## 02-Footprinting / Reconnaissance

Victim Data: no direct interaction

Scope & Contract:

You may not go past the reconnaissance stage.

You may only do this as a class member after you state you agree in the chat.

You may not publish the results ever.

You may only transmit the results to secure.dbushmiller@gmail.com using PDF password encrypted files.

Scope: Dean Bushmiller, Expanding Security.

If the above is unacceptable, then you are your own scope: do not send any files to anyone. If you need a website you may use <a href="http://certifiedhacker.com/">http://certifiedhacker.com/</a> a real website with no instructions (from ec council)

**Advanced**: Build a data file / artifact that is actionable by the contract holder. There are no instructions for this task. You must figure everything out.

Attacker Data: Kali/ Parrot

## Objective

Extract information about the target organization WITHOUT DIRECT INTERACTION OR SCANNING:

- Employee details, partner details, weblinks, web technologies, patents, trademarks
- Domains, sub-domains, network blocks, network topologies, trusted routers, firewalls, IP addresses of the reachable systems, the Whois record, DNS records,

## Overview of Reconnaissance

Footprinting can be categorized into passive footprinting and active footprinting:

**Passive**: Involves gathering information without direct interaction. This is useful when there is a requirement that the information-gathering activities are not to be detected by the target.

**Active**: Involves gathering information with direct interaction.

## LAB Activities: Footprinting & Reconnaissance

- 1. Perform reconnaissance through search engines
  - using advanced Google hacking techniques
  - video search engines
  - FTP search engines
  - loT search engines
- 2. Perform reconnaissance through web services
  - Find the company's domains and sub-domains using Netcraft
  - Gather personal information using PeekYou online people search service
  - Gather an email list using theHarvester
  - Gather information using deep and dark web searching
  - Determine target OS through passive reconnaissance
- 3. Perform reconnaissance through social networking sites
  - o Gather employees' information from LinkedIn using theHarvester
  - o Gather personal information from various social networking sites using Sherlock
  - Gather information using Followerwork
- 4. Perform website reconnaissance
  - Gather information about a target website using ping command line utility
  - Gather information about a target website using Website Informer
  - Extract a company's data using Web Data Extractor
  - Mirror the target website using HTTrack Web Site Copier
  - Gather a wordlist from the target website using CeWL
- 5. Perform email reconnaissance
  - o Gather information about a target by tracing emails using eMailTrackerPro
- 6. Perform Whois reconnaissance
  - Perform Whois lookup using DomainTools
- 7. Perform DNS reconnaissance
  - o Gather DNS information using nslookup command line utility and online tool
  - Perform reverse DNS lookup using reverse IP domain check and DNSRecon
- 8. Perform network reconnaissance
  - Locate the network range
  - Perform network tracerouting in Windows and Linux Machines
- 9. Perform reconnaissance using various tools
  - Recon-ng
  - Maltego