NAME

rctl_add_rule, **rctl_get_limits**, **rctl_get_racct**, **rctl_get_rules**, **rctl_remove_rule** - manipulate and query the resource limits database

LIBRARY

Standard C Library (libc, -lc)

SYNOPSIS

#include <sys/rctl.h>

int
rctl_add_rule(*const char *inbufp, size_t inbuflen, char *outbufp, size_t outbuflen*);

int
rctl_get_limits(*const char *inbufp, size_t inbuflen, char *outbufp, size_t outbuflen*);

int
rctl_get_racct(*const char *inbufp, size_t inbuflen, char *outbufp, size_t outbuflen*);

int
rctl_get_rules(*const char *inbufp, size_t inbuflen, char *outbufp, size_t outbuflen*);

int
rctl_remove_rule(*const char *inbufp, size_t inbuflen, char *outbufp, size_t outbuflen*);

DESCRIPTION

These system calls are used to manipulate and query the resource limits database. For all functions, *inbuflen* refers to the length of the buffer pointed to by *inbufp* and *outbuflen* refers to the length of the buffer pointed to by *outbufp*.

The **rctl_add_rule**() function adds the rule pointed to by *inbufp* to the resource limits database. The *outbufp* and *outbuflen* arguments are unused. Rule format is as described in rctl(8), with exceptions noted in the *RULES AND FILTERS* section.

The **rctl_get_limits**() function returns in *outbufp* a comma-separated list of rules that apply to the process that matches the filter specified in *inbufp*. This includes rules with a subject of the process itself as well as rules with a different subject (such as user or loginclass) that apply to the process.

The **rctl_get_racct**() function returns resource usage information for a given subject. The subject is specified by passing a filter in *inbufp*. Filter syntax is as described in rctl(8), with exceptions noted in

the *RULES AND FILTERS* section. A comma-separated list of resources and the amount used of each by the specified subject is returned in *outbufp*. The resource and amount is formatted as "resource=amount".

The **rctl_get_rules**() function returns in *outbufp* a comma-separated list of rules from the resource limits database that match the filter passed in *inbufp*. Filter syntax is as described in rctl(8), with exceptions noted in the *RULES AND FILTERS* section. A filter of *::* may be passed to return all rules.

The **rctl_remove_rule**() function removes all rules matching the filter passed in *inbufp* from the resource limits database. Filter syntax is as described in rctl(8), with exceptions noted in the *RULES AND FILTERS* section. *outbufp* and *outbuflen* are unused.

RULES AND FILTERS

This section explains how the rule and filter format described in rctl(8) differs from the format passed to the system calls themselves. The rctl tool provides several conveniences that the system calls do not. When using the system call:

- The subject must be fully specified. For example, abbreviating ‘user’ to ‘u’ is not acceptable.
- User and group IDs must be numeric. For example, ‘root’ must be expressed as ‘0’.
- Units are not permitted on resource amounts. For example, a quantity of 1024 bytes must be expressed as ‘1024’ and not ‘1k’.

RETURN VALUES

Upon successful completion, the value 0 is returned; otherwise the value -1 is returned and the global variable *errno* is set to indicate the error.

ERRORS

The rctl system calls may fail if:

[ENOSYS]	RACCT/RCTL support is not present in the kernel or the *kern.racct.enable* sysctl is 0.
[EINVAL]	The rule or filter passed in *inbufp* is invalid.
[EPERM]	User has insufficient privileges to carry out the requested operation.
[E2BIG]	*inbufp* or *outbufp* are too large.

[ESRCH] No process matched the provided rule or filter.

[ENAMETOOLONG]
The loginclass or jail name specified is too long.

[ERANGE] The rule amount is outside of the allowable range or *outbufp* is too small.

[EOPNOTSUPP] The requested operation is not supported for the given rule or filter.

[EFAULT] *inbufp* or *outbufp* refer to invalid addresses.

SEE ALSO

rctl(8)

HISTORY

The rctl family of system calls appeared in FreeBSD 9.0.

AUTHORS

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