

**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. If **ctx** is **NULL**, nothing is done. 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)**

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