

Cybersecurity awareness

Malware

Database hardening

Malware

what is malware?

Malware, short for malicious software, is a blanket term for viruses, worms, trojans and other harmful computer programs hackers use to wreak destruction and gain access to sensitive information

Objective of malware

Intrude on a machine for a variety of reasons:

- Provide remote control for an attacker to use an infected machine.
- Send spam from the infected machine to unsuspecting targets.
- Investigate the infected user's local network.
- Steal sensitive data.

Types of Malware

1. Adware
2. Fileless Malware
3. Viruses
4. Worms
5. Trojans
6. Bots
7. Spyware
8. Ransomware



Prevention

Keep your computer and software updated.

Think twice before clicking links or downloading anything.

Careful when opening email attachments or images.

Don't trust pop-up windows that ask to download softwares.

Limit file-sharing

Demonstration

Database Hardening



What is Database?

Organized collection of structured information or data.

Usually controlled by database management system.

Together, the data and DBMS along with applications that are associated can be referred to as a database system.

Example

phpMyAdmin

SQL

Database

(Databases) ...

Hazwan Supermarket System

(3)

X

customer

order1

salesman

localhost

Hazwan Supermarket System

salesman

Browse

Structure

SQL

Search

Insert

Export

Import

Operations

Empty

Drop

	Field	Type	Collation	Attributes	Null	Default	Extra	Action					
<input type="checkbox"/>	SalesmanID	varchar(4)	latin1_swedish_ci		No	None							
<input type="checkbox"/>	SalesmanName	char(10)	latin1_swedish_ci		No	None							
<input type="checkbox"/>	SalesmanCity	char(20)	latin1_swedish_ci		No	None							
<input type="checkbox"/>	Salesmancomission	varchar(20)	latin1_swedish_ci		No	None							
<input type="checkbox"/>	PhoneNumber	int(11)			No	None							

Check All / Uncheck All

With selected:

Print view

Relation view

Propose table structure

Add

1

field(s)

☒ At End of Table

☐ At Beginning of Table

☐ After

SalesmanID

Go

Indexes: ?

Action	Keyname	Type	Unique	Packed	Field	Cardinality	Collation	Null	Comment
		PRIMARY	BTREE	Yes	No	SalesmanID	2	A	

Create an index on 1 columns Go

+ Details...

7

Extension Update(s) are available.

View Updates

You have post-installation messages

There are important post-installation messages that require your attention.
This information area won't appear when you have hidden all the messages.

Read Messages

JMEDIA FILEMANAGER



Explore Now

LATEST ACTIONS

User hazwan logged in to admin	 2022-08-12 03:2
User hazwan logged out from admin	 2022-08-12 03:2
User hazwan logged in to admin	 2022-08-12 03:2
User hazwan logged out from admin	 2022-08-12 03:2
User hazwan logged in to admin	 2022-08-12 03:2

Storage Server

Database Server

Client



Storage Level
Encryption

Whole Database and
Table Column/Row
Encryption

SSL Encrypted
Connection

Strong passwords and correct
permissions assigned to
database objects



Hardening

1. Deploy physical database security.
2. Seperate database servers.
3. Set up an HTTPS proxy server.
4. Avoid using default network ports.
5. Use real-time database monitoring.
6. Use Database and web application firewalls.
7. Create regular backups of your database.
8. Use strong user authentication.

Question



Reference

1. Arctic wolf
2. Trip wire
3. Technopedia
4. Oracle



Thank You