

**GOVERNMENT OF PAKISTAN**  
**CYBER SECURITY FOR DIGITAL PAKISTAN/nCERT**

**CORRIGENDUM**

Reference tender notice **TS551581E** published on PPRA's website dated 21<sup>st</sup> November, 2024 and uploaded on PPRA e-Pads against **Tender No. F-241169729** on **24.11.2024**. It is intimated that updated Tender Document for "**Establishment of Digital Forensics Lab at PKCERT**" has been uploaded and Bid Submission/Opening date has been further extended as per the following detail: -

<b>Sr. No.</b>	<b>Tender Inquiry No.</b>	<b>For</b>	<b>Read</b>
<b>a.</b>	F-241169729	Technical Bids will be opened on 27 <sup>th</sup> January, 2025 at 1230 hours	Technical Bids will be opened on 07 <sup>th</sup> February, 2025 at 1100 hours

All others terms and conditions of subject tender inquiry will be as per updated Tender Document uploaded on PPRA e-PADS at <http://eprocure.gov.pk> and PKCERT Official website at <https://pkcert.gov.pk/>.

Project Director  
Cyber Security for Digital Pakistan/nCERT  
L- Block Pak Secretariat, Islamabad  
Ph No. 051-9203421-22  
Email: [bid@pkcert.gov.pk](mailto:bid@pkcert.gov.pk)  
Website: (<https://pkcert.gov.pk/>)



**GOVERNMENT OF PAKISTAN**  
**NATIONAL CYBER EMERGENCY RESPONSE TEAM (nCERT)**  
**CYBER SECURITY FOR DIGITAL PAKISTAN/nCERT**



**INVITATION TO BIDS**

1. Cyber Security for Digital Pakistan /nCERT requires **Establishment of Digital Forensics Lab at PKCERT** under the “**Project Cyber Security for Digital Pakistan/nCERT**” for which electronic bids are invited from the firms/ companies registered with Income Tax, Sales Tax Departments and who are on FBR’s Active Taxpayer’s List (ATL) through e-PADS.
2. The prospective service providers are required to submit their electronic bids including technical and financial proposals along with the Bid Security instrument **at the rate of 2% of the bidding amount** must be submitted in favor of Project Director PKCERT (FTN/NTN: 9012000-7) through e-PADS at <http://eprocure.gov.pk> uploaded on or before **1200 hours on Monday, 27<sup>th</sup> January, 2025** in accordance with the provisions of PPRA Rule 36(b) and other terms & conditions as defined in the bidding documents.
3. In case of any technical difficulty in using e-PADS, prospective bidders may contact PPRA team Director MIS Room No. 109, 1<sup>st</sup> floor, FBC building Sector G-5/2, Islamabad (Contact No. 051-111-137-237).
4. Original Bid security instrument **MUST** be submitted to the undersigned before closing hours of the bid submission time otherwise respective bid will not be opened.
5. Bidding documents can be accessed from the website of National Computer Emergency Response Team (<https://pkcert.gov.pk/>) as well as on PPRA website.
6. Bids will be opened on the same day **i.e., 27<sup>th</sup> January, 2025** at **1230 hours** in the presence of representatives of the bidders.
7. As per PPRA Rules 33(1), 2004, National Computer Emergency Response Team (nCERT) has the right to reject any or all bids/ proposals at any time prior to the acceptance of a bid/proposal.

Project Director  
National Computer Emergency Response Team (NCERT)  
L- Block Pak Secretariat, Islamabad  
Ph No. 051-9203421-22  
Email: [bid@pkcert.gov.pk](mailto:bid@pkcert.gov.pk)  
Website: (<https://pkcert.gov.pk/>)

Government of Pakistan  
**Cyber Security for Digital Pakistan/nCERT**  
**CABINET DIVISION, ISLAMABAD.**  
<https://www.pkcert.gov.pk>

**BIDDING DOCUMENTS**

Sr. #.	<b>Description of The Complete Digital Forensics Lab with Maintenance and Support Services (The Contract Services).</b>
	<p>Establishment of a <b>Complete Digital Forensics Lab</b> comprising of following sub solutions/modules <b>as per following preference</b> i.e.</p> <ol style="list-style-type: none"><li>1) Forensic Laptops and Workstations</li><li>2) Computer Forensics</li><li>3) Network Forensics</li><li>4) Cloud Forensics/ Databases Forensics</li><li>5) Cryptanalysis/ Password Cracking</li><li>6) Evidence Storage</li><li>7) Mobile Forensics</li><li>8) DVR Forensics</li><li>9) Data Recovery</li><li>10) Misc Tools and Accessories</li></ol> <p>Through Hardware and Software Provision, Installation, Customization, Configuration, Integration, Fine Tuning, Migration, Licensing including after Sales Contract Support &amp; Maintenance Services for two (02) years including SLA/NDA, Onsite Software Support and Maintenance, Customization, Software and Code updates (24x7), Consultancy/advisory and Professional trainings for skill development.</p>

## **SCOPE OF WORK**

National Cyber Emergency Response Team (NCERT), (hereinafter referred to as “the Client”) invites / requests for proposals/bids (hereinafter referred to as “the Tender”) from firms or companies for the award of contract for the establishment of a **Digital Forensics Lab** including ,Forensic Laptops and Workstations, Computer Forensics, Network Forensics, Cloud Forensics/ Databases Forensics, Cryptanalysis/ Password Cracking, Evidence Storage , Mobile Forensics, DVR Forensics, Data Recovery (hereafter collectively referred to as “**Digital Forensics Laboratory (DFL)**”) with technology components to extract data from the electronic evidence, process the data into useful information and present the findings for prosecution. All processes involved, therefore, should utilize sound forensic techniques to ensure that the findings are admissible in court. Establishment of DFL include installation, customization, licenses, software updates (24X7), code changes, along with after Sales Contract Support & Maintenance Services for a period of two (02) years.

**a. DFL shall be able to: -**

- (1) Combat cybercrime in Pakistan through cooperation in investigation, knowledge sharing, professional training, and the provision of Digital Forensics facilities, empowering a more cooperative and collaborative workforce that works and functions as a unified entity in combating cybercrime.
- (2) Serve as a center of excellence in facilitating digital forensic investigation in pursuance of incident response or cybercrime, by providing law enforcement and investigation agencies with exclusive access to state-of-the-art forensics technology.

**b. The DFL Solution shall be established and maintained at NCERT HQ, Islamabad.**

**c. The client reserves the right to distribute establishment of DFL in phases as per requirement/ availability of funds and/ or procure each module separately from different vendor/ OEM. For the purpose bidder to quote each module/ product (including hardware and software) separately or in group/ bundle of products if single product of OEM covers more than one module of RFP. The client can increase or decrease the quantity of items at the time of issuance of supply order.**

**d. Bidders can bid for all items or for selected items. The client reserves the right to award contract for all or selected items from Annex-C to successful bidder/bidders**

**e. Following are the General Terms of References for The DFL Solution:**

Sr.#.	Terms of Reference
1.	The Contractor must provide an undertaking that The DFL Solution (including its components): <ol style="list-style-type: none"> <li>(1) does not contain any back-doors or any hidden elements.</li> <li>(2) is free from any vulnerability at the date of submission of proposal and subsequently at the time of delivery.</li> <li>(3) is customizable according to the Client’s requirements.</li> </ol>

2.	The Contractor must provide detailed solution design, topology, data flows, use cases and related documentation for the Complete Solution.
3.	The Contractor must provide interoperable, compatible, vendor agonistic and scalable (vertical and horizontal) solution to meet seamless integration, interoperability, manageability, and infrastructure/resource scalability requirements.
4.	The Contractor must provide: a) Installation, Customization, Configuration, Integration, Fine Tuning, Migration, Perpetual /Annual Licenses of DFL Solution including its all hardware and software technology components. b) After sales Contract Support and Maintenance services for the agreed term and service levels.
5.	The Contractor/ OEM must have at least (03 years) experience (national and international) in DFL deployments/solutions.
6.	The Contractor/ OEM must provide certified trainings to DFL staff on Complete DFL Solution components including Installation, Customization, Configuration, Integration, Operations, Migration, and Maintenance.
7.	The Contractor must ensure that the DFL Complete Solution is implemented with standardized processes and services using international security standards and best practices such as ISO-27001 etc.

Detailed specifications of above-mentioned items are provided at **Annex-C** (to be issued separately only in hardcopy) of this document. Invitation to bid issued on NCERT's/PPRA's e-Pads is an integral part of the bidding document.

**Clarification of the Bidding Document**

The bidders can seek further information or clarification regarding the bidding Document, within 07 (Seven) calendar days of issuance/publication of invitation to bids. The clarification and its replies will be shared with all prospective bidders on demand and will also be communicated at the pre-bid meeting to be held at NCERT L Block Pak Secretariat on **23<sup>rd</sup> of December 2024 at 1100 hrs**. Bidders should note that during the period from the receipt of the bid and until further notice from the Primary Contact given herein this document, all queries should be communicated via the Primary Contact and in writing (e.g. e-mail & letter) only.

## **1. GENERAL INFORMATION AND INSTRUCTIONS FOR BIDDERS**

- a. The bidders having presence in Pakistan independently or through joint venture/ consortium/authorized agent/ dealer having valid NTN & GST Registration being on Active Tax Payer List of FBR are invited.
- b. The Bidding will be an open, competitive and transparent process in accordance with Public Procurement Regulatory Authority (PPRA) Ordinance, 2002, and Rules, Regulations and Guidelines made thereunder.
- c. Bids must be submitted online through e-Pak Acquisition & Disposal System (EPADS) by closing date. Manual bids will not be accepted.
- d. The prospective service providers are required to submit their electronic bids including technical and financial proposals along with the Bid Security instrument at the rate of 2% of the bidding amount must be submitted in favor of Project Director PKCERT (FTN/NTN: 9012000-7) through e-PADS at <http://eprocure.gov.pk> uploaded on or before **1200 hours on Wednesday, 15<sup>th</sup> January, 2025** in accordance with the provisions of PPRA Rule 36(b) and other terms & conditions as defined in the bidding documents.
- e. The submission and evaluation of bids will be carried out under the "Single Stage Two Envelop Procedure under Rule 36(b) of Public Procurement Rules 2004". Technical bids will be opened by Technical Evaluation Committee, at **NCERT HQs on the same day at 12:30 PM**, in presence of bidder's representative, who may choose to attend.
- f. The Bidder's name must be on Active Taxpayers List (ATL) of FBR for Income tax and sales tax (or on ATL of any provincial Revenue Authority for sales tax) as on the date of bid submission and onward throughout the period of contract in compliance of the Eligible Bidders (Tax Compliance) Regulations, 2015.
- g. The Bidders shall quote for turnkey DFL solution (all the hardware / software specifications as mentioned in the bidding document and compliance to the design requirements).
- h. The Bidders shall submit proposals in English language Only.
- i. The Bidders shall quote all prices in Pak Rupees (PKR) in the Financial Proposal inclusive of all applicable taxes, duties etc. i.e. GST etc. and amount in both figures and words in the bidding documents. The rates quoted shall remain valid for 90 calendar days from the date of opening of Technical Proposal.
- j. The bidders should nominate a focal person as a liaison officer to act as the primary Point of Contact (PoC) for correspondence with the Client.
- k. The Bidders authorized representative shall sign each page of the Technical and Financial Proposal. The representative's authorization shall be confirmed by power of attorney accompanying the proposal.
- l. The Client shall not entertain incomplete or partial and conditional bids.
- m. The Bidders shall bear all costs / expenses associated with the preparation and submission of the bid(s) and the Client shall in no case be responsible / liable for those costs / expenses including transportation/carriage charges for visit(s) to the Client.

- n. Following Annexures are integral part of technical and financial proposals, which shall be read/filled carefully, signed and stamped by the bidders. Details of the annexures are mentioned below:
- (i) Annex-A – comprises of mandatory requirements for bidder(s).
  - (ii) Annex-B – comprises of technical capabilities of bidder/OEM(s), which has total 100 marks, whereas minimum qualifying marks are 70%.
  - (iii) Annex-C – comprises of technical evaluation of the product and bidder(s) may quote higher specs.
  - (iv) Annex-D - comprises of financial bid format, to be followed by all bidders, the bidder should quote its rates clearly for each item, in the financial proposal in both figures and words without any ambiguity.
  - (v) Annex-E- comprises of Format for Performance Bank Guarantee.
  - (vi) Annex-F– comprises of The Agreement/Contract.
  - (vii) Annex-G– comprises of Non-Disclosure Agreement (NDA).

