



WALCHAND COLLEGE OF ENGINEERING, SANGLI
WALCHAND LINUX USERS' GROUP



LIMITED
SEATS

LINUXDIARY 5.0

EXPLORE THE LINUX REALM

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KICKOFF**

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Session 02:
**ROUTE TO
ROOT**

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Session 03:
**FILE
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Session 04:
**NET
WARS**

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Net-Wars

Basics of Networking

- ❖ What is a Network?
- ❖ IP Address
- ❖ Ports & Common Ports
- ❖ Socket Address
- ❖ TCP vs UDP



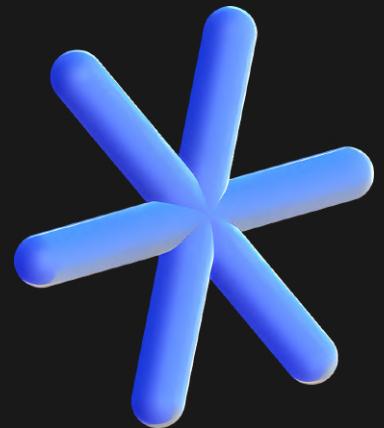


WHAT IS A NETWORK?



Ab ye kya hota hain, Meena?

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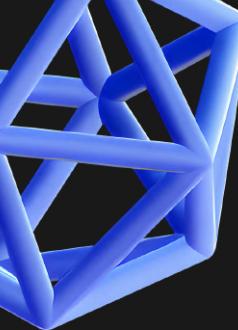


WHAT IS A NETWORK?

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- ◆ A network is a collection of nodes enabling communication
- ◆ Devices linked to share information or resources

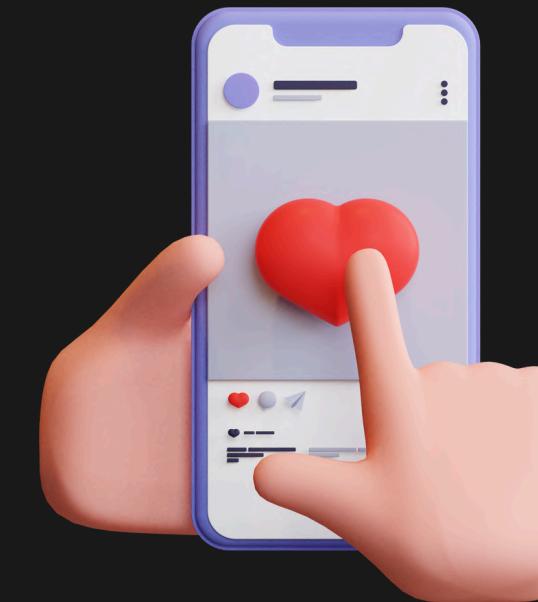




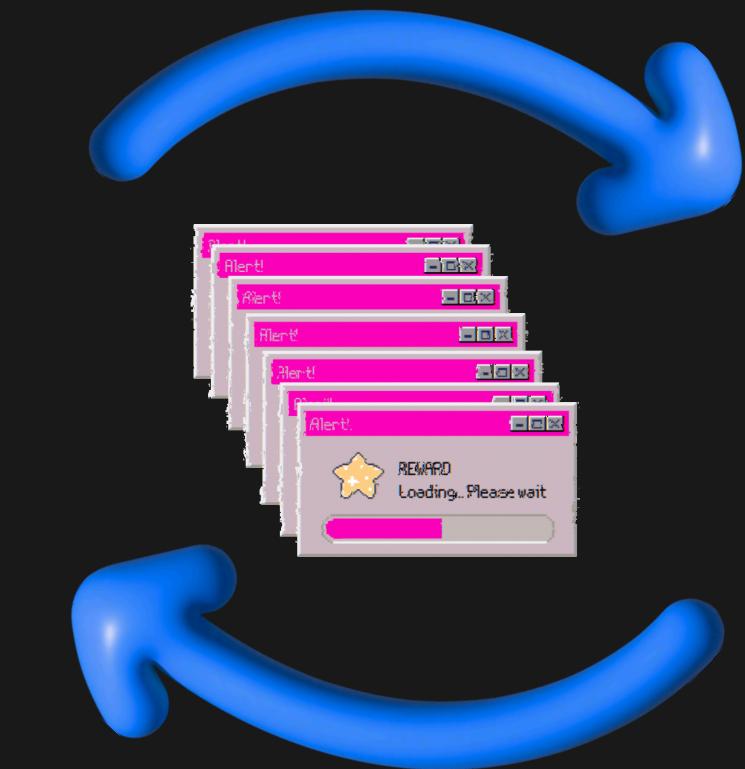
COMPONENTS OF NETWORK

- ❖ **Client:** A device that requests resources or services from a server
- ❖ **Server:** A device that provides resources or services to a client

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Client



Server

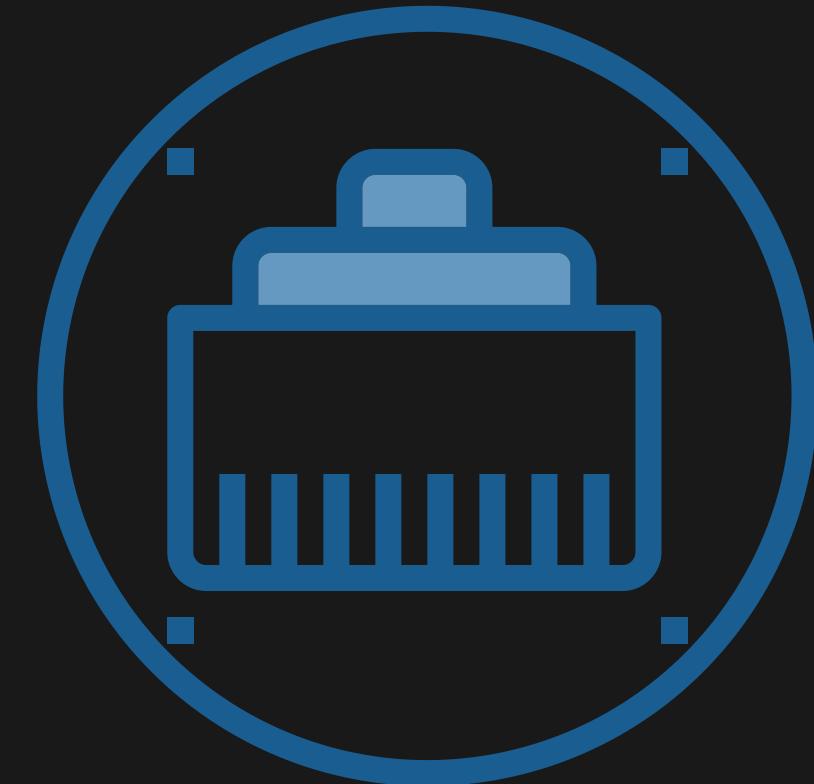
IP ADDRESS

- ◆ IP stands for Internet Protocol
- ◆ Unique numerical identifier that is assigned to every node on a network
- ◆ Used to identify devices logically and enable communication between them

