

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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