FIREEYE

SOLUTION BRIEF

Email Security for Advanced Threat Protection

Overview

Email remains the main entry point for most cyber attacks because it can be highly targeted and customized to increase the odds of exploitation. While legacy anti-spam filters and antivirus software are good at catching traditional, mass phishing threats with known malicious attachments, links and content, they cannot catch sophisticated and targeted spear-phishing and impersonation attacks designed to bypass these traditional solutions.

Most secure email gateways (SEG) mitigate against traditional spam and known malware, but lack the combination of technology, intelligence and expertise to detect and prevent malicious email campaigns and more advanced threats from the first time they're seen. They rely on commodity anti-spam filters and antivirus software designed to react to new threats sent in large volumes. Typically responses can take several minutes and ever-changing techniques can delay detection further, leaving a global gap exploited by spammers and cyber threat actors. Firewalls don't help; they can't examine email traffic that is typically sent over Transport Layer Security (TLS) connections to deliver ransomware and spear-phishing campaigns.

To prevent today's spam campaigns, the activation of ransomware, and spear-phishing emails wrapped in impersonation packages an email security solution needs to evolve quickly to adapt to the threat landscape. It must focus on threat protection that:

- Detects advanced threats from the first time they're seen without relying on signatures
- Identifies critical threats with minimal false positives
- Blocks inline to keep threats such as ransomware out of the environment
- Uses cyber threat intelligence gained from the frontlines and preemptive knowledge about attackers to respond quickly to protect the organization

Why Your Current Email Security Solution Isn't Secure Enough

A data breach puts the information, people and processes an organization is responsible for at risk. It disrupts business, tarnishes the organization's reputation and compromises customer trust. The average cost of a data breach is $3.62 million[2] and they are often initiated by phishing emails. It's likely that the volume of emails stolen through the years is greater than all other forms of data theft combined.[3]

Email is an easy target for cyber attackers. To determine if your current solution(s) are secure, you must ask:

1. In addition to antivirus, anti-spam, and known malware does your SEG detect and block advanced threats including malware-laden attachments and URLs, credential-phishing sites and impersonation techniques?
2. Do they enable efficient response to alerts by blocking threats, telling you which matter and providing intelligence on what to do?
3. Do you have access to the latest, contextual intelligence available to rapidly adapt to the evolving threat landscape?
4. Do your email security solutions integrate with your other security tools to seamlessly work across threat vectors and protect against blended attacks?
5. Are they flexible and scalable to change as your business does?

91% of cyber attacks begin with a spear-phishing email.[1]

1 PhishMe (2016). "Enterprise Phishing Susceptibility and Resiliency Report."
2 Ponemon Institute LLC (June 2017). "2017 Cost of Data Breach Study: Global Overview."
3 Mandiant, A FireEye Company (2017). "M-Trends 2017 A View From The Front Lines."

1

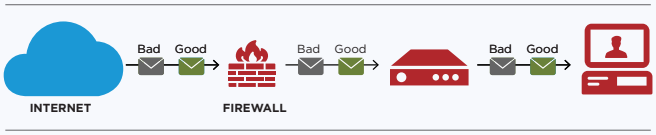
As email threats have evolved, cloud-based email subscription services have seen widespread adoption. Organizations are migrating information, operations and assets to the cloud. Given the rate that public cloud services and Internet-connected devices are growing, it's not surprising that cyber threats targeting the cloud, and the need for cloud-based security, will increase.

FireEye Email Security – Cloud Edition is a secure email gateway that blocks inbound and outbound malware, phishing URLs, impersonation techniques and spam. An antivirus and anti-spam (AVAS) add-on provides protection against spam campaigns and impersonation techniques. It addresses the need for a comprehensive, single-vendor email security offering to protect against spam campaigns, and targeted and advanced threats. This enables organizations to consolidate their email security stack and fully embrace the cloud.

2

Outdated defenses give organizations a false sense of security. Email gateways that rely on commodity intelligence, and third-party signatures and reputations aren't purpose built to detect threats from the first time they're seen. Similarly, a firewall can't stop ransomware and spear-phishing campaigns delivered by email.

Figure 1. Traditional security solutions fail to detect targeted cyber attacks.



Architecturally these technologies can't hold email while they analyze it. This means they allow the delivery of emails to users that contain malware-laden attachments and URLs, and impersonation techniques.

