ET WORKS

# CYBERSECURITY

## ESSENTIALS

*for*

# BUSINESS OWNERS

**OWN IT.**
**SECURE IT.**
**PROTECT IT.**

# TABLE OF CONTENTS



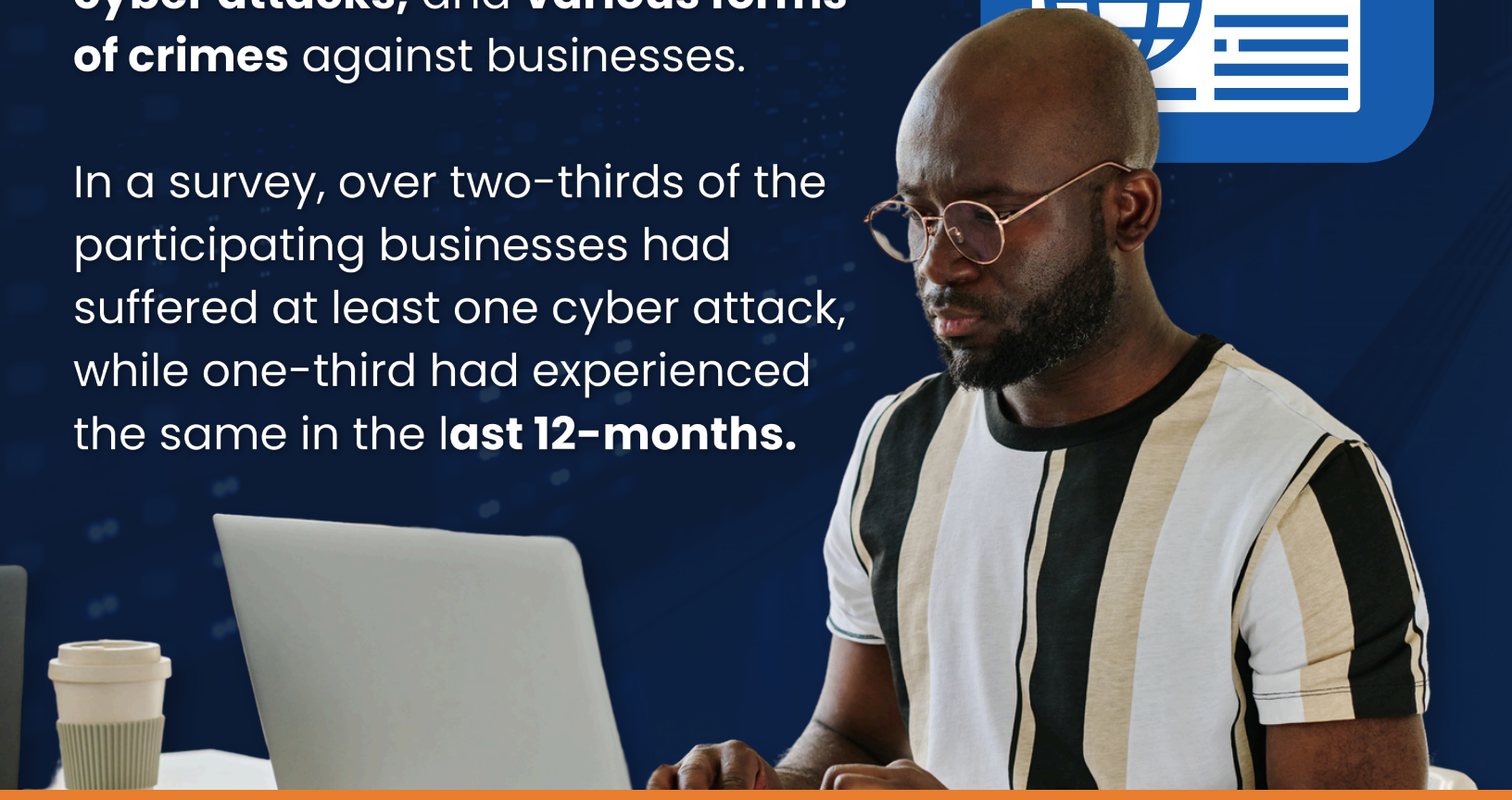
**OWN IT.**
**SECURE IT.**
**PROTECT IT.**

# INTRODUCTION

Cybercrime and cyber-attacks are becoming **more prevalent** with each passing day.