## 2. **BIDDER's INFORMATION**

- a. Bidders shall submit of following documents /information with relevant authorities: -

Company information	1. Valid Incorporation certificate from Securities and Exchange Commission of Pakistan (SECP)/ Registration with GoP 2. Valid NTN and STN Certificates
Address	
Telephone No	
Fax No	
Primary contact person Name, phone, email:	

## 3. **PRICES**

- a. The bidder should quote its rates clearly in Pak Rupees inclusive of all applicable taxes, duties etc. i.e. GST etc. in the financial proposal and amount in both figures and words as per format attached at Annex-D.
- b. The rates quoted shall remain valid for 90 calendar days from the date of opening of Technical Proposal.

## 4. **AFFIDAVIT**

- a. The Bidders shall provide an undertaking on non-Judicial Stamp Paper that the Bidder itself or its sister/sub companies have not been declared black listed by any Government/Semi-Government/autonomous body or private institution.

5. **THE CLIENT'S RIGHTS**

- a. The Client may reject all bids or proposals at any time prior to the acceptance of a bid or proposal. NCERT shall, upon request, communicate to any bidder who submitted a bid or proposal, the grounds for its rejection of all bids or proposals, but is not required to justify those grounds.

6. **EVALUATION CRITERIA**

- a. Technical bids shall be opened and evaluated by technical evaluation committee in view of Annex-A (Mandatory Requirement), Annex-B (Bidder/ OEM Capability) and Annex-C (Technical Specification). Proposals compliant as per Annex-A shall be evaluated and Technical Evaluation will be carried out in the light of Annex-B for marking of 70% Technical Evaluation marks, Firms shall be eligible for the participation in financial bid opening.

- b. Technical bids shall have 60% weightage whereas financial bids shall have 40% weightage.

c. **Evaluation criteria of Technical proposals are as under:**

**Technical Score:**

$$60 \times \frac{\text{Obtained marks}}{100}$$

- d. Technical Evaluation Report shall be announced as per the Rule 35 of PP Rules 2004. Technically qualified/successful bidder(s) shall be notified in advance and invited for opening of the Financial Proposal(s). The Financial Proposals will be opened at the time and venue indicated by the Client (i.e. NCERT) in the presence of the Bidders or their authorized representatives if they choose to attend.
- e. Financial bids shall be opened and evaluated by procurement committee of NCERT i.e. PC-I as the case may be, on the basis of criteria given in Annex-D.
- f. The bidder should quote its rates clearly against each item including all taxes, duties etc. in the **Financial Proposal (Annex-D)** in both figures and words. However, the total aggregate amount of bid will be considered for evaluation/competition.
- g. Financial Proposal evaluation will be conducted under the Rules in vogue. The Price evaluation will include all duties, taxes and expenses etc.
- h. In cases of discrepancy between the cost/price quoted in Words and in Figures of a bid, actual quoted cost of all items will be calculated and aggregated by the NCERT Purchase Committee (PC-I) and will be taken as the total bid price inclusive of all applicable taxes. This evaluated price will be shared with all bidders.
  - (i) In cases of discrepancy between unit price and total price, the former will prevail.
  - (ii) If a bidder does not accept the corrected amount of bid, as explained above, its bid will be rejected together with forfeiture of its Bid Security.
  - (iii) The Client will not be responsible for any erroneous calculation of taxes and all differences arising out as above shall be fully borne by the Successful Bidder. However, any subsequent changes in rates or structure of applicable taxes by the Government of Pakistan at any time during execution/evaluation period should be followed.

**i. Evaluation criteria of Financial proposals are as under:**

**Financial Score=**

$$40 \times \frac{\text{Amount quoted by the lowest bidder}}{\text{Amount quoted by the bidder whose financial score is to be calculated}}$$

**7. DISQUALIFICATIONS**

Proposals will be liable to be rejected if any deviation is found from the instructions as laid down in the bid document i.e.

- a. False/ Incorrect submission of undertaking certificate.
- b. Technical bid is submitted without the required redacted copy of Bid Security.
- c. Offers are received after specified date and time.
- d. Specification and other requirements are not properly adhered to or different from those given in the bidding documents.
- e. GST and NTN certificates are not attached.
- f. Bidder is not in Active Taxpayer List (ATL) of FBR for both income tax and sales tax or any provincial revenue authority for sales tax only.
- g. Relevant experience is less than Three years.
- h. Sales and Support Service Centers not in Pakistan.
- i. Quoting under rated Software i.e. noncompliance of specifications mentioned in the bidding document.

**8. REDRESSED OF GRIEVANCES BY THE PROCURING AGENCY**

- a. NCERT has constituted a committee comprising of odd number of persons, with proper powers and authorizations, to address the complaints of bidder that may occur prior to the entry into force of the procurement contract.
- b. Any Redressal of grievances and settlement of disputes shall be done according to Section 48 of Public Procurement Rules, 2004.
- c. Mere fact of lodging of a complaint shall not warrant suspension of the procurement process.

**9. BID SECURITY**

- a. Bid security will be equal to 2% of the estimated prices and will be in the shape of payorder / bank draft in favor of "Project Director – Cyber Security for Digital Pakistan"
- b. Bid security shall be attached in original with the Financial proposal otherwise proposal will not be evaluated/accepted and redacted copy of the same should also be attached with Technical proposal.
- c. Bids without required amount of Bid security will be rejected without any right of appeal.

- d. Bid security of successful bidder shall be retained till provision of Performance Bank Guarantee (PBG). Whereas, bid security of unsuccessful bidders will be returned after award of contract to successful bidder.
- e. In case of cancelation of Contract due to default of the Contractor, the Bid security shall be forfeited in favor of NCERT.
- f. Bid security will be forfeited if successful lowest bidder is unable to sign the Contract/ submit the Performance Guarantee/to deliver DFL components after issuance of supply/work order.

#### **10. PERFORMANCE BANK GUARANTEE (PBG)**

- a. A Performance Bank Guarantee (PBG) from a bank having credit rating of at least AA+ in the prescribed format (Annex-E), for an amount equal to 10 PERCENT of the bid/contract price in PAK RUPEE, shall be submitted before signing the contract for carrying out the assignment. For the purpose of Bank Guarantee, the bid/contract price will mean the total bid amount as provided in Financial Proposal.
- b. Performance Bank Guarantee (PBG) shall be submitted in shape of pay order/ bank draft in favor of “Project Director – Cyber Security for Digital Pakistan” at the time of signing of the Contract.
- c. If selected, The Contractor if not able to commission the software/solution as per contract or have provided the under rated or under quality product, support services, Performance Guarantee will be forfeited and contract will be cancelled. Further to add the following conditions shall also lead to forfeiture of Performance Guarantee and cancellation of contract:
  - (i) False/ Incorrect submission of undertaking certificate
  - (ii) If the Contractor commits a default under the Contract;
  - (iii) If the Contractor fails to fulfill the obligations under the Contract;
  - (iv) If the Contractor violates any of the terms and conditions of the Contract;
  - (v) If Blacklisting procedure by the client is being initiated against the Contractor.
- d. PBG shall remain in force until TWO (02) YEARS after the completion of the Contract. On satisfactory completion of assignment, this PBG shall be released.

#### **11. AWARD OF CONTRACT**

- a. Work will be awarded to the bidder after technical and financial bids evaluation. The bidder obtaining highest marks combining both Technical and Financial proposals will be awarded the contract.
- b. If two or more bidders obtain equal marks in aggregate in Technical & Financial proposals, then the contract will be awarded to the one having lowest financial bid.
- c. In case of refusal by successful bidder to sign contract, the client may award the contract to second financially lowest bidder in accordance with PPRA letter dated 15-02-2021 having caption “*General Clarification Regarding Award of Contract to Second Most Advantageous Bidder*”.

## **12. CORRUPT OR FRAUDULENT PRACTICES**

- a. Definition of the terms set forth below for the purposes of this bidding document, shall be according to Public Procurement Rules, 2004.
- b. PPR 2004 Rule 2(1) f: "corrupt and fraudulent practices" in respect of procurement process, shall be either one or any combination of the practices including:
  - (i) "coercive practices" which means any impairing or harming or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence the actions of a party to achieve a wrongful gain or to cause a wrongful loss to another party;
  - (ii) "collusive practices" which means any arrangement between two or more parties to the procurement process designed to stifle open competition for any wrongful gain, and to establish prices at artificial, non-competitive levels;
  - (iii) "corrupt practices" which means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the acts of another party for wrongful gain;
  - (iv) "fraudulent practices" which means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation; and
  - (v) "obstructive practices" which means harming or threatening to harm, directly or indirectly, persons to influence their participation in a procurement process, or affect the execution of a contract.

## **13. PAYMENT PROCEDURE**

- a. No advance payment shall be made against the supply of hardware and software mentioned in the bidding document.
- b. Payment shall be made on provision of invoice/bill as per the schedule mentioned in 4(a) of the Agreement.
- c. Payment shall be subject to withholding of applicable taxes as per government rules and after successful completion of milestones mentioned in 4(a) of the Agreement and subject to Performance Certificate from NCERT.

## **14. HARDWARE AND SOFTWARE**

- a. The Complete Solution including all hardware and software components required under this bidding document should be issued in the name of NCERT.
- b. The Complete Solution including all hardware and software components required under this bidding document should be arranged through the legal channels by clearing all customs/duties/taxes (if any) levied by Govt.
- c. Provision, Installation, Customization, Configuration, Integration, Fine Tuning, Perpetual Licenses, Migration and Contract Services for 02 years including SLA/NDA, Hardware and Software Maintenance, Support, Software and Code updates(24x7), Consultancy/advisory and Professional Trainings for skill development, will be the Contractor's responsibility after successful deployment as per Final Acceptance Certificate (FAC).

- d. The Contractor will be asked to update the under rated hardware and Software, failing to replace the underrated hardware and Software within thirty (30) calendar days will lead to the termination of the contract and the Hardware and Software will become the property of NCERT. The Performance Guarantee will be forfeited in favor of NCERT and the process of Blacklisting will also be initiated as per PPRA rules.

**15. DELIVERABLE TIMELINES**

- a. The Contractor shall be responsible for the safe supply of Software and Hardware at NCERT HQs, Islamabad with the provision of Contract Services (Customized development/ Maintenance/Support) as mentioned in the bidding Agreement. Delivery and successful deployment of Hardware and Software items for DFL shall be in accordance with clause 4 (a) of the Agreement (Annex-F). Deliverables & Milestones are also mentioned as under: -

<b>Deliverables/Activity</b>	<b>Payment Schedule</b>	<b>Timeline (Calendar days)</b>
<p><b>Activity 1:</b> The DFL Solution:</p> <ul style="list-style-type: none"> <li>✓ Delivery of the Hardware and Software including high level diagram (HLD), low level diagram (LLD), data flows, Use Cases and related solution documentation</li> <li>✓ Technical Training/ Certifications on the Solution</li> <li>✓ Issuance of PAC (Provision Acceptance Certificate) (for Activity 1)</li> </ul>	50% of the quoted financial bid (Annex-D)	T0= Date of signing of contract T1= T0+60 Days
<p><b>Activity 2:</b> DFL Solution:</p> <ul style="list-style-type: none"> <li>✓ Commissioning of the Solution (i.e. Deployment/Installation/ Configuration, Customization)</li> <li>✓ Solution Testing as per Annex-C</li> <li>✓ Issuance of FAC (Full Acceptance Certificate)</li> </ul>	50 % of the quoted financialbid (Annex-D)	T2 = T1+30 Days
<p><b>Activity 3:</b></p> <ul style="list-style-type: none"> <li>✓ After Sales Contract Customization/ development, Support and Maintenance Services for (02 years) for Complete Solution</li> </ul>	Release of Performance Guarantee (10% of the bid price) will bereleased after expiry of the contract	2 years after issuance of FAC

**Note: Delivery and payment of each module will be treated separately; means if some module is delivered before timeline its payment can be released separately/ independent from other modules**

**Note:** Trainings may be rescheduled on mutual consent with the Contractor.

**Note:** Completion of targets will be acceptable if done before the planned schedule.

**16. TRAINING**

- a. Successful bidder shall be responsible for providing Product Training (locally by vendor) for 2 x DFL Officers from NCERT.

