What's in it for you?

1. The Rise of Cybercrimes
2. Different types of Cyberattacks
3. Reasons for Cyberattacks
4. What is Cyber Security?
5. Basic Network Terminologies
6. Cyber Security Goals
7. Tackling Cybercrime
8. Demo – Metasploit Attack

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The rise of Cybercrimes

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The Rise of Cybercrimes

Did you know about the deadly WannaCry ransomware attack? It was one of the most severe worldwide cyberattacks, caused by the WannaCry cryptoworm

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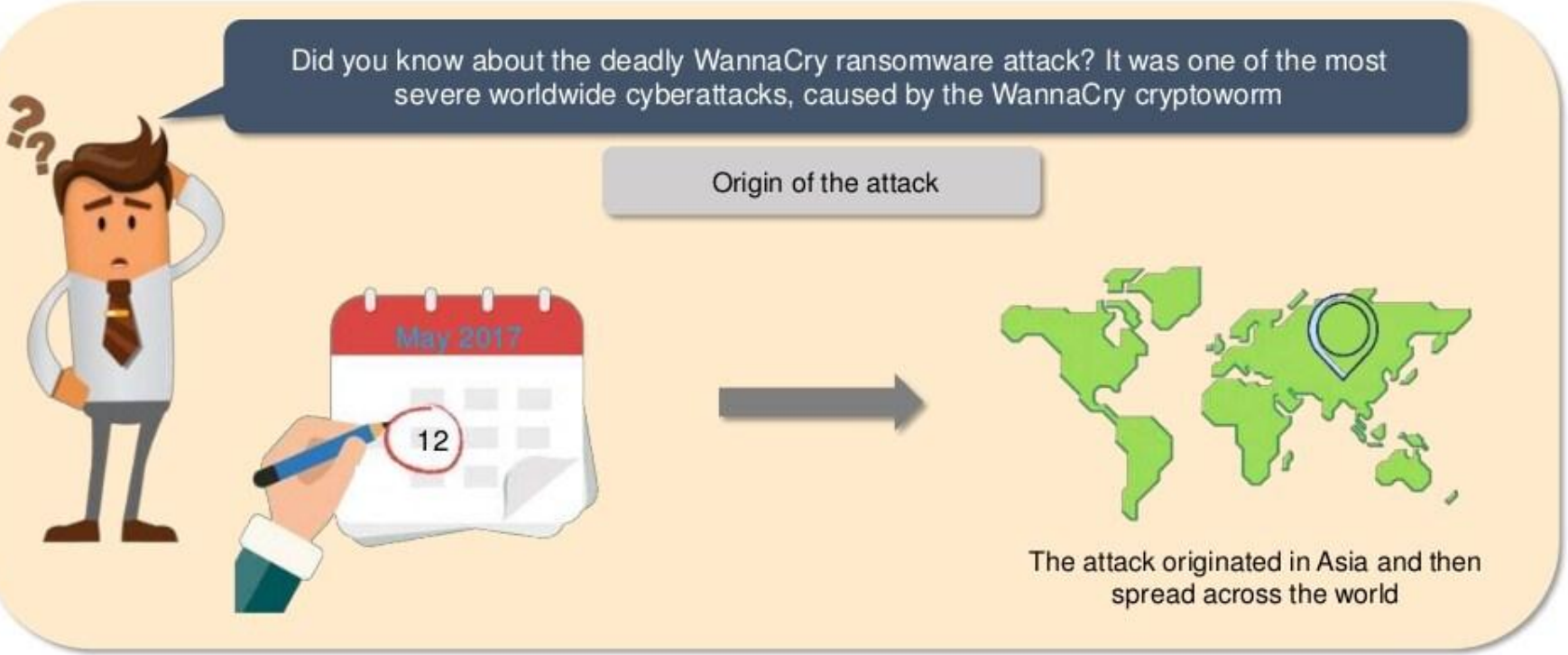
The Rise of Cybercrimes



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How did the attack happen?

