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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'EVP_sha3_512.3oss1' command

\$ man EVP_sha3_512.3oss1

EVP_SHA3_224(3oss1) OpenSSL EVP_SHA3_224(3oss1)

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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