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

$ man OSSL_ENCODER_fetch.3ossl

OSSL_ENCODER(3ossl) OpenSSL OSSL_ENCODER(3ossl)

NAME

OSSL_ENCODER, OSSL_ENCODER_fetch, OSSL_ENCODER_up_ref,

OSSL_ENCODER_free, OSSL_ENCODER_get0_provider,

OSSL_ENCODER_get0_properties, OSSL_ENCODER_is_a,

OSSL_ENCODER_get0_name, OSSL_ENCODER_get0_description,

OSSL_ENCODER_do_all_provided, OSSL_ENCODER_names_do_all,

OSSL_ENCODER_gettable_params, OSSL_ENCODER_get_params - Encoder method

routines

SYNOPSIS

```
#include <openssl/encoder.h>
typedef struct ossl_encoder_st OSSL_ENCODER;
OSSL_ENCODER *OSSL_ENCODER_fetch(OSSL_LIB_CTX *ctx, const char *name,
                                 const char *properties);
int OSSL_ENCODER_up_ref(OSSL_ENCODER *encoder);
void OSSL_ENCODER_free(OSSL_ENCODER *encoder);
const OSSL_PROVIDER *OSSL_ENCODER_get0_provider(const OSSL_ENCODER *encoder);
const char *OSSL_ENCODER_get0_properties(const OSSL_ENCODER *encoder);
int OSSL_ENCODER_is_a(const OSSL_ENCODER *encoder, const char *name);
const char *OSSL_ENCODER_get0_name(const OSSL_ENCODER *encoder);
const char *OSSL_ENCODER_get0_description(const OSSL_ENCODER *encoder);
void OSSL_ENCODER_do_all_provided(OSSL_LIB_CTX *libctx,
                                  void (*fn)(OSSL_ENCODER *encoder, void *arg),
```

```
                                void *arg);
 int OSSL_ENCODER_names_do_all(const OSSL_ENCODER *encoder,
                               void (*fn)(const char *name, void *data),
                               void *data);
 const OSSL_PARAM *OSSL_ENCODER_gettable_params(OSSL_ENCODER *encoder);
 int OSSL_ENCODER_get_params(OSSL_ENCODER_CTX *ctx, const OSSL_PARAM params[]);
```

DESCRIPTION

OSSL_ENCODER is a method for encoders, which know how to encode an object of some kind to a encoded form, such as PEM, DER, or even human readable text.

OSSL_ENCODER_fetch() looks for an algorithm within the provider that has been loaded into the OSSL_LIB_CTX given by ctx, having the name given by name and the properties given by properties. The name determines what type of object the fetched encoder method is expected to be able to encode, and the properties are used to determine the expected output type. For known properties and the values they may have, please have a look in "Names and properties" in provider-encoder(7).

OSSL_ENCODER_up_ref() increments the reference count for the given encoder.

OSSL_ENCODER_free() decrements the reference count for the given encoder, and when the count reaches zero, frees it.

OSSL_ENCODER_get0_provider() returns the provider of the given encoder.

OSSL_ENCODER_get0_properties() returns the property definition associated with the given encoder.

OSSL_ENCODER_is_a() checks if encoder is an implementation of an algorithm that's identifiable with name.

OSSL_ENCODER_get0_name() returns the name used to fetch the given encoder.

OSSL_ENCODER_get0_description() returns a description of the loader, meant for display and human consumption. The description is at the discretion of the loader implementation.

OSSL_ENCODER_names_do_all() traverses all names for the given encoder,

and calls fn with each name and data as arguments.

OSSL_ENCODER_do_all_provided() traverses all encoder implementations by all activated providers in the library context libctx, and for each of the implementations, calls fn with the implementation method and arg as arguments.

OSSL_ENCODER_gettable_params() returns an OSSL_PARAM(3) array of parameter descriptors.

OSSL_ENCODER_get_params() attempts to get parameters specified with an OSSL_PARAM(3) array params. Parameters that the implementation doesn't recognise should be ignored.

RETURN VALUES

OSSL_ENCODER_fetch() returns a pointer to the key management implementation represented by an OSSL_ENCODER object, or NULL on error.

OSSL_ENCODER_up_ref() returns 1 on success, or 0 on error.

OSSL_ENCODER_free() doesn't return any value.

OSSL_ENCODER_get0_provider() returns a pointer to a provider object, or NULL on error.

OSSL_ENCODER_get0_properties() returns a pointer to a property definition string, or NULL on error.

OSSL_ENCODER_is_a() returns 1 of encoder was identifiable, otherwise 0.

OSSL_ENCODER_get0_name() returns the algorithm name from the provided implementation for the given encoder. Note that the encoder may have multiple synonyms associated with it. In this case the first name from the algorithm definition is returned. Ownership of the returned string is retained by the encoder object and should not be freed by the caller.

OSSL_ENCODER_get0_description() returns a pointer to a decription, or NULL if there isn't one.

OSSL_ENCODER_names_do_all() returns 1 if the callback was called for all names. A return value of 0 means that the callback was not called for any names.

SEE ALSO

provider(7), OSSL_ENCODER_CTX(3), OSSL_ENCODER_to_bio(3),

OSSL_ENCODER_CTX_new_for_pkey(3), OSSL_LIB_CTX(3)

HISTORY

The functions described here were added in OpenSSL 3.0.

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