Over half of small and medium businesses **(SMB)** have reported being the victims of cybercrimes. Every day, there are new headlines about **data breaches, hackings, cyber attacks,** and **various forms of crimes** against businesses.

In a survey, over two-thirds of the participating businesses had suffered at least one cyber attack, while one-third had experienced the same in the l**ast 12-months.**



# 66%

of **small businesses** are very concerned about **cyber security risk.**

| | |
|---|---|
| 56% | *Specific cybersecurity "experts" in the organization* |
| 52% | *Incident response planning* |
| 51% | *Cybersecurity insurance* |
| 45% | *Document Management* |
| 43% | *Endpoint protection* |
| 40% | *Security awareness training* |
| 37% | *Network protection* |
| 31% | *Email security* |

**Cybercrime** is a significant threat to businesses. It can lead to disruption of operations, breach of business and customer data, unauthorized access to networks, and more. The average cost of a data breach for a small-to-medium business is a staggering **$149,000.** On top of that, **80%** of SMBs worry about becoming the target of cybercrime in the **next six months.**

Additionally, cyber-attacks remain a worry whether we are talking about the **cloud** or through **emails**.

Many governments have moved to the cloud but are looking for **better ways to protect their data.** A part of that is to increase collaboration between intelligence and law enforcement agencies worldwide to tackle crime. The popularity of smartphones and the increased use of apps also pose a significant risk to **mobile security.** Consumers use apps to input sensitive information like personal, financial and banking information. These apps will need to evolve with new technologies to continually find new ways to resist **attacks** and **data leaks.**

Additionally, as more and more applications are moving to the cloud, malicious actors are getting better at **evading detection by standard security measures and protocols.**

The act of distributing ransomware and holding sensitive data is on the increase as organizational data is **going beyond the control of the company.**

Evolving from simple malware, ransomware has become more **sophisticated** and **efficient.** Cybercriminals are now targeting the local backups, which foil the efforts of the security staff to **restore encrypted data.**

This threat is **no longer limited to local networks**: ransomware attacks remain a problem in cloud environments.

Email remains the most favored method of cybercriminals. Over **91%** of attacks are initiated by email. Traditional antivirus programs cannot identify the phishing attacks employed by hackers.

**51% of small businesses** say they are not allocating any budget to cybersecurity.


Malware can be delivered and initiated on a system **without the user's knowledge**, possibly for a long time. One example of such an attack was the one dealing with the **US Democratic National Party**, where cybercriminals took control of their system.

There is a need to increase the pace of development for holistic solutions to cybercrime. **75%** of businesses in the survey above feel they need to put more emphasis on cybercrime prevention. However, **there is a large gap between reality and expectation.** Most businesses are under educated when it comes to the nuances of cybercrime.

This creates an adverse situation as the organizations are **not able to protect themselves from cybercriminals.** Without a plan, organizations don't know how to react and what steps to take when their network and systems are **compromised.**

Here the role of managed IT service providers (MSPs) becomes **crucial.** MSPs can guide SMBs on the right path and help them stay protected from the increased incidents of cybercrime. They educate clients about the need for a **holistic security solution** and the evolving cybercrime landscape. MSPs should also provide SMBs with a complete collection of security solutions so that they can **stay protected** and **minimize risk.** MSPs can help bridge the gap between the current level of protection and the optimum level desired by businesses. **Enterprises** are recognizing this fact and joining hands with MSPs to eliminate and prevent cyber-attacks and threats. **Eight out of ten** surveyed SMBs are working with an MSP, and **four** of them want to keep working with their current security partners. **Three companies out of ten** plan to switch to a different MSP in the coming months. **12%** of SMBs that don't work with an MSP plan to partner up with one within the **next twelve months.**

***9 in 10 employees say their organization would consider switching to a new MSP if they offered a solution that met their needs.***

When asked what benefit they expected to see from using an MSP, **50%** of SMBs said increased security, even if they had **outsourced their cybersecurity**

MSPs can be the ideal partner of SMBs to fight cybercrime, as **62%** of companies don't have the required in-house skills. The managed IT teams can develop and implement security measures and even layout a **recovery plan** for probable attacks. The MSP helps the organization stay on top of cybersecurity trends and enables it to counter evolving cyber threats with **full confidence.** An MSP can be your partner in safety and protect you from threats or attacks.

