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## **Red Hat Enterprise Linux Release 9.2 Manual Pages on 'X509\_NAME\_hash\_ex.3ossl' command**

**\$ man X509\_NAME\_hash\_ex.3ossl**

X509\_GET\_SUBJECT\_NAME(3ossl)    OpenSSL    X509\_GET\_SUBJECT\_NAME(3ossl)

### NAME

X509\_NAME\_hash\_ex, X509\_NAME\_hash, X509\_get\_subject\_name,  
X509\_set\_subject\_name, X509\_subject\_name\_hash, X509\_get\_issuer\_name,  
X509\_set\_issuer\_name, X509\_issuer\_name\_hash, X509\_REQ\_get\_subject\_name,  
X509\_REQ\_set\_subject\_name, X509\_CRL\_get\_issuer,  
X509\_CRL\_set\_issuer\_name - get X509\_NAME hashes or get and set issuer  
or subject names

### SYNOPSIS

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

```
unsigned long X509_NAME_hash_ex(const X509_NAME *x, OSSL_LIB_CTX *libctx,  
                               const char *propq, int *ok);
```

```
X509_NAME *X509_get_subject_name(const X509 *x);
```

```
int X509_set_subject_name(X509 *x, const X509_NAME *name);
```

```
unsigned long X509_subject_name_hash(X509 *x);
```

```
X509_NAME *X509_get_issuer_name(const X509 *x);
```

```
int X509_set_issuer_name(X509 *x, const X509_NAME *name);
```

```
unsigned long X509_issuer_name_hash(X509 *x);
```

```
X509_NAME *X509_REQ_get_subject_name(const X509_REQ *req);  
int X509_REQ_set_subject_name(X509_REQ *req, const X509_NAME *name);
```

```
X509_NAME *X509_CRL_get_issuer(const X509_CRL *crl);  
int X509_CRL_set_issuer_name(X509_CRL *x, const X509_NAME *name);
```

The following macro has been deprecated since OpenSSL 3.0, and can be hidden entirely by defining `OPENSSL_API_COMPAT` with a suitable version value, see `openssl_user_macros(7)`:

```
#define X509_NAME_hash(x) X509_NAME_hash_ex(x, NULL, NULL, NULL)
```

## DESCRIPTION

`X509_NAME_hash_ex()` returns a hash value of name `x` or 0 on failure, using any given library context `libctx` and property query `propq`. The `ok` result argument may be `NULL` or else is used to return 1 for success and 0 for failure. Failure may happen on malloc error or if no SHA1 implementation is available.

`X509_NAME_hash()` returns a hash value of name `x` or 0 on failure, using the default library context and default property query.

`X509_get_subject_name()` returns the subject name of certificate `x`. The returned value is an internal pointer which **MUST NOT** be freed.

`X509_set_subject_name()` sets the issuer name of certificate `x` to `name`. The `name` parameter is copied internally and should be freed up when it is no longer needed.

`X509_subject_name_hash()` returns a hash value of the subject name of certificate `x`.

X509\_get\_issuer\_name(), X509\_set\_issuer\_name(), and X509\_issuer\_name\_hash() are identical to X509\_get\_subject\_name(), X509\_set\_subject\_name(), and X509\_subject\_name\_hash() except they relate to the issuer name of x.

Similarly X509\_REQ\_get\_subject\_name(), X509\_REQ\_set\_subject\_name(), X509\_CRL\_get\_issuer() and X509\_CRL\_set\_issuer\_name() get or set the subject or issuer names of certificate requests of CRLs respectively.

## RETURN VALUES

X509\_get\_subject\_name(), X509\_get\_issuer\_name(), X509\_REQ\_get\_subject\_name() and X509\_CRL\_get\_issuer() return an X509\_NAME pointer.

X509\_NAME\_hash\_ex(), X509\_NAME\_hash(), X509\_subject\_name\_hash() and X509\_issuer\_name\_hash() return the first four bytes of the SHA1 hash value, converted to unsigned long in little endian order, or 0 on failure.

X509\_set\_subject\_name(), X509\_set\_issuer\_name(), X509\_REQ\_set\_subject\_name() and X509\_CRL\_set\_issuer\_name() return 1 for success and 0 for failure.

## BUGS

In case X509\_NAME\_hash(), X509\_subject\_name\_hash(), or X509\_issuer\_name\_hash() returns 0 it remains unclear if this is the real hash value or due to failure. Better use X509\_NAME\_hash\_ex() instead.

## SEE ALSO

d2i\_X509(3), ERR\_get\_error(3), d2i\_X509(3) X509\_CRL\_get0\_by\_serial(3), X509\_get0\_signature(3), X509\_get\_ext\_d2i(3), X509\_get\_extension\_flags(3), X509\_get\_pubkey(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)

## HISTORY

X509\_REQ\_get\_subject\_name() is a function in OpenSSL 1.1.0 and a macro in earlier versions.

X509\_CRL\_get\_issuer() is a function in OpenSSL 1.1.0. It was previously added in OpenSSL 1.0.0 as a macro.

X509\_NAME\_hash() was turned into a macro and deprecated in OpenSSL 3.0.

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