



How Enterprise Tackles Phishing

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Hackers turning to easy marks - Social engineering

Phishing was the #1 threat vector (> 50%) for Office 365-based threats.

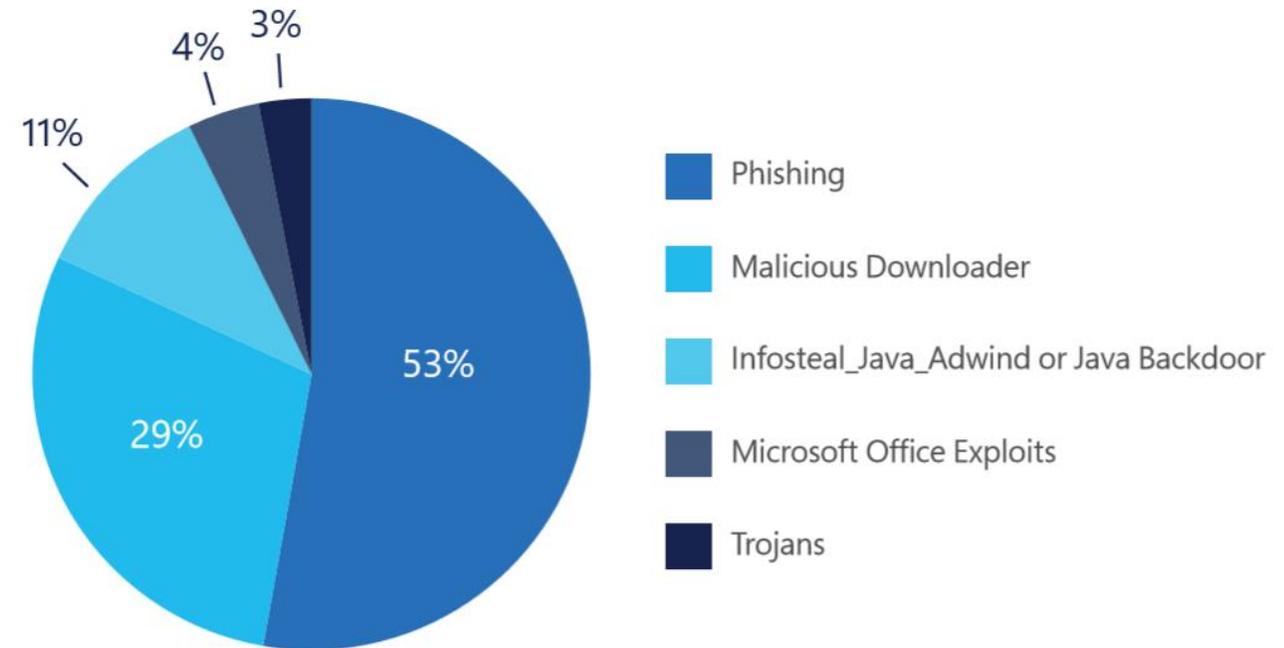


Figure 7: Top threats detected by Microsoft Office 365 ATP

Analysis and explanation



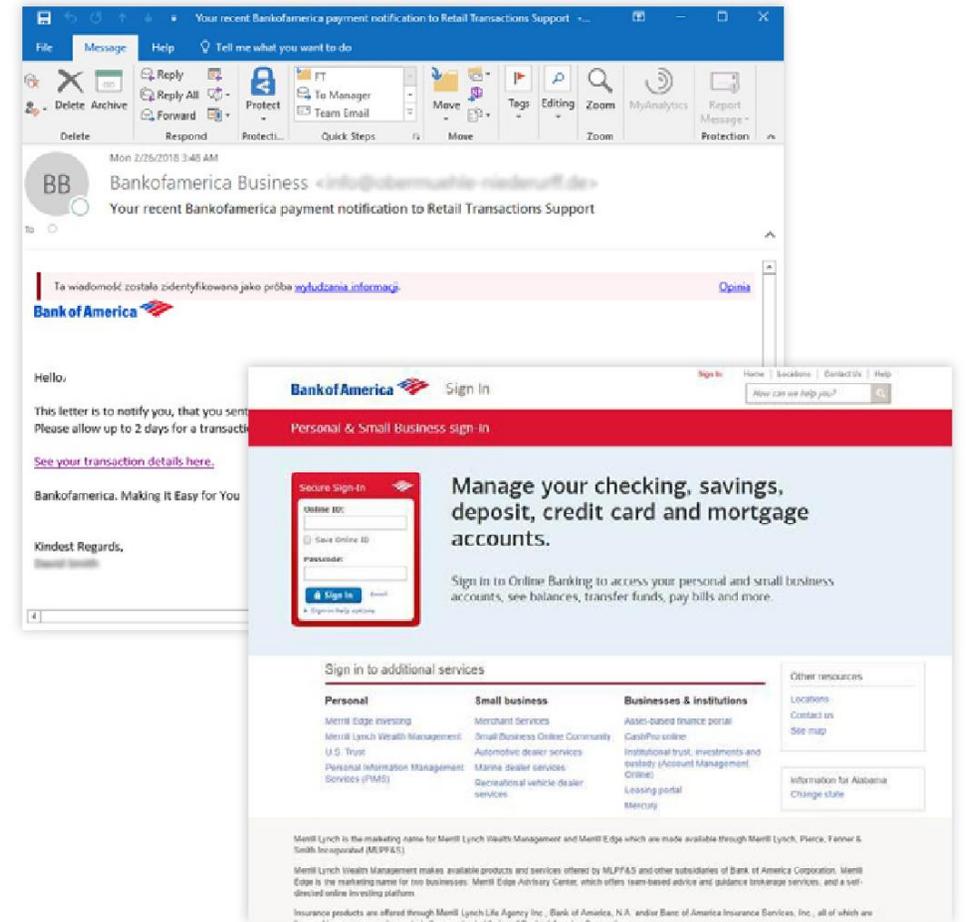
An attacker sending a phishing email in bulk to 1,000 individuals just needs to successfully trick one person to obtain access to that person's credentials.



If users are distracted and quickly scan the seemingly legitimate but fake phishing email, they may accidentally click a link and share details such as entering their credentials.

