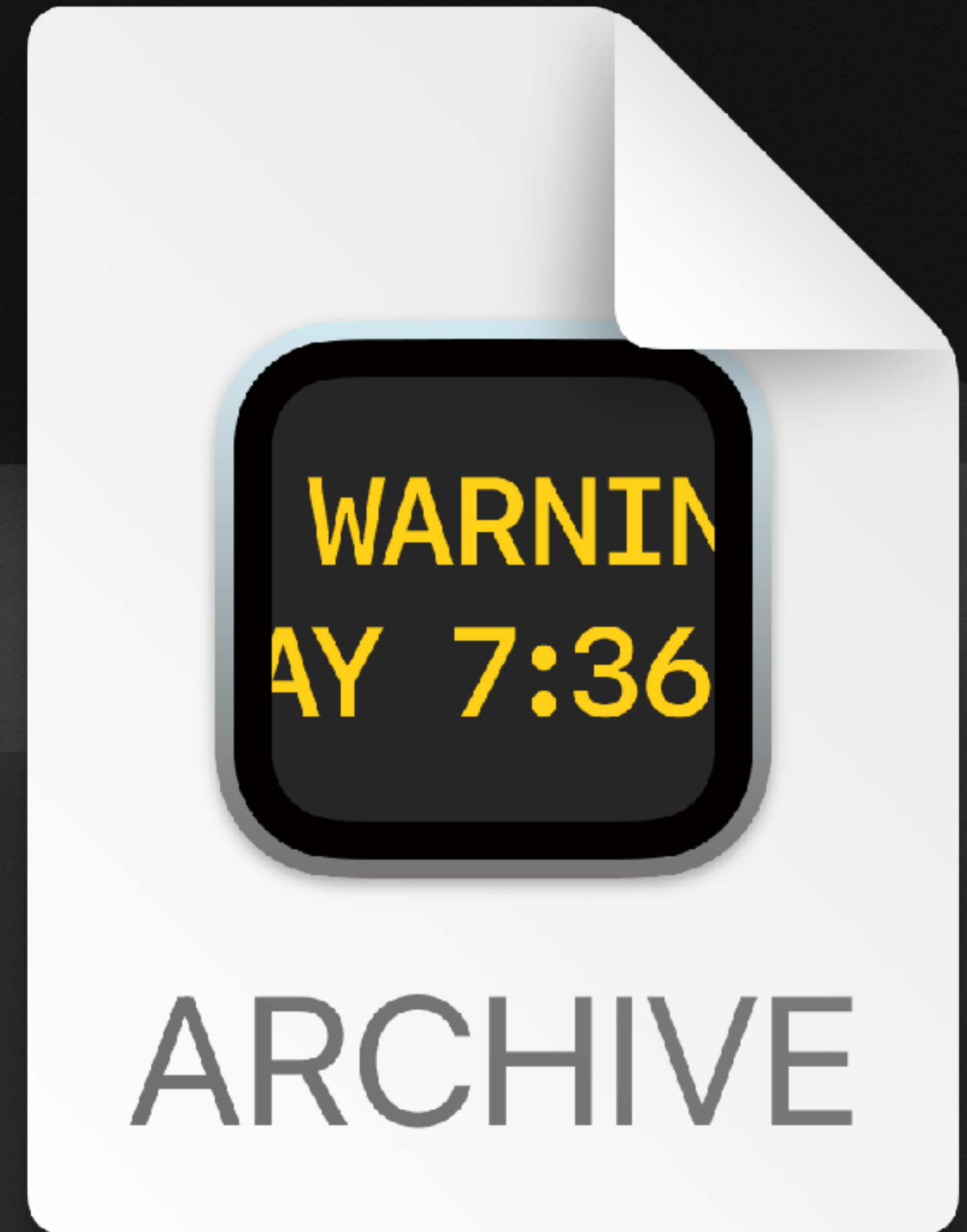
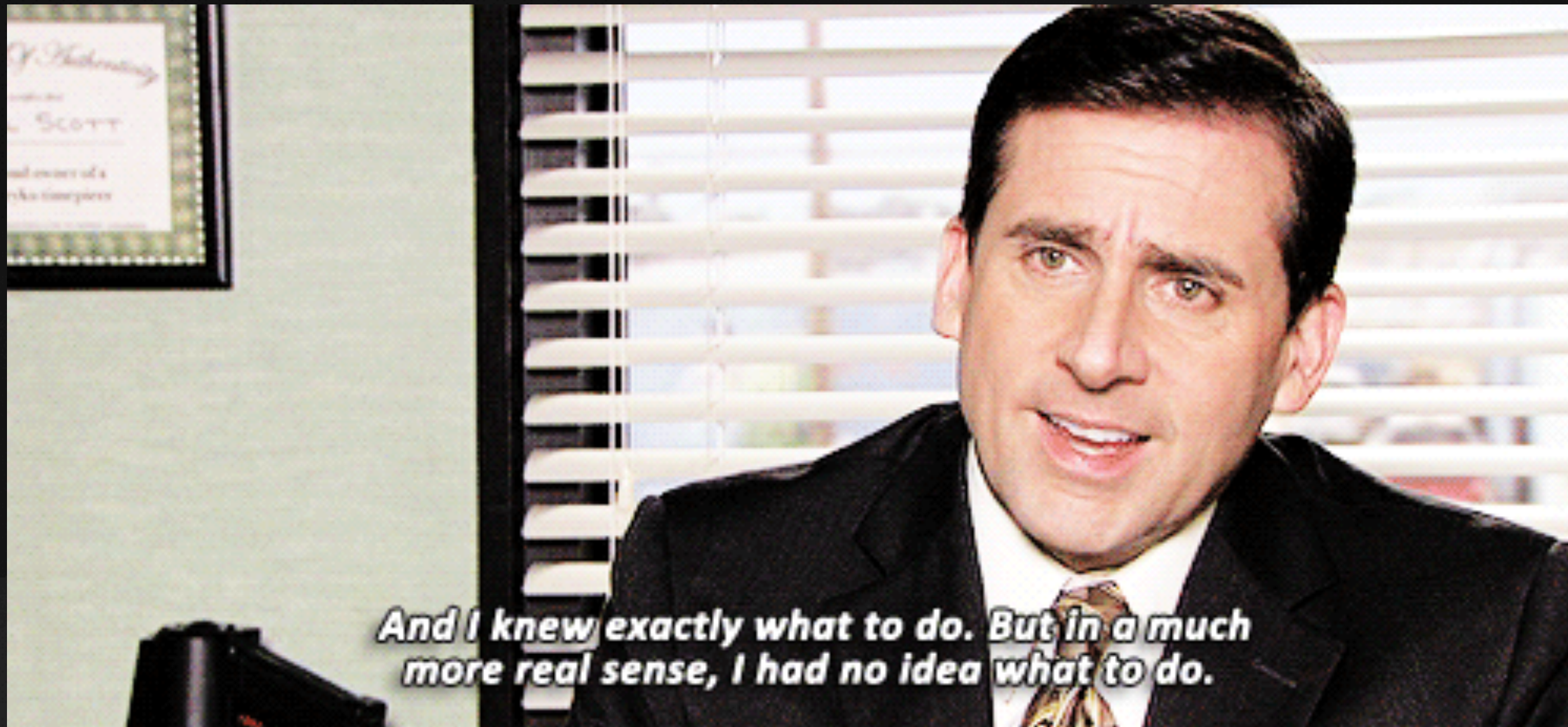
iOS Cellular - *example*



