



**CENTRAL FORENSIC SCIENCE LABORATORY**  
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(An ISO/IEC 17025:2005 laboratory accredited by NABL)  
Notified 'Examiner of Electronic Evidence' under Sec.79A of I.T.Act-2000



NO. 1(425)/CFSL(H)/2018/

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TO WHOM IT MAY CONCERN

The generalized specifications of the software and hardware tools for the proposed four units along with the forensic platform to be deployed on the Data Centre of National Cyber Forensic Laboratory (NCFL) at CFSL, Hyderabad are enclosed herewith for review and suggestions.

The suggestions may please be sent to the **Director** on or before **31/12/2018** positively by way of post or e-mail to the following mail-Id

- [director.cfsi-hyd@nic.in](mailto:director.cfsi-hyd@nic.in)

*Mansur*  
Director  
17/12/18

**Broad Based Specifications for**  
**Forensic Platform for**  
**National Cyber Forensic Laboratory**

S. No.	Name of the Tool	Specifications
1.	The integrated Forensic Platform for sharing the Digital Forensic tools with suitable APIs.	<ul style="list-style-type: none"> <li>• Integrated platform that enables centralized case management and web-based access to various digital forensic tools.</li> <li>• Interface to distributed processing support, Role Assignment, Password Cracking and Recovery, Wizard-Driven Multi-Machine, Customizable Processing.</li> <li>• Integrated Simultaneous access to Forensic Lab, Attorneys and Investigators through centralised management console via web interface.</li> <li>• Automate email notifications regarding case state.</li> <li>• Should include the following with APIs               <ul style="list-style-type: none"> <li>○ FTK Standalone Perpetual Licences – 10 Nos.</li> <li>○ AccessData Lab - FTK Connection – 10 Nos.</li> <li>○ AccessData Lab - Web User Account – 10 Nos.</li> <li>○ Magnet AXIOM Complete Perpetual Licences – 10 Nos.</li> <li>○ Comprehensive Mac and iOS forensic analysis and reporting software – 10 Nos.</li> <li>○ Belkasoft Evidence Centre Perpetual Licences with integration – 10 Nos.</li> <li>○ SPEKTOR Drive with 64GB USB drive running SPEKTOR software Black fabric case 1 x 1 TB collector 1 x 8GB USB Drive for exporting FIVE years' support and updates – 10 Nos.</li> </ul> </li> <li>• The solution should be deployed/operated on the inhouse Data Centre at CFSL, Hyderabad. The required server hardware and software components for the Integrated API is the responsibility of the solution provider.</li> <li>• The platform should be flexible enough to accommodate more number of licences as per the need in future.</li> <li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li> <li>• Solution should include certified training for 10 Experts from OEM with in India or at OEM location.</li> </ul>

**Broad Based Specifications of the S/w and H/w Tools for**  
**Digital Storage Media Examination Unit of**  
**National Cyber Forensic Laboratory**

S. No.	Name of the Tool	Specifications
1.	Digital Forensic Triage Tool Kit with Mobile Work Station	<ul style="list-style-type: none"> <li>• <b>Mobile workstation specifications:</b> <ul style="list-style-type: none"> <li>▪ Processor: Intel Core i9 or latest generation</li> <li>▪ Operating System: Windows 10 64-bit or latest version</li> <li>▪ RAM: 64GB with an option to upgrade to 128GB.</li> <li>▪ GPU: latest NVIDIA GTX based with 16GB memory to support various forensic applications.</li> <li>▪ Display: 17.3" with LED and integrated webcam.</li> <li>▪ Hard Drive: 04TB SATA hard drive.</li> <li>▪ Optical Drive: to support CD/DVD/Blu-ray</li> <li>▪ Connectivity:               <ul style="list-style-type: none"> <li>a. Wired: Integrated Intel 82579M/V 10/100/1000 Gigabit Ethernet</li> <li>b. Bluetooth: Wireless</li> <li>c. Wi-fi connectivity</li> </ul> </li> </ul> </li> <li>• <b>The Triage tool kit specifications:</b> <ul style="list-style-type: none"> <li>▪ Support Digital Forensic Triage of powered-off systems (Desktops, Laptops, Servers) running Windows (NTFS/FAT), Apple (APFS/HFS+/FAT), and Linux (EXT)</li> <li>▪ Support Digital Forensic Triage of powered-on systems (Desktops, Laptops, Servers) running Windows (HPFS/NTFS/FAT), Apple (APFS/HFS+/FAT), and Linux (EXT) including capture of volatile data (RAM capture)</li> <li>▪ Support extraction of data from Customised Locations.</li> <li>▪ Support Automatic tagging of hash and keyword matches</li> <li>▪ Support pre-configured profiles for data collection.</li> <li>▪ Support timelining that combines files, actions and people into a single view.</li> </ul> </li> <li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S.No.	Name of the Tool	Specifications
2.	Hardware Forensic Imaging Device.	<ul style="list-style-type: none"> <li>• Capable to acquire/clone data from one-to-one, two-to-two, one-to-two and two-to-one destinations media.</li> <li>• Capable to acquire/clone data at the rate of 25 GB/Min or higher.</li> <li>• Capable to acquire/clone data in Drive to Drive and Drive to file/s format to support analysis in various forensic analysis tools.</li> <li>• Capable to cross copy support for various hard disk data interfaces, USB interfaces.</li> <li>• Capable to authenticate the data with multiple hashing algorithms.</li> <li>• Capable to identify and acquire HPA and DCO areas of the suspect media.</li> <li>• Capable to acquire data directly from the live system with support for content-based image.</li> <li>• Capable to boot/mount the suspect media virtually in a write protected environment for preview of live data.</li> <li>• Capable to acquire data from suspect RAID (all RAID configurations) drives.</li> <li>• Capable to acquire data over a network.</li> <li>• Capable to generate the log of the processes.</li> <li>• Capable to search for the key words in the suspected media.</li> <li>• Preloaded operating software.</li> <li>• Warranty for 03 Years along with support for updates for 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S.No.	Name of the Tool	Specifications
3.	Hardware write Blocker Kit	<ul style="list-style-type: none"><li>• The kit should have Separate write-blocker devices to support vivid data interfaces i.e., SATA, IDE, Fire wire, USB2, USB3, e-SATA, Micro-SATA, combine-SATA and ZIF etc., along with their respective connecting cables.</li><li>• Warranty for 03 Years along with support for updates to cables for 05 years.</li><li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li></ul>

