How to turn cyber attacks to your advantage

1 **Before you read, check that you know words 1–7. Match them with their definitions (a–g). Use a dictionary to help you if necessary. Then read the article to check your answers.**

1 hacking	**a** sending emails designed to gain secret information such as computer passwords
2 firewall	**b** a range of dishonest schemes
3 phishing	**c** related to computing, information technology and the internet
4 cyber	**d** gaining unauthorised access to data in a computer system
5 scams	**e** a network security system to prevent unauthorised access to computer data
6 breach	**f** an organisation or person that makes sure rules are followed
7 watchdog	**g** a breakdown in security

How to turn cyber attacks to your advantage

By Andrew Hill

A When handling hacking, the main weaknesses in most organisations are not technological – firewalls, software – but human. Since a villain pressed 'send' on the first phishing email, the human factor has played a part in cyber plots.

For example, scams where the widow of a general promises you money to help transfer their fortune – gullible people who believe the first sentence are most likely to trust the rest of the tale.

More recently, criminals have started making attacks to demand money from a company or threaten to create problems with its share price. Again, the approach uses basic human weaknesses. As a senior executive, you may well not know whether the hack is real or not – it still takes at least ninety-nine days for companies to discover a security breach, says consultancy Mandiant. So, are you prepared to risk saying that the news is fake?

B Big companies are under hostile cyber fire all the time – Volkswagen said it was facing 6,000 attacks a week – so it would be better to start thinking of the threat as an opportunity. As Amitava Dutta and Kevin McCrohan of George Mason University wrote in the early days of cyber risk, 'information security is not a technical issue; it is a management issue'. Leadership, culture and structure (or lack of them) have a 'significant impact' on what happens in an attack. So check your company's priorities.

C Spring-clean your structure. Organise files and throw out what you don't need. Find out what information you hold and where.

Update lines of communication, internal and external, and reexamine what your response will say about your attitude to different interests. For two years, Yahoo! failed to reveal a huge security breach as it tried to sell its core business, inviting criticism from customers, investors and watchdogs.

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Make sure your staff are engaged. Carelessness about security may suggest reduced loyalty, risk taking, or worse, potential attacks from inside your own organisation.

Review your network. The computer security controls set by the supplier may not be secure. This could allow a virus to find a way in and infect the computers in your company.

Finally, be prepared. Executives' first reaction to a breach is often to spend time asking 'Who did this to me?', followed by a search for the 'guilty'. By contrast, when San Francisco's public transit system was held hostage by cyber attackers, managers were prepared and were able to decide quickly to open the gates and allow free travel. But if hackers had attacked safety rather than payments, the correct decision would have been to close the network.

D Good cyber security, like worker health and safety, is becoming obligatory, said Elizabeth Corley, vice-chair of Allianz Global Investors.

Hackers may be inadvertently performing a useful service: prompting executives to fix the human weaknesses at the heart of their organisations.

2 Read the article again quickly and match the sub-headings (1–4) with the sections of the article (A–D).

1 Tips to help a company prepare for a cyber attack ____
2 A comparison of employee and computer safety ____
3 A car company experiencing many cyber incidents ____
4 Examples of two types of computer attack ____

3 Choose the correct option (a, b or c) to answer the questions.

1 How many days does it take most companies to realise that a security problem has occurred?
a almost 100 **b** fewer than 60 **c** about 7

2 Who disapproved of the way Yahoo! handled the security problem?
a investors **b** customers **c** both

3 Why is it a danger to trust the security controls set by the company that supplies the computer network?
a They could already have a virus. **b** They might not be secure enough. **c** They don't have firewalls.

4 What did the hacking of San Francisco's public transit system affect?
a safety **b** health **c** payments

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4 Find words/phrases in the article with a similar meaning to the following.

A 1 criminal _____

2 move money from one bank account to another _____

3 too trusting _____

B 4 unfriendly _____

5 main objectives _____

C 6 tidy up _____

7 paying attention and being interested _____

D 8 at the centre _____

5 Complete the sentences with words/phrases from Exercise 4.

1 The customer realised that he had been _____ when he gave his password and card number to a stranger, but explained that he thought that the email was from his credit card provider.

2 As a result of the security breach, the bank advised customers not to _____ money to unknown accounts.

3 Trust is _____ of a company's relationship with its clients, which is why the company must communicate quickly when data is hacked.