**17. PENALTY**

- a. If a security vulnerability is found in deployed solution and contractor fails to patch it in thirty (30) calendar days then a penalty of 01% of Performance Guarantee will be charged per day up to maximum period of hundred (100) calendar days and the contract shall be terminated.
- b. If the Contractor fails to achieve the given time-lines as per execution schedule at Sr. 4(a) of the Agreement (Annex-F), then a penalty of 01% of Performance Guarantee will be charged per day up to maximum period of hundred (100) calendar days and the contract shall be terminated. Subsequently, blacklisting procedure against the Contractor will be initiated.
- c. A penalty of 0.20 % of Performance Guarantee per day will be charged if the under rated and under specification hardware and Software replacement time exceeds up to maximum of thirty (30) calendar days and the contract shall be terminated.
- d. The Client on issuance of Full Acceptance Certificate (FAC) either adjust the imposed penalties in the 3<sup>rd</sup> payment or the Contractor have to recoup the Performance Guarantee to 100% before start of Maintenance and Support services period.
- e. In case of failure to perform as per given SLA during the Customization/ development, Maintenance and Support services period, The Client shall be empowered to impose penalty in accordance with SLA, which will be deducted from the Performance Guarantee. The Contractor will be informed about imposition of such penalty on monthly basis.
- f. In case of failure to perform as per NCERT requirements during the SLA period, NCERT reserves the right to cancel the contract and forfeit Performance Guarantee in favor of NCERT.

**18. FORCE MAJEURE**

- a. Any event or such circumstances which are beyond the reasonable control of a party and prevent or cause to prevent a Party from complying with any of its obligations shall be deemed and considered as Force Majeure.
- b. Delivery of hardware and Software tools in case of events or such circumstances which are beyond the reasonable control of a party and prevents or cause to prevent a Party from complying with any of its obligations shall be deemed and considered as Force Majeure and will be treated in accordance with The Agreement/Contract (Annex-F).

19. **CHECKLIST**

a. Bid Security copy attached with technical bid in shape of bank draft/pay order.	(Yes/No)
b. Relevant documents for Annex A, B, C, D.	(Yes/No)
c. Specification and other requirements are met (Compliance of Annex C).	(Yes/No)
d. Bidder Performance Bank Guarantee Annex E.	(Yes/No)
g. List of employees including technical staff for DFL.	(Yes/No)
h. Affidavit on non-judicial stamp paper for not being black listed.	(Yes/No)
i. Sales and Support Service center in major cities of Pakistan.	(Yes/No)
j. Bidder SECP/Registration with GoP - incorporation certificate.	(Yes/No)

**Mandatory Requirements at the time of submission of bidding document**

Sr. #.	Requirement/ Document to be attached	Compliance? Yes/ No
1.	The bidder must have to produce Sales Tax and Income Tax Registration.	
2.	The bidder must be an Active Tax Payer of FBR.	
3.	The bidder must ensure that Bid Security copy is attached in the Technical Proposal in the form of Bank Draft or Pay Order in favor of “Project Director – Cyber Security for Digital Pakistan”.	
4.	The bidder must submit affidavit on non-judicial Stamp Paper As per Clause 6.	
5.	The bidder/ OEM must have Presence, Sales and Service Support Center in any one major city of Pakistan.	
6.	The bidder/ OEM must have minimum of Three (03) years of relevant national/international experience.	
7.	The bidder must ensure that all hardware and Software Licenses offered are perpetual/ annual where applicable/ possible and Software/ hardware functionality shall work during the 2 years support. (Certificate has to be attached).	

**Annex-A is Mandatory.**

Note: All supporting documents to be attached with technical proposal.  
Non-fulfilling any of the above requirement will result into disqualification of bid.

**Please attach all Supporting Documents Serial wise**

## Bidder's Capabilities

General Evaluation*				
Sr. #	Attributes	Max. Score	Points Earned	Criteria
1.	Detail of Offices	10		Firm has technical support offices in any major city of Pakistan (5 marks)
2.	Bidder/ OEM must have deployed and configured at-least two (02) DFL solutions/tools/modules	10		05 Marks for each successfully completed
5.	Anx C Compliance	80		Solution functional requirements- <b>Anx C</b> Each Module will be evaluated separately against 80 Marks each
<b>Sub Total</b>		<b>100</b>		
<i>Minimum qualifying marks are 70% in above table. All supporting Documentary evidence (verifiable) has to be attached for Annex-B to claim marks.</i>				

**TECHNICAL EVALUATION-**

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Digital Forensics Laboratory  
(DFL)

(To be included in Technical Proposal-Mandatory Requirements)

**Any inferior Specifications will be rejected**

Multiple options are not allowed; Bidder should Quote only one option. Quoting multiple option will lead to disqualification.

**To accommodate multiple bidders, slight changes are allowed  
after the approval of Technical Committee.**

**Note: Any other requirement which is not listed should be the responsibility of the bidder.  
Bidders are encouraged to improve upon this Technical Bidding Document**

Technical Committee may change status of a Required feature/ specification to Desirable if required

**Financial Proposal (Bid Format) The DFL (with 02 years Software updates and SLA/Support 24X7)**

Date \_\_\_\_\_

Company Name \_\_\_\_\_

Sr. #.	Required Specification	Quoted Specification (With Brand Name)	Unit Price <i>Inclusive of Applicable Taxes</i>	Qty	Total Price Inclusive of <i>Applicable Taxes</i>
1.	Establishment of Digital Forensics Laboratory (DFL) Modules/Tools namely _____ including components, Provision, Installation, Configuration, Integration, Fine Tuning, Customization and Licenses			1	
2.	After Sales Contract Support and Maintenance Services for The DFL (02 years support/SLA/NDA for onsite support, Maintenance, Software & Hardware updates, consultancy/advisory, trainings)			1	

Note: please add more rows, if vendor is more than one.

Amount in words: (Rupees.....)

Note: All of the above DFL components shall be quoted for 2 years Customization/ development/ Support/SLA/Maintenance and Services from the Contractor with perpetual/ annual software licenses.

**Any inferior specifications will be rejected**

**Multiple options are not allowed, quoting multiple options will lead to disqualification.**

Authorized Signature of bidder with seal stamp

---

**PERFORMANCE BANK GUARANTEE (PBG)**

Guarantee #:  
Amount in PKR:  
Date of Issuance:  
Date of Expiry:

Title: “Cyber Security for Digital Pakistan” Block L, Pakistan Secretariat, Islamabad, Pakistan and  
..... Supply & Service Agreement

**In favor of:**

“Project Director – Cyber Security for Digital Pakistan” (“**Beneficiary**”).

WHEREAS reference is made to the Agreement No. ...., (hereinafter referred to as the “Agreement”) executed by and between “Project Director – Cyber Security for Digital Pakistan” (hereinafter called the “**Beneficiary**”), and \_\_\_\_\_ ( hereinafter referred to as the Contractor”) dated..... for Supply and Services to establish Digital Forensics Lab (“DFL”) and subsequent maintenance support services.

AND WHEREAS at the request of Contractor and for valid considerations, we [bank Name] have agreed to provide this very Guarantee in favour of the **Beneficiary**.

NOW THERFORE, we do hereby declare, understand and confirm that we, \_\_\_\_\_ (name & address of bank) as primary obligator, shall be responsible and liable to **Beneficiary** on behalf of the Contractor in accordance with the terms of this Guarantee, as follows:

We hereby unconditionally and irrevocably undertake and bind ourselves, our successors and assigns, on continuous basis, to pay Beneficiary immediately, upon its first written demand, amounts upto an aggregate sum of PKR. -----{Pak.....only} declaring the Contractor to be in default under the Agreement, without having recourse to Contractor and without cavil or argument, whatsoever, any sum or sums within the aforesaid limit. Notwithstanding any objection which may be made by the Contractor or any other person, and without Beneficiary proving or showing grounds or reasons for its demand all sum specified therein.

Our aggregate liability hereunder, however, shall not exceed a sum of PKR. ----- {Pak Rupees -- -----Million only}. Multiple demands may also be made by Beneficiary, provided that, the aggregate sum of all amounts demanded shall not exceed PKR. \_----- { ----- only}.

This Guarantee is valid on continuous basis till \_\_\_\_\_ or until Beneficiary shall notify us in writing that Contractor has met with all obligation under the Agreement to Beneficiary, and nothing is due against Contractor.

---

*[signature(s)]*

*Endorsed and guaranteed by Commercial Bank in Pakistan  
[Bank Stamp & Signature(s)]*

*Note: All italicized text is for indicative purposes only to assist in preparing this form and shall be deleted from the final product. If the bank guarantee is arranged from a bank outside Pakistan that bank guarantee has to be backed by the bank guarantee of a local bank in Pakistan with a credit rating of at least AA+.*

Draft Agreement: DFL

**AGREEMENT**

*(To be executed on Rs.100/- Judicial paper)*

This Supply & Service Agreement (the “Agreement”) is made on this day \_\_\_\_\_2024;

By and Between

**NCERT**, a statutory body established under the Prevention of Electronic Crime Act, 2016 (XL of 2016), having its principle office at NCERT, Headquarters Building, Block L, Pakistan Secretariat, Islamabad (hereinafter referred to as “**Client**” which expression shall where the context admits include its administrators and assigns) of the One Part

And

M/s \_\_\_\_\_

through Mr.....

bearing CNIC.....

having registered place of business at.....

(hereinafter referred to as “**the Contractor**,” which expression shall where the context so allows include his/its successors-in-interest, executors, administrators, heirs and permitted assigns) of the **Other Part** (If when and where applicable the Party of the One Part and Party of Other Part shall hereinafter be collectively referred to as ‘Parties’ and individually as ‘Party’ as the context of this Agreement requires).

WHEREAS;

- A. Client is desirous of establishing **Digital Forensics Lab (DFL)** (hereafter referred as “DFL”) at its NCERT, Headquarters Building, Block L, Pakistan Secretariat, Islamabad and have to be **delivered/supplied and installed/configured and subsequently be maintained** by the Contractor in accordance with the terms of this Agreement;
- B. The Contractor is a \_\_\_\_\_ *(details of incorporation)* being engaged in the business of supplying electrical, electronic equipment including but not limited to integrated security technologies, and has agreed to **supply, deliver, install/configure and thereafter provide maintenance services (hereinafter collectively referred as Services)** of The **DFL** at Client HQs Building on the terms and subject to the conditions as set forth hereunder.
- C. The Contractor hereby represents that;
  - (i) it has the relevant expertise and holds valid and subsisting licenses/permissions, authorizations/approvals required from the Government of Pakistan and that;
  - (ii) it has the requisite expertise and resources to provide top quality of requisite Services for the establishment and maintenance of The **DFL** as per Annex-C of the Bid document to the Client in accordance with highest industry standards and satisfaction of the Client. The Contractor undertakes that the Services shall be provided only through the

staff/labour/workforce that has the requisite expertise and experience in this regard.

- D. Upon the basis of the representations and warranties of the Contractor contained herein, the Client wishes to set terms and conditions with the Contractor to provide the Services at NCERT Building premises under this Agreement;

**NOW THEREFORE**, for the consideration provided herein the representation and warranties, covenants, conditions and promises contained herein below and intending to be legally bound, the Client and Contractor hereby agree as follows:

### **1. Scope of Agreement**

Subject to the terms and conditions of this Agreement the Contractor agrees to provide Services as per requirements prescribed under **Bidding Documents and its attached Annexure-A, B, C, D, E.**

### **2. Agreement Documents**

2.1 The following documents shall be deemed to form, and be read and construed as, an integral part of this Agreement:

- a) Invitation to bid
- b) Bidding documents along with its Annexures
- c) Bill of Quantity (BoQ)
- d) Special Stipulations (if any)
- e) Addenda and Corrigenda, if any, issue by the Clients and duly accepted by the Contractor at the signing of the Contract
- f) Bid security/ Performance Bank Guarantee
- g) Form of Agreement/ Contract Agreement
- h) Clients order to commence the work
- i) Limit of Bid security
- j) Any Correspondence by the Clients/Contractor mutually accepted by the Client and the Contractor.

### **3. Term**

3.1 Upon signing of this Agreement, the Contractor shall be obligated to start the work on Client specified location as per clause 4(a) of the Agreement.

3.2 However, in case of any unavoidable/unforeseen delay (i.e. Force Majeure) incurred either by the Contractor or the Client, necessary timeline extension would be agreed mutually between both parties, however, it has to be communicated to each other during the occurrence of Force Majeure as per clause 18.

