Guidelines for Independent Third Party Audit and Performance Monitoring Of SWAN

Draft for discussion

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1. Introduction

1.0 Department of Information Technology, MCIT, as part of its approved central sector 5 year Scheme of "State Wide Area Network (SWAN)", is providing technical and financial support to the States/UTs to set up their SWAN. The requirement for Third Party Audit (TPA) is defined in the SWAN Policy and the Government approval for the Scheme.

1.1 As per SWAN policy, all States/UTs are implementing SWAN under two Options . Under the first Option, the State is to select a suitable Public Private Partnership (PPP) model and get the SWAN commissioned and operated for 5 years by a private Network Operator. In the second Option, the SWAN for the States/UTs would be set up and operated for 5 years by the National Informatics Centre (NIC). In either of the Options TPA is required.

1.2 As a part of the implementation of the SWAN Scheme, quarterly Third Party Audit of the implementation and performance of the network within the provisions of the contracted SLA with Network Operator and bandwidth service provider is required. This shall be done by appointing an independent TPA agency. TPA shall also include timely advice to the State Government from time to time on the health of the network, bandwidth upgradation, optimal utilization, futuristic enhancement and augmentation of the capacity, exit process etc. In short, TPA shall perform the role of a Technology Partner to the State Government/UT in terms of all technical aspects of the SWAN, further, the payment to the Network Operator is linked with the quarterly report of the TPA agency.

1.3 Considering the above-mentioned scope of TPA, it is imperative that the TPA agency should have a high level of credibility , audit experience and background with adequate domain expertise in the area of Information Technology, networking experience, Security Audits, SLA monitoring and consulting.

1.4 SWAN Scheme has provisioned for financial assistance to the States/UTs to meet the cost for TPA. Individual SWAN projects from States/UTs, considered and approved by the Empowered Committee, have an estimated cost for this purpose within the overall project outlay. Department of IT, GoI has issued this document with the objective of setting the Guidelines for Third Party Audit to ensure that State/UT is well equipped and have clear understanding about the role of the

TPA before the SWAN is commissioned.   For appointment of a suitable agency to carry out the Third Party Audit, the following process would be adopted.

1.5 DIT would undertake a centralized initiative to go through the entire open competitive process for selection of a Panel of TPA Agencies by finalizing the RFP and involved technical and financial evaluation for selection of the Panel of Agencies to undertake Third Party SLA Audit. For this purpose, DIT, GoI is currently preparing the RFP to be used in an open competitive process.   A   panel of national agencies for TPA would be identified and option for selecting one of them would be given to the States/UTs. The Scope, Deliverables and Service levels for the TPA agency would be as per these Guidelines.

2. Third Party Audit Scope of Work (essential minimum)

2.1 General

Third Party Audit shall include monitoring the performance of the SWAN with a view to ensuring desired Quality of Service (QoS) by the Network Operator and bandwidth service provider as defined in the respective SLA's, signed between the State Government / UT, and Bandwidth Service Provider, Network Operator.   These Guidelines define the broad areas of work which TPA shall perform for a period of five years from the date of final acceptance test of the network. However, the TPA shall be appointed immediately before the acceptance testing and commissioning of the SWAN.

2.2 To understand the project TPA Agency would:

a) Study of the contract signed between the State/UT and the Network Operator and Bandwidth Service Provider.

b) Study the network design and the services envisaged

c) Review communication process among the stakeholders (State government, Implementation agency, SWAN operator, Bandwidth service provider and DIT-GoI).

d) Create frameworks and procedures for audit.

e) Study of the functionality of the Network Monitoring System (NMS) installed by the Network Operator and identify the gaps if any required for TPA scope of work. The additional module/tool required for the same will be procured by the State and TPA would assist the state with the procurement process for the same.

f) Review of the escalation mechanisms being followed to resolve any issues between the State Implementing Agency and the Network Operator related to the SWAN.

