



ACTIVE DEFENSE

HBGary Active Defense™ Delivers Continuous Protection

HBGary's flagship product, Active Defense, and optional managed services, are designed to provide Continuous Protection against compromise — including advanced and targeted attacks as well as botnets and custom malware attacks. Active Defense enables live response, eliminating the need for expensive forensics, and drastically reducing both the cost and time required for incident response

Enterprise Advanced Threat Detection, Incident Response and Mitigation

Today's targeted threats circumvent existing security technologies and infect the most vulnerable point on your system — the host. Antivirus products, which are in their twilight years, cannot provide host-level protection. In addition, according to NSS Labs, an independent security testing organization, host-based infection detection systems are not much better with a detection rate of about 14%. The perimeter-less network is here. To effectively combat enterprise threats, and the people behind them, threat intelligence is required. HBGary Active Defense provides host-level detection and intelligence critical to protecting your data. Active Defense monitors host physical memory, raw disk, and live operating systems across the enterprise, and provides an unprecedented view of host-level threats. Once a potential threat is detected, Active Defense executes enterprise-wide, scalable host-level scans for breach indicators.

Detect Unknown Threats on End Nodes Without Signatures

Active Defense detects new and unknown malware in your enterprise.

- Physical memory is automatically imaged and reconstructed to reveal all executable code within the Windows® operating system and running programs, including APT, rootkits, injected code and malware.
- Every binary is extracted and **automatically reverse-engineered** to expose all low-level behaviors, including interaction with other binaries and data.
- HBGary's patent-pending Digital DNA™ (DDNA) analyzes programmatic behaviors to assign each binary a threat severity score, along with human-readable behavioral traits.
- Active Defense produces a "DDNA Sequence" and score for every found binary.
- Threat alerts are routed to both key personnel, and to the Active Defense web-based user interface.

Code	Trait Description
F6 E3	Process may inject or write data into other processes.
6E A3	The program may attempt to disable windows file protection, which is sometimes done in conjunction with replacing a system file with a trojan or virus infection.
D3 C5	Uses the Windows Registry to potentially survive reboot.
D3 40	IE toolbar
A0 CE	Program may hook into Internet Explorer.
1B 2A	Program is reading the memory of another process. This is not typical to most programs and is usually only found in system utilities, debuggers, and hacking utilities.
A0 6F	IE Search Bar

Scan Hosts for Known Breach Indicators

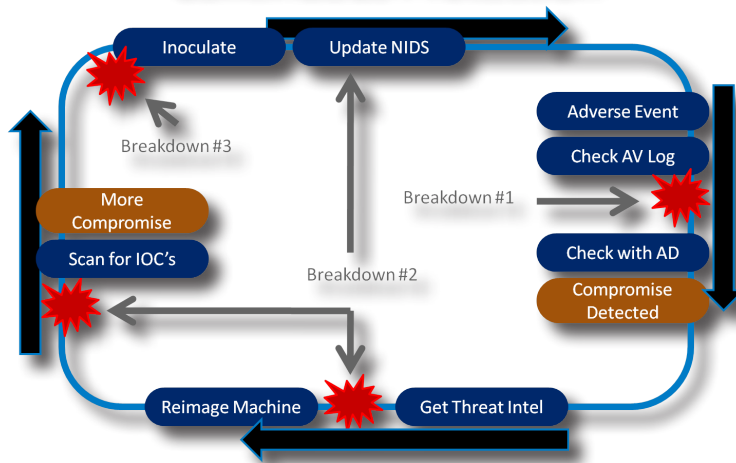
Active Defense includes a constantly updated library of known breach indicators (BI) to rapidly find digital artifacts associated with currently targeted threats. Additionally, customers can customize and extend their baseline set with unique indicators

Malware Strings v1	RawVolume.File	A selection of known malware strings and malicious IP addresses found in memory
Malware Services v1	LiveOS.Registry	Registry Key indicators of targeted malware
APT File Names v1	RawVolume.File	Known filenames in use during targeted attacks
Metasploit Registry Strings v1	LiveOS.Registry	Registry Keys present after metasploit deployment
WCE Binary Strings v1	RawVolume.File	Strings found in the binary of Windows Credentials Editor

specific to attacks occurring in their environment. Detailed searches target even the lowest level attributes of files, executables, registry keys, events and other objects.

