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

\$ man OSSL_STORE_INFO.3ossl

OSSL_STORE_INFO(3ossl) OpenSSL OSSL_STORE_INFO(3ossl)

NAME

OSSL_STORE_INFO, OSSL_STORE_INFO_get_type, OSSL_STORE_INFO_get0_NAME,
OSSL_STORE_INFO_get0_NAME_description, OSSL_STORE_INFO_get0_PARAMS,
OSSL_STORE_INFO_get0_PUBKEY, OSSL_STORE_INFO_get0_PKEY,
OSSL_STORE_INFO_get0_CERT, OSSL_STORE_INFO_get0_CRL,
OSSL_STORE_INFO_get1_NAME, OSSL_STORE_INFO_get1_NAME_description,
OSSL_STORE_INFO_get1_PARAMS, OSSL_STORE_INFO_get1_PUBKEY,
OSSL_STORE_INFO_get1_PKEY, OSSL_STORE_INFO_get1_CERT,
OSSL_STORE_INFO_get1_CRL, OSSL_STORE_INFO_type_string,
OSSL_STORE_INFO_free, OSSL_STORE_INFO_new_NAME,
OSSL_STORE_INFO_set0_NAME_description, OSSL_STORE_INFO_new_PARAMS,
OSSL_STORE_INFO_new_PUBKEY, OSSL_STORE_INFO_new_PKEY,
OSSL_STORE_INFO_new_CERT, OSSL_STORE_INFO_new_CRL, OSSL_STORE_INFO_new,
OSSL_STORE_INFO_get0_data - Functions to manipulate OSSL_STORE_INFO
objects

SYNOPSIS

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

typedef struct ossl_store_info_st OSSL_STORE_INFO;

int OSSL_STORE_INFO_get_type(const OSSL_STORE_INFO *store_info);

const char *OSSL_STORE_INFO_get0_NAME(const OSSL_STORE_INFO *store_info);

char *OSSL_STORE_INFO_get1_NAME(const OSSL_STORE_INFO *store_info);

const char *OSSL_STORE_INFO_get0_NAME_description(const OSSL_STORE_INFO
```

```

        *store_info);

