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FROST & SULLIVAN BEST PRACTICES AWARD

ENDPOINT SECURITY - EUROPEAN AND ISRAELI

Technology Innovation 2019

FROST & SULLIVAN

2019 **BEST PRACTICES AWARD**

HYSOLATE

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Over the past decade, companies of all sizes and from diverse industries have successfully implemented digitization initiatives to modernize various business functions. With digitization, more and more critical assets are getting connected to the Internet, which intensifies the criticality for companies to protect their endpoints from cyberattacks. Undoubtedly, cyberattacks become more sophisticated day by day, and when successful, have had devastating impacts on the affected companies. The average financial loss to companies as a result of cyberattacks is alarmingly high and forces them to adopt advanced cybersecurity solutions.

While cyberattacks mature in sophistication, security solution providers are also making strides in developing innovative combative approaches. Nevertheless, hackers end up succeeding in infiltrating enterprises. Cyber criminals have resorted to using techniques such as browser-based attacks, keyloggers, and file-based malware to conduct attacks that are incredibly difficult for security tools to detect and neutralize, which has forced IT teams to cut down on user privileges to ensure security. In turn, enterprise users today face a number of restrictions on their endpoints, such as laptops, under which they cannot browse the web freely, cannot install applications, and cannot plug external devices into their systems. Such restrictive approaches result in highly frustrating user experience and impact employee productivity.

Unfortunately, enterprises do not remain immune to attacks even after such aggressive measures are adopted because hackers still have access to a large attack surface. More and more enterprises now adopt a physical air gap approach to allow users unrestricted digital working environments without compromising security. Under the physical air-gap approach, companies provide employees with more than one workstation where one is unrestricted and dedicated to non-critical applications while the other workstation is reserved for sensitive resources and applications. With this air-gap approach companies do manage to increase security for their sensitive assets, but subsequently contribute to user frustration that results from the use of two different workstations, the related context switches, carrying two workstations, etc.

Moreover, hackers use countless methods to infiltrate enterprise assets and seek weak spots or vulnerabilities in a company's infrastructure. For companies that do not employ this air-gap approach, the security of critical applications gets compromised because it runs on compromised endpoints with inadequate security controls.

Frost & Sullivan recognizes that today's widely connected companies are looking to give their employees maximum freedom when using their digital endpoints, but without compromising security. It is important for employees to have access to key enterprise assets and applications as and when needed, to make best use of them and remain productive, without having to follow complex procedures.

Technology Attributes and Future Business Value

Industry Impact

Hysolate, an endpoint security provider based in Israel and the United States, has developed a virtual air-gap solution with military-grade security for enterprise endpoints that works in the background without sacrificing user experience. The solution splits a user device into isolated operating systems as an alternative to using multiple separate endpoints (workstations), thus giving employees an unparalleled level of freedom that positions them to maximize productivity by eliminating restrictions.

Hysolate empowers companies to run sensitive applications on a separate virtual machine (VM) on a user's device, which Frost & Sullivan finds liberates business enterprises from investing largely on procuring and maintaining multiple endpoints for their diverse employee base. The Hysolate platform has helped users extract the maximum value out of their critical business applications by allowing a greater level of cross-application collaboration through cross-VM operations. In addition, the platform can be tailored to the needs of privileged users who possess access to their company's most sensitive assets and confidential data. Such users are generally the most lucrative targets for hacks and are thus provided the highest level of security. Frost & Sullivan is impressed that Hysolate's solutions has made it possible for IT teams to loosen restrictions on these privileged users and maintain a granular level of control over sensitive applications, without impacting their performance.

Product Impact

In securing critical assets, security teams often end up deploying multiple solutions in addition to a physical air gap and designated secure endpoints. This approach of deploying multiple software and hardware tools adds to the complexity of a company's IT infrastructure, inadvertently constructing a roadblock while trying to scale. IT teams struggle to keep the enterprise infrastructure simple and easily manageable so as to diagnose and fix issues on the fly and to enable easy scalability.

To untangle this technological knot, Hysolate has relieved IT teams from managing multiple endpoints and the privilege controls designated to each one. More importantly, the Hysolate platform is highly manageable and configurable for IT teams, giving them more granular control over the protected endpoints. At base, IT teams select which endpoints to deploy with the platform, which is designed to support endpoints going back 5 years (i.e., Intel i5 processors, 8GB Memory, and SSD storage). Employees using laptops or PCs installed with Hysolate platforms can have unrestricted access to the Internet and multiple other applications from an unrestricted VM whereas from a different, privileged VM, they could access sensitive applications—all from the same device, without any significant deviation in user experience. Both VMs can run locally, side by side, yet attackers cannot gain visibility into the privileged VM, even if they were able to compromise the unrestricted VM.