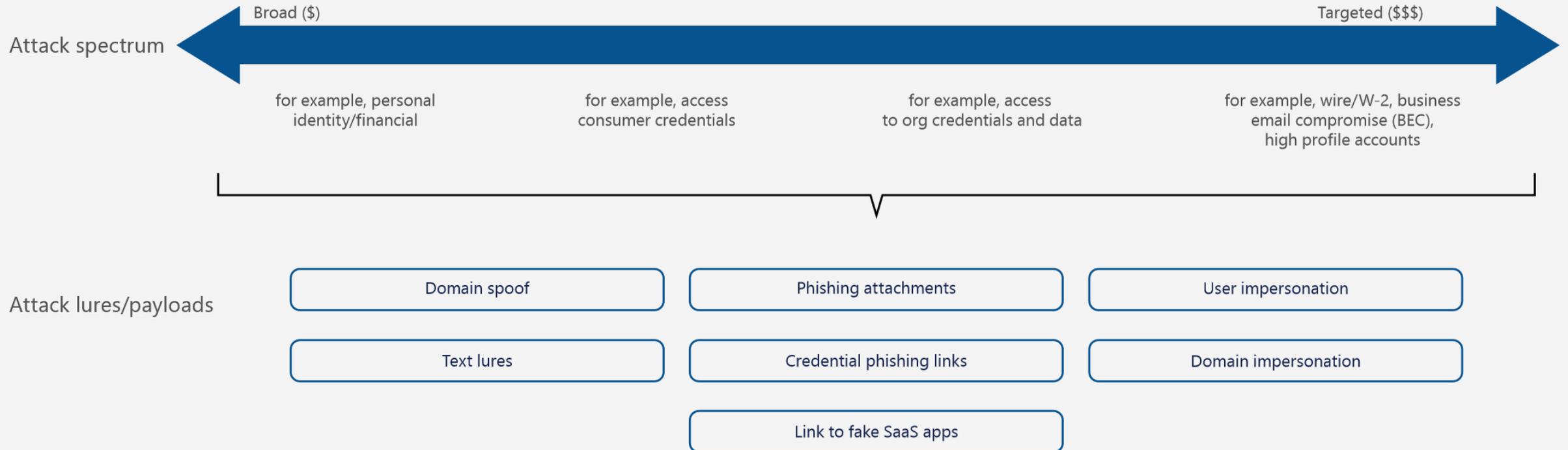


Phishing is an easier way to obtain credentials as compared to exploiting a vulnerability, which is increasingly costly and difficult.



Phishing comes in many forms

Phishing attack landscape



Phishing in real life

What you see

Are you at your desk



FedEx®

FedEx

My FedEx
REWARDS

Sir,

We tried to deliver your package on July 8th 2017 5:45 PM.

The delivery attempted failed because the address was business closed or nobody could sign for it.

To pick up the parcel, please Print the invoice that is attached to this email and Visit FedEx location indicated in the receipt. If this parcel is not picked up within 48 hours, it will be returned to the Shipper

What the machine sees

Areyoueatyouredesk



Key phishing related findings

- ✓ The research team has seen about 30% of domain spoof attacks.
- ✓ More than 75% of phishing mails include malicious URLs to phishing sites. Other variations include malicious phishing attachments and links in attachments.
- ✓ Phishing mails impersonate popular brands:
 - Microsoft associated brands (for example, Office 365)
 - Other commonly abused brands include, but are not limited to, DocuSign, Dropbox, Apple, and Amazon.
 - Recent investigations show attacks that impersonate popular courier services such as FedEx, DHL, and UPS.
 - The research team also detected impersonation related to banks and government services.
- ✓ User impersonation and domain impersonation techniques were low in volume, but they were high-severity attacks.

Low-hanging fruit keeps changing

Downward trend of exploitation, the exploitation of macros was very prevalent.

Office



Most vendors have since been offering more enhanced and effective email sandboxing technology to detect and defend against **macro-based malware** threats. As a result, when macro-based attacks became unsuccessful, adversaries **turned to exploitation of PDFs**.



Vendors improved detection of **PDF based exploits** over time, and attackers moved toward **phishing-based attacks**.



Other low-hanging fruit for attackers are **poorly secured cloud apps**. 79% of SaaS storage apps and 86% of SaaS collaboration apps **do not encrypt data both at rest and in transit**.

Learn to spot a phishing email

- **Spelling and bad grammar.** Cybercriminals are not known for their grammar and spelling.
- **Suspicious links.** If you suspect that an email message is a scam, do not open any links that you see. Instead, rest your mouse but **don't click- on the link to see if the address mismatches** the link that was typed in the message.



- **Threats.** These types of emails cause a **sense of panic** to get you to **respond quickly**. For example, it may include a statement like "You must respond by end of day." Or saying that you might face **financial penalties** if you don't respond.
- **Spoofing.** Spoofing emails appear to be connected to legitimate websites or companies, but actually take you to phony **scam sites or display legitimate-looking** pop-up windows.
- **Altered web addresses.** A form of spoofing where web addresses that closely resemble the names of well-known companies, but are **slightly altered**; for example, **www.micorsoft.com** or **www.mircosoft.com**.
- **Incorrect salutation of your name.**
- **Mismatches.** The link text and the URL are different from one another; or the sender's name, signature, and URL are different.
- **BCC.** The mail is sent to multiple recipients or to you in BCC.

Protect yourself from phishing

Do your own typing. If a company or organization you know sends you a link or phone number, don't click. Use your favorite search engine to look up the website or phone number yourself.