S. No.	Name of the Tool	Specifications
4.	Tool for acquisition of Data from HDDs, Smart Phones, Cloud and VSCs and automated processing and analysis of data.	<ul style="list-style-type: none"> <li>• Support Acquisition of various devices like HDDs, Androids, iPhones, Cloud etc.,</li> <li>• Support analysis of data in an automated way by recovery, analysis and presentation of various artefacts from windows, iOS, mobiles.</li> <li>• Support acquisition and analysis of volume shadow copies.</li> <li>• Support analysis of various Mobile logical and physical backups.</li> <li>• Support analysis of various artefacts from Windows, MAC, Unix based OSs.</li> <li>• Support automated parsing of various internet artefacts, social networking app, instant messages and peer to peer data parsing.</li> <li>• Support creation of portable cases for review purpose.</li> <li>• Support linkage analysis among files, users and devices.</li> <li>• Support time line analysis.</li> <li>• Support Data Analytics.</li> <li>• Support auto identification of password protected/encrypted containers and decrypting them with inbuilt or add-on module.</li> <li>• Support analysis of data basing on AI processing</li> <li>• Supports creation of customized reports.</li> <li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li> <li>• Warranty for 03 Years along with support for updates for 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S. No.	Name of the Tool	Specifications
5.	Tool for digital evidence processing and analysis.	<ul style="list-style-type: none"> <li>• Support acquire, search, analyse, store and share digital evidence found inside computer and mobile devices, RAM and cloud.</li> <li>• Support extract digital evidence from multiple sources by analysing hard drives, drive images, cloud, memory dumps, iOS, Blackberry and Android backups, GrayKey, UFED, OFB, Elcomsoft, JTAG and chip-off dumps.</li> <li>• Support Windows (all versions, including Windows 10), macOS, Unix-based systems (Linux, FreeBSD, etc.), iOS (iPhone/iPad), Android, Windows Phone 8/8.1, Blackberry.</li> <li>• Support EnCase, L01/Lx01, FTK, DD, SMART, X-Ways, Atola, DMG, tar and zip files, Mobile backups, UFED and OFB images, GrayKey and Elcomsoft iOS images, chip-off dumps, JTAG dumps.</li> <li>• Support VMWare, Virtual PC/Hyper-V, VirtualBox, XenServer.</li> <li>• Support APFS, FAT, exFAT, NTFS, HFS, HFS+, ext2, ext3, ext4, YAFFS, YAFFS2 file systems.</li> <li>• Support Various Cloud Artefacts parsing and analysis.</li> <li>• Support analysis of Photos with included module of Photo manipulation.</li> <li>• Support parsing analysis of emails from various email clients.</li> <li>• Support extraction, parsing and analysis of various browser artefacts.</li> <li>• Support extraction, parsing and analysis of various mobile apps.</li> <li>• Support extraction, parsing and analysis of peer to peer, social networking apps, encrypted containers.</li> <li>• Support inbuilt SQLite Viewer, Hex Viewer, Registry Viewer, PList Viewer.</li> <li>• Support both lab and field level investigations with flexible licencing via portable mode through an USB without installation and electronic dongle based with installation on any desired workstation.</li> <li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S.No.	Name of the Tool	Specifications
6.	Software for the forensic previewing, Imaging and analysis of Digital Media and Smart Phones.	<ul style="list-style-type: none"> <li>• Should support Preview of suspect media.</li> <li>• Should support acquire data from various types of storage media.</li> <li>• Should support acquiring data in multisession.</li> <li>• Should support various operating systems viz., Windows, Linux, Unix, Sun Solaris, Macintosh, Apple's iOS, Android OS, Blackberry OS, HP's Palrn OS, Nokia Symbian, Windows Mobile OS etc.</li> <li>• Should support automated processing of evidence with capability to indexing, auto de-NISTing, file signature analysis, hash analysis, Protected File Analysis, Expand compound files, File parser for Email (PST, NSF, DBX, EDB, AOL, MBOX), extract internet artefacts, time line analysis, System Info Parser, I M Parser (AOL, N4SN, Yahoo), File Carver, Windows Event Log Parser, Windows Artefact Parser, Unix Login, Linux Syslog Parser, etc.</li> <li>• Should support decryption of disks, volumes, folders and files of the suspected media having various types of encryption.</li> <li>• Should support custom programmes for processing of data.</li> <li>• Should support various file formats for viewing the data.</li> <li>• Should support iOS Physical image analysis.</li> <li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li> <li>• Warranty for 03 Years along with support for updates for 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>



