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***Rocky Enterprise Linux 9.2 Manual Pages on command 'EVP\_sha3\_384.3ossl'***

***\$ man EVP\_sha3\_384.3ossl***

EVP\_SHA3\_224(3ossl)            OpenSSL            EVP\_SHA3\_224(3ossl)

**NAME**

EVP\_sha3\_224, EVP\_sha3\_256, EVP\_sha3\_384, EVP\_sha3\_512, EVP\_shake128,  
EVP\_shake256 - SHA-3 For EVP

**SYNOPSIS**

```
#include <openssl/evp.h>
```

```
const EVP_MD *EVP_sha3_224(void);
```

```
const EVP_MD *EVP_sha3_256(void);
```

```
const EVP_MD *EVP_sha3_384(void);
```

```
const EVP_MD *EVP_sha3_512(void);
```

```
const EVP_MD *EVP_shake128(void);
```

```
const EVP_MD *EVP_shake256(void);
```

**DESCRIPTION**

SHA-3 (Secure Hash Algorithm 3) is a family of cryptographic hash functions standardized in NIST FIPS 202, first published in 2015. It is based on the Keccak algorithm.

`EVP_sha3_224()`, `EVP_sha3_256()`, `EVP_sha3_384()`, `EVP_sha3_512()`

The SHA-3 SHA-3-224, SHA-3-256, SHA-3-384, and SHA-3-512 algorithms respectively. They produce 224, 256, 384 and 512 bits of output from a given input.

`EVP_shake128()`, `EVP_shake256()`

The SHAKE-128 and SHAKE-256 Extendable Output Functions (XOF) that can generate a variable hash length.

Specifically, `EVP_shake128` provides an overall security of 128 bits, while `EVP_shake256` provides that of 256 bits.

## RETURN VALUES

These functions return a `EVP_MD` structure that contains the implementation of the message digest. See `EVP_MD_meth_new(3)` for details of the `EVP_MD` structure.

## CONFORMING TO

NIST FIPS 202.

## SEE ALSO

`evp(7)`, `EVP_DigestInit(3)`

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