4 A successful business needs teams that are _____ and motivated.

5 In the meeting, we decided that the two main _____ are to review cyber security and check our staff guidelines.

Passwords



Choose a word from the box to complete these sentences.

complex	default	hack
software	strong	technology

1. This password is easy to guess; it's _____ .
2. This password is difficult to guess; it's _____ .
3. This password is not simple: it's _____.
4. You use this password when you start using a new computer for the first time; it's a _____password.
5. People need to make sure the information on their computers is safe; they need good _____.
6. Attackers are people who _____a computer to find private information.
7. The information _____ (IT) department helps a company with their computers.
8. A computer program that gives the computer instructions is called _____ .

Do you ever have problems remembering your passwords? Why / why not?

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Reading

Part B: You are going to read an article about strong passwords. Before you read the article, decide if each statement is true or false. Then read the article to check your ideas.

1. Complex passwords are better than simple passwords.
2. You should change your default password.
3. If you can't remember your password, you should store it on your computer as a plain text file, for example, in a Word document.
4. It is better to create lots of different passwords for different websites.
5. Companies should have more relaxed rules about how customers create passwords.
6. Password management software is completely safe.

Do we really need strong passwords?

A way to know

Complex passwords don't usually stop attackers, but they make everyday life much more difficult for computer users, says the UK security agency GCHQ. They **recommend** using a simpler approach.

GCHQ gives some helpful advice for people who work in IT, as well as normal users. They **warn** people not to keep their default passwords. They also say that people should **avoid** storing passwords as plain text because other people, including attackers, can easily read these documents.

The organization says we should **stop** using too many complex passwords if we don't **want** to suffer from "password overload". This is what happens when people create too many long passwords for different websites and write them down so they can remember them. Writing down passwords is unsafe.

People often use complex passwords because of organizations' rules. For example, to be considered "strong", passwords must be a certain length or include numbers or special characters, like ! or *. Companies should **allow** people to use their own simpler passwords.

These simple passwords might consist of just three short words, for example. Or people could **consider** using password managers, software that creates and stores passwords. The passwords might be complex, but people will never **need** to remember them because their computer will do that for them. Computers don't **mind** storing and remembering complex passwords - it's what they're designed to do.

The report says that software password managers can help, but, like all security software, they can be hacked and are an attractive target for attackers.

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Part B: Read the article again and find verbs in bold which match these meanings. One word in bold is extra.

1. _____ make or change a rule to say someone can do something
2. _____ try not to do something
3. _____ think about
4. _____ feel that something is necessary
5. _____ feel that something is a problem
6. _____ give someone advice about the best thing to do
7. _____ do not continue with an activity
8. _____ tell someone what to do in a dangerous situation



Language point

Part A: Study the sentences from the article and choose the correct ending. All the sentences have *verb + verb combinations*.

They **warn** people **not to keep** their default passwords.

They also say that people should **avoid storing** passwords as plain text ...

The organization says we should **stop using** too many complex passwords if we don't **want to suffer** from "password overload".

1. The verbs *avoid* and *stop* are followed by **a verb + -ing / an infinitive with to**.
2. The second verbs in the sentences with *warn* and *want* are **verbs + -ing / infinitives with to**.
3. In these examples, the use of *warn* is different to the use of *want* because *warn* is immediately followed by **the second verb / an object**.

Note there are two ways to use some verbs. Both patterns have the same meaning in most contexts.
I like/love/hate/prefer playing/to play football.

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Part B: Put five more verbs in bold from the article in the correct part of the table, as well as the verb that follows each one in the article. Write the object if there is one.

	followed by infinitive with to	**followed by verb + *-ing***
example from the article	want to suffer	avoid storing
	warn people not to keep	stop using
more examples	agree to	suggest
	decide to	practice
	hope to	can't stand
	learn to	dislike
	plan to	enjoy
	promise to	finish
	refuse to	give up
	tell someone to	
	would like to	

Practice

Make complete sentences from these words. Change the verb forms and tenses where you need to.

1. The boys / dislike / wash / the car.

   _____

2. My dog / can't stand / have / a bath.

   _____

3. We / hope / visit / Australia / next year.

   _____

4. I / not mind / wait / for you / after class.

   _____

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5. She / need / practice / her pronunciation.

_____

6. They / promise / help me / with my homework.

_____

7. The teacher / tell / the students / speak English.

_____

8. The police / warn / us / not go / into that area / yesterday.

_____

Extra practice/homework

Choose the correct form of the verb.

