

Request For Budgetary Estimate for Imaging Solution/System (Picture Archival & Communication System)

HSCC/IT/Imaging Solution/2026

Date-09/06/2026

Details of scope proposed for above are enclosed herewith. It is requested to submit the Budgetary Quotation of the same inclusive of all taxes & duties.

The quotation should be on Company Letter Head with sign as per the BOQ format enclosed and should be submitted in Hard Copy only in a sealed envelope within 7 days of issue of this Notice at the following address i.e. by 16/06/2026 till 10:00 am:

IT Department
HSCC (India) Ltd.,
E-6(A), Sector-1,
Noida (U.P.) - 201301.

IT Department,
HSCC (India) Ltd.

Note-This is not tender & no work shall be awarded as per this advertisement, this is just a request for budgetary quotation for estimation purpose only.

Technical Specification

Solution must be fully web based.

The Imaging Solution OEM should have US FDA certificate.

Imaging Solution Vendor must be CDSCO Certified, bidder must produce/submit the same.

NO freeware/open-source third party tools must be used in any part of the solution (DICOM tools etc.)

Conformance statement must be attached. Vendor will certify that tools and interface are developed with inhouse R&D and not including free/open-source code.

Bidder will be asked to demonstrate the features and inability to show any feature can result in their bid being rejected.

Imaging Solution OEM/subsidiary company/previous associate/previous named company/other associated company

i. should not be black listed or should not have any court case / litigation by any Government agency of India / institutes.

ii. Should have never withdrawn their bid for any government project after being declared L1

Imaging Solution must be a secured system

Vendor to have in house R&D team to include features requested by end user.

Vendor should have 24x7 centralized technical support helpline with call / complaint log

Imaging Solution must be CERT-IN audited and ensure data is localized in India

Clinical Operations

This section is not normative. It provides examples of the clinical operation of the system(s) as envisioned by Client to aid in understanding the desired functionality. Bidder must comply with these.

Patient Registration and Exam Requisition: With the exception of certain emergency situations, all patients will be registered in the HIS/RIS, and all radiographic exams will be ordered through the RIS. The RIS will automatically inform the Imaging Solution of the scheduled exam and the patient's demographic data. In emergency situations where time or other constraints do not allow normal registration and scheduling procedures to be followed, the Imaging Solution will accept exams directly without orders and allow the exam data to be rationalized with RIS data when it is available.

CR and DR Exams: The existing CR and DR devices will be interfaced to the Imaging Solution in such a way that the Imaging Solution can provide worklists based on the DICOM Modality Worklist specification, of ordered CR or DR exams from which the technologist may select the current exam and receive the patient demographic data without further data entry. Initial QC will be performed by the technologist using the display connected to the CR plate reader or the Work console of the DR units. Final QC for CR and DR exams will be performed by designated technologists at Imaging Solution QA workstations.

CT, MRI, US: The Imaging Solution may provide modality worklists based on the DICOM Modality Worklist specification to CT, MRI, US, systems, allowing those modalities which support worklists to acquire patient demographic data without technologist input. Exams will be completely acquired at the modality before transmission to the Imaging Solution. QC will be performed at the modality. Exams received at the Imaging Solution will require no further interaction to be made accessible to users at Imaging Solution workstations.

Stat Exams: Exams designated as stat in the exam order entry process will be identified in the Imaging Solution, and the Imaging Solution will provide workstation users with lists of stat exams for rapid access.

Hardcopy and CD Printing: Imaging Solution film and/or paper printers as well as CD/DVD burners will be accessible only to authorized users.

Diagnostic Reporting: Using Digital Dictation or Template based reporting, authorized users will access worklists of unread exams for dictation. Relevant historical exams, along with their reports, will be available for simultaneous display at the time of diagnosis, if so required, having been previously retrieved by an automatic pre-fetching process. Users will generally monitor worklists based on modalities; however, it will also be possible to find specific patients by Name, Patient ID number or Accession number. During a diagnostic session, a user will be able to select a specific case from the list or automatically move sequentially down the list. In the latter case, after completing the dictation, the Imaging Solution will automatically change the status of the current exam to indicate that it has been read, close the exam, and open the next one in the worklist. When displaying an exam or a set of related exams for a diagnostic session, the system will automatically present the images in a reasonable arrangement to speed the process. Window width and level and image rearrangement will be used frequently. Following Digital Dictation/transcription, the dictated report will be available in the Imaging Solution and be accessible for display at the workstations. Subsequent changes to the contents or status of the report will also be available in the Imaging Solution. Report approval (sign-off) will be possible on the Imaging Solution workstation, in which case the status change will be sent to the RIS/HIS.

