

MicroTESK - Bug #10102

incorrect ld scripts for x86 test programs

02/06/2020 01:22 PM - Sergey Smolov

Status:	Verified	Start date:	02/06/2020
Priority:	High	Due date:	
Assignee:	Alexander Kamkin	% Done:	0%
Category:	Test Engine	Estimated time:	0.00 hour
Target version:	2.5	Spent time:	0.00 hour
Detected in build:	master	Published in build:	
Platform:			

Description

For x86 test programs emulation on QEMU4V, the following approach can be used. Test program should be compiled as *bootable drive* and run on QEMU4V ("-hda" option). The following linker script should be generated:

SECTIONS

```
{
  /* The BIOS loads the code from the disk to this location.
   * We must tell that to the linker so that it can properly
   * calculate the addresses of symbols we might jump to.
   */
  . = 0x7c00;
  .text :
  {
    __start = .;
    *(.text)
    /* Place the magic boot bytes at the end of the first 512 sector of the disk. */
    . = 0x1FE;
    SHORT(0xAA55)
  }
}
```

Now ld scripts look as follows:

ENTRY(_start)

SECTIONS

```
{
  . = 0x7C00;
  .text : { *(.text)}
  . = 0x8000;
  .data : { *(.data)}
  .bss : { *(.bss COMMON)}
  . = ALIGN(8);
  . = . + 0x10000;
  stack_top = .;
}
```

History

#1 - 02/10/2020 04:51 PM - Sergey Smolov

- Assignee set to Alexander Kamkin

#2 - 02/11/2020 10:44 AM - Alexander Kamkin

- Target version set to 2.5

- Status changed from New to Resolved

- Category set to Test Engine

The following things have been done:

- Removed the hardcoded suffix `.bss ... stack_top = .;` from the linker script printer.
- Added a special section `boot`, which contains the magic bytes, to `x86_base`.

#3 - 02/11/2020 11:25 AM - Sergey Smolov

- *Status changed from Resolved to Verified*