iOS Cellular - *example*



iOS Cellular - *example*



iOS Cellular - example

system_logs.logarchive
1,390 messages

PROCESS softwareupdated

All Messages Errors and Faults Save

Type	Date & Time	Process	Message
●	2024-03-20 06:21:43.998889-I	softwareupdated	16d3ef000 : free space required is 5303303372 (5057 MB)
●	2024-03-20 06:21:43.998960-I	softwareupdated	16d3ef000 : get_nonsnapshot_apply_and_reserve_sizes(): 300 MB UPDATE_PARTITION_SIZE * 2 25 MB UPDATE_APFS_RESERVE 640 MB systemPartitionPadding = get_system_partition_padding(
●	2024-03-20 06:21:43.998974-I	softwareupdated	16d3ef000 : Also returning snapshot apply size
●	2024-03-20 06:21:43.998989-I	softwareupdated	16d3ef000 : Sealing requires 213 MiB overhead
●	2024-03-20 06:21:43.999003-I	softwareupdated	16d3ef000 : Use of APFSIOC_GET_PREALLOCATE_MIN_SPACE is not expressly disallowed by asset attributes
●	2024-03-20 06:21:43.999016-I	softwareupdated	16d3ef000 : 213 MB reserve file will be needed (snapshot)
●	2024-03-20 06:21:43.999061-I	softwareupdated	16d3ef000 : open("/private/var/MobileSoftwareUpdate/.reserved") failed: (Permission denied)
●	2024-03-20 06:21:43.999074-I	softwareupdated	16d3ef000 : snapshot application size : 564133888 (538 MB)
●	2024-03-20 06:21:43.999105-I	softwareupdated	16d3ef000 : get_snapshot_apply_and_reserve_sizes(): 325 MB 2*UPDATE_PARTITION_SIZE + UPDATE_APFS_RESERVE + 213 MB update_attributes["SystemVolumeSealingOverhead"] ----- 538 MB
●	2024-03-20 06:21:50.584436-I	softwareupdated	16d353000 : Using OS prepare calculation because MSUBrain is not loaded
●	2024-03-20 06:21:50.584738-I	softwareupdated	16d353000 : Returning non-snapshot preparation size
●	2024-03-20 06:21:50.585045-I	softwareupdated	16d353000 : nonsnapshot preparation size : 197585248 (188 MB)
●	2024-03-20 06:21:50.585093-I	softwareupdated	16d353000 : get_nonsnapshot_preparation_size(): + 188 MB update_attributes["InstallationSize"] (string) ----- 188 MB
●	2024-03-20 06:21:50.585108-I	softwareupdated	16d353000 : Also returning snapshot prepare size
●	2024-03-20 06:21:50.585244-I	softwareupdated	16d353000 : cryptex size requirement: 4245474508 (4048 MB)
●	2024-03-20 06:21:50.585278-I	softwareupdated	16d353000 : cryptex_size_requirement_for_update_type(msu_update_type_snapshot): 4036 MB update_attributes["CryptexSizeInfo"][0(cryptex-system-arm64e)]["CryptexSize"] * 1.2 + 12 MB updat
●	2024-03-20 06:21:50.585294-I	softwareupdated	16d353000 : snapshot preparation size (mastered) : 6851147523 (6533 MB)
●	2024-03-20 06:21:50.585321-I	softwareupdated	16d353000 : get_snapshot_preparation_size(): 2484 MB update_attributes["InstallationSize-Snapshot"] (string) + 4048 MB cryptex_size_requirement_for_update_type(msu_update_type_snapshot) -
●	2024-03-20 06:21:50.585772-I	softwareupdated	16d353000 : Using OS apply calculation because MSLBrain is not loaded
●	2024-03-20 06:21:50.585822-I	softwareupdated	16d353000 : Returning non-snapshot apply size
●	2024-03-20 06:21:50.586569-I	softwareupdated	16d353000 : cryptex size requirement: 4349283532 (4147 MB)
●	2024-03-20 06:21:50.586620-I	softwareupdated	16d353000 : cryptex_size_requirement_for_update_type(msu_update_type_legacy): 4036 MB update_attributes["CryptexSizeInfo"][0(cryptex-system-arm64e)]["CryptexSize"] + 1.2 66 MB updat
●	2024-03-20 06:21:50.586663-I	softwareupdated	16d353000 : Sealing requires 213 MiB overhead
●	2024-03-20 06:21:50.586682-I	softwareupdated	16d353000 : Minimum system partition is 6009389056 (5731 MB)
●	2024-03-20 06:21:50.586693-I	softwareupdated	16d353000 : System partition padding is 671088640 (640 MB)
●	2024-03-20 06:21:50.586704-I	softwareupdated	16d353000 : System partition firmware is 126877696 (121 MB)
●	2024-03-20 06:21:50.589353-I	softwareupdated	16d353000 : APFS system volume is using 590213248 (5703 MB)

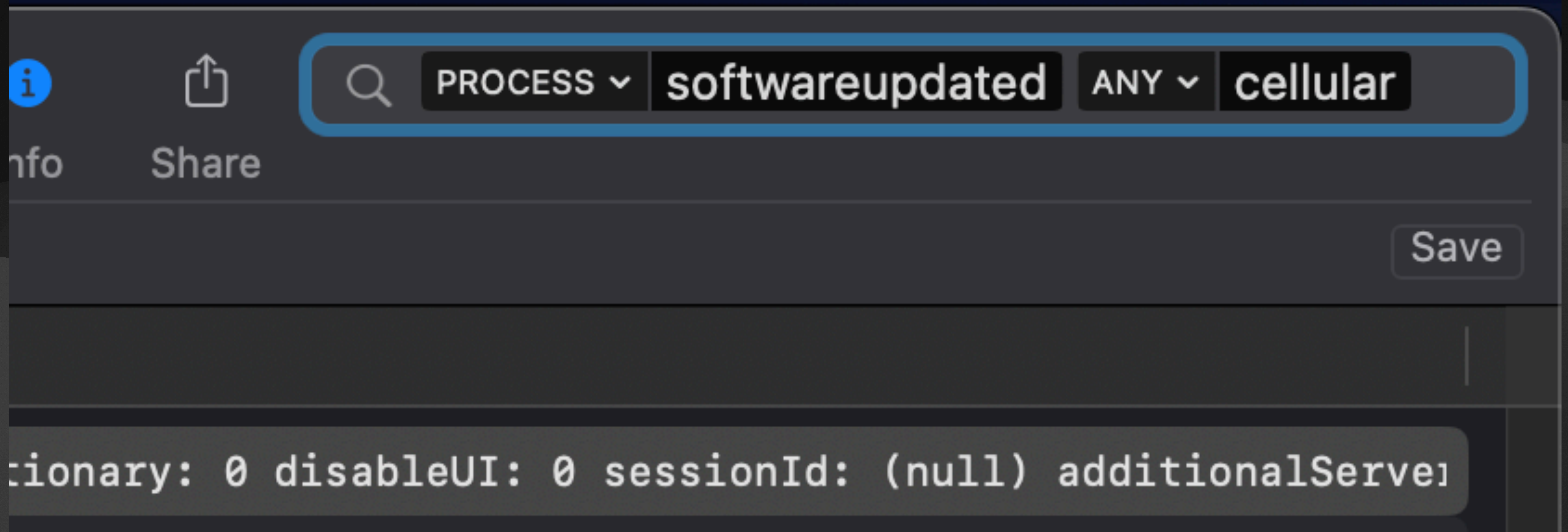
Showing: All Messages

--
Subsystem: -- Category: -- Details

iOS Cellular - *example*



iOS Cellular - *example*



iOS Cellular - *example*

```
info      2024-03-20 06:23:50.959250 -0500
softwareupdated 16d363000 : Caller has passed in
downloadOptions: MADownloadOptions allowsCellular: 1
resourceTimeout: -1 canUseCacheServer: 0 discretionary: 0
disableUI: 0 sessionId: (null) additionalServerParams: { }
allowsExpensiveAccess: 1 requiresPowerPluggedIn: 0
prefersInfraWiFi: 1 liveServerOnly: 0
DownloadAuthorizationHeader: not present analyticsData: not
present allowDaemonConnectionRetries: 1 +
MAMsuDownloadOptions reqProdVersion: 17.3.1 delayPeriod: 0
managedDevice: 1 allowSameVersion: 0 prereqBuild: (null)
prereqVersion: (null) prereqReleaseType: (default)
liveAssetAudienceUUID: (null) purpose: (null)
```

iOS Cellular - example

system_logs.logarchive
2,118,865 messages

Reveal Activities Clear Reload Info Share

All Messages Errors and Faults

Type	Date & Time	Process	Message
	2024-03-20 06:23:47.777877-04	trustd	[0x02481a1a0] activating connection: mach=FALSE listener=FALSE peer=TRUE name=com.apple.trustd.peer.0x02481a1a0
	2024-03-20 06:23:49.999115-04	mobileassetd	cleaning up unpooled xpc conn to trustd 0x904a99860
	2024-03-20 06:23:49.999120-04	mobileassetd	[0x904a99860] invalidated on xpc_connection_cancel()
	2024-03-20 06:23:49.999205-04	mobileassetd	got event: Connection invalid
	2024-03-20 06:23:49.999219-04	trustd	[0xd2481a1a0] invalidated after getting a no-senders notification - client is gone
	2024-03-20 06:23:50.999619-04	mobileassetd	MessageSecurity and Security frameworks have different signed attributes results, returning Security result. sec: { kSecCMSEExpirationDate = "2009-10-08 18:30:00 +0000"; kSecCMSAllCe
	2024-03-20 06:23:50.999641-04	mobileassetd	+[[PallasResponseVerifier verifyReceipt:withSignature:]: MobileAsset verifyReceipt error: 101
	2024-03-20 06:23:50.999665-04	mobileassetd	-[DownloadManager applyTransformsAndCheckReceipts:transformations:assetType:assets:receiptResults:]: Asset passed receipt validation
	2024-03-20 06:23:50.999706-04	mobileassetd	-[DownloadManager applyTransformsAndCheckReceipts:transformations:assetType:assets:receiptResults:]: MobileAsset receipt results: Total: 2 With Receipt: 2 Valid: 2 Valid But Expired: 2
	2024-03-20 06:23:50.000003-04	mobileassetd	-[DownloadManager massageXmlAndPersist:catalogInfo:descriptor:assets:transformations:to:postedDate:receiptResults:assetSetId:pallasUrl:considerCaching:]: assetType: com.apple.MobileAsset.Sof
	2024-03-20 06:23:50.000701-04	mobileassetd	-[DownloadManager massageXmlAndPersist:catalogInfo:descriptor:assets:transformations:to:postedDate:receiptResults:assetSetId:pallasUrl:considerCaching:]: assetType: com.apple.MobileAsset.Sof
	2024-03-20 06:23:50.000925-04	mobileassetd	_MobileAssetCreateDirectoryWorldWriteable: Directory at /private/var/MobileAsset/AssetsV2/downloadDir already exists, updating attributes
	2024-03-20 06:23:50.001322-04	mobileassetd	_MobileAssetCreateDirectoryWorldWriteable: Directory at /private/var/MobileSoftwareUpdate/MobileAsset/AssetsV2/downloadDir already exists, updating attributes
	2024-03-20 06:23:50.001950-04	mobileassetd	-[DownloadManager registerCatalogDownloadJob:withPurpose:usingDownloadOptions:usingXPCConnection:withXPCMessage:performingAutoAssetJob:asClientName:]_block_invoke_2: Pallas call succeeded or
	2024-03-20 06:23:50.001955-04	mobileassetd	-[DownloadManager pallasRequestV2:normlizedIvpe:withPurpose:options:using:with:autoAssetJob:clientName:then:]_block_invoke: Check solum for com.apple.MobileAsset.SoftwareUpdate status code

