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Red Hat Enterprise Linux Release 9.2 Manual Pages on 'setsid.3p' command

$ man setsid.3p

SETSID(3P) POSIX Programmer's Manual SETSID(3P)

PROLOG

This manual page is part of the POSIX Programmer's Manual. The Linux implementation of this interface may differ (consult the corresponding Linux manual page for details of Linux behavior), or the interface may not be implemented on Linux.

NAME

setsid ? create session and set process group ID

SYNOPSIS

#include <unistd.h>

pid_t setsid(void);

DESCRIPTION

The setsid() function shall create a new session, if the calling process is not a process group leader. Upon return the calling process shall be the session leader of this new session, shall be the process group leader of a new process group, and shall have no controlling ter? minal. The process group ID of the calling process shall be set equal to the process ID of the calling process. The calling process shall be the only process in the new process group and the only process in the new session.

RETURN VALUE

Upon successful completion, setsid() shall return the value of the new process group ID of the calling process. Otherwise, it shall return -1

and set errno to indicate the error.

ERRORS

The setsid() function shall fail if:

EPERM The calling process is already a process group leader, or the process group ID of a process other than the calling process matches the process ID of the calling process.

The following sections are informative.

EXAMPLES

None.

APPLICATION USAGE

None.

RATIONALE

The setsid() function is similar to the setpgrp() function of System V. System V, without job control, groups processes into process groups and creates new process groups via setpgrp(); only one process group may be part of a login session.

Job control allows multiple process groups within a login session. In order to limit job control actions so that they can only affect pro? cesses in the same login session, this volume of POSIX.1?2017 adds the concept of a session that is created via setsid(). The setsid() func? tion also creates the initial process group contained in the session. Additional process groups can be created via the setpgid() function. A System V process group would correspond to a POSIX System Interfaces session containing a single POSIX process group. Note that this func? tion requires that the calling process not be a process group leader. The usual way to ensure this is true is to create a new process with fork() and have it call setsid(). The fork() function guarantees that the process ID of the new process does not match any existing process group ID.

FUTURE DIRECTIONS

None.

SEE ALSO

getsid(), setpgid(), setpgrp()

The Base Definitions volume of POSIX.1?2017, <sys_types.h>, <unistd.h>

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