#### 4. Deliverables

a) Deliverables & Payment Milestone for The DFL is mentioned as under:

Deliverables/Activity	Payment Schedule	Timeline (calendar days)
<p><b>Activity 1:</b> The DFL Solution:</p> <ul style="list-style-type: none"> <li>✓ Delivery of the Hardware and Software including high level diagram (HLD), low level diagram (LLD), data flows, Use Cases and related solution documentation</li> <li>✓ Technical Training/ Certifications on the Solution</li> <li>✓ Issuance of PAC (Provision Acceptance Certificate) (for Activity 1)</li> </ul>	50% of the quoted financial bid (Annex-D)	T0= Date of signing of contract T1= T0+60 Days
<p><b>Activity 2:</b> DFL Solution:</p> <ul style="list-style-type: none"> <li>✓ Commissioning of the Solution (i.e. Deployment/Installation/ Configuration, Customization)</li> <li>✓ Solution Testing as per Annex-C</li> <li>✓ Issuance of FAC (Full Acceptance Certificate)</li> </ul>	50 % of the quoted financial bid (Annex-D)	T2 = T1+30 Days
<p><b>Activity 3:</b></p> <ul style="list-style-type: none"> <li>✓ After Sales Contract Customization/ development, Support and Maintenance Services for (02 years) for Complete Solution</li> </ul>	Release of Performance Guarantee (10% of the bid price) will be released after expiry of the contract	2 years after issuance of FAC

**Note: Delivery and payment of each module will be treated separately; means if some module is delivered before timeline its payment can be released separately/ independent from other modules**

**Note:** Trainings may be rescheduled on mutual consent with the Contractor.

**Note:** Completion of targets will be acceptable if done before the planned schedule.

#### 5. Termination

5.1 Notwithstanding anything herein contained the Client shall be exclusively entitled to terminate this Agreement.

a) without advance notice, at in case the Contractor is in breach of any of the terms of this

Agreement, or in case the Client is not satisfied with the Services.

- b) Without cause, by giving three (03) calendar days advance written notice to the Contractor.
- c) If the Services do not meet the specifications, terms & conditions mentioned in the **Annexure-A, B, C, D, E of Bidding documents**.

5.2 In case of such termination, the Contractor shall not be paid for any Services actually rendered up to the date of termination and any advance payment by the Client in respect of the Services not performed or in respect of period falling after the effective date of termination shall be refunded by the Contractor, to the Client. The Client, shall not, because of expiration or termination of this Agreement, be liable to the Contractor for any compensation, reimbursement, or damages because of the loss or prospective profit or because of expenditures or commitments incurred in connection with the business of the Contractor.

## **6. Representations, Warranties and Covenants by the Contractor**

6.1 The Contractor to its respective extent, represents, warrants and covenants, as applicable, as follows:

- a) The Contractor shall deliver the Services as per **Annexure-C&D** of Bid document.
- b) It has the full corporate power and authority to enter into this Agreement and perform its obligations hereunder as a body corporate/corporation, duly formed, validly existing and in good standing under the laws of the Islamic Republic of Pakistan, as the case may be, and is duly authorized and qualified to conduct transactions/business in Pakistan, as the case may be;
- c) It has all requisite power and authority to conduct its business, own its properties and execute and deliver this Agreement and perform its obligations hereunder in accordance with the terms hereof;
- d) the execution, delivery, and performance of this Agreement has been duly authorized by all requisite corporate/administrative action and this Agreement constitutes the legal, valid and binding obligation of the Contractor, enforceable against it in accordance with its terms;
- e) to the best knowledge of the Contractor neither the execution, delivery nor performance of this Agreement conflicts with, or results in a violation or breach of the terms, conditions or provisions of, or constitutes a default under, its organizational documents or any Agreement, indenture or other instrument under which the Contractor or its assets are bound, nor violates or conflicts with any applicable law or any judgment, decree, order, writ, injunction or award applicable to either Party;
- f) it is not in violation of any applicable law, which violations, individually or in the aggregate, would affect its performance of its obligations under this Agreement;
- g) it is the holder of all governmental consents, licenses, permissions and other authorizations and permits required to operate and conduct its business;
- h) there is no pending controversy, legal action, arbitration proceeding, administrative proceeding or investigation instituted, or to the best of Contractor's knowledge threatened, against or affecting, or that could affect, the legality, validity and enforceability of this Agreement, nor does Contractor know of any basis for any such controversy, action, proceeding or investigation; and It has examined this Agreement, including all Annexes

attached hereto, thoroughly and become familiar with all its terms and provisions;

- i) the obligations of the Contractor are set out in detail hereto. The Services shall be performed in accordance with the highest industry standards, principles and practices suitable for the nature and purpose of the Support Services provided hereunder.

## **7. Charges**

- 7.1 In consideration of rendition of Services, all amounts paid to the Contractor shall be inclusive of all taxes, levies, duties, and any other deduction related thereto etc.
- 7.2 All payments to be made by the Client to the Contractor shall be subject to such deductions and withholding as are required by prevailing laws which shall be to the account of the Contractor.

## **8. Invoice**

- 8.1 The Contractor shall submit its Invoice in accordance with the rates/charges specified in **Annexure-D** of Bidding document.
- 8.2 The Contractor shall be solely responsible for all payments, liabilities and all other obligations of whatsoever nature pertaining to its staff/workers who shall be deputed for the Services at the Client's Building.

## **9. Governing Law**

- 9.1 The provisions of this Agreement and the rights and obligations hereunder shall be governed by and construed in accordance with the prevailing laws of Pakistan.

## **10. Indemnification**

- 10.1 The Contractor shall indemnify and hold harmless the Client, its Members, Employees and other Personnel against any and all claims, damages, liabilities, losses, and expenses, whether direct or indirect, or personal injury or death to persons or damage to property arising out of (i) any negligence or intentional act or omission by the Contractor or his employees, personal, agents, etc. in connection with the Agreement, or (ii) arising out of or in connection with the performance of his obligations under this Agreement.
- 10.2 The Contractor and its staff /employees shall be bound to obey safety rules and other regulations prescribed by the Client on its premises. Any losses/damages suffered by the Client due to omission on the part of the Contractor, its staff/employees to abide by this condition shall be the sole liability of the Contractor and it may result in termination of the Agreement by the Client at its sole discretion.

## **11. Confidentiality**

- 11.1 The Contractor and its personnel, employees, agents, sub-contractors or any other persons authorized to act for and/or on behalf of Contractor shall hold in confidence all documents and other information and data, whether technical, financial, legal or commercial, disclosed to it by the Client, orally or in writing, whether it is expressly marked as confidential or not, or shall be deemed to be confidential according to its nature, including but not limited to trade secrets, know-how, patents research, business plans, marketing information, information concerning its customers/licensees, information relating to its financial status and any other technical, commercial and/or financial information, either expressed in notes, letters, facsimile, memoranda, agreements, contracts, analyses, reports, minutes, documents, manuals, compilations, software code, e-mails.
- 11.2 Any of the above-mentioned information and/or and or any other Confidential Information furnished by Client to the Contractor hereunder or in contemplation hereof shall remain the Client's property, and shall not be copied or otherwise distributed or reproduced without the prior written permission of the Client. The Contractor, hereby undertakes to use the Client's Confidential Information only in accordance with the purpose of fulfilling this Agreement. Without the Client's written consent, the Contractor shall not disclose the Confidential Information to any third party by any means, including but not limited to the following:
- a) Client's employees, public media, soft copy or hard copy, e-mail, mail, word of mouth, etc.
  - b) the Contractor shall not at any time divulge, disclose or otherwise furnish to any third party any Confidential Information relating to the affairs or business of the other Party (except to the extent necessary for the implementation of this Agreement).
- 11.3 The Contractor may reveal the Confidential Information only to its employees or sub-contractors on a strictly need to know basis to whom disclosure is necessary for them to perform their duties for the purpose of this Agreement. The Contractor shall impose the above obligations of confidentiality on its employees and sub-contractors, if any.

11.4 The Contractor hereby agrees to use all reasonable efforts to take such action as may be appropriate to prevent the unauthorized use and disclosure of, and to keep confidential such Confidential Information, including, without limitation:

- a) Ensuring that such Confidential Information is disclosed only to responsible employees on a need-to-know basis and who have first been properly instructed to maintain such Confidential Information in confidence;
- b) Not disclosing to any third party the existence of this Agreement, the terms and conditions of this Agreement or any Confidential Information.

11.5 If the Contractor, recipient of the Confidential Information has to disclose such information as compelled by legal, judicial or administrative proceedings, the Contractor shall give the Client reasonable prior notice before the disclosure and cooperate with the Client to enable to seek a protective order or other relief to prevent or limit disclosure of such Confidential Information.

11.6 The foregoing obligations shall not apply, however, to any part of the Confidential Information which:

- a) was already lawfully obtained in good faith by the Contractor prior to receipt hereof,
- b) was already in the public domain or became so through no fault of the Contractor,
- c) was legally acquired by the Contractor from a third party having the right to convey the Confidential Information to the Contractor without any obligation of confidentiality,
- d) is independently and lawfully developed by the Contractor,
- e) is approved for release by prior written authorization of the Client
- f) is obliged to be produced (after notice of the Client whenever it is possible) under applicable law or any other law or regulation including any order of a court.

11.7 Subject to the provisions of the above paragraph, the Contractor hereby agree that, notwithstanding expiration or termination of this Agreement for any reason whatsoever, these obligations of confidentiality shall survive perpetually without having effect or impact of expiration or termination of this Agreement.

11.8 The Contractor further agrees, that upon expiration or earlier termination, for whatever cause all Confidential Information disclosed hereunder, including any copies thereof, shall be forthwith returned to Client within three (03) working days from the date of such termination or expiration, or if Client instructs the Confidential Information to be destroyed, the Contractor shall sign a declaration certifying that all related Confidential Information has been destroyed within three (03) working days thereof.

## **12. Resolution of Disputes**

12.1 All disputes arising under this Agreement, whether during the term of this Agreement or after the termination or expiry of this Agreement shall be referred to (i) Purchase Committee-I (PC-I) of the Client for amicable settlement /resolution of the dispute at first stage. (ii) In case of failure in settlement, at the second stage the case will be referred to the Authority of the Client through Director (Labs). The decision of the Authority to settle the issue amicably will be final and binding on both parties (iii) In the event of failure of amicable

settlement of dispute as above, either party may refer the dispute to Arbitration under the provision of Arbitration Act, 1940 and the rules issued thereunder, at Islamabad, Pakistan.

### **13. Waiver**

13.1 A party's failure to exercise or delay in exercising any right, power or privilege under this Agreement shall not operate as a waiver; nor shall any single or partial exercise of any right, power or privilege preclude any other or further exercise thereof.

### **14. Amendment**

14.1 All addition amendments and variations to this agreement shall be binding only if in writing and signed by the Parties or their duly authorized representatives.

### **15. Severability**

15.1 The invalidity or unenforceability of any provisions of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement, which shall remain in full force and effect.

### **16. Maintenance and Support**

16.1 The Contractor will be responsible for the provision of two (02) Years Contract Services for onsite Support, customization/ development and Maintenance of The DFL complete solution.

16.2 The Contractor will be responsible for The DFL Software Solution Support, Maintenance Customization with Source Code Visibility, Software and Code updates (24x7), Consultancy/advisory and Professional trainings for skill development for two (02) years.

16.3 The maintenance/support period (Two years) will be considered from the date of issuance of Final Acceptance Certificate (FAC).

### **17. Penalty**

17.1 If a security vulnerability is found in deployed solution and contractor fails to patch it in thirty (30) calendar days then a penalty of 01% of Performance Guarantee will be charged per day up to maximum period of hundred (100) calendar days and the contract shall be terminated

17.2 If the Contractor fails to achieve the given time-lines as per execution schedule at Sr. 4(a) of the Agreement, then a penalty of 01% of Performance Guarantee will be charged per day upto maximum period of hundred (100) calendar days and the Agreement shall be terminated. Subsequently, blacklisting procedure against the Contractor will be initiated.

17.3 The Client on issuance of Full Acceptance Certificate (FAC) either adjust the imposed penalties in the 3rd payment or the Contractor has to recoup the Performance Guarantee to 100% before start of Maintenance and Support services period.

17.4 In case of failure to provide Services as per this Agreement, The Client shall be empowered to impose penalty in accordance with this clause, which will be deducted from the Performance Guarantee. The Contractor will be informed about imposition of such penalty on monthly basis.

17.5 A penalty of 0.20% of Performance Guarantee per day will be charged if the under rated and under specification Software replacement time exceeds the time mentioned in the certificate during the Contract Services period as per Annexure C.