Attack started from an exposed vulnerable SMB port

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Within a day more than 230,000 computers were infected across 150 countries

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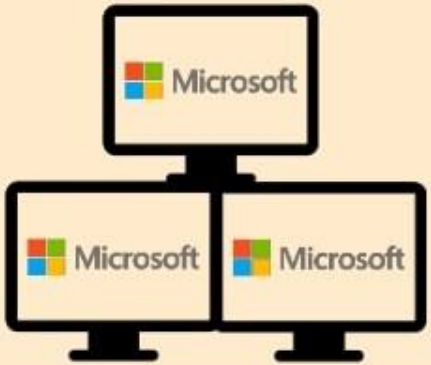
Victims of the attack



Computers running the Microsoft OS

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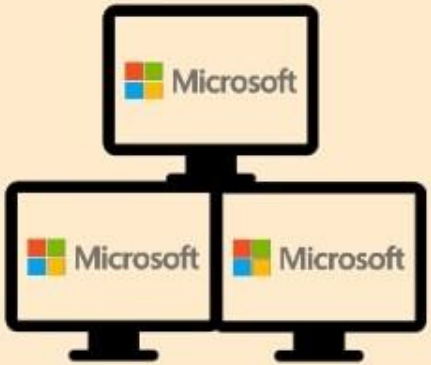

Computers running the Microsoft OS

Users that used the unsupported version of Microsoft Windows and also those users who hadn't installed the new Microsoft security update of April 2017

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Description of the attack

WannaCry cryptoworm encrypted the data and locked the users out of the target systems

In return, the users were asked for a ransom of $300 - $600 which has to be paid via bitcoin

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200,000 to 300,000 computers were infected

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FedEx Express

RENAULT

NISSAN

Both private and government organizations were hit, computers in hospitals were corrupted, Nissan and Renault had to put their business on hold as their computers were infected

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The Rise of Cybercrimes

In February 2019, Dunkin' Donuts announced that the users of their rewards program were targeted by a credential stuffing attack. In such an attack, users' credentials are stolen

Hacker

DUNKIN' DONUTS

The Rise of Cybercrimes

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Hacker

The user's first and last name, and email ID's were stolen

DUNKIN' DONUTS

The Rise of Cybercrimes

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Let's now look into the different types of such cyberattacks

Different Types of Cyberattacks

The different types of cyberattacks are :

- Malware Attack
- Social Engineering Attack
- Man in the Middle Attack
- Denial of Service Attack
- SQL Injection Attack
- Password Attack

Malware Attack

Malware refers to malicious software, viruses, ransomware, and worms. Trojan virus is also a form of malware that disguises itself as a legitimate software

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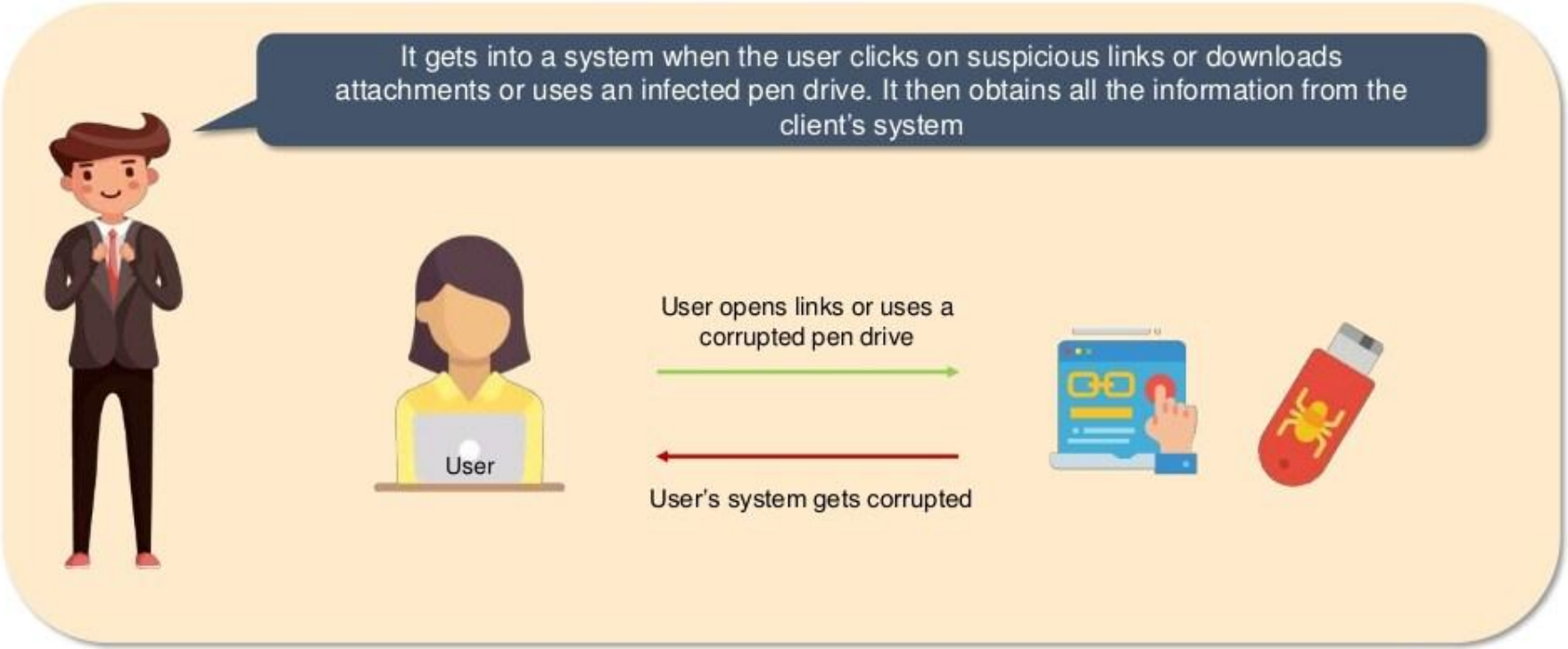
Malware Attack