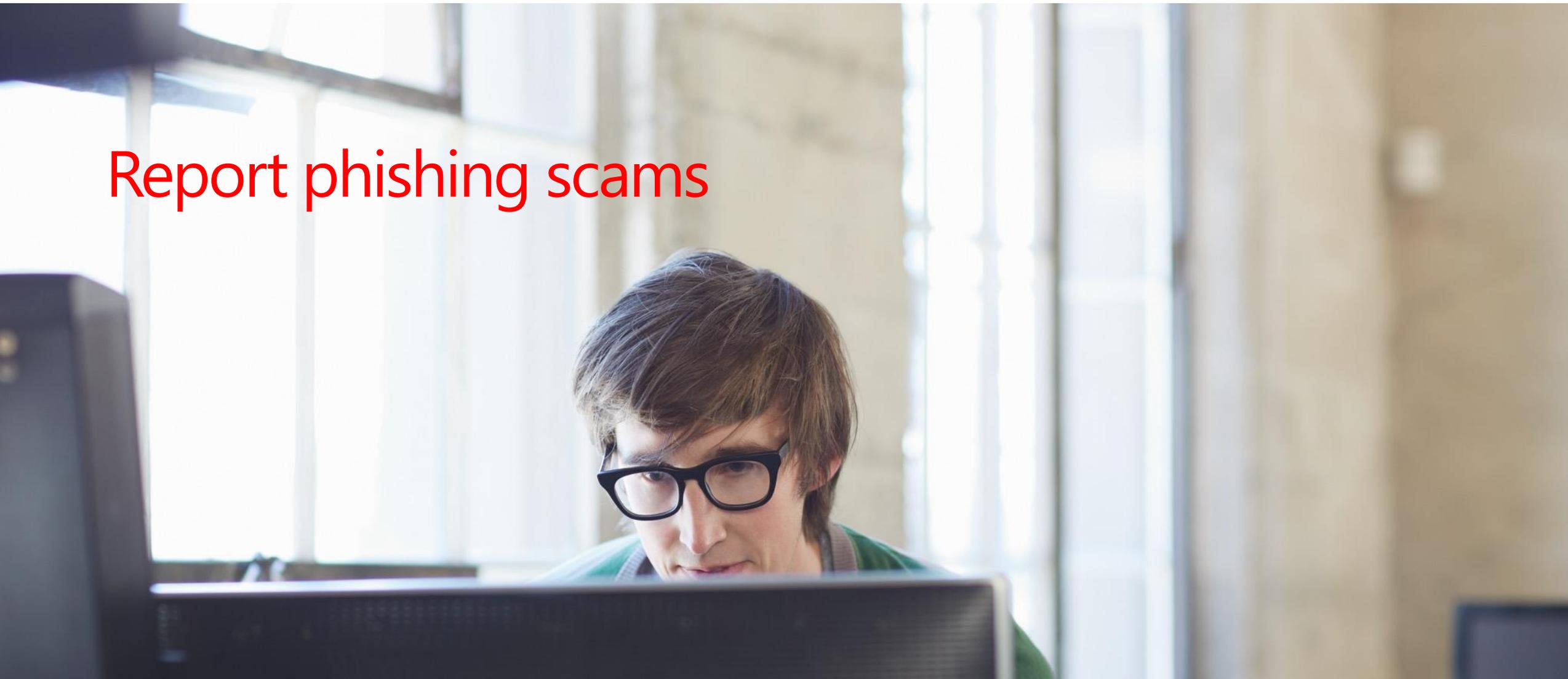
Turn on two-factor authentication. For accounts that support it, two-factor authentication requires both your password and an additional piece of information to log in to your account. The second piece could be a code sent to your phone, or a random number generated by an app or a token. This protects your account even if your password is compromised.

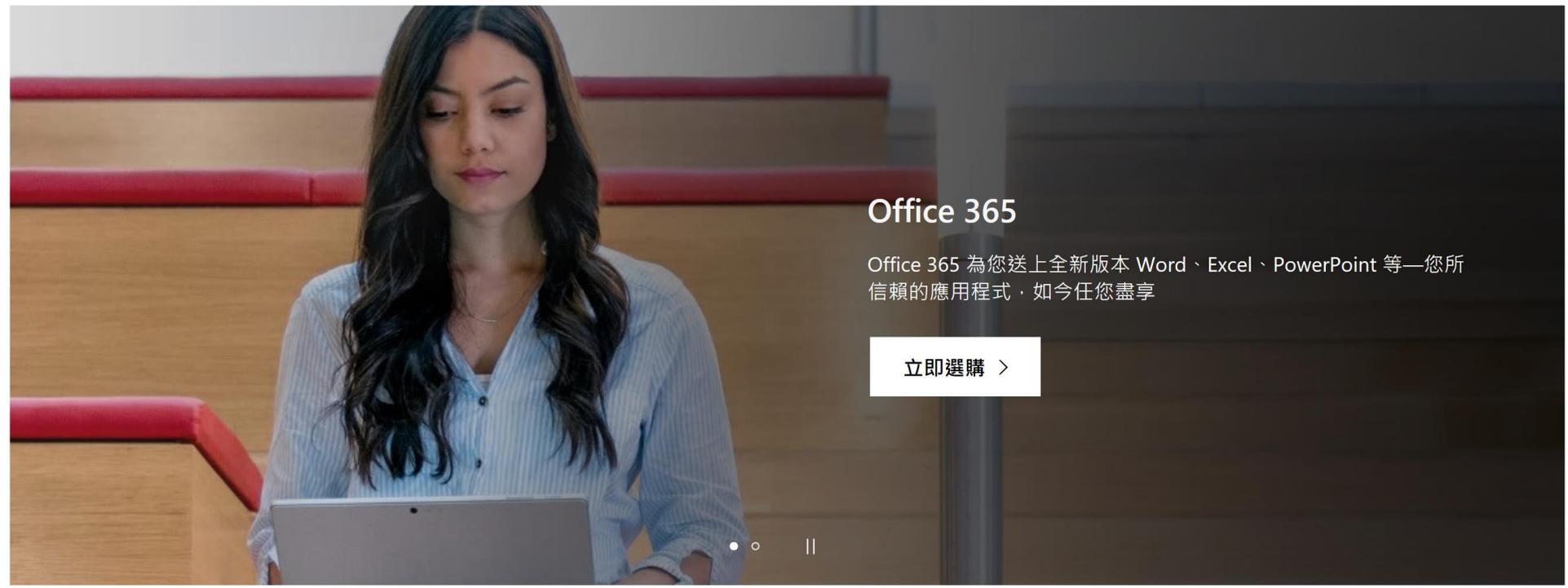


Make the call if you're not sure. Do not respond to any emails that request personal or financial information. Phishers use pressure tactics and prey on fear. If you think a company, friend or family member really does need personal information from you, pick up the phone and call them yourself using the number on their website or in your address book, not the one in the email.



