

EXPERMINT: 05

● <u>Aim:</u> Using OSINT tools gather Tactical information using WHOIS lookup tools or websites like DomainTools (domain, registration details, owner's contact information, registration date, and expiration date.) Archives, Text, Reverse Image Search, Images and EXIF data, Source code, Others TLD, Mentions of target, Check info such as via RSS,SSL certificates, Robots/Sitemap, Port scans, Reverse IP lookup

• Theory:

Analyzing Network Traffic and Data Flow: Network analysis involves studying data traffic patterns to understand connections and behavior:

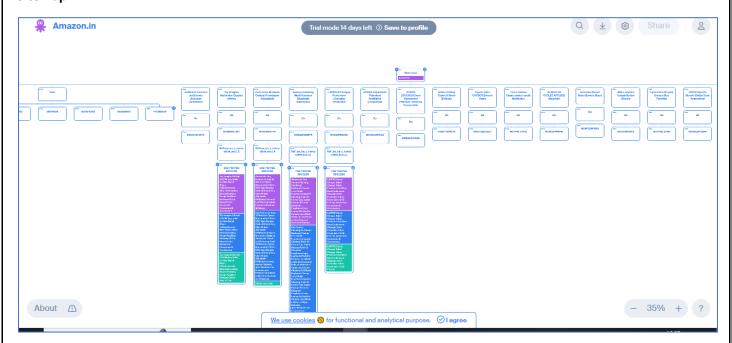
- Traffic Analysis: Monitoring and analyzing network traffic to identify communication patterns and anomalies.
- Packet Inspection: Examining individual data packets to gather insights into the type of information being transmitted
- Flow Data: Collecting flow data (e.g., NetFlow) for understanding communication between devices.
- **DNS Lookups** and **WHOIS Queries**: DNS and WHOIS queries reveal information about domains and IP addresses:
- **DNS Analysis**: Investigating domain names and IP addresses to uncover relationships, affiliations, and potential threats.
- WHOIS Queries: Querying WHOIS databases to identify domain registrants and contact information.
- Tracing Network Paths and Hops: Tracing network paths helps understand data routing and potential bottlenecks:
- Traceroute: Tracing the path that data packets take across networks, revealing intermediate devices (hops) and latency.
- Geolocation of IPs: Mapping IP addresses to geographical locations aids in understanding network topology.
- **Identifying Online Infrastructure Patterns**: Analyzing online infrastructure patterns involves recognizing common components and their interconnections:
- Domain Infrastructure: Identifying domains, subdomains, and their relationships can reveal malicious or suspicious activities.
- **CDN and Cloud Services:** Recognizing the use of content delivery networks and cloud services helps understand a target's online presence.