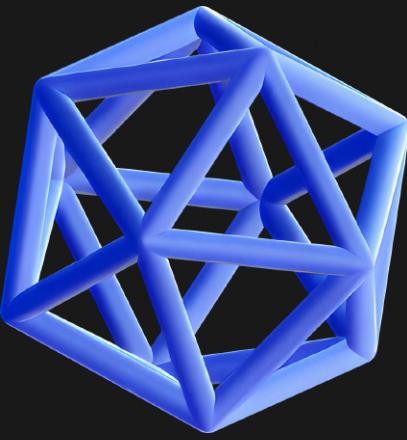


PORTS

- ◆ A virtual endpoint managed by a computer's OS for starting and ending network connections
- ◆ Each port is associated with a specific process or service



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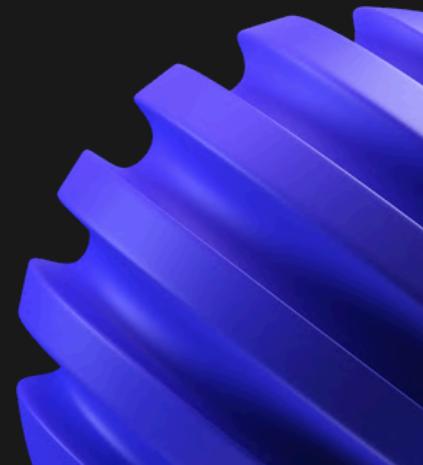
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2003

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ABOUT US

We are a Club of Linux and Open Source Enthusiasts established in 2003 from Walchand College of Engineering, Sangli who actively takes part in training students with limited knowledge of Open Source to fully fledged Open Source developers. We conduct various activities throughout the year to promote Open Source technologies including talks, discussions, bootcamps, and competitions.



COMMON PORTS

HTTP	80	??
HTTPS	443	??
FTP	20, 21	??
DNS	53	??
SSH	22	??

COMMON PORTS

HTTP	80	Hyper Text Transfer Protocol
HTTPS	443	??
FTP	20, 21	??
DNS	53	??
SSH	22	??

COMMON PORTS

HTTP	80	Hyper Text Transfer Protocol
HTTPS	443	Hyper Text Transfer Protocol Secure
FTP	20, 21	??
DNS	53	??
SSH	22	??

COMMON PORTS

HTTP	80	Hyper Text Transfer Protocol
HTTPS	443	Hyper Text Transfer Protocol Secure
FTP	20, 21	File Transfer Protocol
DNS	53	??
SSH	22	??

COMMON PORTS

HTTP	80	Hyper Text Transfer Protocol
HTTPS	443	Hyper Text Transfer Protocol Secure
FTP	20, 21	File Transfer Protocol
DNS	53	Domain Name Service
SSH	22	??

COMMON PORTS

HTTP	80	Hyper Text Transfer Protocol
HTTPS	443	Hyper Text Transfer Protocol Secure
FTP	20, 21	File Transfer Protocol
DNS	53	Domain Name Service
SSH	22	Secure Shell

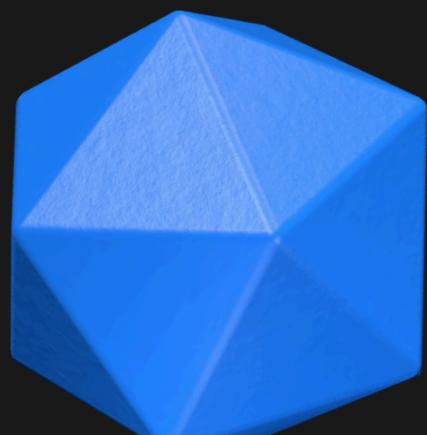


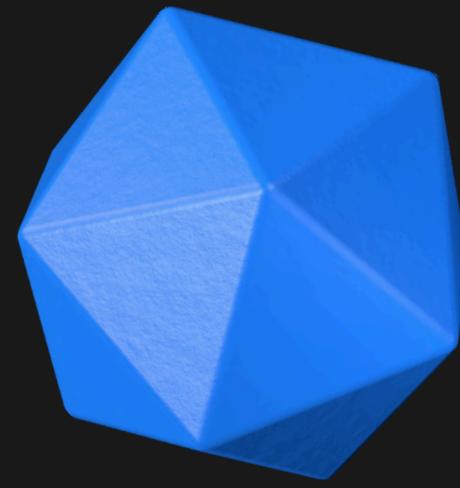
SOCKET ADDRESS

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- ◆ One end point of the two way communication link between two programs running on internet
- ◆ Helps to send the message at the specified port of the specified machine