Report phishing scams

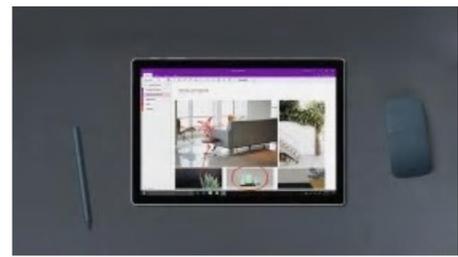




Office 365

Office 365 為您送上全新版本 Word、Excel、PowerPoint 等—您所信賴的應用程式，如今任您盡享

[立即選購 >](#)



Surface Pro



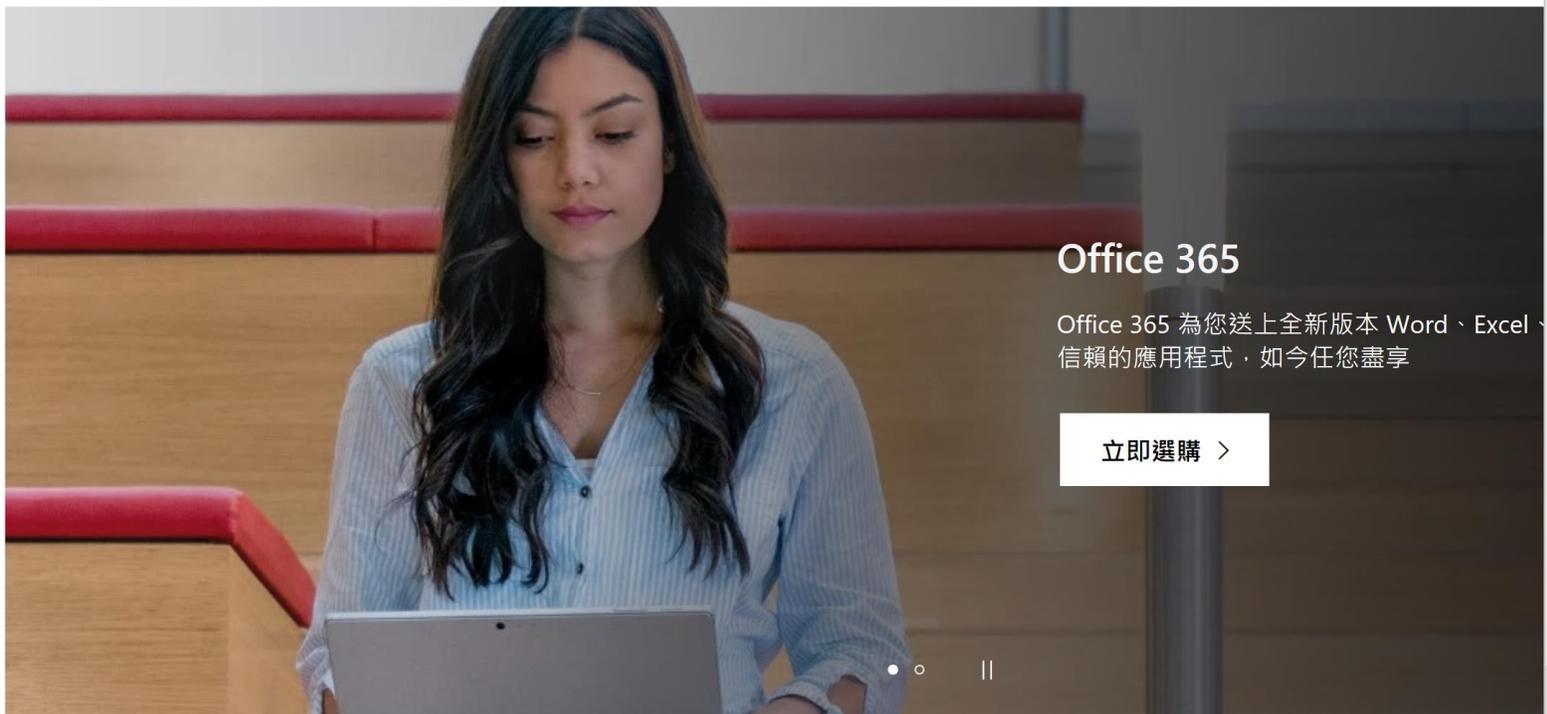
Surface Go



Xbox One S



Windows 10 更新

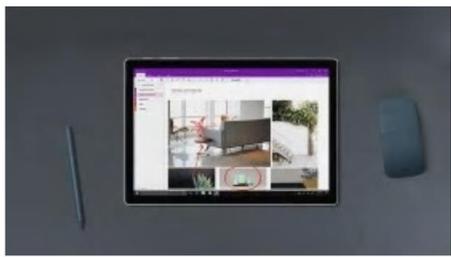


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立即選購 >

- New window
- New InPrivate window
- Zoom - 94% + ↗
- Favorites
- Cast media to device
- Find on page
- Read aloud
- Print
- Pin this page to the taskbar
- Pin this page to Start
- Developer Tools
- Open with Internet Explorer
- Send feedback
- Extensions
- What's new and tips
- Settings



Surface Pro



Surface Go



Xbox One S

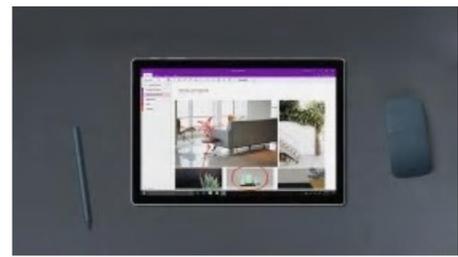


Windows 10 更新

Surface Laptop

高效型格

立即選購 >



Surface Pro



Surface Go



Xbox One S

Feedback & reporting

Tell us what's going on

Website problems

The site or parts of the site are broken, don't look right, or are slow to load.

Report site issue

Unsafe website

The site contains threats, like malicious software, or is impersonating another site to steal your personal info.

Report unsafe site

Microsoft Edge problems or suggestions

Problems with Microsoft Edge browser features or suggestions to make them better.

