

Cymulate Breach and Attack Simulation

Validate, Measure & Optimize Security Controls

Cymulate Breach and Attack Simulation (BAS) validates cybersecurity controls by safely conducting threat activities, tactics, techniques, and procedures in production environments. With automation and a library of realistic attack scenarios and simulations, Cymulate BAS gives security teams an easy-to-use interface to test security architecture, people, and processes for continuous assessment of cyber resilience.

Cymulate BAS applies the latest threat intel and primary research from the Cymulate Threat Research Group with daily updates on emerging threats and new simulations – all mapped to the MITRE ATT&CK framework. On-demand and scheduling systems allow for both ad hoc checks and automated testing to validate security controls against emergent threat activity, confirm remediation, or prepare for audits and penetration tests.

How it Works

Cymulate BAS enables customers to securely simulate real-world cyber attacks, thoroughly testing their organization's resilience against known and emerging threats. Cymulate BAS is cloud based and easily deployed with minimal installation and maintenance efforts.

Customers only need to install one lightweight agent per environment to run assessments. The agent facilitates seamless communication between customer devices and the Cymulate platform, ensuring timely updates and efficient transfer of operational data.

Validate Security Controls

Security is built upon a layered defense that needs continuous testing to assess if controls are working effectively. Cymulate BAS tests for detection and alerting on threats to confirm that controls are functioning correctly or if threats can evade them.

Each vector is scored independently and aggregated for an overall risk score based on industry-standard frameworks. Cymulate BAS integrates with many SIEM, SOAR, GRC, EDR, firewall, and ticketing systems via API to validate and improve security tool detection and response capabilities

Cymulate BAS Benefits



REALISTIC CONTROL TESTING

Offensive testing based on threat actor techniques & tactics, simulated safely



MITIGATION GUIDANCE

Clear steps to remediate, close gaps & reduce exposure



CONTINUOUS VALIDATION

Repeat assessments to validate mitigations & identify drift



RISK SCORING

Benchmarking against peers & continuous improvement with tracked & trending risk scores



AUTOMATION

Scheduled & automated assessments for testing on demand or upon threat updates

Cymulate Dashboard



The Cymulate dashboard presents an at-a-glance view of threat vectors, their scores, and the overall Cymulate risk score.

➤ Test Email Security Controls

The **email gateway capability** challenges email security controls (both native and third-party) by sending emails with attachments containing ransomware, worms, trojans, or links to malicious websites to explicitly defined email addresses within the organization. Cymulate BAS validates control effectiveness for each threat and escalates the email threats that bypass the first line of defense and reach inboxes without being altered or removed.

➤ Assess Web Gateway Protection

The **web gateway capability** tests employee access to malicious websites through coercion or purposely performing dangerous activities. Cymulate BAS includes tests for both inbound protection against thousands of simulated malicious files and exploits and outbound protection against a daily feed of comprised URLs.

➤ Challenge Web Application Firewall (WAF) Configurations

The **WAF capability** simulates attacks against web applications that the WAF protects to discover exploitable vulnerabilities in web applications and infrastructure, preventing potentially sensitive information from being stolen. This capability uses payloads such as command injection, XML injection, SQL injection, NSQL injection, and file inclusion. The results of the simulations are mapped to MITRE ATT&CK tactics, techniques, and procedures (TTPs) and Open Web Application Security Project (OWASP) security risks.

➤ Confirm **Endpoint Security Tools**

The **endpoint security capability** tests endpoint security platforms and native tools against behavioral and signature-based attacks, lateral movement, and MITRE ATT&CK methods and commands to discover security gaps and misconfigurations.

➤ Analyze **Data Loss Prevention (DLP) Controls**

The **data exfiltration capability** tests the effectiveness of DLP security controls and native controls with exfiltration methods such as HTTP & HTTPS, DNS, DNS tunneling, ICMP tunneling, Telnet, email, removable hardware, cloud services, and more. Cymulate BAS packages the data into different file types, including images and office files, and attempts to exfiltrate them using multiple exfiltration methods.