Physician Review: Authorized users will submit queries to the system database by choosing one of a selection of predefined worklists or views, thereby accessing lists of exams, folders, and patients. Reports for exams will be visible on the workstation. Exams will be selected and displayed in the format in which they were last saved. Window width and level and image rearrangement will be used frequently

Technical requirements

System Architecture

The Information Technologies department has established the following preferences: The IT department would prefer that the Operating System for all major Servers be Windows/Linux. The IT department would prefer that the Data Base Management software for the Directory database be MS-SQL/Postgress for implementation.

The IT department would prefer that the Operating System for the Diagnostic Display stations be Windows. The IT department would prefer that the Operating System for the Clinical Display stations be Windows. The IT department would prefer that the Browser used in conjunction with the Web based stations be latest. IT department would prefer that the IMAGING SOLUTION Administrator's software tools be web accessible from any PC as opposed to be installed on a specific PC (Admin Station). DICOM Conformance statement of the quoted product should be submitted

Major requirements

The Imaging Solution shall be Fully Web Based with all users accessing all functions through the latest Internet Browser.

With the intention of Client to eliminate paper, the bidder shall include a strategy for document scanning and management of the application that can be integrated into the Imaging Solution

Imaging Solution should support multithreading technology for DICOM communication

There should be no restriction of License in Imaging Solution based on exams per annum

Offered Imaging Solution should support high volume reading (lots of cases, large cases, across modalities)

Solution should support image viewing from Tabs like IPAD etc.

Offered system should have a common GUI for all Imaging Solution workplaces

Imaging Solution should support and connect modalities both present & future. No extra license cost will be applicable for any new modality connectivity.

Imaging Solution should integrate bidirectionally with HIS (Optional)

It should come with a zero foot print viewer, accessible throughout hospital with unlimited licenses.

Imaging Solution and ZFP should be accessible via LAN without requirement of internet access.
 Ensure AI-readiness with open APIs (HL7, FHIR, REST).
 Clearly define Vendor Neutral Archive (VNA) objectives and exit strategy.
 Web based functionality should be available to access software outside hospital premises.
 Ensure bidirectional HIS/RIS integration.
 Support future EMR, lab and national health integrations.
 Secure mobile and remote access with Optional MFA “Multi-Factor Authentication”/OTP/Biometric authentication
 Data transfer should be possible after Imaging Solution life time expiry
 Ensure onsite post-go-live support. (1 year)
 Supply complete technical and administrative documentation
 Support for integrated 3rd party software and hardware will be provided by vendor
 Provide structured role-based training.

System

The proposal shall include a detailed description of the architecture of the system, documenting the system topology and the components of the system.

The system shall meet all performance requirements in this specification with the database storing 3 years’ examinations.

The system shall support system-wide authentication of users through the use of a unique user-ID and password for each user or through an alternative approach with equivalent result.

The bidder shall provide mechanisms to assure the security of all system components to minimize loss of equipment or data due to theft or malicious tampering.

The system should provide same user interface to any user if logged from any computer

In case of network disconnection the system shall automatically resume the image display on reconnection

System shall display the complete image available at that moment in case of network disruption or disconnection.

Any user preferences like keyboard shortcuts, worklist columns once setup by a user should be available if the user logs from any computer

Must support Cardiology Imaging Solution requirements (Cath Lab reporting, cine handling).

Must include Nuclear Medicine / PET-CT specific workflows (SUV, Fusion etc)

Option to bulk export multiple studies from search query results list without need of opening each study individually.

It must have dictation option which could integrate with dictating devices like Dragon, Speech Magic or AI based reporting etc. 3 concurrent user licenses of medical transcription & speech recognition software should be provided.

