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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'BN_new.3ossl' command

\$ man BN_new.3ossl

BN_NEW(3ossl) OpenSSL BN_NEW(3ossl)

NAME

BN_new, BN_secure_new, BN_clear, BN_free, BN_clear_free - allocate and free BIGNUMs

SYNOPSIS

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

```
BIGNUM *BN_new(void);
```

```
BIGNUM *BN_secure_new(void);
```

```
void BN_clear(BIGNUM *a);
```

```
void BN_free(BIGNUM *a);
```

```
void BN_clear_free(BIGNUM *a);
```

DESCRIPTION

BN_new() allocates and initializes a BIGNUM structure. BN_secure_new() does the same except that the secure heap OPENSSL_secure_malloc(3) is used to store the value.

BN_clear() is used to destroy sensitive data such as keys when they are no longer needed. It erases the memory used by a and sets it to the value 0. If a is NULL, nothing is done.

BN_free() frees the components of the BIGNUM, and if it was created by BN_new(), also the structure itself. BN_clear_free() additionally overwrites the data before the memory is returned to the system. If a is NULL, nothing is done.

RETURN VALUES

BN_new() and BN_secure_new() return a pointer to the BIGNUM initialised to the value 0. If the allocation fails, they return NULL and set an error code that can be obtained by ERR_get_error(3).

BN_clear(), BN_free() and BN_clear_free() have no return values.

SEE ALSO

ERR_get_error(3), OPENSSL_secure_malloc(3)

HISTORY

BN_init() was removed in OpenSSL 1.1.0; use BN_new() instead.

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