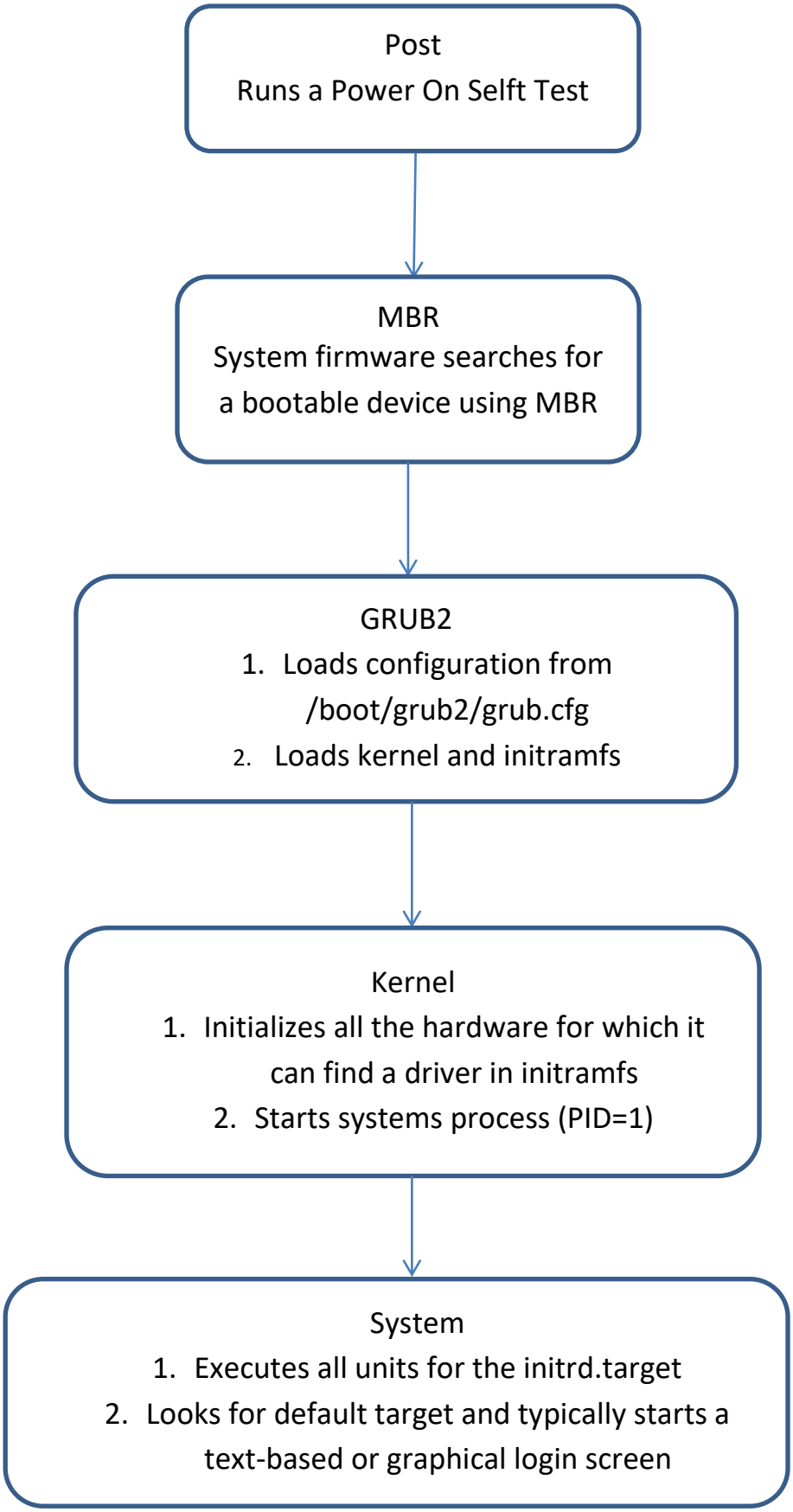
Booting Process

- **Step by Step Boot Process:**



What is booting process?

The machine's BIOS or boot microcode hundreds and runs a boot loader. Boot loader finds the kernel image on the disk and loads it into memory, to start the system. The kernel initializes the devices and their drivers. The kernel mounts the basis filesystem.

POST (Power On Self Test):

The first step of the Linux boot process really has nothing whatever to do with Linux. This is the hardware portion of the boot process and is the boot process and is the same for any operating system. When power is first applied to the computer it runs the **POST.**

MBR (Master Boot Record):

The Master Boot Record (MBR) is the information in the first sector of any hard disk or diskette that identifies how and where an operating system is located so that it can be boot (loaded) into the computer's main storage or random access memory. The MBR is a 512-byte sector, located in the first sector on the disk.

GRUB2 (Grand Unified Bootloader):

GRUB stands for GRand Unified Bootloader. Its function is to take over from BIOS at boot time, load itself, load the Linux kernel into memory, and then turn over execution to the kernel. Once the kernel takes over, GRUB has done its job and it is no longer needed.

Kernel:

The Linux kernel is the main component of a Linux operating system (OS) and is the core interface between a computer's hardware and its processes. It helps with process and memory management, file systems, device control and networking.

systemd:

A systemd target is a set of systemd units that the system should start to reach a desired state. A target can be a part of another target. For example, the graphical.target includes multiuser.target, which in turn depends on basic.target and others.