



भारत सरकार  
संचार मंत्रालय  
दूरसंचार विभाग  
राष्ट्रीय संचार सुरक्षा केंद्र

Government of India  
Ministry of Communications  
Department of Telecommunications  
National Centre for Communication Security



**Lt. No.: NCCS/SAS/TSTP/2021-22/19**

**dated 15.02.2024 at Bangalore**

## **Record of Discussions**

### **Consultation with TSTLs, Industry and Academia on “Testing of CSR clauses of ITSARs”**

Stakeholder consultation on “Testing of CSR clauses of ITSARs” with TSTLs, Industry and academia was held at NCCS, Bangalore on 12.02.2024 at 11:00hrs in hybrid mode. The list of the participants is at Annexure.

ADG (SAS-III), NCCS has extended warm welcome to the representatives of TSTLs, Industry and Academia. Sr. DDG, NCCS has briefed about the objective of the meeting and need to explore the possibility of covering CSR (Common Security Requirements) clauses of more Network Elements with minor augmentation in infrastructure and designation of TSTLs for CSR testing. He requested the stakeholders to provide their valuable inputs to finalize the process of designating TSTLs for testing CSR clauses of ITSARs of various Network Elements/Network Functions.

During the presentation made by DDG (SAS), the participants were explained about the similarities and differences between CSR clauses of 39 published ITSARs and four IoT ITSARs which are under finalization.

The following points are highlighted during the presentation:

1. There are a total of 105 clauses and 13 sections under Common Security Requirements (CSR)
2. 20 ITSARs of 5G Core NFs have all the 13 sections in CSR.
3. 3 ITSARs (gNodeB - 2 and NFV) have 12 sections in CSR. Section 12 General SBI/SBA is not applicable and hence not included under CSR.
4. 6 Nos. of 4G NE ITSARs have 12 sections in CSR. Section 12 General SBI/SBA is not applicable and hence not included under CSR.
5. Out of 6 CPE ITSARs, 3 (Wi-Fi CPE, ONT and PABX) are having 12 sections in ITSARs. Section 12 General SBI/SBA is not applicable and hence not included under CSR.

UICC (SIM) ITSAR is having 11 sections. Section 8- Attack prevention mechanisms is not applicable to UICC in addition to Section 12.

Two ITSARs viz. Hybrid Set-top Box and Mobile User Equipment are different from other ITSARs.

6. All the 4 (IP Router, CBC, OLT and TTE) other ITSARs are having 12 sections in CSR. Section 12 General SBI/SBA is not applicable and hence not included under CSR
7. All 4 (Feedback Device, Smart meter, Smart Camera and Vehicle Tracking Device) IoT ITSARs which are under finalization are having CSR clauses different from other ITSARs.

The salient points discussed during the meeting and views presented by the participants are listed below:

1. CSR of IP Router, OLT, TTE, Wi-Fi CPE ITSARs can be tested together.
2. It may be possible to categorize all network elements under two categories viz. Cellular equipment and non-cellular equipment for CSR testing purpose.
3. Testing procedure for Management plane related clauses may be same for all ITSARs.
4. WAN, LAN and management interfaces are there in most of the products. Design aspects need to be considered while deciding regarding grouping of equipment for testing purpose.
5. Explore the possibility of dividing CSR clauses into three parts viz. infrastructure, application & interface. Can a common method/ process be devised for these three parts for all the products?
6. From infrastructure requirement point of view CPE and IoT may fall under one group.
7. The basic points to be considered for deciding regarding CSR testing procedures of various NEs include a) Infrastructure b) Tools and Testers c) Manpower skill set d) Environment/dependencies and e) Interfaces f) radio and non-radio/core equipment.
8. The clauses may be grouped into three categories: NE specific (cellular, IP network & transport network), CPE specific (Wi-Fi CPE, ONT, etc.) & in between these two (such as mobile, UICC, etc.) & within the group common baseline requirement may be grouped. IoT devices may be taken up separately.
9. If TSTLs are designated for CSR testing, what will be the incentive for TSTLs to get designated for SSR (Specific Security Requirements) testing.
10. If no TSTL is designated for testing of CSR and SSR at the time of application of OEM for security testing of their product, then only CSR will be tested by designated TSTL. The SSR can be tested (if designated TSTL is available) as and when the OEM offers the product for testing of upgraded software.
11. A committee may be constituted to study the CSR testing process involved for different equipment and recommend for grouping of different equipment based on CSR testing processes and tools and environment required.