Showing: All Messages

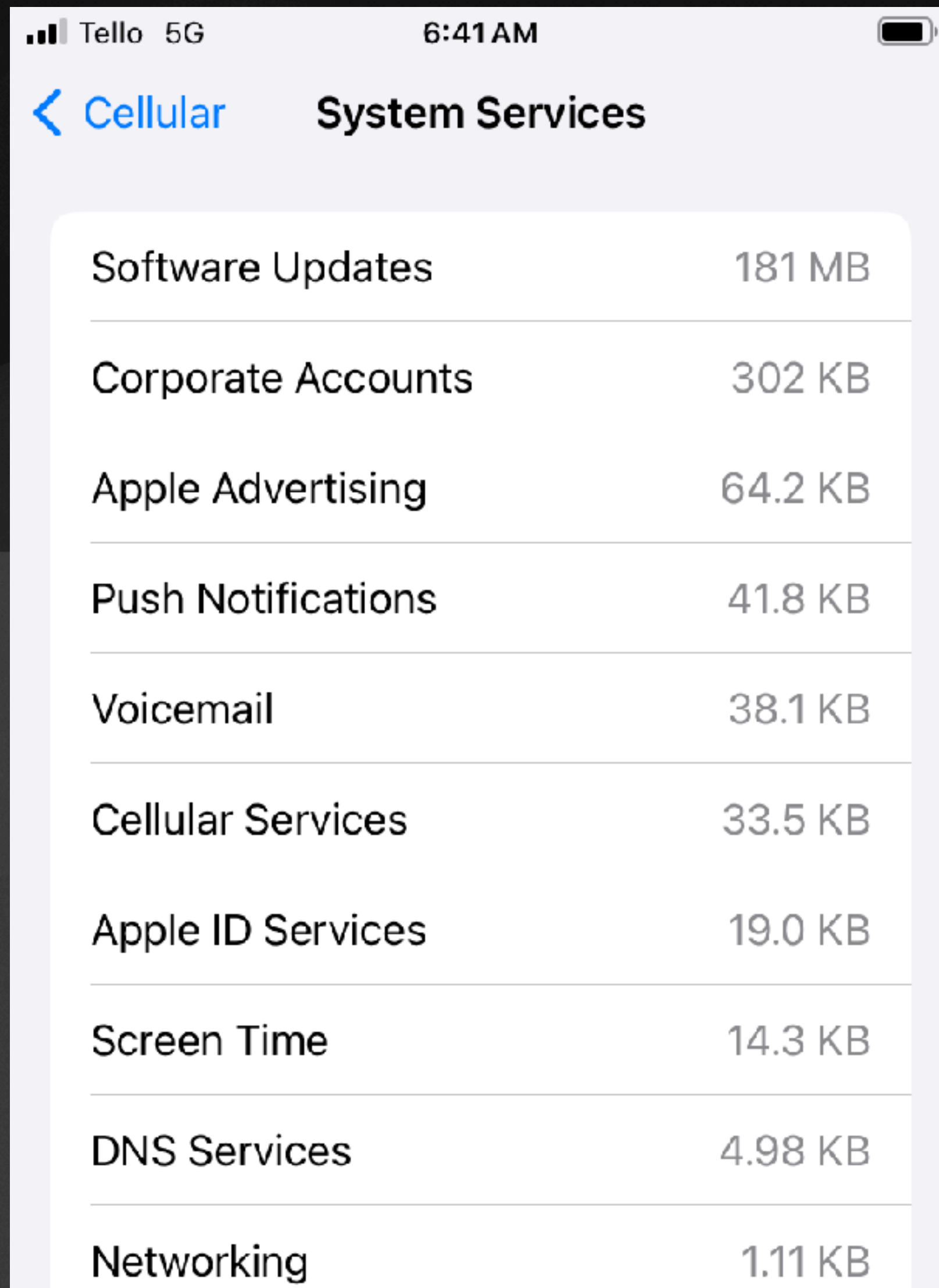
mobileassetd (libmobileassetd.dylib)

Subsystem: com.apple.mobileassetd Category: Notice [Details](#)

2024-03-20 06:23:50.000003-0500

```
-[DownloadManager massageXmlAndPersist:catalogInfo:descriptor:assets:transformations:to:postedDate:receiptResults:assetSetId:pallasUrl:considerCaching:]: assetType: com.apple.MobileAsset.SoftwareUpdate asset: {
  ActualMinimumSystemPartition = 6021;
  AssetType = "com.apple.MobileAsset.SoftwareUpdate";
  Build = 21D61;
  CryptexSizeInfo = (
    {
      CryptexSize = 3244;
      CryptexTag = "cryptex-system-arm64e";
    },
    {
      CryptexSize = 10;
      CryptexTag = "cryptex-app";
    }
  );
  EAPFSEnabled = 1;
  GranularRampingLogic = (
    {
      BgPct = 100;
      FgPct = 0;
      Hour = 0;
    },
    {
      BgPct = 80;
      FgPct = 0;
    }
  );
}
```

iOS Cellular - *example*



A screenshot of the 'Cellular' settings page in iOS, specifically the 'System Services' section. The page shows a list of services and their corresponding cellular data usage. The status bar at the top indicates 'Tello 5G' and '6:41 AM'. The back arrow is labeled 'Cellular' and the title is 'System Services'.

Service	Usage
Software Updates	181 MB
Corporate Accounts	302 KB
Apple Advertising	64.2 KB
Push Notifications	41.8 KB
Voicemail	38.1 KB
Cellular Services	33.5 KB
Apple ID Services	19.0 KB
Screen Time	14.3 KB
DNS Services	4.98 KB
Networking	1.11 KB

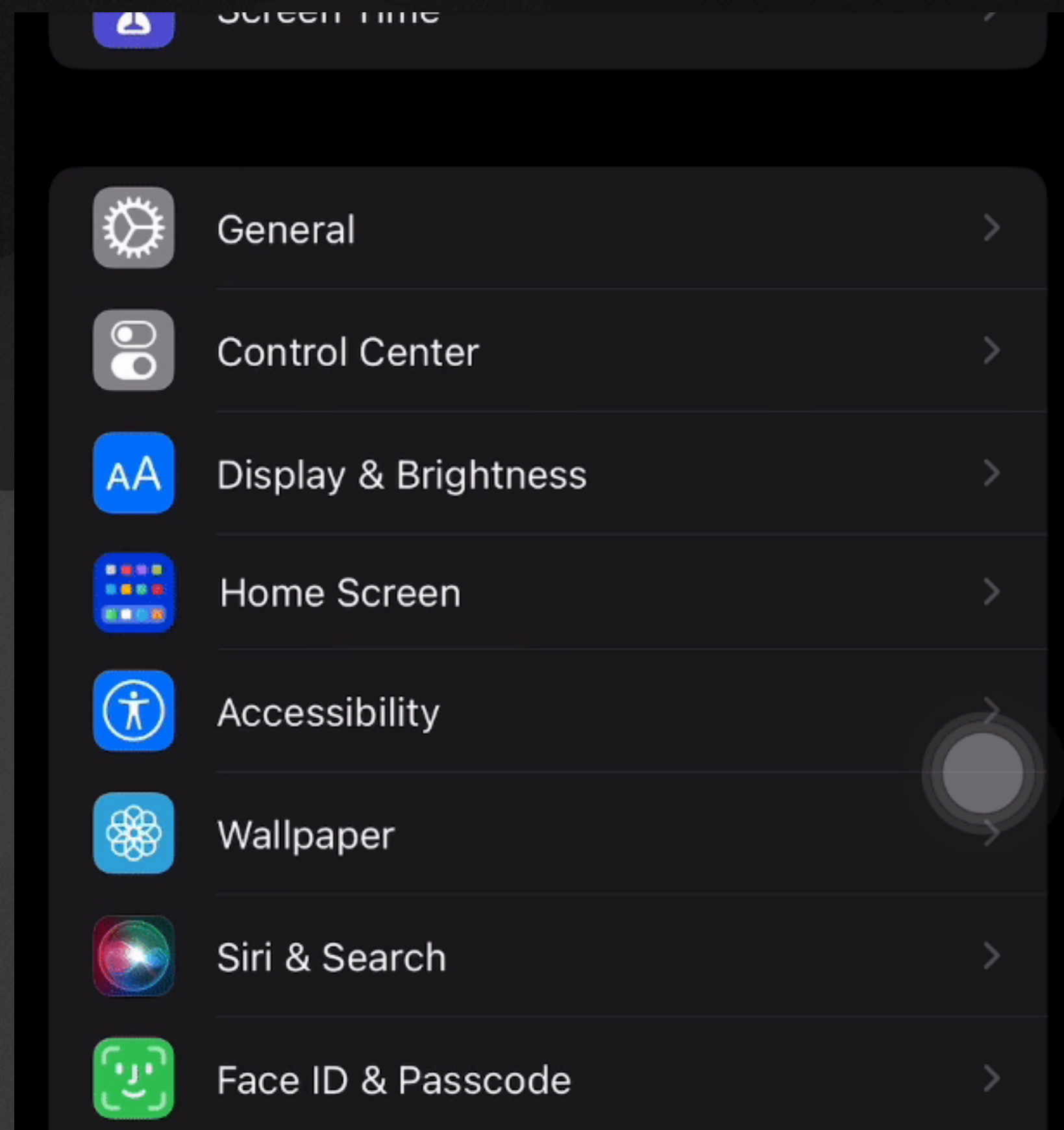


A screenshot of the 'Software Update' page in iOS. The status bar at the top shows 'Tello 5G' and '6:41 AM'. The back arrow is labeled 'General' and the title is 'Software Update'. The 'Automatic Updates' toggle is turned off. A notification states: 'Your organization has decided to update your device to iOS 17.3.1 (21D61). You can choose to update now or it will update automatically on 2/13/24, 12:00 AM.' Below this, there is a section for 'iOS 17.3.1' by Apple Inc., with a progress bar and the text 'About 27 seconds remaining'. A description of the update follows: 'This update provides bug fixes for your iPhone including: Text may unexpectedly duplicate or overlap while typing'. At the bottom, there is a 'Download in Progress' section with a downward arrow icon and the text: 'iPhone has started downloading an update automatically. Once completed, iPhone will attempt to install the update later when iPhone is locked and the...'

