

ATTIVO NETWORKS USE CASES TO DEFEAT ADVANCED ATTACKERS

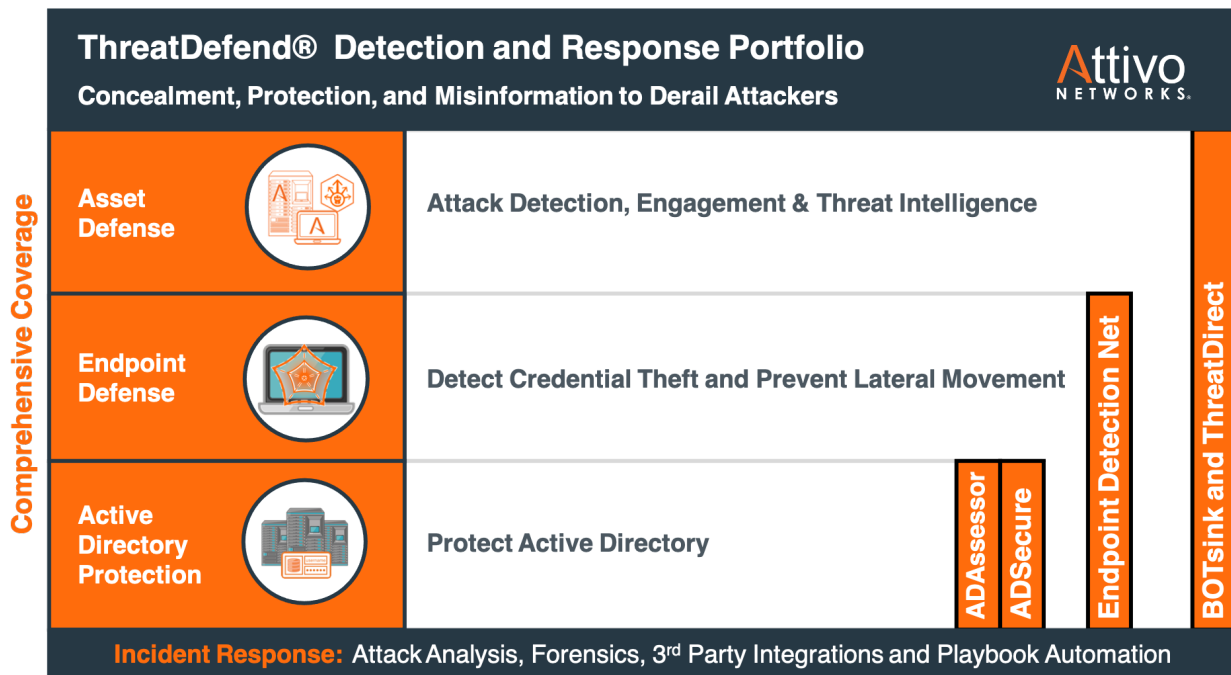


INTRODUCTION

Security professionals acknowledge that determined criminals can evade traditional prevention-based security solutions. Attackers are increasingly more sophisticated, and breaches continue to happen at unprecedented rates. Organizations are constantly challenged to efficiently identify vulnerabilities that create risk and threats that have bypassed perimeter defenses. They need solutions which provide continuous visibility and the ability to quickly detect credential theft, privilege escalation, and lateral movement. Forward-thinking organizations are now looking to deception and concealment technologies to fortify their security stack.

The Attivo Networks ThreatDefend® platform provides early and accurate detection of in-network threats, regardless of attack method or surface. It creates a comprehensive fabric that blankets the network with deceptive decoys, credentials, shares, bait, and other misdirections that derail adversaries early in the attack lifecycle. It also conceals and denies access to sensitive files, folders, data, and accounts that attackers use to further their attacks. Visibility tools empower organizations to proactively strengthen overall security defenses by showing exposed attack paths and attacker movements in a time-lapsed replay. Automated intelligence collection, attack analysis, and third-party integrations accelerate incident response. The components of the platform include the BOTsink® server, the Endpoint Detection Net (EDN) suite, and ADSecure and ADAssessor for Active Directory protection.

The Attivo ThreatDefend platform creates a comprehensive early detection and continuous threat management defense against today's advanced threat actors for an informed Active Defense.



