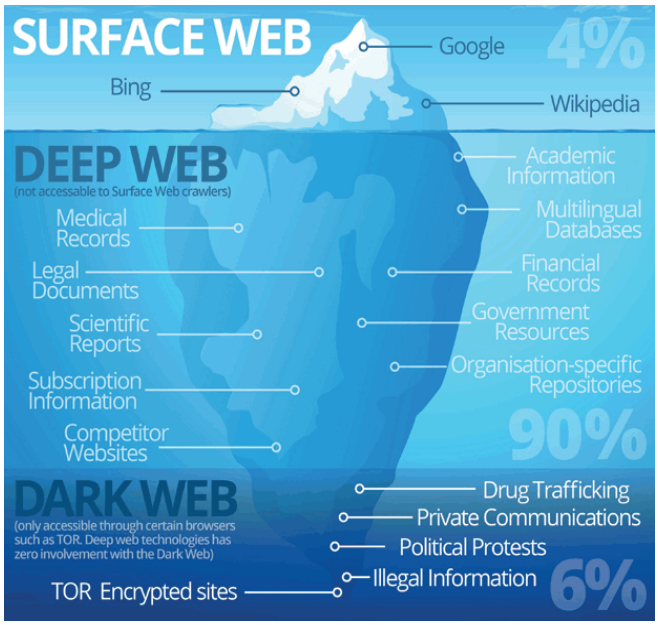
Threat Intelligence

OpenSource INTelligence (OSINT)

Why OSINT?

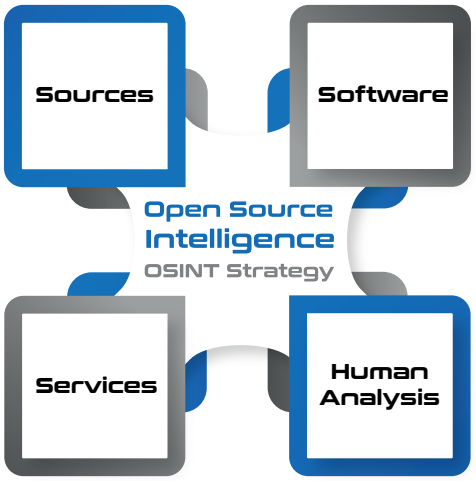


Source: Little Redstone Media

Deliverables

Asset Inventory	List of the assets - AWS buckets, SSL, software used, GitHub, etc.
Security	Detecting insecure network settings.
DNS Health	Detecting DNS insecure configurations and vulnerabilities.
Patching Cadence	Out of date company assets which may contain vulnerabilities or risks.
IP Reputation	Detecting suspicious activity, such as malware or spam, within your company network.
Application Security	Detecting common website application vulnerabilities, information leaks, and identify sensitive information leaks.
Hacker Chatter	Listen to hacker chatter about the organization across Deep and Dark web.

OSINT Strategy



- Utilize cybersecurity tools.
- An intelligence domain which includes search, selection, and the collection of intelligence information, available from publicly available sources.
- Performed through monitoring, analysis, and research of information coming from the internet.
- OSINT is information that has been deliberately discovered, discriminated, distilled and disseminated to a select audience.
- Materials compiled based on information from open sources support all intelligence methods and activities through accumulation of intelligence knowledge, its analysis and dissemination.
- OSINT + Human Intelligence = VA OSINT (OSINT Validated).
  - Validated and Actionable intelligence to which a very high degree of certainty can be attributed.

Common Indicators of Compromise (IoCs) to Monitor

- Unusual outbound network traffic
- Geographical irregularities
- Anomalies in user accounts
- Spike in database read volume
- Suspicious registry or system file changes

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Our Value Proposition

- **OpenSource Intelligence Collection** - Reported from cybercriminals, social media engagement, marketplaces, and chat rooms with the touch of Human Intelligence Collection.
- **Real-time Threat Tracking** - Indicators of compromise, threat actors and malware.
- **Vulnerability and Credential Intelligence** - Vulnerability scoring, compromised credentials of customer, partners, vendors, VIPs and executives.
- **Reduction of Risk** - Security posture of organization mapped against discovered organization assets across surface, Deep and Dark web.