iOS Cellular - *example*



iOS Cellular - *example*



All Messages Errors and Faults

Save

Type	Date & Time	Process	Message
	2024-03-20 14:49:05.458940+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_SoftwareUpdate.f8b33212287d2c1292d2dd746b953b31a1452c8a . task: BackgroundDownloadTask <D49C3A09-D50>
	2024-03-20 14:49:06.436369+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_LinguisticData.0bad8d9a2a6f3ced8d8eea5f7b1df3b796f0076f . task: BackgroundDownloadTask <A8E83773-2F3>
	2024-03-20 14:49:06.437093+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_SoftwareUpdate.f8b33212287d2c1292d2dd746b953b31a1452c8a . task: BackgroundDownloadTask <D49C3A09-D50>
	2024-03-20 14:49:07.458204+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_LinguisticData.0bad8d9a2a6f3ced8d8eea5f7b1df3b796f0076f . task: BackgroundDownloadTask <A8E83773-2F3>
	2024-03-20 14:49:07.458805+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_SoftwareUpdate.f8b33212287d2c1292d2dd746b953b31a1452c8a . task: BackgroundDownloadTask <D49C3A09-D50>
	2024-03-20 14:49:08.410325+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_LinguisticData.0bad8d9a2a6f3ced8d8eea5f7b1df3b796f0076f . task: BackgroundDownloadTask <A8E83773-2F3>
	2024-03-20 14:49:08.411011+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_SoftwareUpdate.f8b33212287d2c1292d2dd746b953b31a1452c8a . task: BackgroundDownloadTask <D49C3A09-D50>
	2024-03-20 14:49:09.458165+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_LinguisticData.0bad8d9a2a6f3ced8d8eea5f7b1df3b796f0076f . task: BackgroundDownloadTask <A8E83773-2F3>
	2024-03-20 14:49:09.458878+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_SoftwareUpdate.f8b33212287d2c1292d2dd746b953b31a1452c8a . task: BackgroundDownloadTask <D49C3A09-D50>
	2024-03-20 14:49:10.440562+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_LinguisticData.0bad8d9a2a6f3ced8d8eea5f7b1df3b796f0076f . task: BackgroundDownloadTask <A8E83773-2F3>
	2024-03-20 14:49:10.441299+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_SoftwareUpdate.f8b33212287d2c1292d2dd746b953b31a1452c8a . task: BackgroundDownloadTask <D49C3A09-D50>
	2024-03-20 14:49:11.460669+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_LinguisticData.0bad8d9a2a6f3ced8d8eea5f7b1df3b796f0076f . task: BackgroundDownloadTask <A8E83773-2F3>
	2024-03-20 14:49:11.461278+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_SoftwareUpdate.f8b33212287d2c1292d2dd746b953b31a1452c8a . task: BackgroundDownloadTask <D49C3A09-D50>
	2024-03-20 14:49:11.490324+H	mobileassetd	-[DownloadManager registerAssetDownloadJob:withPurpose:usingDownloadOptions:forAssetId:withBase:relativeTo:startingAt:withLength:extractWith:allocateExtractorIfNecessary:usingXPCCConnection:v
	2024-03-20 14:49:11.490554+H	mobileassetd	-[DownloadInfo determineDownloadUrl:callback:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_CoreSuggestions.955b7ebcb6693fea61a8e0404c834be4ccbff0ff3 . task: (null) taskState: nil sta
	2024-03-20 14:49:11.491353+H	mobileassetd	-[MADownloadOptions logOptions]: The download options are MADownloadOptions allowsCellular: 0 resourceTimeout: 5382 canUseCacheServer: 0 discretionary: 1 disableUI: 0 sessionId: (null) addit
	2024-03-20 14:49:11.494544+H	mobileassetd	-[DownloadManager startDownloadAndUpdateState:for:startingAt:withLength:extractWith:modified:options:downloadSize:using:with:clientName:autoAssetJob:ofJobType:notify:]_block_invoke_3: The b
	2024-03-20 14:49:12.476020+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_LinguisticData.0bad8d9a2a6f3ced8d8eea5f7b1df3b796f0076f . task: BackgroundDownloadTask <A8E83773-2F3>
	2024-03-20 14:49:12.476720+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_SoftwareUpdate.f8b33212287d2c1292d2dd746b953b31a1452c8a . task: BackgroundDownloadTask <D49C3A09-D50>
	2024-03-20 14:49:13.465596+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_LinguisticData.0bad8d9a2a6f3ced8d8eea5f7b1df3b796f0076f . task: BackgroundDownloadTask <A8E83773-2F3>
	2024-03-20 14:49:13.465975+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_SoftwareUpdate.f8b33212287d2c1292d2dd746b953b31a1452c8a . task: BackgroundDownloadTask <D49C3A09-D50>
	2024-03-20 14:49:14.475706+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_LinguisticData.0bad8d9a2a6f3ced8d8eea5f7b1df3b796f0076f . task: BackgroundDownloadTask <A8E83773-2F3>
	2024-03-20 14:49:14.476385+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_SoftwareUpdate.f8b33212287d2c1292d2dd746b953b31a1452c8a . task: BackgroundDownloadTask <D49C3A09-D50>
	2024-03-20 14:49:15.465117+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_LinguisticData.0bad8d9a2a6f3ced8d8eea5f7b1df3b796f0076f . task: BackgroundDownloadTask <A8E83773-2F3>
	2024-03-20 14:49:15.465785+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_SoftwareUpdate.f8b33212287d2c1292d2dd746b953b31a1452c8a . task: BackgroundDownloadTask <D49C3A09-D50>
	2024-03-20 14:49:16.382693+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_LinguisticData.0bad8d9a2a6f3ced8d8eea5f7b1df3b796f0076f . task: BackgroundDownloadTask <A8E83773-2F3>
	2024-03-20 14:49:16.383264+H	mobileassetd	-[DownloadInfo addNewRateDataPoint:]: DownloadInfo taskDescriptor: com_apple_MobileAsset_SoftwareUpdate.f8b33212287d2c1292d2dd746b953b31a1452c8a . task: BackgroundDownloadTask <D49C3A09-D50>

Showing: Last 5 Minutes

mobileassetd (MobileAsset)

Subsystem: com.apple.mobileassetd Category: Notice Details

2024-03-20 14:49:11.491353+0100

```
-[MADownloadOptions logOptions]: The download options are MADownloadOptions allowsCellular: 0 resourceTimeout: 5382 canUseCacheServer: 0 discretionary: 1 disableUI: 0 sessionId: (null) additionalServerParams:(null) allowsExpensiveAccess:1 requiresPowerPluggedIn: 0 prefersInfrWiFi: 1 liveServerOnly: -1 DownloadAuthorizationHeader: not present analyticsData: not present allowDaemonConnectionRetries: 0 + MAMsuDownloadOptions reqProdVersion: (null) delayPeriod: 0 managedDevice: 0 allowSameVersion: 0 prereqBuild: (null) prereqVersion: (null) prereqReleaseType: (default) liveAssetAudienceUUID: (null) purpose: (null)
```

iOS Cellular - *example*

```
default      2024-03-20 14:49:11.491353 +0100
mobileassetd  -[MADownloadOptions logOptions]: The
download options are MADownloadOptions allowsCellular: 0
resourceTimeout: 5382 canUseCacheServer: 0 discretionary: 1
disableUI: 0 sessionId: (null) additionalServerParams: (null)
allowsExpensiveAccess:1 requiresPowerPluggedIn: 0
prefersInfraWiFi: 1 liveServerOnly: -1
DownloadAuthorizationHeader: not present analyticsData: not
present allowDaemonConnectionRetries: 0 +
MAMsuDownloadOptions reqProdVersion: (null) delayPeriod: 0
managedDevice: 0 allowSameVersion: 0 prereqBuild: (null)
prereqVersion: (null) prereqReleaseType: (default)
liveAssetAudienceUUID: (null) purpose: (null)
```