Open Feedback Hub

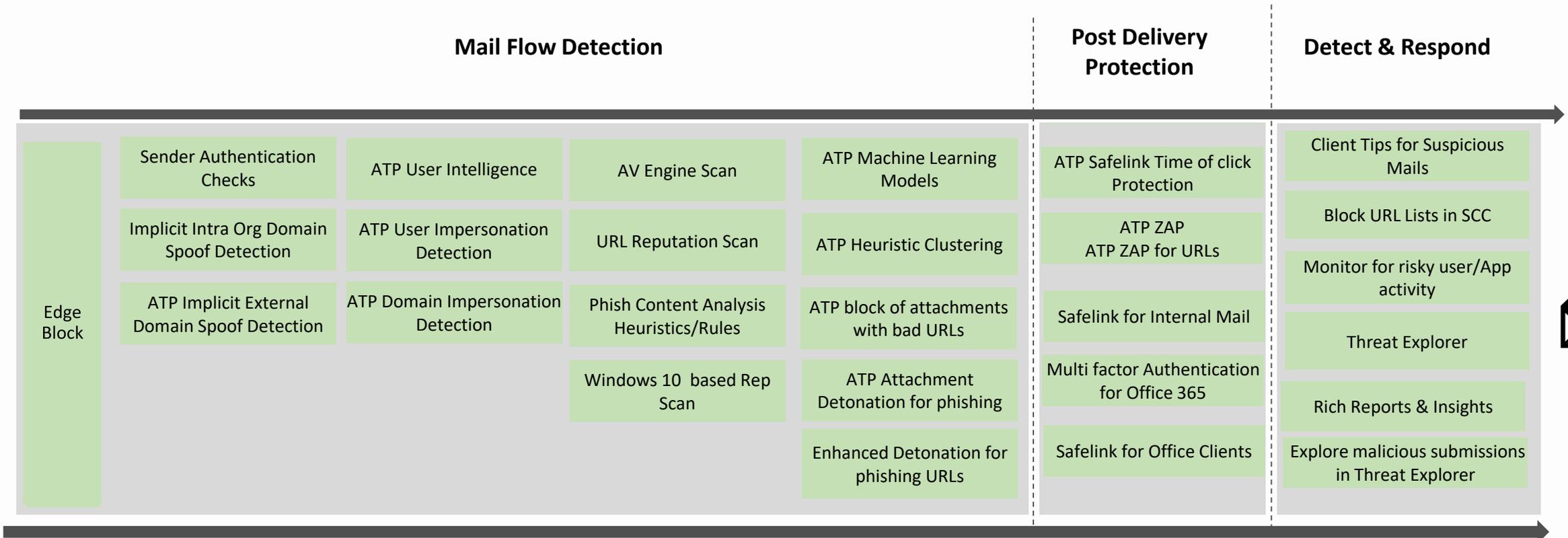
Rate Microsoft Edge

Take a minute to rate and review this app. To send us more detailed feedback, use the Feedback Hub.

Rate it

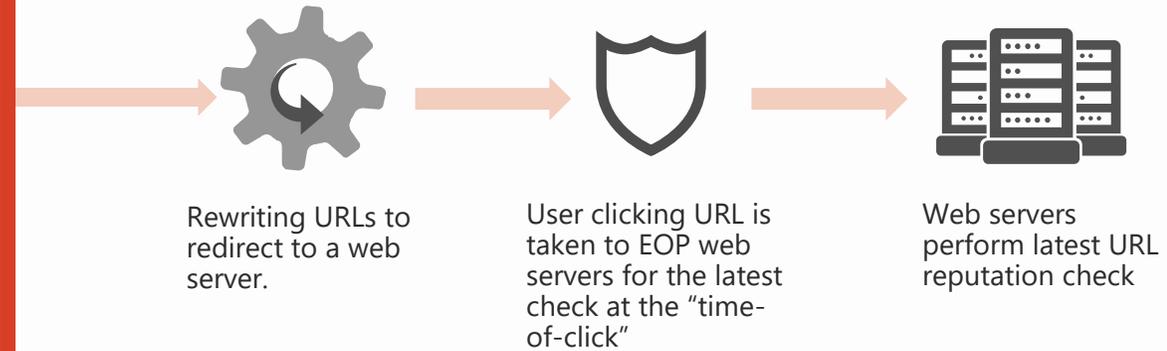
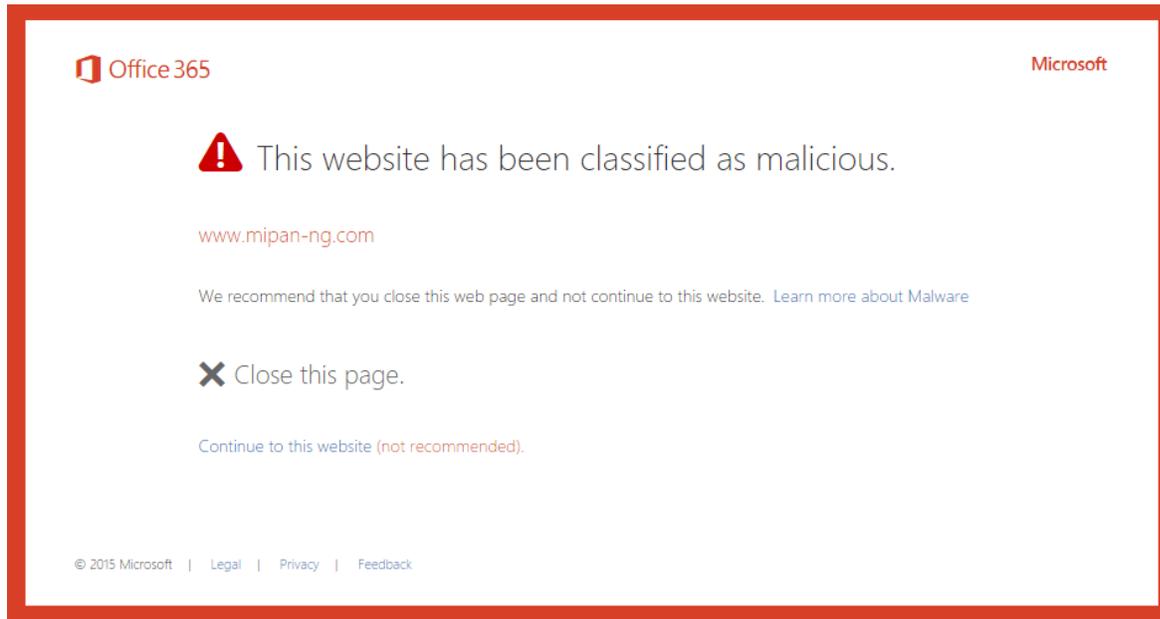
We'll send the URL of this site to Microsoft.