**18. Force Majeure Event**

- 18.1 Neither Party shall be held responsible for any loss or damage or failure to perform all or any of its obligations hereunder resulting from a Force Majeure event.
- 18.2 For the purpose of this Agreement a “Force Majeure Event” shall mean any cause(s) which render(s) a Party wholly or partly unable to perform its obligations under this Agreement and which are neither reasonably within the control of such Party nor the result of the fault or negligence of such Party, and which occur despite all reasonable attempts to avoid, mitigate or remedy, and shall include acts of God, war, riots, civil insurrections, cyclones, hurricanes, floods, fires, explosions, earthquakes, lightning, storms, chemical contamination, epidemics or plagues, acts or campaigns of terrorism or sabotage, blockades or acts of Governmental Authority after the date of this Agreement.
- 18.3 The Party initially affected by a Force Majeure shall promptly but not later than seven (07) calendar days following the Force Majeure event notify the other of the estimated extent and duration of its inability to perform or delay in performing its obligations (“Force Majeure Notification”). Failure to notify within the afore-said period shall disentitle the Party suffering the Force Majeure from being excused for non-performance for the period for which the delay in notification persists.
- 18.4 Upon cessation of the effects of the Force Majeure the Party initially affected by a Force Majeure shall promptly notify the other of such cessation.

**19. Integrity Pact**

INTEGRITY PACT DECLARATION OF FEES, COMMISSION AND BROKERAGE ETC. PAYABLE BY THE CONTRACTOR(S) OF GOODS, SERVICES & WORKS IN CONTRACTS WORTH RS.10.00 MILLION OR MORE

Contract Number: \_\_\_\_\_

Dated: \_\_\_\_\_

Contract Value: \_\_\_\_\_

Contract Title: \_\_\_\_\_

[Name of Contractor] hereby declares that it has not obtained or induced the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Pakistan or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoP) through any corrupt business practice.

Without limiting the generality of the foregoing [Name of Contractor] represents and warrants that it has fully declared the brokerage, commission, fee etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultations fee or otherwise, with the object of obtaining or inducing the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP, except that which has been expressly declared pursuant hereto.

[Name of Contractor] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoP and has not taken any action or will not take any action to circumvent the above declaration, representative or warranty. [Name of Contractor] accepts full responsibility and strict liability for making and false declaration, not making full disclosure, misrepresenting fact or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to GoP under any law, contract or other instrument, be voidable at the option of GoP.

Notwithstanding any rights and remedies exercised by GoP in this regard, [Name of Contractor] agrees to indemnify GoP for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoP in an amount equivalent to ten time the sum of any commission, gratification, bribe, finder's fee or kickback given by [Name of Contractor] as aforesaid for the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoP.

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[ Buyer ]

---

[Contractor]

**20. Assignment**

This Agreement may not be assigned by either party to other than by mutual agreement between the Parties in writing.

IN WITNESS WHEREOF, the parties hereto set their hands the day, month and year first above written.

For and Behalf of Client.

For and on Behalf of: Contractor

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title : \_\_\_\_\_

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

Date : \_\_\_\_\_

Date : \_\_\_\_\_

Witnesses

1. \_\_\_\_\_

2. \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

CNIC: \_\_\_\_\_

CNIC: \_\_\_\_\_

**NON-DISCLOSURE AGREEMENT**

THIS NON-DISCLOSURE AGREEMENT (“NDA”) is made and entered into at **Islamabad, Pakistan** on the \_\_ day of----- 2021

**BY AND BETWEEN**

National Cyber Emergency Response Team (NCERT), a statutory regulatory authority established under Prevention of Electronic Crime Act, 2016 (XL of 2016), having its Head Quarter at NCERT, Block L, Pakistan Secretariat, Islamabad (hereinafter called as the “**CLIENT**” which expression shall where the context admits, include its administrators and permitted assigns) of the One Part:

**AND**

(insert name of Company/Contractor) a Company incorporated under the laws of ..... having its registered office at-----through its authorized representative Mr..... (herein after called as “the **Contractor**”) which expression shall where the context so allows include his/its successors-in-interest, executors, administrators, heirs and permitted assigns) of the **Other Part**;

(The Party of the One Part and Party of the Other Part shall hereinafter be collectively referred to as ‘Parties’ and individually as ‘Party’ as the context of this NDA requires).

**WHEREAS,**

1. The parties have entered into Agreement dated ....., (the “Agreement”) whereby, the Client may have to disclose certain nonpublic and proprietary information in result of execution and subsequent operation of the Agreement to the Contractor, which may fairly be considered to be of confidential nature including, but not limited to, methods, practices and procedures with which the Parties conduct their respective businesses, Internal working, decisions or Standard operating Procedures (SOPs) which are not Public documents, strategies in dealing with the Operators, Licensees, licensee lists, contract terms, methods of operation, software specifications, software codes, functionality, know how, financial information, entity or IT and OT sector specific security and threat intelligence information etc. the Know-How, information pertaining to its principles, pricing policy, commercial relationship, negotiations or parties’ projects, affairs, finances or any information in respect of which the parties are bound by an obligation of confidentiality to any third party.
2. The Parties are desirous to set the terms and conditions hereunder and sign this NDA.

**NOW, THEREFORE THIS AGREEMENT WITNESSETH**, for good and valuable consideration, it is hereby agreed between the parties as under;

1. Under this NDA, the Contractor is under an obligation to keep all such information confidential that is disclosed in the course of the Agreement and after completion of the term of the Agreement with the Client, and not to use it to the detriment of the Client or its licensees. In particular, the Contractor shall not use it for, or disclose it to, any of its new employer or client or to other direct or indirect stakeholders
2. Any unauthorized disclosure or use of the confidential information could prejudice the rights of Client and shall lead Contractor and third party, to whom it is discloses, for remedy as per law.
3. **Definition of Confidentiality.**

In addition to the definition used in the Agreement, "Confidential Information" refers to any information which has commercial value and is either (i) technical information, including patent, copyright, trade secret and other proprietary information, techniques, sketches, drawings, models, inventions, know-how, processes, apparatus, equipment, algorithms, software programs, software source documents, and formulae related to the current, future and proposed products and functions of the Client, or (ii) non-technical information relating to Client's functions, responsibilities, operations including, without limitation, plans and strategies, finances, financial and accounting data and information, suppliers, stakeholders, purchasing data, strategical plans and any other information which is proprietary and confidential to Client.

**4. Exclusions.**

Confidential Information shall not include the following:

- a. information which is now or which hereafter becomes publicly known or available through no act or failure on the part of the Contractor;
- b. information which is actually known to the Contractor prior to the time of receipt of such Confidential Information;
- c. information which is furnished to the Contractor by a third party who has rightfully obtained the Confidential Information without restriction on disclosure;
- d. information which is independently developed by the Contractor without use of or reference to the Confidential Information of the Client that does not otherwise contravene the terms and provisions of the Agreement, and which such independent development can be established by evidence that would be acceptable to a Court of competent jurisdiction; or
- e. information which the Contractor is by law, order of a Court of competent jurisdiction, or other legal compulsion required to disclose; including but not limited to provision of information required by recognized stock exchange, regulation, governmental or regulatory body etc.
- f. information that is disclosed by the Contractor with the prior written approval of the Client.

## 5. Nondisclosure and Non-use Obligations.

Subject to confidentiality clause under the Agreement, the Contractor will maintain in confidence and will not disclose, disseminate or use any Confidential Information belonging to Client, whether or not in written form. The Contractor agrees that Contractor shall treat all Confidential Information of Client with at least the same degree of care as Contractor accords its own Confidential Information. Contractor further represents that the Contractor exercises at least reasonable care to protect its own Confidential Information. the Contractor agrees that Contractor shall disclose Confidential Information only to those of its employees who need to know such information and certifies that such employees have previously signed a copy of this Agreement.

**Non-Disclosure of Confidential Information.** The Contractor hereby agree and undertake that they shall not

- a. disclose Confidential Information *[or the existence or content of any negotiations or discussions]*- between the Parties to any third party other than as authorized in clause 4 above; or (ii) use the Confidential Information disclosed to it by the Client for its own use or for any purpose, other than for the Purpose.
- b. Provided, however, that the Contractor may, without being required to seek prior written consent of the Client, disclose, in connection with the proposed business venture described in clause 5 above, to the extent necessary for the Purpose, Confidential Information to such of the following persons who reasonably require the same:
  - (i) employees, officers and directors of the Contractor;
  - (ii) employees, officers and directors of any Affiliate of the Contractor;
  - (iii) to any professional consultants/advisors retained by the Contractor acting for the purpose of advising the Contractor on the Purpose.
- c. The Contractor shall procure that any Confidential Information disclosed to any employee, officer or director of the Contractor or any of its Affiliates or any professional consultants/advisors retained by the Contractor shall be held strictly confidential on the same terms as set out herein.
- d. The Contractor further undertakes and agrees:
  - (i) to take all reasonable steps to protect the secrecy of Confidential Information and avoid disclosure, publication, or dissemination of the Client's Confidential Information or use of Confidential Information of the other in order to prevent it from falling into the public domain or the possession of unauthorized persons, using the same standard of care and discretion that Contractor uses to protect its own confidential information
  - (ii) to notify the Client in writing of any misuse or misappropriation of Confidential Information by any person of which it may become aware.
  - (iii) in the event it receives any lawful order by a court or government entity to disclose Confidential Information of the Client, that it shall notify the Client immediately in order to provide the Client the opportunity to seek an appropriate protective order. If the Client is unable to procure such protective order, the Contractor may disclose such Confidential Information only to the limited extent required to comply with such order;

- (iv) not to use the Confidential Information for purposes of unfair or improper competition. The Contractor shall not copy, alter, modify, reverse engineer, disassemble, or decompile any of the materials, software code or other tangible items that embody Confidential Information of the Client. The Contractor shall not copy or permit copying of Confidential Information of the other except as permitted in writing by Client.

6. **Miscellaneous.**

- a. **Successors and Assigns:** This Agreement shall be binding upon and for the benefit of the executing Parties, their successors and assigns, provided that Confidential Information may not be assigned without consent of the Client.
  - b. **Entire Understanding:** The Agreement and NDA sets forth the entire understanding and agreement of the parties with respect to the subject matter hereof and supersedes all prior or contemporaneous oral or written representations and understandings.
  - c. **No Waiver:** Any failure or delay by either Party to enforce any provision of this NDA or to exercise any right under this NDA will not be construed as a waiver of its rights.
  - d. **Amendment:** This NDA may be amended or modified only in a writing signed by both Parties.
  - e. **Parties Independent:** The Parties agree that each Party is an independent party/contractor and that this NDA will not be construed as a teaming agreement, joint venture, partnership or other business relationship.
  - f. **Good Faith:** The Parties agree to act in good-faith in the performance of all their obligations and in exercise of all their rights, powers and privileges hereunder.
  - g. **Dissociability:** Each provision of this NDA is disassociable and distinct from the others. The invalidity, illegality or unenforceability of any one or more provisions of this Agreement at anytime shall not in any way affect or impair the validity, legality and enforceability of the remaining provisions hereof.
  - h. **Governing Law.** This NDA shall be governed in all respects in accordance with the laws of Pakistan and will be governed by and construed in accordance with the laws of Pakistan, without application of its conflict of law rules. The Parties agree that all legal proceedings arising from or relating to the Agreement and NDA or breach thereof will be brought and maintained exclusively in the courts of Pakistan.
7. **Survival.** This NDA shall govern all communications between the Parties. The Contractor understands that its obligations under Paragraph 5 ("Nondisclosure and Non-use Obligations") shall survive for two years after the termination or expiry of the NDA. Upon termination of any relationship between the Parties, the Contractor will promptly deliver to Client, without retaining any copies, all documents and other materials furnished to the Contractor by Client.
8. The Contractor agrees and undertakes that upon termination of the Agreement/NDA by the Client.

- a. shall return to Client all documents and property of Client, even if not marked “confidential” or “proprietary,” including but not necessarily limited to drawings, reports, manuals, correspondence, customer lists, computer programs, and all other materials and all copies thereof relating in any way to Client, or in any way obtained by the Contractor during the course of the Agreement and shall not retain copies, notes or abstracts of the foregoing.
- b. The Client may notify any future or prospective employer or third party of the existence of this Agreement/NDA.

**9. Injunctive Relief.**

- a. A breach of any of the promises or agreements contained herein will result in irreparable and continuing damage to Client for which there will be no adequate remedy at law, and Client shall be entitled to injunctive relief and/or a decree for specific performance and such other relief as may be proper (including monetary damages if appropriate).
- b. Removal of difficulty or conflict of clauses. In case of any difficulty which may arise as result of conflict or discrepancy or misinterpretation of clauses of NDA or Agreement or any annexures thereto, the Client, on its sole and absolute discretion remove such conflict or discrepancy or misinterpretation in a manner that may not prejudice the rights of the Client.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the dates written below.