1. My parents never allow me **to come home / coming home** after midnight.
2. They considered **to sell / selling** their second car.
3. Most people enjoy **to spend / spending** time with their families.
4. When will you finish **to clean / cleaning** the kitchen?
5. I am learning **to ride / riding** a horse.
6. What do you plan **to do / doing** this weekend?
7. My father suggested **to visit / visiting** the museum.
8. He wanted **to see / seeing** some new paintings.

Speaking

Use the points below to think of things that are true for you. Write phrases in the boxes, as in the example, but do not write the first verb. You don't need to use all the phrases but choose a mixture of *infinitive* and *-ing* forms.

- something you can't stand doing at the beach
- something you need to do to learn English
- something you recommend doing to visitors to your town
- something you refuse to do around the house
- something you should practise doing
- something you think drivers should not be allowed to do
- something you usually avoid doing
- something you usually finish doing very quickly
- something you would like to do next summer
- something you've decided to do at the weekend
- something you've given up doing
- something your teachers always tell you to do

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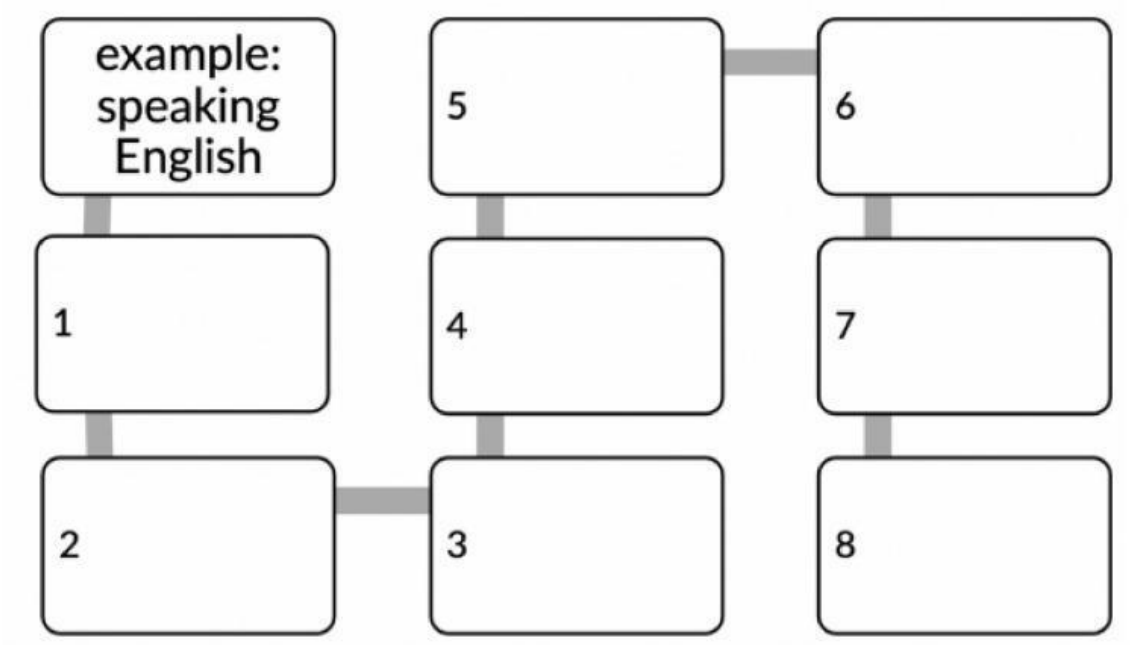
Work in pairs. Look at each other's boxes and ask questions to guess the first verb, like this:

A: You wrote "watching films in English". Do you suggest watching films in English?

B: No, try again.

A: Do you enjoy watching films in English?

B: Yes, that's correct. My turn now.



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Optional extension

Part A: To make a password stronger, many websites ask people to use letters, numbers, and special characters. We also use these special characters for website addresses.

Match the characters with their names.

1.	.	a.	backslash
2.	/	b.	dot
3.	\	c.	underscore
4.	@	d.	at
5.	-	e.	double u
6.	_	f.	dash
7.	w	g.	forward slash

Now read the following URLs and email addresses:

- www.amazon.com
- www.travel-abroad.co
- www.example.com/mail
- www.food.net/greek_food.html
- tony@hotmail.com
- www.learn-english.com/grammar

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