

# How to choose a Disk Space Analyzer for Mac: A transparent evaluation methodology

*54 criteria to objectively compare disk space analyzers — from a team that's been building macOS utilities for 15 years.*

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## TL;DR

### For users

- We've created **54 verifiable criteria** to evaluate Disk Space Analyzers
- Test your analyzer in 15–20 minutes using the Level 1 criteria (9 total) — that's the bare minimum for safety
- If a tool fails even one Level 1 criterion — **don't use it**

- Use our evaluation calculator for automatic results

To check any app quickly, use the [calculator](#)

## For reviewers and QA

- 54 criteria across 3 levels: 9 blockers, 22 important, 23 bonuses
- Maximum score: 94 (formula:  $L1 \times 3 + L2 \times 2 + L3 \times 1$ )
- 4 test datasets with ground truth (scripts attached)
- 7 testing phases, 3–5 hours for a full cycle
- Download the full methodology with templates and scripts

## Why this methodology exists

The Mac App Store and developer websites are packed with dozens of disk space analyzers. They all promise to "quickly show you what's eating up your disk and help free up space." But how do you tell which one is actually accurate and safe?

Picking the wrong tool can cost you:

- Incorrect folder sizes (the tool doesn't account for APFS clones or purgeable space)
- Important files removed (system caches, Application Support)
- "10 GB Freed up" — but the actual space didn't change (snapshots, purgeable)
- Crashes when dealing with a large number of files

macOS makes this harder than it looks. APFS clones, purgeable space, Time Machine snapshots, iCloud evicted files — standard tools (`du`, `stat`, Finder) don't always show the real picture. That's not a bug — it's how the APFS file system works. A good analyzer needs to take this into account, or at least match what Finder shows.

At Nektony, we've been developing macOS utilities since 2011. Over the years, we've analyzed the behavior of dozens of competing products and collected feedback from hundreds of thousands of users. Based on that experience, we created a transparent evaluation methodology: **54 criteria** that actually matter for accurate and safe analysis.

**We're publishing it transparently** so that:

- You can evaluate any tool on your own
- Journalists and reviewers have an objective comparison framework
- Quality standards in the category become higher for everyone

## Who this methodology is for

Audience	How to use
Regular users	Go through the Level 1 criteria (15–20 minutes) or use the <a href="#">calculator</a>
Journalists and reviewers	Use the full methodology to compare tools objectively
QA engineers	Download the full methodology with templates and scripts
Developers	Use it as a requirements checklist for your own product

## Core principle

When evaluating tools, we follow a clear priority:

**Safety > Accuracy > Usability > Speed**

A fast tool that shows wrong sizes or removes important files is useless. A slow but accurate and safe tool is useful.

## Terms and definitions

Before starting the evaluation, it's important to understand the terminology:

Term	Definition
<b>APFS (Apple File System)</b>	Apple's file system, used by default since macOS High Sierra (2017). Supports clones, snapshots, and transparent compression
<b>APFS clone</b>	A copy-on-write file copy. The data isn't physically duplicated until one of the files is modified. <code>du</code> , <code>stat</code> , and Finder show the full logical size and don't see clone sharing
<b>Purgeable space</b>	Space that macOS can free up automatically (caches, iCloud data, logs). Shown in <code>diskutil info /</code>
<b>Time Machine snapshot</b>	A local file system snapshot. It takes up disk space but isn't visible as files or folders
<b>Cloud-only evicted file</b>	An iCloud Drive file uploaded to the cloud. Locally it takes up minimal space (stub), but Finder shows the full size
<b>Hard link</b>	Multiple names pointing to the same data. Removing one name doesn't remove the data as long as other links exist
<b>Symlink</b>	A shortcut to a file or folder path. Contains no data of its own
<b>Sparse file</b>	A file with "empty" blocks that don't take up space. Logical size is larger than physical size
<b>Firmlink</b>	macOS links between the Data and System APFS volumes
<b>Logical size</b>	The size of a file's contents in bytes (apparent size)
<b>Physical size</b>	The actual space used subject to FS blocks, clones, and compression (on-disk size)
<b><code>du</code> (disk usage)</b>	A Terminal command that shows allocated size. Doesn't see APFS clone sharing
<b>Ground truth</b>	A known correct result used to verify accuracy
<b>FDA (Full Disk Access)</b>	A macOS permission to access protected areas (~Library, /Library, Mail, Safari, etc.)