# PHISHING & SPEAR PHISHING

Phishing involves sending emails with **malicious attachments designed to steal personal information**. The phishing attack can also lead the victim to an illegitimate website that steals passwords, credit card details, business information, and other sensitive data. A phishing attack uses **technical trickery** and **social engineering** to achieve its goals. Attackers employing phishing choose their targets carefully and take on the guise of a **trusted source that victims are less likely to question.** The attackers also use personalized messages that make the emails look relevant and trustworthy. As a result, SMBs might find it challenging to protect themselves from spear phishing attacks. **Phishing is one of the most common forms of cyber threats.**

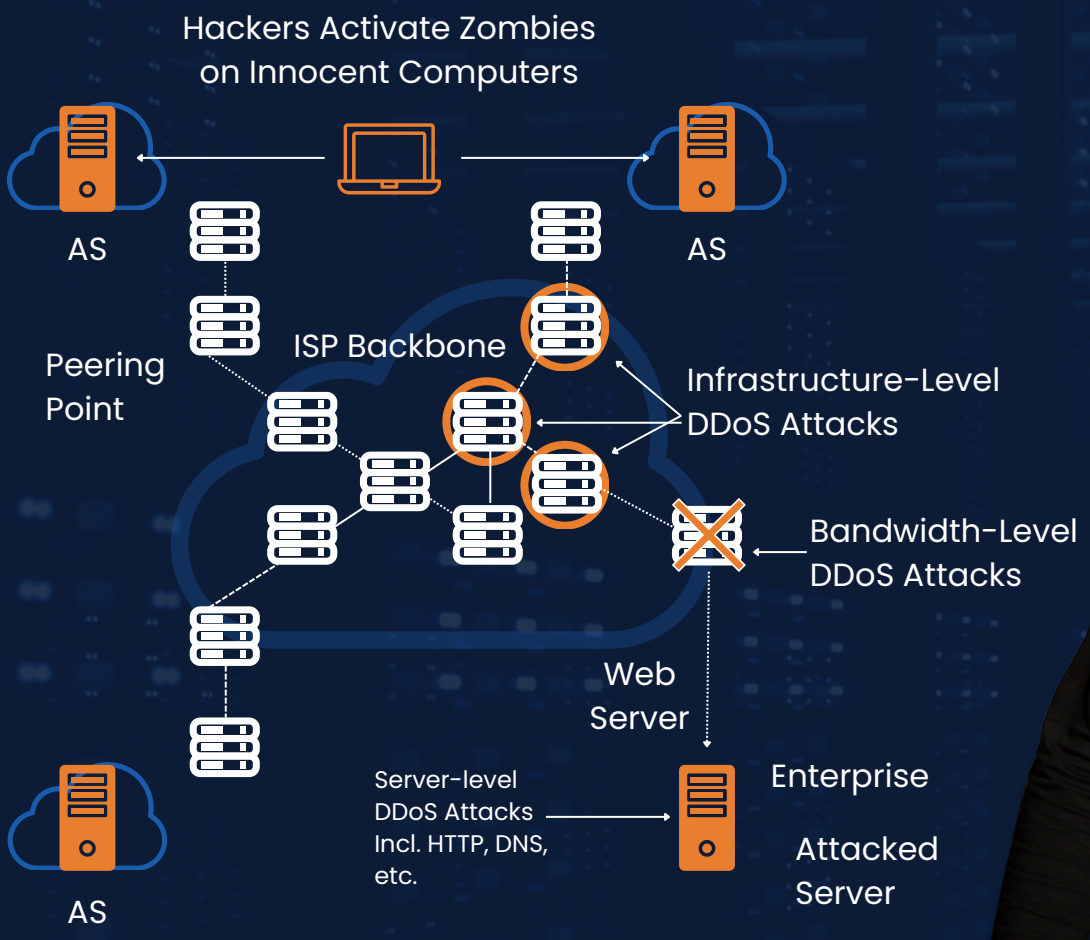
From **2022** to **2023**, there was an observed

