

Regulatory Approaches for Nuclear Computer Security

Member States have developed regulations for safety and security for nuclear facilities, radioactive materials, and associated facilities including inspection programs for compliance. Due to the increasing computer security threats to the nuclear industry, computer security regulation must also be developed and implemented at a State level to ensure the protection of nuclear information and operations to maintain the integrity, availability, and confidentiality of *critical functions performed by digital systems/assets* for nuclear facilities and materials.

Among member states, there is a spectrum of experience in the implementation of nuclear computer security regulations. Some states have used a prescriptive approach to regulation and others have developed a regulatory structure that is performance-based. A state's regulatory experience with nuclear computer security impacts the appropriate level of prescriptive vs performance-based regulatory implementation.

Some states have found that the dynamic computer security threat environment has driven them towards a performance-based approach.

- A potential example of a prescriptive approach to computer security would be the requirement for licensees to evaluate the implementation of over 1000 technical controls for each digital device.
- An example of a performance-based approach to computer security would be a high-level regulatory requirement that could read, "The licensee shall protect the systems and networks that would, (i) Adversely impact the integrity or confidentiality of data and/or software; (ii) Deny access to systems, services, and/or data; and (iii) Adversely impact the operation of systems, networks, and associated equipment."

The technical meeting will explore the benefits and challenges of prescriptive, performance, and a hybrid approach to computer security regulation. The IAEA encourages participants to give presentations on the topic at the technical meeting.

Participants who wish to give presentations are requested to submit an abstract of their work. The abstract will be reviewed as part of the selection process for presentations.