

**NAME**

X509\_get0\_distinguishing\_id, X509\_set0\_distinguishing\_id, X509\_REQ\_get0\_distinguishing\_id, X509\_REQ\_set0\_distinguishing\_id - get or set the Distinguishing ID for certificate operations

**SYNOPSIS**

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

```
ASN1_OCTET_STRING *X509_get0_distinguishing_id(X509 *x);
void X509_set0_distinguishing_id(X509 *x, ASN1_OCTET_STRING *distid);
ASN1_OCTET_STRING *X509_REQ_get0_distinguishing_id(X509_REQ *x);
void X509_REQ_set0_distinguishing_id(X509_REQ *x, ASN1_OCTET_STRING *distid);
```

**DESCRIPTION**

The Distinguishing ID is defined in FIPS 196 as follows:

*Distinguishing identifier*

Information which unambiguously distinguishes an entity in the authentication process.

The SM2 signature algorithm requires a Distinguishing ID value when generating and verifying a signature, but the Distinguishing ID may also find other uses. In the context of SM2, the Distinguishing ID is often referred to as the "SM2 ID".

For the purpose of verifying a certificate or a certification request, a Distinguishing ID may be attached to it, so functions like **X509\_verify(3)** or **X509\_REQ\_verify(3)** have easy access to that identity for signature verification.

**X509\_get0\_distinguishing\_id()** gets the Distinguishing ID value of a certificate **x** by returning an **ASN1\_OCTET\_STRING** object which should not be freed by the caller.

**X509\_set0\_distinguishing\_id()** assigns **distid** to the certificate **x**. Calling this function transfers the memory management of the value to the X509 object, and therefore the value that has been passed in should not be freed by the caller after this function has been called.

**X509\_REQ\_get0\_distinguishing\_id()** and **X509\_REQ\_set0\_distinguishing\_id()** have the same functionality as **X509\_get0\_distinguishing\_id()** and **X509\_set0\_distinguishing\_id()** except that they deal with **X509\_REQ** objects instead of **X509**.

**RETURN VALUES**

**X509\_set0\_distinguishing\_id()** and **X509\_REQ\_set0\_distinguishing\_id()** do not return a value.

**SEE ALSO**

**X509\_verify(3)**, **SM2(7)**

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