

**Activity Overview**



In this activity, you'll analyze an artifact using VirusTotal and capture details about its related indicators of compromise using the Pyramid of Pain.

Previously, you were introduced to the concept of the Pyramid of Pain, which is used to understand the different types of **indicators of compromise** (**IoCs**). Remember, an IoC is observable evidence that suggests signs of a potential security incident. The Pyramid of Pain describes the relationship between IoCs and the level of difficulty that malicious actors experience when the IoCs are blocked by security teams.

VirusTotal is one of many tools that security analysts use to identify and respond to security incidents. **VirusTotal** is a service that allows anyone to analyze suspicious files, domains, URLs, and IP addresses for malicious content. Through crowdsourcing, VirusTotal gathers and reports on threat intelligence from the global cybersecurity community. This helps security analysts determine which IoCs have been reported as malicious. As a security analyst, you can take advantage of shared threat intelligence to learn more about threats and help improve detection capabilities.

***Important Note****: Data uploaded to VirusTotal will be publicly shared with the entire VirusTotal community. Be careful of what you submit, and make sure you do not upload personal information.*

**Scenario**



Review the following scenario. Then complete the step-by-step instructions.

You are a level one security operations center (SOC) analyst at a financial services company. You have received an alert about a suspicious file being downloaded on an employee's computer.

You investigate this alert and discover that the employee received an email containing an attachment. The attachment was a password-protected spreadsheet file. The spreadsheet's password was provided in the email. The employee downloaded the file, then entered the password to open the file. When the employee opened the file, a malicious payload was then executed on their computer.

You retrieve the malicious file and create a SHA256 hash of the file. You might recall from a previous course that a **hash function** is an algorithm that produces a code that can't be decrypted. Hashing is a cryptographic method used to uniquely identify malware, acting as the file's unique fingerprint.

Now that you have the file hash, you will use VirusTotal to uncover additional IoCs that are associated with the file.

***Note***: *Use the incident handler's journal you started in* [*a previous activity*](https://www.coursera.org/learn/detection-and-response/exam/ghRgc/portfolio-activity-document-an-incident-with-an-incident-handlers-journal)

*to take notes during the activity and keep track of your findings.*

***Note****: You might recall creating SHA256 hashes in the* [*lab activity on hash values*](https://www.coursera.org/learn/assets-threats-and-vulnerabilities/ungradedLti/SjSUK/activity-create-hash-values)

*from a previous course.*