FireEye Email Security helps organizations of all sizes minimize the risk of costly breaches. It detects and blocks spam campaigns, and advanced and targeted attacks hiding in email traffic that other email security solutions miss. In fact, during a recent POV (proof of value) for a global consumer packaged goods company, FireEye detected thousands of phishing and impersonation tactics missed by the incumbent gateway.

3

Legacy, signature-based intelligence feeds can't evolve quickly enough to stop today's email-borne attacks. Those feeds cannot help anticipate attacks or guide responses. In fact, the numerous security technologies and software incorporated as point solutions has led to a huge uptick in alerts. In-house detection, rather than relying on signature and reputation updates from third-parties, allows FireEye Email Security to evolve much faster and immediately block spam campaigns when something new is found. Algorithms analyze message sender and domain for spoofing of known names within the recipient domain to stop increasingly prevalent impersonation attacks such as CEO fraud that don't involve malware or malicious URLs.

FireEye Email Security knows what to block based on intelligence gained from firsthand investigations and observations of adversaries. This insight also provides security teams with alert context to simplify alert prioritization. Malicious emails are quarantined and actionable contextual intelligence accelerates containment of advanced threats with in-depth information about the attack and attacker.

Globally shared real evidence enables immediate blocking of previously unknown attacks and accelerates threat response. Threats are identified with minimal noise and false positives. This ensures security team resources are focused on real attacks, reduces operational expenses and minimizes organizational risk.

4

Many attacks combine network (web) and email tactics in multiple stages to evade web-only and email-only defenses, which focus on just one stage of an advanced attack. A single cyber attack may be comprised of sophisticated malware that exploits a zero-day vulnerability, a spear-phishing email, a malicious URL and a complex network of command servers for controlling compromised devices and stealing targeted assets.

While ransomware attacks start with an email, a callback to a command-and-control server is required to encrypt the data. These email-led, multi-stage attacks easily evade most sandboxes, which analyze files in isolation. By the time most security products discover a problem, the victim's data is already encrypted. FireEye Email Security and Network Security integrate seamlessly to detect and stop blended attacks. Together, they correlate the attack life cycle to trace attacks back to an original spear-phishing email and threat actor.

Superior Threat Detection

Email Security helps mitigate the risk of costly breaches by identifying and isolating advanced, targeted and other evasive attacks camouflaged as normal traffic. Once detected these attacks are immediately stopped, analyzed and fingerprinted for faster identification of future threats.

At the core of Email Security are Advanced URL Defense and the Multi-Vector Virtual Execution™ (MVX) technologies. These technologies use cutting edge machine learning and analytics to identify attacks that evade traditional signature and policy-based defenses.

Email Security – Cloud Edition is available with anti-spam and antivirus (AVAS) protection to detect both common attacks that use conventional signature matching as well as impersonation techniques.

Impersonation attacks, such as CEO fraud (often called Business Email Compromises) continue to significantly impact businesses financially.

This is due in part to the lack of traditional threat indicators such as malicious attachments or links. To combat these attacks and protect customers, FireEye has developed innovative algorithms, systems, and tools specializing in impersonation detection and defense.

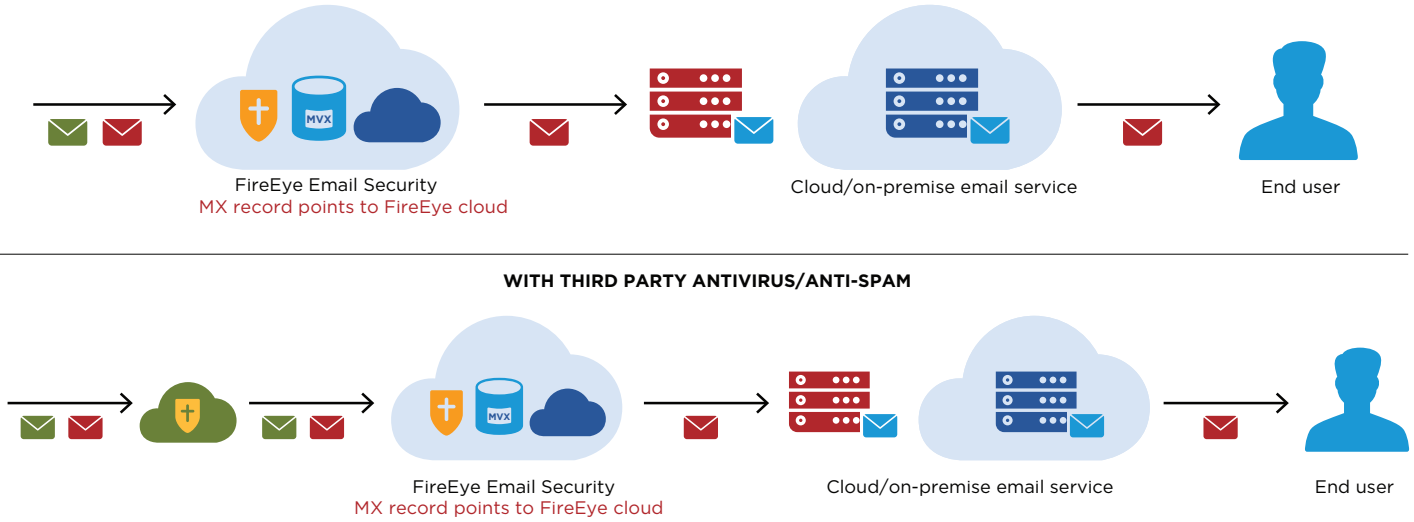
With the use of email specific threat intelligence, attack and attacker intelligence gained from firsthand investigations, and observations of adversaries threats are identified with minimal noise and false positives are nearly nonexistent. This frees security teams to focus on investigating and responding to real attacks and using scarce resources efficiently.