iOS Cellular - *example*



All Messages Errors and Faults

Save

Type	Date & Time	Process	Message
	2024-03-20 14:44:53.402616+H	InCallService	Retrieving initial CT carrier entitlements
	2024-03-20 14:44:53.402765+H	CommCenter	#I ==== client 805 (<private>) registered for event kCTEventCarrierEntitlementsQueryComplete(124) (now total 1)
	2024-03-20 14:44:53.402772+H	CommCenter	#I 1.5 subscribeForPushNotificationIfNeeded CarrierSpace
	2024-03-20 14:44:53.402777+H	CommCenter	#E 1.5 No topic to subscribe for push notification 'CarrierSpace'
	2024-03-20 14:44:53.402792+H	CommCenter	#I 1.5 subscribeForPushNotificationIfNeeded CarrierSpace
	2024-03-20 14:44:53.402795+H	CommCenter	#E 1.5 No topic to subscribe for push notification 'CarrierSpace'
	2024-03-20 14:44:53.402812+H	InCallService	=> Successfully retrieved initial CT carrier entitlements
	2024-03-20 14:45:02.555867+H	Preferences	-[PSJICarrierSpaceManager refreshAndReload] received notification: com.apple.PreferencesApp.willBecomeActive and will post notification PSUICarrierSpaceChanged
	2024-03-20 14:45:02.566203+H	softwareupdateservicesd	Carrier SU download policy: SUDownloadPolicy <0xe7c8c9430>: isDownloadFree: NO isDownloadAllowable: YES isDownloadAllowableOver2G: NO isAutoDownloadAllowable: YES
	2024-03-20 14:45:17.991884+H	dmd	could not get voice roaming switch from carrier bundle, assuming NO: (null)
	2024-03-20 14:45:18.063306+H	mdmd	Failed to retrieve device information key DMFDeviceSIMCarrierNetworkKey with error: NSError: Desc: Property "(null)" was never retrieved. Domain: DeviceManagement.error Code: 111 Extension: (null)
	2024-03-20 14:45:18.176546+H	CommCenter	#I ==== client 805 (<private>) registered for event kCTEventCarrierEntitlementsQueryComplete(124) (now total 1)
	2024-03-20 14:45:24.102869+H	Preferences	-[PSJICarrierSpaceManager refreshAndReload] received notification: com.apple.PreferencesApp.willBecomeActive and will post notification PSUICarrierSpaceChanged
	2024-03-20 14:45:24.112308+H	softwareupdateservicesd	Carrier SU download policy: SUDownloadPolicy <0xe7c8c9430>: isDownloadFree: NO isDownloadAllowable: YES isDownloadAllowableOver2G: NO isAutoDownloadAllowable: YES
	2024-03-20 14:45:32.444895+H	CommCenter	#I ==== client 591 (<private>) registered for event kCTEventCarrierEntitlementsQueryComplete(124) (now total 1)
	2024-03-20 14:45:32.449932+H	Preferences	Clearing carrier bundle cache
	2024-03-20 14:45:32.513144+H	softwareupdateservicesd	Carrier SU download policy: SUDownloadPolicy <0xe7c89fc40>: isDownloadFree: NO isDownloadAllowable: YES isDownloadAllowableOver2G: NO isAutoDownloadAllowable: YES
	2024-03-20 14:45:32.752202+H	Preferences	-[PSJICarrierSpaceManager refreshAndReload] received notification: com.apple.PreferencesApp.willBecomeActive and will post notification PSUICarrierSpaceChanged
	2024-03-20 14:45:32.762679+H	softwareupdateservicesd	Carrier SU download policy: SUDownloadPolicy <0xe7c8cc4b0>: isDownloadFree: NO isDownloadAllowable: YES isDownloadAllowableOver2G: NO isAutoDownloadAllowable: YES
	2024-03-20 14:47:21.985886+H	Preferences	-[PSJICarrierSpaceManager refreshAndReload] received notification: com.apple.PreferencesApp.willBecomeActive and will post notification PSUICarrierSpaceChanged
	2024-03-20 14:47:23.211318+H	softwareupdateservicesd	Carrier SU download policy: SUDownloadPolicy <0xe7ca97490>: isDownloadFree: NO isDownloadAllowable: YES isDownloadAllowableOver2G: NO isAutoDownloadAllowable: YES
	2024-03-20 14:49:40.206815+H	symptomsd	CFSM System properties: ProductName = iPhone OS, ProductClass = iPhone, ProductType = iPhone15,2, ProductVersion = 17.2.1, BuildVersion = 21C66, BuildPlatform = iOS, BuildVariant = Customer, BuildType = Retail
	2024-03-20 14:49:40.206924+H	symptomsd	CFSM is NOT high capacity cell plan (carrier supplied)
	2024-03-20 14:49:40.206934+H	symptomsd	Client is fetching data plan metrics
	2024-03-20 14:49:40.207005+H	CommCenter	#I Client [<private>] invoking <private>, srge <private>
	2024-03-20 14:49:40.207040+H	CommCenter	#I response for fetchDataPlanMetrics, metrics (null), error <private>
	2024-03-20 14:49:40.207149+H	symptomsd	CFSM data plan, metrics: (null), error: Error Domain=CTCarrierSpaceError Code=7 "Not supported" UserInfo={NSLocalizedDescription=Not supported, NSLocalizedFailureReason=No error}

Showing: Last 5 Minutes

softwareupdateservicesd (SoftwareUpdateServices)

INFO

Subsystem: com.apple.softwareupdateservices Category: Common Details

2024-03-20 14:45:02.566203+0100

```
Carrier SU download policy: SUDownloadPolicy <0xe7c8c9430>:  
  isDownloadFree: NO  
  isDownloadAllowable: YES  
  isDownloadAllowableOver2G: NO  
  isAutoDownloadAllowable: NO  
  maximumDownloadSizeInBytes: 18446744073709551615  
  numberOfDaysToWaitForCellularDownload: 0  
  peakStartHour: -1  
  peakEndHour: -1  
  AllowEnhancedDownloadOnNRHDM: YES
```

system_logs.logarchive
97 messages

All Messages Errors and Faults

Type	Date & Time	Process
●	2024-03-19 16:06:48.278382H	softwareupdateservicesd
●	2024-03-19 16:06:48.290060H	softwareupdateservicesd
●	2024-03-19 16:06:48.294550H	softwareupdateservicesd
●	2024-03-19 16:06:48.299524H	softwareupdateservicesd
●	2024-03-19 16:06:48.303857H	softwareupdateservicesd
●	2024-03-19 16:06:48.308104H	softwareupdateservicesd
●	2024-03-19 16:06:48.318918H	softwareupdateservicesd
●	2024-03-19 16:06:48.322995H	softwareupdateservicesd
●	2024-03-19 16:06:48.580074H	softwareupdateservicesd
●	2024-03-19 16:06:48.584651H	softwareupdateservicesd
●	2024-03-19 16:06:48.586240H	softwareupdateservicesd
●	2024-03-19 16:06:48.587838H	softwareupdateservicesd
●	2024-03-19 16:06:48.594049H	softwareupdateservicesd
●	2024-03-20 14:22:06.937429H	softwareupdateservicesd
●	2024-03-20 14:22:12.075153H	softwareupdateservicesd
●	2024-03-20 14:32:46.554729H	softwareupdateservicesd
●	2024-03-20 14:32:48.008207H	softwareupdateservicesd
●	2024-03-20 14:33:45.584871H	softwareupdateservicesd
●	2024-03-20 14:37:37.555553H	softwareupdateservicesd
●	2024-03-20 14:43:39.694468H	softwareupdateservicesd
●	2024-03-20 14:43:40.402237H	softwareupdateservicesd
●	2024-03-20 14:43:41.907740H	softwareupdateservicesd
●	2024-03-20 14:45:02.566203H	softwareupdateservicesd
●	2024-03-20 14:45:24.112308H	softwareupdateservicesd
●	2024-03-20 14:45:32.513144H	softwareupdateservicesd
●	2024-03-20 14:45:32.762679H	softwareupdateservicesd
●	2024-03-20 14:47:23.211318H	softwareupdateservicesd

Showing: All Messages

softwareupdateservicesd (SoftwareUpdateServices)

Subsystem: com.apple.softwareupdateservices Category: Common [Details](#)

```
Carrier SU download policy: SUDownloadPolicy <0xe7ca97490>:
  isDownloadFree: NO
  isDownloadAllowable: YES
  isDownloadAllowableOver2G: NO
  isAutoDownloadAllowable: NO
  maximumDownloadSizeInBytes: 18446744073709551615
  numberOfDaysToWaitForCellularDownload: 0
  peakStartHour: -1
  peakEndHour: -1
  AllowEnhancedDownloadOnNRHDM: YES
```

system_logs.logarchive
110 messages

All Messages Errors and Faults

Type	Date & Time	Process	Message
●	2024-03-20 06:42:20.912781-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:42:21.911406-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:42:22.913453-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:42:23.913181-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:42:26.916214-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:42:27.966845-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:42:28.978667-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:42:29.979083-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:42:31.983171-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:42:33.861509-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:44:35.382531-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:45:43.746232-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:45:48.393404-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:45:52.206228-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:45:54.228569-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:45:56.224246-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:45:58.226023-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:46:10.416167-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:46:11.272667-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:46:13.381639-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:46:15.372586-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:46:17.398477-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:46:18.922897-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:46:18.923899-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:46:18.932382-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:46:18.944540-I	softwareupdateservicesd	Carrier SU
●	2024-03-20 06:46:27.847714-I	softwareupdateservicesd	Carrier SU

