

Cybersecurity assessment in telecommunications products approved by Anatel

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Conformity assessment of telecommunications products

- National Telecommunications Agency (Anatel) is the body responsible in Brazil for assessing the conformity of equipment classified as telecommunication products.
- One of Anatel's main concerns in the product conformity assessment process is the protection of consumer:
 - Electrical safety;
 - Elettromagnetic Compatibility;
 - Assessment of safe levels of electromagnetic radiation emission.
- Cybersecurity has become an object of concern for the Agency, especially because consumers do not have sufficient technical knowledge to assess whether the products are safe or not.
- Many approvals issued by Anatel are for consumer products (mobile phones, routers, modems, smart watches).

Conformity assessment of telecommunications products



- Certification Body (CB) conducts the process for product approval.
- CB defines mandatory laboratory tests product must undergo.
- For cyber security Anatel chose to initially establish a set of recommendations to be adopted by manufacturers:
 - [Anatel Act 77/2021](#).
 - Comprehensive set of recommendations
 - Recommendations are not assessed in product certification.
- Based on risk analysis, requirements of Act 77/21 can be defined as mandatory for certification of certain types of products.

Cybersecurity Recommendations (Anatel Act 77/21)

- Act 77/21 presents recommendations for product cybersecurity:
 - Software/firmware update.
 - Remote management.
 - Installation and operation.
 - Access to equipment configuration.
 - Data communication services.
 - Personal data.
 - Ability to mitigate attacks.
- It also presents process recommendations to be adopted by product manufacturers:
 - Clear product support policy, especially regarding software security updates.
 - Provide a communication channel for reporting security vulnerabilities identified in products.
 - Implement Coordinated Vulnerability Disclosure processes.

Cybersecurity Recommendations (Anatel Act 77/21)

- Act 77/21 also establishes that Anatel can carry out market surveillance activities:
 - The Act determines that if any cybersecurity vulnerability is identified in the approved product, Anatel will demand the manufacturer to correct it.
 - Depending on how critical the vulnerability is, Anatel may suspend the approval of the product, preventing it from being sold in the country.

Mandatory cybersecurity requirements

- In some cases, Anatel realized that recommendations are not enough to address vulnerabilities usually found in some products.
- In this case, it is necessary to establish mandatory minimum safety requirements for the approval of products.
- Based on a risk assessment, Anatel may define that some of the recommendations of Act 77/21 become mandatory in the product conformity assessment process.

Mandatory minimum requirements for certification of CPEs

- Anatel defined minimum cybersecurity requirements for approval of Customer Premise Equipment (home gateways) - [Anatel Act 2436/2023](#).
- The requirements focus on vulnerabilities such as:
 - Default factory passwords
 - Insecure passwords
 - Unnecessarily enabled communication services/ports
- The Act was published in March 2023 and its requirements will be mandatory for CPE approval from March 2024.
 - Equipment must undergo laboratory tests to assess whether they meet the requirements of the Act 2436/2023.

Summary of cybersecurity regulations

Regulation	Document	Subject
Cybersecurity Regulation Applied to the Telecommunications Sector	Anatel Resolution 740/2020	Promote security in telecommunications networks and services, including Cyber Security and the protection of Critical Telecommunications Infrastructures.
Cybersecurity Requirements for Telecommunications Equipment	Anatel Act 77/2021	Establish a set of cybersecurity recommendations for telecommunications equipment.
Mandatory minimum cybersecurity requirements for assessing the conformity of CPE (Customer Premises Equipment) equipment	Anatel Act 2436/2023	Establish a set of mandatory minimum cybersecurity requirements for assessing conformity general public use CPE employed to connect subscribers to the Internet service provider's network.

Next steps for product approval

- Study possible ways of assessing cybersecurity in IoT equipment.
 - Recommendations
 - Labeling Schemes
 - Minimum mandatory requirements
- The experiences of other countries presented in this workshop are of great relevance and will subsidize Anatel's studies on the subject.

Thank you!

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