# Scoring system

All 54 criteria are divided into three levels by importance:

Level	Name	Criteria	Weight	Max points	Description
L1	Must Have	9	x3	27	Blockers. Fail = unsafe
L2	Should Have	22	x2	44	Important. Affect accuracy and usability
L3	Nice to Have	23	x1	23	Bonuses. Nice extras
	<b>Total</b>	<b>54</b>		<b>94</b>	

## Scoring formula

$$\text{Total score} = (L1 \times 3) + (L2 \times 2) + (L3 \times 1)$$

$$\text{Maximum: } (9 \times 3) + (22 \times 2) + (23 \times 1) = 27 + 44 + 23 = 94 \text{ points}$$

## How to interpret the result

Score	Recommendation
73–94	✔ Recommended
47–72	⚠ With caveats
< 47	✘ Not recommended

**Important!** Failing any Level 1 criterion automatically falls under "Not recommended," regardless of the total score.

# Red flags

If a tool matches any of the following, **don't use it**:

## ▶ Data loss

- *Removes files without user confirmation*
- *Removes the wrong files (mismatch between what's shown and what's removed)*
- *Permanently removes files by default (bypasses Trash without warning)*
- *Removes system files without warning*

## ▶ Safety and trust

- *Sends your file list or paths to an external server*
- *Installs additional software without consent (bundleware or adware)*
- *Requests root/admin access without a good reason*
- *Unsigned, not notarized — a disk analyzer can see every file on your Mac, so trusting that kind of access to an unsigned tool is risky: there's no way to verify the developer or guarantee there's no malicious code*

## ▶ Stability

- *Crashes or loses data during a basic scenario*
- *Infinitely loops / freezes with no way to cancel*
- *Consumes all available RAM and gets force-killed by the system*

## ▶ Critical deception

- *Shows deliberately false sizes (off by more than 50% from actual)*

- Claims "X GB freed up," but the actual space didn't change
- Scans and shows results, then demands payment for any further action (without warning you beforehand)

## Evaluation criteria

### Level 1: Must Have (blocking criteria)

Safety and basic accuracy criteria.

**If a tool fails at least one criterion, using it is risky.**

#### 1.1. Basic analysis accuracy ( $\pm 5\%$ )

*Why it matters:* The tool should show folder sizes that match reality. Errors over 5% can lead to bad cleanup decisions.

How to check:

1. Create a test folder with a known structure (Dataset 01, ~4.6 GB, ~2,800 files).
2. CScan it with the tool.
3. Compare the reported top-level folder sizes with the ground truth.
4. CDeviation should be  $\leq 5\%$  for each folder.

✅ All folders are within  $\pm 5\%$  of ground truth | ❌ At least one folder  $> \pm 5\%$

#### 1.2. Stability (with no crashes on Dataset 01)

*Why it matters:* The tool shouldn't crash or freeze on any of the test datasets (Dataset 01–04).

How to check:

1. Scan all 4 test datasets one after another
2. Monitor the tool in Activity Monitor
3. Are there any crashes, freezes, or uncontrolled memory usage spike?

✅ The tool runs stable on all datasets | ❌ The tool crashes or freezes on any dataset

### 1.3. Confirmation before removal

*Why it matters:* An accidental click shouldn't lead to data loss. Removal should only happen after explicit confirmation.

How to check:

1. Select a file from the results and click Remove
2. Does a confirmation dialog appear?
3. Does it show the number of files and size? Where does it go after removal?

✅ The tool shows a confirmation dialog | ❌ Files removed immediately without confirmation

### 1.4. Removal to Trash by default

*Why it matters:* Removed files should go to Trash and be recoverable. It's your safety net against mistakes.

How to check:

1. Remove a file through the tool
2. Open Trash in the Dock
3. Is the file there? Can you restore it?

✅ Files go to Trash by default | ❌ The tool removes files permanently, or there is no Trash option

### 1.5. Removal matches selection

*Why it matters:* Only the selected files should be removed — nothing more, nothing less.

How to check:

1. Select 3 specific files, keep in mind the names and paths
2. Remove them
3. Check in Finder: Were only the selected files removed? Are other files untouched?
4. Restore them from Trash — are the files intact?

✅ Exactly the selected files were removed | ❌ Mismatch between selected and removed

## 1.6. System file protection

*Why it matters:* Removing system files can break macOS or other tools.

How to check:

1. Scan the boot volume
2. Try to remove a file from ~/Library/Preferences/
3. Does the tool warn you about the risks or block the action?

✅ The tool blocks or warns | ❌ The tool allows removal without warning

## 1.7. The tool doesn't send data to external servers

*Why it matters:* The tool shouldn't transmit your file list or paths to external servers. That's confidential information.

How to check:

1. Check network activity via Activity Monitor (Network) or Little Snitch
2. Can it be used completely offline?
3. Is there an explicit privacy policy?

✅ There are no file/path data leaks | ❌ The tool sends data to an external server

## 1.8. Signed and notarized by Apple

*Why it matters:* If a tool is signed and notarized, this means Apple has checked it for malicious code.

How to check:

1. Terminal: `codesign -dv --verbose=2 /path/to/app.app`
2. Terminal: `spctl --assess --verbose /path/to/app.app`

✅ The tool is signed and notarized | ❌ The tool is not signed or not notarized

## 1.9. The tool doesn't install third-party software

*Why it matters:* The installation shouldn't bundle third-party software, adware, or toolbars.