Showing: All Messages

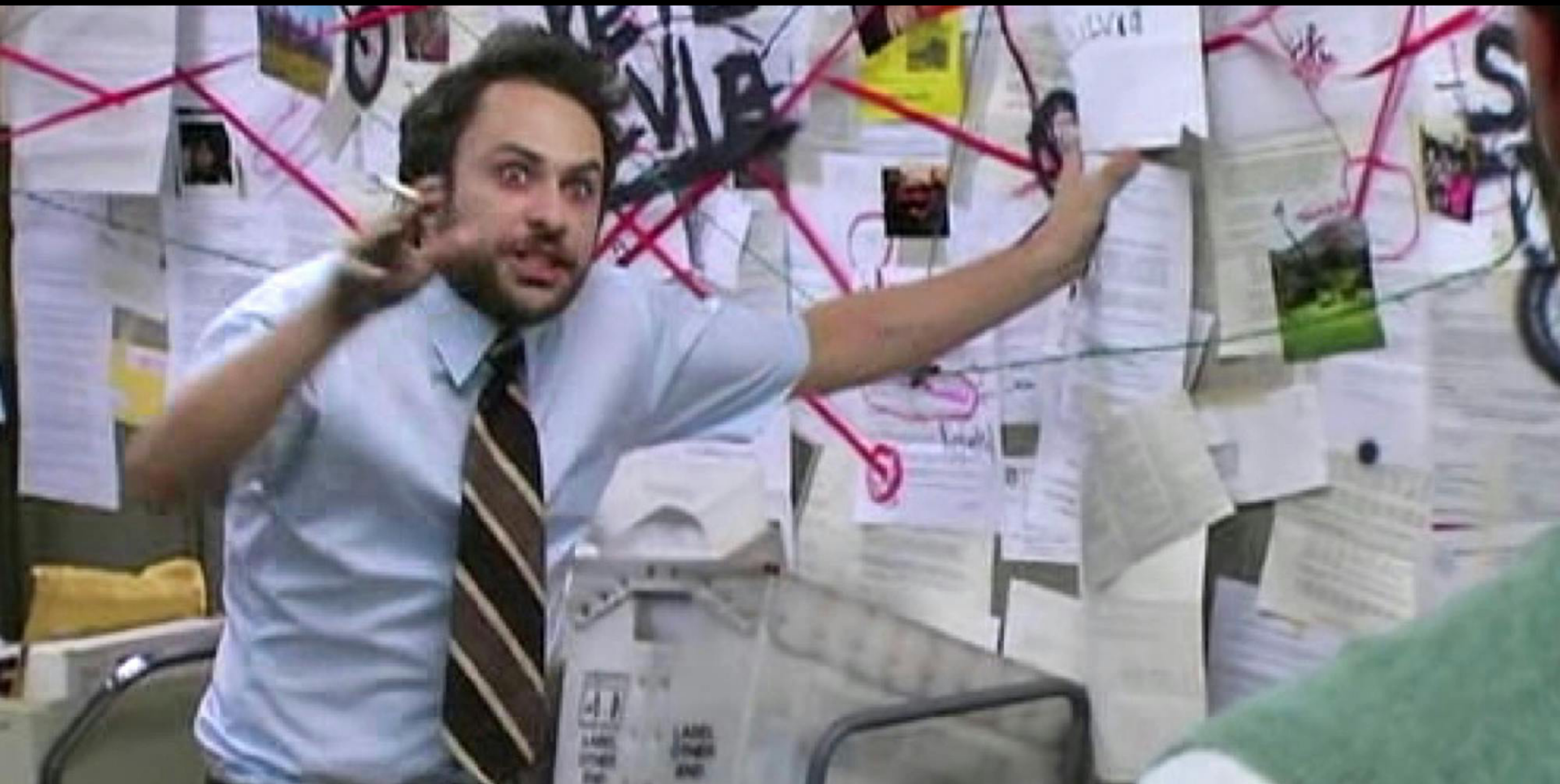
softwareupdateservicesd (SoftwareUpdateServices)

Subsystem: com.apple.softwareupdateservices Category: Common [Details](#)

```
Carrier SU download policy: SUDownloadPolicy <0xdaae1c890>:
  isDownloadFree: YES
  isDownloadAllowable: YES
  isDownloadAllowableOver2G: NO
  isAutoDownloadAllowable: NO
  maximumDownloadSizeInBytes: 18446744073709551615
  numberOfDaysToWaitForCellularDownload: 0
  peakStartHour: -1
  peakEndHour: -1
  AllowEnhancedDownloadOnNRHDM: YES
```

iOS Cellular - example

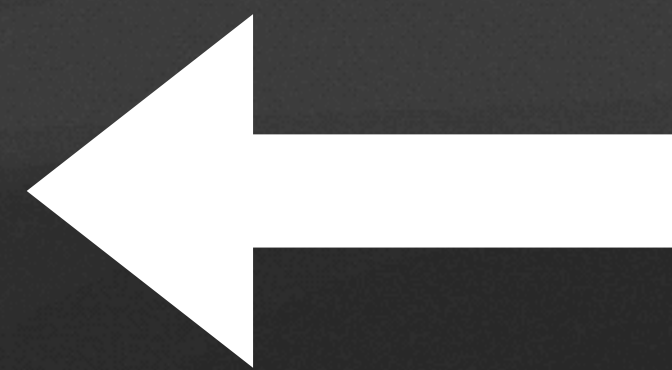
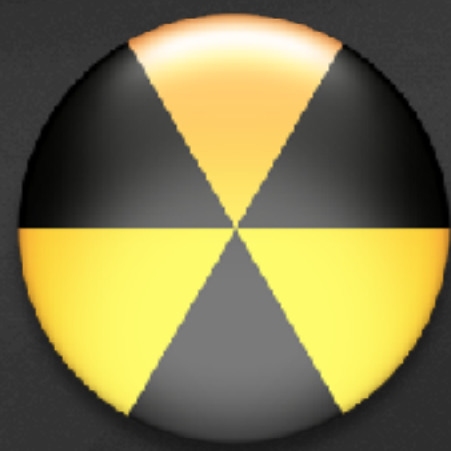
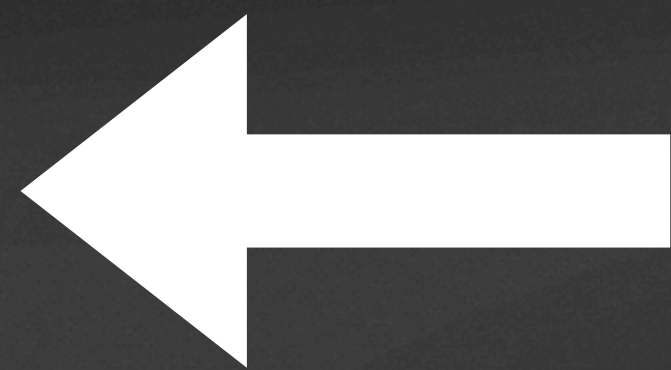
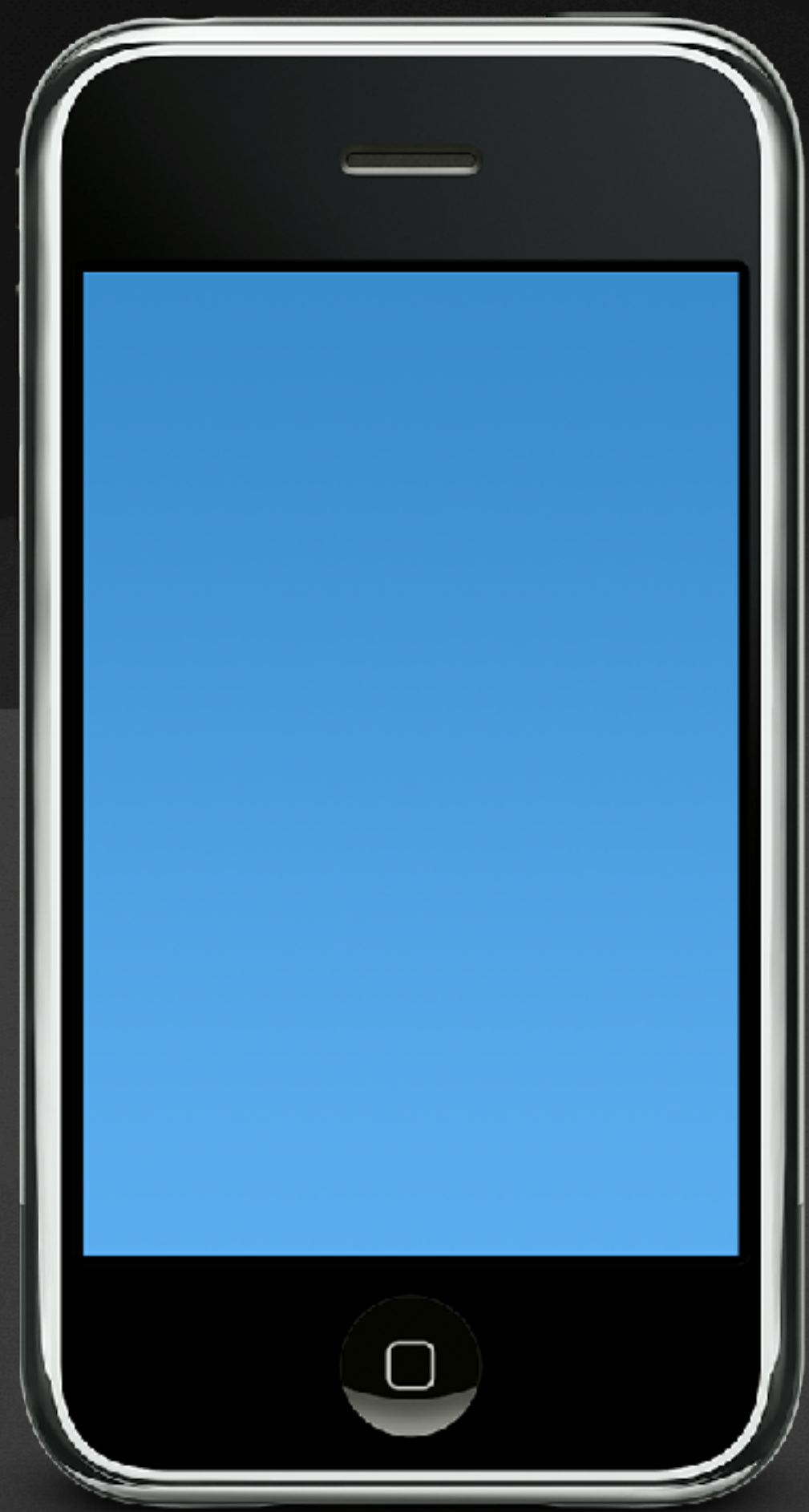
Lycamobile or Telia (Denmark)	Tello (T-Mobile USA)
<p>info2024-03-20 14:47:23.211318 +0100 softwareupdateservicesdCarrier SU download policy: SUDownloadPolicy <0xe7ca97490>: isDownloadFree: NO isDownloadAllowable: YES isDownloadAllowableOver2G: NO isAutoDownloadAllowable: NO maximumDownloadSizeInBytes: 18446744073709551615 numberOfDaysToWaitForCellularDownload: 0 peakStartHour: -1 peakEndHour: -1 AllowEnhancedDownloadOnNRHDM: YES</p>	<p>info2024-03-20 06:46:27.847714 -0500 softwareupdateservicesdCarrier SU download policy: SUDownloadPolicy <0xdaae1c890>: isDownloadFree: YES isDownloadAllowable: YES isDownloadAllowableOver2G: NO isAutoDownloadAllowable: NO maximumDownloadSizeInBytes: 18446744073709551615 numberOfDaysToWaitForCellularDownload: 0 peakStartHour: -1 peakEndHour: -1 AllowEnhancedDownloadOnNRHDM: YES</p>