Microsoft Exchange Online Anti-Phishing Protection Stack



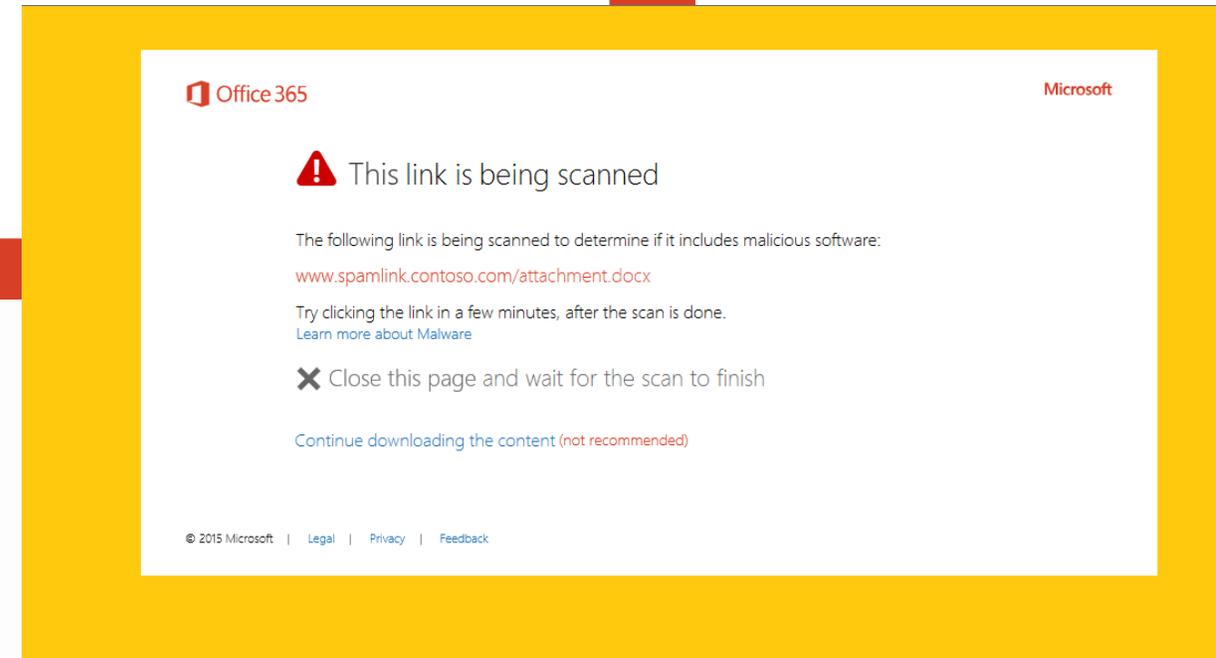
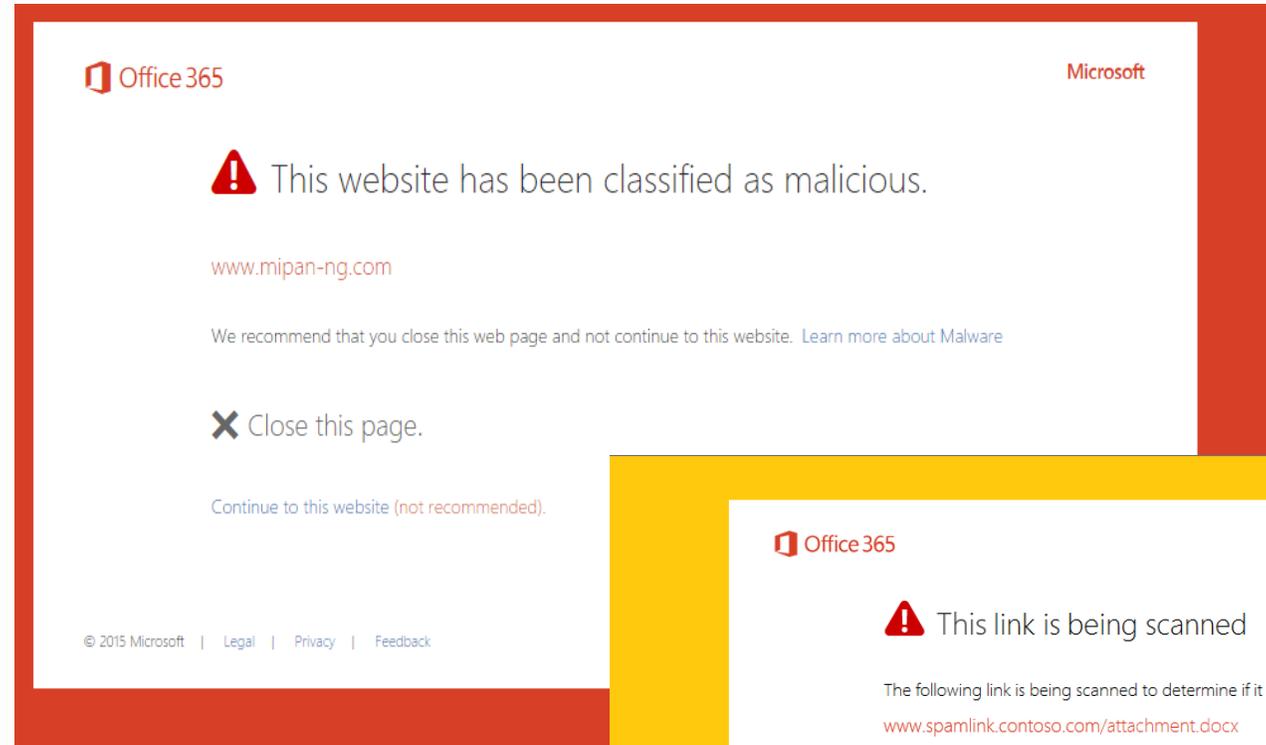
Protect your data

