

**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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