Cellular Summary

- Objective
 - Deploy iOS updates over Cellular
- Not working
 - iOS updates over Cellular
- Investigated
 - Network in use
 - Declarations Sent History
 - sysdiagnose output
- Tried
 - Known good Wi-Fi network test
 - Known good Cellular network test
 - Known bad Cellular network test

DDM VPP App - *example*



DDM VPP App - *example*

```
default 2024-07-09 14:33:34.937736 -0400 remotemanagementd  
Running DeclarativeManagement command of MDM service
```

```
default 2024-07-09 14:33:43.251741 -0400 remotemanagementd  
Finished running DeclarativeManagement command of MDM  
service
```

```
default 2024-07-09 14:34:42.007889 -0400  
managedappdistributiond [MDIedb3cca7] Requesting metadata for  
updating declaration edb3cca7-XXXX-XXXX-XXXX-453d3ddf932f --  
C39X53XXXXXX -- 302584613
```

DDM VPP App - *example*

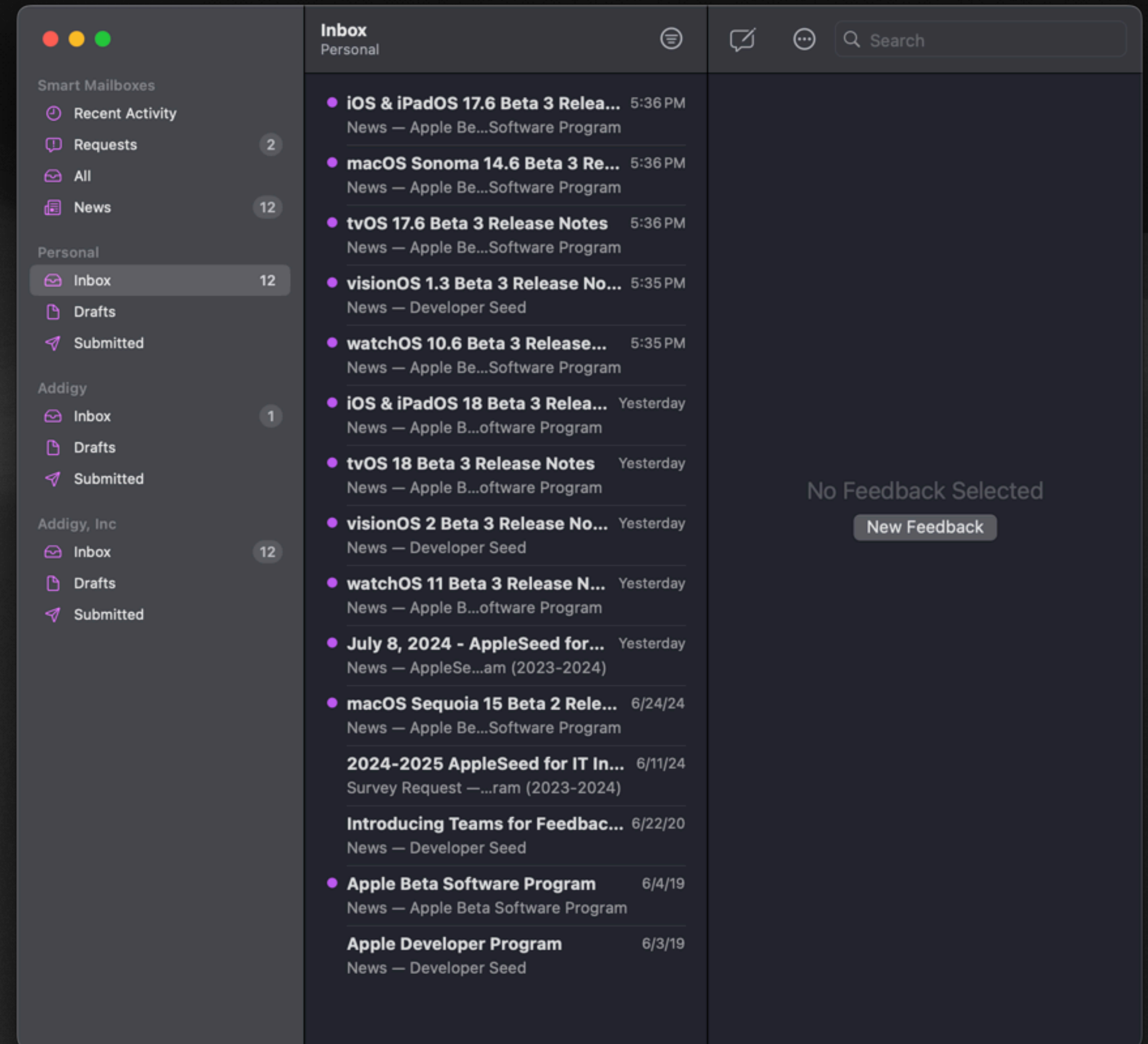
✓	Jul 9, 2024 2:33:38PM EDT	iPhone device	fetches app managed declaration Amazon Kindle v7.14	Addigy DDM platform	✓	info
Sender			Action			
Name	iPhone		Name	fetched		
Identifier	c0ac[REDACTED]e0		Entity Name	Amazon Kindle v7.14		
Type	device		Entity Identifier	302584613		
Receiver			Entity Type	app managed declaration		
Name	Addigy DDM		Details	Device successfully fetched declaration from declarative device management service!		
Identifier	addigy-ddm		Result			
Type	platform		✓ success			
			Details	Device successfully fetched declaration!		

