GOBIERNO DE ESPAÑA
MINISTERIO DEL INTERIOR

UAM Universidad Autónoma de Madrid

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CIBERWALL 2020

Marta Barrio Marcos

Security Architect

> 7 years of experience

CISA, CEH, CSX, OSCP

Speaker at security conferences like NN2019

Teacher in ISACA, TSS, IMF, master UCLM

https://es.linkedin.com/in/martabarriomarcos
@martrudix

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Carolina Gómez Uriarte

Security Analyst

> 2 years of experience

Head of Sh3llCON

Speaker at security conferences like NN2019, HoneyCON, MundoHackerDay2020 ...

https://es.linkedin.com/in/carolina-gomez-uriarte
@Carol12Gory

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Part I

INTRODUCTION

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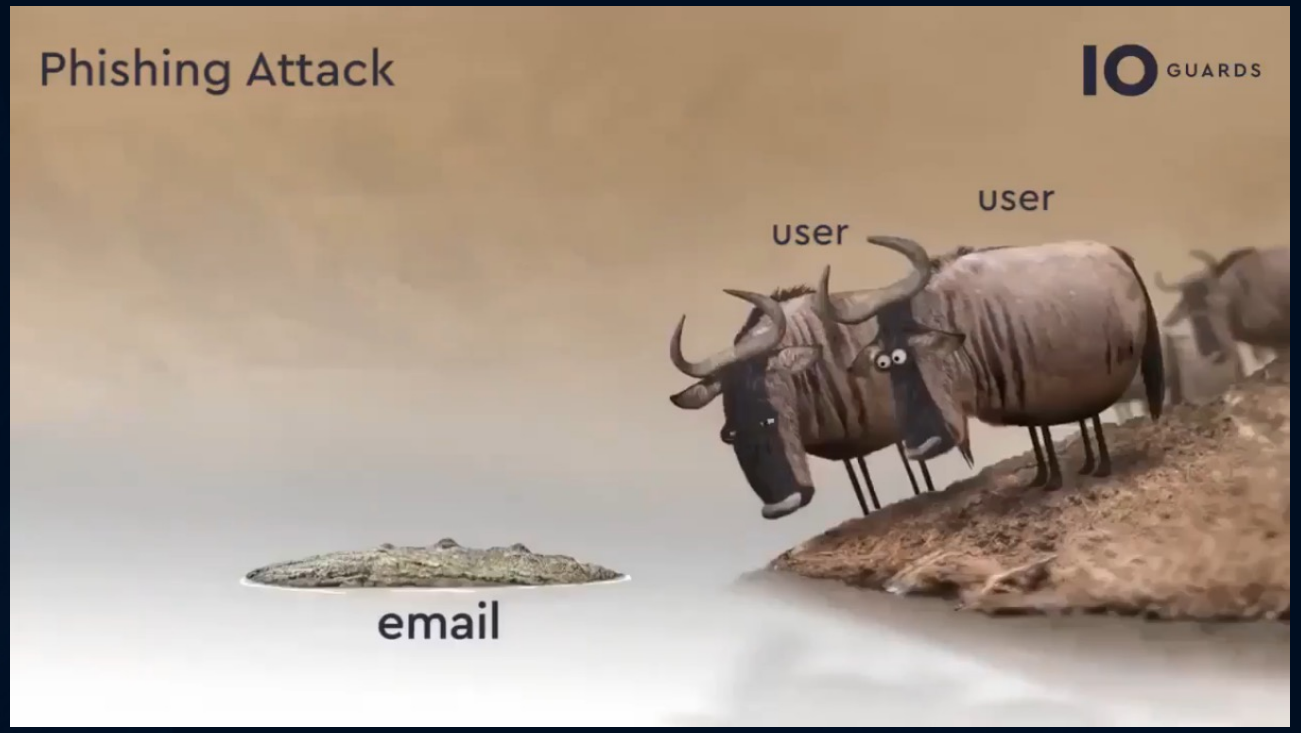
Disclaimer

- This workshop is held to raise awareness and teach how cyber criminals carry out phishing attacks.
- Everything explained in this workshop has been done in controlled environments and without any evil purpose.
- Both speakers are not responsible for any illegitimate use for profit.

What is phishing?



