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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'ASN1_STRING_get0_data.3ossl' command

$ man ASN1_STRING_get0_data.3ossl

ASN1_STRING_LENGTH(3ossl) OpenSSL ASN1_STRING_LENGTH(3ossl)

NAME

ASN1_STRING_dup, ASN1_STRING_cmp, ASN1_STRING_set, ASN1_STRING_length, ASN1_STRING_type, ASN1_STRING_get0_data, ASN1_STRING_data, ASN1_STRING_to_UTF8 - ASN1_STRING utility functions

SYNOPSIS

```
#include <openssl/asn1.h>
int ASN1_STRING_length(ASN1_STRING *x);
const unsigned char *ASN1_STRING_get0_data(const ASN1_STRING *x);
unsigned char *ASN1_STRING_data(ASN1_STRING *x);
ASN1_STRING *ASN1_STRING_dup(const ASN1_STRING *a);
int ASN1_STRING_cmp(ASN1_STRING *a, ASN1_STRING *b);
int ASN1_STRING_set(ASN1_STRING *str, const void *data, int len);
int ASN1_STRING_type(const ASN1_STRING *x);
int ASN1_STRING_to_UTF8(unsigned char **out, const ASN1_STRING *in);
```

DESCRIPTION

These functions allow an ASN1_STRING structure to be manipulated.

ASN1_STRING_length() returns the length of the content of x.

ASN1_STRING_get0_data() returns an internal pointer to the data of x. Since this is an internal pointer it should not be freed or modified in any way.

ASN1_STRING_data() is similar to ASN1_STRING_get0_data() except the returned value is not constant. This function is deprecated:

applications should use ASN1_STRING_get0_data() instead.

ASN1_STRING_dup() returns a copy of the structure a.

ASN1_STRING_cmp() compares a and b returning 0 if the two are identical. The string types and content are compared.

ASN1_STRING_set() sets the data of string str to the buffer data or length len. The supplied data is copied. If len is -1 then the length is determined by strlen(data).

ASN1_STRING_type() returns the type of x, using standard constants such as V_ASN1_OCTET_STRING.

ASN1_STRING_to_UTF8() converts the string in to UTF8 format, the converted data is allocated in a buffer in *out. The length of out is returned or a negative error code. The buffer *out should be freed using OPENSSL_free().

NOTES

Almost all ASN1 types in OpenSSL are represented as an ASN1_STRING structure. Other types such as ASN1_OCTET_STRING are simply typedef'ed to ASN1_STRING and the functions call the ASN1_STRING equivalents.

ASN1_STRING is also used for some CHOICE types which consist entirely of primitive string types such as DirectoryString and Time.

These functions should not be used to examine or modify ASN1_INTEGER or ASN1_ENUMERATED types: the relevant INTEGER or ENUMERATED utility functions should be used instead.

In general it cannot be assumed that the data returned by ASN1_STRING_data() is null terminated or does not contain embedded nulls. The actual format of the data will depend on the actual string type itself: for example for an IA5String the data will be ASCII, for a BMPString two bytes per character in big endian format, and for a UTF8String it will be in UTF8 format.

Similar care should be take to ensure the data is in the correct format when calling ASN1_STRING_set().

RETURN VALUES

ASN1_STRING_length() returns the length of the content of x.

ASN1_STRING_get0_data() and ASN1_STRING_data() return an internal

pointer to the data of x.

ASN1_STRING_dup() returns a valid ASN1_STRING structure or NULL if an error occurred.

ASN1_STRING_cmp() returns an integer greater than, equal to, or less than 0, according to whether a is greater than, equal to, or less than b.

ASN1_STRING_set() returns 1 on success or 0 on error.

ASN1_STRING_type() returns the type of x.

ASN1_STRING_to_UTF8() returns the number of bytes in output string out or a negative value if an error occurred.

SEE ALSO

ERR_get_error(3)

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