

[Apple CryptoKit / ChaChaPoly](#)

Enumeration

# ChaChaPoly

An implementation of the ChaCha20-Poly1305 cipher.

iOS 13.0+ | iPadOS 13.0+ | Mac Catalyst 13.0+ | macOS 10.15+ | tvOS 13.0+ | visionOS 1.0+ | watchOS 6.0+

enum ChaChaPoly

## Topics

### Storing the output

struct SealedBox

A secure container for your data that you access using a cipher.

### Getting a nonce

struct Nonce

A value used once during a cryptographic operation and then discarded.

### Securing the plaintext message

```
static func seal<Plaintext>(Plaintext, using: SymmetricKey, nonce: ChaChaPoly.Nonce?) throws -> ChaChaPoly.SealedBox
```

Secures the given plaintext message with encryption and an authentication tag.

```
static func seal<Plaintext, AuthenticatedData>(Plaintext, using:  
SymmetricKey, nonce: ChaChaPoly.Nonce?, authenticating: Authenticated  
Data) throws -> ChaChaPoly.SealedBox
```

Secures the given plaintext message with encryption and an authentication tag that covers both the encrypted data and additional data.

## Decrypting and verifying the message

```
static func open(ChaChaPoly.SealedBox, using: SymmetricKey) throws ->  
Data
```

Decrypts the message and verifies its authenticity.

```
static func open<AuthenticatedData>(ChaChaPoly.SealedBox, using:  
SymmetricKey, authenticating: AuthenticatedData) throws -> Data
```

Decrypts the message and verifies the authenticity of both the encrypted message and additional data.

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## Relationships

### Conforms To

Sendable, SendableMetatype

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### See Also

#### Ciphers

enum AES

A container for Advanced Encryption Standard (AES) ciphers.