char *OSSL_STORE_INFO_get1_NAME_description(const OSSL_STORE_INFO *store_info);
EVP_PKEY *OSSL_STORE_INFO_get0_PARAMS(const OSSL_STORE_INFO *store_info);
EVP_PKEY *OSSL_STORE_INFO_get1_PARAMS(const OSSL_STORE_INFO *store_info);
EVP_PKEY *OSSL_STORE_INFO_get0_PUBKEY(const OSSL_STORE_INFO *info);
EVP_PKEY *OSSL_STORE_INFO_get1_PUBKEY(const OSSL_STORE_INFO *info);
EVP_PKEY *OSSL_STORE_INFO_get0_PKEY(const OSSL_STORE_INFO *store_info);
EVP_PKEY *OSSL_STORE_INFO_get1_PKEY(const OSSL_STORE_INFO *store_info);
X509 *OSSL_STORE_INFO_get0_CERT(const OSSL_STORE_INFO *store_info);
X509 *OSSL_STORE_INFO_get1_CERT(const OSSL_STORE_INFO *store_info);
X509_CRL *OSSL_STORE_INFO_get0_CRL(const OSSL_STORE_INFO *store_info);
X509_CRL *OSSL_STORE_INFO_get1_CRL(const OSSL_STORE_INFO *store_info);
const char *OSSL_STORE_INFO_type_string(int type);
void OSSL_STORE_INFO_free(OSSL_STORE_INFO *store_info);
OSSL_STORE_INFO *OSSL_STORE_INFO_new_NAME(char *name);
int OSSL_STORE_INFO_set0_NAME_description(OSSL_STORE_INFO *info, char *desc);
OSSL_STORE_INFO *OSSL_STORE_INFO_new_PARAMS(DSA *dsa_params);
OSSL_STORE_INFO *OSSL_STORE_INFO_new_PUBKEY(EVP_PKEY *pubkey);
OSSL_STORE_INFO *OSSL_STORE_INFO_new_PKEY(EVP_PKEY *pkey);
OSSL_STORE_INFO *OSSL_STORE_INFO_new_CERT(X509 *x509);
OSSL_STORE_INFO *OSSL_STORE_INFO_new_CRL(X509_CRL *crl);
OSSL_STORE_INFO *OSSL_STORE_INFO_new(int type, void *data);
void *OSSL_STORE_INFO_get0_data(int type, const OSSL_STORE_INFO *info);

```

DESCRIPTION

These functions are primarily useful for applications to retrieve supported objects from OSSL_STORE_INFO objects and for scheme specific loaders to create OSSL_STORE_INFO holders.

Types

OSSL_STORE_INFO is an opaque type that's just an intermediary holder for the objects that have been retrieved by OSSL_STORE_load() and similar functions. Supported OpenSSL type object can be extracted using one of STORE_INFO_get0_<TYPE>() where <TYPE> can be NAME, PARAMS, PKEY, CERT, or CRL. The life time of this extracted object is as long

as the life time of the OSSL_STORE_INFO it was extracted from, so care should be taken not to free the latter too early. As an alternative, STORE_INFO_get1_<TYPE>() extracts a duplicate (or the same object with its reference count increased), which can be used after the containing OSSL_STORE_INFO has been freed. The object returned by STORE_INFO_get1_<TYPE>() must be freed separately by the caller. See "SUPPORTED OBJECTS" for more information on the types that are supported.

Functions

OSSL_STORE_INFO_get_type() takes a OSSL_STORE_INFO and returns the STORE type number for the object inside.

STORE_INFO_get_type_string() takes a STORE type number and returns a short string describing it.

OSSL_STORE_INFO_get0_NAME(), OSSL_STORE_INFO_get0_NAME_description(), OSSL_STORE_INFO_get0_PARAMS(), OSSL_STORE_INFO_get0_PUBKEY(), OSSL_STORE_INFO_get0_PKEY(), OSSL_STORE_INFO_get0_CERT(), OSSL_STORE_INFO_get0_CRL() all take a OSSL_STORE_INFO and return the object it holds if the OSSL_STORE_INFO type (as returned by OSSL_STORE_INFO_get_type()) matches the function, otherwise NULL.

OSSL_STORE_INFO_get1_NAME(), OSSL_STORE_INFO_get1_NAME_description(), OSSL_STORE_INFO_get1_PARAMS(), OSSL_STORE_INFO_get1_PUBKEY(), OSSL_STORE_INFO_get1_PKEY(), OSSL_STORE_INFO_get1_CERT() and OSSL_STORE_INFO_get1_CRL() all take a OSSL_STORE_INFO and return a duplicate the object it holds if the OSSL_STORE_INFO type (as returned by OSSL_STORE_INFO_get_type()) matches the function, otherwise NULL.

OSSL_STORE_INFO_free() frees a OSSL_STORE_INFO and its contained type.

OSSL_STORE_INFO_new_NAME(), OSSL_STORE_INFO_new_PARAMS(), OSSL_STORE_INFO_new_PUBKEY(), OSSL_STORE_INFO_new_PKEY(), OSSL_STORE_INFO_new_CERT() and OSSL_STORE_INFO_new_CRL() create a OSSL_STORE_INFO object to hold the given input object. On success the input object is consumed.

