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RAR Files: How to Open, Extract, and Check Archives Safely

A RAR file is a compressed archive, not malware by itself. Learn how to open single and multi-part archives safely, handle passwords, recognize risky contents, and update vulnerable extraction tools.

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CONTENTS

In this guide

01 RAR vs ZIP at a glance
02 How to open a RAR file safely
03 Can a RAR file contain malware?
04 Are password-protected RAR files safe?
05 How to extract a multi-part RAR archive
06 What is a self-extracting RAR archive?
07 RAR4, RAR5, and compatibility
08 Why a RAR file will not open
09 Quick RAR safety checklist
10 Frequently asked questions
11 References

A RAR file is a compressed archive that can hold one file, many files, or an entire folder structure. The `.rar` extension does not mean the file is malware. Risk depends on where the archive came from, which extraction software processes it, and what you open after extraction.

RAR is the native archive format used by WinRAR. It is known for efficient compression, solid archives, recovery records, encryption, and convenient multi-volume sets. Those features are useful for backups and large downloads, but they can also hide the contents of an untrusted attachment until you enter a password or unpack it.

01 RAR vs ZIP at a glance

Feature	RAR	ZIP
Typical extension	`.rar`	`.zip`
Opening support	Usually needs WinRAR, 7-Zip, or another compatible app	Built into most desktop and mobile operating systems
Multi-part archives	Common and clearly numbered, such as `.part1.rar`	Supported by some tools, but less consistent
Recovery data	Can include recovery records or recovery volumes	Not a standard ZIP feature
Encryption	RAR5 supports AES-256 and optional file-name encryption	Security depends on the ZIP method and tool used

Neither format is inherently safe or unsafe. Both are containers, and both can carry documents, scripts, installers, or malware.

02 How to open a RAR file safely

1. **Confirm the source.** Make sure you expected the archive and can verify the sender or download site. Treat a surprise invoice, job application, crack, game cheat, or password sent in the same unsolicited message as suspicious.
2. **Use a current extraction tool.** Download WinRAR or another established RAR-compatible program from its official site or trusted package manager. Archive parsers have had exploitable bugs, so an old extractor can create risk before you run any extracted file.
3. **List the contents first.** Open the archive in the extraction app and inspect names, types, and expected sizes. Turn on file-name extensions in Windows so `invoice.pdf.exe` is not mistaken for a PDF.
4. **Extract into a new folder.** Do not unpack an untrusted archive directly into Desktop, Documents, a shared drive, a web root, or an application folder. A dedicated folder makes unexpected files easier to see and delete.
5. **Scan the extracted files.** Password protection may prevent mail gateways or cloud scanners from seeing the contents. Scan after extraction and before opening documents, scripts, shortcuts, or executables.
6. **Open only what you expected.** Be especially cautious with `.exe`, `.msi`, `.scr`, `.bat`, `.cmd`, `.js`, `.lnk`, macro-enabled Office files, and disk images.

03 Can a RAR file contain malware?

Yes. A RAR archive can package any file type, including a Trojan or script. Merely downloading an archive normally does not execute its contents, but opening or extracting a specially crafted archive with vulnerable software can be enough to trigger an extraction flaw. Running an extracted program or enabling document macros creates a separate and usually greater risk.

Action	What changes	Main risk
Download only	The archive is stored on disk	Usually low if it is not processed, but keep it unopened until verified

Action	What changes	Main risk
Browse the archive	The extractor parses file metadata	A vulnerable parser may mishandle a crafted archive
Extract files	Files and folders are written to disk	Path traversal, symbolic links, misleading names, or extremely large output
Open an extracted document	The associated application parses active content	Exploits, macros, phishing forms, or external links
Run an extracted program	Code executes with your permissions	Malware installation, credential theft, persistence, or ransomware

Current software matters. RARLAB released WinRAR 7.23 on June 30, 2026, and its change log documents fixes for a heap overflow in RAR5 recovery-volume reconstruction and a symbolic-link condition that could contribute to path traversal. Check the vendor's download page rather than assuming an older installed copy is still safe.

