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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'OSSL_STORE_SEARCH_get0_serial.3ossl' comman

$ man OSSL_STORE_SEARCH_get0_serial.3ossl

OSSL_STORE_SEARCH(3ossl) OpenSSL OSSL_STORE_SEARCH(3ossl)

NAME

OSSL_STORE_SEARCH, OSSL_STORE_SEARCH_by_name,

OSSL_STORE_SEARCH_by_issuer_serial,

OSSL_STORE_SEARCH_by_key_fingerprint, OSSL_STORE_SEARCH_by_alias,

OSSL_STORE_SEARCH_free, OSSL_STORE_SEARCH_get_type,

OSSL_STORE_SEARCH_get0_name, OSSL_STORE_SEARCH_get0_serial,

OSSL_STORE_SEARCH_get0_bytes, OSSL_STORE_SEARCH_get0_string,

OSSL_STORE_SEARCH_get0_digest - Type and functions to create OSSL_STORE

search criteria

SYNOPSIS

```
#include <openssl/store.h>
typedef struct ossl_store_search_st OSSL_STORE_SEARCH;
OSSL_STORE_SEARCH *OSSL_STORE_SEARCH_by_name(X509_NAME *name);
OSSL_STORE_SEARCH *OSSL_STORE_SEARCH_by_issuer_serial(X509_NAME *name,
                                                      const ASN1_INTEGER
                                                      *serial);
OSSL_STORE_SEARCH *OSSL_STORE_SEARCH_by_key_fingerprint(const EVP_MD *digest,
                                                        const unsigned char
                                                        *bytes, int len);
OSSL_STORE_SEARCH *OSSL_STORE_SEARCH_by_alias(const char *alias);
void OSSL_STORE_SEARCH_free(OSSL_STORE_SEARCH *search);
int OSSL_STORE_SEARCH_get_type(const OSSL_STORE_SEARCH *criterion);
```

```
X509_NAME *OSSL_STORE_SEARCH_get0_name(OSSL_STORE_SEARCH *criterion);
const ASN1_INTEGER *OSSL_STORE_SEARCH_get0_serial(const OSSL_STORE_SEARCH
                                                  *criterion);
const unsigned char *OSSL_STORE_SEARCH_get0_bytes(const OSSL_STORE_SEARCH
                                                  *criterion, size_t *length);
const char *OSSL_STORE_SEARCH_get0_string(const OSSL_STORE_SEARCH *criterion);
const EVP_MD *OSSL_STORE_SEARCH_get0_digest(const OSSL_STORE_SEARCH
                                            *criterion);
```

DESCRIPTION

These functions are used to specify search criteria to help search for specific objects through other names than just the URI that's given to OSSL_STORE_open(). For example, this can be useful for an application that has received a URI and then wants to add on search criteria in a uniform and supported manner.

Types

OSSL_STORE_SEARCH is an opaque type that holds the constructed search criterion, and that can be given to an OSSL_STORE context with OSSL_STORE_find().

The calling application owns the allocation of an OSSL_STORE_SEARCH at all times, and should therefore be careful not to deallocate it before OSSL_STORE_close() has been called for the OSSL_STORE context it was given to.

Application Functions

OSSL_STORE_SEARCH_by_name(), OSSL_STORE_SEARCH_by_issuer_serial(), OSSL_STORE_SEARCH_by_key_fingerprint(), and OSSL_STORE_SEARCH_by_alias() are used to create an OSSL_STORE_SEARCH from a subject name, an issuer name and serial number pair, a key fingerprint, and an alias (for example a friendly name). The parameters that are provided are not copied, only referred to in a criterion, so they must have at least the same life time as the created OSSL_STORE_SEARCH.

OSSL_STORE_SEARCH_free() is used to free the OSSL_STORE_SEARCH.

Loader Functions

OSSL_STORE_SEARCH_get_type() returns the criterion type for the given OSSL_STORE_SEARCH.

