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GT ARC
GERMAN TURKISH
ADVANCED RESEARCH CENTRE FOR ICT

Predicting and Defending Against Cyber Attacks on IT Networks

COSY

Motivation

The progressive development of new ICT leads to a growing digitalization in everyday life and at the same time creates constantly growing dependencies on applications, services and IT infrastructures. For example, the IoT or the industry 4.0 are creating cyber-physical systems and are increasingly merging the physical with the digital world. Conventional security solutions, such as firewalls, SIEM applications or IDS solutions are often not fully effective in highly complex and highly dynamic systems. They do not offer an optimal approach to protect against cyber-attacks and threats and to react to them early and minimize damage.

Solution: Cosy

The aim of the project is to provide a comprehensive and innovative solution for the detection and protection of IT systems. The focus is on the development of AI methods for predicting cyber threats and calculating responses to reduce potential risks and damage. By using game theoretic solutions, optimal strategies for prevention and countermeasures will be generated. In a dedicated hybrid test environment (physical and virtualized components), controlled threat prediction tests are performed and analyzed so that results are made available to the research community in the form of an open data set.

PROJECT OVERVIEW

PROJECT TITLE

COSY - Cognitive Cybersecurity

WHAT IS IT ABOUT?

The project will develop a framework for predicting cyber attacks and, at best, preventing potential damage and risks, based on game theory approaches and artificial intelligence.

RUN-TIME

from 2019/04/01 to 2022/03/31

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BUZZWORDS

cybersecurity, threat prediction, artificial intelligence, risk mitigation

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