(Approx. 620 words)

Dan’s Desk

Partially Locked Laptop

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This month I’ll look at an interesting situation of a partially locked PC that I picked up at a recent auction. One of the features that all PCs share is the ability to set a supervisor, master or boot PC password.

This is usually done for one of two reasons: a) to prevent users from inadvertently making a change to the BIOS (Basic Input Output System) of a PC that makes it vulnerable or less secure on a business network or b) make it impossible to use if it is stolen. When booting up a PC, you can access the hardware BIOS by pressing a specific key during the display of the manufacturers logo. Once set, it can be extremely difficult, if not impossible, to change the BIOS settings if that password is lost. If the BIOS has been configured to only boot from the hard drive and to ignore any DVD or USB device, then it can be impossible to reload the operating system on the hard drive.

In my situation, the locked PC was included in a group of three Toshiba laptops that I won at auction. All of the PCs had their hard drives removed to protect the data of the selling organization from being accessed. All three were locked with BIOS passwords set to prevent the BIOS settings from being modified. Two of them were able to boot from a DVD but not from a USB device. Those PCs were able to have the new hard drives reloaded from a Windows 10 DVD. But one of them would not load from either a DVD or a USB device.

There is a way to clear the password if you have desktop PC, by moving a jumper located on the motherboard. Laptops do not have this capability however. Some laptops, like those from Dell, can be cleared by entering a master unlock password. Most Toshiba laptops can only be cleared by shorting out two connection points located on the motherboard. Toshiba does not provide documentation on the location of these connection points in their consumer accessible documentation for the specific model being worked on. The only way to get the password cleared on those models, is to take it to an authorized Toshiba service dealer, and pay about $75 for the technician to spend literally 5 minutes to perform the shorting operation.

After almost giving up on loading the new hard drive on this locked laptop, I came up with a somewhat unique approach to solving the issue. As I had an identical model, that was reloaded with the latest version of Windows 10, I decided to try cloning the hard drive to another drive. Cloning involves using a software program that will produce a duplicate copy of a specific hard drive. Once the clone was completed, I installed the new drive in the locked PC and booted it up. As the PC was set to only load from the hard drive, it booted up successfully. The license of Windows 10 is tied to the serial number of each motherboard, so the new drive needed to be reactivated with Microsoft. This was easily done once I was able to boot Windows. Once Windows was running, I could access the USB devices and the DVD through the OS, as needed to load any other software.

I guess my stubborn streak to never give up solving a problem can lead to imaginative solutions when required.

If you have suggestions for other topics like this, that you would like to see explained, please let me know!