➤ Identify **Exposure to the Latest Active Threats**

The **immediate threat intelligence capability** tests security controls against new and emerging threats observed in the wild. The Cymulate Threat Research Group updates Cymulate BAS daily with attack simulations of these latest threats that require urgent attention and action. Threat and simulation updates include insights into threat actors, attack vectors, techniques mapped to MITRE ATT&CK, and indicators of compromise.

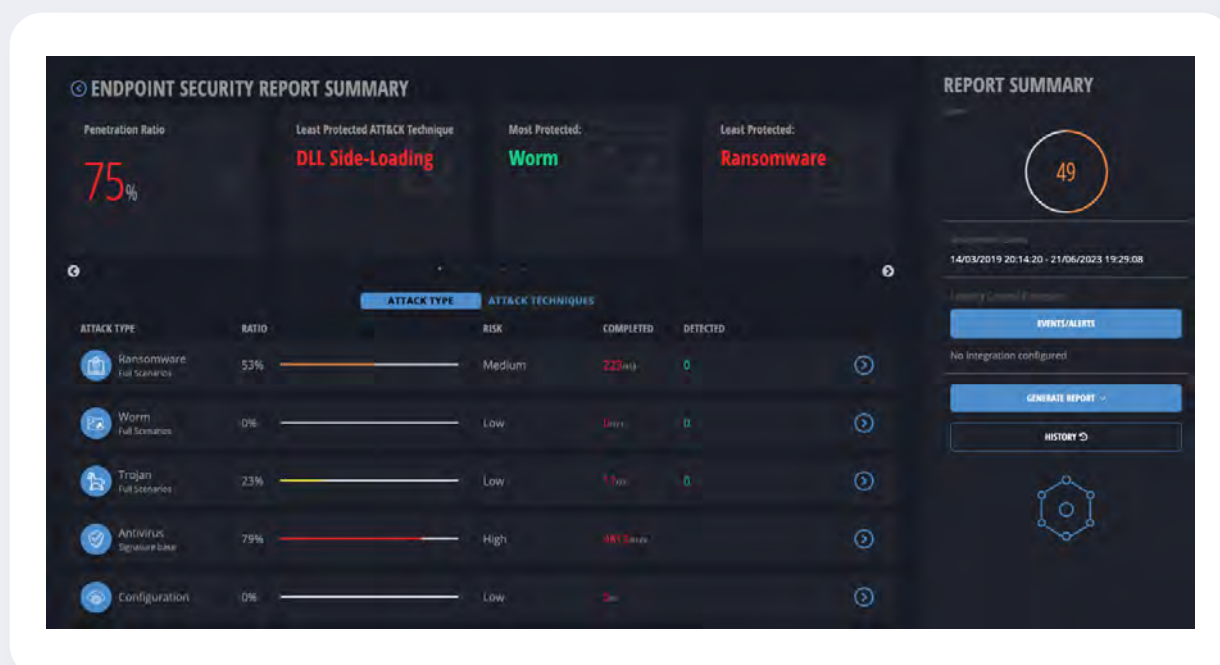
➤ Validate **Security Architecture Against APT Attacks**

The **full kill-chain scenarios capability** simulates end-to-end attack scenarios of known advanced persistent threat (APT) groups. These attack simulations deliver and execute production-safe ransomware, trojan, worm, or custom payload via web or email attack vectors. In addition to challenging each attack vector separately, Cymulate BAS tests the effectiveness of various security controls across the entire cyber kill-chain—from attack delivery to exploitation and post-exploitation.

