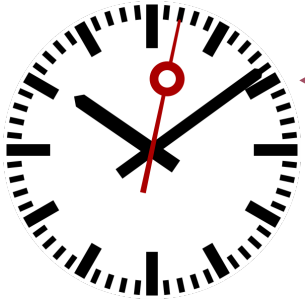# Cyber Range Exercises

BIS - Cyber Resilience Coordination Centre

Sameh Mekhail

Agenda

Today's Agenda

Duration: 12 mins

➢ **What is a Cyber Range Exercise?**

➢ **BIS Cyber range exercises**

➢ **Shared experience / Lessons Learned**

➢ **Q&A**

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What is a Cyber Range and what are cyber range exercises?

- No lack of definitions in the cyber security world.

- Cyber range is a **controlled environment** replicating the technology and business processes of a specific structure where exercises can be performed.

- Cyber range exercise types:
  - **Tabletop:** Run through a scenario with stakeholders
  - **Full simulation Technical**: Simulation of a large-scale cybersecurity incidents that escalate to become cyber crises
  - **Full simulation Hybrid**: Full-simulation technical + Tabletop for other units
  - **Training and competition exercises**: Technology focused (e.g. CTF)

BIS CRCC Cyber Range Exercises

- Full Simulation technical

- Table top for managers and regulators

- Light touch for supervisors

- CTF

- Hybrid

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6 Tips for successfully organising exercises

1. Why have an exercise? – Context

Context and Goals inform the exercise type and design

- Commonly available exercises: standard scenarios, table-top for multiple orgs

- Coordination on international level is limited

- Two exercise worlds : business processes – technical exercises

2. Focus on what you want to achieve - Goals

- Preparedness and Process testing => Table top testing specific process

- Test technical knowledge and solutions => Full simulation using actual technology

- Promote Info sharing => Key stakeholders – Scenario only solved by sharing

3. Prepare suitable resources per type of exercises

- **Human**
    - Planning team
    - Event Management
    - Role Players
    - ....
- **Infrastructure**
    - Conferencing Venue Vs. Virtual
    - IT
- **Red Team / Story line**

- **Support Services**

Dedicated Converged Infrastructure solution

Dedicated High Speed Network connectivity

Physical Vs Virtual – Different resources

4. **Dedicated Helpdesk person for every team**
Call, chat, email, video call

1. **Remote access to range systems**

3. **Video conferences with role players and team**
CISO, Investigator, law enforcement

2. **Join team members in other countries**
Collaborate, Chat, share,

4. Participants vs exercise goal and context

- Different exercises are suited for different audience

- Clarify who you expect to join the exercise

- Distribute participants (e.g. in teams) evenly based on profile and skill level

- Ensure you still provide them with some training before the exercise

5. Make it immersive and realistic

- Good Experience needs realistic surroundings
- Examples: Role Playing (Management, Customers) , News and social Media, Time stress

News

Live Interviews

Interrogations

6. Exercise flexibility is key

- Unexpected events will occur (inject failure – super experienced participants)

- Rhythm is too quick or too slow

- Adjust complexity (even within the same exercise to different teams)

- Provide continuous briefing – Don't just wait till the end

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Questions?