

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

SYNOPSIS

```
#include <stdlib.h>

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

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

All functions shown above:

```
/* Glibc since 2.19: */ _DEFAULT_SOURCE
|| /* Glibc versions <= 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 |
|---|---------------|---------------------|
| <code>drand48_r()</code> , <code>erand48_r()</code> , <code>lrand48_r()</code> , <code>nrand48_r()</code> , <code>mrand48_r()</code> , <code>jrand48_r()</code> , <code>srand48_r()</code> , <code>seed48_r()</code> , <code>lcong48_r()</code> | Thread safety | MT-Safe race:buffer |

CONFORMING TO

These functions are GNU extensions and are not portable.

SEE ALSO

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

COLOPHON

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