# Lenovo Ideapad v80 SSD Upgrade

This document outlines the process used to upgrade a Lenovo Ideapad v80 system from a 1 TB Seagate hard disk to a 1 TB SSD. The reason for this upgrade is that the client describes the laptop as being slow to boot, start processes, and use processes. There is constant freezing of the applications, and the task manager almost always shows the Disk at 100%. This document describes the steps which led to the completion of this HDD to SSD upgrade which was able to solve all of the described issues for the system.

# Planning

Research was conducted on the system to understand how the hard disk was secured in the system so that it could be changed out without damage. This research included finding online reference materials for various aspects and disassembling the system in-person. Reference materials which were utilized included videos of similar laptop model tear-downs as well as materials to determine which SSD to purchase and utilize for the system. At this stage I was compiling a list of needed materials. Upon disassembling the system, I confirmed that the HDD already in use was using a SATA connection port. Due to this, I decided that finding an SSD with a SATA connection would be most efficient. This is because it shows that the motherboard is already using a SATA connection for its main storage drive, so I decided not to further look into PCIe and NVMe options. Since I was going to upgrade the HDD to an SSD, I wanted the SSD to be about the same size—2.5 inches—to fit into the shell. I was also going to be able to reuse the SATA connection cable since the HDD was being replaced.

# Required Materials

* Crucial BX500 1TB 3D NAND SATA 2.5-Inch Internal SSD, up to 540MB/s - CT1000BX500SSD1
* Prying tool
* Phillips Screwdriver
* USB drive of at least 8 GB which contains operating system install media

# Steps to upgrade SSD

1. Remove screws on the back of the system using the Phillips screwdriver, taking care to ensure that you remember the placement of each screw for reassembly.
2. Using the prying tool, remove the back shell casing.
3. Locate the HDD.
4. Remove the SATA connection cable from the HDD port.
5. Hold down the tab locking the HDD into place and remove the HDD from the laptop.
6. Remove the casing to the HDD.
7. Place the SSD into the casing which the HDD was removed from.
8. Click the cased SSD into the slot which the HDD was removed from.
9. Connect the SATA cable to the SSD.
10. Click the back shell casing into place.
11. Screw each screw into its correct place.
12. Insert the USB with install media into the system.
13. Power on the system and install the operating system.

# References

<https://www.digitaltrends.com/computing/what-is-sata/>

<https://www.youtube.com/watch?v=0ZPBxswjeIA>

<https://www.tomshardware.com/reviews/best-ssds,3891.html>