**20%**

increase in **data breaches.**

| PHISHING | | SPEAR PHISHING |
|---|---|---|
| **APPROACH** | | |
| Spray & Pray | | Targeted Attack |
| **TARGETING** | | |
| Broad & Automated | | Specific employee and/or company |
| **HACKING LEVEL** | | |
| Not Very Sophisticated | | Requires Advanced Techniques |
| **THE ATTACK** | | |
| Usually Obvious | | Harder to Detect |
| **WHAT THEY'RE AFTER** | | |
| Usernames, Passwords, Credit Card Details, etc. | | Confidential Information, Business Secrets, etc. |

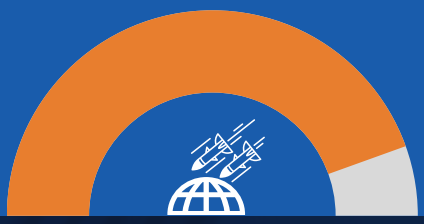
# AVERAGE COST OF A DDOS ATTACK $20K TO $40K




## DISTRIBUTED DENIAL OF SERVICE (DDOS)

Distributed Denial-of-service (DDoS) is an attack that targets the resources of a server, network, website, or computer to **take it down or disrupt services.** DDoS attacks generally have a host system that infects other computers or servers connected to the network. DDoS attacks **overload** a system with constant flooding of connection requests, notifications, traffic. As a result, the system denies service requests by legitimate users. DDoS attacks don't benefit the attacker directly as they don't steal any information: they compromise the systems so that they **can't function properly**. Nonetheless, DDoS attacks can be damaging for businesses as it can **halt operations** and **result in damages worth thousands of dollars.**

**Shorter duration** DDOS attacks were observed in 2022, with **89%** lasting less than one hour.



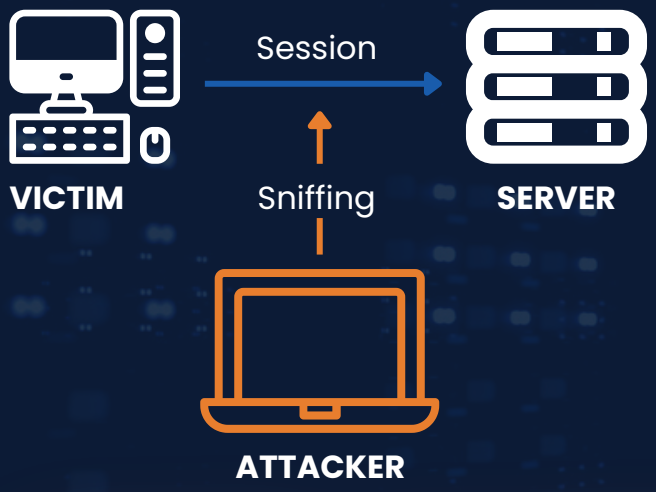
## MAN-IN-THE MIDDLE (MitM) ATTACKS

A MitM attack occurs when a hacker inserts themselves between the communications of a **client** and a **server**. Cybercriminals use **session hijacking** to gain control of the victim's sessions and get access to resources or data. The most common method is **IP spoofing**, where the hijacker uses the IP of the trusted client to avail unauthorized services from a server or application.