Social Engineering Attack

It is the art of manipulating people so that they end up giving their confidential information. It is broken down into 3 categories:

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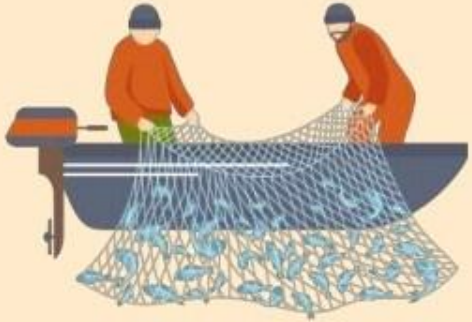

Phishing Attack

Spear Phishing Attack

Whaling Phishing Attack

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Social Engineering Attack

Phishing attack is a practice wherein the hacker usually sends fraudulent emails, which appear to be coming from a trusted source. It is done to install malware or to steal sensitive data like credit card information, and log in credentials

Phishing Attack

User opens the mail with the attachment and unknowingly downloads the virus

User's system gets affected

Social Engineering Attack

Spear Phishing is a variation of Phishing. Here, the attacker targets a specific individual or a group of people

Spear Phishing Attack

Hacker identifies a victim

Hacker then sends a targeted legitimized looking email

Unaware of this, the victim opens the email which has malware

Now, hacker steals data from the victim's computer

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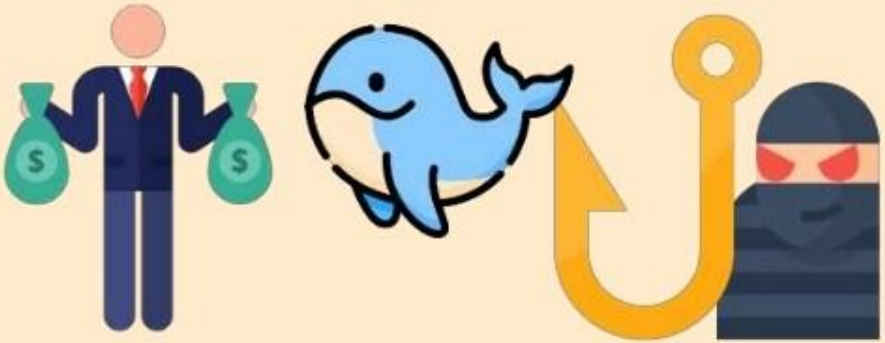
Social Engineering Attack

Whaling Phishing Attack

Whaling Phishing attack is a type of attack that specifically targets wealthy, powerful and prominent individuals