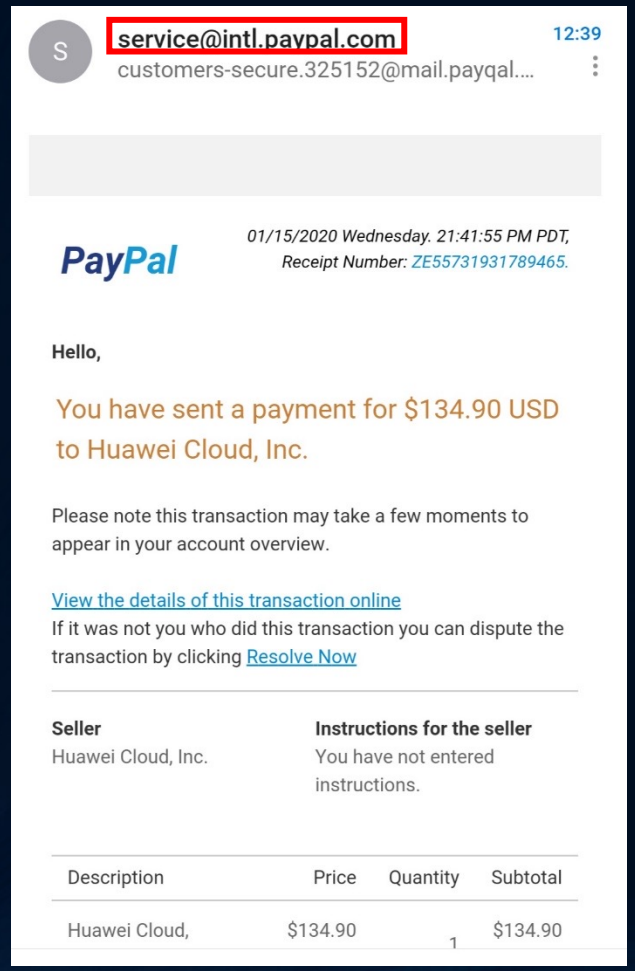
How to detect phishing?

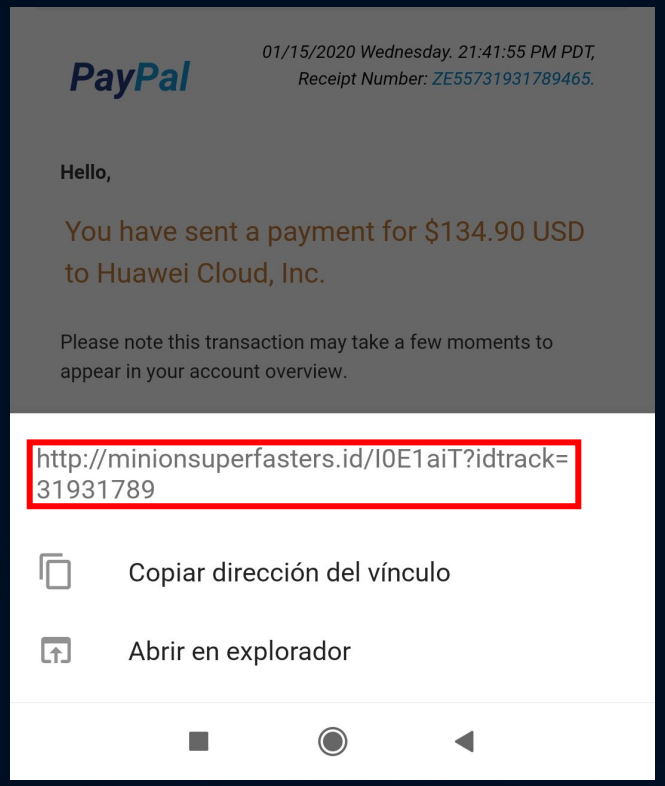
- **Impersonation** of web pages, e-mails, etc.
- Use of logos, texts, images known by the user to **mislead the user** and make him fall for the trick.
- Target: credentials, malware distribution, subscriptions to spam lists...

How to detect phishing?

- Check the **recipient**
- Check the **grammar of the mail**
- Where does the **link** go?
- Others checks like **Mail Headers**: IPs, domains, etc.