**More than one in four** small businesses have no security plan at all.

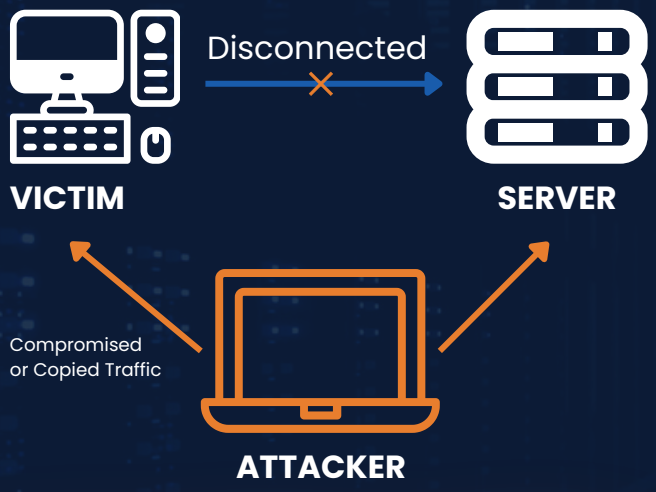
**STEP 1**

**Hijacking the Session**




**STEP 2**

**Assuming the Victim's IP Address**




# 95 PERCENT

## OF HTTP SERVERS ARE **VULNERABLE TO MitM ATTACKS**

# MALWARE ATTACKS

Malware or malicious software is designed for **compromising a system for a purpose.** A user can unknowingly download malware that infects a system and replicates itself. Malware can be designed to act in many ways, **just like software.**

**600%** Increase in Cyber Crime Due to **COVID-19 Pandemic**

**66 DAYS** THE NUMBER OF DAYS TO DISCOVER A CYBERATTACK

### Macro viruses

Macro viruses target the **initialization sequence** of an application to compromise programs such as **Microsoft Excel** or **Word**.

### File infectors

File infectors find their way in your system through executable codes like **.exe extensions.** The infector becomes active when you **access the .exe file** or the **executable code.**

### Trojans

Non-replicating viruses that gain **unauthorized access** to a system. Trojans often camouflage themselves in the form of **legitimate software.**

### Logic bombs

Logic bombs are pieces of malicious codes that get initialized when **predefined conditions are met.** Attackers can program logic bombs to serve a range of purposes.

### System or boot-record infectors

These infectors attach to **executable codes** residing in parts of a disc. Boot record infectors can connect to a hard disk's Master Boot Records and even boot sectors of USB flash drives. **The infectors are initialized when someone boots using the compromised disk or drive.**

### Worms

Worms don't need a host file to propagate themselves on a network or system. **They are self- contained forms of viruses.**

### Droppers

Droppers help viruses **find their way into your networks and systems.** Most often, your antivirus will not detect droppers as they don't contain the malicious code: **they just lead to it!**

### Polymorphic viruses

Polymorphic viruses **replicate endlessly to sabotage systems.** They use dynamic encryption keys every time to **avoid detection.**

### Ransomware

Ransomware can take the form of any virus that **holds a victim's data hostage for ransom.** Ransomware attacks often encrypt data or files and **demand money in exchange for decryption keys.**

