

# Cyber security exercise for digital healthcare

Cyber security exercise for digital healthcare in the Healthcare Cyber Range (HCCR) environment is safe and controlled. The exercise enables development of knowledge and performance that enhances patient safety.



## Simulated exercise environment for healthcare

The healthcare professionals are accustomed to studying new skills in training events taking place in a simulated environment where the training proceeds according to a scenario prepared in advance. In simulated environments, they also practice skills that cannot be practiced with patients or live patient data.

## HCCR – Healthcare Cyber Range for digital healthcare cyber exercises

The same basic principle of enhancing patient safety is applied to the world of digital healthcare. In a digital operation environment, a cyber incident needing immediate reaction can be targeted straight at the healthcare organization. The cyber incident can cause significant side effects for an organization through its service chain or a stakeholder.

### Advantages for healthcare organization

- Recovery from cyber incidents and systematic development of knowledge about them facilitate high quality and efficient service.
- According to publicly available authentic examples of cyber incidents and calculations, recovery from cyber incident causes the targeted organization remarkable and unforeseeable expenses.
- By exercising, the organization identifies development targets and promotes them according to its own priorities and resources.
- Exercising internal operational models builds confidence in securing patient safety and continuity of operations. The organization is able to take patient safety into account already in their procurement.

## Founded on determined and continuous development work

Healthcare Cyber Range (HCCR) environment is based on Realistic Global Cyber Environment (RGCE) which has been developed actively and with great determination since its foundation in 2011.

RGCE exercise environment has been utilized in several national and private cyber security exercises and training events. Also, a multitude of scientific articles and theses have been written based on the environment.

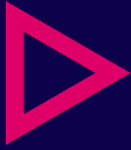
JYVSECTEC - Jyväskylä Security Technology staff at the Institute of Information Technology are responsible for the development of RGCE.

## Cyber exercises for digital healthcare

Digital healthcare exercise environment enables healthcare actors to practice as a work community against cyber incidents caused by real threat actors and threat models. Actors use their own processes with their service providers and stakeholders.

### Benefits for the participants of cyber exercise

- Identify their own knowledge and development targets
- Learn to work together and recover from a cyber incident
- Understand and identify potential threats and incident mechanisms and are able to protect themselves from them
- Practice internal operational models



# Healthcare Cyber Range (HCCR)

During Healthcare Cyber Range project (2019 – 2021) a simulated realistic cyber security exercise environment for digital healthcare is built and piloted in a cyber security exercise. Utilizing the environment, actors in digital healthcare can train their staff's skills in cyber security, develop their resilience and thus make sure of the organization's operational continuity.

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