NAME

EVP_PKEY_CTX_new, EVP_PKEY_CTX_new_id, EVP_PKEY_CTX_dup, EVP_PKEY_CTX_free - public key algorithm context functions.

SYNOPSIS

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

EVP_PKEY_CTX *EVP_PKEY_CTX_new(EVP_PKEY *pkey, ENGINE *e);
EVP_PKEY_CTX *EVP_PKEY_CTX_new_id(int id, ENGINE *e);
EVP_PKEY_CTX *EVP_PKEY_CTX_dup(EVP_PKEY_CTX *ctx);
void EVP_PKEY_CTX_free(EVP_PKEY_CTX *ctx);
```

DESCRIPTION

The *EVP_PKEY_CTX_new()* function allocates public key algorithm context using the algorithm specified in **pkey** and ENGINE **e**.

The *EVP_PKEY_CTX_new_id()* function allocates public key algorithm context using the algorithm specified by **id** and ENGINE **e**. It is normally used when no **EVP_PKEY** structure is associated with the operations, for example during parameter generation of key genration for some algorithms.

EVP_PKEY_CTX_dup() duplicates the context **ctx**.

EVP_PKEY_CTX_free() frees up the context **ctx**.

NOTES

The **EVP_PKEY_CTX** structure is an opaque public key algorithm context used by the OpenSSL high level public key API. Contexts **MUST NOT** be shared between threads: that is it is not permissible to use the same context simultaneously in two threads.

RETURN VALUES

EVP_PKEY_CTX_new(), *EVP_PKEY_CTX_new_id()*, *EVP_PKEY_CTX_dup()* returns either the newly allocated **EVP_PKEY_CTX** structure of **NULL** if an error occurred.

EVP_PKEY_CTX_free() does not return a value.

SEE ALSO

EVP_PKEY_new(3)

HISTORY

These functions were first added to OpenSSL 1.0.0.