OSSL_STORE_SEARCH_get0_name(), OSSL_STORE_SEARCH_get0_serial(), OSSL_STORE_SEARCH_get0_bytes(), OSSL_STORE_SEARCH_get0_string(), and OSSL_STORE_SEARCH_get0_digest() are used to retrieve different data from a OSSL_STORE_SEARCH, as available for each type. For more information, see "SUPPORTED CRITERION TYPES" below.

SUPPORTED CRITERION TYPES

Currently supported criterion types are:

OSSL_STORE_SEARCH_BY_NAME

This criterion supports a search by exact match of subject name. The subject name itself is a X509_NAME pointer. A criterion of this type is created with OSSL_STORE_SEARCH_by_name(), and the actual subject name is retrieved with OSSL_STORE_SEARCH_get0_name().

OSSL_STORE_SEARCH_BY_ISSUER_SERIAL

This criterion supports a search by exact match of both issuer name and serial number. The issuer name itself is a X509_NAME pointer, and the serial number is a ASN1_INTEGER pointer. A criterion of this type is created with OSSL_STORE_SEARCH_by_issuer_serial() and the actual issuer name and serial number are retrieved with OSSL_STORE_SEARCH_get0_name() and OSSL_STORE_SEARCH_get0_serial().

OSSL_STORE_SEARCH_BY_KEY_FINGERPRINT

This criterion supports a search by exact match of key fingerprint. The key fingerprint in itself is a string of bytes and its length, as well as the algorithm that was used to compute the fingerprint. The digest may be left unspecified (NULL), and in that case, the loader has to decide on a default digest and compare fingerprints accordingly. A criterion of this type is created with OSSL_STORE_SEARCH_by_key_fingerprint() and the actual fingerprint and its length can be retrieved with OSSL_STORE_SEARCH_get0_bytes(). The digest can be retrieved with OSSL_STORE_SEARCH_get0_digest().

OSSL_STORE_SEARCH_BY_ALIAS

This criterion supports a search by match of an alias of some kind.

The alias in itself is a simple C string. A criterion of this type is created with OSSL_STORE_SEARCH_by_alias() and the actual alias is retrieved with OSSL_STORE_SEARCH_get0_string().

RETURN VALUES

OSSL_STORE_SEARCH_by_name(), OSSL_STORE_SEARCH_by_issuer_serial(), OSSL_STORE_SEARCH_by_key_fingerprint(), and OSSL_STORE_SEARCH_by_alias() return a OSSL_STORE_SEARCH pointer on success, or NULL on failure.

OSSL_STORE_SEARCH_get_type() returns the criterion type of the given OSSL_STORE_SEARCH. There is no error value.

OSSL_STORE_SEARCH_get0_name() returns a X509_NAME pointer on success, or NULL when the given OSSL_STORE_SEARCH was of a different type.

OSSL_STORE_SEARCH_get0_serial() returns a ASN1_INTEGER pointer on success, or NULL when the given OSSL_STORE_SEARCH was of a different type.

OSSL_STORE_SEARCH_get0_bytes() returns a const unsigned char pointer and sets *length to the strings length on success, or NULL when the given OSSL_STORE_SEARCH was of a different type.

OSSL_STORE_SEARCH_get0_string() returns a const char pointer on success, or NULL when the given OSSL_STORE_SEARCH was of a different type.

OSSL_STORE_SEARCH_get0_digest() returns a const EVP_MD pointer. NULL is a valid value and means that the store loader default will be used when applicable.

SEE ALSO

ossl_store(7), OSSL_STORE_supports_search(3), OSSL_STORE_find(3)

HISTORY

OSSL_STORE_SEARCH, OSSL_STORE_SEARCH_by_name(), OSSL_STORE_SEARCH_by_issuer_serial(), OSSL_STORE_SEARCH_by_key_fingerprint(), OSSL_STORE_SEARCH_by_alias(), OSSL_STORE_SEARCH_free(), OSSL_STORE_SEARCH_get_type(),

OSSL_STORE_SEARCH_get0_name(), OSSL_STORE_SEARCH_get0_serial(), OSSL_STORE_SEARCH_get0_bytes(), and OSSL_STORE_SEARCH_get0_string() were added in OpenSSL 1.1.1.

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