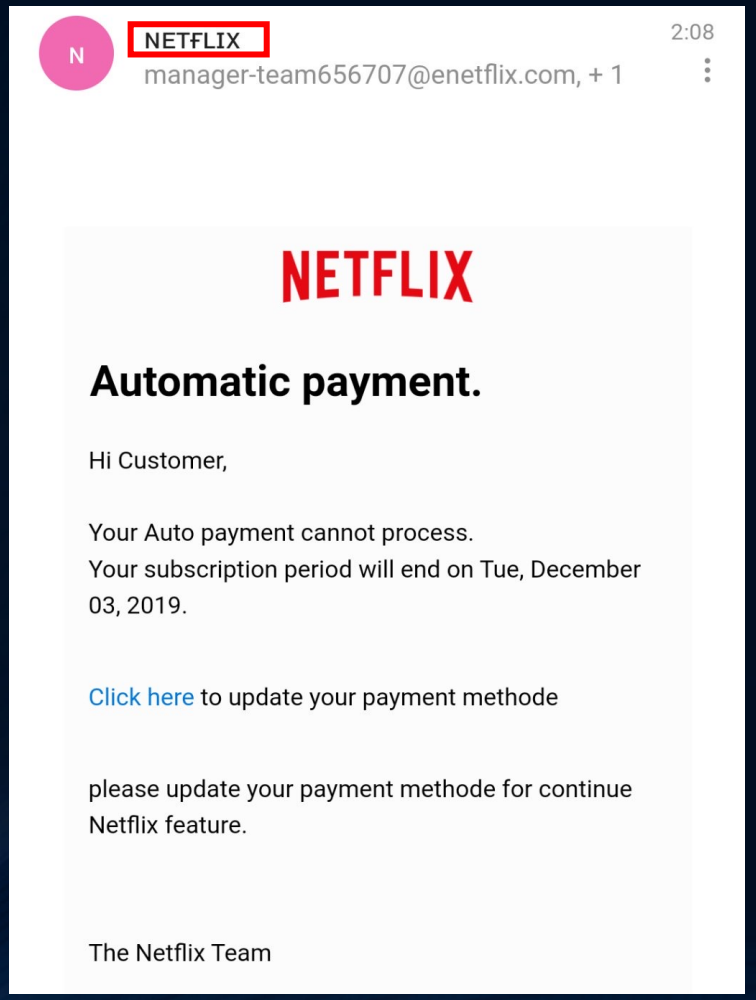
Phishing examples

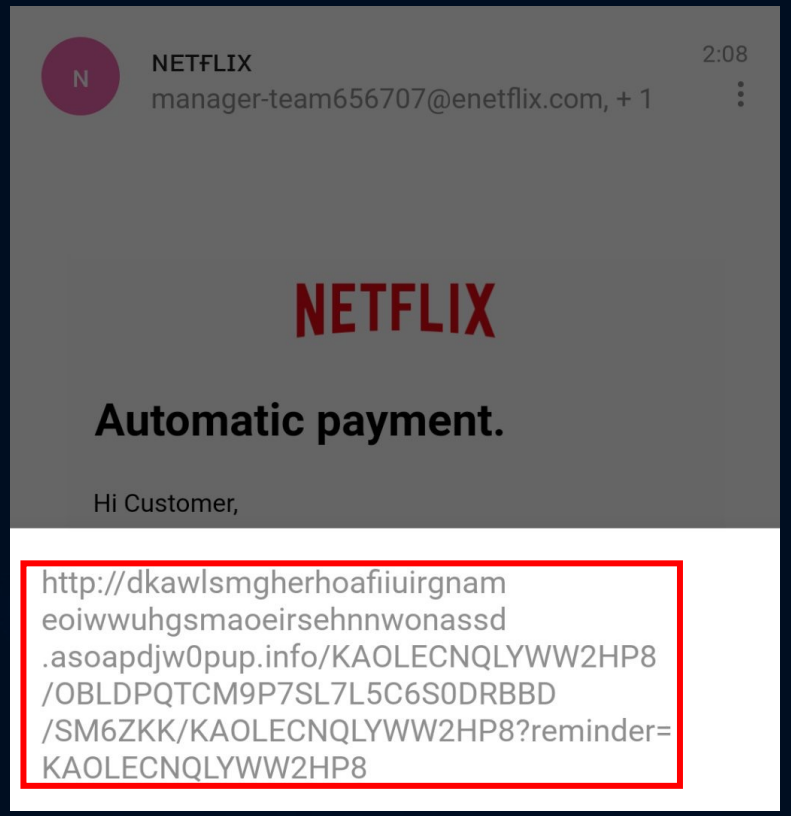




https://twitter.com/t31mo/status/1217431423843520518?s=21

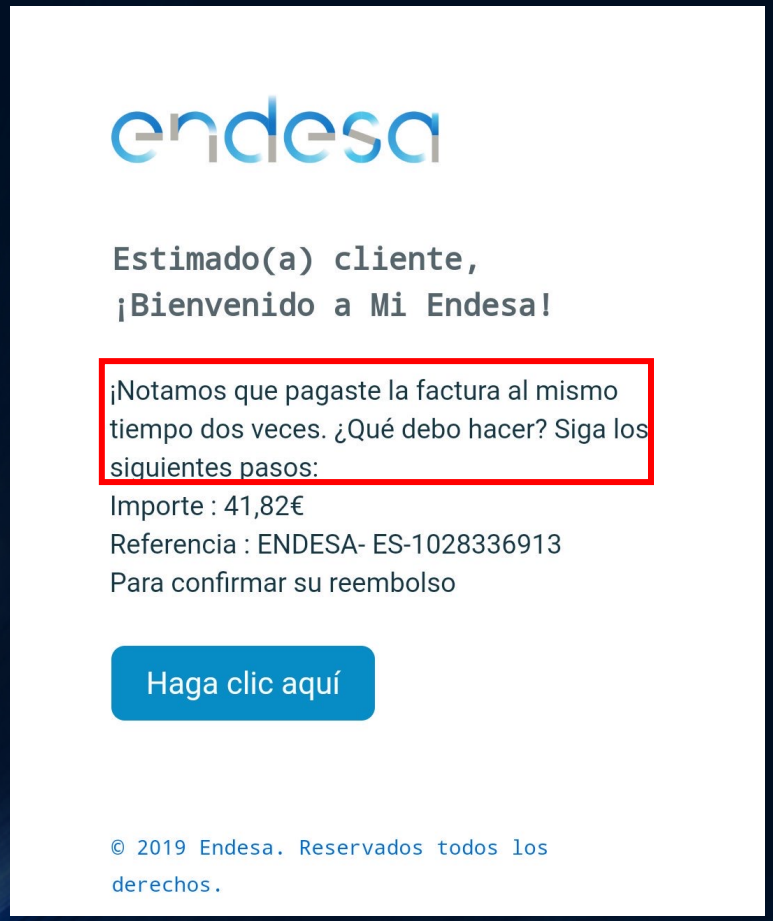
Phishing examples

