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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'PKCS7_add_certificate.3ossl' command

$ man PKCS7_add_certificate.3ossl

PKCS7_SIGN_ADD_SIGNER(3ossl) OpenSSL PKCS7_SIGN_ADD_SIGNER(3ossl)

NAME

PKCS7_sign_add_signer, PKCS7_add_certificate, PKCS7_add_crl - add information to PKCS7 structure

SYNOPSIS

```
#include <openssl/pkcs7.h>

PKCS7_SIGNER_INFO *PKCS7_sign_add_signer(PKCS7 *p7, X509 *signcert,
                                         EVP_PKEY *pkey, const EVP_MD *md, int flags);
int PKCS7_add_certificate(PKCS7 *p7, X509 *cert);
int PKCS7_add_crl(PKCS7 *p7, X509_CRL *crl);
```

DESCRIPTION

PKCS7_sign_add_signer() adds a signer with certificate signcert and private key pkey using message digest md to a PKCS7 signed data structure p7.

The PKCS7 structure should be obtained from an initial call to PKCS7_sign() with the flag PKCS7_PARTIAL set or in the case or re-signing a valid PKCS#7 signed data structure.

If the md parameter is NULL then the default digest for the public key algorithm will be used.

Unless the PKCS7_REUSE_DIGEST flag is set the returned PKCS7 structure is not complete and must be finalized either by streaming (if applicable) or a call to PKCS7_final().

NOTES

The main purpose of this function is to provide finer control over a PKCS#7 signed data structure where the simpler PKCS7_sign() function defaults are not appropriate. For example if multiple signers or non default digest algorithms are needed.

Any of the following flags (ored together) can be passed in the flags parameter.

If PKCS7_REUSE_DIGEST is set then an attempt is made to copy the content digest value from the PKCS7 structure: to add a signer to an existing structure. An error occurs if a matching digest value cannot be found to copy. The returned PKCS7 structure will be valid and finalized when this flag is set.

If PKCS7_PARTIAL is set in addition to PKCS7_REUSE_DIGEST then the PKCS7_SIGNER_INO structure will not be finalized so additional attributes can be added. In this case an explicit call to PKCS7_SIGNER_INFO_sign() is needed to finalize it.

If PKCS7_NOCERTS is set the signer's certificate will not be included in the PKCS7 structure, the signer's certificate must still be supplied in the signcert parameter though. This can reduce the size of the signature if the signers certificate can be obtained by other means: for example a previously signed message.

The signedData structure includes several PKCS#7 authenticatedAttributes including the signing time, the PKCS#7 content type and the supported list of ciphers in an SMIMECapabilities attribute. If PKCS7_NOATTR is set then no authenticatedAttributes will be used. If PKCS7_NOSMIMECAP is set then just the SMIMECapabilities are omitted.

If present the SMIMECapabilities attribute indicates support for the following algorithms: triple DES, 128 bit RC2, 64 bit RC2, DES and 40 bit RC2. If any of these algorithms is disabled then it will not be included.

PKCS7_sign_add_signers() returns an internal pointer to the PKCS7_SIGNER_INFO structure just added, which can be used to set additional attributes before it is finalized.

PKCS7_add_certificate() adds to the PKCS7 structure p7 the certificate cert, which may be an end-entity (signer) certificate or a CA certificate useful for chain building. This is done internally by PKCS7_sign_ex(3) and similar signing functions. It may have to be used before calling PKCS7_verify(3) in order to provide any missing certificate(s) needed for verification.

PKCS7_add_crl() adds the CRL crl to the PKCS7 structure p7. This may be called to provide certificate status information to be included when signing or to use when verifying the PKCS7 structure.

RETURN VALUES

PKCS7_sign_add_signers() returns an internal pointer to the PKCS7_SIGNER_INFO structure just added or NULL if an error occurs.

PKCS7_add_certificate() and PKCS7_add_crl() return 1 on success, 0 on error.

SEE ALSO

ERR_get_error(3), PKCS7_sign_ex(3), PKCS7_final(3), PKCS7_verify(3)

HISTORY

The PPKCS7_sign_add_signer() function was added in OpenSSL 1.0.0.

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