

A. Purpose

The purpose of this Expression of Interest (EOI) is to perform gap analysis of existing security mitigation processes across BSNL network, comprising ADSL2+, GPON, MPLS, WiMax, WiFi and Mobile network, and propose a step by step process to establish a Security Operation Center (SOC) to address current gaps, recommend full proof security controls to achieve the desired security posture that is within the risk profile for BSNL.

B. Scope of Work

Security mitigation processes involves understanding of the network topology, traffic profiles, attack surfaces, vulnerabilities and understanding the existing security measures

Following is the scope of work for the Expression of Interest (EOI)

1. Topology

- a. Analyze the networking infrastructure at BSNL that serves the various subscriber types.
- b. Analyze end to end topology from the subscribers / Customer premise to the intermediate POPs, aggregation points, core network, egress gateways and peering mechanisms.
- c. Analyze topology to gauge the scale of the network both in terms of the physical layout as well and the network speeds

2. Network traffic profile

- a. Analyze network traffic profile at specific points of interest:
 - i. The average and peak bandwidths
 - ii. Types of communication protocols that traverse the network
 - iii. Normal usage patterns
 - iv. Network user behavior
- b. Analyze types and scale of security controls that are currently in place

3. Asset discovery

- a. Analyze any critical assets that are on the network. These include entities such as:
 - i. Customer premise equipment
 - ii. Servers (Compute, Apps, Network Functions etc.)
 - iii. Networking assets (relevant routers & switches, Firewalls, Load balancers etc.)
 - iv. IP Address ranges and allocation schemes
- b. Asset discovery will be done by a combination of interviewing key stake holders, documentation review and using existing tools available with BSNL

4. Attack surfaces & vulnerabilities

- a. Analyze the vulnerabilities in the assets to understand the attack surfaces that are exposed and pose a risk.
- b. Analyze Secure Software Development Life Cycle principles and process

5. Threat detection and prevention

- a. Propose complete frame work on how following shall be implemented across the network
 - i. Threat detection and prevention
 - ii. Malware detection and prevention
 - iii. DOS, DDOS and ADOS detection and prevention
 - iv. Data Loss Prevention
 - v. TLS inspection
 - vi. Botnet detection and prevention

6. Prepare Expression of Interest

Propose a complete Expression of Interest for where these controls shall be placed at strategic network points along with the appropriate policies and workflows.

Note:

- **BSNL will provide access for interviewing key stakeholders and reviewing documentation along with access to NoC and BSNL exchange**

C. Time for Competing the Analysis and Proposing EOI

1. Analysis Locations:

- i. BSNL NoC Bangaluru
- ii. BSNL NoC NCR
- iii. One BSNL Exchange that serves all type of traffic in Bangaluru (South)
- iv. One BSNL Exchange that serves all type of traffic in Delhi (North)
- v. One BSNL Exchange that serves all type of traffic in Pune (West)
- vi. One BSNL Exchange that serves all type of traffic in Kolkata (East)

2. Analysis Time:

- i. BSNL NoC Bangaluru – **5 days**
- ii. BSNL NoC NCR – **5 days**
- iii. One BSNL Exchange that serves all type of traffic in Bangaluru (South) – **2 days**
- iv. One BSNL Exchange that serves all type of traffic in Delhi (North) – **2 days**
- v. One BSNL Exchange that serves all type of traffic in Pune (West) – **2 days**
- vi. One BSNL Exchange that serves all type of traffic in Kolkata (East) – **2 days**

3. EOI Preparation Time:

It will take 10 working days to complete and propose first draft of EOI

4. Total Time:

Twenty-Eight working days (28) are required to complete assignment.

D. Cost (to be quoted): All-inclusive Rs. _____

E. Eligible Companies who are willing to work with BSNL may kindly send their proposal to:

DGM (Operation)
O/o Chief General Manager (NGNGN) Circle
Bharat Sanchar Nigam Limited
CTS Compound, Netaji Nager, New Delhi 110023