

**NAME**

CTLOG\_new\_ex, CTLOG\_new, CTLOG\_new\_from\_base64, CTLOG\_new\_from\_base64\_ex, CTLOG\_free, CTLOG\_get0\_name, CTLOG\_get0\_log\_id, CTLOG\_get0\_public\_key - encapsulates information about a Certificate Transparency log

**SYNOPSIS**

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

```
CTLOG *CTLOG_new_ex(EVP_PKEY *public_key, const char *name,
                   OSSL_LIB_CTX *libctx, const char *propq);
```

```
CTLOG *CTLOG_new(EVP_PKEY *public_key, const char *name);
```

```
int CTLOG_new_from_base64_ex(CTLOG **ct_log, const char *pkey_base64,
                             const char *name, OSSL_LIB_CTX *libctx,
                             const char *propq);
```

```
int CTLOG_new_from_base64(CTLOG **ct_log,
                          const char *pkey_base64, const char *name);
```

```
void CTLOG_free(CTLOG *log);
```

```
const char *CTLOG_get0_name(const CTLOG *log);
```

```
void CTLOG_get0_log_id(const CTLOG *log, const uint8_t **log_id,
                       size_t *log_id_len);
```

```
EVP_PKEY *CTLOG_get0_public_key(const CTLOG *log);
```

**DESCRIPTION**

**CTLOG\_new\_ex()** returns a new CTLOG that represents the Certificate Transparency (CT) log with the given public key and associates it with the library context *libctx* and property query string *propq*. A name must also be provided that can be used to help users identify this log. Ownership of the public key is transferred.

**CTLOG\_new()** does the same thing as **CTLOG\_new\_ex()** but with the default library context and the default property query string.

**CTLOG\_new\_from\_base64\_ex()** also creates a new CTLOG, but takes the public key in base64-encoded DER form and sets the *ct\_log* pointer to point to the new CTLOG. The base64 will be decoded and the public key parsed. The CTLOG will be associated with the given library context *libctx* and property query string *propq*.

**CTLOG\_new\_from\_base64()** does the same thing as **CTLOG\_new\_from\_base64\_ex()** except that the default library context and property query string are used.

Regardless of whether **CTLOG\_new()** or **CTLOG\_new\_from\_base64()** is used, it is the caller's responsibility to pass the CTLOG to **CTLOG\_free()** once it is no longer needed. This will delete it and, if created by **CTLOG\_new()**, the **EVP\_PKEY** that was passed to it.

**CTLOG\_get0\_name()** returns the name of the log, as provided when the CTLOG was created. Ownership of the string remains with the CTLOG.

**CTLOG\_get0\_log\_id()** sets *\*log\_id* to point to a string containing that log's LogID (see RFC 6962). It sets *\*log\_id\_len* to the length of that LogID. For a v1 CT log, the LogID will be a SHA-256 hash (i.e. 32 bytes long). Ownership of the string remains with the CTLOG.

**CTLOG\_get0\_public\_key()** returns the public key of the CT log. Ownership of the **EVP\_PKEY** remains with the CTLOG.

## RETURN VALUES

**CTLOG\_new()** will return **NULL** if an error occurs.

**CTLOG\_new\_from\_base64()** will return 1 on success, 0 otherwise.

## SEE ALSO

**ct(7)**

## HISTORY

The functions **CTLOG\_new\_ex()** and **CTLOG\_new\_from\_base64\_ex()** were added in OpenSSL 3.0. All other functions were added in OpenSSL 1.1.0.

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