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### ***Rocky Enterprise Linux 9.2 Manual Pages on command 'RAND\_get\_rand\_method.3ossl'***

***\$ man RAND\_get\_rand\_method.3ossl***

**RAND\_SET\_RAND\_METHOD(3ossl)    OpenSSL    RAND\_SET\_RAND\_METHOD(3ossl)**

#### **NAME**

**RAND\_set\_rand\_method, RAND\_get\_rand\_method, RAND\_OpenSSL - select RAND method**

#### **SYNOPSIS**

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

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):

```
RAND_METHOD *RAND_OpenSSL(void);
```

```
int RAND_set_rand_method(const RAND_METHOD *meth);
```

```
const RAND_METHOD *RAND_get_rand_method(void);
```

## DESCRIPTION

All of the functions described on this page are deprecated.

Applications should instead use `RAND_set_DRBG_type(3)`, `EVP RAND(3)` and `EVP RAND(7)`.

A `RAND_METHOD` specifies the functions that OpenSSL uses for random number generation.

`RAND_OpenSSL()` returns the default `RAND_METHOD` implementation by OpenSSL. This implementation ensures that the PRNG state is unique for each thread.

If an `ENGINE` is loaded that provides the `RAND` API, however, it will be used instead of the method returned by `RAND_OpenSSL()`. This is deprecated in OpenSSL 3.0.

`RAND_set_rand_method()` makes `meth` the method for PRNG use. If an `ENGINE` was providing the method, it will be released first.

`RAND_get_rand_method()` returns a pointer to the current `RAND_METHOD`.

## THE RAND\_METHOD STRUCTURE

```
typedef struct rand_meth_st {
    int (*seed)(const void *buf, int num);
    int (*bytes)(unsigned char *buf, int num);
    void (*cleanup)(void);
    int (*add)(const void *buf, int num, double entropy);
    int (*pseudorand)(unsigned char *buf, int num);
    int (*status)(void);
} RAND_METHOD;
```

The fields point to functions that are used by, in order, `RAND_seed()`,

RAND\_bytes(), internal RAND cleanup, RAND\_add(), RAND\_pseudo\_rand() and RAND\_status(). Each pointer may be NULL if the function is not implemented.

## RETURN VALUES

RAND\_set\_rand\_method() returns 1 on success and 0 on failure.

RAND\_get\_rand\_method() and RAND\_OpenSSL() return pointers to the respective methods.

## SEE ALSO

EVP RAND(3), RAND\_set\_DRBG\_type(3), RAND\_bytes(3), ENGINE\_by\_id(3),  
EVP RAND(7), RAND(7)

## HISTORY

All of these functions were deprecated in OpenSSL 3.0.

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