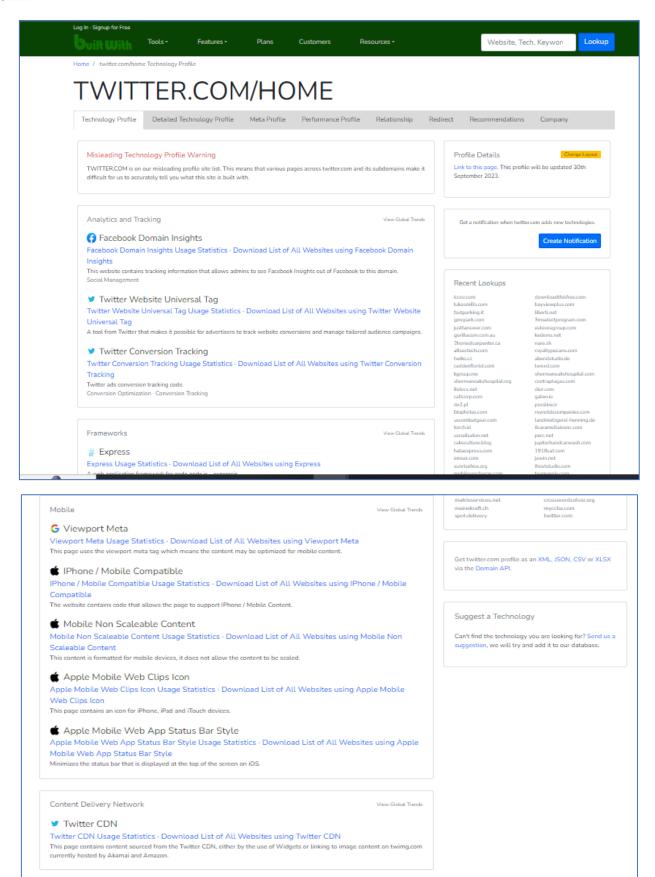




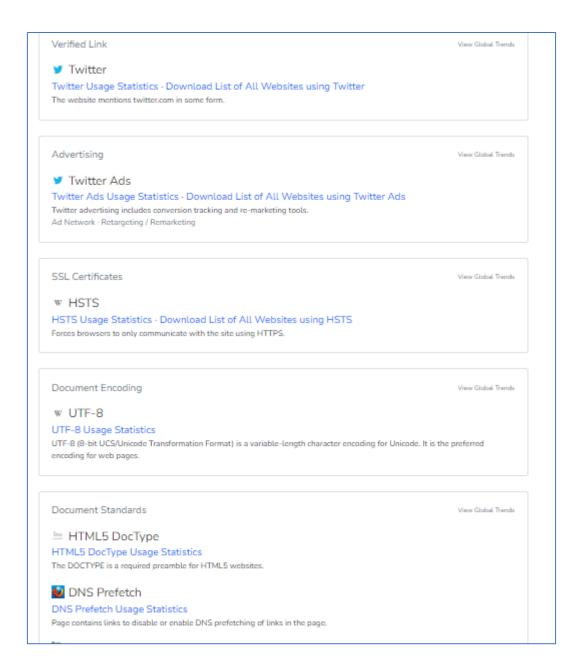
Sitemap



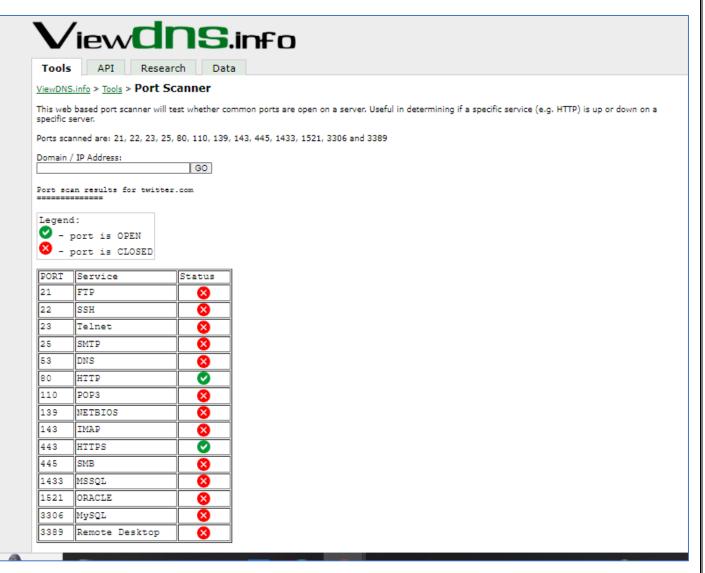


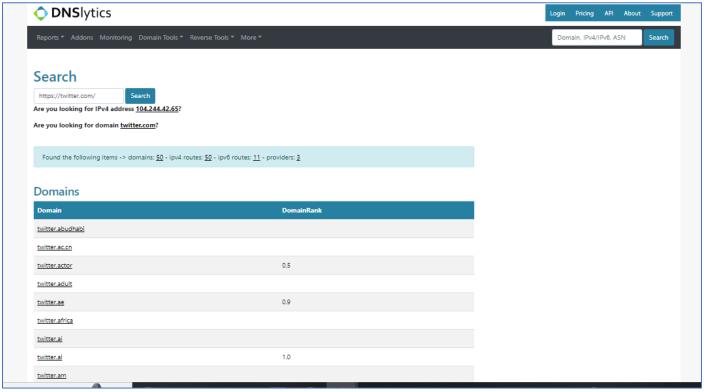




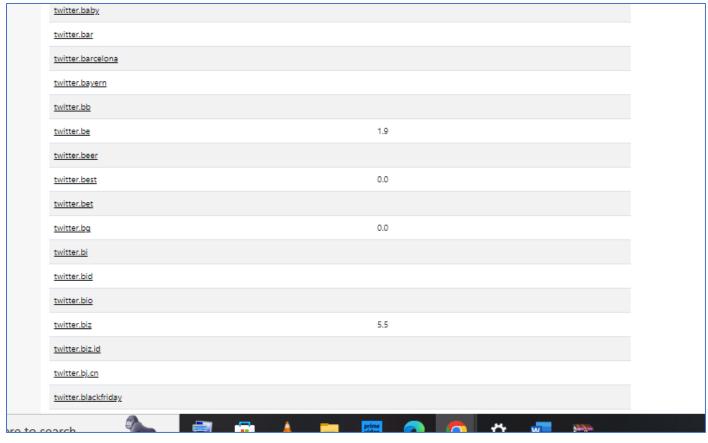


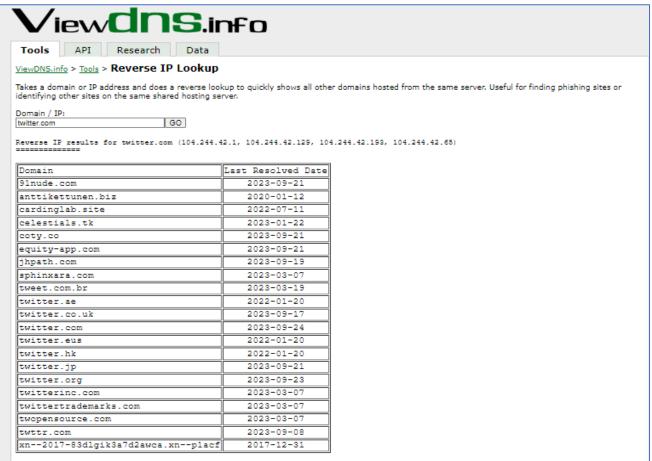




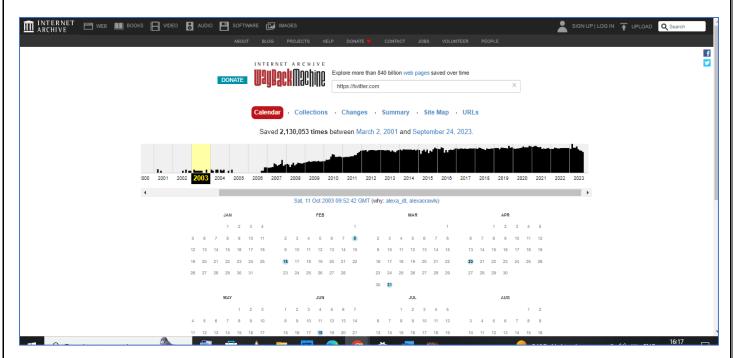












EXIF DATA WITH IMAGE

Metadata

Metadata is data that provides information about data that is not the content of the data itself, i.e. summarising basic information about data to make it easier to find or work with.

Unfortunately, the majority of social media sites remove metadata from images as they are uploaded, however, if an original digital photo can be sourced then it is likely to provide some information on the photograph. Metadata can be viewed freely using a number of tools.

Jeffrey's Image Metadata Viewer — http://exif.regex.info/exif.cgi

Jeffrey's Image Metadata Viewer is a browser-based tool that enables you to upload a photo and view the EXIF data, detailing the time and date the image was taken, the type of camera used, and the location (in the event that location was enabled on the camera).

Jeffrey's Image Metadata Viewer will show all of the Metadata within an image, including Camera, Shutter Speed, Date Captured, and any embedded co-ordinates



Target file:	20180704_172057[7684].jpeg
