



Red Hat Enterprise Linux Release 9.2 Manual Pages on 'ASN1_item_d2i_fp_ex.3oss1' command

\$ man ASN1_item_d2i_fp_ex.3oss1

ASN1_ITEM_D2I_BIO(3oss1) OpenSSL ASN1_ITEM_D2I_BIO(3oss1)

NAME

ASN1_item_d2i_ex, ASN1_item_d2i, ASN1_item_d2i_bio_ex,
ASN1_item_d2i_bio, ASN1_item_d2i_fp_ex, ASN1_item_d2i_fp,
ASN1_item_i2d_mem_bio - decode and encode DER-encoded ASN.1 structures

SYNOPSIS

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

```
ASN1_VALUE *ASN1_item_d2i_ex(ASN1_VALUE **pval, const unsigned char **in,  
                             long len, const ASN1_ITEM *it,  
                             OSSL_LIB_CTX *libctx, const char *propq);
```

```
ASN1_VALUE *ASN1_item_d2i(ASN1_VALUE **pval, const unsigned char **in,  
                          long len, const ASN1_ITEM *it);
```

```
void *ASN1_item_d2i_bio_ex(const ASN1_ITEM *it, BIO *in, void *x,  
                          OSSL_LIB_CTX *libctx, const char *propq);
```

```
void *ASN1_item_d2i_bio(const ASN1_ITEM *it, BIO *in, void *x);
```

```
void *ASN1_item_d2i_fp_ex(const ASN1_ITEM *it, FILE *in, void *x,  
                          OSSL_LIB_CTX *libctx, const char *propq);
```

```
void *ASN1_item_d2i_fp(const ASN1_ITEM *it, FILE *in, void *x);
```

BIO *ASN1_item_i2d_mem_bio(const ASN1_ITEM *it, const ASN1_VALUE *val);

DESCRIPTION

ASN1_item_d2i_ex() decodes the contents of the data stored in *in of length len which must be a DER-encoded ASN.1 structure, using the ASN.1 template it. It places the result in *pval unless pval is NULL. If *pval is non-NULL on entry then the ASN1_VALUE present there will be reused. Otherwise a new ASN1_VALUE will be allocated. If any algorithm fetches are required during the process then they will use the OSSL_LIB_CTX provided in the libctx parameter and the property query string in propq. See "ALGORITHM FETCHING" in crypto(7) for more information about algorithm fetching. On exit *in will be updated to point to the next byte in the buffer after the decoded structure.

ASN1_item_d2i() is the same as ASN1_item_d2i_ex() except that the default OSSL_LIB_CTX is used (i.e. NULL) and with a NULL property query string.

ASN1_item_d2i_bio_ex() decodes the contents of its input BIO in, which must be a DER-encoded ASN.1 structure, using the ASN.1 template it and places the result in *pval unless pval is NULL. If in is NULL it returns NULL, else a pointer to the parsed structure. If any algorithm fetches are required during the process then they will use the OSSL_LIB_CTX provided in the libctx parameter and the property query string in propq. See "ALGORITHM FETCHING" in crypto(7) for more information about algorithm fetching.

ASN1_item_d2i_bio() is the same as ASN1_item_d2i_bio_ex() except that the default OSSL_LIB_CTX is used (i.e. NULL) and with a NULL property query string.

ASN1_item_d2i_fp_ex() is the same as ASN1_item_d2i_bio_ex() except that

a FILE pointer is provided instead of a BIO.

ASN1_item_d2i_fp() is the same as ASN1_item_d2i_fp_ex() except that the default OSSL_LIB_CTX is used (i.e. NULL) and with a NULL property query string.

ASN1_item_i2d_mem_bio() encodes the given ASN.1 value val using the ASN.1 template it and returns the result in a memory BIO.

RETURN VALUES

ASN1_item_d2i_bio() returns a pointer to an ASN1_VALUE or NULL.

ASN1_item_i2d_mem_bio() returns a pointer to a memory BIO or NULL on error.

HISTORY

The functions ASN1_item_d2i_ex(), ASN1_item_d2i_bio_ex(), ASN1_item_d2i_fp_ex() and ASN1_item_i2d_mem_bio() were added in OpenSSL 3.0.

COPYRIGHT

Copyright 2021 The OpenSSL Project Authors. All Rights Reserved.

Licensed under the Apache License 2.0 (the "License"). You may not use this file except in compliance with the License. You can obtain a copy in the file LICENSE in the source distribution or at <https://www.openssl.org/source/license.html>.

3.0.7 2023-07-13 ASN1_ITEM_D2I_BIO(3ossl)