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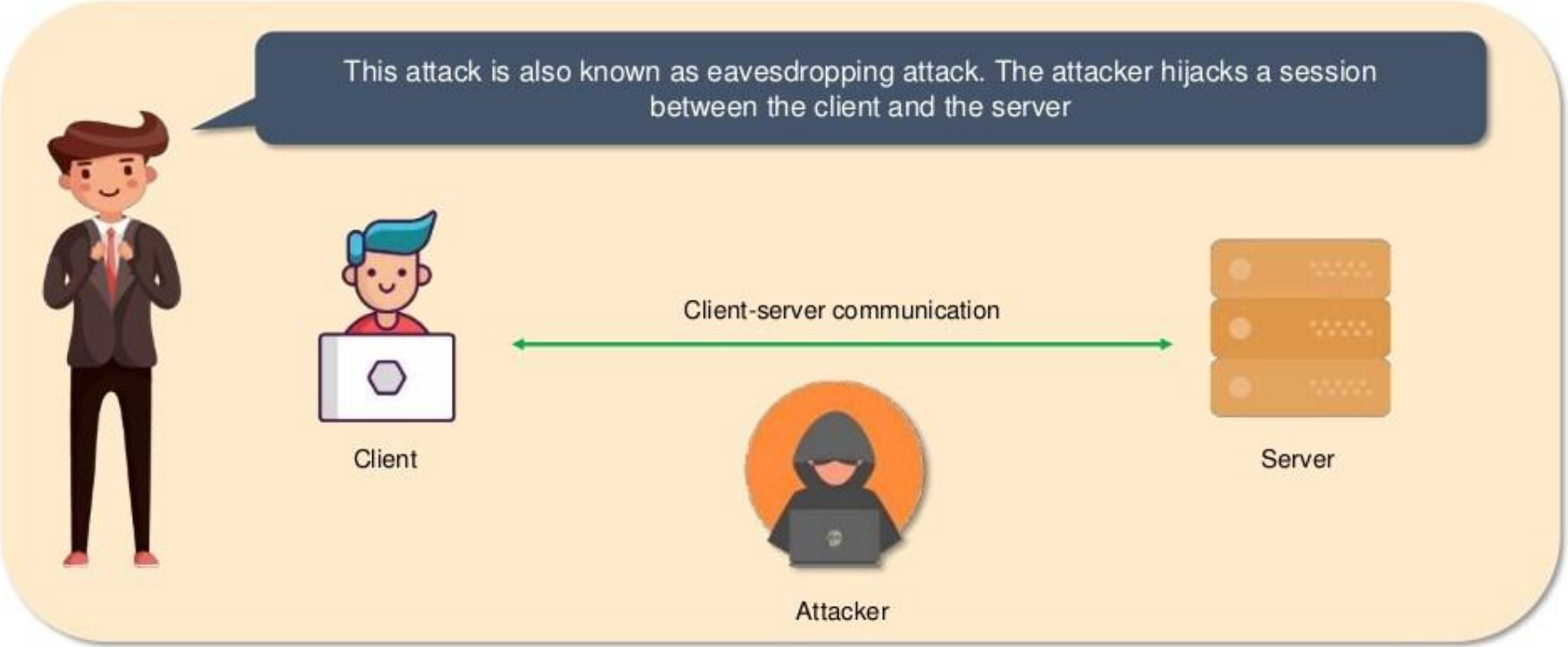
Man in the Middle Attack