ACTIVE DIRECTORY ATTACKS

- Detects unauthorized querying of Active Directory services preventing an attacker from enumerating AD
- Intercepts unauthorized AD query responses and hides production asset details (Privileged Domain Admin Accounts, Service Accounts, Users/Computers, Domain Controllers, etc.)
- Substantially reduces the ability for an adversary to escalate privileges as a part of their campaign
- Returns misleading information to the attacker and redirects them to a decoy environment to gather TTPs, initiate response and remediation efforts
- Requires no modifications to production Active Directory

ACTIVE DIRECTORY HEALTH & VULNERABILITY

- Continuously monitors and evaluates the vulnerability and security health of Active Directory, the highest value asset attackers leverage for lateral movement and privilege escalation
- Provides visibility for security teams into the trust relationships between domains and across the forest
- Presents a health score identifying the most vulnerable exposures and ranks them by severity
- Provides analysis to understand top-level metrics and visibility into privileged users, delegated admins, and service accounts that adversaries target for exploitation the most
- Detailed reporting that makes for fast and easy remediation

ENDPOINT CREDENTIAL THEFT AND RANSOMWARE ATTACKS

- Detects endpoint attacks focused on credential harvesting and data theft by deploying deceptive credentials, bait, lures, and artifacts on the endpoint
- Redirects attacker back to Attivo Engagement Servers via the ThreatStrike® solution to engage, trap, and slow down the attack
- Misdirects ransomware attacks to deceptive network shares that store decoy files, slowing and stalling the attack through high-interaction continuous engagement, preventing the encryption process from completing
- Provides data masking by hiding DFS, cloud, and network shared drives, removable storage, and local files and folders from untrusted applications
- Protects credentials, data stored in databases, and Active Directory with ADSecure to hide and deny access to these elements, derailing AD recon and Local Administrator privilege escalation

The Endpoint Detection Net solution redirects attackers back to the Attivo Engagement Servers to engage, trap, and slow down the attack.

ZERO TRUST

- Protects authorizations for applications and data using deception and concealment technologies, adding a layer of controlled access management for organizations to validate user access to data and resources beyond the initial authorization.
- Provides granular visibility and precise control of access to files, folders, shares, or Active Directory by applying security policies to all services, computers, applications, and users
- Delivers dedicated solutions to detect and prevent adversaries from accessing high-value assets, escalating privileges, and moving laterally
- Fulfills requirements for each of the five trust elements (device, user, transport, application, and data), including identifying and removing access and entitlements from low-privileged users

SECURING THE CLOUD

- Provides dynamic threat detection for AWS, Azure, and OpenStack environments that are present in today's public, private, or hybrid cloud environments.
- Offers full deception capabilities enabled and deployable to the cloud.

ENGAGING INSIDERS AND 3RD PARTY CONTRACTORS

- Creates authentic, organization-specific decoys that look like production assets, allowing the Attivo Networks ThreatDefend® platform to observe attacks in real time.
- Slows the attack, buying SOC and IR teams precious time to understand the threat, its key characteristics, and the threat vectors being employed. This additional time gives organizations the opportunity to accelerate containment and remediation.
- Detects attacks based on engagement, not on its signature.
- Provides evidence-based engagement with the attacker for full analysis, forensics capture, and TTP development (including C&C traffic capture), delivering deep insight and understanding of the nature and intent of an attack.
- Provides intelligence for internal hunt teams to validate and assess the enterprise environment for other potential vulnerabilities.

Internal hunt teams can leverage Intelligence gathered from the Attivo solution for broader validation and assessment of potential vulnerabilities that exist in the enterprise.

IDENTIFYING CREDENTIAL VULNERABILITIES AND AVAILABLE ATTACK PATHS

- The EDN ThreatPath® solution provides valuable insight into potential vulnerabilities and available attack paths that an attacker could exploit to move laterally to production-critical assets.
- Identifies stored, exposed, or orphaned credentials along with misconfigurations an attacker can exploit to move laterally.
- Alerts when anyone uses invalid or deactivated cloud credentials from applications like Salesforce, Box, and Google Drive, etc.

MAN-IN-THE-MIDDLE (MITM) NETWORK-BASED ATTACK DETECTION: CREDENTIAL AND DATA THEFT

- Provides automatic or manual detection of all MitM attack methods looking to steal credentials and data.
- Learns domain requests, DHCP, and ARP resolutions from production systems and uses heuristics to detect attackers trying to mount a MitM attack responding to 3 or more domain queries. A very proactive, simple, and transparent approach to detect those would-be victims, not just attackers.
- Detects queries for user-configured false domains. Any response to these is considered malicious.
- Provides deceptive responses to a confirmed MitM attack, sending deceptive credentials to the attacker and querying the SIEM for their use.