How to check:

1. Install the tool, watching the process carefully
2. Are there any extra offers, checkboxes, or ad pop-ups?
3. Check /Applications and ~/Library after installation — anything new show up?

 Clean install, just the main app |  The tool installs third-party software or shows ads

## Level 2: Should Have (important)

These criteria affect accuracy, usability, and completeness. Without them, a tool can still be used, but with limitations.

### Data source coverage

#	Criterion	How to check	Result
2.1	Scanning the boot APFS volume	Select the root drive in the analyzer and scan the boot APFS volume. Does it show the size correctly?	 Yes /  No
2.2	Scanning external volumes (ExFAT, HFS+)	Connect an external ExFAT and HFS+ volume — does it see and scan them?	 Both /  One /  No
2.3	Selecting volume or folder for scanning	Can you pick a specific volume or folder (not the whole disk)?	 Yes /  No
2.4	Distinguishing iCloud cloud-only from local files	Does it differentiate between cloud-stored and locally downloaded files?	 Yes /  Partially /  No
2.5	Handling Full Disk Access	Revoke FDA — does it show a clear warning + instructions?	 Yes /  No

## Performance

#	Criterion	How to check	Result
2.6	Scan time within baseline	Compare the time against the baseline table (see below)	✓ Excellent / ⚠ Acceptable / ✗ Unacceptable
2.7	RAM < 1 GB during scan	Activity Monitor — peak usage?	✓ < 500 MB / ⚠ 500 MB - 1 GB / ⚠ 1 - 2 GB / ✗ > 2 GB
2.8	Progress indicator during scan	Can you see progress (% , files, path)? Is there no stuck at 99%?	✓ Yes / ✗ No
2.9	Pause/cancel scan	Are there Pause and Cancel buttons?	✓ Both / ⚠ Cancel only / ✗ None
2.10	UI stays responsive (no beach ball)	During a Dataset 04 scan — can you interact with the UI?	✓ Yes / ✗ No

## Accuracy

#	Criterion	How to check	Result
2.11	Accuracy on external volume (Dataset 02)	Do sizes on ExFAT/HFS+ match ground truth?	✓ ±5% / ⚠ ±10% / ✗ > ±10%
2.12	APFS correctness (Dataset 03)	Clones, hard links, sparse — correct sizes?	✓ Physical or explanation / ⚠ Logical size, same as Finder / ✗ Different numbers

#	Criterion	How to check	Result
2.13	Accuracy under stress (Dataset 04)	120,000 files — do the number and size match?	✅ Yes / ⚠️ Minor deviations / ❌ Major gaps

## Visualization and navigation

#	Criterion	How to check	Result
2.14	Visualization (treemap / sunburst / list)	How many visualization modes are available?	✅ 2+ / ⚠️ 1 / ❌ None
2.15	Folder drill-down navigation	Can you click a folder and drill down into it?	✅ Yes / ❌ No
2.16	Item info (size / date / path)	Does each item show full details?	✅ All three / ⚠️ In part / ❌ None
2.17	Search by file/folder name	Is there a search or filter by name in the results?	✅ Yes / ❌ No

## Operations on results

#	Criterion	How to check	Result
2.18	Multi-selecting files	Can you select multiple items for an operation?	✅ Yes / ❌ No
2.19	Showing total size of selection	Can you see the total size of selected items?	✅ Yes / ❌ No

## Reliability

#	Criterion	How to check	Result
2.20	Correct symlink handling	The tool neither follows symlinks nor counts the target file twice.	✅ Yes / ❌ No

#	Criterion	How to check	Result
		Is it so?	
2.21	Unicode / special characters / long paths	Can it work with emoji, Cyrillic, paths ~900 characters long?	✅ Yes / ❌ No
2.22	Error message quality	Are errors clear? Can you keep working in case of partial failures?	✅ Yes / ⚠️ Partially / ❌ No

### Level 3: Nice to Have

Nice extras that improve the overall experience. Check for:

#	Feature	How to check
3.1	Network drive scanning (SMB)	Connect an SMB volume — does it see and scan it?
3.2	System area access with FDA	With FDA granted, does it show ~/Library and /Library?
3.3	Filtering by type and size	Can you filter results by type or size?
3.4	Sorting (size, name, date, type)	Can you sort the results?
3.5	Color coding in visualization	Are types/folders color-coded?
3.6	Reveal in Finder / Copy path	Can you open the file in Finder or copy its path?
3.7	Quick Look preview	Does Space bar or a button trigger a preview?
3.8	Move to... / Compress (alternatives)	Can you move to another folder or compress?