From an IT administrator's vantage, the platform allows granular control as to how many VM instances are to be deployed for each endpoint and which applications are to be run on which VM. In addition, the platform allows more granular control on policy definition, such

as transfer of files or text between applications running on different VMs. The platform empowers IT administrators to manage user profiles where permissions and policies can be defined and configured at the user level.

The virtual air-gap-based approach ensures security by design, making it extremely difficult for attackers to move freely between VMs and leaving them trapped in the unrestricted VM, which does not allow access to the enterprise's sensitive data. The platform also provides users with an embedded firewall system that verifies each network a user connects to, sidestepping the chance of exposing the privileged VM to unsecure or potentially malicious networks. In case of the network not being verified, the platform forces the VM to go through a secure VPN tunnel via the hypervisor. This frees employees to access their critical applications from home or public networks, thus privileging companies to implement flexible work policies.
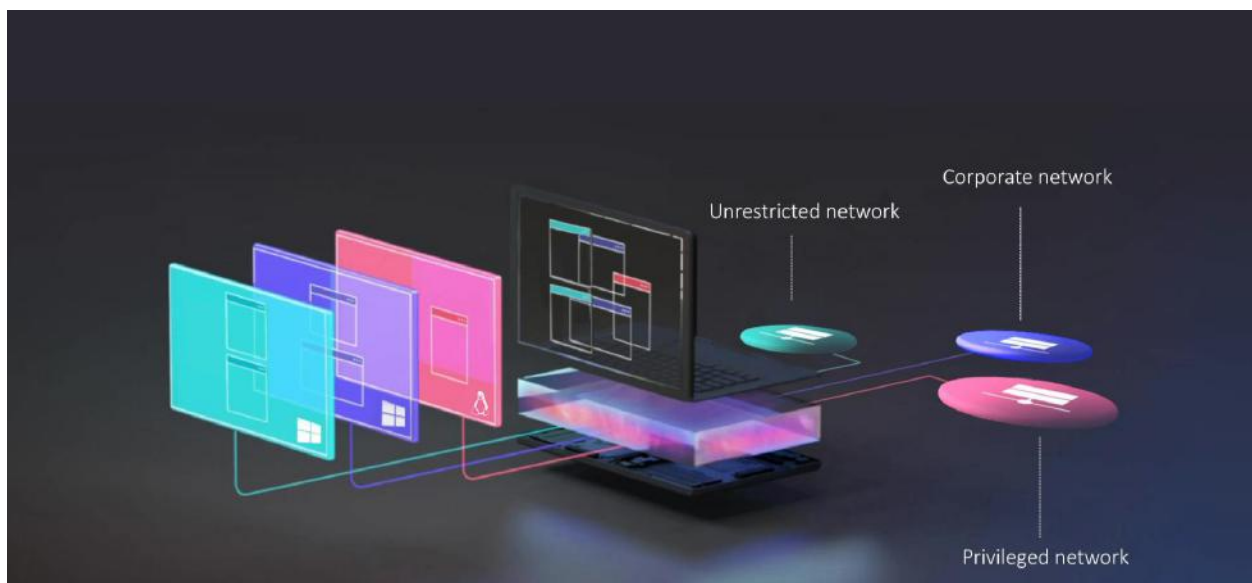

Image courtesy of Hysolate

Visionary Innovation & Application Diversity

Hysolate has designed its solution with the overreaching goal of providing customers with utmost security combined with user experience flexibility at the core. This intention is reflected throughout the solution. With a goal of providing flexibility to users, many companies are adopting bring your own device (BYOD) practices and are allowing employees to use enterprise devices for personal use or vice versa. Hysolate also supports BYOD use cases and provides users with a personal VM alongside their enterprise VM in such cases.