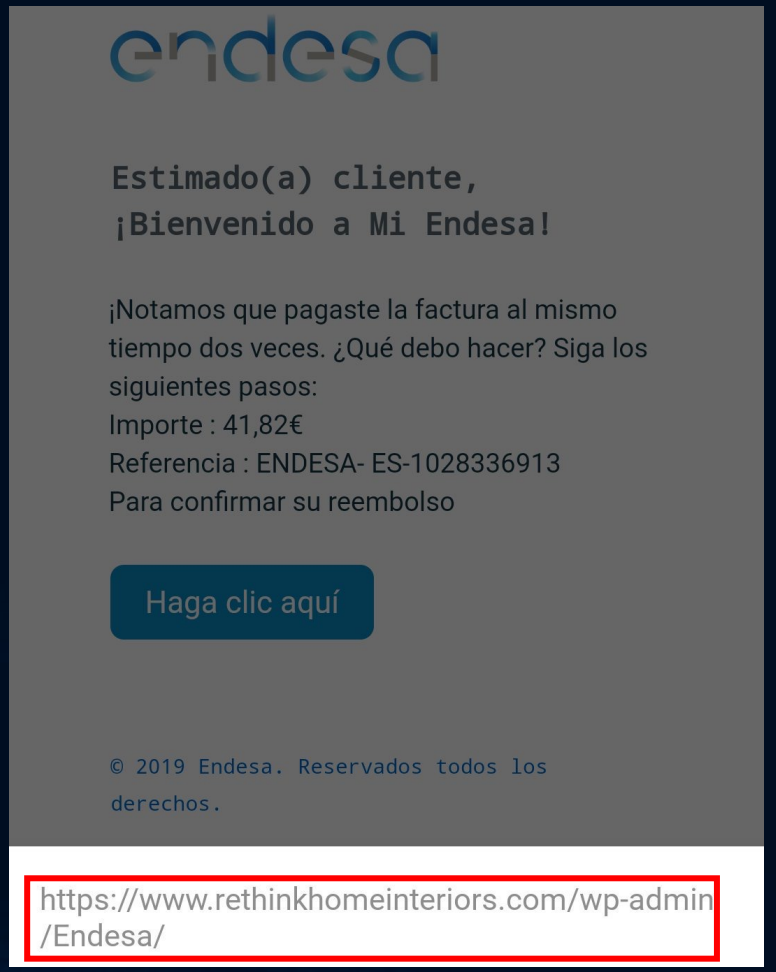




https://twitter.com/t31mo/status/1201809152655405057?s=20

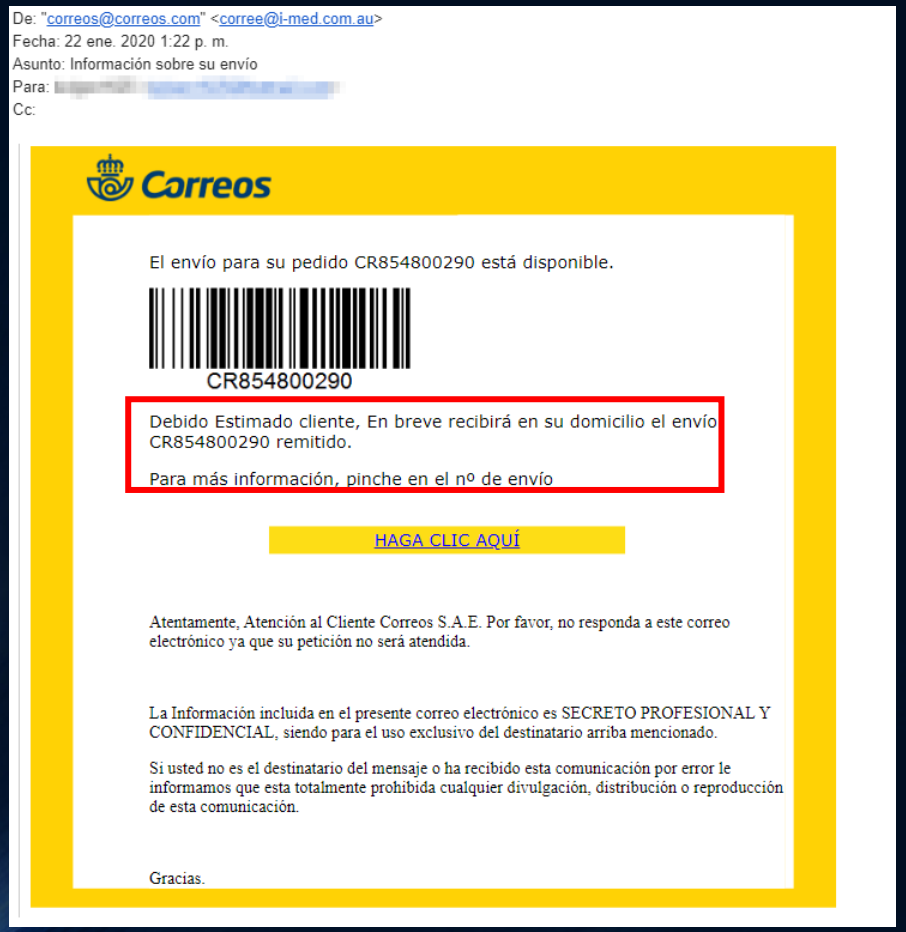
Phishing examples





https://twitter.com/t31mo/status/1194543214184808449?s=20

Phishing examples



De: "correos@correos.com" <corree@i-med.com.au>
Fecha: 22 ene. 2020 1:22 p. m.
Asunto: Información sobre su envío
Para:
Cc:

Correos

El envío para su pedido CR854800290 está disponible.