Additionally, for OSSL_STORE_INFO_NAME objects,

OSSL_STORE_INFO_set0_NAME_description() can be used to add an extra

description. This description is meant to be human readable and should be used for information printout.

`OSSL_STORE_INFO_new()` creates a `OSSL_STORE_INFO` with an arbitrary type number and data structure. It's the responsibility of the caller to define type numbers other than the ones defined by `<openssl/store.h>`, and to handle freeing the associated data structure on their own.

Using type numbers that are defined by `<openssl/store.h>` may cause undefined behaviours, including crashes.

`OSSL_STORE_INFO_get0_data()` returns the data pointer that was passed to `OSSL_STORE_INFO_new()` if type matches the type number in `info`.

`OSSL_STORE_INFO_new()` and `OSSL_STORE_INFO_get0_data()` may be useful for applications that define their own STORE data, but must be used with care.

SUPPORTED OBJECTS

Currently supported object types are:

`OSSL_STORE_INFO_NAME`

A name is exactly that, a name. It's like a name in a directory, but formatted as a complete URI. For example, the path in URI `"file:/foo/bar/"` could include a file named `"cookie.pem"`, and in that case, the returned `OSSL_STORE_INFO_NAME` object would have the URI `"file:/foo/bar/cookie.pem"`, which can be used by the application to get the objects in that file. This can be applied to all schemes that can somehow support a listing of object URIs. For `"file:"` URIs that are used without the explicit scheme, the returned name will be the path of each object, so if `"/foo/bar"` was given and that path has the file `"cookie.pem"`, the name `"/foo/bar/cookie.pem"` will be returned.

The returned URI is considered canonical and must be unique and permanent for the storage where the object (or collection of objects) resides. Each loader is responsible for ensuring that it only returns canonical URIs. However, it's possible that certain schemes allow an object (or collection thereof) to be reached with alternative URIs; just because one URI is canonical doesn't mean

that other variants can't be used.

At the discretion of the loader that was used to get these names,
an extra description may be attached as well.

OSSL_STORE_INFO_PARAMS

Key parameters.

OSSL_STORE_INFO_PKEY

A keypair or just a private key (possibly with key parameters).

OSSL_STORE_INFO_PUBKEY

A public key (possibly with key parameters).

OSSL_STORE_INFO_CERT

An X.509 certificate.

OSSL_STORE_INFO_CRL

A X.509 certificate revocation list.

RETURN VALUES

OSSL_STORE_INFO_get_type() returns the STORE type number of the given
OSSL_STORE_INFO. There is no error value.

OSSL_STORE_INFO_get0_NAME(), OSSL_STORE_INFO_get0_NAME_description(),
OSSL_STORE_INFO_get0_PARAMS(), OSSL_STORE_INFO_get0_PKEY(),
OSSL_STORE_INFO_get0_CERT() and OSSL_STORE_INFO_get0_CRL() all return a
pointer to the OpenSSL object on success, NULL otherwise.

OSSL_STORE_INFO_get1_NAME(), OSSL_STORE_INFO_get1_NAME_description(),
OSSL_STORE_INFO_get1_PARAMS(), OSSL_STORE_INFO_get1_PKEY(),
OSSL_STORE_INFO_get1_CERT() and OSSL_STORE_INFO_get1_CRL() all return a
pointer to a duplicate of the OpenSSL object on success, NULL
otherwise.

OSSL_STORE_INFO_type_string() returns a string on success, or NULL on
failure.

OSSL_STORE_INFO_new_NAME(), OSSL_STORE_INFO_new_PARAMS(),
OSSL_STORE_INFO_new_PKEY(), OSSL_STORE_INFO_new_CERT() and
OSSL_STORE_INFO_new_CRL() return a OSSL_STORE_INFO pointer on success,
or NULL on failure.

OSSL_STORE_INFO_set0_NAME_description() returns 1 on success, or 0 on
failure.

SEE ALSO

`ossl_store(7)`, `OSSL_STORE_open(3)`, `OSSL_STORE_register_loader(3)`

HISTORY

The `OSSL_STORE` API was added in OpenSSL 1.1.1.

The `OSSL_STORE_INFO_PUBKEY` object type was added in OpenSSL 3.0.

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