PHISHING MALWARE ANALYSIS

- Provides supplementary automated analysis of suspicious emails containing executables or URLs that users self-submit. Provides security teams with a detailed report after the automated examination.
- Eliminates the need for IT Security Teams to do manual evaluations, freeing them up for higher priority initiatives.
- Reduces the risk associated with having a backlog of suspicious emails that require investigation.

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THREAT DETECTION FOR OPERATIONAL ENVIRONMENTS: SCADA, ICS, IOT, POINT OF SALE, MEDICAL DEVICES

- Rapidly establishes deception-based threat detection in operational environments, providing a critical control that is increasingly falling under the jurisdiction of traditional IT Security Teams.

- Projects deceptive decoys into SCADA, ICS, IoT, Point of Sale, and Medical Device networks, identifying attacker lateral movement and reconnaissance activity targeting production-critical systems.
- Provides flexibility to deploy out-of-the-box SCADA images and protocols, and facilitates custom images specific to an organization's infrastructure.
- Enterprise-wide deception-based threat detection from a single platform provides complete coverage for an evolving attack surface inclusive of traditional enterprise IT and OT networks.

REMOTE LOCATION THREAT DETECTION

- Provides scalable and flexible threat detection for remote offices; branch offices; power generation, distribution, and service centers; or retail locations.
- Redirects traffic back to an appliance for engagement and evaluation.
- Eliminates the need for an appliance in each location to establish deception at remote sites

PROTECTING LEGACY ENVIRONMENTS

- Provides customized deception decoys that mirror legacy systems for authentic and attractive targets.
- Deploys decoys in production-critical legacy system networks that are traditionally difficult to patch, creating a minefield to detect lateral movement and reconnaissance activity.

MERGER & ACQUISITION ASSESSMENT AND VALIDATION

- Quickly establishes visibility into the networks and infrastructure of newly-acquired entities by deploying and remotely monitoring engagement servers.
- Provides a quick way to ascertain risks and vulnerabilities that may exist in these unknown environments, the state of current security controls, and potential gaps.
- Identifies potentially active compromises and areas of risk.
- Delivers intelligence of the existing infrastructure across cloud, data center, end-user networks, and even into operational networks like SCADA/ICS/IoT/POS networks.
- Establishes a critical threat detection control to elevate the security posture of immature environments.
- Provides insights as part of assessment activities. After addressing deficiencies, red teams can validate the remediation efforts and verify risk mitigation.
- Provides counterintelligence and insight into data targeted by attackers.

THREAT HUNTING AND RED TEAM TESTING

- Provides forensics and intelligence gathered from an attack to internal hunt teams for broader validation and assessment of potential vulnerabilities that exist in the enterprise.
- Provides counterintelligence and insight into data targeted by attackers.

- Allows decoy-creation modeled after planned production assets to learn about the types of attacks that may affect new technologies.
- Provides business-aware, targeted threat detection of APT-grade actors.
- Provides specific threat detection using threat assessment results (such as likely attacker interests and assets attackers intend to steal).
- Validates network resiliency during Red Team and penetration tests.

PROTECTING CRITICAL INTELLECTUAL PROPERTY AND SENSITIVE CLIENT INFORMATION

- Allows fully customizable decoys built to replicate production systems and databases that contain intellectual property, like application code for a software company, proprietary formulas for a pharmaceutical company, or confidential client data.
- Creates tripwires or landmines by deploying these decoys into the networks where critical IP or sensitive client information lives, surrounding the essential assets and providing lateral movement reconnaissance activity detection.
- Produces highly authentic and tailor-made decoys to specific environments, including the use of golden images. Decoys embedded with deceptive content represent an attractive and realistic target to lure an attacker.
- Provides counterintelligence and insight into patent theft or IP targeted by attackers.

Decoys are highly authentic and can be tailored to specific environments.

PROTECTING CRITICAL AND CONFIDENTIAL DATA OF KEY EXECUTIVES AND EMPLOYEES

- Deploys deceptive decoys into critical network segments where key executive and strategic employee systems reside, providing the ability to detect lateral movement and reconnaissance activity targeted at discovering these high-value systems and data.
- Detects credential theft of executives who possess highly privileged access to systems and resources that contain sensitive and confidential information. Deceptive credentials placed on the user's systems redirect attackers back to the Attivo Networks engagement environment to engage, trap, and slow the attack.

DECOYDOCS

- Deploys enticing deceptive decoy documents throughout the environment, seeding fake artifacts representing the data and information that an attacker seeks.
- Tracks these deceptive documents designed to beacon home when attackers open them, whether internally or externally, providing additional detection capabilities, geographical location, counterintelligence, and insight into attacker activity and potential egress of stolen data.

