**101.1 Determine and configure hardware settings**

**Weight:** 2

**Description:** Candidates should be able to determine and configure fundamental system hardware.

**Key Knowledge Areas:**

* Enable and disable integrated peripherals
* Configure systems with or without external peripherals such as keyboards
* Differentiate between the various types of mass storage devices
* Know the differences between coldplug and hotplug devices
* Determine hardware resources for devices
* Tools and utilities to list various hardware information (e.g. lsusb, lspci, etc.)
* Tools and utilities to manipulate USB devices
* Conceptual understanding of sysfs, udev, dbus

**The following is a partial list of the used files, terms and utilities:**

* /sys/
* /proc/
* /dev/
* modprobe
* lsmod
* lspci
* lsusb

**Enable and disable integrated peripherals**

If your system supports legacy peripheral interfaces, you might have a place to configure them. In my case, I can use the Advanced menu to configure the serial and parallel port interrupt requests (IRQs) and I/O port starting addresses. Figure 2 shows the advanced settings for my system. In addition to configuring the legacy serial and parallel ports, note that I can enable or disable the on-board LAN and 1394 (FireWire) controllers. Note that the LAN controller also has a boot ROM that I have disabled. You enable the boot ROM if you want the system to load over a LAN from a remote server. You might want this for a kiosk machine or for reimaging a large number of systems.

##### Figure 2. Configuring serial, parallel, and on-board devices with BIOS

