

# Hands-On Projects

## Project 2-1: Use an Online Password Cracker

In this project, you will create a digest on a password and then crack it with an online cracking website to demonstrate the speed of cracking passwords.

1. The first step is to use a hash algorithm to create a password digest. Use your web browser to go to **www.fileformat.info/tool/hash.htm** (if you are no longer able to access the site through the web address, use a search engine to search for “Fileformat.Info hash functions”).
2. Under **String hash**, enter the simple password **apple123** in the **Text:** line.
3. Click **Hash**.
4. Scroll down the page and copy the MD4 hash of this password to your Clipboard by selecting the text, right-clicking, and choosing **Copy**.
5. Open a new tab on your web browser.
6. Go to **https://crackstation.net/**.
7. Paste the MD4 hash of *apple123* into the text box beneath **Enter up to 10 non-salted hashes:**.
8. In the RECAPTCHA box, enter the current value being displayed in the box that says **Type the text**.
9. Click **Crack Hashes**.
10. How long did it take this online rainbow table to crack this hash?
11. Click the browser tab to return to FileFormat.Info.
12. Under **String hash**, enter the longer password **12applesauce** in the **Text:** line.
13. Click **Hash**.
14. Scroll down the page and copy the MD4 hash of this password to your Clipboard.
15. Click to browser tab to return to the CrackStation site.
16. Paste the MD4 hash of *12applesauce* into the text box beneath **Enter up to 10 non-salted hashes:**.
17. In the RECAPTCHA box, enter the current value being displayed in the box that says **Type the text**.
18. Click **Crack Hashes**.

19. How long did it take this online rainbow table to crack this stronger password hash?
20. Click the browser tab to return to FileFormat.Info and experiment by entering new passwords, computing their hash, and testing them in the CrackStation site. If you are bold, enter a string hash that is similar to a real password that you use.
21. What does this tell you about the speed of cracking passwords? What does it tell you about how easy it is for attackers to crack weak passwords?
22. Close all windows.