

The Strategies of Physical and Cyber Security in Sudan

Mohammed Abdulrahman¹ / Khalid Ayoub²

¹ Sudan Atomic Energy Commission (SAEC)

² Ministry of Communications and Information Technology (MCIT)



International Conference on Physical Protection of Nuclear
Material and Nuclear Facilities

Vienna, Austria, 13 – 17 November 2017

Aims and scope

- ◎ **The aim of this presentation is to show:**
 - > The strategies of cyber and physical security in Sudan.
 - > The main three bodies that stand of information management in Sudan.
 - > The system of physical security that applied in the official governmental data center in Sudan.
 - > R&D of information management in Sudan.
 - > Latest statistics of cyber attacks in Sudan.

Physical and cyber security

- ⦿ The physical and cyber security are so integrated parts, that each complement the other.
- ⦿ The physical attacks in some cases could be for cyber attack, so the data must be secured physically and through the firewalls.
- ⦿ In addition; the security tools itself need to be controlled by software platforms.

Collaborators

- ⊙ **There are three bodies that collaborating in developing the information security in Sudan.**
 - The National Information Center (NIC)
 - Sudan Computer Emergency Response Team (Sudan Cert).
 - The Nile Center for Technology Research.

The National Information Center (NIC)

- NIC is an official body that is directed by the Ministry of Telecommunications and Information Technology.
- It works in several sectors such as infrastructure of cyber, software applications, cyber standards, and promotion the industry of information management.
- It is responsible officially for cyber security in Sudan.
- As one of the main activities; NIC is conducting regional activities to share the culture of cyber security.

The Responsibilities of the National Information Center (NIC)

- ◎ The NIC is responsible for:
 - > Establishing and achieving the national strategy of information security.
 - > Establishing and updating the regulations of information security in Sudan.
 - > Encourage the distribution of the national products that serve in information security.

Sudan Computer Emergency Response Team (Sudan Cert).

- ◉ The Sudan Computer Emergency Response Team (Sudan CERT) is established by generous initiative of Sudan's National Telecommunication Corporation.
- ◉ It Serves as a trusted focal point collecting statistical information on networks incidents, to be published periodically as report on threats.
- ◉ Assists in publishing the awareness in information security through Sudanese citizens.
- ◉ Tracks, tests, and analyzes reports of threats.
- ◉ Supporting for law enforcement.

Nile Center for Technology Research (NCTR)

- ◉ NCTR is an R&D governmental institution under supervision of the ministry of telecommunication and information technology.
- ◉ NCTR provides a wide range of products, services and solutions that cover different aspects of the ICT fields such as Information security, networks, communication, electronics and radio systems, software solutions and consultations.
- ◉ NCTR gives a special concern to encryption and Information security, communication, and navigation systems.

Wathiq

- ◉ The main product of NCTR that assists in cyber security is Wathiq Terminals Manager.
- ◉ Wathiq is an Arabic word means confidence.
- ◉ It has been designed to manage terminals using central management system.

Wathiq



The strategy of Information security in Sudan

- ◉ The information management in Sudan is supported in the governmental level.
- ◉ The strategy of Information security in Sudan appears in the role of the following bodies:
 - NIC as national body concerns on securing governmental information, draws regulations, and support with the required facilities.
 - NCRT as a national body for research and technology in ICT and network security.
 - CERT Sudan as a response team for information and privacy accidents.

Physical security

- ⦿ The physical security that applied in the main data center in Sudan compounds security tools with high integral platform to insure the targeted security.
- ⦿ Besides that, the data center has been situated in the National Telecommunication Corporation (NTC) building which is extremely secured with natural protective environment and highly security system managed by highly qualified security officers and reliable security equipment.