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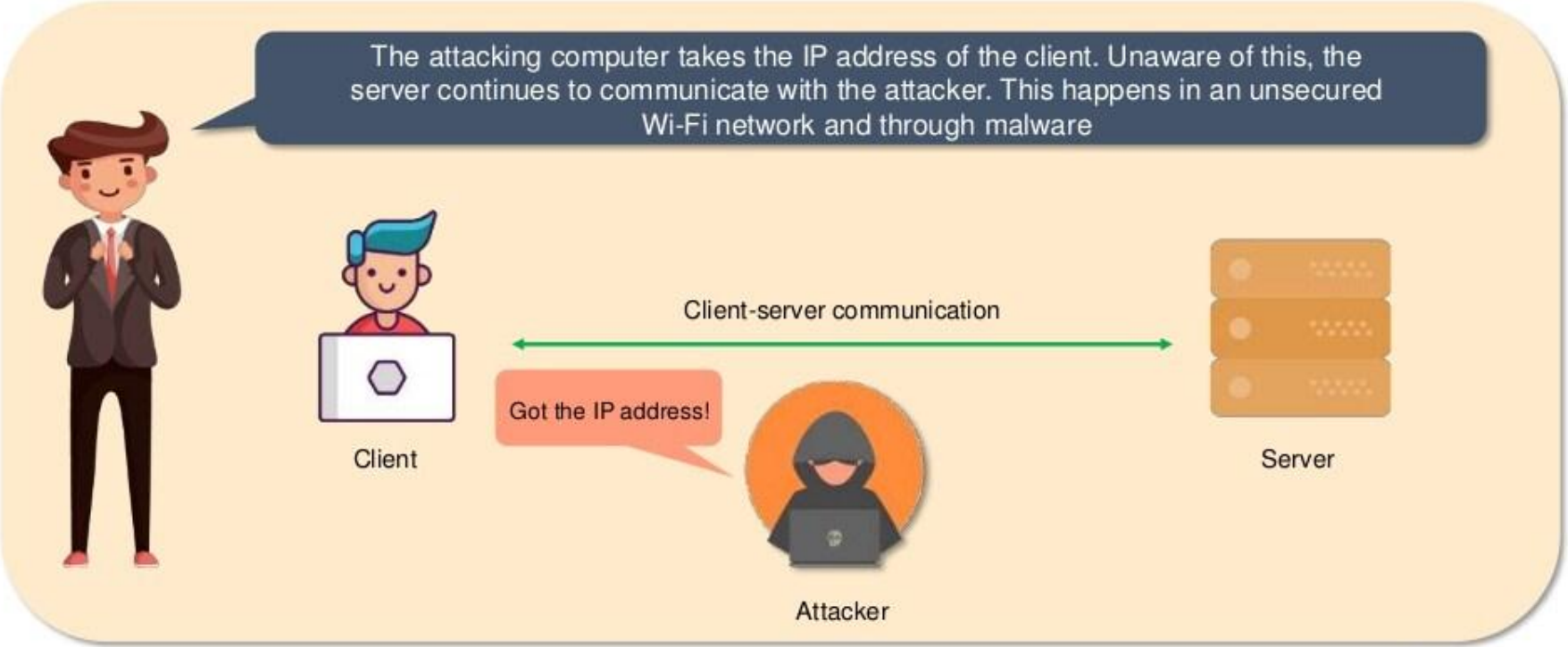

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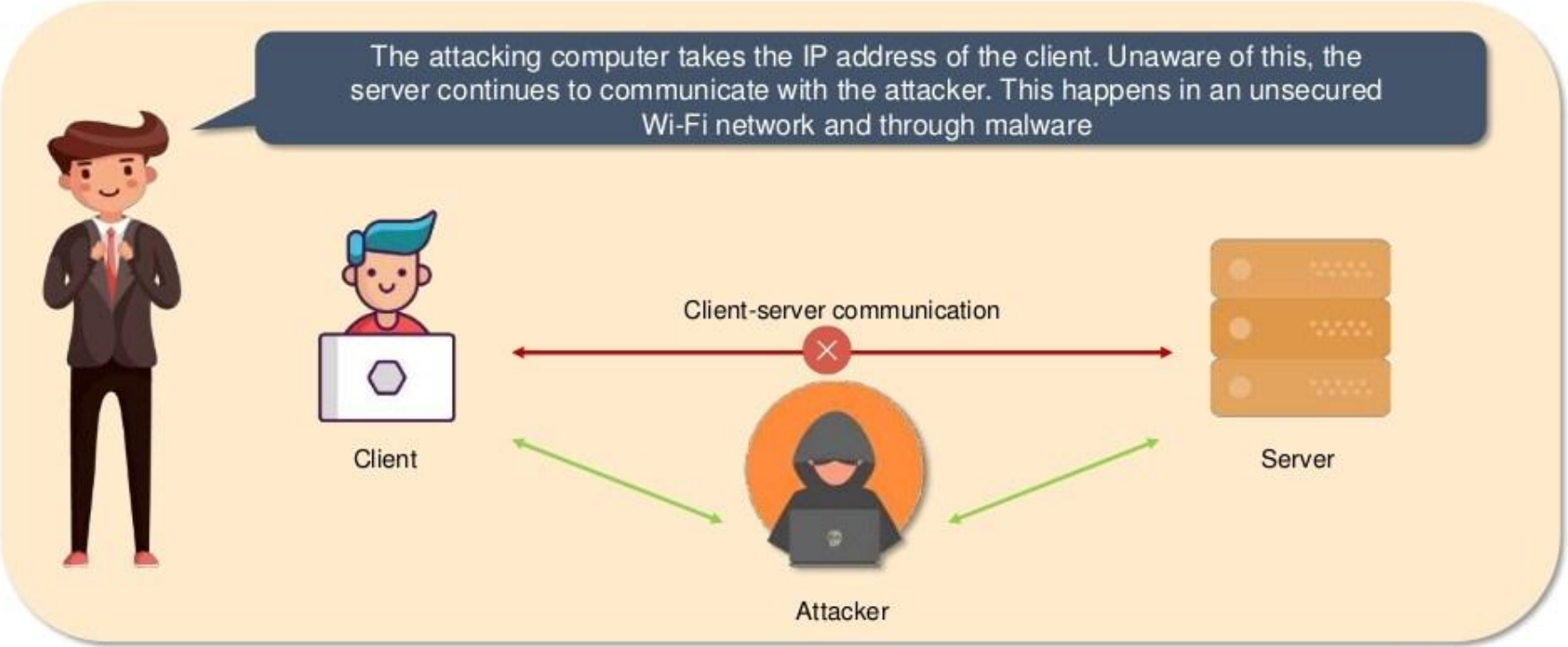