S.No.	Name of the Tool	Specifications
7.	Integrated Computer Forensics Software	<p>The tool should have the following capabilities:</p> <ul style="list-style-type: none"> <li>• Disk cloning and imaging</li> <li>• Ability to read partitioning and file system structures inside raw (.dd) image files, ISO, VHD and VMDK images</li> <li>• Built-in interpretation of JBOD, RAID 0, RAID 5, RAID 5EE, and RAID 6 systems, Linux software RAIDs, Windows dynamic disks, and LVM2</li> <li>• Native support for FAT12, FAT16, FAT32, exFAT, TFAT, NTFS, Ext2, Ext3, Ext4, Next3, CDFS/ISO9660/Joliet, UDF and additional support filesystems HFS, HFS+/HFSJ/HFSX, ReiserFS, Reiser4, XFS, many variants of UFS1 and UFS2, many data structures of APFS.</li> <li>• analysis of file system data structures, including \$LogFile in NTFS, .journal in Ext3/Ext4</li> <li>• Superimposition of sectors, e.g. with corrected partition tables or file system data structures to parse file systems completely despite data corruption, without altering the original disk or image</li> <li>• Ability to create skeleton images, cleansed images, and snippet images</li> <li>• Various data recovery techniques, and powerful file carving</li> <li>• Viewing and editing binary data structures using templates</li> <li>• Gathering slack space, free space, inter-partition space, and generic text from drives and images</li> <li>• File and directory catalog creation for all computer media</li> <li>• Easy detection of and access to NTFS alternate data streams (ADS)</li> <li>• Mass hash calculation for files</li> <li>• Viewer for Windows event log files (.evt, .evt), Windows shortcut (.lnk) files, Windows Prefetch files, \$LogFile, \$UsnJrnl, restore point change.log, Windows Task Scheduler (.job), \$EFS LUS, INFO2, wtmp/utmp/btmp log-in records, MacOS X kcpasword, AOL-PFC, Outlook NK2 auto-complete, Outlook WAB address book, Internet Explorer travellog (a.k.a. RecoveryStore), Internet Explorer index.dat history and browser cache databases, SQLite databases such as Firefox history, Firefox downloads, Firefox form history, Firefox sign-ons, Chrome cookies, Chrome archived history, Chrome history, Chrome log-in data, Chrome web data, Safari cache, Safari feeds, Skype's main.db database with contacts and file transfers.</li> <li>• powerful physical and logical search capabilities for many search terms at the same time</li> <li>• Recursive view of all existing and deleted files in all subdirectories</li> <li>• Automatic coloring for the structure of FILE records in NTFS</li> <li>• Ability to analyze remote computers in conjunction with included addon module.</li> <li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S.No.	Name of the Tool	Specifications
8.	Software for the previewing, image mounting, password cracking and forensic analysis of Digital Media.	<ul style="list-style-type: none"> <li>• Should support Windows, Apple, UNIX and Linux operating systems for analysis of the media.</li> <li>• Should support RAM analysis.</li> <li>• Should support PLIST, SQLite database, Apple DMG and DD_DMG disk image and JSON file, etc.</li> <li>• Should support automated processing of evidence with capability to indexing, auto de-NISTing, recover files and partitions, detect deleted files, file signature analysis, hash analysis, Recover Folders, Expand compound files, parse Email databases, extract Internet artefacts, time line analysis, System Info Parser, IM Parser (AOL, MSN, Yahoo), File Carver, Windows Event Log Parser, Windows Artefact Parser, etc.,</li> <li>• Should support the registry log analysis.</li> <li>• Should support auto detection of password protected files, decryption of various types of encrypted files.</li> <li>• Should support generation of csv based reports for time line analysis.</li> <li>• Should support automated explicit image identification Skin tone analysis.</li> <li>• Should support automated tile indexing and statistical report generation for each file type.</li> <li>• Should support auto carving of files and adding the carved files to the file tree structure.</li> <li>• Should include all supported modules.</li> <li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S. No.	Name of the Tool	Specifications
9.	MAC Forensic Toolkit along with MAC Work Station	<ul style="list-style-type: none"> <li>• <b>Specification for MAC Forensic Tool Kit:</b> <ul style="list-style-type: none"> <li>○ Should have a Software Write-Blocker, Imager and Analysis.</li> <li>○ Support imaging of RAM, capture Volatile Data from MAC machines.</li> <li>○ Should have Built-in Live Imaging.</li> <li>○ Should support acquisition and analysis of latest MAC OSX.</li> <li>○ Support Processing of forensic images or live Macs.</li> <li>○ Should have support for iTunes backups, Time Machine Folder Hard Links Backup, File Vault Analysis.</li> <li>○ Support Advanced Timeline Analysis.</li> <li>○ Support full log of social media activity parsing.</li> <li>○ Support Image mounting supporting popular forensic image formats and Fusion drives.</li> <li>○ Automatic identification of Spoliation artefacts.</li> <li>○ Supports creation of customized reports – PDF, HTML, CSV and XML.</li> <li>○ Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li> <li>○ Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul> </li> <li>• <b>Specification for MAC Workstation:</b> <ul style="list-style-type: none"> <li>○ Latest Mac OS</li> <li>○ 3.1 GHz 6-Core Intel Xeon E5 or higher</li> <li>○ 16 GB 1866 MHz DDR3 or higher</li> <li>○ 1000 GB HDD or higher or support for multiple HDDs</li> <li>○ 1680 x 1050 or higher screen resolution</li> </ul> </li> </ul>

S. No.	Name of the Tool	Specifications
10.	e-Mail Parsing and Analysis tool	<ul style="list-style-type: none"><li>• Should support extraction of e-Mail archives from live systems, Forensic Disk Images.</li><li>• Should support identification, parsing and analysis of mails from various e-Mail clients like Exchange Offline Storage, Microsoft Outlook, IBM Notes (Lotus Notes), Exchange Server, Gmail, Yahoo, IMAP, Hotmail.</li><li>• Should support web based mail containers.</li><li>• Should support link analysis and time line analysis.</li><li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li><li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li></ul>

S. No.	Name of the Tool	Specifications
11.	Tool for analysis of programming Codes.	<ul style="list-style-type: none"><li>• Should support analysis on source code and binary code.</li><li>• Should process the code in automated way by way of abstraction-filtration-comparison.</li><li>• Should support code analysis by way of modules like BitMatch, CodeCLOC, CodeCross, CodeDiff,CodeMatch,CodeSplit,SourceDetective</li><li>• Should support code analysis by way of multi core processing, distributed processing.</li></ul>

S.No.	Name of the Tool	Specifications
12.	High End Forensic Work Station	<ul style="list-style-type: none"> <li>• Intel XEON based multiprocessor with 64 cores processor or more.</li> <li>• RAM with 128GB or more.</li> <li>• Latest NVIDIA GTX Graphic card with 16 GB Memory or more to support Forensic Applications.</li> <li>• Minimum of 08 USB 2/3/3.1/3.2 ports or better.</li> <li>• 01 Hard Disk for OS with minimum of 256GB-SSD/01TB-SATA or better.</li> <li>• 01 Hard Disk for Applications 01TB-SATA or better.</li> <li>• 01 Hard Disk for Data 04TB-SATA with RAID controller support or better.</li> <li>• Integrated Forensic Write Blockers to support to various Hard Disk data interfaces, USBs, Flash Media, FireWire with read only and read/write switches with enough cooling arrangement.</li> <li>• Should have all required connectors, data adaptors to suit different data interfaces of various storage media.</li> <li>• Optical Drive to support CD/DVD/Blue Ray Disks.</li> <li>• Pre-installed Windows 10 OS 64bit or latest with perpetual licence.</li> <li>• Pre-installed Ms Office Business 2016 or latest with perpetual licence.</li> <li>• Monitor 24" LED with integrated webcam along with wired Key Board and wired Optical Mouse.</li> </ul>