Analyze Assessment Results & Generate Insights

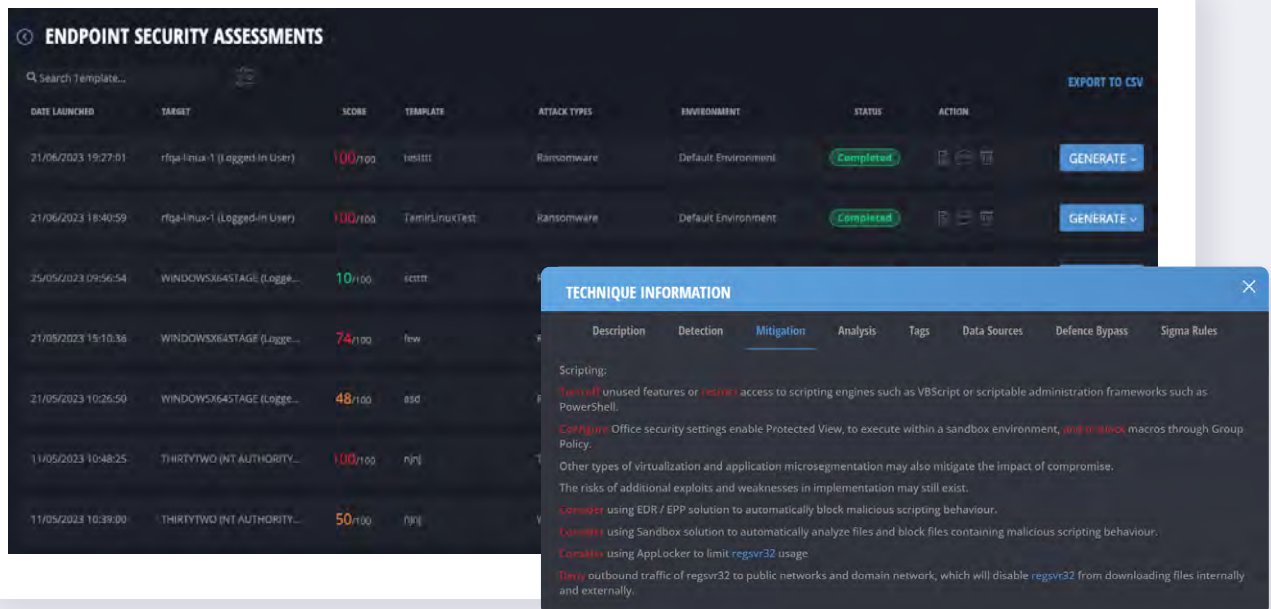
➤ Control Validation Dashboards

Dashboards and detailed reports summarize results for each Cymulate BAS Scenarios capability and threat vector with both at-a-glance metrics and details (payload/URL/site) from recent tests.



➤ Assessment History & Mitigation Guidance

Customers can view the history of all assessments and drill down further per assessment to view results and mitigation guidance mapped to the MITRE ATT&CK framework.



ENDPOINT SECURITY ASSESSMENTS

DATE LAUNCHED	TARGET	SCORE	TEMPLATE	ATTACK TYPES	ENVIRONMENT	STATUS	ACTION
21/06/2023 19:27:01	rfqa-linux-1 (Logged-in User)	100/100	test01	Ransomware	Default Environment	Completed	GENERATE
21/06/2023 18:40:59	rfqa-linux-1 (Logged-in User)	100/100	TamirLinuxTest	Ransomware	Default Environment	Completed	GENERATE
25/05/2023 09:56:54	WINDOWSX64STAGE (Logge...	10/100	iccttt				
21/05/2023 15:10:36	WINDOWSX64STAGE (Logge...	74/100	few				
21/05/2023 10:26:50	WINDOWSX64STAGE (Logge...	48/100	asd				
11/05/2023 10:48:25	THIRTYTWO (NT AUTHORITY...	100/100	njn				
11/05/2023 10:39:00	THIRTYTWO (NT AUTHORITY...	50/100	gnj				