FORENSICS

- Allows the full forensic collection of detected malicious activity to gain insight into an attacker's tactics, techniques, procedures (TTPs).
- Gives rich forensics output to gain an advantage against an adversary and an accurate and deeply intuitive understanding of the threat.
- Provides easily sharable details in IOC, STIX, CSV, and PCAP formats for specific information around the threat: lateral movement patterns, C2 communication, registry changes, files drops, etc.

At the heart of effective deception, isn't just the ability to detect malicious activity, but the ability to gain insight into what an attacker's tactics, techniques, procedures strategy are.

ENGAGE, IDENTIFY, AND UNDERSTAND ATTACKER BEHAVIOR

- Safely engages an attacker, yielding an advantage of how best to respond, remediate, and proactively fortify an organization. Authentic, real-OS-based decoys engage an attacker in a manner where the attacker believes that the decoy is a legitimate production system.
- Deceives the threat actor into spending hours executing their strategy and employing their tactics while trapped within the decoy, all under the watchful eye of the SOC and IR teams. Security teams can observe and gather tactical details necessary to understand their adversary while increasing the attacker's costs.
- Security teams gain time and in-depth threat intelligence to quickly contain, remediate, and minimize the impact of a compromise.
- Provides the most comprehensive evidence and analysis of an attacker's behavior based on actual engagement.

MOBILE- OFFLINE USERS REMOTE OFFICES

- Provides deception-based threat detection capabilities to mitigate risks associated with credential theft of offline endpoints that can compromise enterprise networks when they reconnect.
- Shifts the posture of security teams securing their organizations from a reactive, prevention-based position to a proactive, evidenced-based stance derived from high fidelity alerts and validated attacker behavior in remote locations.
- Deceptive credentials, files and, artifacts divert attackers from production-critical assets and redirect them to a decoy environment, triggering the incident handling process.
- Ability to rapidly deploy decoys into the networks of remote offices, gaining visibility and enabling detection of lateral reconnaissance campaigns.
- Flexible and scalable across geographically dispersed and multinational organizations, their affiliates, subsidiaries, and joint ventures.
- Ability to inventory and identify production credentials that could provide an available attack path that attackers could leverage to gain access to production-critical systems and data.
- Easy and intuitive to use, doesn't require extensive training or additional staff to achieve proficiency and is transparent to end-users.

HIGH PROFILE AND ONE-TIME EVENTS (SPORTS CHAMPIONSHIPS, STRATEGIC SENIOR LEVEL OFFSITE MEETINGS, ETC.)

- Provides advanced monitoring and detection of threat actors targeting highly visible/high-value targets and events.
- Shifts the posture of security teams securing those events from a reactive, prevention-based position, to a proactive, evidenced-based stance derived from high fidelity alerts, and validated attacker behavior in unsecured locations.
- Rapidly and unobtrusively delivers innovative deception-based threat detection to identify attackers that rely on reconnaissance, lateral movement, and credential theft to compromise systems and obtain confidential and proprietary data of high-value targets attending off-premise events.
- Accelerates detection and response to incidents that occur, expediting remediation and mitigating the impact of the compromise.
- Provides quick provisioning and de-provisioning through simplicity and speed of deployment, allowing for rapid fielding and repurposing for current and future events.

COLLECT COMPANY-SPECIFIC PRIVATE THREAT INTELLIGENCE

- Allows for decoy deployment to the DMZ to collect and develop threat intelligence.
- Automatically collects source IP addresses of attacking systems and C2 servers.
- Provides automated or manual network blocking based on native integrations with supported firewalls.

ABOUT ATTIVO NETWORKS®

Attivo Networks®, the leader in lateral movement attack detection and privilege escalation prevention, delivers a superior defense for countering threat activity. Through cyber deception and other tactics, the Attivo ThreatDefend® Platform offers a customer-proven, scalable solution for denying, detecting, and derailing attackers and reducing attack surfaces without relying on signatures. The portfolio provides patented innovative defenses at critical points of attack, including at endpoints, in Active Directory, in the cloud, and across the entire network by preventing and misdirecting attack activity. Forensics, automated attack analysis, and third-party integrations streamline incident response. Deception as a defense strategy continues to grow and is an integral part of NIST Special Publications and MITRE® Shield, and its capabilities tightly align to the MITRE ATT&CK® Framework. Attivo has won over 130 awards for its technology innovation and leadership. www.attivonetworks.com