**Broad Based Specifications of the S/w and H/w Tools for  
Mobile Phone and Embedded System Examination Unit of  
National Cyber Forensic Laboratory**

S. No.	Name of the Tool	Specifications
1.	Mobile Phone Forensic Examination Lab Kit	<ul style="list-style-type: none"> <li>• Software based suit to support Logical, File System and Physical level analysis of various Mobile phones running on Android, iOS, RIM, Windows and custom build OSs.</li> <li>• Support bypassing/unlocking of security locks for mobile phones.</li> <li>• Support super user/administrative privilege access to popular mobile OSs.</li> <li>• Support analysis and parsing of data from various mobile artefacts.</li> <li>• Support data acquisition and analysis from SIM and USIM cards with various form factors.</li> <li>• Support data acquisition and analysis from GPS devices.</li> <li>• Support data acquisition and analysis from satellite phones.</li> <li>• Support data acquisition and analysis from expandable memory of mobile phones.</li> <li>• Support pulling the data from cloud resources of mobile phones and analysis.</li> <li>• Support data acquisition and analysis from UAVs.</li> <li>• Support data acquisition and analysis from Satellite phones.</li> <li>• Solution should include specialised data extraction capabilities from               <ul style="list-style-type: none"> <li>○ locked iPhones later to 4S and</li> <li>○ locked Androids with OS later to 6.0 and Security Patch later to October 2016.</li> </ul> </li> <li>• Support data analytics.</li> <li>• Support with various data cables for various mobile phones.</li> <li>• Support data acquisition and analysis from popular chipset manufacturers.</li> <li>• Supports creation of customized reports.</li> <li>• Perpetual Licencing through USB Dongle.</li> <li>• Warranty for 03 Years along with support for updates for 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S. No.	Name of the Tool	Specifications
2.	Software Based solution for Mobile Devices and CDR Analysis.	<ul style="list-style-type: none"> <li>• Software based solution for the analysis of various Mobile phones running on Android, iOS, Windows and custom build OSs.</li> <li>• Supports lock screen bypass and Screen Lock disabler with acquisition of locked phones.</li> <li>• Support data acquisition and analysis from drones.</li> <li>• Support non- encrypted and encrypted backup parsing.</li> <li>• Support data acquisition and analysis from SIM cards.</li> <li>• Support data acquisition and analysis from expandable memory of mobile phones.</li> <li>• Support pulling the data from cloud resources of mobile phones and analysis.</li> <li>• Support Call Data Record (CDR) Analysis.</li> <li>• Support with various data cables for various mobile phones.</li> <li>• Support data acquisition and analysis from popular chipset manufacturers.</li> <li>• Supports creation of customized reports.</li> <li>• Perpetual Licencing through USB Dongle.</li> <li>• Warranty for 03 Years along with support for updates for 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>



S. No.	Name of the Tool	Specifications
3.	Solution for Conducting CHIP level analysis of Mobile Phones.	<ul style="list-style-type: none"> <li>• Support Extraction of chip-off memory, JTAG board, ISP</li> <li>• Support Physical/Logical extraction of mobile device</li> <li>• Support Extraction of selected partition</li> <li>• Support Data preview during extraction</li> <li>• Support Write protection and evidence integrity</li> <li>• Supports features phones and smartphones.</li> <li>• Supports iOS, Android, Windows, Tizen, Samsung, LG, Pantech, Apple, Microsoft, Nokia, Motorola Global, Chinese, Japanese, Indian mobile phones.</li> <li>• Support for various Mobile File Systems viz., FAT12/16/32, exFAT, NTFS, EXT3/4, HFS+, EFS, YAFFS, FSR, XSR</li> <li>• General memory chip reader</li> <li>• Heat blower for the general disassemble work</li> <li>• BGA Reballing kit</li> <li>• Hot plate for reballing</li> <li>• Microscope - Zoom Stereo, 3.5X~180X</li> <li>• Rework station</li> <li>• Mobile phone dryer</li> <li>• The Software and the Hardware related apps preloaded on to a system which is part of the suite with the following specs: <ul style="list-style-type: none"> <li>○ OS : Windows 10</li> <li>○ CPU : i7</li> <li>○ RAM : 64GB or more</li> <li>○ HDD : 2TB or more</li> <li>○ Display : 1024x768 or above</li> <li>○ USB : USB 2.0 port 4 or higher</li> </ul> </li> <li>• Perpetual Licencing through USB Dongle.</li> <li>• Warranty for 03 Years along with support for updates for 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S. No.	Name of the Tool	Specifications
4.	Mobile Phone Forensic Examination Field Kit	<ul style="list-style-type: none"> <li>• <b>Field solution</b> to the Logical, File System and Physical level analysis of various Mobile phones running on Android, iOS, Windows and custom build OSs.</li> <li>• Support bypassing/unlocking of security locks for mobile phones.</li> <li>• Support super user/administrative privilege access to popular mobile OSs.</li> <li>• Support analysis and parsing of data from various mobile artefacts.</li> <li>• Support data acquisition and analysis from SIM cards with various form factors.</li> <li>• Support data acquisition and analysis from GPS devices.</li> <li>• Support data acquisition and analysis from satellite phones.</li> <li>• Support data acquisition and analysis from expandable memory of mobile phones.</li> <li>• Support pulling the data from cloud resources of mobile phones and analysis.</li> <li>• Support data acquisition from UAVs.</li> <li>• Support link analysis and time line analysis also data analytics.</li> <li>• Support with various data cables for various mobile phones.</li> <li>• Support data acquisition and analysis from popular chipset manufacturers.</li> <li>• Supports creation of customized reports.</li> <li>• Perpetual Licencing through USB Dongle.</li> <li>• Warranty for 03 Years along with support for updates for 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S.No.	Name of the Tool	Specifications
5.	High End Forensic Work Station	<ul style="list-style-type: none"> <li>• Intel XEON based multiprocessor with 64 cores or more.</li> <li>• RAM with 128GB or more.</li> <li>• Latest NVIDIA GTX Graphic card with 16 GB Memory or more to support Forensic Applications.</li> <li>• Minimum of 08 USB 2/3/3.1/3.2 ports or better.</li> <li>• 01 Hard Disk for OS with minimum of 256GB-SSD/01TB-SATA or better.</li> <li>• 01 Hard Disk for Applications 01TB-SATA or better.</li> <li>• 01 Hard Disk for Data 04TB-SATA with RAID controller support or better.</li> <li>• Integrated Forensic Write Blockers to support to various Hard Disk data interfaces, USBs, Flash Media, FireWire with read only and read/write switches with enough cooling arrangement.</li> <li>• Should have all required connectors, data adaptors to suit different data interfaces of various storage media.</li> <li>• Optical Drive to support CD/DVD/Blue Ray Disks.</li> <li>• Pre-installed Windows 10 OS 64bit or latest with perpetual licence.</li> <li>• Pre-installed Ms Office Business 2016 or latest with perpetual licence.</li> <li>• Monitor 24" LED with integrated webcam along with wired Key Board and wired Optical Mouse.</li> </ul>

