

**NAME**

unw\_getcontext -- get initial machine-state

**SYNOPSIS**

```
#include <libunwind.h>
```

```
int unw_getcontext(unw_context_t *ucp);
```

**DESCRIPTION**

The `unw_getcontext()` routine initializes the context structure pointed to by `ucp` with the machine-state of the call-site. The exact set of registers stored by `unw_getcontext()` is platform-specific, but, in general, at least all preserved (“callee-saved”) and all frame-related registers, such as the stack-pointer, will be stored.

This routine is normally implemented as a macro and applications should not attempt to take its address.

**PLATFORM-SPECIFIC NOTES**

On IA-64, `unw_context_t` has a layout that is compatible with that of `ucontext_t` and such structures can be initialized with `getcontext()` instead of `unw_getcontext()`. However, the reverse is *not* true and it is *not* safe to use structures initialized by `unw_getcontext()` in places where a structure initialized by `getcontext()` is expected. The reason for this asymmetry is that `unw_getcontext()` is optimized for maximum performance and does not, for example, save the signal mask.

**RETURN VALUE**

On successful completion, `unw_getcontext()` returns 0. Otherwise, a value of -1 is returned.

**THREAD AND SIGNAL SAFETY**

`unw_getcontext()` is thread-safe as well as safe to use from a signal handler.

**SEE ALSO**

`libunwind(3)`, `unw_init_local(3)`

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