- Advanced threat protection: Time of click protection for malicious links



Safe links – users messages

Users notified if a malicious link is clicked in email

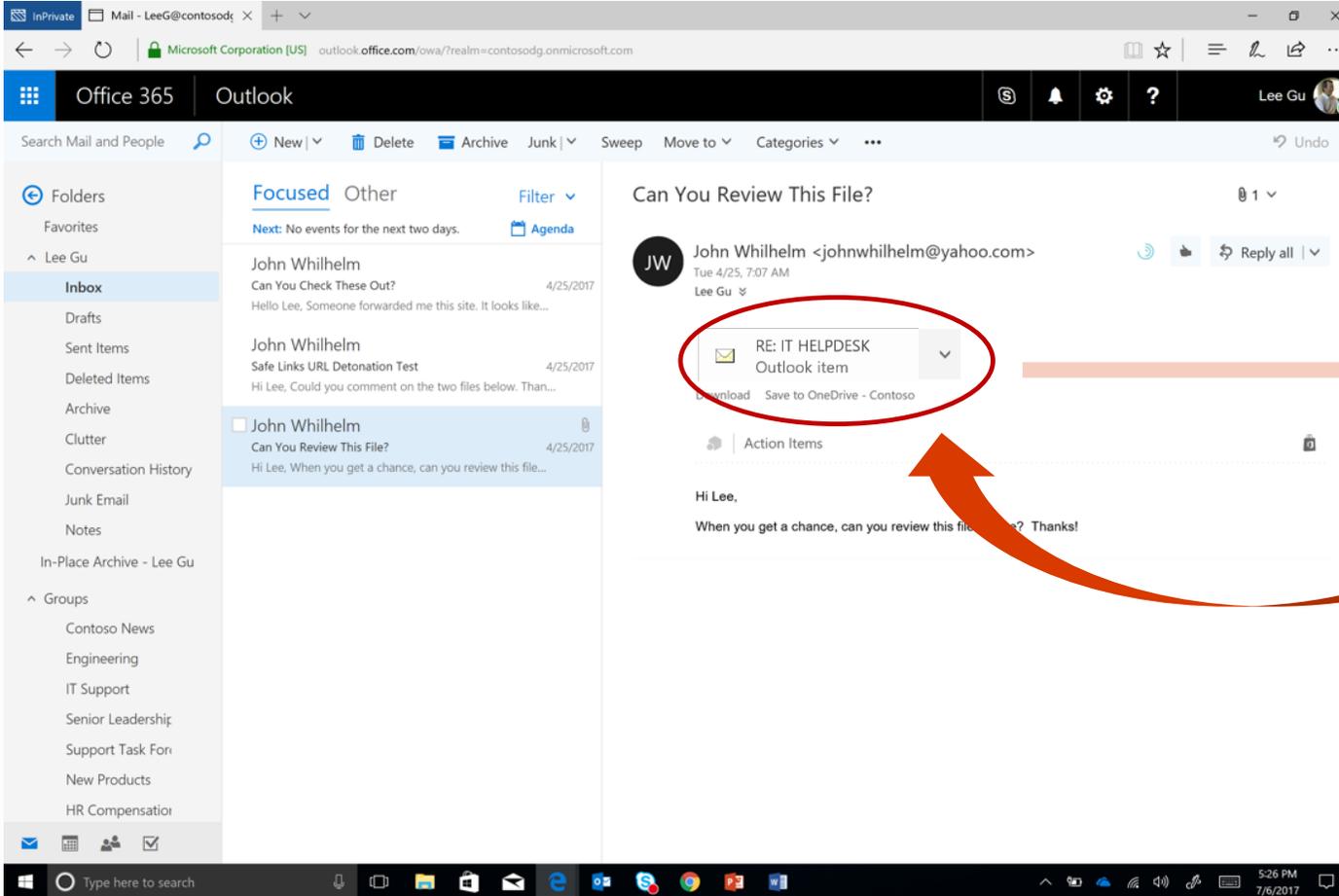


Url rewritten to web server for check against list of malicious Urls



Protect your data

- Advanced threat protection: Sandboxing technology for malicious attachments



Sandboxing

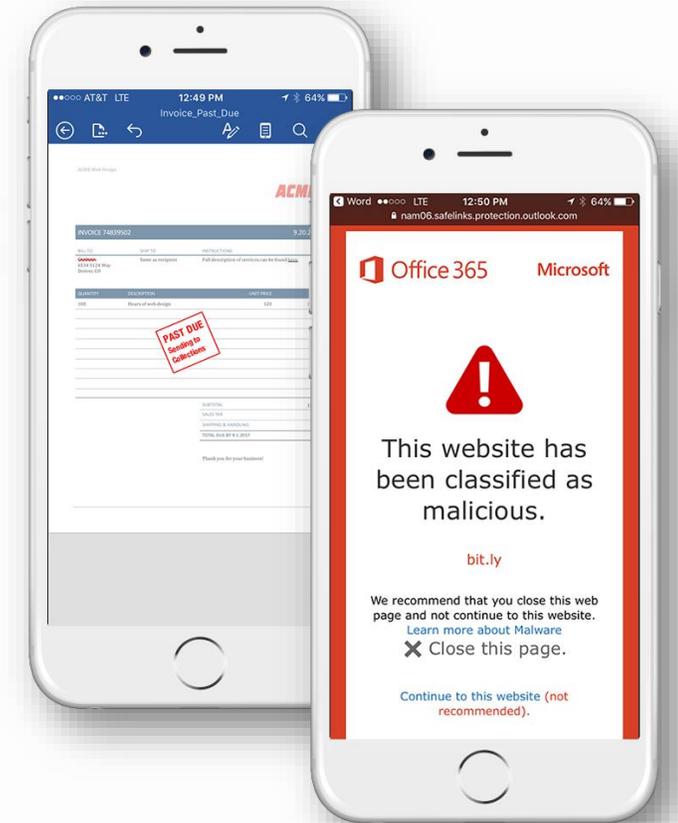
Observed Behavior

Network Traffic

Downloaded Files

Protect – Post Delivery

- ✓ **Safe links provides Time of click protection**
 - ✓ Client Agnostic
 - ✓ Location agnostic
 - ✓ Tenant level block list
 - ✓ Detonation
- ✓ **Integrated directly into Office clients**
- ✓ **Zero hour Auto purge (ZAP) Files/URLs (New)**
 - ✓ High Confidence URL lists



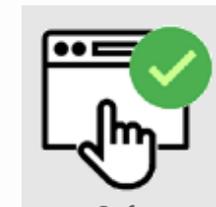
When a message containing a link was scanned and deemed malicious, the message is automatically deleted and the link is moved to a separate folder.



