

**NAME**

DH\_get\_1024\_160, DH\_get\_2048\_224, DH\_get\_2048\_256, BN\_get0\_nist\_prime\_192, BN\_get0\_nist\_prime\_224, BN\_get0\_nist\_prime\_256, BN\_get0\_nist\_prime\_384, BN\_get0\_nist\_prime\_521, BN\_get\_rfc2409\_prime\_768, BN\_get\_rfc2409\_prime\_1024, BN\_get\_rfc3526\_prime\_1536, BN\_get\_rfc3526\_prime\_2048, BN\_get\_rfc3526\_prime\_3072, BN\_get\_rfc3526\_prime\_4096, BN\_get\_rfc3526\_prime\_6144, BN\_get\_rfc3526\_prime\_8192 - Create standardized public primes or DH pairs

**SYNOPSIS**

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

```
const BIGNUM *BN_get0_nist_prime_192(void);
const BIGNUM *BN_get0_nist_prime_224(void);
const BIGNUM *BN_get0_nist_prime_256(void);
const BIGNUM *BN_get0_nist_prime_384(void);
const BIGNUM *BN_get0_nist_prime_521(void);
```

```
BIGNUM *BN_get_rfc2409_prime_768(BIGNUM *bn);
BIGNUM *BN_get_rfc2409_prime_1024(BIGNUM *bn);
BIGNUM *BN_get_rfc3526_prime_1536(BIGNUM *bn);
BIGNUM *BN_get_rfc3526_prime_2048(BIGNUM *bn);
BIGNUM *BN_get_rfc3526_prime_3072(BIGNUM *bn);
BIGNUM *BN_get_rfc3526_prime_4096(BIGNUM *bn);
BIGNUM *BN_get_rfc3526_prime_6144(BIGNUM *bn);
BIGNUM *BN_get_rfc3526_prime_8192(BIGNUM *bn);
```

The following functions have been deprecated since OpenSSL 3.0, and can be hidden entirely by defining **OPENSSL\_API\_COMPAT** with a suitable version value, see **openssl\_user\_macros(7)**:

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

```
DH *DH_get_1024_160(void);
DH *DH_get_2048_224(void);
DH *DH_get_2048_256(void);
```

**DESCRIPTION**

**DH\_get\_1024\_160()**, **DH\_get\_2048\_224()**, and **DH\_get\_2048\_256()** each return a DH object for the IETF RFC 5114 value. These functions are deprecated. Applications should instead use **EVP\_PKEY\_CTX\_set\_dh\_rfc5114()** and **EVP\_PKEY\_CTX\_set\_dhx\_rfc5114()** as described in **EVP\_PKEY\_CTX\_ctrl(3)** or by setting the **OSSL\_PKEY\_PARAM\_GROUP\_NAME** as specified in

"DH parameters" in **EVP\_PKEY-DH(7)**) to one of "dh\_1024\_160", "dh\_2048\_224" or "dh\_2048\_256".

**BN\_get0\_nist\_prime\_192()**, **BN\_get0\_nist\_prime\_224()**, **BN\_get0\_nist\_prime\_256()**, **BN\_get0\_nist\_prime\_384()**, and **BN\_get0\_nist\_prime\_521()** functions return a **BIGNUM** for the specific NIST prime curve (e.g., P-256).

**BN\_get\_rfc2409\_prime\_768()**, **BN\_get\_rfc2409\_prime\_1024()**, **BN\_get\_rfc3526\_prime\_1536()**, **BN\_get\_rfc3526\_prime\_2048()**, **BN\_get\_rfc3526\_prime\_3072()**, **BN\_get\_rfc3526\_prime\_4096()**, **BN\_get\_rfc3526\_prime\_6144()**, and **BN\_get\_rfc3526\_prime\_8192()** functions return a **BIGNUM** for the specified size from IETF RFC 2409. If **bn** is not **NULL**, the **BIGNUM** will be set into that location as well.

## RETURN VALUES

Defined above.

## HISTORY

The functions **DH\_get\_1024\_160()**, **DH\_get\_2048\_224()** and **DH\_get\_2048\_256()** were deprecated in OpenSSL 3.0.

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