CEN/CENELEC/CSCG N 410



ABOUT ETSI CYBERSECURITY

Brief facts

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Cybersecurity worldwide



ETSI

Cybersecurity within Europe



ETSI



TC CYBER sets base standards for ETSI and provides expertise where required:

• Security white paper



Cyber Security

- <u>http://www.etsi.org/images/files/ETSIWhitePapers/etsi_wp18_CyberSecuri</u> <u>ty_Ed1_FINAL.pdf</u>
- Role, Standards
 - <u>http://www.etsi.org/technologies-clusters/technologies/cyber-security</u>



Cyber Security at ETSI

- e Horizontal cybersecurity
 - Global Cybersecurity Ecosystem
 - Privacy by design
 - Security controls
 - Information Security Indicators
 - Network and Information Security
 - Network gateway cyber defence and middlebox security...
- Securing technologies and systems
 - Mobile/Wireless Comms (3G/4G, TETRA, DECT, RRS, RFID...)
 - IoT and Machine-to-Machine (M2M)
 - Network Functions Virtualisation
 - Intelligent Transport Systems
 - Broadcast...
- Security tools and techniques
 - Lawful Interception and Retained Data
 - Digital Signatures and trust service providers
 - Secure elements
 - Cryptography (algorithms, quantum key distribution, quantum-safe cryptography)

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ETSI working on Security Standardization

ETS

- The Internet of Things
- eHealth
- Trust Service Providers
- Secure Cards and Elements
- Cryptography
- Network Functions Virtualization
- Lawful Interception and Data Retention
- Security within work areas





- TR 103 456 Implementation of the Network and Information Security (NIS) Directive Publication soon this year
 - Guidance on available and ongoing standards or development initiatives to meet Directive (EU) 2016/1148
 - Overview of the NIS Directive
 - The context for NIS
 - ENISA recommendations on standardisation
 - Cyber threat intelligence sharing: incidents and risks
 - Role of risk analysis in protecting NIS
 - Challenges, obstacles, and recommendations
 - Harmonizing implementations across the diverse network and service sectors and Member State legal and operational environments
 - Recommendations

Example of Guide on Quantum Computing

- EG 203 310 Quantum Computing Impact on security of ICT Systems; Recommendations on Business Continuity and Algorithm Selection
 - In brief if the promise of quantum computing holds true then the following impacts will be immediate on the assumption that the existence of viable quantum computing resources will be used against cryptographic deployments:
 - Symmetric cryptographic strength will be halved, e.g. AES with 128 bit keys giving 128 bit strength will be reduced to 64 bit strength (in other words to retain 128 bit security will require to implement 256 bit keys).
 - Elliptical curve cryptography will offer no security. RSA based public key cryptography will offer no security.
 - The Diffie-Helman-Merkle key agreement protocol will offer no security.



Standards of TC CYBER



+ Work in progress – 12 Items including MiddleBox