



Office of the Chief Information Officer

U. S. Department of Education

# CYBERSECURITY & PRIVACY AWARENESS

*VIRTUAL ESCAPE ROOM*

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# New Virtual Escape Room Course

- In FY2022 the Department released a gamified Cyber Security and Privacy Awareness course which features a simulated escape room.
- This course provides essential information on user responsibilities for complying with Department policies, guidance, procedures, and best practices designed to reduce these risks.
- Compliance with Web Content Accessibility Guidelines (WCAG) ensures that it is accessible to all learners.
- The escape room gamification format is a fun way to increase user awareness of potential threats, vulnerabilities, and risks to the security and privacy of the Department's information and information systems.

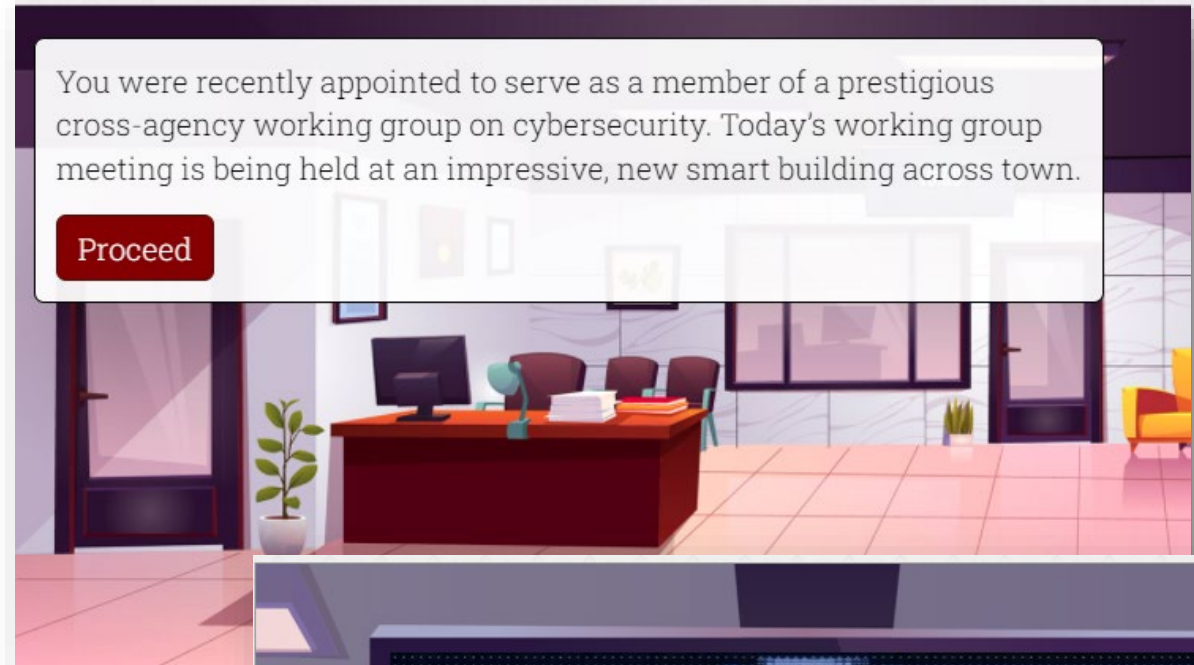


# Benefits of Gamification

- Increases learner engagement by holding attention and increasing motivation.
- Improves knowledge absorption and retention and enhances the overall learning experience as it appeals to multiple learning styles.
- Makes eLearning fun and interactive. If learners are having fun and are getting excited about learning, they are more likely to acquire and retain information.
- Allows for real world application of knowledge.