Adding to the flexibility and user friendliness of the platform is the user experience. Hysolate users do not have to go through any kind of training or perform any activity differently than they would in an endpoint which is not running Hysolate. "We had planned to do a full training class but during our Hysolate deployment, we found it was so much easier to just give users a five-minute demo - that's all they needed to understand how it

works." - Cole Holloway, Midwest Independent Bank. The platform works entirely in the background, and a user only has to shift between different windows to alternate between virtual environments in what is called "Seamless Mode". One of the factors that Hysolate has emphasized is the performance of applications in virtual environments and has taken steps to ensure that the user experience of each application running in the virtual environment is consistent with its experience in non-virtual environments.

As a long-term vision, the company is trying to develop itself as a platform on which other applications can be built. Existing as a layer below the operating system itself, Hysolate allows third-party developers to provide additional features to their customers as they are out of the reach of malware. For future development, Hysolate is looking to introduce more use cases and to support clients in a wide range of industries.

Customer Acquisition & Human Capital

After launching in 2018, Hysolate's solutions have been adopted by multiple companies to provide strong security controls for managing sensitive assets and crown jewels. Some key clients hail from the banking and financial, legal, and technology domains whereas the primary users are IT admins, senior executives, or users with access to payment systems such as SWIFT. While a large majority of Hysolate users initially adopted the platform for privileged users only, many companies have been expanding their rollout to include additional users as a way to add more flexibility and security to their daily tasks. The company derives a large part of its business from Europe and North America and has made significant investments to expand its presence in the United States.

Hysolate is characterized by a powerful and experienced leadership team. The company was founded by Tal Zamir, who serves as the CTO. Mr. Zamir is a veteran of an elite Israeli cyber technology unit and a former R&D leader at Wanova (acquired by VMware). The leadership team also features Marc Gaffan (CEO), former Chief Business Officer at Nexar and Co-founder of Incapsula (acquired by Imperva); Yuki Arbel (VP Product Management), former Head of Product for Nokia's NFV infrastructure; and Dror Granot (VP R&D), former Head of R&D at Reduxio Systems. Marketing is headed by Jessica Stanford, former Director of Product Marketing at Cybereason.

Frost & Sullivan understands the company has gained considerably from the variety and depth of its leadership team's experience, which made it possible to translate their cumulative vision into a product that is gaining the confidence of leading investors, such as Team8, Bessemer and Innovation Endeavours.

Conclusion

Today's digitized companies are plagued with security issues, and cyberattacks have only gotten more sophisticated over the years. In the process of protecting the most sensitive assets and confidential data of the organization, IT teams have essentially locked down enterprise endpoints at the cost of user experience. Users often have to live with highly limited workstations or work on separate workstations to access sensitive assets, making it nearly impossible for them to have any kind of seamless collaboration among two separate endpoints.

Hysolate offers a unique virtual air-gap solution that has made it possible for companies to provide users with seamless access to sensitive assets without compromising on security, while at the same time enabling customers with drastic cost optimization by eliminating the use of multiple endpoints. Hysolate's clients have also been able to dramatically reduce complexities in their networks, making it easier for them to scale operations seamlessly. For its strong overall performance, Hysolate is recognized with Frost & Sullivan's 2019 Technology Innovation Award.

Significance of Technology Innovation

Ultimately, growth in any organization depends on finding new ways to excite the market and maintaining a long-term commitment to innovation. At its core, technology innovation, or any other type of innovation, can only be sustained with leadership in 3 key areas: understanding demand, nurturing the brand, and differentiating from the competition.

Understanding Technology Innovation

Technology innovation begins with a spark of creativity that is systematically pursued, developed, and commercialized. That spark can result from a successful partnership, a productive in-house innovation group, or a bright-minded individual. Regardless of the source, the success of any new technology is ultimately determined by its innovativeness and its impact on the business as a whole.

Key Benchmarking Criteria

For the Technology Innovation Award, Frost & Sullivan analysts independently evaluated 2 key factors—Technology Attributes and Future Business Value—according to the criteria identified below.

Technology Attributes

Criterion 1: Industry Impact
Requirement: Technology enables the pursuit of groundbreaking ideas, contributing to the betterment of the entire industry.

Criterion 2: Product Impact
Requirement: Specific technology helps enhance features and functionalities of the entire product line for the company.

Criterion 3: Scalability
Requirement: Technology is scalable, enabling new generations of products over time, with increasing levels of quality and functionality.

Criterion 4: Visionary Innovation
Requirement: Specific new technology represents true innovation based on a deep understanding of future needs and applications.

Criterion 5: Application Diversity
Requirement: New technology serves multiple products, multiple applications, and multiple user environments.