Solution must have single window access to complete patient history (Images/Documents/Reports-retrieved from CDAC) and also it can able to upload any PDF or word document from that window itself

Scan access time: Access to first image in no more than 2 sec and entire study in no more than 10 sec over intranet

Data migration from all the existing DICOM data of department available in DVD/Hard drive/server to the new system to be done by the vendor. Support will be provided by the existing vendor for migration.

System administration will decide the quality amount of data access of the images accessible through ZFP / different users LOSSY/LOSSLESS

User should be able to load all priors of any modality for comparison

Main Application/Database

The system shall support the creation of individual users each having individually configurable access-privileges.

The system shall provide an access control mechanism that enables assignment of unique access privileges to individual users to access or alter system resources and data. Examples of such functions are:

- o Displaying approved reports
- o Displaying unapproved (unsigned) reports
- o Displaying images
- o Printing images
- o Burning CD/DVD's
- o Changing the status of images and exams
- o Changing the display attributes of exams
- o Approving reports

The database should also support a direct DICOM Query/Retrieve interface, such as could be used for 3rd party workstations or modality retrievals, without noticeable performance degradation.

A system-wide administration function shall be provided to facilitate user profile creation, worklist query creation, system configuration management, data integrity checks and maintenance, and any other administration functions as required by the implementation of the product. A graphical user interface for this function is required. In particular, patient merge and split, as well as exam merge and split features shall be provided.

The system shall implement the following minimum DICOM SOP Classes

- o DICOM Storage
- o DICOM Verification
- o DICOM Print
- o DICOM Q/R
- o DICOM Send

Image Archive

The system shall provide sufficient storage capacity to provide direct rapid access to 12 months of image production in online archive.

Secondary archive should store 10 years data and must retrieve automatically without manual intervention. Should be Vendor Neutral Archive (VNA).

The system shall not store any image in the storage system with non-reversible compression. (Lossy compression)

The system shall make exams available for retrieval by workstations.

The storage system shall tolerate the failure of a single disk drive without loss of data.

The storage system shall remain operational in the event of the failure of a single disk drive.

The storage system shall remain operational during the service required to correct a failed disk drive.

The storage system shall support the storage and retrieval of all SOP classes needed to accommodate the present modalities. It shall support Explicit as well as Implicit Value Representation as part of its Syntax and store Explicit VR as its default transfer syntax.

The system shall provide a DICOM interface to which DICOM-compliant external devices may connect. External devices are devices not supplied with the system and include but are not limited to image review workstations, image printers and modalities.

The system shall include a DICOM Query/Retrieve SCP which is based on the Patient and Study Root Information model and which provides query responses for all studies, series, and images stored in either the Storage System and/or the Archive System

The system shall include a DICOM Modality Worklist Management SCP

The system shall include a DICOM Storage Commitment SCP which accepts storage commitment by the modalities.

The bidder shall provide with the proposal the Conformance Statements covering all DICOM services of the system for each individual component

The external DICOM interface shall support storage of ultrasound images using the Ultrasound Storage SOP Class

The system shall provide DICOM Support for ultrasound

Image library function for research and marking interesting cases must be available

Teleradiology module for accessing images and reporting from remote locations should be available

User Interface

The cursor shall move within and between monitors in a smooth and continuous manner under the control of a mouse or trackball pointing device with the cursor remaining visible during its movement.

The system shall enable all users to create their own profiles accessible from any workstation which specifies at a minimum:

- o Window width and level presets
- o Default display protocols
- o Mouse Settings
- o Worklist Columns as per choice
- o Electronic Signature
- o Autorefresh time for Worklist Size of Worklist

The system shall provide the capability to access user specific hanging protocols from each workstation. These hanging protocols should be created through a user-friendly GUI which would allow a user to edit the default protocols and/or generate them from scratch. These

hanging protocols will be modality and body-part specific.

The system shall provide a mechanism for automatic logoff of a user at a workstation after a configurable period of workstation inactivity.