# Training Concept

- After entering the building lobby, you find that the evil Dr. Mal has installed malware on the smart building's security system and to your dismay, you are now locked in. The only way out is to locate the cipher code to the exit door. Unfortunately, Dr. Mal has broken the code up into pieces and hidden a piece in each office throughout the building.
- You must use your cyber security and privacy knowledge, as well as your wits and cunning, to work your way through each office. Solve the clues and interact with cyber security and privacy scenarios to receive a piece of the cipher code. Collect all the pieces and assemble the code to escape the building and complete the course.



# Test-Out Option

The screenshot shows a virtual escape room environment. At the top left, the name 'Dr. Mal' is displayed. At the top right, it says 'Page 5 of 53' and has a menu icon. In the top right corner of the room, there is a yellow button that says 'Need Help?'. A digital clock in the center of the room displays '10:00'. A large white dialog box is centered on the screen with the text 'What will your choice be?'. Below this text are two red buttons: 'Take Dr. Mal's Test-Out' and 'Proceed to the Escape Room'. The room features a pink tiled floor, a reception desk, a potted plant, and several doors. At the bottom of the screen is a control bar with icons for mute, document, navigation (back, forward, refresh), and close.

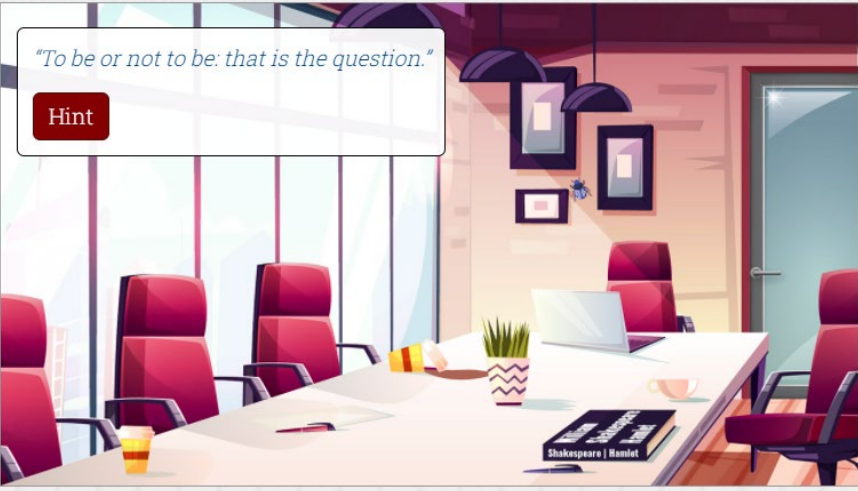
- Learners who already have a strong understanding of the content may opt to complete the course using the test-out feature. This challenging assessment allows those with competency in the subject to easily demonstrate it, thus saving them time.
- Those that prefer to complete the full course or who did not successfully pass the test-out proceed to the escape room.

# Solve the Clues

Learners solve clues that grant them access to real world cyber scenarios.

Office Room 1 - Clue 2 Page 10 of 53

Nice! First clue solved. What a cyber win. The next clue is behind the recycling bin.

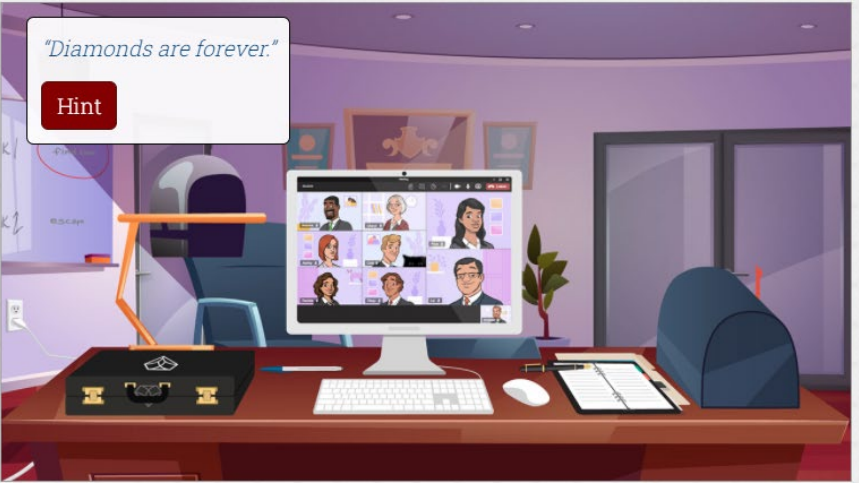


The image shows a modern office conference room with a long white table, red chairs, and large windows. A text box in the upper left corner contains the quote: *"To be or not to be; that is the question."* Below the quote is a red button labeled "Hint".