192.168.1.8 : 8090





HOPE THIS MAKES MY



MemeCenter.com

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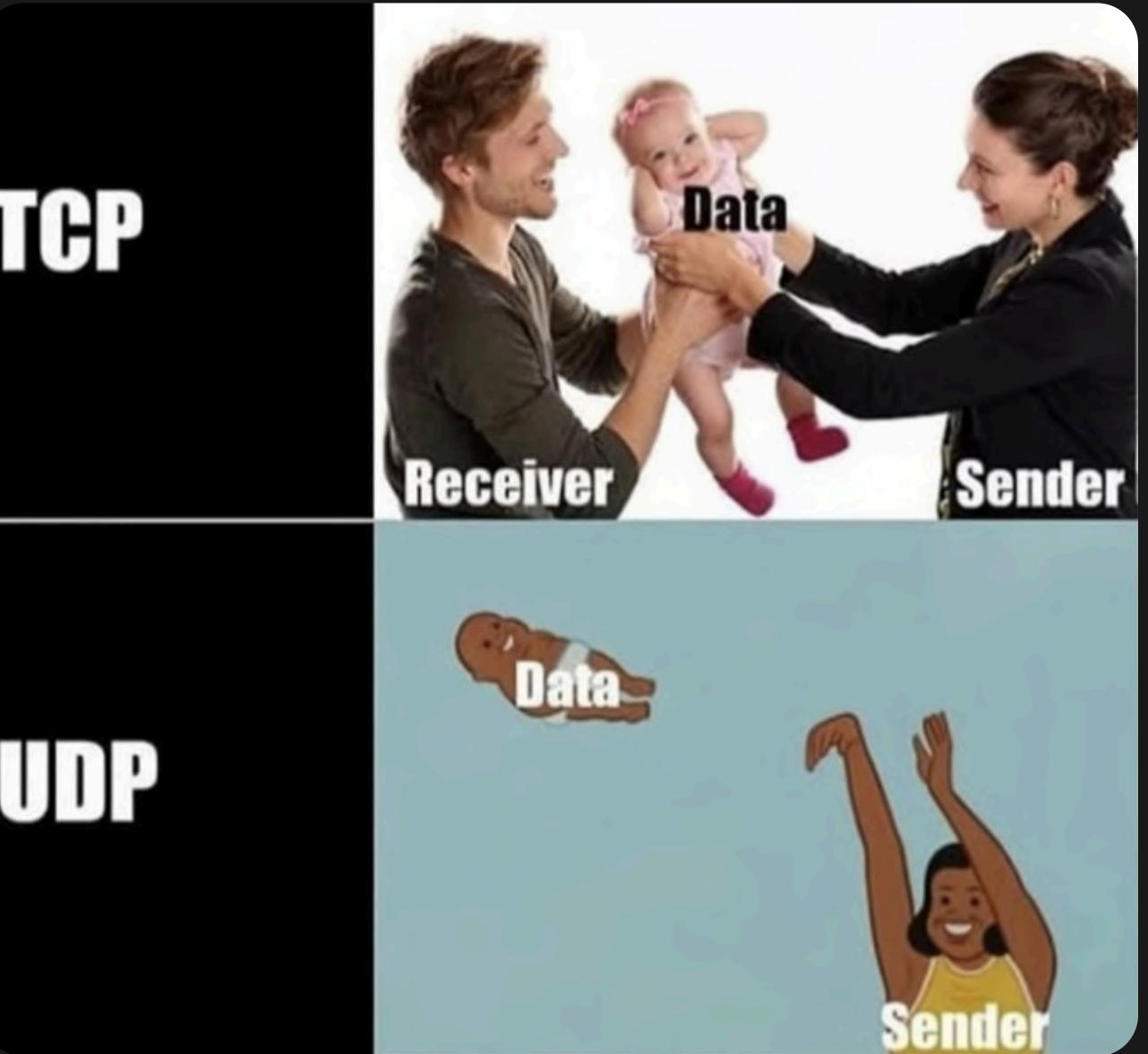
TCP vs UDP

TCP: Transmission Control Protocol

- Slower
- Reliable messenger
- Safely and accurately delivers to their destination on the internet

UDP: User Datagram Protocol

- Faster
- Unreliable messenger
- Less overhead





Building/Apartment

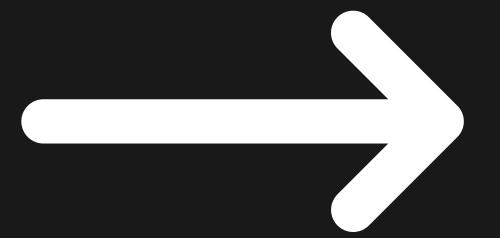


Floors



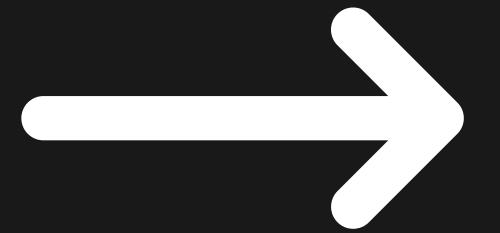
Flat Numbers

Apartment



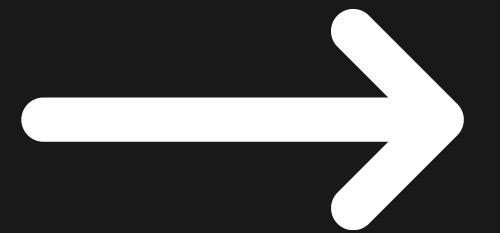
Network

Floors



IP Address

Flat Numbers



Ports

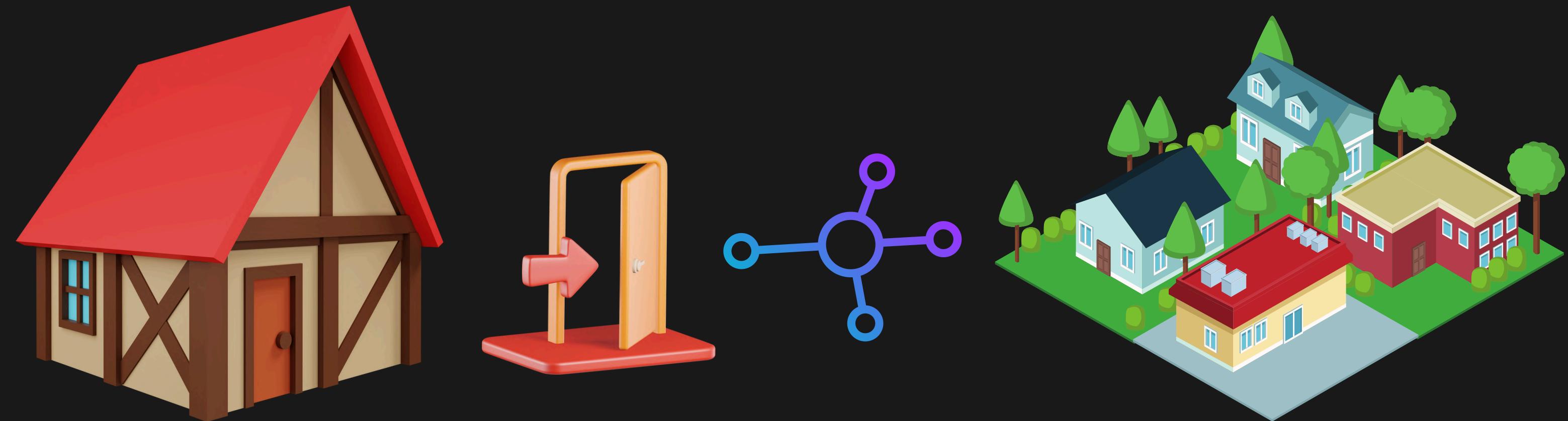
Networking Commands

Where Network matters....