DDM VPP App - example

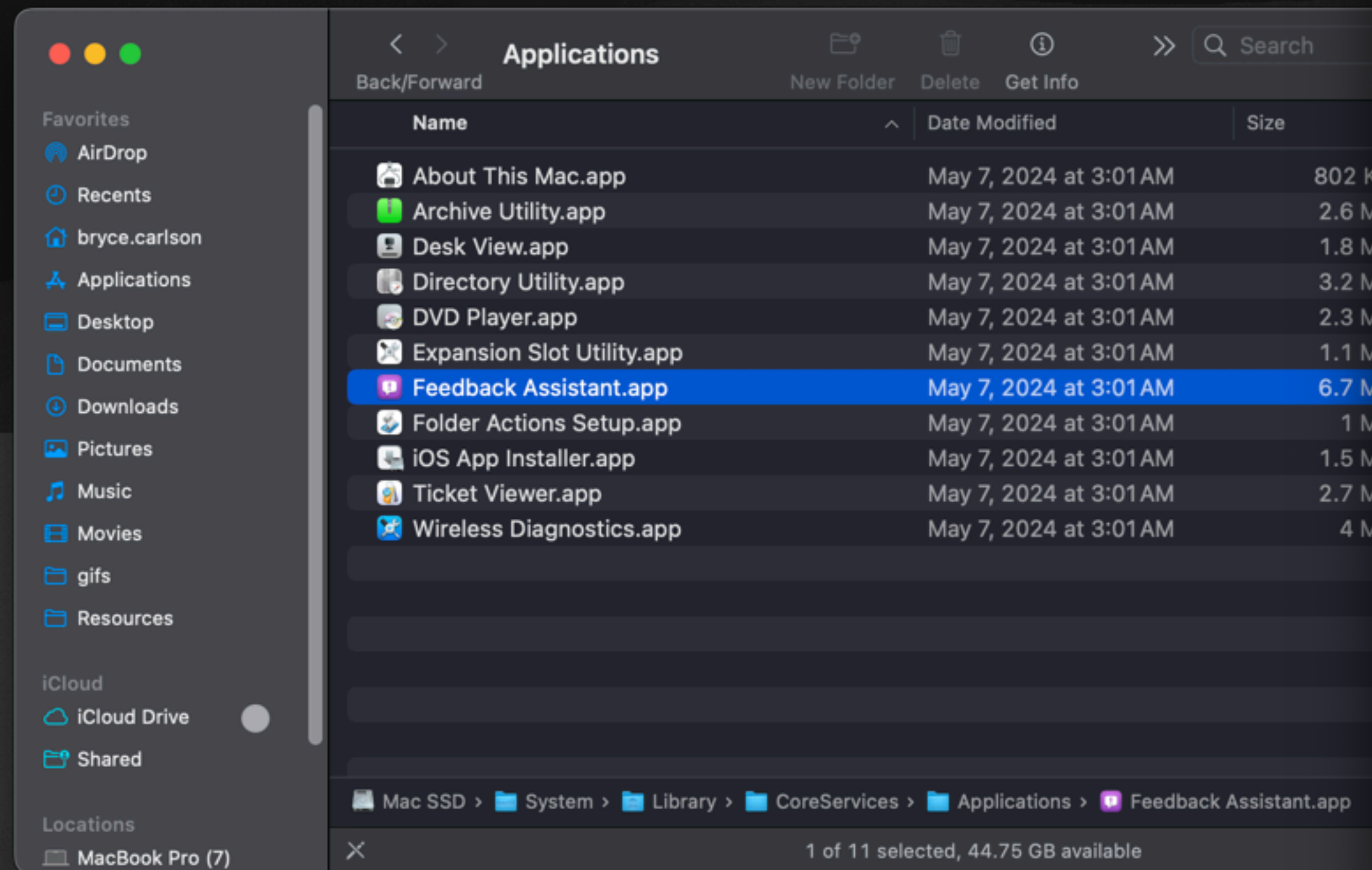
```
default 2024-07-09 14:38:45.045597 -0400 MDMAppSubscriber Publisher MDMAppStatus starting processing status keys: (
  "mdm.app"
)
default 2024-07-09 14:38:45.415436 -0400 managedappdistributiond [DDM3D048E46] Received response: status: 200 url: https://
iosapps.itunes.apple.com/itunes-assets/Purple221/v4/82/fe/2a/82fe2ae7-3784-10fa-ca62-fcef4cb21dd0/pre-
thinned11639859919161560343.thinned.signed.dpkg.ipa?REDACTED headers:
  Accept-Ranges: bytes
  Content-Length: 61893104
  Content-Type: application/octet-stream
default 2024-07-09 14:38:45.463130 -0400 appstored [DIS3BB025F1/com.amazon.Lassen:302584613] bundleDisplayName: Amazon Kindle metatdata: {
  bundleDisplayName = "Amazon Kindle";
  bundleID = "com.amazon.Lassen";
  is32bitOnly = 0;
  softwareVersionExternalIdentifier = 866798614;
  uncompressedSize = 132843520;
}
default 2024-07-09 14:38:45.464804 -0400 dmd Send app store request result: success: YES, metadata: {
  bundleDisplayName = "Amazon Kindle";
  bundleID = "com.amazon.Lassen";
  is32bitOnly = 0;
  softwareVersionExternalIdentifier = 866798614;
  uncompressedSize = 132843520;
}, change type: ASDManagedApplicationChangeTypeNeedsReDownload, error: (null)
default 2024-07-09 14:38:45.502511 -0400 dmd Send app store request result: success: YES, metadata: {
  bundleDisplayName = "Amazon Kindle";
  bundleID = "com.amazon.Lassen";
  freeBuyParams = "productType=C&price=0&salableAdamId=302584613&pricingParameters=STDQ&pg=default&appExtVrsId=866798614";
  is32bitOnly = 0;
  isActiveAccountAppOwner = 0;
  isAppFree = 1;
  itemID = 302584613;
  softwareVersionExternalIdentifier = 866798614;
  uncompressedSize = 153390080;
  vendorName = "AMZN Mobile LLC";
}, change type: ASDManagedApplicationChangeTypeNone, error: (null)
```

Feedback to Apple

- Feedback Assistant.app
 - Public Beta
 - AppleSeed
 - Developer Program
- Collects user story/
workflow details
- sysdiagnose logging
uploaded



Feedback to Apple



Feedback for macOS

Personal Change...

Basic Information

Please provide a descriptive title for your feedback:

Example: Calendar events are missing after creating an event

Which area are you seeing an issue with?

What type of issue are you reporting?

Description

Please describe the issue and what steps we can take to reproduce it:

Please include:

- A clear description of the problem
- A step-by-step set of instructions to reproduce the problem (if possible)
- What results you expected
- What results you actually saw

Attachments

Add Attachment

MacBook Pro (7)
MacBook Pro


Submit

Feedback to Apple

- What results you actually saw

Attachments

Add Attachment +

-  MacBook Pro (7)
MacBook Pro ×
- macOS Sysdiagnose Gathering... 🗑️
- macOS System Information Report 🔍 🗑️


Description

Please describe the issue and what steps we can take to reproduce it:

Please include:

- A clear description of the problem
- A step-by-step set of instructions to reproduce the problem
- What results you expected
- What results you actually saw

Attachments

-  MacBook Pro (7)
MacBook Pro ×
- macOS Sysdiagnose Gathering... 🗑️
- macOS System Information Report 🔍 🗑️

Add Attachment +

Removing Device


Removing MacBook Pro (7) will remove all of the diagnostics associated with it. Removing diagnostics limits Apple's ability to understand the issue and address it.

Remove Device

Cancel

Feedback to Apple

DDM Update Enfroment causes Software Update prompt for local user password – FB13481266 — macOS

 Bryce Carlson
December 20, 2023 at 1:54 PM ASSIGNEE

DDM Update Enfroment causes Software Update prompt for local user password

FB13481266 – Assigned to Bryce Carlson
Recent Similar Reports: Less than 10
Resolution: Potential fix identified – For a future OS update

Basic Information

Please provide a descriptive title for your feedback:
DDM Update Enfroment causes Software Update prompt for local user password

Which area are you seeing an issue with?
Software Update

What type of issue are you reporting?
Incorrect/Unexpected Behavior

Details

What does the Software Update issue you are experiencing involve?
Preparing/Verifying

Description

Please describe the issue and what steps we can take to reproduce it:
TL;DR: Just looking to better understand the local user prompt as it seems to not relate to the actual install of the OS.

Trying to figure out why on all of our devices with DDM OS updates enabled we get an end user password prompt on macOS 14.1.1 declaration with enforcement going to macOS 14.2.0. It seems that the password prompt has no impact on the update actually installing and updating the device as the attached devices logs and screen shots are from my device where the prompt was ignored. Trying to fin the best practice so we can communicate that to mutual MDM and Apple customers correctly (as most end users will ignore the prompt it seems from customer feedback).

Steps followed on the attached example device:


- 1.) Fresh reboot almost daily leading up to the declaration install and enforcement time being set
- 2.) When prompted by the end user on screen password prompt after the Notification Center notification about macOS 14.2 being available for install and that it would be enforced a few days out from that the password prompt was canceled every time.
- 3.) As the enforcement time got closer and it was set to install overnight the MacBook Pro M1 was fully charged to 100% battery, unplugged from power (to test the install on non-AC power) and left plugged into it's Apple TB3 to TB2 adapter to an Apple TB2 to Ethernet adapter that it uses for internet connectivity.
- 4.) The device was updated to macOS 14.2.0 overnight.

Attached are screenshots leading up to and just after the device was woken up post update the following morning. There is also a sysdiagnose from pre-install and post-install.

Just looking to better understand the local user prompt as it seems to not relate to the actual install of the OS.

Files

- 1declaration-installed-Screenshot 2023-12-11 at 11:03:13 PM.png
- 2declaration-installed-ready-Screenshot 2023-12-13 at 6:50:18 AM.png
- 3declaration-sw-binary-prompt-Screenshot 2023-12-13 at 6:50:24 AM.png
- battery-after-sleep-install-Screenshot 2023-12-14 at 7:36:26 AM.png
- dock-before-sleep-Screenshot 2023-12-13 at 9:52:49 PM.png
- post-macOS-142-viaDDM-bryce-sysdiagnose_2023.12.14_07-41-38-0600_macOS_MacBookPro18-3_23C84.tar.gz
- sys-pw-prompt-sysdiagnose_2023.12.14_09-57-0600_macOS_MacBookPro18-3_23B92.tar.gz
- sys-prefs-before-sleep-Screenshot 2023-12-13 at 9:52:59 PM.png
- uptime-afterboot-from-Install-Screenshot 2023-12-14 at 7:36:58 AM.png





Q&A