Allianz Global Investors

FROM PERIMETER TO DATA:

The five layers of cyber security

With more and more devices, cars, homes and – not least – production and manufacturing processes being connected to the internet, businesses and individuals are increasingly exposed to cyber-risks and vulnerable to cyber-attacks. This growing need for protection means a requirement for more sophisticated approaches to cyber security – something that is providing attractive opportunities for investors to participate in the growth prospects of companies at the forefront of these developments. Indeed, the layered approach that this article discusses has proven to be the most effective as malefactors only need to be right once, while security professionals – and the organisations they protect – need to be right all the time.

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Perimeter security: the first line of defence

Perimeter security has traditionally been synonymous for firewalls; i.e., the protection of data and systems by filtering out potentially dangerous or unknown traffic. With the growing ubiquity of the cloud and remote access, perimeter security solutions – once designed to locally manage and protect local networks - must now adapt to this new and more complex landscape.

The transformation of network security defence

Network security covers both hardware and software technologies, and processes and devices that protect a network and its data from harm. Again, the expansion of the cloud and working from home/anywhere are fundamentally changing the landscape here; networks now also include the path to the cloud and hybrid infrastructures that may consist of on-premises data centres, public/private cloud instances, and SaaS applications.

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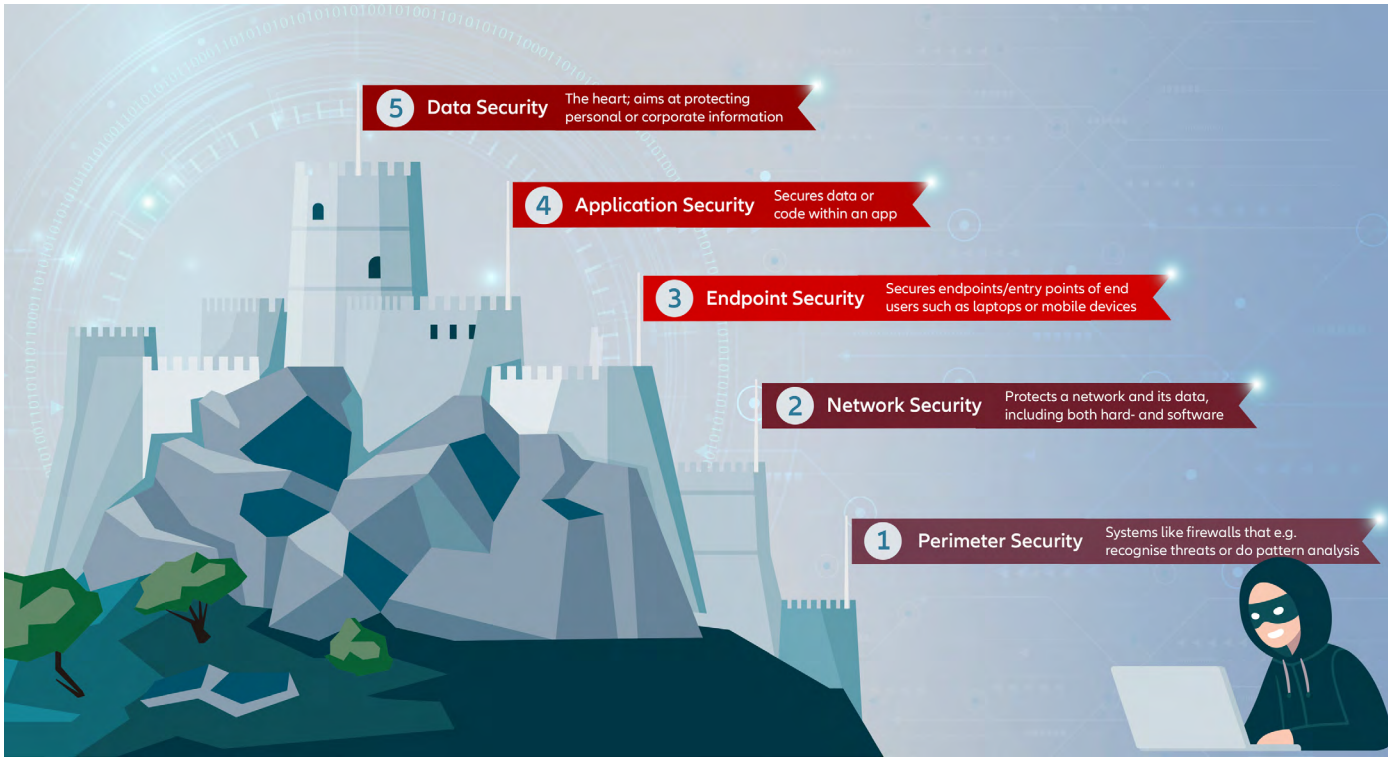