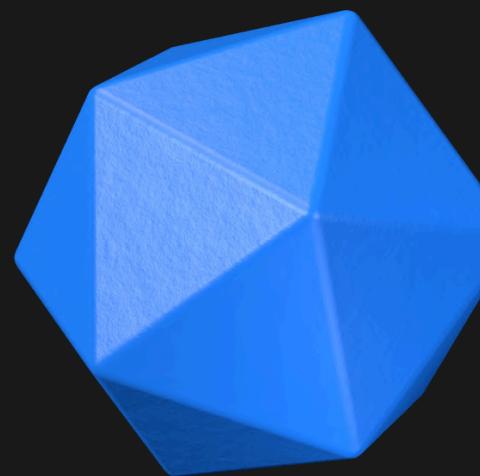
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Network Interface

- ◆ Hardware or software component that connects a computer or other device to a network, allowing it to communicate with other devices



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Commands

- ◆ ifconfig
- ◆ iwconfig
- ◆ ping
- ◆ host
- ◆ ip
- ◆ whois
- ◆ curl

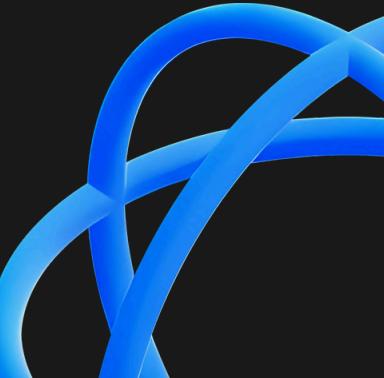
\$ ifconfig

- ❖ Configure a network interface
- ❖ Displays the status of the currently active interfaces

Syntax

```
● ● ●  
$ ifconfig [flags]  
$ ifconfig [-v] [interface]
```

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\$ iwconfig

- ❖ Similar to ifconfig command
- ❖ Displays wireless networking interfaces only

Syntax



```
$ iwconfig [interface] [options]
```

+++

\$ ip

- ❖ Configure a network interface
- ❖ Displays or manipulate routers, devices and tunnels

Syntax



```
$ ip [options] OBJECT {command | help}
```



\$ ping

- ◆ Checks the network connectivity between host and server/host
- ◆ Sends a data packet to the specified address with the message "PING" and gets a response from the server/host

Syntax

```
● ● ●  
$ ping [URL]  
$ ping -c [URL]
```

\$ host

- ◆ Displays domain name for given IP address or vice-versa
- ◆ Flags:
 - t A: IPv4 address
 - t AAAA: IPv6 address

Syntax



```
$ host [website ip address/website name]
```



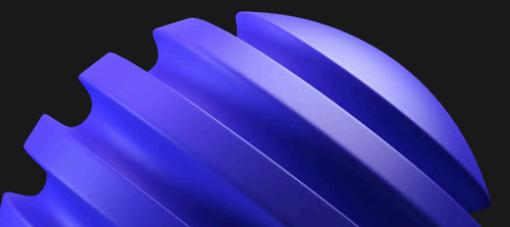
\$ whois

- ◆ Displays information about a website's record
- ◆ Registration information
- ◆ Owner's information
- ◆ Server Names

Syntax



```
$ whois [website name]
```



\$ curl

- ◆ A command line tool to transfer data to or from a server, using any of the supported protocols (HTTP, FTP etc.)

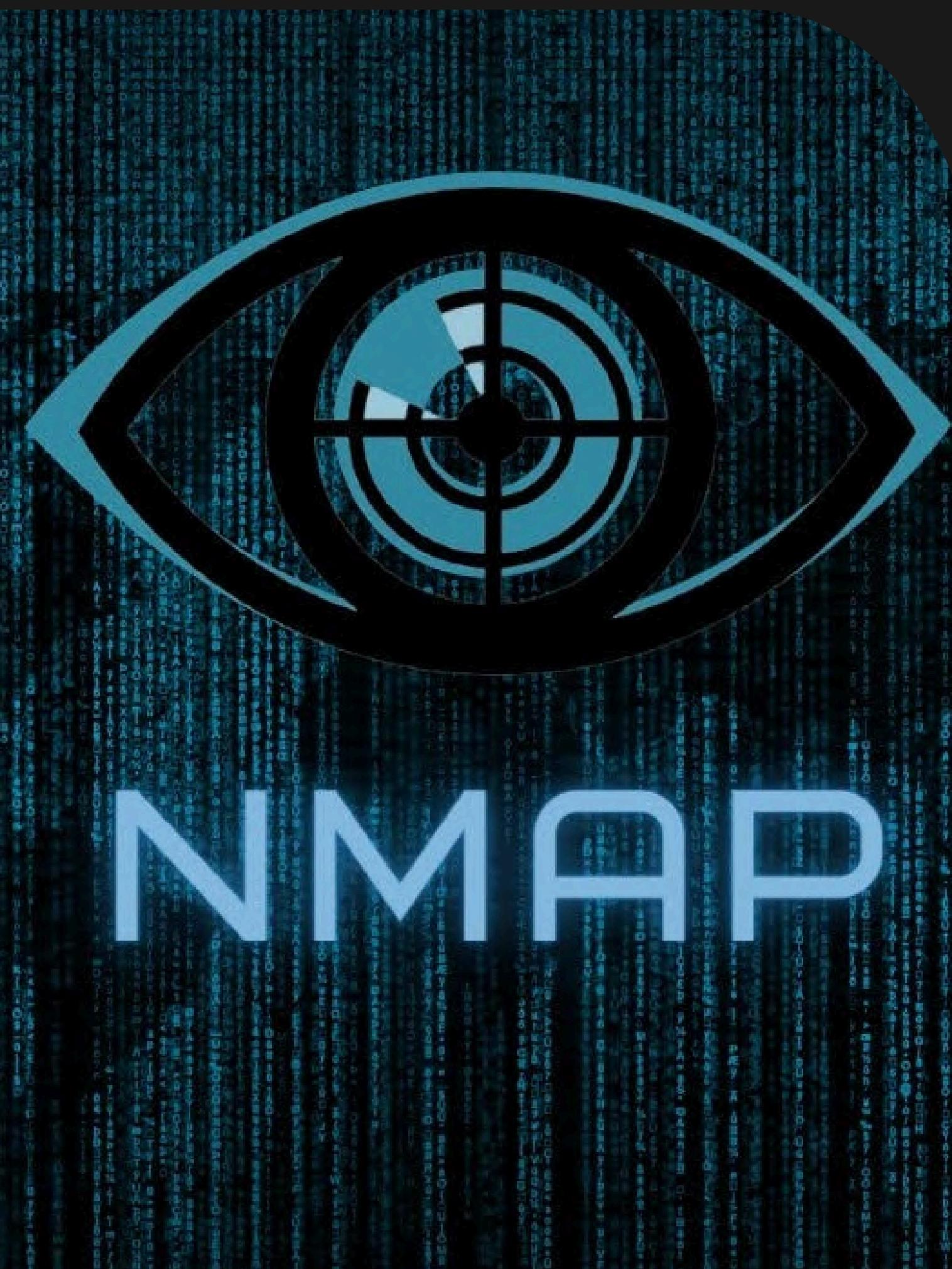
Syntax



```
$ curl [Options] [URL]
```

