NAME

msgctl – message control operations

SYNOPSIS

#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/msg.h>

int msgctl(int *msqid***, int** *cmd***, struct msqid_ds ***buf* **);**

DESCRIPTION

msgctl( ) provides a variety of message control operations as specified by *cmd*. The following *cmd*s are available:

IPC_STAT Place the current value of each member of the data structure associated with *msqid* into the structure pointed to by *buf*. The contents of this structure are defined in **intro**(2).

IPC_SET Set the value of the following members of the data structure associated with *msqid* to the corresponding value found in the structure pointed to by *buf*:

msg_perm.uid
msg_perm.gid
msg_perm.mode /* only access permission bits */
msg_qbytes

This *cmd* can only be executed by a process that has an effective user ID equal to either that of super user, or to the value of **msg_perm.cuid** or **msg_perm.uid** in the data structure associated with *msqid*. Only super user can raise the value of **msg_qbytes**.

IPC_RMID Remove the message queue identifier specified by *msqid* from the system and destroy the message queue and data structure associated with it. This *cmd* can only be executed by a process that has an effective user ID equal to either that of super user, or to the value of **msg_perm.cuid** or **msg_perm.uid** in the data structure associated with *msqid*. *buf* is ignored.

RETURN VALUES

Upon successful completion, a value of 0 is returned. Otherwise, a value of –1 is returned and **errno** is set to indicate the error.

ERRORS

msgctl( ) fails if one or more of the following are true:

EACCES *cmd* is **IPC_STAT** and operation permission is denied to the calling process (see **intro**(2)).

EFAULT *buf* points to an illegal address.

EINVAL *msqid* is not a valid message queue identifier.

EINVAL *cmd* is not a valid command.

EINVAL *cmd* is **IPC_SET** and **msg_perm.uid** or **msg_perm.gid** is not valid.

EPERM *cmd* is **IPC_RMID** or **IPC_SET**. The effective user of the calling process is not super-user, or the value of **msg_perm.cuid** or **msg_perm.uid** in the data structure associated with *msqid*.

EPERM *cmd* is **IPC_SET**, an attempt is being made to increase to the value of **msg_qbytes,** and the effective user ID of the calling process is not that of super user.

EOVERFLOW *cmd* is **IPC_STAT** and *uid* or *gid* is too large to be stored in the structure pointed to by *buf*.

SEE ALSO

intro(2), **msgget**(2), **msgop**(2)