

**NAME**

**elf32\_getphdr**, **elf64\_getphdr**, **gelf\_getphdr** - retrieve an ELF program header table

**LIBRARY**

ELF Access Library (libelf, -lelf)

**SYNOPSIS**

```
#include <libelf.h>
```

```
Elf32_Phdr *
```

```
elf32_getphdr(Elf *elf);
```

```
Elf64_Phdr *
```

```
elf64_getphdr(Elf *elf);
```

```
#include <gelf.h>
```

```
GElf_Phdr *
```

```
gelf_getphdr(Elf *elf, int index, GElf_Phdr *dst);
```

**DESCRIPTION**

These functions retrieve and translate ELF program header information from an ELF descriptor, if this information exists.

Functions **elf32\_getphdr()** and **elf64\_getphdr()** return a pointer to an array of translated *Elf32\_Phdr* and *Elf64\_Phdr* descriptors respectively. These descriptors are described in elf(5). The number of entries in this array may be determined using the elf\_getphnum(3) function.

Function **gelf\_getphdr()** will retrieve the program header table entry at index *index* from ELF descriptor *elf*. The translated program header table entry will be written to the address pointed to be argument *dst*.

Applications may inform the library of modifications to a program header table entry by using the elf\_flagphdr(3) API. Applications using the gelf(3) interface need to use the gelf\_update\_phdr(3) API to copy modifications to a program header entry back to the underlying ELF descriptor.

**RETURN VALUES**

The functions a valid pointer if successful, or NULL in case an error was encountered.

**ERRORS**

These functions may fail with the following errors:

[ELF\_E\_ARGUMENT]

Argument *elf* was NULL.

[ELF\_E\_ARGUMENT]

Argument *elf* was not a descriptor for an ELF object.

[ELF\_E\_ARGUMENT]

Argument *dst* was NULL.

[ELF\_E\_ARGUMENT]

Index *index* was out of range.

[ELF\_E\_CLASS]

The class of ELF descriptor *elf* did not match the expected class of the function being called.

[ELF\_E\_HEADER]

ELF descriptor *elf* did not possess an executable header.

[ELF\_E\_HEADER]

ELF descriptor *elf* had a corrupt executable header.

[ELF\_E\_RESOURCE]

An out of memory condition was detected.

[ELF\_E\_SECTION]

The ELF descriptor in argument *elf* did not adhere to the conventions used for extended numbering.

[ELF\_VERSION]

ELF descriptor *elf* was of an unsupported version.

## SEE ALSO

elf(3), elf32\_getehdr(3), elf32\_newphdr(3), elf64\_getehdr(3), elf64\_newphdr(3), elf\_flagphdr(3), elf\_getphnum(3), gelf(3), gelf\_getehdr(3), gelf\_newphdr(3), gelf\_update\_phdr(3), elf(5)