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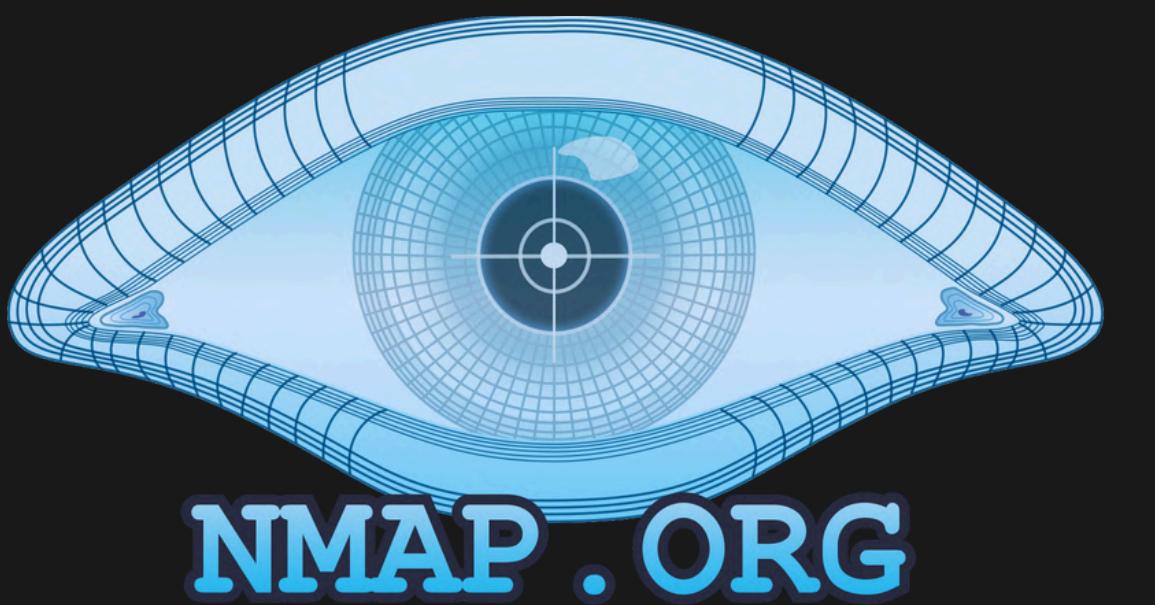
What is NMAP?



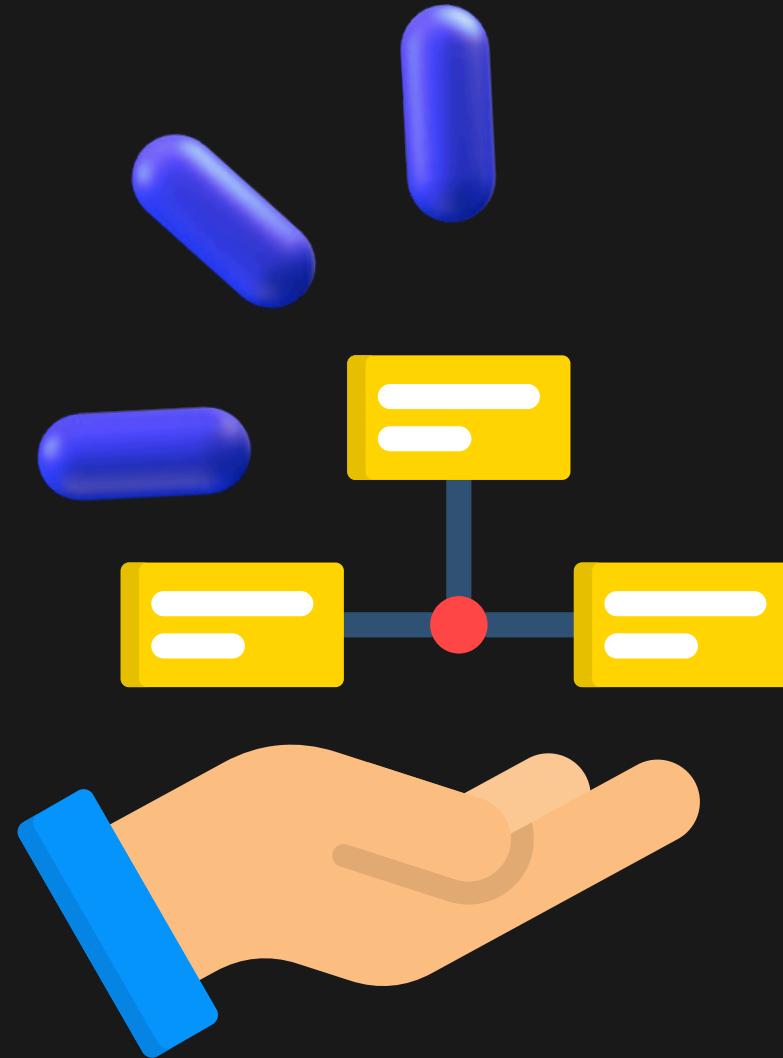
NMAP

- ◆ Stands for Network Mapper
- ◆ Open-Source Linux command line tool
- ◆ Scans IP Addresses and ports, discovers all open ports and it's services and detect vulnerabilities

+++



Features



- ◆ Open-Source
- ◆ Versatile
- ◆ Cross-Platform
- ◆ Integration
- ◆ Well-maintained and Supported

NMAP

Port Scanning

- ◆ Scans ports on a target system to identify open ports
- ◆ Services running on those ports and potential vulnerabilities

