

The Open Group Base Specifications Issue 7, 2018 edition
 IEEE Std 1003.1-2017 (Revision of IEEE Std 1003.1-2008)
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NAME

sys/resource.h – definitions for XSI resource operations

SYNOPSIS

[XSI] `#include <sys/resource.h>`

DESCRIPTION

The `<sys/resource.h>` header shall define the following symbolic constants as possible values of the *which* argument of [getpriority\(\)](#) and [setpriority\(\)](#):

`PRIO_PROCESS`
 Identifies the *who* argument as a process ID.
`PRIO_PGRP`
 Identifies the *who* argument as a process group ID.
`PRIO_USER`
 Identifies the *who* argument as a user ID.

The `<sys/resource.h>` header shall define the following type through **typedef**:

`rlim_t`
 Unsigned integer type used for limit values.

The `<sys/resource.h>` header shall define the following symbolic constants, which shall have values suitable for use in `#if` preprocessing directives:

`RLIM_INFINITY`
 A value of **`rlim_t`** indicating no limit.
`RLIM_SAVED_MAX`
 A value of type **`rlim_t`** indicating an unrepresentable saved hard limit.
`RLIM_SAVED_CUR`
 A value of type **`rlim_t`** indicating an unrepresentable saved soft limit.

On implementations where all resource limits are representable in an object of type **`rlim_t`**, `RLIM_SAVED_MAX` and `RLIM_SAVED_CUR` need not be distinct from `RLIM_INFINITY`.

The `<sys/resource.h>` header shall define the following symbolic constants as possible values of the *who* parameter of [getrusage\(\)](#):

`RUSAGE_SELF`
 Returns information about the current process.
`RUSAGE_CHILDREN`
 Returns information about children of the current process.

The `<sys/resource.h>` header shall define the **`rlimit`** structure, which shall include at least the following members:

`rlim_t` `rlim_cur` The current (soft) limit.
`rlim_t` `rlim_max` The hard limit.

The `<sys/resource.h>` header shall define the **`rusage`** structure, which shall include at least the following members:

```
struct timeval ru_utime  User time used.
struct timeval ru_stime  System time used.
```

The `<sys/resource.h>` header shall define the **timeval** structure as described in [<sys/time.h>](#).

The `<sys/resource.h>` header shall define the following symbolic constants as possible values for the *resource* argument of [getrlimit\(\)](#) and [setrlimit\(\)](#):

```
RLIMIT_CORE
    Limit on size of core file.
RLIMIT_CPU
    Limit on CPU time per process.
RLIMIT_DATA
    Limit on data segment size.
RLIMIT_FSIZE
    Limit on file size.
RLIMIT_NOFILE
    Limit on number of open files.
RLIMIT_STACK
    Limit on stack size.
RLIMIT_AS
    Limit on address space size.
```

The following shall be declared as functions and may also be defined as macros. Function prototypes shall be provided.

```
int  getpriority(int, id_t);
int  getrlimit(int, struct rlimit *);
int  getrusage(int, struct rusage *);
int  setpriority(int, id_t, int);
int  setrlimit(int, const struct rlimit *);
```

The `<sys/resource.h>` header shall define the **id_t** type through **typedef**, as described in [<sys/types.h>](#).

Inclusion of the `<sys/resource.h>` header may also make visible all symbols from [<sys/time.h>](#).

The following sections are informative.

APPLICATION USAGE

None.

RATIONALE

None.

FUTURE DIRECTIONS

None.

SEE ALSO

[<sys/time.h>](#), [<sys/types.h>](#)

XSH [getpriority](#), [getrlimit](#), [getrusage](#)

CHANGE HISTORY

First released in Issue 4, Version 2.

Issue 5

Large File System extensions are added.

Issue 7

This reference page is clarified with respect to macros and symbolic constants.

End of informative text.

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