#	Feature	How to check
3.9	Undo and removal history	Is there an undo action or a log of removed files?
3.10	Scan exclusions (exclude list)	Can you specify folders or patterns to skip?
3.11	Priority settings / background scanning	Is there a background mode or priority setting?
3.12	Parallel scanning	Can it scan multiple volumes simultaneously?
3.13	Display customization (grouping, etc.)	Can you group by type or customize columns?
3.14	Logical / physical size toggle	Is there a toggle between logical and physical size?
3.15	Export results (CSV, JSON, PDF)	Can you export scan results?
3.16	Save/load scan results	Are results saved between sessions?
3.17	CLI / AppleScript / Automation	Is automation supported?
3.18	Keyboard navigation and shortcuts	Keyboard navigation, standard macOS shortcuts?
3.19	VoiceOver / accessibility	Is VoiceOver supported for visually impaired users?
3.20	Dark mode / System Appearance	System Settings → Appearance → Dark — does it switch?
3.21	Localization + macOS folder names	3+ languages, "Desktop" vs localized name?
3.22	Requests only necessary permissions	Only FDA, no Contacts/Calendar/Camera?

#	Feature	How to check
3.23	Stability on SMB disconnect	Is there no crash when the network connection drops?

## Test preparation

**⚠ Warning:** The tools you're testing may remove files, damage the file system, or break macOS. Before you start, create a full system backup (Time Machine or equivalent). Don't test on a production machine with real data.

### Step 1. Set up your test environment

1. Create a new macOS user or use a fresh session
2. Quit all unnecessary apps
3. Turn off Time Machine for the duration of the test
4. Open Activity Monitor to track resources

### Step 2. Make a note of the disk state

```
macOS version: _____  
Processor: Intel / Apple Silicon  
RAM: _____  
Disk type and capacity: _____  
diskutil info / → available: ____ / purgeable: ____  
tmutil listlocalsnapshots / → snapshots: ____  
iCloud optimization:  Yes /  No
```

### Step 3. Install the tool

1. Download and install the tool to be tested
2. Verify it is signed: `codesign -dv --verbose=2 /path/to/app.app`

3. Grant Full Disk Access: System Settings → Privacy & Security → Full Disk Access

4. Make a note of: name, version, source (App Store / website)

## Fair test rules

- Test under the same conditions for all tools
- Run 3 scans, make a note of the median time
- Before each run: `sudo purge` (flush file cache), wait 30 seconds
- Make sure Spotlight isn't indexing the test folder
- Don't run resource-heavy tasks during the test

## Test datasets

Create a folder `~/Disk_Space_Analyzer_Test_Files/` and prepare 4 datasets:

Dataset	Contents	Expected result	What it tests
<b>01 Basic</b>	~2,800 files, ~4.6 GB (documents, photos, videos, caches)	Folder sizes $\pm 5\%$ of ground truth	Accuracy, visualization, operations
<b>02 External</b>	~250 files, ~500 MB (copied to an external volume)	Sizes $\pm 5\%$ , hidden files visible	Source coverage, non-APFS
<b>03 APFS Traps</b>	~40 files, ~2.5 GB logical / ~350 MB physical	Clones, hard links, sparse — correct	APFS edge cases
<b>04 Stress</b>	~120,000 files, ~200 MB	All files found, no crashes	Performance, stability

### Dataset 03: APFS traps (in detail)

This is the key dataset to test accuracy:

Trap	What's created	Expected
<b>APFS clones</b>	<code>cp -c</code> files of 100 MB each	Logical 400 MB, physical ~100 MB
<b>Hard links</b>	Multiple names → same data	Don't count twice
<b>Sparse files</b>	Logical size > physical	Show actual on-disk size
<b>Symlinks</b>	Links to files and folders	Don't follow, don't count twice
<b>Mixed folder</b>	Clones + regular files	Correct total

**Note:** `du`, `stat`, and Finder DON'T see APFS clone sharing — they all show the logical size. This is standard macOS behavior, not a bug. Most tools will show the logical size — that's okay. The actual physical size can be measured via **diskutil info /** (available space difference).

## Performance baseline (SSD + Apple Silicon)

Dataset	Excellent	Acceptable	Unacceptable
01 Basic (~4.6 GB, ~2,800 files)	< 30 sec	< 90 sec	> 180 sec
02 External (~500 MB)	< 15 sec	< 45 sec	> 90 sec
03 APFS Traps (~40 files)	< 5 sec	< 15 sec	> 30 sec
04 Stress (~120K files)	< 3 min	< 10 min	> 20 min

*For Intel Macs, multiplying these values by 1.5–2x is acceptable.*

## Memory (RAM)

Level	Usage
Excellent	< 500 MB

Level	Usage
Acceptable	500 MB – 1 GB
Borderline	1 – 2 GB
Unacceptable	> 2 GB or crash

False positives and common testing mistakes.