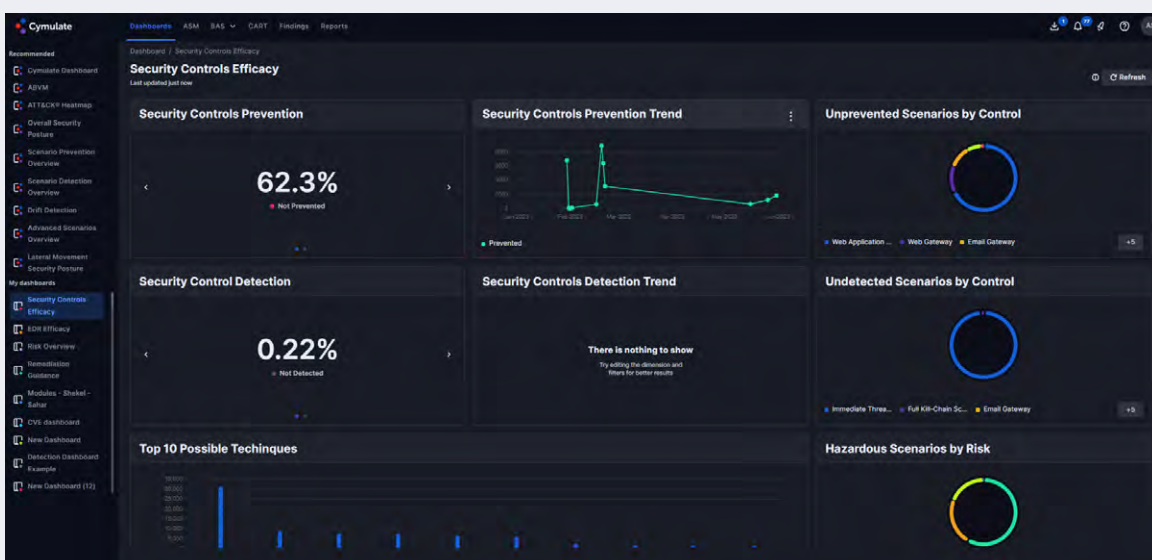
TECHNIQUE INFORMATION

Description Detection **Mitigation** Analysis Tags Data Sources Defence Bypass Sigma Rules

Scripting:
Turn off unused features or **restrict** access to scripting engines such as VBScript or scriptable administration frameworks such as PowerShell.
Configure Office security settings enable Protected View, to execute within a sandbox environment, **and to block** macros through Group Policy.
 Other types of virtualization and application microsegmentation may also mitigate the impact of compromise.
 The risks of additional exploits and weaknesses in implementation may still exist.
Consider using EDR / EPP solution to automatically block malicious scripting behaviour.
Consider using Sandbox solution to automatically analyze files and block files containing malicious scripting behaviour.
Consider using AppLocker to limit regsvr32 usage.
Deny outbound traffic of regsvr32 to public networks and domain network, which will disable regsvr32 from downloading files internally and externally.

➤ Dynamic Dashboards & Reports

Dynamic dashboards and reports provide organizations with the ability to gather insights based on findings from across the Cymulate platform. Organizations can choose from out-of-the-box templates or create customized dashboards and reports tailored to meet their specific needs and goals. Included in the dynamic reports is an up-to-date view of the latest critical and high-risk security gaps across security controls and policies in the organization. Customers use this report as a base for discussion with IT and security engineering teams to prioritize remediation efforts and further investigate the best course of action.



Map Assessments to the MITRE ATT&CK® Framework

The MITRE ATT&CK® Heatmap provides a detailed view of the current state of cyber resilience by visualizing the exposure to each technique. The heatmap correlates all findings from across the Cymulate platform, including filtering and drill-downs into the assessment details for test results and recommended mitigations.



Validate and Improve Detection and Response with Security Control Integrations

Cymulate BAS integrates with many SIEM, SOAR, GRC, EDR, and other tools via API to augment and benefit existing security solutions. With the API integrations, Cymulate identifies the specific policies that need to be tuned to improve security posture and mitigate control gaps. Cymulate remediation guidance integrates with IT service management to streamline workflows and security task management. Here is just a small sample of the available integrations.



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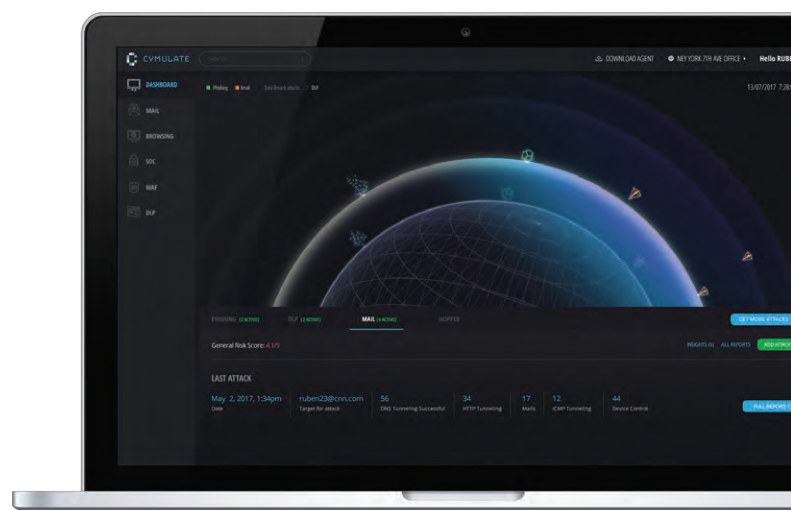


