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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'X509_NAME_hash.3ossl' command

\$ man X509_NAME_hash.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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