### False positives

Not a red flag, but a serious downside:

Category	Error
False inflation	Counts iCloud cloud-only files as locally occupied space
False inflation	Sums up APFS clones as separate files (doubling/tripling)
False inflation	Counts hard links multiple times
False inflation	Follows symlinks and counts target files twice
False recommendations	Labels Application Support files as "junk"
Misleading	Shows "X GB available" without taking purgeable space into account
Misleading	After removal, shows "X GB freed up," but diskutil says otherwise

### Common testing mistakes

- Comparing App Store and non-App Store versions without taking the Sandbox into account
- Testing without Full Disk Access (incomplete results)
- One scan instead of 2 (scan times vary)

- Not to make a note of the disk state before the test (baseline)
- Not to turn off Time Machine (snapshots affect measurements)

## Testing procedure

Testing follows phases — groups of actions — not the criteria number order. Each phase covers specific criteria. All 54 criteria are distributed across 7 phases (0–6) with no gaps.

### Phase 0

## Preparation (Criteria 1.8, 1.9)

### 0.1. Signature check and installation

*Why it matters:* Unsigned tools, which Apple hasn't verified, may contain malicious code. Bundeware during installation is a sign of a shady developer.

1. `codesign -dv --verbose=2 /path/to/app.app` — signed?
2. `spctl --assess --verbose /path/to/app.app` — notarized?
3. Install the tool — any extra offers or ad pop-ups?
4. Check /Applications after installation — anything extra show up?

**1.8:** Signed and notarized / Unsigned

**1.9:** Clean install / Third-party software during installation

### 0.2. Monetization (transparency)

Check before you start testing

Question	Answer
Are the free version limitations clear BEFORE you start?	<input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
Is the price visible before you buy?	<input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No

Question	Answer
No "trap": scans for free, but charges for any further action without warning?	<input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No

**Phase 1**

## Scanning and performance (Criteria 1.2, 2.6–2.10)

### 1.1–1.4. Scanning test datasets

*Why it matters:* The tool should run stable and meet a reasonable deadline on all data types — from basic to stress.

For each dataset (Dataset 01–04):

1. Select the dataset folder in the analyzer and start the scan
2. Note down the time from start to finish (3 scans, the median)
3. Note down peak RAM from Activity Monitor
4. Note down whether there were any crashes or freezes.

Dataset	Time (sec)	Baseline	RAM (MB)	Crash
01 Basic				<input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
02 External				<input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
03 APFS Traps				<input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No
04 Stress				<input checked="" type="checkbox"/> Yes / <input checked="" type="checkbox"/> No

**1.2:**  No crash/freeze on any dataset /  Crash on any dataset

**2.6:**  Time within baseline /  Time outside baseline

**2.7:**  RAM < 1 GB /  > 1 GB

### 1.5. UI responsiveness

*Why it matters:* You should be able to see progress and interact with the tool during a long scan.

For each dataset (Dataset 01–04):

1. Check when scanning a Dataset 04: is there a progress bar, percentage, or file number?
2. Does it get stuck at 99%?
3. Can you click the interface without the beach ball showing up?

**2.8:**  Informative progress shown /  No progress

**2.10:**  UI stays responsive /  Beach ball or freeze

## 1.6. Pause/cancel scan

*Why it matters:* You should be able to stop or pause a long scan.

1. Start scanning Dataset 04
2. Is there a Pause button? Does it work?
3. Is there a Cancel/Stop button? Does it work?
4. After canceling, can you see partial results?

**2.9:**  Pause + cancel /  Cancel only /  Nothing

### Phase 2

## Analysis accuracy (Criteria 1.1, 2.11–2.13, 2.20, 2.21)

### 2.1. Ground truth — Dataset 01 **CRITICAL**

*Why it matters:* This is the main accuracy test. Folder sizes should match the known ground truth.

How to check:

1. Select Dataset\_01\_BasicDisk/ in the analyzer
2. For each top-level folder, compare the reported size with **ground\_truth.json**

Folder	Ground truth	Analyzer	Difference	±5%?
Documents/				
Photos/				
Videos/				
Applications/				
Caches/				
<b>TOTAL</b>				

3. Does the total value match the sum of subfolders?

1.1:  All folders ±5% /  At least one > ±5%

## 2.2. Ground truth — Dataset 02, external volume

*Why it matters:* The app should work correctly not just with APFS, but with ExFAT/HFS+ volumes too.

How to check:

1. Copy Dataset 02 to an external ExFAT or HFS+ volume
2. Select the external volume in the analyzer
3. Compare sizes with ground\_truth.json
4. Does it see hidden files (.dotfiles)? Does it display Unicode correctly?

2.11:  ±5% and sees everything /  ±10% /  > ±10% or missing items

## 2.3. APFS traps — Dataset 03

*Why it matters:* APFS has quirks (clones, sparse files, hard links) where logical and physical sizes can differ. Finder and du also show logical size — that's okay. But a good analyzer should explain the difference or offer switching between logical and physical size.

