

Framework

Apple Archive

Perform multithreaded lossless compression of directories, files, and data.

iOS 14.0+ | iPadOS 14.0+ | Mac Catalyst 14.0+ | macOS 11.0+ | tvOS 14.0+ | visionOS 1.0+ | watchOS 7.0+

Overview

Apple Archive provides fast compression that includes file attributes, such as, ownership, permissions, flags, times, extended attributes, and error correction. Apple Archive offers these features:

- Multithreaded processing that uses all cores, is energy efficient, and yields faster results
- An ability to transport files and their attributes and use Apple File System (APFS) features when they're available, for example, filesystem compression, full clones, and sparse files
- Flexible encoding formats, so you can use archives, for example, for error correction, digests, manifests, and external data storage
- API support for in-memory archive processing, streaming access, random access, and back-to-back archive and extraction

Topics

Apple Archive essentials

Compressing single files

Compress a single file and store the result on the file system.

Decompressing single files

Recreate a single file from a compressed file.

- 📄 Compressing file system directories
Compress the contents of an entire directory and store the result on the file system.
- 📄 Decompressing and extracting an archived directory
Recreate an entire file system directory from an archive file.
- 📄 Compressing and saving a string to the file system
Compress the contents of a Unicode string and store the result on the file system.
- 📄 Decompressing and Parsing an Archived String
Recreate a string from an archive file.

Apple Encrypted Archive essentials

- { } Encrypting and Decrypting a String
Encrypt the contents of a string and save the result to the file system, then decrypt and recreate the string from the archive file using Apple Encrypted Archive.
- { } Encrypting and Decrypting a Single File
Encrypt a single file and save the result to the file system, then decrypt and recreate the original file from the archive file using Apple Encrypted Archive.
- { } Encrypting and Decrypting Directories
Compress and encrypt the contents of an entire directory or decompress and decrypt an archived directory using Apple Encrypted Archive.

`class ArchiveEncryptionContext`

An object that encapsulates all parameters, keys, and data necessary to open an encrypted archive for both encryption and decryption streams.

Apple Archive headers

`class ArchiveHeader`

An AppleArchive entry header.

Apple Archive streams

`protocol ArchiveStreamProtocol`

A set of methods that defines the interface for using an archive stream that reads from and writes to data blobs.

```
class ArchiveStream
```

An archive stream that reads from and writes to data blobs

```
protocol ArchiveByteStreamProtocol
```

A set of methods that defines the interface for using an archive stream that reads from and writes to buffers.

```
class ArchiveByteStream
```

An archive stream that reads from and writes to buffers.

Apple Archive errors

```
enum ArchiveError
```

Error codes for AppleArchive.

Constants

```
var APPLE_ARCHIVE_API_VERSION: Int32
```

The version of the framework at compile time.

Reference

☰ Apple Archive structures

See Also

Related Documentation

📄 About Apple File System

Use high-level APIs to get the most out of Apple File System.