For and on Behalf of Client	For and on behalf of Contractor
Signed by _____ Seal----- Witness _____	Signed by _____ Seal _____ Witness _____

**Digital Forensics Lab**  
**(Technical Specifications)**

1. License Requirement: TWO licenses for each module. Preference for perpetual licenses. If perpetual licenses are not available than per annum licenses can be offered.
2. Computer Forensics (like FTK, Axiom, Detago or equivalent)

	Functional Requirement	Compliance (Yes/No/Partial)
a.	<b>Write Blocker/ Duplicator Kit</b>	
	1) Should support various operating systems viz, Windows, Linux, Unix, Sun Solaris, Macintosh, Apple iOS	
	2) The kit should have the blocker devices for the storage media having the interface of SATA, IDE, Firewire USB2, USB3, e-SATA, Micro-SATA, Combine SATA and ZIF, and SAS (Serial Attached SCSI) along with their respective connecting cables	
	3) Image SATA, USB 3.0, and IDE hard disks natively	
	4) Image SAS drives with the SAS Expansion Module Standard operations: Disk-to-Disk (clone) duplication Disk-to-File (image) duplication Format, Wipe, Hash (MD5 or SHA-1) HPA/DCO detection and removal Blank Disk Check	
	5) Should be able to read/write images in	
	a) Raw Image (.IMG, .DD)	
	b) Split Raw Image (.00n)	
	c) Advanced Forensics Format Images* (AFF3 and AFF4)	
	d) Advanced Forensics Format Images w/ meta data* (AFM)	
	e) Advanced Forensics Format Directories* (AFD)	
	f) VMWare Image (.VMDK)	
	g) EnCase EWF (.E01)	
	h) EnCase 7 EWF (.EX01)	
	i) EnCase Logical EWF (.L01)	
	j) EnCase 7 Logical EWF (.LX01)	
	k) SMART EWF (.S01)	
	l) VHD Image (.VHD)	
	m) Mobile Phone Raw Binary Memory Dumps (*.bin)	
	6) Capable to acquire/clone data from one-to-one, two-to-two destinations media.	
	7) Capable to acquire/clone data at the rate of 5GB/Min. (or more).	
	8) Capable to acquire/clone data in Drive to Drive, Drive to Uncompressed segmented files and Drive to Compressed segmented files format to support analysis in various forensic analysis tools.	
	9) Capable to cross copy support to PCIe, IDE, SATA, eSATA, micro SATA, SCSI, SAS, ZIF and USB interfaces and combine-SATA etc.	
	10) Capable to authenticate the data with at least two hashing algorithms.	

	11) Capable to identify and acquire HPA and DCO Areas of the suspect media.	
	12) Capable to acquire data directly from the live system/content-based image.	
	13) Capable to boot/Mount the suspect media virtually in a write-protected environment from the preview of live data.	
	14) Capable to acquire data from suspect RAID (all RAID Configuration) drives.	
	15) Capable to acquire data over a network.	
	16) Capable to generate the log of the processes.	
	17) Capable to search for the keywords in the suspected media.	
	18) Preloaded operating software	
b.	<b>Portable Imaging Device for Incident Response</b>	
	1) Should support various operating systems viz, Windows, Linux, Unix, Sun Solaris, Macintosh, Apple iOS	
	2) Should have the inbuild blocker device for the source drive.	
	3) Should support the disks of various interfaces like IDE, SATA, ESATA, FIREWIRE, PCIe and USB devices.	
	4) Should have the facility to Disk-to-Disk duplication with a facility of compression.	
	5) Should have the facility to Disk to File duplication with e01 and .ex01.'	
	6) Should compute and verify the hash values with at least two hashing algorithms.	
	7) Should have the facility to format./wipe/black check the destination drive.	
	8) Should have the facility to display, print, and save logs.	
	9) Should have a user-friendly GUI screen.	
	10) Should have the facility to use the device as a remote write blocker.	
c.	<b>Forensic Triage Tool Kit</b>	
	1) Should support various operating systems viz, Windows, Linux, Unix, Sun Solaris, Macintosh, Apple iOS	
	2) Run directly from the USB thumb drive without having to install the software on the target computer	
	3) Preview and acquire full disk, targeted data, support Image formats of AD1, E01, RAW, or SMART.	
	4) Acquire data from a live system with an active USB port.	
	5) Manual mode to search the file system/data prior to collection.	
	6) Pre-configured options for reporting on collected data.	
	7) Mount & Search volume shadow copies on a live system, at the logical or physical level.	
	8) Save all results directly to the thumb drive.	
	9) 4. Automatically check for disk encryption including Truecrypt, PGP, Bitlocker and SafeBoot.	
	10) Built-in live RAM capture.	

	11) Support to collect data from Chrome Browser History, Default Browsers, Firefox Browser History, Internet Explorer History, Internet Explorer Registry Keys, Typed URLs, Recently Accessed media Player Files, Local Network Connections, Remote Share, IP Addresses, Application Usage History, Installed Software, Program Files Software, Start-up Programs, Clipboard Data, Device Drives, Memory Dump, Processes, Scheduled Tasks, Screenshot, Services, User Accounts, User Groups, Acquire Registry, System Information, Typed Paths, USB Devices, Users, Owner Information, SAM User etc	
	12) Should be able to collect/ parse/ carve/ recover artefacts left behind live/ offline system	
	13) Cloud Artefacts like Dropbox, Carbonite, SkyDrive, Google Docs, Google Drive Flickr Social Networking Pages like Facebook, Twitter, Bebo Chat, Myspace Chat, Google+, Linked In etc	
	14) Webmail Applications like Gmail Email, Yahoo Webmail Email, Hotmail Webmail Email etc	
	15) Instant Messenger Chats like Google Talk Chat Messages, Yahoo Chat Messages, MSN/ Windows Live Messenger Chat Messages, messenger Plus Chat Logs, AOL Instant Messenger (AIM) chat logs, mIRC Chat logs, Skype, ICQ, World of Warcraft, Second Life, Trillian etc	
	16) P2P File sharing Application like Linewire, Frostwire. Props Files, Gigtribe Chat Messages, Ares P2P Search Keywords, Shareaza Search Keywords, eMules. Torrent File Artifacts etc	
	17) Web Browser Activity from Internet Explorer History/Recovery URLs, Firefox History, Google Chrome History, Apple Safari, Opera, Google Maps, Browser Activity-Chrome Incognito/Firefox Private Browsing etc	
	18) Support dd, EnCase, FTK, AFF, and Apple disk images	
	19) Should support automated processing of evidence with the capability to indexing, auto de-NISTing, file signature analysis, hash analysis, Protected File signature analysis, hash analysis, Protected file analysis, Expand compound files. File parser for Emails (PST, NSF, DBX, EDB, AOL, MBOX), extract internet artifacts, timeline analysis, System Info Parser, IM Parser (AOL, MSN, Yahoo), File Carver, Windows Event Log Parser, Windows Artefact Parser, Unix Login, Linux Syslog Parser, etc.	
	20) Should support decryption of disks, volumes, folders and file of the suspected media having various types of encryptions.	
	21) Should support custom programs for processing of data.	
	22) Should Support PLIST, SQLite database, Apple DMG and DD_DMG disk image and JSON file, etc.	
	23) Should support remote extraction of hard and removable drives, RAM, connected mobile devices, and even specific types of data	
	24) Should be able to collect and preserve data from local endpoints before it is potentially modified or lost.	

	25) Should provide a pre-set collection profile to target a comprehensive set of files and data relevant to incident response investigations, including RAM	
	26) It should provide selective acquisition from evidence without privacy infringement, screen capture & recording of mirrored smartphone display, and recording of forensic process by an external camera via an internal recording feature.	
	27) Capability to extracts and analyzes data from cloud data storages	
	28) capability to recover data from SATA/PATA/USB HDD, PCIe/SATA SSD, and RAID both in the lab and on-site.	
	29) The features to deeply analyze and recover logically damaged Files Systems: FAT12/16/32, NTFS, Ext2/3/4, HFS+, exFAT, F2FS, etc	

### 3. Network Forensics

a.	Taps with bypass capability for following throughput 5 x 1 Gbps Network Taps (RJ45 version) 2 x 10 Gbps Network Taps 1 x 100 Gbps Network Tap	
b.	2 x 10 TB NAS: SSD without RAID and compatible with Profitap products (Synology NAS or equivalent)	
c.	Application to capture and process network traffic up to 10 Gbps with following capabilities: <ul style="list-style-type: none"> <li>1. Policy/ Auditing/ Compliance based Playbooks <ul style="list-style-type: none"> <li>a. Long Connection Detection. Find connections that have communicated with long period of time</li> <li>b. Connection Score by Severity</li> <li>c. First Seen/ Last Seen: When external/ internal host first/ last seen on Network</li> <li>d. Prevalence: One to many and Many to One connection relevance for Ingress and Egress traffic</li> <li>e. Certificate based White, Grey and Black listing</li> <li>f. Domain based White, Grey and Black listing</li> <li>g. Application protocol based White, Grey and Black listing</li> <li>h. IP and Port (Session based) based White, Grey and Black listing</li> <li>i. Asset Identification</li> <li>j. Asset Criticality Identification</li> <li>k. Identify/ Segregate types of Encryption stacks</li> <li>l. L-7 Application identification</li> <li>m. Identify SMB shares in the network traffic</li> <li>n. Identify Remote Desktop Protocols</li> <li>o. Identify network services</li> </ul> </li> <li>2. Threat Hunting Playbooks <ul style="list-style-type: none"> <li>a. Beaconing Detection: Search for signs of beaconing behavior in and out of network</li> </ul> </li> </ul>	

	<ul style="list-style-type: none"> <li>b. DNS Tunneling Detection: Search for signs of DNS based covert channels</li> <li>c. Identify malicious or legit use of Microsoft BITS Jobs by Windows operating system</li> <li>d. Identify rootkits/ malware using Port Knocking based activation techniques</li> <li>e. Identify signature-less Web shells</li> <li>f. Identify Malicious root chain certificates</li> <li>g. Identify Multistage and Split channel communication for malicious traffic identification</li> <li>h. Identify Non-Application layer protocols used for malicious traffic</li> <li>i. Identify Multi-threaded exfiltration</li> </ul> <ol style="list-style-type: none"> <li>3. Options to configure White/ Blacklist Assets (based on IP, Ports, Certificates, Domains etc) for above mentioned playbooks</li> <li>4. Ability to ingest IoCs in form of Threat Intelligence feeds</li> <li>5. Ability to identify anomalies in traffic</li> <li>6. Capability to operate in Live (Port Mirroring/ Span) and Offline (on already captured traffic) modes</li> <li>7. Capability of AI/ ML based anomaly detection</li> <li>8. Capability to identify anomalies in network traffic using statistical analysis</li> <li>9. Capability to map traffic against timeline</li> <li>10. Capability to map Detections and anomalies against MITRE attack vectors</li> <li>11. Ability to extract files/ URLs from captured traffic</li> <li>12. Native/ Built-in Sandbox to analyze extracted files/ URLs</li> <li>13. Capability to transfer files to third party system for Malware Analysis</li> <li>14. Capability to configure capture filters for Smart Capturing of Traffic of Interest</li> </ol>	
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#### 4. Cloud/ Applications/ DB Forensics (Magnet AXIOM Cyber)

	Functional Requirement	Compliance (Yes/No/Partial)
a.	Should be able to extract Forensically secure backup data from cloud for social media, navigation, health, lifestyle, banking and messaging apps (including WhatsApp, Telegram, Facebook Messenger, WeChat, Snapchat, Line, Signal etc)	
a.	Should be able to recover the main types of relational & non-relational databases.	
b.	Should be able to resolve the problems of deleted /corrupted/fragmented database files, false file systems, and restriction of application system accessibility	
c.	Should be able to conduct the preview, recovery, extraction, reorganization, analysis, and export operations to the database files	

	involved in the cases independently without the assistance of any expensive expert or configuration regarding the environment.	
d.	Should provide capability for cloud data forensic downloader and report generator for the most popular services. It should be able to immediately start downloads when authentication information is found in a phone through multiple concurrent sessions	