**Broad Based Specifications of the S/w and H/w Tools for  
Image, Audio and Video Forensics unit of  
National Cyber Forensic Laboratory**

S. No.	Name of the Equipment	Specifications
1.	<b>Forensic Audio Examination Hardware and software System</b>	<ul style="list-style-type: none"> <li>• <b>Capture of Audio</b> <ul style="list-style-type: none"> <li>• Facility for minimum 4 - Channels input or above to collect audio signals simultaneously from various devices.</li> <li>• Facility for minimum 4 - channels output or above, line and speaker, headphone output.</li> <li>• Frequency response for both AC and DC mode - 20 Hz - 50,000 Hz.</li> <li>• Dynamic range should be greater than 90 dB.</li> <li>• Support the sampling rates 8,000 - 50,000 Hz or better for analysis of higher frequency signals for research and case analysis purpose.</li> <li>• In built features for accurate voice signal capture such as use of low-latency ASIO drivers, high gain pre-amplification and anti-alias filtering.</li> <li>• Facility of Software Interface card with Audio Stream Input and Output (ASIO) and Multi Media Extensions (MME).</li> <li>• Facility for segregation of Audio from different formats</li> </ul> </li> <li>• <b>Noise reduction of Audio</b> <ul style="list-style-type: none"> <li>• Facility of Digital Interface card with AES/EBU or S/PDIF connectors and support various audio formats</li> <li>• Ability to offers signal-to-noise performance typically superior to generic sound cards.</li> <li>• Facility for Signal Normalization</li> <li>• Facility for AC coupling to removes low-frequency components.</li> </ul> </li> <li>• <b>Audio features extraction, analysis and display</b> <ul style="list-style-type: none"> <li>• Facility for wave form, FFT, LPC Spectrograms/spectrums &amp; power spectrum</li> <li>• Facility for Pitch, formant extraction and spectrum analysis</li> <li>• Facility for energy and power spectrum</li> <li>• Support the Windows XP or better operating system.</li> <li>• Statistical analysis and display of features</li> </ul> </li> <li>• Perpetual Licencing through USB Dongle.</li> </ul>