BREACH & ATTACK SIMULATION

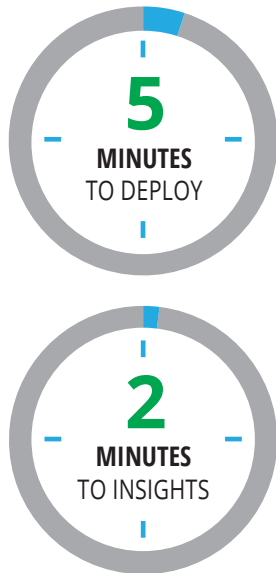
THE EFFECTIVE APPROACH TO CYBER SECURITY VALIDATION

Cymulate's cyber simulation platform allows you to test your security assumptions, identify possible security gaps and receive actionable insights to improve your security posture.

It works by simulating a multi-vector, internal or external attack – which includes the very latest vulnerabilities derived from Cymulate's research unit. The result is a comprehensive validation of your organization's current security posture status – delivered on-demand and with a zero false positive.



YOU ARE 7 MINUTES AWAY FROM
KNOWING IF YOU ARE SECURE!



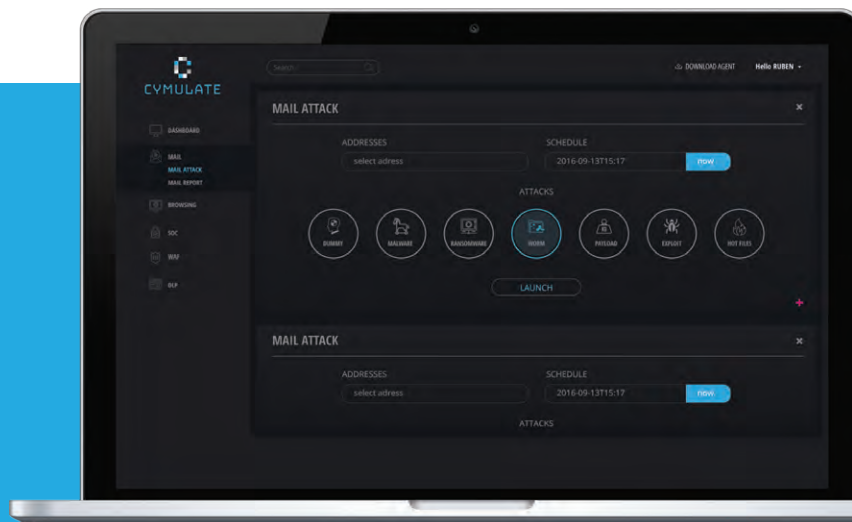
STAY ONE STEP AHEAD OF HACKERS

Cyber-attacks today are more sophisticated and dynamic than ever before, as hackers work around the clock to breach networks, steal intellectual property, and disrupt operations. Organizations worldwide invested more than \$80 billion last year to protect their data, block malware, and safeguard critical business processes. Yet despite all the time, money, and effort invested in cybersecurity solutions, many CISOs still can't answer an essential question: **Is my organization safe right now?** Cymulate provides the answer to this question and empowers organizations to validate their cyber defenses more frequently and comprehensively.

KNOW YOUR REAL SECURITY POSTURE



Organizations now have the power to verify their security posture, on-demand through a unique breach and attack simulation platform. Cymulate's advanced technology provides organizations with the capability to launch simulations of cyber-attacks against themselves, immediately exposing vulnerabilities and providing procedures to mitigate them. Fully-automated and diversified attacks allow for complete security testing anytime, providing organizations with a better understanding of their security posture and allowing them to improve it, continuously. By eliminating false positive, Cymulate delivers only accurate and actionable results.