5. Mobile Forensics (like Graykey, Oxygen, Recon, F-EX Bundle Tablet or equivalent)

	Functional Requirement	Compliance (Yes/No/Partial)
a.	Should be able to unlock/ bypass PIN, passcode lock, pattern lock for latest Android, Apple iOS, Windows, Blackberry OS, Tizen OS including all Chinese brands etc	
b.	Should be able to unlock/ bypass PIN, passcode lock, pattern lock for for all branded/ known chipsets including but not limited to Qualcomm/ Snapdragon, Bionic, Tensor, kirin, Exynos, MTK, INFINEON, SPREADTRUM, etc etc	
c.	Provides physical extraction and decoding from phones manufactured with Chinese/ non-Chinese chipsets using proprietary boot loaders	
d.	Perform forensically sound full file system and logical acquisition of cellphones including smart/ smartwatch and feature phones	
e.	It should support the extraction and analysis of the smartwatches, IoT devices, PDAs, GPS devices	
f.	Extract and analyse data from drones including but not limited to DJI (Phantom, Mavic), Parrot and PixHawk	
g.	Perform logical SIM data extraction including support for SIM Card reading, extract SIM related info along with user information line phone book, call register, text messages (Active and Deleted) and SIM Card cloning to bypass PIN	
h.	Should support extraction of CDMA Mobile Phones	
i.	Should be able to perform fast imaging over a networked environment with Forensically secure system information, RAM data, usernames and passwords, internet artefacts and physical images from endpoints	
j.	Remote extraction should be able to resume extractions from previous cut-off points in the event of network failures/drops	
k.	Extract and decrypt keychain/keystore/truststore from the device without jailbreak/ rooting	
l.	Image device file system, extract device secrets (passwords, encryption keys and protected data) and decrypt the file system image	
m.	Perform logical and over-the-air (remote) acquisition of devices, break into encrypted backups, obtain and analyze backups, synchronized data (call logs, photos, browsing history etc.) and passwords from Apple iCloud, Microsoft, Android Google and Samsung cloud etc	

n.	Should provide multiple extraction options including physical and logical extractions, bootloader, Android Debug Bridge (ADB), bypassing, backups and others	
o.	Should be able to transfer forensically sound encrypted image remotely through internet to remote location	
p.	Logical acquisition to include extraction of backups, crash logs, media and shared files	
q.	Extracts and decrypts protected keychain/keystore/truststore items	
r.	Should be able to perform backup file decryption and keychain/keystore/truststore extraction for android, ios and other branded/ non-branded phones	
s.	Automatically disables screen lock for smooth, uninterrupted acquisition	
t.	Passcode unlock and physical acquisition for legacy devices	
u.	Extract activity logs from a database within the device	
v.	Should contain portable solution for immediate onsite digital evidence acquisition and analysis	
w.	Should be able to take physical, logical and targeted forensically sound images	
x.	Should be able to read/write images in	
	1) Raw Image (.IMG, .DD)	
	2) Split Raw Image (.00n)	
	3) Advanced Forensics Format Images* (AFF3 and AFF4)	
	4) Advanced Forensics Format Images w/ meta data* (AFM)	
	5) Advanced Forensics Format Directories* (AFD)	
	6) VMWare Image (.VMDK)	
	7) EnCase EWF (.E01)	
	8) EnCase 7 EWF (.EX01)	
	9) EnCase Logical EWF (.L01)	
	10) EnCase 7 Logical EWF (.LX01)	
	11) SMART EWF (.S01)	
	12) VHD Image (.VHD)	
	13) Mobile Phone Raw Binary Memory Dumps (*.bin)	
y.	Should provide automated Forensic Image file validation with at least two hashing algorithms	
z.	Choose from a range of extraction options including physical and logical extractions, bootloader, Android Debug Bridge (ADB), bypassing, backups and others	
aa.	for triage* purposes and enables investigators to decide whether a digital exhibit contains information of interest or if there is enough obvious evidence on the device to proceed with charging	
bb.	Should be able to carry out selective extractions of partitions, files, categories and apps	
cc.	Should be able to extract and analyze data from non-brand devices and burner phones	
dd.	Should be able to extract Forensically secure data from social media, navigation, health, lifestyle, banking and messaging apps (including	

	WhatsApp, Telegram, Facebook Messenger, WeChat, Snapchat, Line, Signal etc)	
ee.	Should be able to extract digital footprint from social media and cloud-based applications	
ff.	Should be able to access file properties, internet artefacts, communication history (email addresses, call events, contacts, messages, credentials etc.), device information, financial information and keywords to rapidly identify and link suspects	
gg.	Able to extract selective data (call logs, phone book, SMS messages, e-mail messages along with attachments, MMS messages along with attachments, calendar, multi-media files, passwords, location information, audio and video files etc	
hh.	Should be able to use Artificial Intelligence (AI) and Machine Learning (ML) to quickly and easily collect evidence from iOS and Android phones and tablets	
ii.	Selective extractions of partitions, files, categories and apps	
jj.	It should provide selective acquisition from evidence without privacy infringement, screen capture & recording of mirrored smartphone display, and recording of forensic process by an external camera via an internal recording feature	
kk.	The software also supports processing and analysing Call Data Records (CDR) and Cloud data (WhatsApp, iCloud, Facebook, Twitter, etc.)	
ll.	Should support SQLite database parsing	
mm.	Should be able to extract and analyze (using AI and Machine Learning techniques) phone book and contact list, Call Logs, caller group information, organizer, notes, SMS messages (live & deleted). Web-browser artifacts, multi-media messages with attachments, e-mail messages with attachments, multi-media files (images, audio & video files), details of installed applications and their data, traffic and sessions log	
nn.	Should support timeline analysis, GEO event positioning analysis of extracted data	
oo.	Should be able to perform Social Networking data and link analysis	
pp.	Should provide Multilanguage (regional) support	

6. Cryptanalysis/ Password cracking Solution (like Passware kit Ultimate or equivalent)

	Functional Requirement	Compliance (Yes/No/Partial)
a.	Capability to run from a USB thumb drive and recover password without installation on a target PC Should provide encryption detection and decryption solution for computers, disks, files, and mobile devices	
b.	Should be able to report and decrypt all password-protected items on a computer using available methodologies.	

c.	Should work for all file types including but not limited to MS Office, PDF, Zip and RAR, QuickBooks, FileMaker, Lotus Notes, Bitcoin wallets, Apple iTunes Backup, Mac OS X Keychain, password managers etc	
d.	Should be able to decrypt or recover passwords for APFS, Apple DMG, BitLocker, BitLocker ToGo, Dell, FileVault2, LUKS and LUKS2, McAfee, PGP, Symantec, TrueCrypt, and VeraCrypt disk images, FileVault2 and PGP volumes	
e.	Able to reset the password for Local and Domain Windows Administrators instantly	
f.	Able to recover password for Windows user from a memory image or a standalone SAM file, iTunes backups: both iPad and iPhone.	
g.	Able to recover passwords from email, websites and network connections from standalone registry files.	
h.	Able to extract passwords from encrypted Mac keychain files	
i.	Should be able to recovers passwords for Macs equipped with Apple T2 Security Chip	
j.	Should be able to work in batch mode recovering passwords.	
k.	Should provide hardware and software based accelerated password recovery with multiple computers, NVIDIA and AMD GPUs, and Rainbow Tables	
l.	Should provide support for distributed password recovery for Windows, Linux, and Amazon EC2	
m.	Should be able to unlock documents, decrypt archives, break into encrypted containers	
n.	Should provide support all popular crypto containers, encrypted compressed archives, system disk and file system encryption, and many other types of passwords	
o.	Should enable massively parallel operation, and scale linearly upto 10,000 workstations and cloud instances with no scalability overhead	
p.	Should provide Remote deployment and console management	
q.	Should support batch file processing	
r.	Acquire memory images of the seized computers	
s.	Cryptanalysis/ Password cracking Hardware:	Specifications
	Functional Requirements	5th Gen Intel® Xeon® Scalable Processors - <b>Computer Case</b> Cosmos C700 Serie, customized Big-Tower Dimensions: 306(W) x

	<p>651(H) x 639(D)mm; 11 x 5.25 Drive Bay; I/O Panel: 1x USB 3.1 Typ-C; 4x USB 3.0 Typ A; 1x FAN- / RGB-LED-Control Unit; 1x Audio In/Out;</p> <ul style="list-style-type: none"> <li>- Power Supply 1600WATT Modular Power Supply ATX, EPS12V, PS/2</li> <li>- <b>Mainboard</b> 5th/4th Gen Intel® Xeon® Scalable processors, Dual Socket LGA-4677 (Socket E), Intel® C741 Chipset, Up to 4TB 3DS ECC RDIMM, DDR5-5600MT/s(1DPC) in 16x DIMM slots, Broadcom BCM57416 Dual ports 10G LAN, 8x SATA 3.0 ports(C741, RAID 0, 1, 5, 10), 2x SATA DOM ports; 2x M.2, 4x NVMe ports PCIe 5.0 x4 via 2 MCIO connectors, 5x PCIe 5.0 x16, 1x PCIe 5.0 x8, HD Audio 7.1 channel, 1x USB 3.1 Gen 2, 6x USB 3.0, TPM 2.0 AOM-TPM-9670V</li> <li>- <b>CPU's</b> 2x 16-Core Intel® Xeon® Gold 6526Y Processor (37.5M Cache, 2.80 GHz - 3.90 GHz) - RAM 256GB (expandable up to 4TB) 4x 64GB DDR5 ECC REG RAM</li> <li>- <b>Storage-Intern</b> 1 x 1TB SSD M.2 PCIe 4.0 for OS 1 x 2TB SSD M.2 PCIe 4.0 for Cache 2x 3.84TB SSD U.2 PCIe 4.0 in RAID 0 for data base 4 x 20TB Enterprise HDD SATA-III for Data in RAID 5 or 6 via RAID Controller</li> <li>- <b>Backplane</b> 3x Backplane, screwless hot-swap for additional 3.5" HDD's (empty)</li> <li>- <b>Grafic Card</b> NVIDIA Gf RTX, min. 8G memory, PCIe, min. 1x HDMI/ 1x DP</li> <li>- <b>Optical Drives</b> DVD BluRay - Writer, SATA - Controller 1x 8-Port RAID Controller, 4GB Cache, PCIe, 12Gb/s SATA/SAS Supports RAID 0, 1, 5, 6, 10, 50, 60</li> <li>- <b>Forensic-Bridge</b></li> </ul>
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	Tableau T356789iu Forensic Universal Bridge USB3.0&PCIe&SATA&FireWire&IDE&SAS mh Service Silent Edition incl. all cables, adapters and "ICY TRAY" Imaging Shelf. Cable Set: TC2-8-R2, TC4-8-R2, TC6-8, TC7-9-9 PCIe Adapter Set: TDA7-1, TDA7-2, TDA7-3, TDA7-4, TDA7-7, TCPCIE-4 SATA&IDE Adapter Set: TC6-2, TDA3-1, TDA3-2, TDA3-3, TDA3-LIF, two LIF cables, TDA5-18, TDA5-25, TDA5-ZIF, TC20- BNDL
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7. DVR Forensics (like Salvation Video Investigator, Magnet or equivalent)

	Functional Requirement	Compliance (Yes/No/Partial)
a.	Extract all DVR data in bulk	
b.	Recover deleted video and metadata	
c.	Bypass passwords	
d.	Acquire data from damaged DVRs	
e.	Tackle complex cases with support for multiple sources, locations, and devices	
f.	Quickly review video evidence, add locations, devices, and sources	
g.	Export in Open Video format	

8. Data Recovery (Like R-Studio Technician and Salvation DRS), Dr. Fone Full toolkit (For Mobile Devices)

9. Evidence Storage.

	Functional Requirement	Compliance (Yes/No/Partial)
a.	1 x NAS with 50 TB Raw storage and expendable capacity up to 500 TB, SAS 15k RPM, 2 x RAID Controllers	

10. **2 x Server, 2 x Workstation and 4 x Laptops.** Servers and Workstation, Laptops to support above mentioned systems.