Future Business Value

Criterion 1: Financial Performance
Requirement: Potential is high for strong financial performance in terms of revenue, operating margins, and other relevant financial metrics.

Criterion 2: Customer Acquisition
Requirement: Specific technology enables acquisition of new customers, even as it enhances value to current customers.

Criterion 3: Technology Licensing
Requirement: New technology displays great potential to be licensed across many verticals and applications, thereby driving incremental revenue streams.

Criterion 4: Brand Loyalty
Requirement: New technology enhances the company's brand, creating and/or nurturing brand loyalty.

Criterion 5: Human Capital
Requirement: Customer impact is enhanced through the leverage of specific technology, translating into positive impact on employee morale and retention.

Best Practices Recognition: 10 Steps to Researching, Identifying, and Recognizing Best Practices

Frost & Sullivan analysts follow a 10-step process to evaluate award candidates and assess their fit with select best practices criteria. The reputation and integrity of the awards are based on close adherence to this process.

STEP		OBJECTIVE	KEY ACTIVITIES	OUTPUT
1	**Monitor, target, and screen**	Identify award recipient candidates from around the world	• Conduct in-depth industry research • Identify emerging industries • Scan multiple regions	Pipeline of candidates that potentially meet all best practices criteria
2	**Perform 360-degree research**	Perform comprehensive, 360-degree research on all candidates in the pipeline	• Interview thought leaders and industry practitioners • Assess candidates' fit with best practices criteria • Rank all candidates	Matrix positioning of all candidates' performance relative to one another
3	**Invite thought leadership in best practices**	Perform in-depth examination of all candidates	• Confirm best practices criteria • Examine eligibility of all candidates • Identify any information gaps	Detailed profiles of all ranked candidates
4	**Initiate research director review**	Conduct an unbiased evaluation of all candidate profiles	• Brainstorm ranking options • Invite multiple perspectives on candidates' performance • Update candidate profiles	Final prioritization of all eligible candidates and companion best practices positioning paper
5	**Assemble panel of industry experts**	Present findings to an expert panel of industry thought leaders	• Share findings • Strengthen cases for candidate eligibility • Prioritize candidates	Refined list of prioritized award candidates
6	**Conduct global industry review**	Build consensus on award candidates' eligibility	• Hold global team meeting to review all candidates • Pressure-test fit with criteria • Confirm inclusion of all eligible candidates	Final list of eligible award candidates, representing success stories worldwide
7	**Perform quality check**	Develop official award consideration materials	• Perform final performance benchmarking activities • Write nominations • Perform quality review	High-quality, accurate, and creative presentation of nominees' successes
8	**Reconnect with panel of industry experts**	Finalize the selection of the best practices award recipient	• Review analysis with panel • Build consensus • Select recipient	Decision on which company performs best against all best practices criteria
9	**Communicate recognition**	Inform award recipient of recognition	• Present award to the CEO • Inspire the organization for continued success • Celebrate the recipient's performance	Announcement of award and plan for how recipient can use the award to enhance the brand
10	**Take strategic action**	Upon licensing, company is able to share award news with stakeholders and customers	• Coordinate media outreach • Design a marketing plan • Assess award's role in strategic planning	Widespread awareness of recipient's award status among investors, media personnel, and employees

The Intersection between 360-Degree Research and Best Practices Awards

Research Methodology

Frost & Sullivan's 360-degree research methodology represents the analytical rigor of the research process. It offers a 360-degree view of industry challenges, trends, and issues by integrating all 7 of Frost & Sullivan's research methodologies. Too often companies make important growth decisions based on a narrow understanding of their environment, resulting in errors of both omission and commission. Successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. The integration of these research disciplines into the 360-degree research methodology provides an evaluation platform for benchmarking industry participants and for identifying those performing at best-in-class levels.

360-DEGREE RESEARCH: SEEING ORDER IN THE CHAOS

About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, helps clients accelerate growth and achieve best-in-class positions in growth, innovation, and leadership. The company's Growth Partnership Service provides the CEO and the CEO's growth team with disciplined research and best-practices models to drive the generation, evaluation, and implementation of powerful growth strategies. Frost & Sullivan leverages nearly 60 years of experience in partnering with Global 1000 companies, emerging businesses, and the investment community from 45 offices on 6 continents. To join Frost & Sullivan's Growth Partnership, visit http://www.frost.com.