Telecom Security Testing and Certification

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Telecom Network Security

- Telecom is the gateway to digital services and bedrock for all critical infrastructure.
- The security of telecommunication network is of paramount importance for any country in terms of economic prosperity, social wellbeing and national security, country's sovereignty, territorial integrity, strengthening the rule of law..
- Telecommunication sector is one of the seven critical sectors declared by National Critical Information Infrastructure Protection Centre (NCIIPC) established under the Information Technology Act, 2000.
- Telecommunication network include PSTN, PLMN, Satellite Network, Broadband Network, Leased Line Network etc

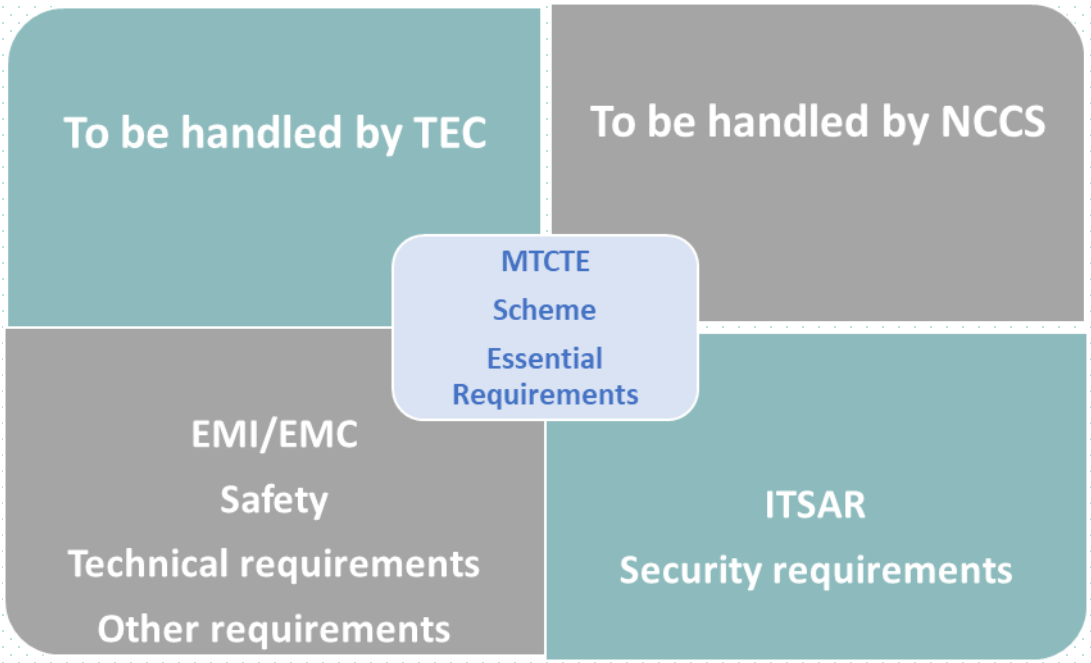
Indian Scenario-MTCTE

- The Indian Telegraph (Amendment) Rules, 2017, provides that every telecom equipment must undergo mandatory testing and certification prior to sale, import of use in India.
- The detailed procedure for Mandatory Testing and Certification of Telecom Equipment (MTCTE) under these rules has been notified.
- Mandatory testing and certification in respect of Security requirements is planned to be implemented through a Scheme titled ‘Communication Security Certification Scheme’ (ComSeC).
- National Centre for Communication Security (NCCS) shall be responsible for implementation of this scheme.

MTCTE

- MTCTE is to be carried out for conformance to Essential Requirements(ER) for the equipment, by Indian Accredited Labs designated by TEC /NCCS and based upon their test reports, certificate shall be issued .
- Essential Requirements of an equipment are a set of requirements against which Mandatory Testing and Certification of Telecom Equipment (MTCTE) will be carried out under MTCTE Procedure.
- Essential Requirements (ER) comprises of following parameters
  - (a)EMI/EMC (b)Safety (c)Technical requirements (d)Other requirements and (e)Security requirements..