CR854800290

Debido Estimado cliente, En breve recibirá en su domicilio el envío CR854800290 remitido.

Para más información, pinche en el nº de envío

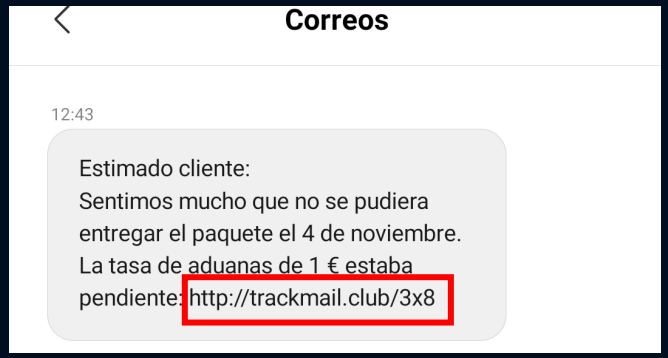
HAGA CLIC AQUÍ

Atentamente, Atención al Cliente Correos S.A.E. Por favor, no responda a este correo electrónico ya que su petición no será atendida.

La Información incluida en el presente correo electrónico es SECRETO PROFESIONAL Y CONFIDENCIAL, siendo para el uso exclusivo del destinatario arriba mencionado.

Si usted no es el destinatario del mensaje o ha recibido esta comunicación por error le informamos que esta totalmente prohibida cualquier divulgación, distribución o reproducción de esta comunicación.

Gracias.



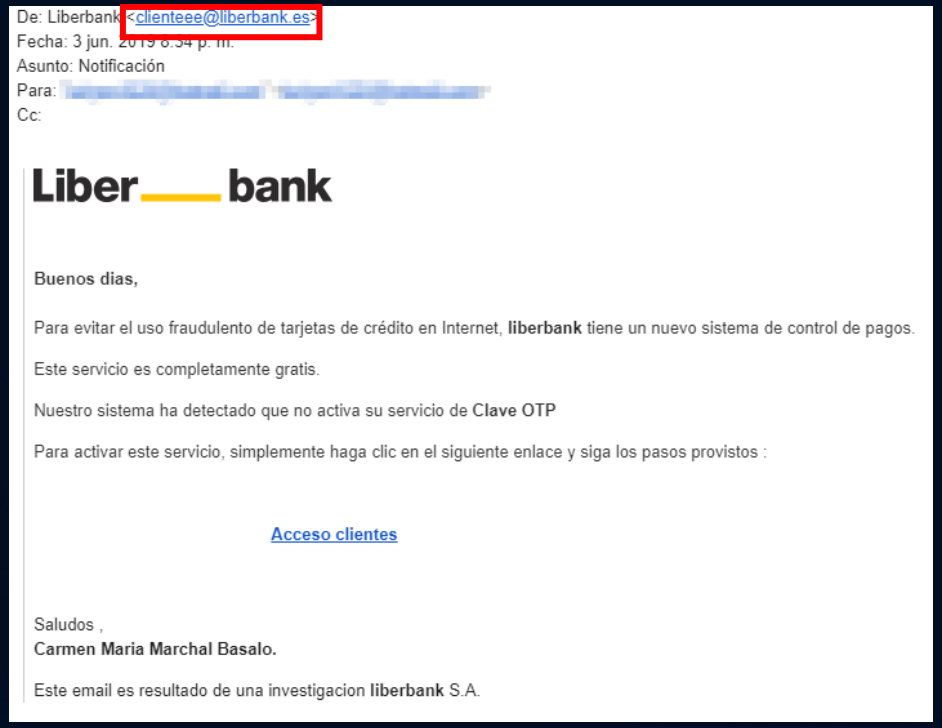
Correos

12:43

Estimado cliente:
Sentimos mucho que no se pudiera entregar el paquete el 4 de noviembre.
La tasa de aduanas de 1 € estaba pendiente: http://trackmail.club/3x8

https://twitter.com/t31mo/status/1192408711681204224?s=12

Phishing examples



De: Liberbank <clienteee@liberbank.es>
Fecha: 3 jun. 2019 8:34 p. m.
Asunto: Notificación
Para:
Cc:

Liber bank

Buenos dias,

Para evitar el uso fraudulento de tarjetas de crédito en Internet, **liberbank** tiene un nuevo sistema de control de pagos.