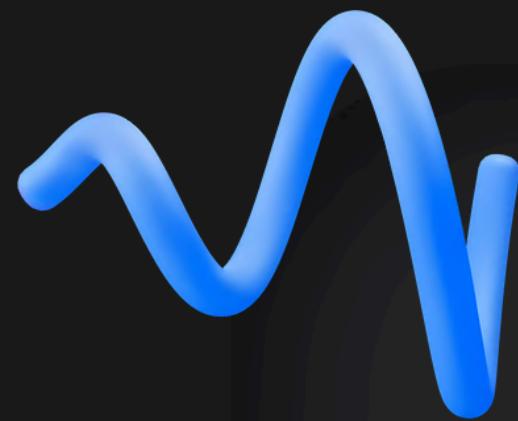
Syntax



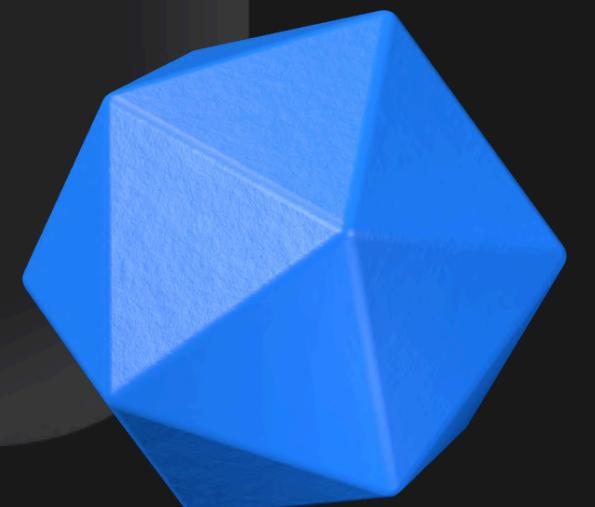
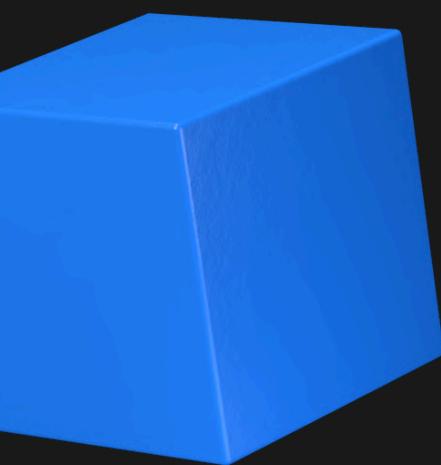
```
$ nmap <TARGET IP>
```

```
$ nmap -p [port(s)] <TARGET IP>
```





Phishing



PHISHING

- ◆ What is Phishing?
- ◆ Examples
- ◆ Tools & Demo
- ◆ Detection and Prevention



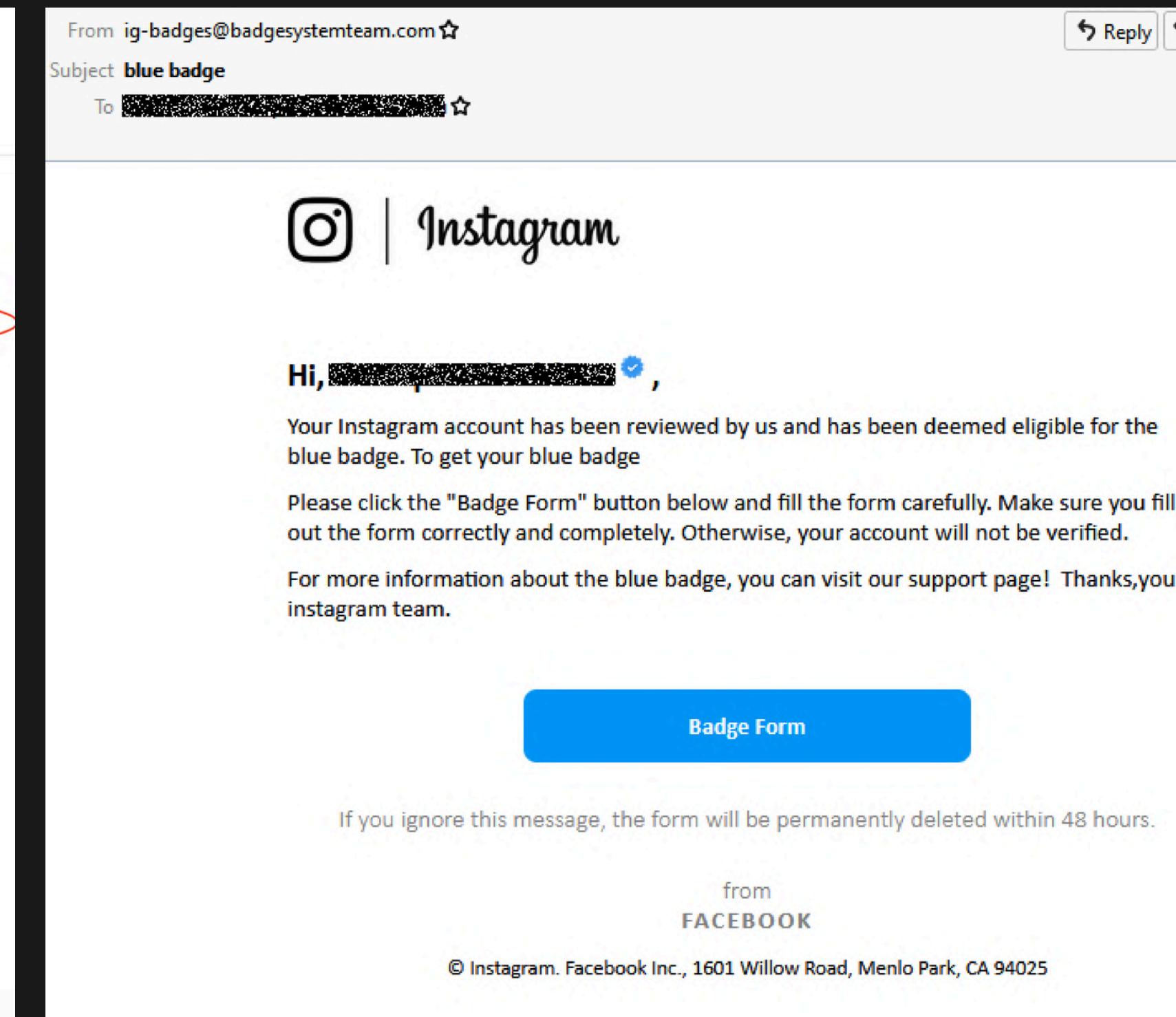
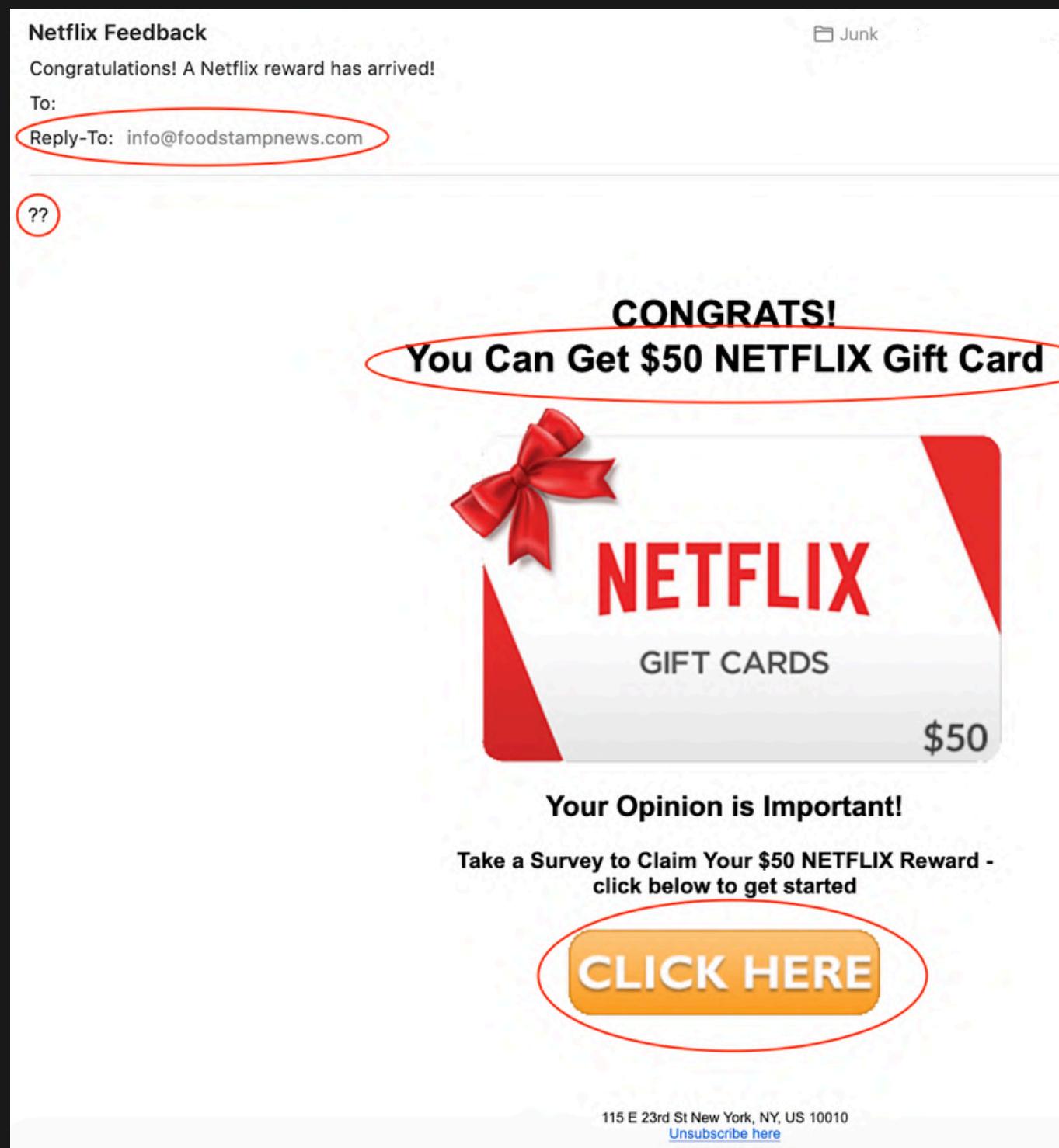
WHAT IS PHISHING ?