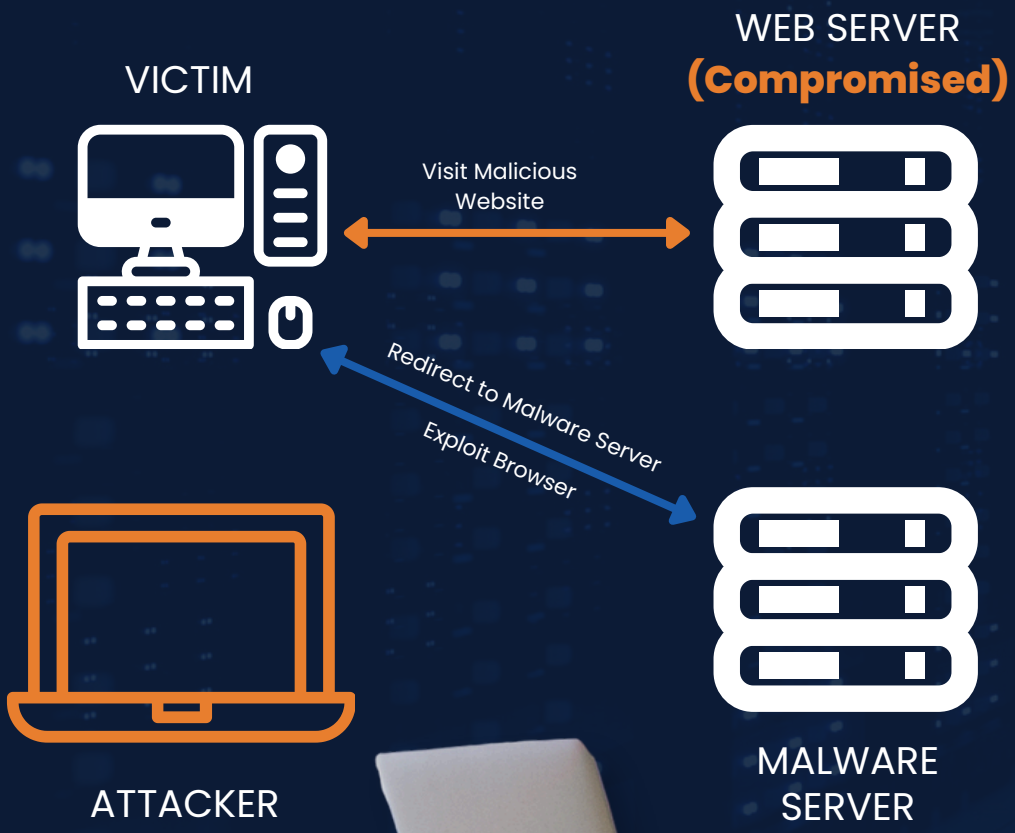
### Stealth viruses

Stealth viruses hide under the **guise of system functions.** They also infect your computer's defenses to **stay undetected.**

## DRIVE-BY ATTACKS

Drive-by attacks use **various online resources** to compromise a user's system. The malicious code can be inserted in internet ads, HTTP or PHP codes on websites, or even applications. Contrary to other forms of cyber-attacks, a user doesn't have to do anything to initialize the malicious software or virus. **A single click on a pop-up window or website link can do the job!** Drive-by attacks are increasingly used to spread viruses and malware. The attacks take advantage of **security vulnerabilities** in apps or websites to exploit victim systems. These include not updating the app, flaws in security patches, bugs, and more. The attacks also **run in the background** and are **not visible to the user.** As a result, you can't take any concrete steps to identify incorrect codes. Only being **proactive** can help businesses protect themselves from drive-by attacks.

**HALF** of all Cyber Attacks Specifically Target **Small Businesses**






# 92 PERCENT

of Malware is **Delivered by Email**

IN **2023,**

# 98 PERCENT

of organizations had a relationship with a vendor that experienced a data breach **within the last two years.**

## PASSWORD ATTACKS

Password attacks enable cybercriminals to gain **unauthorized access** to user accounts and networks. Someone in your office can just guess or look around your desk to steal your password. That's why it's always recommended **not to write down your passwords.** Attackers may also spy on your network, use decryption tools, and use brute force to break your passwords.

A range of precautions can help save you from password attacks. You can program your system to **lock accounts after a few wrong passwords.** Using **two-step authentication** is also an excellent way to keep your accounts safe from prying eyes.

**98 PERCENT**
of Cyber Attacks rely on **Social Engineering**

**73 PERCENT**
of **Passwords** are **Duplicates.**

**etworks.com**

ET WORKS

# WE CAN HELP!

We can help you navigate the complicated world of **IT** & **Cybersecurity** so you can better protect your **Data** and your **Business.**


**etworks.com**

**hello@etworks.com**

**+44 1932 260 470**


**Sources & Attribution:**

*All statistics are from the following sources unless otherwise mentioned:*

- **Harvard Business Review -** Why Data Breaches Spiked in 2023
- **Microsoft Security -** 2022 in review: DDoS attack trends and insights
- **PurpleSec 2021 Cybersecurity Statistics**
- **Verizon 2019 Data Breach Investigations Report**
- **Cyber Rescue Alliance**
- **Cyber Insights of 2021 Report**
- **FBI 2020 IC3 Annual Report**


ET Works Ltd

Cambridge Road,
Cambridge House,
Walton on Thames,
Surrey. KT12 2DP