	Functional Requirement	Specifications
a.	Laptops (4 x Quantity)	<ul style="list-style-type: none"> <li>14th Gen Intel Core i9-14900HX (2.2 GHz, Max Turbo Boost 5.40 GHz) 8 P-core &amp; 16 E-core / 32 thread CPU</li> <li>GRAPHICS CARD NVIDIA GeForce RTX 4080 GPU 12GB</li> </ul>

	<ul style="list-style-type: none"> <li>• 16 inch QHD (2560-1440) 240Hz, WVA, 100% DCI-P3, G-Sync Display</li> <li>• 128 GB Dual Channel DDR5 SDRAM at 5200 MHz</li> <li>• One (1) 1TB M.2 NVMe PCIe 4.0 SSD for the Operating System</li> <li>• One (1) 1TB M.2 NVMe PCIe 4.0 SSD for Temporary Files</li> <li>• One (1) 4 TB M.2 NVMe PCIe 4.0 SSD for Evidence Files</li> <li>• Intel Dual Band Wireless Wi-Fi 6E AX211 + Bluetooth, M.2 interface</li> <li>• One (1) RJ-45 LAN port (10/100/1000/2500Mbps)</li> <li>• Embedded 8-cell Polymer battery pack, 99WH</li> <li>• 330W AC Adapter 100~240V, 50~60Hz, DC output 19.5V, 16.92A</li> <li>• Kensington Lock / Intel PTT (Platform Trust Technology) / TPM 2.0</li> <li>• Illuminated Keyboard, full size</li> <li>• One (1) HDMI output Port (with HDCP 2.2)</li> <li>• One (1) Mini DisplayPort 1.4</li> <li>• One (1) Thunderbolt 4 combo Port with Power Delivery DC in (Type C)</li> <li>• Two (2) USB 3.2 Gen 2 Ports (Type A, 1 x powered USB port, AC/DC)</li> <li>• One (1) 2-in-1 Audio Jack (Headphone / Microphone)</li> <li>• One (1) 2-in-1 Audio Jack (Microphone / S/PDIF Optical output)</li> <li>• Microsoft Windows 11 Professional 64 Bit</li> </ul> <p><b>Hardware Write Blocking:</b>  - Laptop ULTRAKIT (v5) – Set of forensic hardware write blockers (Ultra Block USB3.0 to IDE/SATA, Ultra Block PCIe, and Ultra Block USB3.0) including interface cables, SATA III to m.2 and mSATA adapter, PCIe m.2 SSD adapter and two power supplies in a watertight/airtight case</p>
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		<p>- Forensic Media Card Reader – Read-Only and Read/Write switchable (Packaged in Laptop Ultra Kit v5)</p>
b.	Forensics Workstation (2 x quantity)	<ul style="list-style-type: none"> <li>• Intel Xeon W, Dual 10G Ethernet –</li> <li>• Computer Case Cosmos C700 Serie, customized Big-Tower Dimensions: 306(W) x 651(H) x 639(D)mm; 11 x 5.25 DriveBay; I/O Panel: 1x USB 3.1 Typ-C; 4x USB 3.0 Typ A; 1x FAN- /RGB-LED-Control Unit; 1x Audio In/Out; - Power Supply 1200WATT Modular Power Supply ATX, EPS12V, PS/2</li> <li>• Mainboard Intel Socket LGA4677 for Xeon W Series Processors, IntelW790 Chipset, 128 GB RAM, 8x DIMM slots, Max. 2048GB DDR5 RAM, 2x 10Gb Ethernet port, 1x 1Gb Ethernet port, 3 x M.2 slots, 2 x Slim SAS slots, 8x SATA 6Gb/s ports –</li> <li>• CPU 12-Core Intel® Xeon® w5-3425 Processor (30M Cache, 3.20 GHz - 4.60 GHz) - RAM 128GB (expandable up to 2TB) 4x 32GB DDR5 ECC REG RAM</li> <li>• Graphic Card NVIDIA GF RTX, min. 6GB Memory, PCIe, min. 1x HDMI &amp; 1x DisplayPort</li> <li>• Storage Intern 1x 1TB SSD M.2 NVMe PCIe 4.0 x4 for OS 1x 2TB SSD M.2 NVMe PCIe 4.0 for Cache 1x 4TB SSD M.2 NVMe PCIe 4.0 for database 2x 20TB Enterprise HDD SATA III for DATA</li> <li>• Backplane 3x Backplane, screwless hot-swap for additional 3.5" HDD's (empty) 2x Backplane for Storage HDD –</li> <li>• Forensic-Bridge</li> </ul>

		<p>Tableau T356789iu Forensic Universal Bridge USB3.  0&amp;PCIe&amp;SATA&amp;FireWire&amp;IDE&amp;SAS mh  Service Silent  Edition incl. all cables, adapters and "ICY TRAY" Imaging Shelf.  Cable Set: TC2-8-R2, TC4-8-R2, TC6-8, TC7-9-9  PCIe Adapter Set: TDA7-1, TDA7-2, TDA7-3, TDA7-4, TDA7-7, TCPCIE-4  SATA&amp;IDE Adapter Set: TC6-2, TDA3-1, TDA3-2, TDA3-3, TDA3-LIF, two LIF cables, TDA5-18, TDA5-25, TDA5-ZIF, TC20- BNDL</p>
c.	2 x Server	<p>Chassis with up to 8x2.5" Drives  Trusted Platform Module 2.0 V3  2.5" Chassis with up to 8 SAS/SATA Drives  Intel® Xeon® Platinum 8380 2.3G, 40C/80T, 11.2GT/s, 60M Cache, Turbo, HT (270W) DDR4-3200  Intel® Xeon® Platinum 8380 2.3G, 40C/80T, 11.2GT/s, 60M Cache, Turbo, HT (270W) DDR4-3200  Heatsink for 2 CPU  Performance Optimized  3200MT/s RDIMMs  256 GB RAM  16GB RDIMM, 3200MT/s, Dual Rank C7, Unconfigured RAID for HDDs or SSDs (Mixed Drive Types Allowed)  Front PERC H755 Rear Load  1.92TB SSD SAS, RI, up to 24Gbps 512e  2.5in Hot-Plug, AG Drive  Performance BIOS Setting  UEFI BIOS Boot Mode with GPT Partition  No Energy Star  Very High-Performance Fan  Dual, Hot-Plug, Power Supply Fault Tolerant Redundant (1+1), 2400W, Mixed Mode  Jumper Cord - C19/C20, 2.5M, 250V, 16A (TW and APCC countries except ANZ)  Riser Config 0, 6x16 + 2x8 slots  R750XA Motherboard with Broadcom 5720 Dual Port 1Gb On-Board LOM</p>

	<p>Broadcom 57416 Dual Port 10GbE BASE-T Adapter, OCP NIC 3.0</p> <p>Intel X710 Dual Port 10GbE SFP+ Adapter, PCIe Low Profile</p> <p>Mellanox ConnectX-6 DX Dual Port 100GbE QSFP 56 Network Adapter, Low Profile NVIDIA Ampere A16, PCIe 250W, 64GB Passive DW, FH GPU with R750xa Bracket, Requires vGPU SW for VDI GPU</p> <p>Factory Installed cable kit for DW GPU W/CPU CONN + 2 GPU Blanks (2 GPUs)</p> <p>PowerEdge 2U Standard Bezel</p> <p>BOSS-S2 controller card + with 1 M.2 240GB (No RAID)</p> <p>No Operating System</p> <p>No Media Required</p> <p>iDRAC9, Enterprise 15G</p> <p>OpenManage Enterprise Advanced Quick Sync 2 (At-the-box mgmt)</p> <p>iDRAC, Factory Generated Password</p> <p>iDRAC Service Module (ISM), NOT Installed</p> <p>iDRAC Group Manager, Disabled</p>
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### 11. Tools and accessories.

	Functional Requirement	Compliance (Yes/No/Partial)
a.	<p>Forensics Adapter Kit (TABLEAU PCIE ADAPTER BUNDLE (TKDA7-3PC-BNDL))</p> <ul style="list-style-type: none"> <li>•TDA7-1 Tableau PCIe Card SSD Adapter</li> <li>•TDA7-2 Tableau PCIe M.2 SSD Adapter</li> <li>•DA7-3 Tableau PCIe Adapter for Apple SSD</li> <li>•TC-PCIE-4 Tableau PCIe Adapter Cable - 4"</li> <li>•Rugged Travel Case with Foam</li> </ul>	
b.	Power extension	
c.	Leads and adaptors	
d.	Screwdrivers	
e.	Toolkit	
f.	Digital Camera, video recorder	
g.	Magnetic tapes	
h.	Communication devices	
i.	Storage box or container for carrying equipment	
j.	Torch	
k.	Magnifying glass	
l.	Evidence sealing or evidence bags	
m.	Tamper-proof stickers	
n.	Permanent markers	

o.	Faraday bags (Mobile, Tablet & Laptop size) For protection from 2G, 3G, 4G, 5G, Bluetooth, GPS and WiFi, (2.5Ghz and 5Ghz)	
p.	1 x iPhone with bionic chipset and latest iOS version	
q.	1 x Android Phone with Mediatek chipset and latest android OS	
r.	1 x Android Phone with Qualcomm chipset and latest android OS	
s.	1 x Android Phone with Samsung Exynos chipset and latest android OS	
t.	1 x Android Phone with Google Tensor chipset and latest android OS	
u.	1 x Android Phone with Infineon chipset and latest android OS	
v.	1 x Android Phone with Kirin chipset and latest android OS	
w.	1 x Android Phone with UNISOC/ Spreadtrum chipset and latest android OS	
	<b>Hardware Screening Lab (Functional Requirement)</b>	Compliance (Yes/No/Partial)
a.	<p>Intelligent X-Ray Security Inspection System (like HIK VISION ISD-SC100100S-4CVL or equivalent) Tunnel Size 1000 mm W×1000 mm H Dimension 3592mmx1360mmx1894mm (L x W x H) Operation Desk Size 850mmx700mmx1200mm (L x W x H) Line Resolution 36AWG standard , 38AWG typical Penetration Steel panel 32mm standard, 34mm typical. Spatial Resolution 1.0mm(Horizontal and vertical typical ) X-Ray Generator 160kV 1.2mA(Adjustable) X-Ray Cooling/Work Period Oil Cooling/Continuous Film Security Standard of ASA/ISO1600 Leakage &lt; 5μGy/h, 10cm away from the device sheet Conveyor Height 300mm Speed 0.2 m/s, 0.3 m/s, 0.4m/s adjustable Sensor Type 1/2.7" Progressive Scan CMOS Camera 4 ch Video Compression Standard H.265 /H.264 / MJPEG Max. Image Size 1920× 1080 Frame Rate 60Hz: 30fps (1920x1080,1280 x 960,1280 x 720) Storage Time ≥30 days Prohibited Goods 41 classes in 15 major types Login Method Face/ Fingerprint/ Password Screen Size 21.5", Single Screen,1920×1080 Camera Image Size 1920 x 1080 Consumption 800W Power AC220V+10%~-15% 50±3Hz Operating Humidity 0% to 95%(No Condensation) Operating Temperature 0°C to 45°C Weight Net : 1300 kg(With rack and operating table gross weight 1500kg)</p>	

b.	PCB X-Ray inspection system (X-Ray machine Fixed like Semi-conductor SMT-X-eye 5000B or equivalent)	
c.	XRAY Machine portable (like NUCTECH BXM-2000 or equivalent)	
d.	Faraday's Box (like Ramsey STE3000F2 Isolation Box or equivalent): <ul style="list-style-type: none"> <li>• Compatible with Forensic software tools</li> <li>• RF isolated 6-outlet 120VAC power strip</li> <li>• RF isolated 6-pole feed-through terminal block</li> <li>• RF isolated USB2.0 high speed interface</li> <li>• 60MM Honeycomb Vents</li> <li>• RF tight illuminated viewing window</li> <li>• RF tight "hands-on" silver mesh gloves</li> <li>• Wide variety of I/O options</li> <li>• fully isolated from WiFi signal sources, including both 2.4 GHz and 5.0 GHz or any combination of 802.11a/b/g/n/ac protocols</li> </ul>	
e.	Hard wall Modular Faraday Enclosure – RF/EMI Shielding Size: 8' x 8' x 7' with a 4' x 6' x 7' Vestibule Attenuation: average shielding effectiveness of >85 dB attenuation in the range of 400 MHz to 11 GHz. Two shielded honeycomb vents; lower intake with fan and sleeve, upper exhaust AC Power and 1G Ethernet	
f.	RF Analyzer portable (like Merlin MK4 or equivalent): <ul style="list-style-type: none"> <li>• Bandwidth up to 30 GHz (50kHz to 30GHz Spectrum Capture and Recording)</li> <li>• Acquisition Rate 52 Terahertz per second</li> <li>• Ethernet control</li> <li>• Record / Replay 3D waterfall</li> <li>• Cable or Wireless control</li> <li>• Multi-format computer control (tablet supplied as standard)</li> <li>• Hot Swap Battery / Mains powered</li> <li>• Digital Video demodulation</li> </ul>	
g.	RF Analyzer – Table Mounted	

	<p>Frequency range from 2 Hz to 8/13.6/26.5/43.5/50/67 GHz (with external harmonic mixers up to 110 GHz)</p> <p>Low phase noise of <math>-137</math> dBc (1 Hz) at 10 kHz offset (1 GHz carrier)</p> <p>WCDMA/HSPA/HSPA+</p> <p>3GPP LTE</p> <p>GSM/EGPRS/EDGE Evolution/VAMOS</p> <p>CDMA2000® 1xEV-DO</p>	
h.	<p>Non-Linear Junction Detector (NLJD) (like Lornet-36 (Selcom Security) or equivalent):</p> <ul style="list-style-type: none"> <li>• Detection of small electronic devices</li> <li>• Exact positioning of the search object</li> <li>• Detection distance of metal striking elements up to 10 meters</li> <li>• Transmitter signal range 3600 MHz</li> <li>• Remote detection of electronic devices at a distance of up to 1 meter</li> </ul>	