2.3. Acceptance Test (PAT, FAT)

a. TPA shall include review of the detailed acceptance test plan (PAT and FAT) in consultation with States/UTs after taking into account any comments/suggestions of the DIT.

b. TPA would also include audit of the process, plan and results of the Acceptance Test carried out by the Network Operator. TPA would include certification of completion for PoP's, for which TPA agency shall verify availability of all the defined services as per the contract signed between SWAN operator and State government. The SWAN operator shall be required to demonstrate all the services/features/functionalities as mentioned in the agreement.

2.4 Inventory

a. TPA would include verification of completeness of bill of material for each PoP.

b. TPA would include review that all hardware and software items have been installed at the sites as per the contract.

c. TPA would include maintenance of an inventory register to have PoP wise equipment list, including hardware and software. TPA would also include updating inventory registry in event of any changes in the inventory.

These exercises would include review of documentation, physical verification on a sample basis (5- 10 % sample size) and reports generated using NMS.
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2.5 SLA Monitoring Audit

SLA monitoring would include audit of the performance of network. Network includes the components provided and operated by the network operator and bandwidth provisioned by the bandwidth service provider.

Subsequently, TPA Agency would carry out the following tasks:

i. TPA would include preparation of templates for reports to be submitted by SWAN operator to TPA Agency / State and report to be submitted by the TPA Agency to the State and also tabulate measurable parameters as defined in the respective SLAs with the SWAN operator and bandwidth service provider.

ii. TPA Agency shall review the configuration/deployment parameters of the NMS and the process followed to ensure that the reports generated are authentic.

iii.   TPA Agency would proactively convey to the stakeholders regarding any concerns based on the information generated using NMS.

iv.   TPA Agency would provide quarterly certification of network availability and perform penalty computation for the calculation of QGR to be paid to the SWAN operator as per the SLA and payment conditions mentioned in the agreement between SWAN operator and State/UT. (Quarterly)

v.   TPA Agency would also undertake proactive monitoring of the links provided by the bandwidth service provider based on the SLA signed by the bandwidth service provider. The Agency shall submit reports on the same to the government who would use these reports for making the payments to the bandwidth service provider.

vi.   TPA would also include site inspection to verify those parameters of the SLA which can not be monitored using NMS. These site visits would be limited to 5% of the site per quarter.

2.6 Usage Audit

a.   TPA Agency would appraise the State/UT about the health of the network through reports indicating the bandwidth utilization, scalability requirements as per the current and envisaged State level applications etc.

b.   TPA would include recommendations to the State/UT for network expansion as per the requirements of the State.

2.7 Security Audit

a.   TPA agency would perform security audit of the SWAN as per the Guidelines issued by the Department of IT, Govt. of India and submit recommendations to the State indicating the risk elements in the network operations.

b.   The Agency would perform the penetration testing and vulnerability testing on the SWAN network.

c.   The Agency would review the rules and policies for network components such as firewall, IDS etc.

d.   The Agency would review the network security policy of the State/UT and suggest recommendations if any.

e.   The Agency would review the policy of granting access to the SWAN network.

2.8 Helpdesk & User feedback

    a. TPA would include review of the helpdesk setup by the Network Operator and the Agency would submit a Quarterly Report with recommendations to the State/UT.

        i. The Agency would have access to the Helpdesk system for reporting rights

        ii. Helpdesk must be implemented from an ITIL perspective and must necessarily be integrated with the NMS for ensuring 360° functionality including managing and monitoring.

    b. The Agency would review the mechanism to obtain user feedback on quality of service & post analysis of the same, submit a report with recommendations to the State/UT. This task would be done on a yearly basis.

2.9 Exit Process support

This role is envisaged with a view to ensuring preparedness of the State at all the times for any eventuality resulting in termination of contract. TPA includes support/ advice during the exit of the SWAN operator. The Agency would support the following:

    a) Reviewing the exit process as per the contract.

    b) Advising the State on documentation, process and procedures necessary for taking over the network from the SWAN operator.

    c) Providing advisory support during the transition period from the current SWAN operator to the new operator.

    d) Conducting audit readiness of the State for such an eventuality on a Quarterly basis.

