

**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.