04 Are password-protected RAR files safe?

A password encrypts the archive; it does not verify the sender or make the contents harmless. Attackers often password-protect attachments to prevent automated email scanning, then put the password in the same message. After you enter it, the extracted payload can still be malware.

- Verify the sender through a separate channel if the archive was unexpected.
- Do not disable antivirus protection because an extraction tool reports an error.
- Scan the files after extraction, when the security tool can see their contents.
- Do not upload confidential archives to random online unlock or viewer sites.
- For archives you create, use a long unique password and enable file-name encryption if names themselves are sensitive.

Google Chrome can ask for an archive password during its enhanced download checks so the contents can be scanned. Decide whether that cloud-scanning workflow is appropriate for the sensitivity of your files; business or private data may require an approved local tool instead.

05 How to extract a multi-part RAR archive

A large archive may be split into volumes named `backup.part1.rar`, `backup.part2.rar`, and so on. Older sets may use `.rar`, `.r00`, `.r01`, and similar names.

1. Download every volume and place them in the same folder.
2. Do not rename individual parts unless you know the complete original naming scheme.
3. Start extraction from `.part1.rar`, or from the `.rar` file in an older set.
4. Let the extraction program read the remaining volumes automatically.

An error such as "next volume is required" or "unexpected end of archive" usually means a part is missing, incomplete, damaged, or named incorrectly. Re-download the named volume first. Recovery records can repair some damage, but they cannot replace arbitrary missing content unless the creator supplied enough recovery data.

06 What is a self-extracting RAR archive?

A self-extracting archive, often called an SFX archive, combines compressed data with executable extraction code. On Windows it normally ends in `.exe`, not `.rar`. It may be legitimate, but double-clicking it runs a program. Treat an unknown SFX archive like any other executable: verify its source and digital signature, scan it, and do not launch it merely to view the file list.

07 RAR4, RAR5, and compatibility

RAR5 is the newer format family introduced with WinRAR 5.0. It supports features including AES-256 encryption, stronger integrity information, larger dictionaries, and modern recovery data. An old extraction app may report "unknown format" or fail to unpack an archive created with newer compression settings. Update the app from its official source before concluding that the archive is

corrupted.

The label RAR5 describes the archive format, not a safety rating. A valid RAR4 or RAR5 archive can still contain dangerous files, and a malformed archive can target bugs in the program that reads it.

08 Why a RAR file will not open

- **Wrong password:** check capitalization and keyboard layout; do not use password-cracking sites for private data.
- **Missing volume:** collect all numbered parts and begin with the first.
- **Incomplete download:** compare the file size or checksum with the publisher's value and download it again.
- **Unsupported format:** update the extraction tool or try another reputable implementation.
- **Damaged archive:** test the archive and use its recovery record if one exists.
- **False extension:** a renamed HTML page or executable is not converted into a RAR archive just because its name ends in `.rar`.

09 Quick RAR safety checklist

- You expected the archive and verified its source.
- Your extraction software is current.
- All file extensions are visible before you open anything.
- You extract into a separate folder with enough free space.
- You scan password-protected contents after extraction.
- You do not run scripts, shortcuts, or executables that were not expected.
- You avoid public online tools for confidential archives.
- You delete the archive and extracted folder if the source cannot be trusted.

10 Frequently asked questions

Does changing .rar to .zip convert the archive?

No. Renaming an extension does not change the internal format. Use an extraction tool to unpack the RAR file, then create a new ZIP archive if you need broader compatibility.

Can Windows open RAR files without WinRAR?

Support depends on the Windows release and the archive's features. Even when File Explorer can read a RAR file, a current dedicated tool may handle encrypted, solid, recovery, or multi-volume archives more reliably.

Can an antivirus scan a RAR file?

Many security tools can inspect ordinary archives, but encryption can hide their contents. Deeply nested, oversized, damaged, or unusual archives may also exceed scanning limits. Scan the extracted files and do not treat a single clean result as proof of trust.

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- RARLAB: Latest WinRAR changes
- Microsoft: CVE-2023-38831 archive exploit detection
- Google Chrome Help: Download protection and encrypted archives

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