Denial of Service Attack

A Denial of Service attacks' motive is to flood systems and networks with traffic to exhaust its resources and bandwidth. By doing so, it is unable to cater to legitimate service requests

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Denial of Service Attack

When attackers use multiple systems to launch this attack, it is known as Distributed Denial of Service (DDOS) attack

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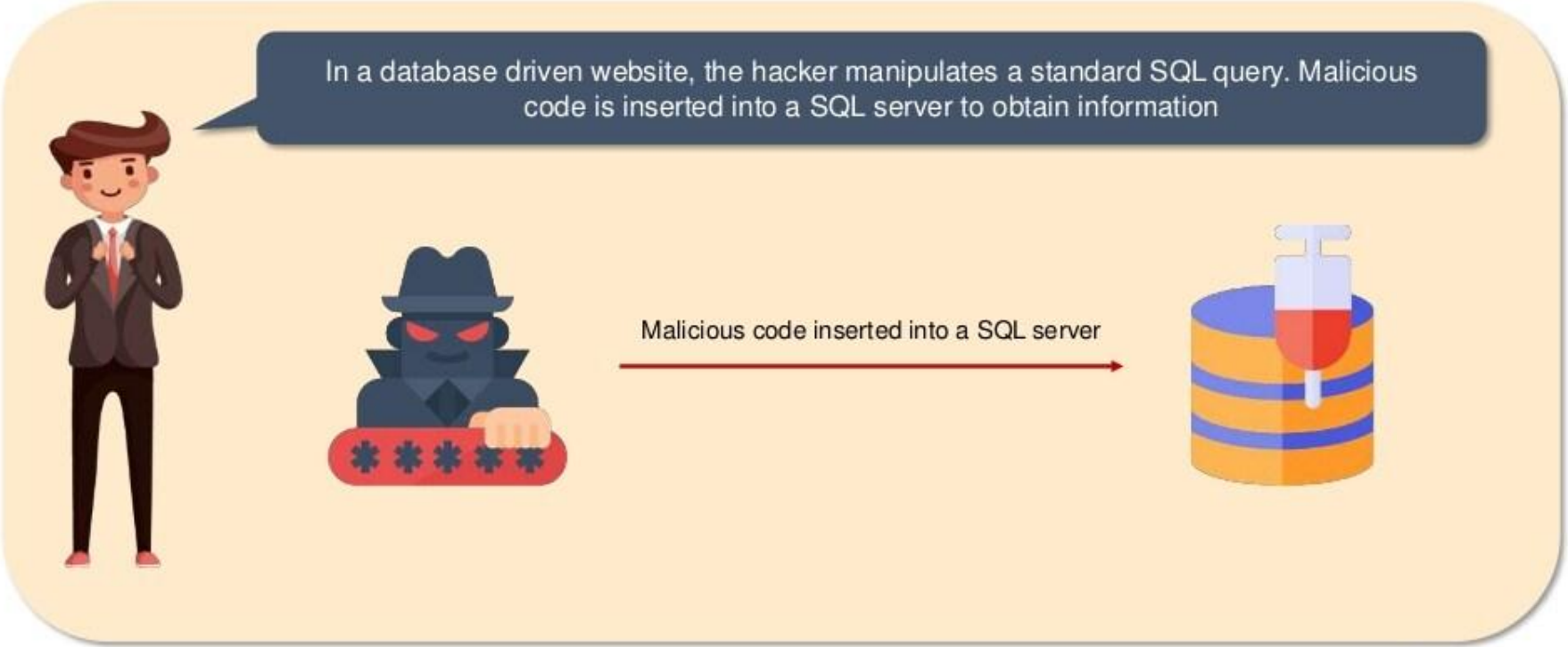
SQL Injection Attack