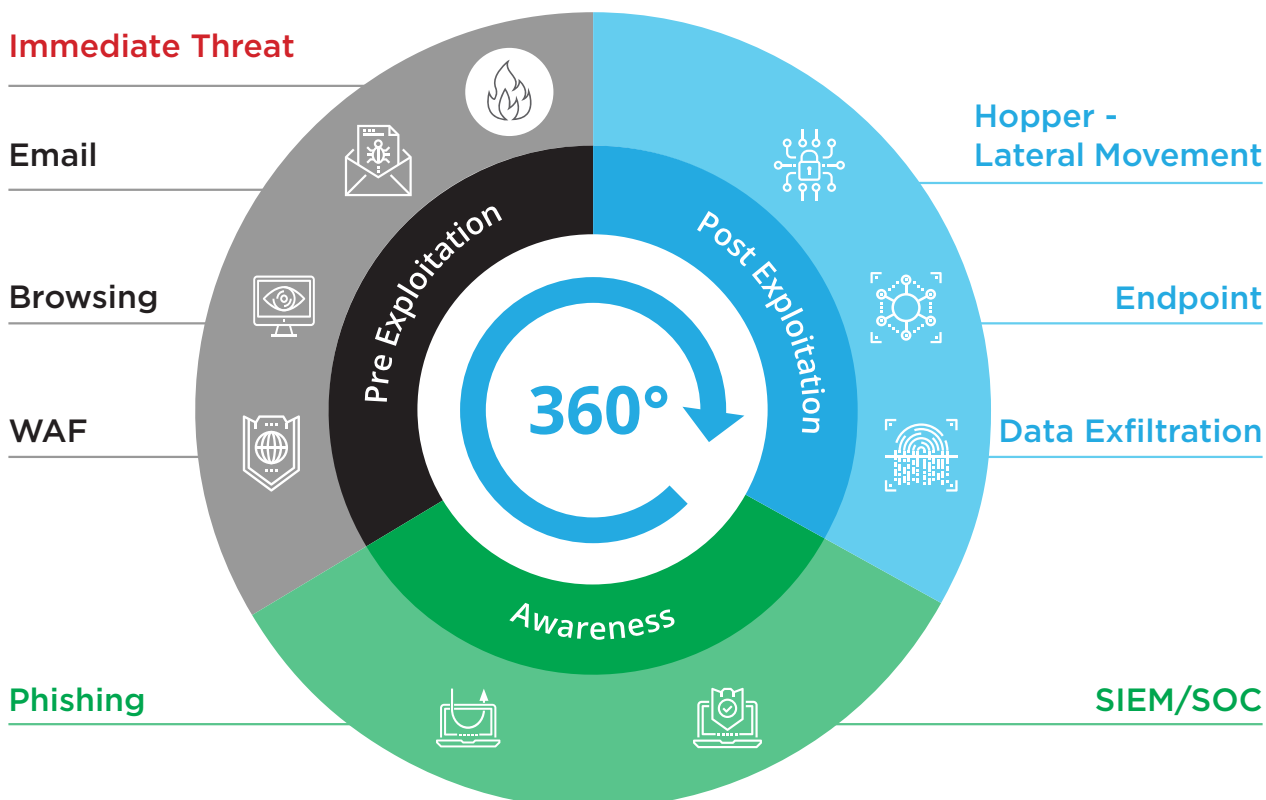
Mail Attack



OUR SOLUTIONS

Cymulate's platform comprehensively exercises your defenses with the industry's widest range of attack vectors, providing an Advanced Persistent Threat (APT) simulation of your security posture at all times. Test your network's ability to cope with pre-exploitation-stage threats in Email, Browsing, and WAF. Analyze your ability to respond to real incidents with our post-exploitation solutions as the Hopper, Endpoint and Data Exfiltration And improve awareness among employees against phishing, ransomware and other attacks.

Gain a clear picture of your vulnerabilities from every point of exposure and learn what will really happen when you are attacked.



PRE EXPLOITATION



IMMEDIATE THREAT ALERT

Test your organization's security posture against clear and present cyber danger

To help organizations protect themselves against new threats that hackers have just launched, Cymulate provides its Immediate Threat solution that simulates the latest attack. This simulation is created by the Cymulate Research team that catches and analyzes threats immediately after they were launched by cybercriminals. By running this simulation, a customer can validate within an hour if its organization would be vulnerable to this threat and take measures before the attack will take place.