Navigation icons: speaker, document, left arrow, right arrow, refresh, close.

Office Room 5 - Clue 4 Page 50 of 53

Signed, sealed, and delivered. The message within brings you to the final clue.



The image shows a desk with a computer monitor displaying a video conference with several participants. A text box in the upper left corner contains the quote: *"Diamonds are forever."* Below the quote is a red button labeled "Hint".

Navigation icons: speaker, document, left arrow, right arrow, refresh, close.

# Use Your Cyber Knowledge

## Public Wi-Fi

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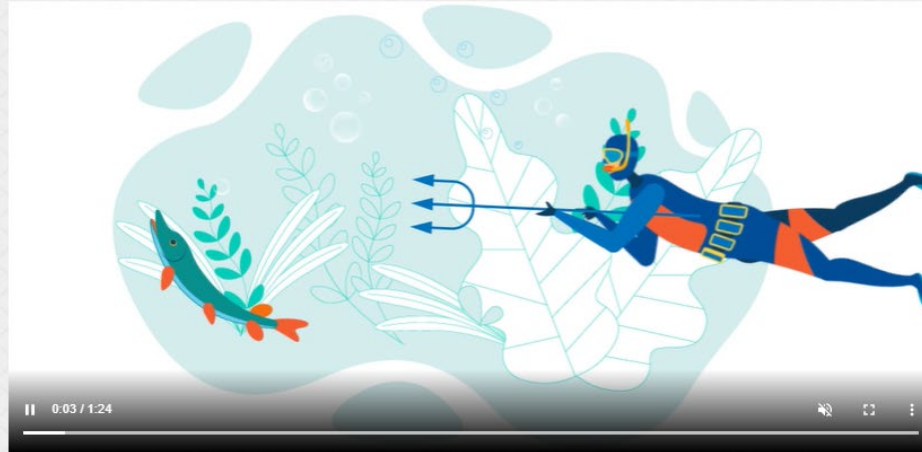


Antoine is going to the office today for a meeting with some colleagues. He's enjoying the ability to work remotely and also nice to get a break about for a change. His commute was reduced so he decides to stop at a nearby café to get a coffee as he has a long drive home before the meeting. Might as well get something for himself! It'll be a good opportunity to check up on email so he puts out his laptop.

Show next panel

## Spear Phishing

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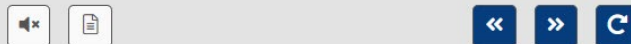
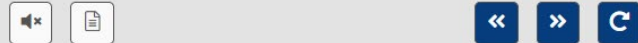
## Digital Signatures