		<ul style="list-style-type: none"><li>• Warranty for 03 Years along with support for updates for 05 years.</li><li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li></ul>
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2.	<b>Audio enhancement and authentication Hardware/ software</b>	<ul style="list-style-type: none"><li>• Capture Uncompressed/compressed audio data from a variety of sources.</li><li>• Capability to support major audio formats</li><li>• Audio stabilization.</li><li>• Facility for pre-processing and enhancement of Audio signal using different filters such as adopting filtering, filter averaging, filter compression and equalization etc.,</li><li>• Facility to determine authenticity of audio</li><li>• Perpetual Licencing through USB Dongle.</li><li>• Warranty for 03 Years along with support for updates for 05 years.</li><li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li></ul>
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3.	<b>Forensic Image&amp; Video enhancement and analysis System</b>	<ul style="list-style-type: none"> <li>• Computerized system with preloaded software.</li> <li>• Capture Uncompressed/compressed audio-data from a variety of video sources including CCTV.</li> <li>• Magnification of the result to display</li> <li>• Should be able to improve the blurry stills printed from video using De-interlace</li> <li>• Standard enhancement tools for video and image Forensics</li> <li>• Should have Automatic project archiving, Titling and labelling/Capable of insert case notes &amp; Combine and stack tools.</li> <li>• Should be able to handle variable slow motion and time lapsed video</li> <li>• Keyboard/interface short cuts defined to User</li> <li>• System should have editing features such as crop, flip, rotate, re-size, de- interlace</li> <li>• System should have capability to extract and compare the frames.</li> <li>• Pre-processing of video signal and image clarification.</li> <li>• Video de-multiplexing and stabilization.</li> <li>• Process Digital (DVR) or Analogue Video Evidence.</li> <li>• DVR security video-decode digital video (DVR) files from proprietary security systems into uncompressed video.</li> <li>• Enhance dark video and poor-quality video security and surveillance video.</li> <li>• De-interlace field recorded forensic video to avoid blurry stills printed from video frame averaging.</li> <li>• Facility for enhancing image/video by Laplacian filtering, Gaussian, Bilateral, Wiener, De- blocking filters or other suitable filters for forensic applications.</li> <li>• Support for enhancement/Noise suppression (Signal SNR up to 4dB).</li> <li>• Variable slow-motion speed adjustment to compensate for time lapsed video.</li> <li>• System should be compatible with digital and analog video, still image should be scalable with different modules.</li> <li>• System should have facility to analyse with photogrammetric tools and measurement tools.</li> <li>• Suitable hardware for to meet the above requirement.</li> <li>• Perpetual Licencing through USB Dongle.</li> <li>• Warranty for 03 Years along with support for updates for 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>
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4.	<b>Forensic Image&amp; Video authentication System</b>	<ul style="list-style-type: none"><li>• Computerized system with preloaded software.</li><li>• Capture Uncompressed/compressed audio-video data from a variety of sources including CCTV.</li><li>• Facility to authenticate still image and video recordings with meta data and hash value</li><li>• Facility to determine/search tempered and edits areas/zones in video and image.</li><li>• System should have editing features such as crop, flip, rotate, re-size, de- interlace</li><li>• System should have capability to extract ,compare the frames and frame by frame analysis.</li><li>• Process Digital (DVR) or analogue Video Evidence in different formats.</li><li>• Facility for enhancing image/video by Laplacian filtering, Gaussian, Bilateral, Wiener, Deblocking filters or other suitable filters.</li><li>• Suitable hardware for to meet the above requirement.</li><li>• Perpetual Licencing through USB Dongle.</li><li>• Warranty for 03 Years along with support for updates for 05 years.</li><li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li></ul>
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5.	<b>Facial Recognition software</b>	<ul style="list-style-type: none"> <li>• Support all the popular image formats</li> <li>• Capable to metadata extraction</li> <li>• Facial Capturing from different media &amp; pre-processing.</li> <li>• Should be able to highlight common exposure over 100 signatures using signature engine</li> <li>• Capable of generation of Hash digest, ELA (Error Level Analysis)</li> <li>• Preview thumbnail extraction, consistency check with original image</li> <li>• Detection of various file type with GPS information and Maps view</li> <li>• Creation of photo like composites</li> <li>• Generation of unique alphanumeric code for every composite.</li> <li>• Three-tone hair colour, side to side hair flip.</li> <li>• Data Generation of Facial markings: scars, moles, piercing, tattoos.</li> <li>• Facility for improvement of age progression.</li> <li>• Detachable hats and headwear facility.</li> <li>• Ability to export composite as JPEG file and in other image formats</li> <li>• Side by side show I comparison capability.</li> <li>• Improved zooming and positioning tools.</li> <li>• Runs on any standard desk or laptop computer.</li> <li>• Analyse the static Images</li> <li>• Full or partial face identification.</li> <li>• Capable to detect and register the numerous characteristic of each face.</li> <li>• Capable to store, retrieve and compare the facial features from the database and display matching score.</li> <li>• Perpetual Licencing through USB Dongle.</li> <li>• Warranty for 03 Years along with support for updates for 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>
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S. No.	Name of the Tool	Specifications
6.	Forensic Tool kit for the acquisition and analysis of HDDs from DVR/CCTV systems.	<ul style="list-style-type: none"> <li>● Support bypassing the DVR passwords.</li> <li>● Support identification of DVR HDD file Systems.</li> <li>● Support acquisition of DVR HDDs.</li> <li>● Support identification of DVR system time stamping and video footage time stamping.</li> <li>● Support various DVR files systems.</li> <li>● Support DVRs of broad variety manufacturers.</li> <li>● Support previewing the clips internally.</li> <li>● Support filtering based on various conditions.</li> <li>● Support exporting the video footages into popular formats.</li> <li>● Perpetual Licencing through USB Dongle.</li> <li>● Warranty for 03 Years along with support for updates for 05 years.</li> <li>● Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S. No.	Name of the Tool	Specifications
7.	High End Forensic Work Station	<ul style="list-style-type: none"> <li>• Intel XEON based multiprocessor with 64 cores processor or more.</li> <li>• RAM with 128GB or more.</li> <li>• Latest NVIDIA GTX Graphic card with 16 GB Memory or more to support Forensic Applications.</li> <li>• Minimum of 08 USB 2/3/3.1/3.2 ports or better.</li> <li>• 01 Hard Disk for OS with minimum of 256GB-SSD/01TB-SATA or better.</li> <li>• 01 Hard Disk for Applications 01TB-SATA or better.</li> <li>• 01 Hard Disk for Data 04TB-SATA with RAID controller support or better.</li> <li>• Integrated Forensic Write Blockers to support to various Hard Disk data interfaces, USBs, Flash Media, FireWire with read only and read/write switches with enough cooling arrangement.</li> <li>• Should have all required connectors, data adaptors to suit different data interfaces of various storage media.</li> <li>• Optical Drive to support CD/DVD/Blue Ray Disks.</li> <li>• Pre-installed Windows 10 OS 64bit or latest with perpetual licence.</li> <li>• Pre-installed Ms Office Business 2016 or latest with perpetual licence.</li> <li>• Monitor 24” LED with integrated webcam along with wired Key Board and wired Optical Mouse.</li> </ul>

**Broad Based Specifications of the S/w and H/w Tools for  
Advanced Digital Forensic Examination Unit of  
National Cyber Forensic Laboratory**