E-MAIL ASSESSMENT

Test Your Entire E-Mail Security with Our Vast & Diverse Email Assessment

Despite the widespread use of mail filters, email gateway security and sandboxes, the majority of attacks still originate via email. Poor configuration or implementation of security products might lead to the false assumption that you are safe. Cymulate's Email Assessment module enables organizations to challenge this significant attack vector and test your assumptions.



BROWSING ASSESSMENT

Test Your HTTP/HTTPS Outbound Exposure to Malicious Websites

The vast majority of web malware encounters occur via legitimate browsing of mainstream websites. A significant amount of malware is delivered through browser add-ons - malicious scripts that use Flash, Java and Microsoft Silverlight plug-ins on webpages make up a quarter of malware attacks. Cymulate's Browsing Assessment solution enables you to assess your outbound exposure to malicious websites using common HTTP/HTTPS protocols.



WEB APPLICATION FIREWALL ASSESSMENT (WAF)

Test Your WAF security resilience to web payloads for better protection of your web apps

Web applications have become a central business component; huge amounts of money and effort are spent protecting them. Whereas in the past, IT security teams were tasked with defending just a few enterprise web apps, now they must protect a multitude of web backends of mobile apps, SaaS apps and other cloud-delivered solutions. Cymulate WAF tests your WAF configuration, implementation and features, ensuring that it can block payloads.

POST EXPLOITATION



HOPPER - LATERAL MOVEMENT

Test Your Windows Domain Network Configuration Using Our Sophisticated Algorithm

Lateral movement inside a Windows Domain Network is a common penetration scenario. As threat actors move deeper into the network, their movements and methods become difficult to detect, especially when they utilize Windows features and tools typically used by IT administrators. Cymulate Hopper's sophisticated and efficient algorithm gathers all the common and clever techniques used by the most sophisticated hackers to move laterally inside the network to reveal the breach spots of your Windows Domain Network.



ENDPOINT ASSESSMENT

Test if your Endpoint solutions are tuned properly and if they are protecting you against the latest attack vectors

Endpoints have become the target of choice by hackers. Organizations reinforce their endpoints with layers of protection such as anti-virus, anti-spyware and behavioral detection. They often deploy highly sophisticated deception systems to lead attackers away from the real endpoints and information to honeypots and traps. Cymulate's Endpoint Assessment simulation shows you which of your products are really protecting your endpoints and which are not working properly, exposing your organization to breach. This Assessment allows you to understand the actual security state of your endpoints by comprehensively testing: Automated behavioral detection (EDR), Signature-based detection (Anti-Virus), Known vulnerabilities including Windows patches and your 3rd-party software, Hardening of your endpoints according to Proven methodologies. The results will provide you a unified report of all endpoint security aspects in an easy-to-understand format that lets you take specific actions to upgrade the security state of each of your endpoints.



DATA EXFILTRATION ASSESSMENT

Test Your Outbound Critical Data Safely Before Real Data is Exposed

Laws and regulations are increasingly putting the onus on companies to fully safeguard their data. Breaches create huge financial impact and damage a victim company's reputation. Data Loss Prevention products are designed to protect against data exfiltration. Precious digital assets depend almost entirely on DLP implementation, methodology and configuration. Cymulate's Data Exfiltration Assessment allows you to test your outbound flows to validate that information assets stay indoors.