Flexible Deployment Options

FireEye Email Security can be deployed inline for greater control and real-time response to stop attacks in progress. Especially with attacks such as ransomware, where prevention is the only effective defense, inline deployment keeps malicious and malware-less content from even being delivered to the end user.

FireEye Email Security – Cloud Edition, with nothing to install, is ideal for organizations migrating their email infrastructure to the cloud. It integrates seamlessly with cloud-based email systems such as Microsoft Office 365 and G Suite. An AVAS add-on is available with inline anti-spam and antivirus protection for stopping new spam campaigns and impersonation techniques (Fig. 2).

Figure 2. **FireEye Email Security – Cloud Edition – inline deployment.**



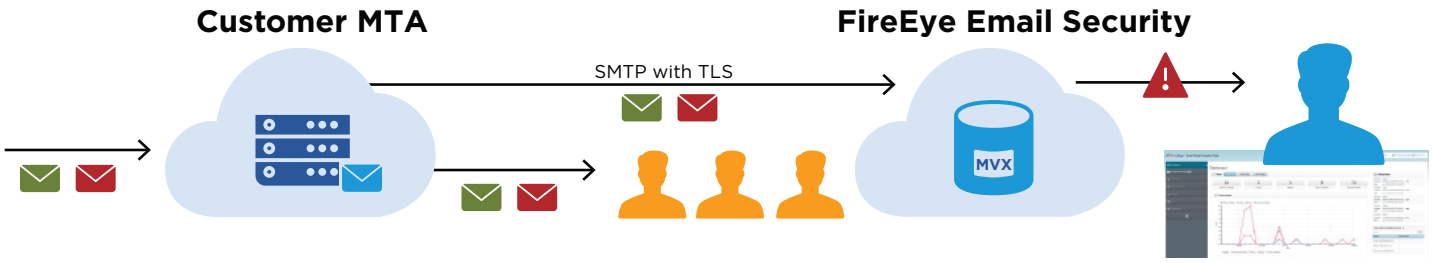
Some organizations prefer to start with a more conservative approach, and FireEye Email Security can be deployed in out-of-band or monitor-only modes (Fig. 3). In this deployment, all traffic is monitored for malicious activity and a report is generated, but there is no automated prevention mechanism.

FireEye Email Security – Server Edition is a family of on-premises appliances. FireEye or its authorized partners can help you determine and deploy the option that best fits your needs.

Next Steps

Today's sophisticated cyber attackers and dynamic threat landscape necessitate that organizations understand their threat profile. This involves knowing what assets are at risk, focusing on fast threat detection and response, and resolving incidents quickly. To stay focused on their missions and to minimize risk, organizations need email security focused on detecting and blocking email-borne threats from the first time they're seen. This includes security technologies and cyber threat intelligence gained from firsthand investigations of the cyber attacks that matter.

Figure 3. FireEye Email Security – Cloud Edition – BCC mode.



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FireEye is the intelligence-led security company. Working as a seamless, scalable extension of customer security operations, FireEye offers a single platform that blends innovative security technologies, nation-state grade threat intelligence, and world-renowned Mandiant® consulting. With this approach, FireEye eliminates the complexity and burden of cyber security for organizations struggling to prepare for, prevent and respond to cyber attacks.