S. No.	Name of the Tool	Specifications
1.	Damaged Media Analysis suite	<ul style="list-style-type: none"> <li>• Hardware-Software solution for diagnosis, repair and recovery of data from               <ul style="list-style-type: none"> <li>○ Damaged HDDs based on                   <ul style="list-style-type: none"> <li>a. SATA (Serial ATA) ,IDE interfaces for various manufacturers(Seagate, Western Digital, Fujitsu, Samsung, Maxtor, Quantum, IBM (HGST), HITACHI, TOSHIBA,etc)of various capacities with support for all the file systems (i.e. FAT, exFAT, NTFS, EXT2/3/4, HFS+, UFS1/2, XFS, ReiserFS, VMFS and virtual images VMDK, and VHD etc.) and various form factors: 3.5" - desktop drives, 2.5", 1.8" - laptop drives etc.</li> </ul> </li> <li>○ Damaged RAID arrays based on                   <ul style="list-style-type: none"> <li>a. SATA, IDE interfaces with different configurations like Stripe, Mirror, JBOD, 1E Offset, 1E Adjacent, 4, 5, 5E, 5EE, 6, 6 Adaptec and any combinations of RAID etc.</li> </ul> </li> <li>○ Damaged SSDs with SATA, PATA, mSATA, and M.2 (NGFF) interfaces and of various capacities produced by different manufacturers(such as OCZ, Corsair, Crucial, RunCore, A-DATA, G.Skill, Micron, Plextor, Intel, Samsung, Seagate, SanDisk, Kingston and others.)</li> <li>○ All NAND based devices where there is no access through the authorized drive interface:                   <ul style="list-style-type: none"> <li>a. UFD (USB Flash Drive), SD (Secure Digital Card), CF (Compact Flash), micro SD (micro Secure Digital Card), MS (Memory Stick), xD, Monolithic Flash Devices, MMC (Multi Media Card), Voice Recorder (dictaphone), mobile phones with various generations having different operations systems.</li> </ul> </li> </ul> </li> <li>• The solution should include creation of clean room facility of 100 sft. for disassembling/reassembling the media with all required anti-dusting and vacuum cleaning capabilities.</li> <li>• The solution should provide all required drive library with regular updates/upgrades for a period of 05 years.</li> <li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S.No.	Name of the Tool	Specifications
2.	Password Recovery solution.	<ul style="list-style-type: none"> <li>• Able to crack password of vivid files with dictionary/brute-force/custom attacks.</li> <li>• Able to decrypt encrypted disks/volumes/folders/files with white box and black box attacks with the assistance of memory/RAM dumps.</li> <li>• Able to bypass/crack windows boot passwords, SAM, NTLM Hashs.</li> <li>• Able to bypass/crack passwords of smart phones.</li> <li>• Support advanced Password Recovery for archives compressed with various methods.</li> <li>• Support decryption of EFS-Encrypted Files and FDE Volumes/Disks, MAC OS Keychain and File Vaults.</li> <li>• Support recovery of Passwords for various Instant Messages and various Intuit Documents.</li> <li>• Support recovery of Passwords of files created by various word processing applications.</li> <li>• Support recovery of Passwords of POP3 and IMAP email clients and extraction of Passwords from the auto complete locations of Various Web Browsers.</li> <li>• Support decryption of Encrypted SQL databases.</li> <li>• Support decryption of Sage PeachTree Accounting Passwords, Protected ACT! Documents, PeachTree Accounting Passwords</li> <li>• Support Distributed Password Recovery with support minimum of 15 Clients.</li> <li>• Support Extraction of data from Blackberry Backups i.e. IPD and BBB and Mobile Phone Backups.</li> <li>• Support Decryption of WhataApp Databases from Androids and iTunes Backups along with other chat applications.</li> <li>• Support recovery of password from Windows User account Salts.</li> <li>• Support decryption of Bitcoin Vaults.</li> <li>• Warrantly for 03 Years along with support for updates for 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S.No.	Name of the Tool	Specifications
3.	Blockchain Forensic Tool	<ul style="list-style-type: none"><li>• Parse the Crypto Currency Addresses from Disk, Mobile Images/Backups.</li><li>• Parse the Crypto Currency Logged Transaction Queries.</li><li>• Support Online Crypto Currency Ledgers.</li><li>• Support De-anonymize Cryptocurrency Transactions and Wallets.</li><li>• Support Interact with Live Transaction Databases to See Relationships.</li><li>• Support Address Analysis, Transaction List Analysis via tabular/graphic way, graphical representation of transaction link visualisation.</li><li>• Support Score Chain and identify the origin of funds, the destination of funds.</li><li>• Warranty for 03 Years along with support for updates for 05 years.</li><li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li></ul>

S. No.	Name of the Tool	Specifications
4.	Virtual Machine Creation and Management Tool .	<ul style="list-style-type: none"> <li>• Able to Create New VMs, Create Large VMs (such as 16CPU, 64GB RAM, 3GB VRAM) with support to various Guest OSs.</li> <li>• Support for latest Windows 10 as Guest and Host.</li> <li>• Support for macOS Mojave Host and Guest</li> <li>• Support for Mass Deployment, Host/Guest Integration, Host/Guest File Sharing</li> <li>• Support running VMs with Different View Modes, 3D Graphics with DX10.1 and OpenGL 3.3 Support, Drag-able Tabbed Interface, One-Click SSH to Linux VM</li> <li>• Device Support, 4K / Retina Display Support, Support a Wide Range of Virtual Devices, USB Smart Card Reader Support, USB 3.0 Device Support, Works with Assistive Devices (Section 508 Compliant), Multi-Language Keyboard Support</li> <li>• Able to run BootCamp as VM, Import/Convert BootCamp into VM</li> <li>• Microsoft Virtualization Based Security (Guest) Support, Virtual Trusted Platform Module (vTPM)</li> <li>• UEFI Boot Support, UEFI Secure Boot Support</li> <li>• Create/Manage Encrypted VM</li> <li>• Virtual Network Rename</li> <li>• Run Managed/Restricted Desktop</li> <li>• REST API Control</li> <li>• vCenter Server Appliance Effortless Deploy</li> <li>• Command Line Operation</li> <li>• Snapshots, Run Multiple VMs at Once, Run Encrypted VM</li> <li>• Virtual Network Customization, Virtual Network Simulation (packet loss, latency), Virtual Machine Cloning</li> <li>• Share Virtual Machine (Workstation Server)</li> </ul>

S. No.	Name of the Tool	Specifications
5.	Disassembler coupled Debugger.	<ul style="list-style-type: none"><li>• Interactive, programmable, multi-processor disassembler coupled to a local and remote debugger and augmented by a complete plugin programming environment.</li><li>• Support explore binary programs, for which source code isn't always available, to create maps of their execution.</li><li>• Support debugging the various 32-bit and 64-bit MS Windows executables, MS Windows, Linux, Mac OS X both locally and remotely.</li><li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li><li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li></ul>



S.No.	Name of the Tool	Specifications
6.	Visual Resource Editor.	<ul style="list-style-type: none"> <li>• Should support Working with 32- and 64-bit executable files such as .EXE, .DLL, binary .RES, ActiveX Controls (.OCX), Borland Libraries (.DPL and .BPL), XP Visual Styles (.MSSTYLES), Control Panel Extensions (.CPL), Screen Savers (.SCR) and any other win32 executables.</li> <li>• Resource optimizing, error checking and repairing automatically.</li> <li>• Support for insert the manifest resource in existing applications</li> <li>• Automatic UPX unpacking.</li> <li>• Support for custom plug-ins to perform any startup processing.</li> <li>• Saving multiple resources at once.</li> <li>• Navigate easily through the Delphi forms, RCDATA, and objects, and view their contents (Image Lists, Strings List, Glyphs, Bitmaps).</li> <li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S.No.	Name of the Tool	Specifications
7.	Advanced 2 and 3-way file comparison merging and folder synchronization tool.	<p>The tool should have the following capabilities:</p> <ul style="list-style-type: none"><li>• Text comparison and merging</li><li>• Compare text from common office file formats</li><li>• Image and binary file comparison</li><li>• Three-way comparison and automatic merging</li><li>• Folder hierarchy comparison and synchronization</li><li>• Archive comparison.</li><li>• Direct access to configuration management (version control) systems, Time Machine and FTP sites</li><li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li><li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li></ul>