AWARENESS



PHISHING & AWARENESS

Test Your Employees' Awareness of Phishing Campaigns

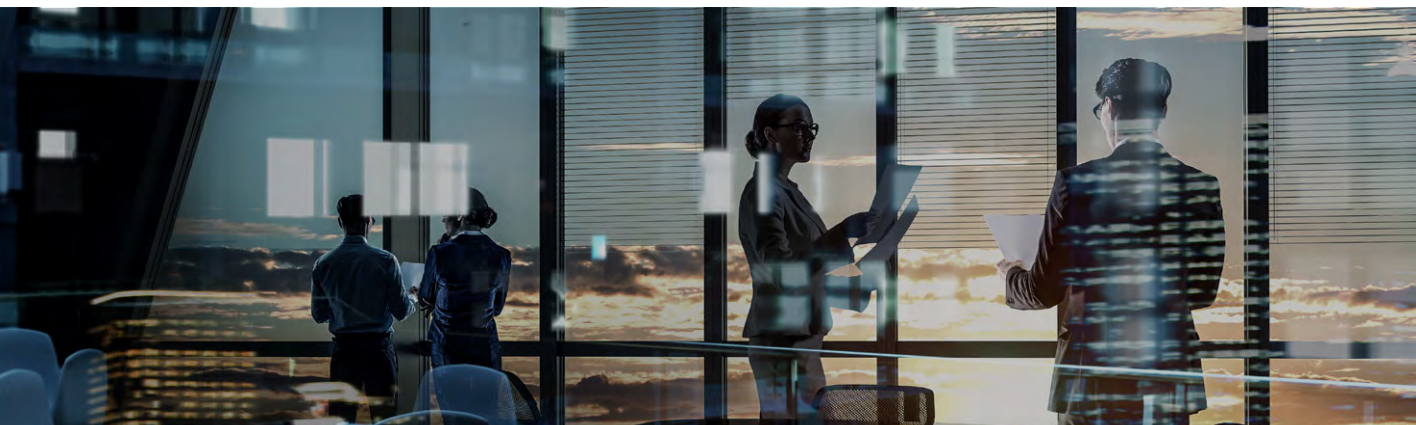
Designed to reduce the risk of spear-phishing, ransomware or CEO fraud, Cymulate Phishing solution minimizes malware-related downtime and saves money on incident response. Focused on raising organization's employees' security awareness by creating and executing simulated phishing campaigns, it finds weak links in your organization, helping you build tailored training programs that improve and reinforce proper employee cyber-security behavior.



SIEM/SOC SIMULATION ASSESSMENT

Test Your SIEM/SOC Alert Configuration and Team Competence

SOC teams are built to react, and can sometimes get a little rusty. To adapt cyber defenses to the current threat landscape, a proactive security approach is needed. Rather than reacting to the last attack, organizations need to continuously monitor their networks, hunt attackers and create strategic intelligence. SIEM/SOC Simulation Assessment allows organizations to test the SIEM events correlation and to validate the SIEM alerts. Furthermore, it enables the CISO to test the SOC Team Incident Response procedures.



KEY BENEFITS

KEY BENEFITS

Mitigate attacks before they happen



Eliminate false positives



Remote test your entire Security



Audit your security products - Maximize your ROI



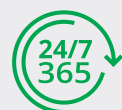
Compare solutions before purchase



Plug & Play solution
Easy to deploy and use



SaaS solution
No hardware required



Immediate results:
24/7/365



Fully Automated -
Continuous testing
& improvement

CYMULATE RESEARCH UNIT

Comprising top Reverse Engineers, Penetration Testers & Programmers, Cymulate's distinguished Cyber Support Unit is what sets us apart. Our primary role is to uncover flaws across a variety of vectors, and continuously search for new vulnerabilities and exploits.

With diverse backgrounds encompassing private security, military and intelligence experience, and combined with the understanding of how your business works, our highly experienced security

experts can deliver the visibility into threats and the actors behind them that you need to protect your organization.

We monitor the cyber threat landscape to provide a globalized view of emerging threats, zero-day vulnerabilities, and the tactics, techniques, and procedures (TTP) of advanced threat actors. Our researchers proactively identify new and one-of-a-kind breach methods through emulation of hacker's tactics and strategies.

Results Dashboard



ABOUT CYMULATE

Cymulate was founded by an elite team of former Israel Defense Forces intelligence officers and leading cyber researchers with world-class experience in offensive cyber solutions. Combining vast expertise in cyber simulation technology with extensive field experience to mimic the latest and most sophisticated cyber-attacks. Cymulate employs software-as-a-service applications to simulate the myriad tactics and strategies employed by hackers to attack network and endpoint security infrastructures.

Cymulate helps companies stay one step ahead of cyber attackers with a unique breach and attack simulation platform that empower organizations with complex security solutions made easy to safeguard their digital assets and maintain business continuity. With Cymulate, organizations can assess their true readiness to handle cyber security threats effectively.

For more information, visit www.cymulate.com