MTCTE


To be handled by TEC
To be handled by NCCS
MTCTE
Scheme
Essential Requirements
EMI/EMC
Safety
Technical requirements
Other requirements
ITSAR
Security requirements

ComSec Scheme

ComSec Scheme

- Mandatory testing and certification in respect of Security requirements is being implemented through a Scheme titled ‘Communication Security Certification Scheme’ (ComSeC).

- To develop country specific security standards, processes and specifications
- To develop testing and certification eco-system
- To ensure Telecom network elements meet security assurance requirements
- To ensure compliance of regulatory requirements pertaining to security testing

ComSec Scheme

- The scope of certification covers all types of telecom equipment to be sold in India and to be connected to Indian telecom network, after the date of effect of this scheme, for which Indian Telecommunication Security Assurance Requirement (ITSAR) is available and is in force.

- National Centre for Communication Security (NCCS) is responsible for implementation of this scheme. NCCS is headed by Sr.DDG who is also the Scheme Controller

- Sr.DDG/ Scheme Controller is assisted by three divisions each headed by a DDG-
  - Security Assurance Standards (SAS) Division
  - Security Lab Recognition/Designation (SLR) Division
  - Security Certification (SC) Division

ComSec Scheme

- Scheme provides for:
  - Preparation and publication of various process documents for the three division of NCCS to carry out their tasks.
  - Preparation and publication of ITSARs based on country specific security requirements, International Standards and consultations with stakeholders such as OEMs, TSTLs, TSPs, Academic institutes, Industry and Government bodies.
  - Designation of Labs as TSTLs after satisfactory evaluation of their application and competency of the lab to perform the security testing as per ITSAR. The labs from private and public sector can be designated as TSTLs .
  - The designation is valid for a period of 3 years.

ComSec Scheme

- Scheme provides for
  - Issue of Security Certificate for a Telecom equipment after evaluation of test results submitted by TSTL chosen by the applicant viz., OEM, TSP, Importer etc. Certificate is valid for 10 years or till the equipment is modified, whichever is earlier.
  - Renewal and modification of certificates issued to TSTLs and the equipment.
  - Issue of temporary certificates to facilitate quick deployment of software patches like updates and upgrades.
  - Collection of fee for designation of TSTLs and certification of equipment.

ComSec Scheme

- Scheme provides for :
  - Dispute resolution mechanism for various process under the scheme.
  - Surveillance to ensure compliance to scheme requirements.
  - Dealing with non-confirmity and contraventions.
  - Pl visit https://nccs.gov.in for further details

ComSec Scheme

- Scheme provides for :
  - "Model' means a particular hardware/software design or version of a product/equipment bearing a unique model number assigned to the equipment. An equipment, which is different in either of hardware/ software/ design/ model/ version, shall be treated as a different model.
  - The model with full configuration of hardware, interfaces and software is called the Main Model.
  - Associated models for the purpose of security certification are those models which have identical software but having hardware which is a subset of the main model. Associated models of the telecom equipment shall be certified without testing.

ComSec Scheme

- Applicants intending to get their equipment certified will register on MTCTE portal.
- After registration, the Applicant can choose a designated TSTL for security testing of his equipment against the applicable ITSAR.
- TSTL will conduct the requisite testing under the supervision of a validator from NCCS.
- After completion of the testing, test reports will be submitted by the TSTL for evaluation and security certification by NCCS.
- On successful evaluation, security certificate will be issued.

TSTL designated so far

- Four Labs have been designated for security testing of IP router and 3 Labs have been designated for Wi-Fi CPE.
- Voluntary certification window is open since 1st sept, 2023. OEMs have started applying for security certification of their products.
- Few more TSTLs are being designated, especially for 5G.

Thank You

PI visit- https://nccs.gov.in