**Encrypting Files**

Time required: 30 minutes

## Lab Description

In this project, you will compare three methods of encrypting files.

## Using Microsoft’s Encrypting File System (EFS)

Microsoft’s Encrypting File System (EFS) is a cryptography system for Windows operating systems that uses the Windows NTFS file system. Because EFS is tightly integrated with the file system, file encryption and decryption are transparent to the user. In this project, you turn on and use EFS. EFS is easy to use, but you can’t transport the encrypted file anywhere, it is an in-place encryption process only.

**NOTE:** Windows Home does not support the Encrypting File system. If you have Windows Home on your computer, use your Windows virtual machine.

1. Create a Notepad document with the phrase: **Now is the time for all good men to come to the aid of their country.**
2. Save the document as **Encrypted**
3. Save the document again as **Not Encrypted**
4. Go to File Explorer.
5. Navigate to the location of **Encrypted**
6. Right-click **Encrypted**
7. Click Properties.
8. Click the Advanced button.
9. Check the box Encrypt contents to secure data. This document is now protected with EFS. All actions regarding encrypting and decrypting the file are transparent to the user and should not noticeably affect any computer operations.
10. **Insert a screenshot:**

Click or tap here to enter text.

1. Click OK.
2. Click OK to close the Encrypted Properties dialog box.
3. Open **Encrypted** 🡪 **Was there any delay in the operation?**

Click or tap here to enter text.

1. Now open **Not Encrypted** 🡪 **Was it any faster or slower?**
2. Retain these two documents for use in the next part of this project. Close Word.

## Using 7-Zip

Third-party software applications can be downloaded to protect files with cryptography. 7-Zip is free and can create and extract compressed files. It can also encrypt files that can be decrypted somewhere else.

1. Go to [www.7-zip.org](http://www.7-zip.org) Download and install the latest stable release.
2. In File Explorer, Right Click **Encrypted 🡪** More Options 🡪 Click **z-Zip**, Click **Add to Archive**.
3. Leave 7z as the archive format.
4. Enter **cyber123** as the encryption password. Click OK to compress and encrypt the file.
5. Email the encrypted and compressed **Encrypted.7z** file (not the original document) to your instructor for instructions to complete the assignment.