## NAME

PKCS12_gen_mac, PKCS12_setup_mac, PKCS12_set_mac, PKCS12_verify_mac - Functions to create and manipulate a PKCS#12 structure

## SYNOPSIS

```
#include <openssl/pkcs12.h>

int PKCS12_gen_mac(PKCS12 *p12, const char *pass, int passlen,
                   unsigned char *mac, unsigned int *maclen);
int PKCS12_verify_mac(PKCS12 *p12, const char *pass, int passlen);
int PKCS12_set_mac(PKCS12 *p12, const char *pass, int passlen,
                   unsigned char *salt, int saltlen, int iter,
                   const EVP_MD *md_type);
int PKCS12_setup_mac(PKCS12 *p12, int iter, unsigned char *salt,
                     int saltlen, const EVP_MD *md_type);
```

## DESCRIPTION

**PKCS12_gen_mac()** generates an HMAC over the entire PKCS#12 object using the supplied password along with a set of already configured parameters. The default key generation mechanism used is PKCS12KDF.

**PKCS12_verify_mac()** verifies the PKCS#12 object's HMAC using the supplied password.

**PKCS12_setup_mac()** sets the MAC part of the PKCS#12 structure with the supplied parameters.

**PKCS12_set_mac()** sets the MAC and MAC parameters into the PKCS#12 object.

*pass* is the passphrase to use in the HMAC. *salt* is the salt value to use, *iter* is the iteration count and *md_type* is the message digest function to use.

## NOTES

If *salt* is NULL then a suitable salt will be generated and used.

If *iter* is 1 then an iteration count will be omitted from the PKCS#12 structure.

**PKCS12_gen_mac()**, **PKCS12_verify_mac()** and **PKCS12_set_mac()** make assumptions regarding the encoding of the given passphrase. See **passphrase-encoding**(7) for more information.

## RETURN VALUES

All functions return 1 on success and 0 if an error occurred.

## CONFORMING TO

IETF RFC 7292 (<https://tools.ietf.org/html/rfc7292>)

## SEE ALSO

**d2i_PKCS12**(3), **EVP_KDF-PKCS12KDF**(7), **PKCS12_create**(3), **passphrase-encoding**(7)

## COPYRIGHT