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### ***Rocky Enterprise Linux 9.2 Manual Pages on command 'BN\_security\_bits.3ossl'***

***\$ man BN\_security\_bits.3ossl***

BN\_SECURITY\_BITS(3ossl)      OpenSSL      BN\_SECURITY\_BITS(3ossl)

#### NAME

BN\_security\_bits - returns bits of security based on given numbers

#### SYNOPSIS

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

```
int BN_security_bits(int L, int N);
```

#### DESCRIPTION

BN\_security\_bits() returns the number of bits of security provided by a specific algorithm and a particular key size. The bits of security is defined in NIST SP800-57. Currently, BN\_security\_bits() support two types of asymmetric algorithms: the FFC (Finite Field Cryptography) and IFC (Integer Factorization Cryptography). For FFC, e.g., DSA and DH, both parameters L and N are used to decide the bits of security, where L is the size of the public key and N is the size of the private key.

For IFC, e.g., RSA, only L is used and it's commonly considered to be the key size (modulus).

## RETURN VALUES

Number of security bits.

## NOTES

ECC (Elliptic Curve Cryptography) is not covered by the `BN_security_bits()` function. The symmetric algorithms are not covered neither.

## SEE ALSO

`DH_security_bits(3)`, `DSA_security_bits(3)`, `RSA_security_bits(3)`

## HISTORY

The `BN_security_bits()` function was added in OpenSSL 1.1.0.

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