2.9 The State SWAN Implementing Agency, in consultation with Department of Information Technology, Govt. of India and the State Government, would institute a separate audit by an Agency at a National level (e.g. STQC) which would carry out risk based sample audit of the methodology, process and documentation adopted by the TPA Agency in order to ensure that the processes adopted by the Agency is of international standard.. The identification of State/UT (risk based) would be based upon parameters such as past record of the Agency, previous observations of the audit, State/UT Feedback, Amount of QGR to be paid by DIT, etc. TPA Agency would undergo one such audit in a year. However, this would be decided by Dept. of IT, GoI and notified separately to all States / UTs.

3. Deliverables for TPA Agency

TPA Agency would be responsible for auditing the processes and procedures followed by the SWAN operator. The Agency is also responsible for validation of the bill generated by the bandwidth operator. The Agency would also act as a trusted advisor to the State for network related concerns of SWAN over period of five years. The Agency would be required to submit following reports/certificate to the State/UT based on the Scope defined in section 2:

S No	Deliverables	Periodicity
1.	Completion/acceptance report for the work carried out by the Network Operator for PoPs (SHQ, DHQ, BHQ) and/or co-located and remote officers after Partial Acceptance Test (PAT)	Once
2.	Completion report for SHQ, DHQ, BHQ and co-located & remote officers after Final Acceptance Test (FAT) depending on the project plan defined in the RFP/contract.	Once
3.	Assessment Framework for Performance Audit incorporating following: • Assessment parameters based on State/UT policies and guidelines regarding networking, security IP addressing schemes, migration strategy, and GoI's interoperability and security standards. • Tabulation of measurable parameters for SWAN infrastructure (network and other elements). • Formulation of scripts and schedules. • Map the SLA conditions and limits onto NMS. • Review of processes of interaction between NO, State/UT and bandwidth provider. • Template for reports to be submitted by the SWAN Operator to TPA Agency on a regular basis. • Also make sure that NMS reports are not	Once

	modified.	
4.	Performance Audit report of the SWAN	Weekly/Monthly/Quarterly
5.	Report on network availability and other SLA conditions with final recommendations release of QGR after penalty computations	Quarterly
6.	MIS reports relating to uptime, downtime of the network etc to measure the health of the network based on PoP. Network components etc	Quarterly
7.	Security Audit Report	Quarterly
8.	Exit Readiness Report	Once ?
9.	Customer Satisfaction Survey	Yearly/ half yearly

4. Eligibility Criteria for TPA Agency

For the purpose of selection of the TPA Agency Deptt. of IT, GoI, would apply the following criteria for eligibility:

a. The Agency should be an individual organization. Consortium shall not be allowed.

b. The organization would undertake not to sub-contract / outsource any part of the work defined for TPA

c. The SWAN Operator of State/UT or any of its associates (supplier/service provider to the organization) cannot qualify as the TPA Agency.

d. The Agency should have previous audit experience and having adequate expertise in networking activities.

e. The Agency should have average annual turnover of INR 100 Crores or above in the last three financial years with cumulative IT Audit business equivalent to at least INR 10 Crores.. The Agency would provide audited balance sheets and income statements for last three years for verification of the same.

f. The Net worth of the Agency (lead member of the consortium) should be positive.

g. The Agency should preferably have successfully completed two IT audit assignments, each with value of audit fees not less than Rs. 20 lakh. The Agency may have desirably assisted in the designing and setting up of SWAN network.

h. The Agency should have experience of SLA monitoring with at least 2 jobs for monitoring/ audit.

i. References (contact details, customer completion certificate, customer satisfaction certificate etc) for these projects shall be provided. Projects executed within the Agency's own, company, bidder's group of companies or bidder's JV companies shall not be considered.

j. The Agency shall have Quality certification from an accredited and internationally reputed / renowned firm (viz. ISO 9000)

k. The Agency should undertake to provide a project office in State/UT where such services are to be provided

l. The Agency must have company registration certificate, registration and service tax registration certificate.

m. The Agency must have a team of professionals having professional qualifications like CISAs, CISSP, BS 7799 and ITIL certified, at least 5 in each category on its payroll.

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