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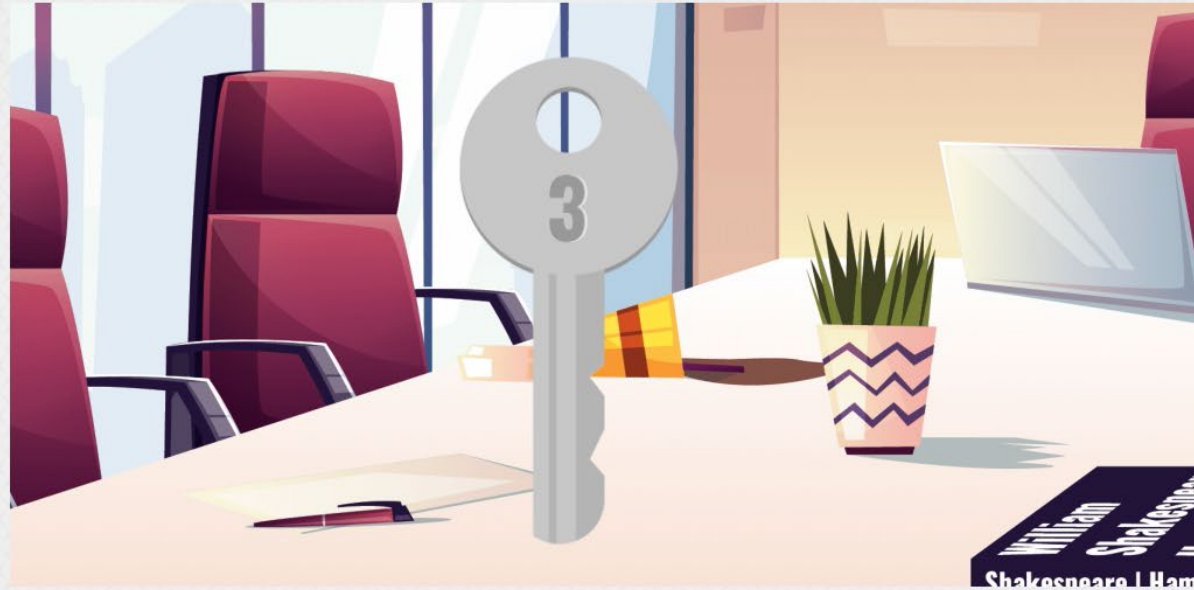
A digital signature is a process that guarantees that the contents of a message have not been altered in transit. It also acts as an assurance that an email is genuine and from the sender indicated in the address.

An ActivClient Login popup screen displays which requests you to enter your username and password. After successful login, a Personal Identity Verification (PIV) card. Nice work. At the end of the session, you are prompted to enter your PIN and select **OK** to digitally sign the document.

Branching scenarios and hands-on activities enable users to actively engage with the content.



# Solving Clues Unlocks Each Room



Once all clues in a room are solved, a key is revealed, and that room unlocks.





# Enter the Override Code to Escape

The screenshot shows a training interface for a cipher puzzle. At the top left, the title "Cipher" is displayed. At the top right, it says "Page 52 of 53". The main content area features a keypad on the left with a screen that says "ENTER CODE". The keypad has buttons for numbers 1-9, 0, #, and CLEAR, with corresponding letters: 1 (ABC), 2 (DEF), 3 (GHI), 4 (JKL), 5 (MNO), 6 (PQR), 7 (STU), 8 (VWX), 9 (YZ). To the right of the keypad, five keys are shown with numbers 3, 25, 2, 5, and 18. Below the keys, a 26-letter alphabet is displayed in two rows: "A B C D E F G H I J K L M" (1-13) and "N O P Q R S T U V W X Y Z" (14-26). A video player interface is visible at the bottom with a play button, a progress bar showing "0:01 / 0:39", and navigation controls (back, forward, refresh, close).

Once all rooms are unlocked, the learner can use the keys they found to reveal the code that unlocks the building thus completing the training.

# What did the Learners Think?

This was probably the best training I have done over the years. It was interactive and engaging, love the clues and graphics to keep it entertaining!

**ABSOLUTELY LOVED IT!**

It was challenging and I liked Dr. Mal.

Escape room format made learning exciting.

**This was excellent, please continue building on these types of concepts/themes.**

Though it was fun and definitely kept my interest and focus.

Escape room was entertaining with the different voices and animations.

Enjoyed the Dr. Mal scenarios and the keys. Humor was appreciated.

I really enjoyed the Escape Room format. Enough interaction to keep me engaged without taking away from the content!

Yes, this was by far the most entertaining and engaging cyber security training I have ever taken. These trainings are typically painful, but not so much this time around.