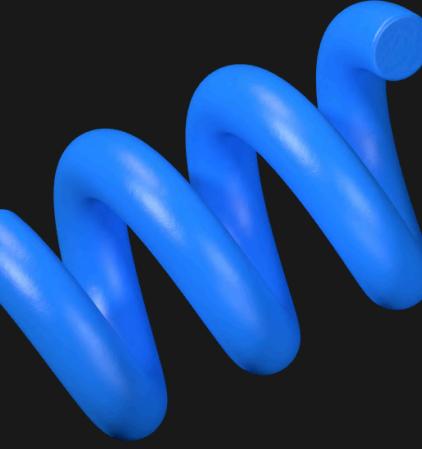
- ◆ Phishing attacks are fraudulent communications (emails, texts, calls or websites)
- ◆ Their aim is to trick users into revealing sensitive information or downloading malware
- ◆ These attacks put users at risk of cybercrime



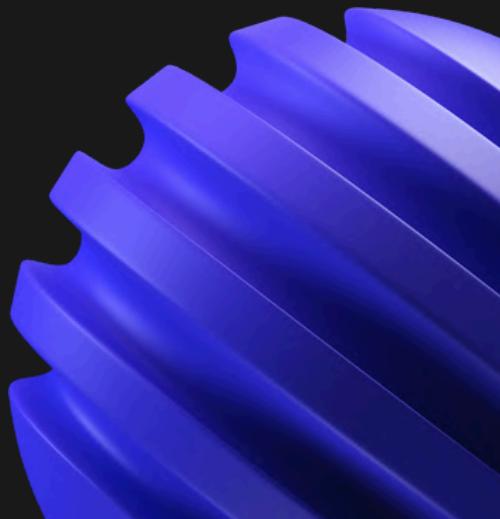
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EXAMPLES