Camera:	samsung SM-A520F
Lens:	3.6 mm (Max aperture f/1.9) (shot wide open)
Exposure:	Auto exposure, Program AE, 1/25 sec, f/1.9, ISO 250
Flash:	none
Date:	July 4, 2018 5:20:57PM (timezone not specified) (3 years, 3 months, 9 days, 21 hours, 48 minutes, 47 seconds ago, assuming image timezone of GMT)
Location:	Latitude/longitude: 52° 28' 59" North, 1° 54' 51" West (52.483056, -1.914167)
	Map via embedded coordinates at: Google, Yahoo, WikiMapia, OpenStreetMap, Bing (also see the Google Maps pane below)
	Timezone guess from earthtools.org: GMT
File:	3,013 × 4,204 JPEG (12.7 megapixels) 2,441,333 bytes (2.3 megabytes)
Color Encoding:	WARNING: Color space tagged as sRGB, without an embedded color profile. Windows and Mac browsers and apps treat the colors randomly.

Images for the web are most widely viewable when in the sRGB color space and with an embedded color profile. See my Introduction to Digital-Image Color Spaces for more information.



Conclusion:

The collection of tactical information using OSINT tools and techniques is a crucial part of cybersecurity, threat intelligence, and information gathering for various purposes. However, it's essential to use these tools and methodologies responsibly and ethically, respecting privacy and adhering to legal and ethical standards while conducting OSINT activities.