Telecommunications Tower



Controlled Entrance



Secured environment



Optimal location

Parameters in physical security



**Full Automatic
Access Control
system**

**X-ray check
points**



Parameters in physical security

**Secured
environment**



**Security
officers**

Parameters in physical security



CCTV Monitoring Systems

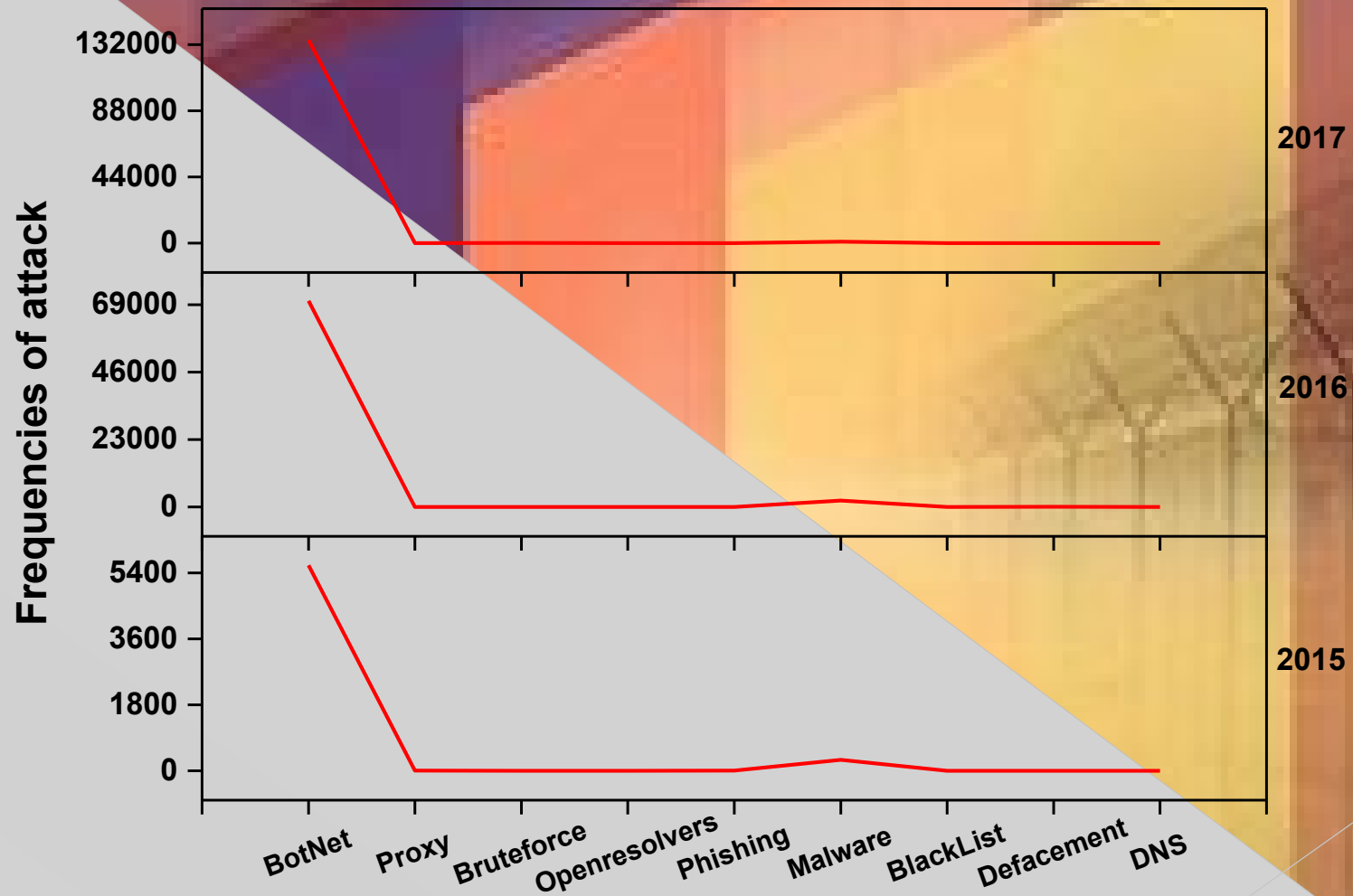
limited
accessibility
for specific
resources



Hacking statistics

- ◎ The Statistics of cyber attacks in Sudan shows
 - > High frequency of attacks for Botnet connected devices for three years (2015 – 2017).
 - > The higher frequency is in 2017 (135250) followed by years 2016 and 2015 (70314 and 5612) respectively.
 - > Malware attacks have also been increasing from 2015 till September 2017 as follow (300, 2225, and 1000), respectively.

Frequencies of cyber attacks detected in Sudan through the years: 2015 – 2017.



Conclusion

- ⦿ Due to global revolution in Information technology and security; Sudan as well shows significant improvement in both issues.
- ⦿ The main data center in Sudan is well located in secure area and controlled with highly reliable system of physical security.

Conclusion (continued)

- Regarding cyber security; there are three bodies in Sudan handle this issue; which are: The National Information Center (NIC), Sudan Computer Emergency Response Team (Sudan Cert), and the Nile Center for Technology Research; all of them under governmental supervision and each of them cover a specific area in information management.

The background features a large, light gray triangle on the left side. To its right, there are several overlapping, semi-transparent geometric shapes in shades of purple, blue, orange, and yellow. In the bottom right corner, there is a small, solid magenta triangle. The overall composition is modern and abstract.

Thanks for attention