Lab - Hard Drive Maintenance (Instructor Version)

**Instructor Note**: Red font color or gray highlights indicate text that appears in the instructor copy only.

# Introduction

In this lab, you will examine the results of using Disk Check and Disk Defragmenter on a hard drive.

**Instructor Note**: If the hard drive is an SSD, do not let students perform the defragmentation. Defragmentation should not hurt the SSD, but it is not necessary with this type of drive.

# Recommended Equipment

* A computer running Windows
* Two or more partitions on the hard drive

# Instructions

## Run the Error-checking Tool on a disk volume.

* + - 1. Log on to Windows as an administrator.
      2. Open the **File Explorer** > click **This PC**.

If there is only one partition on the hard drive, use **Disk Management** to create a second partition with at least 2GB.

* + - 1. Right-click the volume without an installed Windows OS. Click **Properties**.
      2. In the Properties window, click the **Tools** tab. Click **Check** to start the error checking.
      3. Windows monitors the drives and runs automatic scheduled scans. You may see a message saying that **You don’t need to scan this drive**. Click **Scan drive**.
      4. When you receive a message that your drive or disk was successfully scanned, click **Show details**.
      5. The **Event Viewer** opens to display the **Chkdsk** event. Double click the **Information** event in the middle pane to review the detailed information.

#### Questions:

How many stages were processed?

Type your answers here.

Answers may vary. 3 stages if no problems occurred during check.

Were any problems found with the volume? If problems were found, what were they?

Type your answers here.

Answers may vary.

* + - 1. Click **Close**. Close the **Event Viewer** as necessary.

## Use the Disk defragmenter tool.

**Note**: Do not perform this step if your computer has an SSD drive. It is unnecessary to defragment SSD drives.

* + - 1. Navigate to the **Properties** window for the drive that does not have a Windows OS installation.
      2. In the Properties window, click the **Tools** tab. Click **Optimize** to start disk optimization.
      3. Select the volume without an installed Windows OS. Click **Analyze** in the Optimize Disk window.

#### Question:

What percentage of the disk is fragmented?

Type your answers here.

Answers may vary

* + - 1. Click **Optimize** to start defragmenting the disk.

#### Question:

What is the first process during defragmenting (See **Current status** column)?

Type your answers here.

Analyzed.

What are the three tasks performed for each pass (See **Current status** column)?

Type your answers here.

Relocated, defragmented, and consolidated.

How many passes did it take to defragment drive?

Type your answers here.

Answers may vary. 6 passes.

* + - 1. When defragmenting is complete, click **Close**.
      2. Close all windows.

**Note**: It is not possible to view the detail of the defragmented hard drive through the GUI version of defragmenter.

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