

scripts  
directory

[vmlinux\\_decompressor.py](#)

Purpose:

- This script is the entry point for decompressing or unpacking a single kernel, and supports a handful for formats, including Android boot images and compressed vmlinux
- It calls the `core.vmlinux_decompressor` ([obtain\\_raw\\_kernel\\_from\\_file](#)) module

[kallsyms\\_finder.py](#)

Purpose:

- This script is the entry point for printing a list of (symtype, symname, symaddr) objects to the standard output
- It calls the `core.vmlinux_decompressor` ([obtain\\_raw\\_kernel\\_from\\_file](#)) and `core.kallsyms` ([KallsymsFinder](#)) modules

[vmlinux\\_to\\_elf.py](#)

Purpose:

- This script intends to take a raw kernel image and make it into an analyzable .ELF file
- It calls the `core.vmlinux_decompressor` ([obtain\\_raw\\_kernel\\_from\\_file](#)) and `core.elf_symbolizer` ([ElfSymbolizer](#), which calls itself `core.kallsyms` ([KallsymsFinder](#))) modules

core modules

[core.kallsyms](#)

The purpose of this module is to provide extraction logic for the kallsyms information. It contains **most of the kallsys extraction routine**, and what is the most important to debug.

The `KallsymsFinder` class is called by the `scripts.kallsyms_finder` and `core.elf_symbolizer` modules.

[core.elf\\_symbolizer](#)

The purpose of this short enough module is to provide **framing constructing a new ELF file** out of an origin binary with extracted symbols.

The `ElfSymbolizer` class is called by the `scripts.vmlinux_to_elf` module only.

[core.architecture\\_detector](#)

This is an heuristic **binary architecture guesser** used to pinpoint the **output e\_machine ELF field** and underlying instruction set for the file, including endianness and register size.

This is done through the `ArchitectureDetector` class which is called by the `core.kallsyms` module only.

[core.vmlinux\\_decompressor](#)

This file contains the `obtain_raw_kernel_from_file` routine which is called from multiple entry scripts, and wraps off known kernel binary header and compression formats.