

NAME

BN_CTX_start, BN_CTX_get, BN_CTX_end - use temporary BIGNUM variables

SYNOPSIS

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

void BN_CTX_start(BN_CTX *ctx);

BIGNUM *BN_CTX_get(BN_CTX *ctx);

void BN_CTX_end(BN_CTX *ctx);
```

DESCRIPTION

These functions are used to obtain temporary **BIGNUM** variables from a **BN_CTX** (which can be created by using [BN_CTX_new\(3\)](#)) in order to save the overhead of repeatedly creating and freeing **BIGNUM**s in functions that are called from inside a loop.

A function must call [BN_CTX_start\(\)](#) first. Then, [BN_CTX_get\(\)](#) may be called repeatedly to obtain temporary **BIGNUM**s. All [BN_CTX_get\(\)](#) calls must be made before calling any other functions that use the **ctx** as an argument.

Finally, [BN_CTX_end\(\)](#) must be called before returning from the function. When [BN_CTX_end\(\)](#) is called, the **BIGNUM** pointers obtained from [BN_CTX_get\(\)](#) become invalid.

RETURN VALUES

[BN_CTX_start\(\)](#) and [BN_CTX_end\(\)](#) return no values.

[BN_CTX_get\(\)](#) returns a pointer to the **BIGNUM**, or **NULL** on error. Once [BN_CTX_get\(\)](#) has failed, the subsequent calls will return **NULL** as well, so it is sufficient to check the return value of the last [BN_CTX_get\(\)](#) call. In case of an error, an error code is set, which can be obtained by [ERR_get_error\(3\)](#).

SEE ALSO

[BN_CTX_new\(3\)](#)

HISTORY

[BN_CTX_start\(\)](#), [BN_CTX_get\(\)](#) and [BN_CTX_end\(\)](#) were added in OpenSSL 0.9.5.