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## **Red Hat Enterprise Linux Release 9.2 Manual Pages on 'ASN1\_TYPE\_set.3oss!' command**

**\$ man ASN1\_TYPE\_set.3oss!**

ASN1\_TYPE\_GET(3oss!)          OpenSSL          ASN1\_TYPE\_GET(3oss!)

### NAME

ASN1\_TYPE\_get, ASN1\_TYPE\_set, ASN1\_TYPE\_set1, ASN1\_TYPE\_cmp,  
ASN1\_TYPE\_unpack\_sequence, ASN1\_TYPE\_pack\_sequence - ASN1\_TYPE utility  
functions

### SYNOPSIS

```
#include <openssl/asn1.h>

int ASN1_TYPE_get(const ASN1_TYPE *a);

void ASN1_TYPE_set(ASN1_TYPE *a, int type, void *value);

int ASN1_TYPE_set1(ASN1_TYPE *a, int type, const void *value);

int ASN1_TYPE_cmp(const ASN1_TYPE *a, const ASN1_TYPE *b);

void *ASN1_TYPE_unpack_sequence(const ASN1_ITEM *it, const ASN1_TYPE *t);

ASN1_TYPE *ASN1_TYPE_pack_sequence(const ASN1_ITEM *it, void *s,
                                   ASN1_TYPE **t);
```

### DESCRIPTION

These functions allow an ASN1\_TYPE structure to be manipulated. The ASN1\_TYPE structure can contain any ASN.1 type or constructed type such as a SEQUENCE: it is effectively equivalent to the ASN.1 ANY type.

ASN1\_TYPE\_get() returns the type of a or 0 if it fails.

ASN1\_TYPE\_set() sets the value of a to type and value. This function uses the pointer value internally so it must not be freed up after the call.

ASN1\_TYPE\_set1() sets the value of a to type a copy of value.

ASN1\_TYPE\_cmp() compares ASN.1 types a and b and returns 0 if they are identical and nonzero otherwise.

ASN1\_TYPE\_unpack\_sequence() attempts to parse the SEQUENCE present in t using the ASN.1 structure it. If successful it returns a pointer to the ASN.1 structure corresponding to it which must be freed by the caller.

If it fails it return NULL.

ASN1\_TYPE\_pack\_sequence() attempts to encode the ASN.1 structure s corresponding to it into an ASN1\_TYPE. If successful the encoded ASN1\_TYPE is returned. If t and \*t are not NULL the encoded type is written to t overwriting any existing data. If t is not NULL but \*t is NULL the returned ASN1\_TYPE is written to \*t.

## NOTES

The type and meaning of the value parameter for ASN1\_TYPE\_set() and ASN1\_TYPE\_set1() is determined by the type parameter. If type is V\_ASN1\_NULL value is ignored. If type is V\_ASN1\_BOOLEAN then the boolean is set to TRUE if value is not NULL. If type is V\_ASN1\_OBJECT then value is an ASN1\_OBJECT structure. Otherwise type is and ASN1\_STRING structure. If type corresponds to a primitive type (or a string type) then the contents of the ASN1\_STRING contain the content octets of the type. If type corresponds to a constructed type or a tagged type (V\_ASN1\_SEQUENCE, V\_ASN1\_SET or V\_ASN1\_OTHER) then the ASN1\_STRING contains the entire ASN.1 encoding verbatim (including tag and length octets).

ASN1\_TYPE\_cmp() may not return zero if two types are equivalent but have different encodings. For example the single content octet of the boolean TRUE value under BER can have any nonzero encoding but ASN1\_TYPE\_cmp() will only return zero if the values are the same.

If either or both of the parameters passed to ASN1\_TYPE\_cmp() is NULL the return value is nonzero. Technically if both parameters are NULL the two types could be absent OPTIONAL fields and so should match, however, passing NULL values could also indicate a programming error (for example an unparseable type which returns NULL) for types which do not match. So applications should handle the case of two absent values

separately.

## RETURN VALUES

ASN1\_TYPE\_get() returns the type of the ASN1\_TYPE argument.

ASN1\_TYPE\_set() does not return a value.

ASN1\_TYPE\_set1() returns 1 for success and 0 for failure.

ASN1\_TYPE\_cmp() returns 0 if the types are identical and nonzero otherwise.

ASN1\_TYPE\_unpack\_sequence() returns a pointer to an ASN.1 structure or NULL on failure.

ASN1\_TYPE\_pack\_sequence() return an ASN1\_TYPE structure if it succeeds or NULL on failure.

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3.0.7                    2023-07-13            ASN1\_TYPE\_GET(3ossl)