For each trap, note down the reported size and compare it with ground truth:

Trap	Logical	Physical	Analyzer	Rating
APFS clones				Excellent / Good / Acceptable / Poor
Hard links				
Sparse files				
Symlinks	Don't count twice			Correct / Double-counted
Mixed folder				

Scale:

1. **Excellent** — the tool shows physical size, explains the difference
2. **Good** — the tool shows logical size, but there's a logical/physical toggle
3. **Acceptable** — the tool shows logical size, it matches Finder's "Get Info"
4. **Poor** — the tool shows its own numbers that don't match Finder or du
5. **Fail** — crash, lag, absurd values

**2.12:**  Physical size or explanation /  Logical size as in Finder /  Own numbers or crash

**2.20:**  Symlinks handled correctly (no loops, no double-counting) /  Incorrect

## 2.4. Stress — Dataset 04

*Why it matters:* With a large number of files, the tool should maintain accuracy and correctly handle Unicode, special characters, and long paths.

1. Does the total file number match ground truth (~120,000)?
2. Does the total size match (~200 MB)?
3. Are all 1,000 subdirectories displayed?
4. Does it reach the 100th nesting level?

5. Are files with long paths (~900 characters) found?
6. Are files with special characters/emoji displayed without artifacts?

2.13:  Everything matches /  Minor deviations /  Major gaps

2.21:  Handles Unicode correctly /  No

### Phase 3

## Operation safety (Criteria 1.3–1.6, 2.18, 2.19, 2.22)

Use the Dataset 01 scan results.

### 3.1. Confirmation before removal **CRITICAL**

*Why it matters:* Accidental removal without confirmation is a direct threat to user data.

1. Select a file, click Remove
2. Does a confirmation appear? Does it show number, size, and destination?

1.3:  Confirmation appears /  The tool removes files immediately

### 3.2. Removal to Trash **CRITICAL**

*Why it matters:* Moving to Trash is your safety net against mistakes. Permanent removal by default is unacceptable.

1. Remove a file → check Trash
2. Default behavior: Trash or Permanent?

1.4:  Trash by default /  Permanent or no Trash option

### 3.3. Removal matches selection **CRITICAL**

*Why it matters:* Removing the wrong files is the most dangerous mistake an analyzer can make.

1. Select 3 files, keep in mind the names
2. Remove them → check in Finder: only those 3 removed? Everything else untouched?
3. Restore from Trash — do the files open?

1.5:  Exactly the selected files removed /  Mismatch

### 3.4. System file protection **CRITICAL**

*Why it matters:* Removing files from ~/Library/Preferences/ or /System can break macOS.

1. Scan the boot volume
2. Try to remove a file from ~/Library/Preferences/
3. Does the tool block, warn, or allow it without warning?

1.6:  The tool blocks or warns /  The tool allows removal without warning

### 3.5. File selection

*Why it matters:* You should be able to select multiple items and see their total size before removal.

1. Can you select multiple items (multi-select)?
2. Can you see the total size of the selected items before confirmation?

2.18:  Multi-select available /  No

2.19:  I can see the total size /  No

### 3.6. Removal error handling

*Why it matters:* When an error occurs (file locked, no access), the tool should make it clear and proceed with the rest.

1. Lock a file (Get Info → Locked)
2. Try to remove it through the tool
3. Is the message clear? Does it proceed with the remaining files?

2.22:  Clear errors + proceeds /  Crash or unclear

Phase 4

## Visualization, navigation, and UI (Criteria 2.14–2.17, 3.3–3.7)

Use the scan results from Dataset 01 and Dataset 04.

## 4.1. Visualization

*Why it matters:* Visualization lets you quickly see what's taking up space. Color coding helps distinguish data types.

1. Available modes: treemap, sunburst, list, bar chart?
2. Are types/folders distinguished by color?
3. Does it work with a large number of items (Dataset 04)?

**2.14:**  2+ modes /  1 mode /  Text list only

**3.5:**  Color coding available /  No

## 4.2. Folder drill-down navigation

*Why it matters:* Drill-down is the main way to find what's specifically eating up space.

1. Click a folder — can you drill down into it?
2. Is there back navigation / breadcrumbs?
3. Do proportions update when entering a subfolder?
4. Does it work at 100-level depth (Dataset 04)?

**2.15:**  Drill-down with updated proportions /  No

## 4.3. Information on items

*Why it matters:* To decide whether to remove something, you need to see its size, path, and date.

1. Does each item show: size, full path, date modified?

**2.16:**  All three (size + path + date) /  Some of them /  None

## 4.4. Search

*Why it matters:* With thousands of files, you need a search to find specific items quickly.

1. Is there a search by file/folder name in the results?
2. Does the search return correct results?

2.17:  Search available /  No

## 4.5. Filters and sorting

1. Filtering: by type (photos, videos, documents)? By size (> 100 MB)?
2. Sorting: by size, name, date, type?

3.3:  Filtering available /  No

3.4:  Sorting available /  No

## 4.6. System integration

1. Reveal in Finder / Copy path?
2. Quick Look (Space bar or button)?

3.6:  Reveal in Finder or Copy path available /  No

3.7:  Quick Look works /  No

### Phase 5

## Source coverage and permissions (Criteria 2.1–2.5, 1.7, 3.1, 3.2, 3.22, 3.23)

### 5.1. Boot APFS volume

*Why it matters:* The main disk is the primary analysis target for the vast majority of users.