Este servicio es completamente gratis.

Nuestro sistema ha detectado que no activa su servicio de **Clave OTP**

Para activar este servicio, simplemente haga clic en el siguiente enlace y siga los pasos provistos :

Acceso clientes

Saludos ,
Carmen Maria Marchal Basalo.

Este email es resultado de una investigacion **liberbank** S.A.

http://nuevadigital.co.vu/?ref=9809C51RO2M5BB3908H8SY1HXTFRLW3D0998D7H897

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Part II

HANDS ON LABS

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Requirements
Deployment

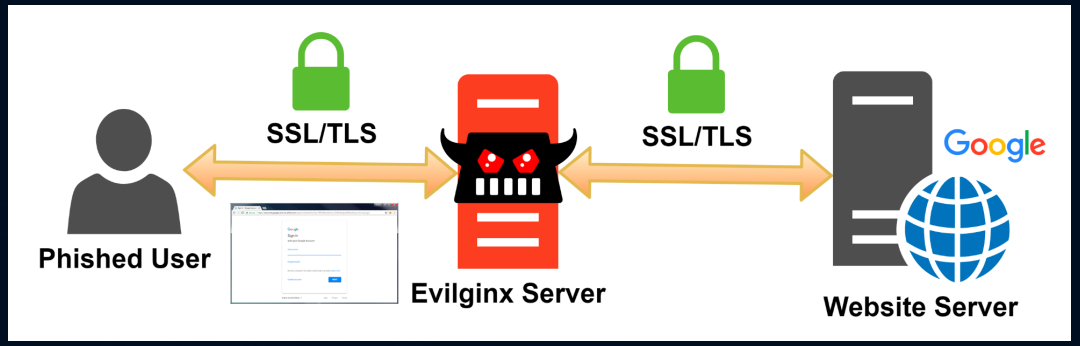
- **GoPhish** – Mail sender
- **Evilginx** – Manage the phishing

Requirements
Deployment

- *Config.json* file → IP and certificates config
- Sending Profiles → Config SMTP relay.
- ~~Landing Pages → Web that is shown to the victim when he clicks on the link~~
- Email Templates →Mail received by the victim
- Users & Groups → Destinations
- Campaigns

Requirements
Deployment

- **Phishlet** → YAML file where are defined subdomain necessary to do proxy, which strings should be replaced in relayed packets and which cookies should be captured.
- **Lure** → generation of phishing URLs
- **Config** → general configuration
- **Sessions** → sessions and captured tokens with credentials




OMG
DEMO TIME

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Part III

HOW NOT TO BE PHISHED

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Countermeasures
Recommendations for final users

- Check **domain in URL** bar
- Use **U2F devices**
- **DO NOT use SMS 2FA** – SIMJacking
- Common sense

Countermeasures
Recommendations for developers

- Check **window.location**
- Check **window.location** & obfuscate

```
> window.location
< Location https://www.google.com/
    assign: function assign()
    hash: ""
    host: "www.google.com"
    hostname: "www.google.com"
    href: "https://www.google.com/"
    origin: "https://www.google.com"
    pathname: "/"
    port: ""
    protocol: "https:"
    reload: function reload()
    replace: function replace()
    search: ""
    toString: function toString()
    valueOf: function valueOf()
    Symbol(Symbol.toPrimitive): undefined
```

Countermeasures
Recommendations for developers

- Check baseURI property of DOM items

```
>> $("body").baseURI
<- "https://www.google.com/"
```

- Check headers: X-Evilginx

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Part IV

DOCUMENTATION AND RESOURCES

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References

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- https://docs.getgophish.com/user-guide/
- https://medium.com/@valeriyshevchenko/how-to-perform-phishing-attack-with-2fa-e9d633c66383
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- https://breakdev.org/evilginx-2-next-generation-of-phishing-2fa-tokens/

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THANKS

IF YOU HAVE ANY DOUBTS YOU CAN FIND US AT
@MARTRUDIX & @CAROL12GORY

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