Marketplace

- Healthcare
- Financial
- Legal
- Cyber Insurance
- Insurance
- Sports
- Manufacturing
- Venue Entertainment
- Background Checks
- Executive Protection

Deep and Dark Web

Three levels

1. Surface Web
2. Deep Web
3. Dark Web

The value of information cannot be realized unless it can be found.

- Most common methods are paste sites and forums.
- Cached content is very important.

Threat Intelligence Use Cases

- Brand Management and Protection
- Insider Threat
- Self-Assessment
- Vendor Risk Management
- Merger & Acquisition Due Diligence
- Threat Hunting
- Compromised Credentials
- Threat Intelligence
- Cyber Insurance
- Vulnerability Management

Threat Intelligence

OpenSource INTelligence (OSINT)

Cyber Threat Intelligence (CTI)

- Focuses on analyzing raw data gathered from recent and past events to **monitor, detect and prevent threats to an organization.**
- Details of the motivations, intent, and capabilities of internal and external threat actors (e.g. Government, Organized crime, Activists, State-sponsored criminals).
- Threat intelligence includes specifics on the tactics, techniques, and procedures of these adversaries.
- Primary purpose is to inform business decisions regarding the risks and implications associated with threats.
- Shifting the focus from reactive to preventive intelligent security measures.

Benefits of CTI

- Prevent data loss
- Detect breaches
- Threat analysis
- Data analysis
- Incident response
- 24/7 threat intelligence, monitoring and analysis
- Rapid identification and remediation of attacks
- Ability to assess risk and prioritise threats

CTI Monitoring

- Network Threats - Ability to monitor the risk exposure of an entire country and/or specific organization's (e.g. infected systems, malware and botnets).
- Monitoring and take down of phishing sites.
- Identification of compromised bank accounts Internationally.
- Reporting of leaked credits card transactions to money mules.
- Monitoring underground cybercrime forums and the Deep/Dark Web to discover compromised bank accounts.
- Monitoring the Internet to discover compromised credentials (emails, username and passwords).
- Rogue Mobile Application - Unauthorized mobile application developed to look like and behave like a legitimate one.
- Monitoring Threats from Third Parties - Continuous auditing, security controls and monitoring controls.

Leveraging the CTI Process (Intelligence Cycle)

Processing and Production

Identifying the organization's requirements to create the right amount of intelligence from information.

Planning & Evaluation

Analysing and converting the raw data into meaningful intelligence that is ready for interpretation.

Collection

Acquiring the raw data to process.

Dissemination

Supplying the relevant teams with finished and processed intelligence products.

Threat Intelligence

OpenSource INTelligence (OSINT)

Threat Intelligence with Return on Investment

Industry Leading Intelligence

- Automated, Human Intelligence Collection and finished intelligence reporting from cybercriminal forums, marketplaces, chat rooms and online engagements.

Reduction of Risk

- An industry leading intelligence requirements program that enables organizations to map intelligence collection and outputs to business drivers and risk reduction.

Real-time Malware Tracking

- Automated and technical tracking of malware including IoCs, TTPs, YARA, IDS signatures and technical intelligence reports.

Vulnerability and Credential Intelligence

- Vulnerability intelligence to drive your patching priorities and compromised credentials of your employees, VIPs and customers.

Threat Intelligence Sources

	Internal Sources	External Sources	
	Structured (mainly)	Structured	Unstructured
Example	Firewall and router logs, honeynets	Vulnerabilities databases, IP blacklists and whitelists, threat data feeds	Forums, news sites, social media, Dark web
Technologies for collecting and processing	Feed parser	Feed/web scraper, parser	Collection: crawlers, feed/web parsers Processing: Natural Language Processing (NLP), machine learning

IoCs

Tactical Intelligence (Short-term)

Information from known attacks, which has the potential to immediately influence cybersecurity decision-making.

Operational Intelligence (Mid-term)

Offers insight into threat actor motivations, capabilities and objectives, and helps teams assess specific incidents relating to events and investigations, and guides and supports incident response.

Strategic Intelligence (Long-term)

Broader and higher-level abstracts of the data to identify threats associated with foreign policy, global events etc., and focuses on the long-term impacts of cyber threats.

Technical Threat Intelligence (TTI)

TTI is information that is normally consumed through technical resources. TTI typically feeds the investigative or monitoring functions of an organization, for example firewalls and mail filtering devices, by blocking attempted connections to suspect servers. TTI also serves for analytic tools, or just for visualization and dashboards.

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