Perimeter and network security

With an increasing use and a deeper integration of cloud technologies into business processes and with the establishment of flexible work models (on-site, remote and hybrid), many organizations are struggling with more complex network and data vulnerability issues. Innovators in this sector are thus rethinking established security concepts and developing new models. For instance, Zscaler and CrowdStrike have developed a solution based on the idea of "zero trust", where user identity, device posture (i.e., a device's security credentials), and access policies are used to grant or withhold access rights. These risk-based conditional access solutions help steering a multitude of individual access requirements from users by detecting in real time possible threats which may arise when identities don't match with corresponding access rights. This, in turn, protects complex and thus more vulnerable IT environments from breaches.

Endpoint security: where a network's safety begins

The growing use of the cloud is also resulting in profound changes in how endpoints – i.e., any device that is connected to the network and can communicate both ways – should be protected from cyberattacks. Indeed, malicious actors now often target the vulnerability of endpoint devices to get access to a network while, until relatively recently, they would have focused on breaching perimeter security.

Given the increasing proliferation of devices connected to organization's networks, the growth of the "internet of things" (IoT), and the unique risks associated with "bring your own device" (BYOD) policies, endpoint security is likely to represents a particularly strong growth area for the foreseeable future. Indeed, some estimates suggest that the endpoint security market will grow at a CAGR of 8.3% by 2028, reaching a value of USD 24.58 bn.[1]

Endpoint security

Formed in 2011, CrowdStrike has developed a comprehensive endpoint security offering comprising of a range of unified modules to prevent breaches. Their Falcon platform collects cyber security data – processing over 6 trillion events per week[2] – and leverages AI to constantly improve its performance ands deliver one of the highest detection and efficacy rates in the industry.

The company's annual recurring revenue grew by 48% year-on-year to exceed 2.5 billion, as of January 31, 2023.[3]

Endpoint security market: projected market CAGR of 9.4% by 2026, reaching a value of USD 22 billion[4]

Application security: defending apps and users

Application security is as multifaceted as applications themselves. It includes not only the procedures used to protect websites and apps while in use, but also those used during their development and design.

Again, the rise of the cloud is changing the game here. With more and more organizations hosting resources in this way, application security is becoming ever more complex. Recent research suggests that the global application security market will experience a CAGR of 18.30% by 2028 reaching a value of USD 22.54 bn, up from USD 6.95 USD bn in 2021.[5]

Application security

One of the leaders in a range of cyber security areas and disciplines, Zscaler's "Private Access" (ZPA) solution applies the principles of zero trust and segmentation to give users secure and direct connectivity to apps while eliminating unauthorized access via "zero trust network access" (ZTNA). ZPA is currently the world's most deployed ZTNA platform[6], and this model is expected to become dominant in the coming years – Gartner predicts that, by 2025, over 70% of remote access deployments will use ZTNA[7].

Application security – projected market CAGR of over 18% by 2028, reaching a value of USD 22.54 billion[8]

Data security: the heart of protection

The protection of data across platforms and applications connected to an organization's network is often considered the paramount discipline of cyber security. The safeguarding of data is vital for every enterprise as many companies base their processes and business models on the storage, transmission, and, not least, the monetarization of gathered internal and external data. Indeed, the consequences of breaches in this respect present one of the greatest risks to companies and other organisations in terms of potential liability and reputational damage.

Data security

According to Cowen Research and Boston Consulting Group, the "human element" is responsible for at least three quarters of cyber breaches. Issues here include, for example, users failing to follow security protocols or becoming victim to deceptive communications or other forms of social engineering. For this reason, security awareness training and technologies that identify and detect threats more efficiently remains key to limiting such breaches. Microsoft offers a variety of security solutions that help its customers keep data safe from attacks. One of the company's new solutions is the Copilot product, which allows security teams to detect hidden patterns and respond to incidents faster with generative AI. Microsoft is a leader in cyber security and continues to develop innovative solutions to secure critical data. We see this segment as an important driver to the company's long-term growth.

Allianz Global Investors identifies first movers in cyber security

When it comes to cyber security, it is vital for companies to stay a step ahead of malicious actors. Cybercrime is, and will continue to be, a difficult-to-assess risk. Leading companies providing solutions in this area are thus likely to benefit from the growing need for holistic cyber security approaches – a need that will only become more pertinent, and complex to address, in the coming years.

Allianz Global Investors identifies innovators and first movers in cyber security across the full range of cyber security solutions, especially those that provide innovative solutions to protect applications, organizations, and users in complex cloud environments.

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