

**NAME**

X509\_NAME\_add\_entry\_by\_txt, X509\_NAME\_add\_entry\_by\_OBJ,  
 X509\_NAME\_add\_entry\_by\_NID, X509\_NAME\_add\_entry, X509\_NAME\_delete\_entry -  
 X509\_NAME modification functions

**SYNOPSIS**

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

```
int X509_NAME_add_entry_by_txt(X509_NAME *name, const char *field, int type,  

    const unsigned char *bytes, int len, int loc, int set);
```

```
int X509_NAME_add_entry_by_OBJ(X509_NAME *name, const ASN1_OBJECT *obj, int type,  

    const unsigned char *bytes, int len, int loc, int set);
```

```
int X509_NAME_add_entry_by_NID(X509_NAME *name, int nid, int type,  

    const unsigned char *bytes, int len, int loc, int set);
```

```
int X509_NAME_add_entry(X509_NAME *name, const X509_NAME_ENTRY *ne, int loc, int set);
```

```
X509_NAME_ENTRY *X509_NAME_delete_entry(X509_NAME *name, int loc);
```

**DESCRIPTION**

**X509\_NAME\_add\_entry\_by\_txt()**, **X509\_NAME\_add\_entry\_by\_OBJ()** and **X509\_NAME\_add\_entry\_by\_NID()** add a field whose name is defined by a string **field**, an object **obj** or a NID **nid** respectively. The field value to be added is in **bytes** of length **len**. If **len** is -1 then the field length is calculated internally using `strlen(bytes)`.

The type of field is determined by **type** which can either be a definition of the type of **bytes** (such as **MBSTRING\_ASC**) or a standard ASN1 type (such as **V\_ASN1\_IA5STRING**). The new entry is added to a position determined by **loc** and **set**.

**X509\_NAME\_add\_entry()** adds a copy of **X509\_NAME\_ENTRY** structure **ne** to **name**. The new entry is added to a position determined by **loc** and **set**. Since a copy of **ne** is added **ne** must be freed up after the call.

**X509\_NAME\_delete\_entry()** deletes an entry from **name** at position **loc**. The deleted entry is returned and must be freed up.

**NOTES**

The use of string types such as **MBSTRING\_ASC** or **MBSTRING\_UTF8** is strongly recommended for

the **type** parameter. This allows the internal code to correctly determine the type of the field and to apply length checks according to the relevant standards. This is done using **ASN1\_STRING\_set\_by\_NID()**.

If instead an ASN1 type is used no checks are performed and the supplied data in **bytes** is used directly.

In **X509\_NAME\_add\_entry\_by\_txt()** the **field** string represents the field name using **OBJ\_txt2obj(field, 0)**.

The **loc** and **set** parameters determine where a new entry should be added. For almost all applications **loc** can be set to -1 and **set** to 0. This adds a new entry to the end of **name** as a single valued RelativeDistinguishedName (RDN).

**loc** actually determines the index where the new entry is inserted: if it is -1 it is appended.

**set** determines how the new type is added. If it is zero a new RDN is created.

If **set** is -1 or 1 it is added as a new set member to the previous or next RDN structure, respectively. This will then become part of a multi-valued RDN (containing a set of AVAs). Since multi-valued RDNs are very rarely used **set** typically will be zero.

## RETURN VALUES

**X509\_NAME\_add\_entry\_by\_txt()**, **X509\_NAME\_add\_entry\_by\_OBJ()**, **X509\_NAME\_add\_entry\_by\_NID()** and **X509\_NAME\_add\_entry()** return 1 for success or 0 if an error occurred.

**X509\_NAME\_delete\_entry()** returns either the deleted **X509\_NAME\_ENTRY** structure or **NULL** if an error occurred.

## EXAMPLES

Create an **X509\_NAME** structure:

```
"C=UK, O=Disorganized Organization, CN=Joe Bloggs"
```

```
X509_NAME *nm;
```

```
nm = X509_NAME_new();
```

```
if (nm == NULL)
```

```
    /* Some error */
```

```
if (!X509_NAME_add_entry_by_txt(nm, "C", MBSTRING_ASC,
```

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```
        "UK", -1, -1, 0))
/* Error */
if (!X509_NAME_add_entry_by_txt(nm, "O", MBSTRING_ASC,
        "Disorganized Organization", -1, -1, 0))
/* Error */
if (!X509_NAME_add_entry_by_txt(nm, "CN", MBSTRING_ASC,
        "Joe Bloggs", -1, -1, 0))
/* Error */
```

## BUGS

**type** can still be set to **V\_ASN1\_APP\_CHOOSE** to use a different algorithm to determine field types. Since this form does not understand multicharacter types, performs no length checks and can result in invalid field types its use is strongly discouraged.

## SEE ALSO

**ERR\_get\_error(3)**, **d2i\_X509\_NAME(3)**

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