Feedback/inputs are requested from Industry/Academia in respect of following points:

- a) At present, the TSTL designated for testing of one ITSAR will be testing CSR and SSR clauses of that ITSAR.

- b) Whether the TSTL designated for testing of one ITSAR can test the CSR clauses of other ITSARs.
- c) The testing infrastructure and skill set required for testing 5G Core NFs, 5G RAN, NFV, 4G EPC, 4G RAN, CPEs, Other NEs will be different. Whether it is possible to test all CSRs of all ITSARs (having same clauses/ requirements) with minor augmentation of TSTL infrastructure/capacity.
- d) Is it possible to install common infrastructure and skill set by any TSTL to test CSRs of all ITSARs which are having same requirements and clauses.
- e) If some ITSARs are to be grouped for CSR testing, what should be the approach and what are the requirements?

All stakeholders were requested to mail their inputs/feedback with respect to above listed points regarding TSTL designation and grouping of network elements for CSR testing to mail IDs [ddgntb.bg-dot@gov.in](mailto:ddgntb.bg-dot@gov.in) or [dirnccs5.bg-dot@gov.in](mailto:dirnccs5.bg-dot@gov.in) latest by 25.02.2024.

DDG (SAS) thanked everyone for their active participation and concluded the meeting.



Director (SAS-III),  
O/o Sr. DDG, NCCS

To,  
All participants (through email)  
NCCS website for publication

## ANNEXURE

Physically present at NCCS Conference Hall (S/Shri/smt./Ms.)

- 1) S. N. Rama Gopal, Sr. DDG, NCCS
- 2) Srikrishna Karuturi DDG(SAS), NCCS
- 3) Atul Karelia, DDG(SLR), NCCS
- 4) R. Babu Srinivasa Kumar, DDG(SC & HQ), NCCS
- 5) N. Janardhan, Dir(SAS-III), NCCS
- 6) Prashanth Pantode, Director, NCCS
- 7) Anurodh Kumar, Director(SLR), NCCS
- 8) Manas Kumar Panda, ADG(SAS IV), NCCS
- 9) Ashutosh Diwakar, ADG (SAS-III), NCCS
- 10) Mounika Adepu, ADET-I(SAS-II), NCCS
- 11) Laxmikant, ADET(SLR), NCCS
- 12) Ashish Redhu, ADET(HQ), NCCS
- 13) Umakant, AD(SAS-I), NCCS
- 14) Abhilash, AD(SAS-II), NCCS

Virtually participated (S/Shri/Mrs/Ms.)

- 1) Ekta Mittal, Cisco
- 2) Jagdeep Walia, Ericsson
- 3) Jyoti Chawla, Nokia
- 4) Neelesh Som, Nokia
- 5) Ramakrishnan, Nokia
- 6) Akash, Nokia
- 7) Ravi Rupela, Matrix ComSec
- 8) Akib Sayyed, Matrix Shell
- 9) Sanjay Sharma, GRL
- 10) Nitin Mishra, Acucert
- 11) Brent Searle, Cisco
- 12) Srikanth R., EcoEnergy Insights
- 13) Ameer Rehmaan, Ciena
- 14) Kalyan Verma, GRL
- 15) KPM Das, Cisco
- 16) Krishnan, Deltaphi
- 17) Shubham
- 18) Sunil Shenoy, Sunren lab
- 19) Ramesh Gulati, Nokia
- 20) Sunil Verma, Nokia
- 21) Prashant Pandey, ST Microelectronics
- 22) Rahul Raybecker
- 23) Amit Singh, Thales Group
- 24) Rajesh Gupta, Ciena
- 25) John Ramesh, TUV
- 26) Shubham, TUV