Zero-Hour Auto-purge



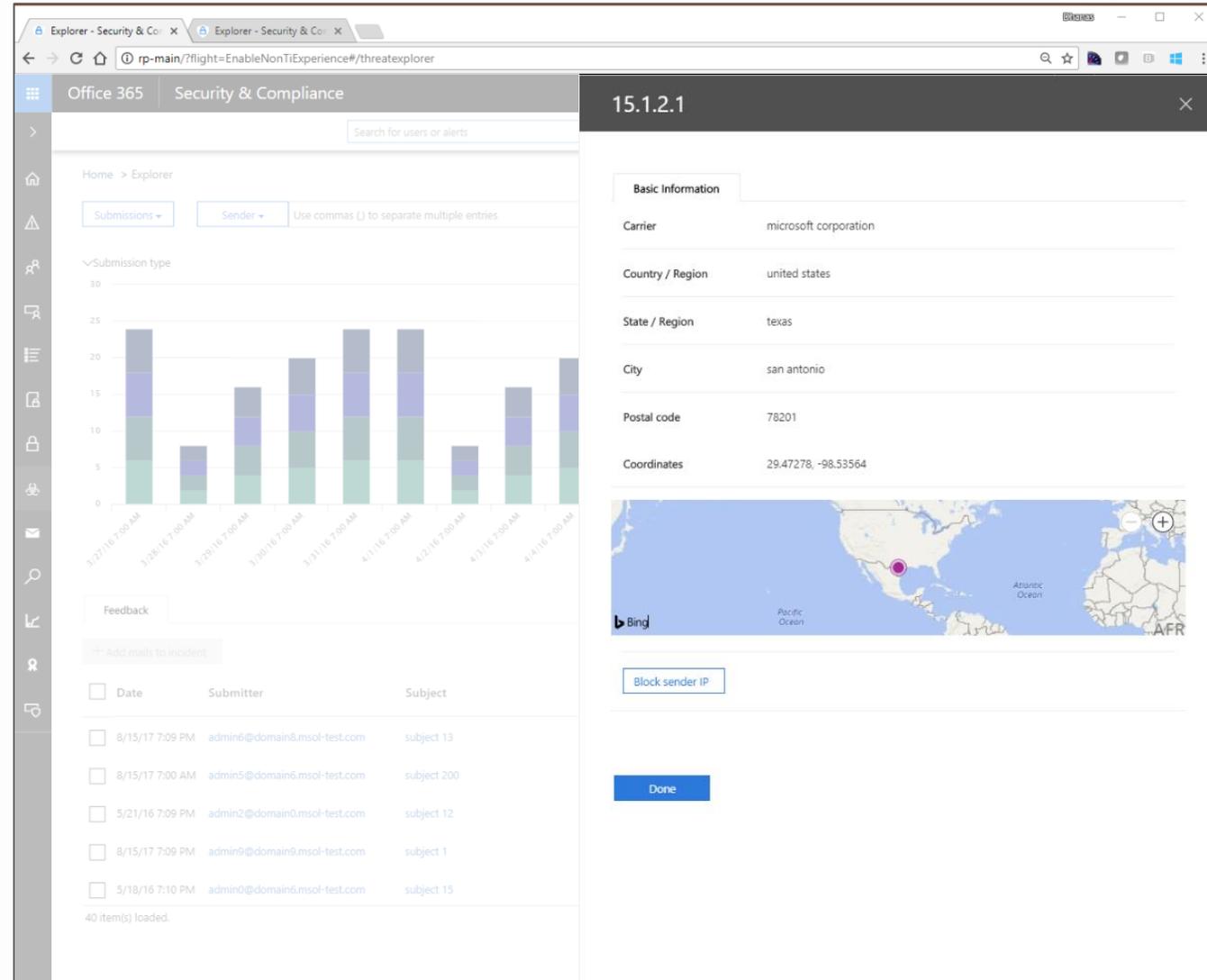
Safe Links for Office Clients



Safe Links

Detect & Respond: User Submissions/Real time Reports

- ✓ View of what users are reporting
 - ✓ Phish and Spam
- ✓ Benefits
 - ✓ ML Models use this data
 - ✓ Analysts cluster on missed phish
 - ✓ Highlight configuration issues related to submissions
- ✓ Realtime reports
 - ✓ Phishing including spoof and impersonation
 - ✓ Details of messages with rich search



Educating users through attack simulation

The screenshot displays the Microsoft Office 365 Security & Compliance center. The left-hand navigation pane includes options such as Home, Alerts, Classifications, Data loss prevention, Data governance, Threat management, Dashboard, Threat explorer, **Attack simulator** (highlighted with a blue box), Incidents, Campaigns, Mail filtering, Anti-malware, Dkim, Safe attachments, Safe links, and Quarantine. The main content area features a header with the text "Simulate attacks to test your defenses" and a sub-header "Run realistic phishing, spear phishing and other attack scenarios to identify and find vulnerable users before it impacts your bottom line." Below this, a summary bar indicates "3 Attacks" with a "Refresh" button. The main content is divided into three sections, each representing a different attack type:

- Display Name - Spear Phishing** (Account Breach): Described as a social engineering style attack. The progress bar is labeled "Test" and is partially filled with orange. A "Schedule Attack" button and "Attack Details" link are present.
- Brute Force Password Attack** (Account Breach): Described as a trial-and-error method. The progress bar is labeled "Test Int Deployment Attack" and is partially filled with orange. A "Schedule Attack" button and "Attack Details" link are present.
- Password Spray Attack** (Account Breach): The progress bar is currently empty.

