

Re: bootloader-bios interaction

Source: <http://linux.derkeiler.com/Newsgroups/comp.os.linux.embedded/2004-11/0154.html>

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On Sun, 21 Nov 2004 21:11:27 +0800, du wrote:

>
> *"Uday Mullangi" <udaymullangi@lucent.com>*
>> *Hi,*
>>
>> *I am looking for the boot sequence for Linux OS (Intel P4 processor) In*
>> *particular, where the BIOS finishes the POST and jumps to the*
> *predefined*
>> *location where the bootloader code is executed. I believe while the BIOS*
> *is*
>> *running the processor is configured in real mode. So when the bootloader*
>> *code is executing, will the processor switch to protected mode?(i am*
>> *not*
>

For a description of the boot process, see this file in the kernel source distribution "linux/Documentation/i386/boot.txt". You can download a copy from kernel.org.

> *No, bootloader running in real mode then it do not load the whole kernel*
> *image.*
> *Bootloader only load part of kernel, and jump to it. In the kernel, there*
> *is a asm function named setup() switch the processor to protected mode and*
> *call startup_32(). The startup_32 do something and load other*
> *part of kernel image*

I think this is the sequence for Windows. I've never seen setup() and startup_32() in Linux.

>> *Could anyone give me some pointers about this execution ??*

Look in "linux/arch/i386/boot/setup.S" this is where the bios calls in real mode and the switch to protected happens.

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