1. Can the tool scan the boot volume (/)?
2. Does it show the correct total size?

2.1:  The tool scans correctly /  No

### 5.2. External volumes

*Why it matters:* Users often store data on external drives with file systems other than APFS.

1. Connect an ExFAT volume — does it see and scan it?

2. Connect an HFS+ volume — does it see and scan it?

2.2:  ExFAT + HFS+ /  Only one /  Neither

### 5.3. Volume/folder selection

1. Does it show a list of available volumes?

2. Can you scan a specific folder (not the whole volume)?

2.3:  Volume and folder selection available /  No

### 5.4. iCloud Drive

*Why it matters:* If the tool treats cloud-only files as locally occupied space, you get an inflated result.

1. Does it distinguish between cloud-stored and locally downloaded files?

2. Doesn't it count cloud-only files as disk space used?

3. Does it work correctly with Desktop & Documents under iCloud sync?

2.4:  The tool distinguishes and counts them correctly /  Partially /  No

### 5.5. Full Disk Access

*Why it matters:* Without FDA, the tool can't see `~/Library`, Mail, Safari, and other protected areas. You need to understand why the results are incomplete.

1. Revoke FDA, restart the tool

2. Scan the boot volume

3. Behavior: clear warning + instructions? Or crash/silence?

4. **Important:** re-enable FDA after the test!

2.5:  The tool warns + explains /  Crash or silence

### 5.6. Network drives

1. Connect an SMB volume — does it see and scan it?

2. Disconnect the network during a scan — crash or graceful exit?

3.1:  The tool scans SMB /  No

3.23:  Stable when disconnecting /  Crash

## 5.7. System areas

1. With the FDA, does it show `~/Library` and `/Library` in the results?

3.2:  The tool shows them /  No

## 5.8. Network activity **CRITICAL**

*Why it matters:* A disk space analyzer can see ALL your files. Transmitting that data is a serious privacy violation.

1. Little Snitch or a firewall: what connections does it make? What does it send?

2. Is there a privacy policy? Does it describe what data is collected?

3. Can it be used completely offline?

1.7:  No data leaks /  It sends files/paths

## 5.9. Permissions

1. Does it only request FDA, or also Contacts/Calendar/Camera?

3.22:  Only necessary permissions /  Unnecessary permissions

## Phase 6

## Bonus features (Criteria 3.8–3.21)

For each item: feature is available and works → pass, otherwise → fail.

### 6.1 Alternative actions (3.8)

Is there Move to... or Compress?

### 6.2 Undo and history (3.9)

Is there an undo for the last action or a removal log?

### **6.3 Scan exclusions (3.10)**

Can you specify folders or patterns (\*.log, .DS\_Store) to skip?

### **6.4 Priority and background scanning (3.11)**

Is there a background mode or priority setting (low / background)?

### **6.5 Parallel scanning (3.12)**

Can it scan multiple volumes at the same time?

### **6.6 Display customization (3.13)**

Grouping by type, customizable columns?

### **6.7 Logical / Physical size (3.14)**

Is there a toggle between logical and physical size? Test with Dataset 03 (APFS clones).

### **6.8 Export results (3.15)**

Can you export to CSV, JSON, PDF, or text?

### **6.9 Scan saving (3.16)**

Quit and reopen the tool — are the results still there?

### **6.10 CLI / automation (3.17)**

Is there CLI, AppleScript, or Shortcuts support?

### **6.11 Keyboard navigation (3.18)**

Keyboard navigation, hotkeys (⌘A, ⌘C, ⌘Delete)?

### **6.12 VoiceOver / accessibility (3.19)**

Cmd+F5, try navigating — are the main items announced?

### **6.13 Dark mode (3.20)**

System Settings → Appearance → Dark — does it switch?

## 6.14 Localization (3.21)

3+ languages? Does the tool correctly display localized folder names vs “Desktop”?

## Scoring formula

### Level 1 (×3)

#	Criterion	Result
1.1	Basic analysis accuracy (±5%)	
1.2	Stability (no crashes on Dataset 01)	
1.3	Confirmation before removal	
1.4	Removal to Trash by default	
1.5	Removal matches selection	
1.6	System file protection	
1.7	The tool doesn't send data to external servers	
1.8	Signed and notarized by Apple	
1.9	The tool doesn't install third-party software	
	<b>L1 total:</b>	___ / 9
	<b>L1 points:</b>	___ × 3 = ___ / 27

*If any L1 criterion fails → the tool is automatically "Not recommended."*

### Level 2 (×2)

Calculate the number of passes from criteria 2.1–2.22:

L2 total	___ / 22
L2 points	___ × 2 = ___ / 44

Note: ⚠ counts as 0.5 points

### Level 3 (×1)

Calculate the number of passes from criteria 3.1–3.23:

