



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

\$ man posix_trace_attr_getinherited.3p

POSIX_TRACE_ATTR_GETINHERIT(POSIX)Programmer'sPOSIX_TRACE_ATTR_GETINHERITED(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

posix_trace_attr_getinherited, posix_trace_attr_getlogfullpolicy,
posix_trace_attr_getstreamfullpolicy, posix_trace_attr_setinherited,
posix_trace_attr_setlogfullpolicy, posix_trace_attr_setstreamfullpolicy
? retrieve and set the behavior of a trace stream (TRACING)

SYNOPSIS

```
#include <trace.h>

int posix_trace_attr_getinherited(const trace_attr_t *restrict attr,
    int *restrict inheritancepolicy);

int posix_trace_attr_getlogfullpolicy(const trace_attr_t *restrict attr,
    int *restrict logpolicy);

int posix_trace_attr_getstreamfullpolicy(const trace_attr_t *restrict
    attr, int *restrict streampolicy);

int posix_trace_attr_setinherited(trace_attr_t *attr,
    int inheritancepolicy);

int posix_trace_attr_setlogfullpolicy(trace_attr_t *attr,
    int logpolicy);
```

```
int posix_trace_attr_setstreamfullpolicy(trace_attr_t *attr,  
    int streampolicy);
```

DESCRIPTION

The `posix_trace_attr_getinherited()` and `posix_trace_attr_setinherited()` functions, respectively, shall get and set the inheritance policy stored in the inheritance attribute for traced processes across the `fork()` and `spawn()` operations. The inheritance attribute of the `attributes` object pointed to by the `attr` argument shall be set to one of the following values defined by manifest constants in the `<trace.h>` header:

POSIX_TRACE_CLOSE_FOR_CHILD

After a `fork()` or `spawn()` operation, the child shall not be traced, and tracing of the parent shall continue.

POSIX_TRACE_INHERITED

After a `fork()` or `spawn()` operation, if the parent is being traced, its child shall be concurrently traced using the same trace stream.

The default value for the inheritance attribute is `POSIX_TRACE_CLOSE_FOR_CHILD`.

The `posix_trace_attr_getlogfullpolicy()` and `posix_trace_attr_setlogfullpolicy()` functions, respectively, shall get and set the trace log full policy stored in the log-full-policy attribute of the `attributes` object pointed to by the `attr` argument.

The log-full-policy attribute shall be set to one of the following values defined by manifest constants in the `<trace.h>` header:

POSIX_TRACE_LOOP

The trace log shall loop until the associated trace stream is stopped. This policy means that when the trace log gets full, the file system shall reuse the resources allocated to the oldest trace events that were recorded. In this way, the trace log will always contain the most recent trace events flushed.

POSIX_TRACE_UNTIL_FULL

The trace stream shall be flushed to the trace log until the

trace log is full. This condition can be deduced from the `posix_log_full_status` member status (see the `posix_trace_status_info` structure defined in `<trace.h>`). The last recorded trace event shall be the `POSIX_TRACE_STOP` trace event.

POSIX_TRACE_APPEND

The associated trace stream shall be flushed to the trace log without log size limitation. If the application specifies `POSIX_TRACE_APPEND`, the implementation shall ignore the `log-max-size` attribute.

The default value for the `log-full-policy` attribute is `POSIX_TRACE_LOOP`.

The `posix_trace_attr_getstreamfullpolicy()` and `posix_trace_attr_setstreamfullpolicy()` functions, respectively, shall get and set the trace stream full policy stored in the `stream-full-policy` attribute of the `attributes` object pointed to by the `attr` argument.

The `stream-full-policy` attribute shall be set to one of the following values defined by manifest constants in the `<trace.h>` header:

POSIX_TRACE_LOOP

The trace stream shall loop until explicitly stopped by the `posix_trace_stop()` function. This policy means that when the trace stream is full, the trace system shall reuse the resources allocated to the oldest trace events recorded. In this way, the trace stream will always contain the most recent trace events recorded.

POSIX_TRACE_UNTIL_FULL

The trace stream will run until the trace stream resources are exhausted. Then the trace stream will stop. This condition can be deduced from `posix_stream_status` and `posix_stream_full_status` (see the `posix_trace_status_info` structure defined in `<trace.h>`).

When this trace stream is read, a `POSIX_TRACE_STOP` trace event shall be reported after reporting the last recorded trace event.

The trace system shall reuse the resources allocated to any trace events already reported?see the `posix_trace_getnext_event()`,

`posix_trace_trygetnext_event()`, and `posix_trace_timedgetnext_event()` functions? or already flushed for an active trace stream with log if the Trace Log option is supported; see the `posix_trace_flush()` function. The trace system shall restart the trace stream when it is empty and may restart it sooner. A `POSIX_TRACE_START` trace event shall be reported before reporting the next recorded trace event.

POSIX_TRACE_FLUSH

If the Trace Log option is supported, this policy is identical to the `POSIX_TRACE_UNTIL_FULL` trace stream full policy except that the trace stream shall be flushed regularly as if `posix_trace_flush()` had been explicitly called. Defining this policy for an active trace stream without log shall be invalid.

The default value for the stream-full-policy attribute shall be `POSIX_TRACE_LOOP` for an active trace stream without log.

If the Trace Log option is supported, the default value for the stream-full-policy attribute shall be `POSIX_TRACE_FLUSH` for an active trace stream with log.

RETURN VALUE

Upon successful completion, these functions shall return a value of zero. Otherwise, they shall return the corresponding error number.

If successful, the `posix_trace_attr_getinherited()` function shall store the inheritance attribute value in the object pointed to by `inheritedpolicy`. Otherwise, the content of this object is undefined.

If successful, the `posix_trace_attr_getlogfullpolicy()` function shall store the log-full-policy attribute value in the object pointed to by `logpolicy`. Otherwise, the content of this object is undefined.

If successful, the `posix_trace_attr_getstreamfullpolicy()` function shall store the stream-full-policy attribute value in the object pointed to by `streampolicy`. Otherwise, the content of this object is undefined.

ERRORS

These functions may fail if:

EINVAL The value specified by at least one of the arguments is invalid.

The following sections are informative.

EXAMPLES

None.

APPLICATION USAGE

None.

RATIONALE

None.

FUTURE DIRECTIONS

The following functions:

`posix_trace_attr_getinherited()`

`posix_trace_attr_getlogfullpolicy()`

`posix_trace_attr_getstreamfullpolicy()`

`posix_trace_attr_setinherited()`

`posix_trace_attr_setlogfullpolicy()`

`posix_trace_attr_setstreamfullpolicy()`

may be removed in a future version.

SEE ALSO

`fork()`, `posix_trace_attr_destroy()`, `posix_trace_create()`,

`posix_trace_get_attr()`, `posix_trace_getnext_event()`,

`posix_trace_start()`

The Base Definitions volume of POSIX.1-2017, `<trace.h>`

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