

Cyber security

with Dr Jason Nurse
and Jamie MacColl

Talking points

Knowledge & Comprehension

1. What occurs during a ransomware attack?
2. What are the impacts of ransomware attacks?
3. What are the challenges involved in assessing the full impacts of ransomware attacks?

Application

4. If cyber criminals attacked a school with ransomware, what impacts would it have on the students, teachers and functioning of the school?
5. Jason refers to 'anecdotal evidence' that cyber criminals specifically target companies with cyber insurance. Why do you think it is difficult to gather more robust evidence on this potential trend, and how might the research team overcome these challenges?
6. What skills do you think are important to communicate academic research findings to politicians, the media and the public effectively?

Analysis

7. Why do you think most government policies recommend that individuals and organisations do not pay ransom demands?
8. What impact might having cyber insurance have on a company's likelihood of being attacked by ransomware, and why?

Synthesis

Imagine you work alongside Jason and Jamie:

9. What recommendations would you make to policymakers and companies to prevent the issue of underreporting of cyber attacks?
10. What recommendations would you make to policymakers and insurance providers to help protect companies from ransomware attacks?
11. What recommendations would you make to policymakers and cyber security experts to address the cyber security challenges and opportunities from artificial intelligence (AI)?

Evaluation

12. If you ran an organisation, how likely would you be to take out cyber insurance, and why?

Activity

On behalf of RUSI, Jamie must give a speech to a government committee about your recommendations from question 9, 10 or 11, and he has asked you to write it for him. Select one of the following topics:

- The importance of reporting cyber attacks
- The role of cyber insurance
- The impacts of AI on cyber security

The committee members have an interest in the issue but are unlikely to have any depth of expertise in the topic. They are also very busy. Think about what this means for communicating effectively with them. Write a speech for Jamie that contains the following:

- An introduction to the issue
- Why the issue is (or might become) a problem, and how it impacts stakeholders (e.g., individuals, organisations, cyber security experts, wider society)
- Clear policy recommendations for how to address the issue

As records of committee meetings are made publicly available, the media will probably want to interview Jamie after he has given his speech. To prepare for this, Jamie has asked you to adapt the original speech so it communicates the message to the public. To do this, think about:

- Which parts are most important or interesting for a broader audience who may have little or no knowledge of the topic?
- How might the issue specifically impact individuals reading, watching or listening to Jamie's interview?
- What specific actions can audience members take to improve their own cyber security?

More resources

- The iCSS has a range of outreach resources for schools: research.kent.ac.uk/cyber/outreach
- In this article, Jason explains how big companies collect data about you and what this means for digital privacy: www.theconversation.com/amazon-facebook-and-google-dont-need-to-spy-on-your-conversations-to-know-what-youre-talking-about-108792
- This TEDx talk by Dr Erik J. Huffman introduces the psychological tricks exploited by hackers and how psychology can improve cyber security: www.youtube.com/watch?v=FrNLE1lxgak
- The Record is an online news site that specialises in cyber crime stories: www.therecord.media