

NAME

drand48_r, erand48_r, lrand48_r, nrand48_r, mrand48_r, jrand48_r, srand48_r, seed48_r, lcong48_r – generate uniformly distributed pseudo-random numbers reentrantly

LIBRARY

Standard C library (*libc*, *-lc*)

SYNOPSIS

```
#include <stdlib.h>

int drand48_r(struct drand48_data *restrict buffer,
             double *restrict result);
int erand48_r(unsigned short xsubi[3],
             struct drand48_data *restrict buffer,
             double *restrict result);
int lrand48_r(struct drand48_data *restrict buffer,
             long *restrict result);
int nrand48_r(unsigned short xsubi[3],
             struct drand48_data *restrict buffer,
             long *restrict result);
int mrand48_r(struct drand48_data *restrict buffer,
             long *restrict result);
int jrand48_r(unsigned short xsubi[3],
             struct drand48_data *restrict buffer,
             long *restrict result);
int srand48_r(long int seedval, struct drand48_data *buffer);
int seed48_r(unsigned short seed16v[3], struct drand48_data *buffer);
int lcong48_r(unsigned short param[7], struct drand48_data *buffer);
```

Feature Test Macro Requirements for glibc (see **feature_test_macros(7)**):

All functions shown above:

```
/* glibc >= 2.19: */ _DEFAULT_SOURCE
|| /* glibc <= 2.19: */ _SVID_SOURCE || _BSD_SOURCE
```

DESCRIPTION

These functions are the reentrant analogs of the functions described in **drand48(3)**. Instead of modifying the global random generator state, they use the supplied data *buffer*.

Before the first use, this struct must be initialized, for example, by filling it with zeros, or by calling one of the functions **srand48_r()**, **seed48_r()**, or **lcong48_r()**.

RETURN VALUE

The return value is 0.

ATTRIBUTES

For an explanation of the terms used in this section, see **attributes(7)**.

Interface	Attribute	Value
drand48_r() , erand48_r() , lrand48_r() , nrand48_r() , mrnd48_r() , jrand48_r() , srand48_r() , seed48_r() , lcong48_r()	Thread safety	MT-Safe race:buffer

STANDARDS

These functions are GNU extensions and are not portable.

SEE ALSO

drand48(3), **rand(3)**, **random(3)**