The Containerof Macro

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The Linux kernel and many other projects use a macro called *container_of* (or similar) that facilitates the use of intrusive data structures. This macro is common but usually relies on compiler magic for improved type safety. Hence, it is useful to provide this macro as part of the standard library.

Wording (insert in 7.21 (stddef.h) after offsetof)

and

```
containerof(ptr, type, member-designator)
```

which expands to a pointer expression pointing to a structure or union object that contains a subobject (designated by *member-designator*) pointed-to by the pointer *ptr*, where *type* and *member-designator* shall be as described for the **offsetof** macro. The type of the pointer *ptr* shall be compatible to a pointer to the type of the designated member. If the pointer *ptr* does not point to a member of a structure or union object with a type compatible to *type*, the behavior is undefined.