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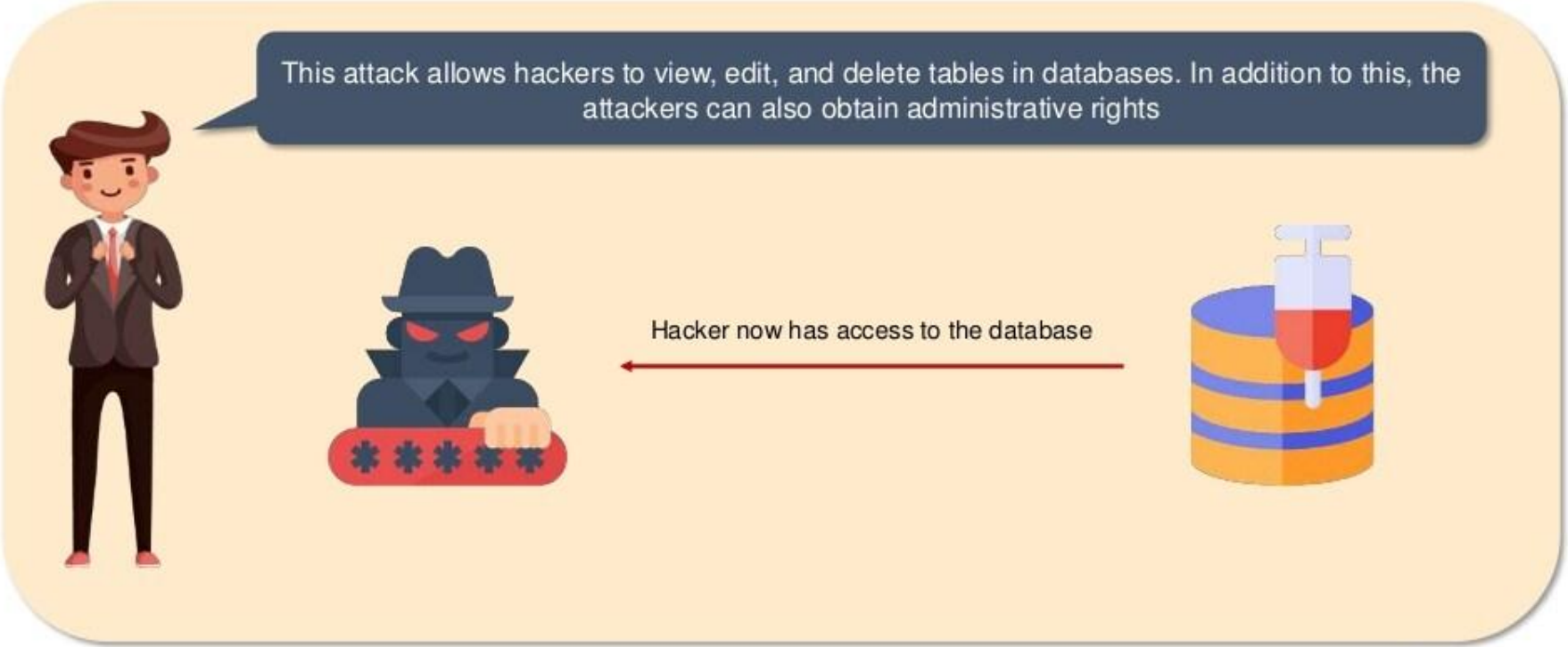

Password Attack

The easiest way to hack a system is by cracking a user's password. This is done in various ways

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Password Attack

Brute force attack is the practice wherein the hacker tries to login with all possible password combinations

Brute force attack – every possible combination

A, a, Aa, AAAA, aaaa, B, b….

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Password Attack

In the dictionary attack, a list of common passwords is used to crack the users' log in credentials

Brute force attack – every possible combination

A, a, Aa, AAAA, aaaa, B, b….

Dictionary attack – common passwords

1234, ABCD,……