L3 total	___ / 23
L3 points	___ × 1 = ___ / 23

### Total

L1: \_\_\_ + L2: \_\_\_ + L3: \_\_\_ = TOTAL: \_\_\_ / 94

Score	Recommendation
73–94	✅ Recommended
47–72	⚠ With caveats
< 47 or any L1 failure	❌ Not recommended

### Report template

```

=====
DISK SPACE ANALYZER EVALUATION REPORT
=====

TOOL
Name: _____

```

Version: \_\_\_\_\_

Source: App Store / Website

#### TEST ENVIRONMENT

macOS: \_\_\_\_\_  
Processor: Intel / Apple Silicon  
RAM: \_\_\_\_\_  
Disk type/capacity: \_\_\_\_\_  
Test date: \_\_\_\_\_

---

#### RESULTS BY LEVEL

Level 1 (Must Have): \_\_\_ / 9 x3 = \_\_\_ / 27  
Level 2 (Should Have): \_\_\_ / 22 x2 = \_\_\_ / 44  
Level 3 (Nice to Have): \_\_\_ / 23 x1 = \_\_\_ / 23

---

TOTAL: \_\_\_ / 94

---

#### PERFORMANCE

01 Basic: \_\_\_\_\_ sec / \_\_\_\_\_ MB RAM  
02 External: \_\_\_\_\_ sec / \_\_\_\_\_ MB RAM  
03 APFS: \_\_\_\_\_ sec / \_\_\_\_\_ MB RAM  
04 Stress: \_\_\_\_\_ sec / \_\_\_\_\_ MB RAM

---

#### RECOMMENDATION

RECOMMENDED (73–94 points, no L1 failures)  
 WITH CAVEATS (47–72 points)  
 NOT RECOMMENDED (<47 points or L1 failure)

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#### NOTES

-----  
Strengths: -----  
Key weaknesses: -----  
Blockers: -----

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=====

## Evaluation calculator

We've built an interactive calculator that automates the entire process:

[Open the evaluation calculator](#)

The calculator will:

- Walk you through all 54 criteria
- Calculate the score automatically
- Show the recommendation
- Save your progress (you can come back later)
- Export results to a file

## Download the full methodology

For printing and offline use:

[Download DSA\\_QuickTest.zip](#)

Includes:

- All 54 criteria with detailed instructions
- Test dataset creation scripts
- Final report template
- CSV template for results

## Frequently asked questions

### **Why do you publish this methodology if you develop a Disk Space Analyzer yourself?**

We believe transparency builds trust. A transparent methodology allows anyone to verify our statements. If our product is good, it will show. If not, we'll learn what needs to be improved.

### **Why is the maximum 94 points and not 100?**

This is a result of the formula:  $(9 \times 3) + (22 \times 2) + (23 \times 1) = 27 + 44 + 23 = 94$ . We didn't want to round it up artificially. That would break the link between the number of criteria and their weights.

### **Why are APFS traps a separate test dataset?**

Because APFS clones, sparse files, and purgeable space create a gap between logical and physical size. Even Finder and `du` show the logical size — that's standard macOS behavior. A separate dataset allows you to check whether the analyzer explains this difference to users, rather than penalizing it for behaving like Finder.

### **Can this methodology be used for other categories of tools?**

In part. The removal safety criteria (L1) and UX criteria (L3) apply to any cleaning utilities. The specific criteria (APFS clones, purgeable space, Dataset 03) apply only to disk space analyzers.

### **Can I suggest a new criterion?**

Yes! Email us at [support@nektony.com](mailto:support@nektony.com). We'll consider your suggestion for the next version.

## Disclaimer

This methodology is provided "**as is**" for reference only.

## Limitations

- Test results may vary depending on the tool version, macOS version, hardware configuration, and test data.
- The methodology is not exhaustive and does not cover all possible use cases.
- Scores and recommendations are advisory in nature.

## Testing risks

- The tools you're testing may remove user files, damage the file system, or break macOS.
- A malfunctioning test tool can lead to irreversible data loss.
- **Testing on a production machine with real data is risky. Use a dedicated test environment or a backup (Time Machine).**

## Liability

- Nektony shall not be liable for any damage resulting from testing under this methodology, including but not limited to: data loss, system damage, disruption of tools or hardware.
- The user shall be solely liable for choosing their software, testing it, and for the consequences of using it.
- **Before you start testing, we strongly recommend creating a full system backup (Time Machine or equivalent).**

## Conflict of interest

Nektony develops a disk space analyzer — a product in the category being tested. We publish this methodology transparently and apply it to our own products. Independent

verification of results is welcome.

## License

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## Related materials

- [Disk Space Analyzer evaluation calculator](#)
- [Disk Space Analyzer by Nektony](#)

Found an issue? Want to suggest a new criterion?

**Email:** [support@nektony.com](mailto:support@nektony.com)   **Website:** [nektony.com](https://nektony.com)

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