S.No.	Name of the Tool	Specifications
8.	Database Comparator.	<ul style="list-style-type: none"> <li>• Should support SQL Server 2005, 2008, 2012, 2014, 2016, 2017, SQL Azure, &amp; SQL Server on Amazon RDS databases.</li> <li>• Support to take Snapshots of the schema for audit and roll-back purposes.</li> <li>• Capable to <ul style="list-style-type: none"> <li>○ Backup files (both native SQL Server &amp; Redgate SQL Backup Pro)</li> <li>○ Compare and deploy changes to SQL Server database schemas (from dev, to test, to production)</li> <li>○ Compare two SQL Server databases (Small and Large), synchronize, and deploy from within SSMS</li> <li>○ Automatically create error-free deployment, synchronization scripts</li> <li>○ Generate T-SQL scripts that update one SQL Server database to match the schema of another</li> <li>○ Migrate individual schema differences, a selection of them, or all of them</li> <li>○ Support for reading encrypted database objects</li> <li>○ Troubleshoot database differences and explore schema changes to see what's going on in development</li> <li>○ Support for Temporal Tables, Retention Tables, Azure Active Directory authentication, SQL Graph, save database and server login details, connections to SQL Server instances on Linux, Run deployments from the command line</li> </ul> </li> <li>• Should include all supported modules.</li> <li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li> <li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li> </ul>

S. No.	Name of the Tool	Specifications
9.	Forensic Log Analysis tool	<ul style="list-style-type: none"><li>• Support GUI based automated SQL query access to any system log or text-based data including Web Server Logs (IIS, Apache, W3C, SharePoint, MS Exchange, FTP, etc), Windows System Events and application log files (generated with log4net, Nlog, SeriLog, etc.).</li><li>• Perpetual Licencing with 03 years warranty with support for updates up to 05 years.</li><li>• Solution should include certified training for 03 Experts from OEM with in India or at OEM location.</li></ul>

S. No.	Name of the Tool	Specifications
10.	Forensic Data Mining through OSINT architecture.	<ul style="list-style-type: none"> <li>• Should provide a platform for data mining from open web resources.</li> <li>• Should include All APIs to perform search of the online resources.</li> <li>• Should include subscription for access to Kaspersky Full Threat Intelligence.</li> <li>• Query Threat Grid's database of threat intelligence.</li> <li>• The set of transforms to retrieve data from Facebook, Instagram, Foursquare, LinkedIn, Twitter, Google+, Vkontakte. Search queries to Google, Bing, Baidu, Yandex, Yahoo, Google Images, Youtube. Search for documents, companies, offshores, aliases. Identify Facebook, Skype, Gravatar profiles by email.</li> <li>• Query the ThreatConnect Platform for your indicators, groups, and other information.</li> <li>• Query Flashpoint's Deep and Dark Web intelligence datasets..</li> <li>• Query the Intel 471 API to obtain attribution and additional data around indicators and threat actors.</li> <li>• query the CrowdStrike Intelligence API to obtain attribution and additional data for indicators.</li> <li>• query the CrowdStrike ThreatGraph API to interact with CrowdStrike Falcon data.</li> <li>• SocialNet maps social media connections with data from 70+ social networks using 700+ transforms. Query by email address, aliases, phone numbers, or names to visualize 1 to 1 correlations, multiple relationships and networks into the thousands of records.</li> <li>• Transforms for monitoring and analyzing news from different sources.</li> <li>• Query the Digital Shadows cyber threat intelligence database.</li> <li>• Visualize threat data, identify connections and correlate campaigns in minutes using 30+ transforms.</li> <li>• Search and visualize relationships between phishing attacks and their payloads.</li> <li>• Query FireEye iSIGHT Intelligence holdings.</li> <li>• Investigate cybercrime with DomainTools historic and reverse datasets.</li> <li>• Threat Intelligence transforms from Silobreaker.</li> <li>• Visualize ZeroFOX social media threat intelligence and custom alerts.</li> <li>• Query ThreatCrowd for Malware, Passive DNS and historical Whois data.</li> <li>• Query Maxmind Precision Services.</li> <li>• Use PhoneSearch to verify phone numbers, providing real names, addresses, social media links, related persons.</li> <li>• Investigate and pivot domains, identities, IPs, &amp; more with DomainTools Iris.</li> <li>• Should support inhouse installation and function and strictly no data sharing.</li> <li>• Should support code analysis by way of multi core processing, distributed processing.</li> </ul>

S.No.	Name of the Tool	Specifications
11.	High End Forensic Work Station	<ul style="list-style-type: none"> <li>• Intel XEON based multiprocessor with 64 cores processor or more.</li> <li>• RAM with 128GB or more.</li> <li>• Latest NVIDIA GTX Graphic card with 16 GB Memory or more to support Forensic Applications.</li> <li>• Minimum of 08 USB 2/3/3.1/3.2 ports or better.</li> <li>• 01 Hard Disk for OS with minimum of 256GB-SSD/01TB-SATA or better.</li> <li>• 01 Hard Disk for Applications 01TB-SATA or better.</li> <li>• 01 Hard Disk for Data 04TB-SATA with RAID controller support or better.</li> <li>• Integrated Forensic Write Blockers to support to various Hard Disk data interfaces, USBs, Flash Media, FireWire with read only and read/write switches with enough cooling arrangement.</li> <li>• Should have all required connectors, data adaptors to suit different data interfaces of various storage media.</li> <li>• Optical Drive to support CD/DVD/Blue Ray Disks.</li> <li>• Pre-installed Windows 10 OS 64bit or latest with perpetual licence.</li> <li>• Pre-installed Ms Office Business 2016 or latest with perpetual licence.</li> <li>• Monitor 24” LED with integrated webcam along with wired Key Board and wired Optical Mouse.</li> </ul>