

DATA SHEET

Helping Protect Our National Security

The Cyber Challenge

American prosperity, liberty and security depend on open and reliable access to information. The Internet empowers us and enriches our lives by providing ever-greater access to new knowledge, business and services. The arrival of the digital age has also created challenges for the Nation. The open, transnational, and decentralized nature of the Internet creates significant vulnerabilities that we seek to protect. Nations that are deterred from directly confronting U.S. military strength are using cyberspace operations in day-to-day competition to exploit a perceived advantage and harm our interests. China and Russia are engaging in Super Power competition via persistent, aggressive cyberspace threats that pose strategic, long-term risks to the Nation.

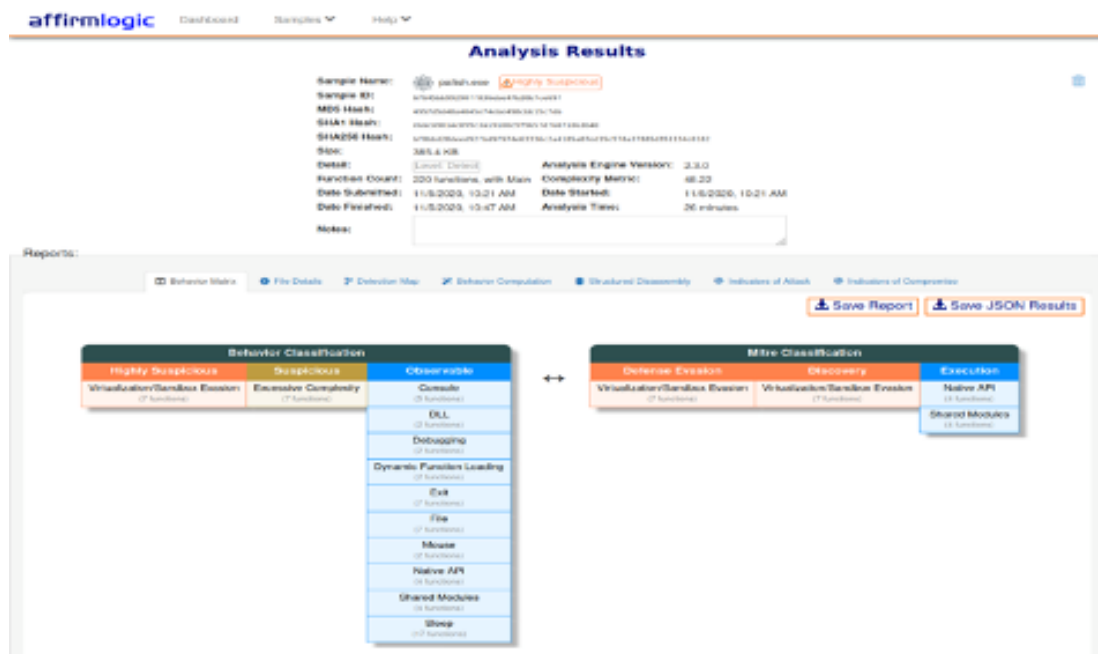


The United States Cyber Command (USCYBERCOM) is one of ten unified commands of the U.S. Department of Defense (DoD). USCYBERCOM centralizes the direction of cyberspace operations, strengthens DoD cyberspace capabilities, and integrates and bolsters DoD's cyber expertise.

In June 2018, USCYBERCOM announced the selection of AffirmLogic's Hyperion cyber security software to support its malware detection initiatives within DoD. Experts recognize that traditional techniques for protection from malicious software are incomplete, relying on previously identified "signatures" to flag malware, or executing the code in a protected environment in hope of detecting malicious behavior.

“Cyberspace is a fluid environment of constant contact and shifting terrain. New vulnerabilities and opportunities continually arise as new terrain emerges. No target remains static; no offensive or defensive capability remains indefinitely effective; and no advantage is permanent. Well-defended cyber terrain is attainable but continually at risk.”

— *The USCYBERCOM Vision*



Hyperion Detection of Virtualization and Sandbox Evasion by Malware

In order to meet the needs of government organizations like USCYBERCOM, Hyperion takes an innovative approach to detecting, analyzing and defending against malware. Hyperion uses mathematical methods to calculate the behavior of software and identify malware that is often invisible to current generation cybersecurity technology. Reverse-engineering is automated, saving up to 95% of time and effort, a true force-multiplier.

Hyperion is based on cutting-edge mathematical research carried out at Carnegie Mellon University. The research was expanded into a proof-of-concept by Oak Ridge National Laboratory (Department of Energy) and piloted by a number of leading government and commercial cybersecurity organizations. In order to bring an advanced malware detection and defense product to market, the technology underlying Hyperion was spun out into a commercial entity, Affirm Logic Corporation.

Hyperion provides extensive behavior analysis of software. For example, although our adversaries have become skilled at detecting and preventing sandbox execution, Hyperion offers the U.S. Government the capability to thwart these adversaries as they attempt to attack critical systems while disguising their presence.

Hyperion empowers government organizations with heretofore unavailable visibility into their software:

- **Provide Precision Visibility** into the functional behavior of binary executables.
- **Classify computed behavior** as Malicious/ Highly Suspicious, Suspicious, and Observable.
- **Accelerate Security Incident Response** for Zero-Day Attacks and Sleeper Code.
- **Simplify Forensic Examination** of malware by eliminating control flow obfuscation.
- **Automate Reverse Engineering** by pin-pointing the precise location and function of malicious behavior in binary code right down to the instruction.
- **Create Defensive Countermeasures** by automatically generating behavior-based AV and network signatures to multiply effectiveness of existing tools.
- Determine **Indicators of Compromise (IoCs)** and **Indicators of Attacks (IoAs)**.
- Provide API-based, industry-standard **integration with Splunkk and Arcsight**.
- Support ad interoperate with **custom workflows through APIs**.

For more information or to arrange a pilot of Hyperion contact us at: info@affirmlogic.com.