**Hey, we are Linux users
we believe in practical, not in theory**





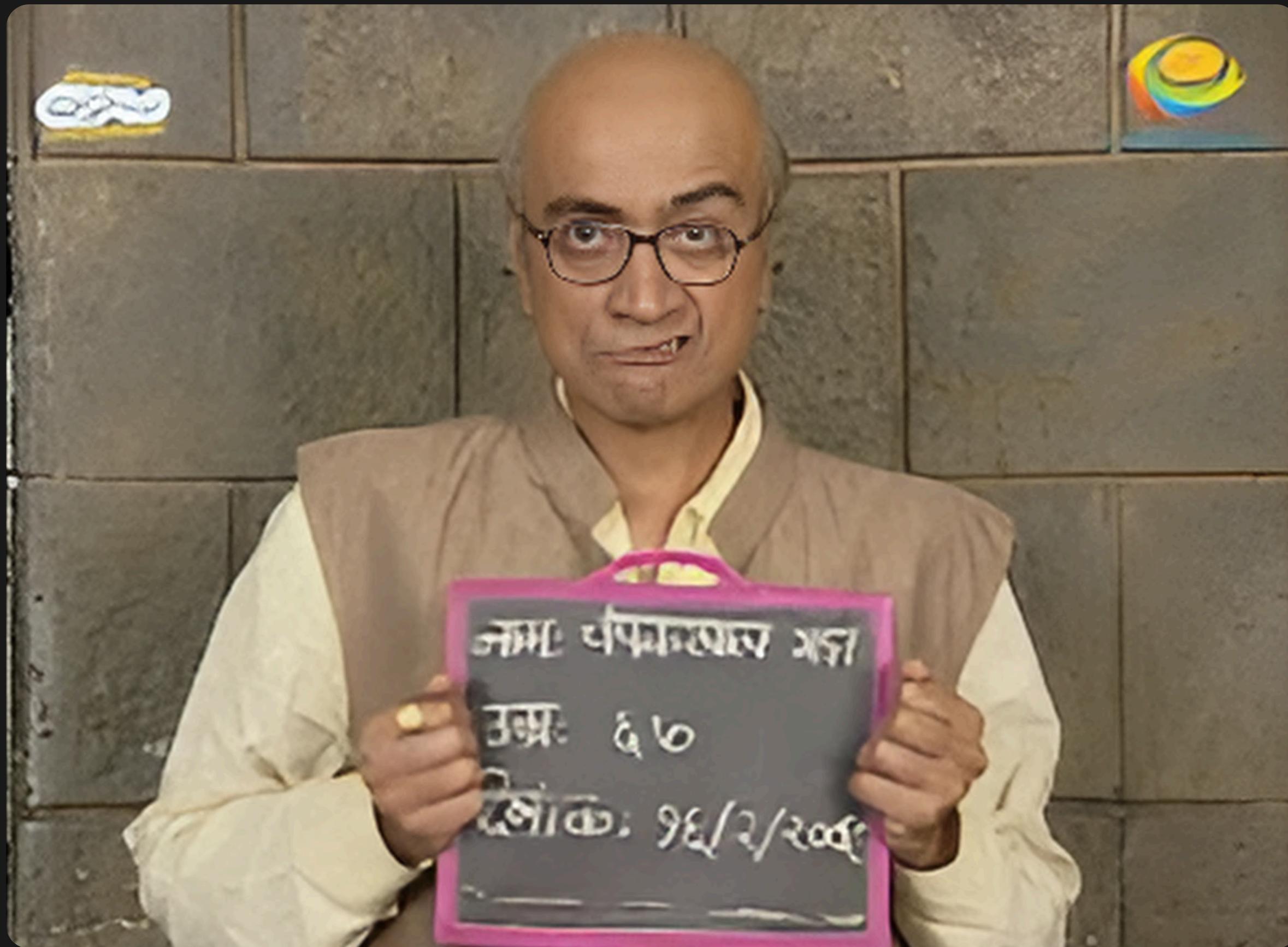
Let's have a demo then!

Disclaimer

This presentation is only for Educational Purposes.
Performing any types of hacking attempts (without permission)
on computers that you do not own is illegal. WLUG does not
promote any types of Illegal activities.



This is how you might end up !



ZPHISHER

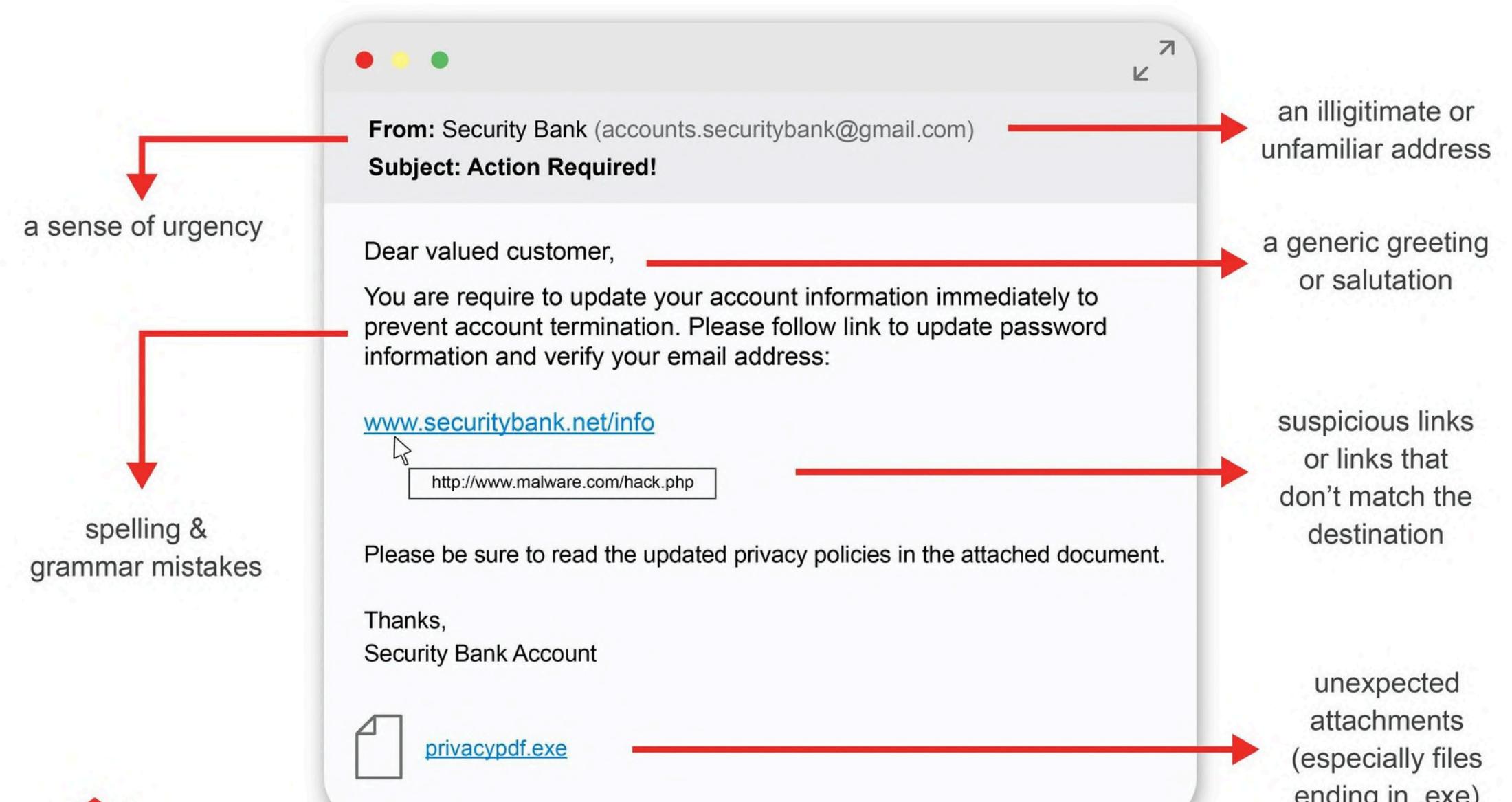
- ◆ Automated phishing tool for various popular websites
- ◆ Simple setup with pre-built phishing templates and server hosting
- ◆ Open-source and available on GitHub for free

DETECTING PHISHING

- ◆ There are grammatical mistakes
- ◆ Creates a sense of urgency e.g. Limited Time, Offer valid for only today, etc
- ◆ It includes suspicious attachments or links
- ◆ Website is misspelled e.g. go0gle.com, abibas.com, pumba.com/login, etc



WATCH OUT FOR...



THANK YOU!

Community | Knowledge | Share