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### ***Rocky Enterprise Linux 9.2 Manual Pages on command 'X509\_get\_pubkey.3ossl'***

***\$ man X509\_get\_pubkey.3ossl***

X509\_GET\_PUBKEY(3ossl)      OpenSSL      X509\_GET\_PUBKEY(3ossl)

#### NAME

X509\_get\_pubkey, X509\_get0\_pubkey, X509\_set\_pubkey,  
X509\_get\_X509\_PUBKEY, X509\_REQ\_get\_pubkey, X509\_REQ\_get0\_pubkey,  
X509\_REQ\_set\_pubkey, X509\_REQ\_get\_X509\_PUBKEY - get or set certificate  
or certificate request public key

#### SYNOPSIS

```
#include <openssl/x509.h>

EVP_PKEY *X509_get_pubkey(X509 *x);
EVP_PKEY *X509_get0_pubkey(const X509 *x);
int X509_set_pubkey(X509 *x, EVP_PKEY *pkey);
X509_PUBKEY *X509_get_X509_PUBKEY(const X509 *x);
EVP_PKEY *X509_REQ_get_pubkey(X509_REQ *req);
EVP_PKEY *X509_REQ_get0_pubkey(X509_REQ *req);
int X509_REQ_set_pubkey(X509_REQ *x, EVP_PKEY *pkey);
X509_PUBKEY *X509_REQ_get_X509_PUBKEY(X509_REQ *x);
```

#### DESCRIPTION

X509\_get\_pubkey() attempts to decode the public key for certificate x.

If successful it returns the public key as an `EVP_PKEY` pointer with its reference count incremented: this means the returned key must be freed up after use. `X509_get0_pubkey()` is similar except it does not increment the reference count of the returned `EVP_PKEY` so it must not be freed up after use.

`X509_get_X509_PUBKEY()` returns an internal pointer to the `X509_PUBKEY` structure which encodes the certificate of `x`. The returned value must not be freed up after use.

`X509_set_pubkey()` attempts to set the public key for certificate `x` to `pkey`. The key `pkey` should be freed up after use.

`X509_REQ_get_pubkey()`, `X509_REQ_get0_pubkey()`, `X509_REQ_set_pubkey()` and `X509_REQ_get_X509_PUBKEY()` are similar but operate on certificate request `req`.

## NOTES

The first time a public key is decoded the `EVP_PKEY` structure is cached in the certificate or certificate request itself. Subsequent calls return the cached structure with its reference count incremented to improve performance.

## RETURN VALUES

`X509_get_pubkey()`, `X509_get0_pubkey()`, `X509_get_X509_PUBKEY()`, `X509_REQ_get_pubkey()` and `X509_REQ_get_X509_PUBKEY()` return a public key or `NULL` if an error occurred.

`X509_set_pubkey()` and `X509_REQ_set_pubkey()` return 1 for success and 0 for failure.

## SEE ALSO

`d2i_X509(3)`, `ERR_get_error(3)`, `X509_CRL_get0_by_serial(3)`,  
`X509_get0_signature(3)`, `X509_get_ext_d2i(3)`,  
`X509_get_extension_flags(3)`, `X509_get_subject_name(3)`,  
`X509_get_version(3)`, `X509_NAME_add_entry_by_txt(3)`,  
`X509_NAME_ENTRY_get_object(3)`, `X509_NAME_get_index_by_NID(3)`,  
`X509_NAME_print_ex(3)`, `X509_new(3)`, `X509_sign(3)`, `X509V3_get_d2i(3)`,  
`X509_verify_cert(3)`

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