Searches can be applied against physical memory, extracted binary objects, the raw NTFS volume, master file table records, files both locked and unlocked, or in use, any handle or object, and, of course, data queried through the more traditional Win32 API. **Using Active Defense, malware and rootkits have almost no chance of hiding themselves.** Scans may include any number of known indicators, such as; strings found within malware, registry values, paths, file sizes, time stamps, wildcards and much more. Users are able to define their own BI scans by creating simple or complex expression-based AND/OR logic queries from an interface that is no more difficult to use than an advanced Google™ query. **The speed of the scanning engine is unmatched in the industry.**

Continuous Protection

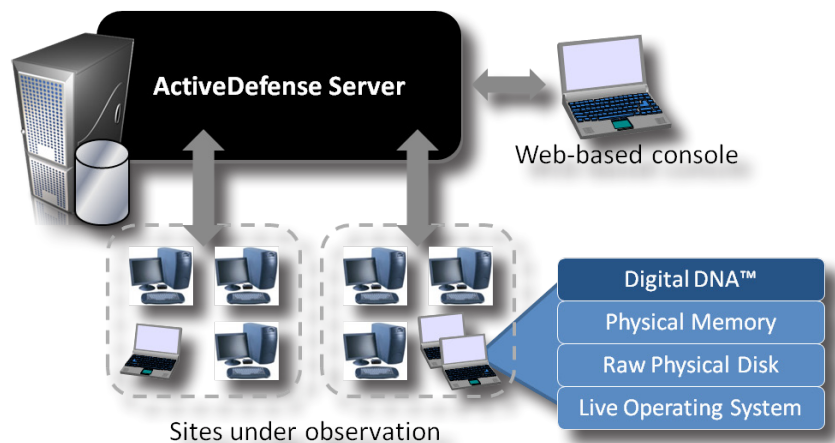


Gain Actionable Threat Intelligence

Conduct enterprise-wide live response investigations to quickly understand an attacker's tactics, techniques, and procedures (TTP's). From a centralized web interface, you are empowered with automated detection, memory and disk forensics, malware analysis, and event timeline analysis to pinpoint compromised hosts, determine the initial point of infection, and malicious interaction with the host, and identify malicious digital objects. Using this threat intelligence, signatures can be created to improve the effectiveness of the existing security infrastructure against any threat actors active in your network.

Active Defense System Architecture

Active Defense system administrators schedule endpoint scan and analysis jobs from a web interface. Jobs execute on workstations and server hosts using the deployed Active Defense intelligent host agent. Scan results are collected quickly within the centralized SQL database as processing is distributed across concurrently running agents. Communications are encrypted and compressed over HTTPS.



Minimal Impact to Computers and Network

Execution of the Active Defense agent can be throttled at three different levels to control host system impact. The default throttling has been heavily tested in Enterprise environments covering all version of Windows and should not produce any help-desk calls. If required, the agent can be configured to stop its execution if the user on that system touches the keyboard or moves the mouse. When scan speed is imperative, system administrations can choose to run jobs using maximum host resources. Normal operation of the Active Defense system has negligible network impact because scan and analysis results are transmitted over the network within small .XML files. Enterprises with small pipes, international offices with T-1 lines, and even industrial equipment connected by satellite will have no problems running complete and robust Active Defense scans. The agent also has the ability to perform off-line scans, and check-in the results when the system comes online.

Use HBGary Inoculator to Remove Malware and Prevent Reinfection

HBGary patent-pending Inoculator™ is a sister product of Active Defense, designed to automatically find known malware, remove it from Windows hosts, prevent reinfection, and issue alerts if the malware attempts to re-install. Malware reinfection attempts are blocked by protecting specific registry key and file locations, so that malware is unable to use them. Best of all, HBGary Inoculator uses built-in Windows networking features of the operating system. Inoculator is a cost-effective, fast and nondisruptive alternative to reimaging computers, and buys valuable time when fighting against cyber-adversaries.

Active Defense Integration With Other Systems

- McAfee ePolicy Orchestrator
- Guidance EnCase Enterprise
- Verdasys Digital Guardian

Supported 32- and 64-bit Operating Systems

- Windows Server 2000
- Windows XP
- Windows Server 2003
- Windows Vista
- Windows Server 2008
- Windows 7