Exams, Folders, Worklists, and Queries

The system shall allow dynamically updated worklists to be created by the system administrator for a specific user. For the purpose of this RFP, a worklist is any database query, which returns a list of exams or patients. Dynamically updated means that as exams change status in such a way as to change the contents of a worklist, the worklist is automatically refreshed within a specific time. The requirement for dynamic updating can be satisfied by periodic polling of the database with a frequency defined by a parameter which is configurable by the system administrator.

A worklist entry for an exam shall include at least the patient name and ID, examination procedure, exam date and time, report status, modality, number of images, referring doctor, age & sex.

The system shall support worklist which display a list of exams based on queries of:

- I. patient name
- II. patient ID
- III. Accession number
- IV. modality
- V. report status
- VI. study date
- VII. Between a range of dates
- VIII. Marked studies
- IX. AE title
- X. institution name
- XI. patient age / range
- XII. reading / reporting / approving doctor
- XIII. referring physician
- XIV. report content text
- XV. technologist

Worklists shall be generated and stored centrally to the IMAGING SOLUTION network so that a user, logged on to any workstation, may access any worklist from the network and display exams selected from this worklist to his/her current workstation location.

Worklist should be customizable for each user and allow the user to display their own set of columns. User should also be able to setup his page size and dual monitor support.

The workstation shall allow the user, with a single click, to sort the studies on any of the columns displayed in the Worklist.

Offered system should utilize a data locking methodology, if several concurrent users access images i.e. Concurrent users will get reading access to images & no reporting except by 1st user is allowed

All exams shall be accessible from every workstation, limited only by security mechanisms.

Old exams should be automatically displayed in the image viewer along with history & report. User should be able to load up to 4 priors of any modality for comparison

A mechanism shall be provided to permit a user with proper privileges to select images or exams for inclusion into one or more manually-created folders for teaching and research purposes

Ensure simultaneous diagnostic, teaching and research usage.

It shall provide a mechanism to lock a study to prevent deletion of that study by another user

It shall provide a mechanism to attach a message from one user to another to every study

The Worklist shall display STAT request by easily identifiable color codes

Should be possible to merge 2 studies together

Should be possible to split a study into two

Should support scanning of paper/reports and conversion to DICOM series

The Worklist shall display the studies which have been locked or printed with some indication

It should be possible to add a keyword to a study and then search & retrieve a list of studies based on that keyword

It should be possible to search report content for any user definable keyword and get a list of reports with such keywords

Reports

The workstation shall allow creation of reports based on user selectable templates

The workstation shall allow pre-configured header/footer in the report

The report window shall be opened separately and multiple such windows can be opened

The report shall allow insertion of key images for printing in user selectable format

The report shall automatically display the patient demographics from the DICOM header

The workstation shall allow a user with the proper privileges to display the report for any reported exam without requiring the display of its associated images.

The administrative status of any report (e.g., approved or not approved) shall be indicated when the report is displayed

The system shall allow creation of multiple templates according to user/modality/organ

The system shall support capture and attachment of audio file by the radiologist user for reporting

The system shall allow the transcriptionist to review the audio and transcribe the report and submit it for approval of the radiologist

The report shall support all standard formatting functions available in MS Word

Report text search engine should be available

Proposed solution should support email/SMS of reports automatically on finalization

Proposed solution should support speech recognition using dragon software

Exam Display, Arrangement and Image Processing

The workstation shall support the display of multiple images from one exam on one or more monitors

It shall be possible to choose among multiple image display formats for the monitors of a workstation, for example: 1:1, 2:1, 3:1, 4:1, 6:1, 9:1, 16:1, 20:1 and 24:1

The system shall provide user-selectable, user-definable protocols for display of the images of an exam where the protocols are specific to the type of exam. The intent of this requirement is to allow physicians' preferences for display to be satisfied

The workstation shall allow a user with the proper privileges to save the information that controls the display of the images of an exam, including window width and level, display sequence, orientation, magnification, pan position, and any annotations.

The workstation shall support the display of multiple exams simultaneously.

The system shall provide for display of multiple exams of a patient. The intent of this requirement is to support the presentation of historical studies along with a new study for diagnosis.

The system shall support rapidly moving to the next or previous exam/series/image in a Worklist using the equivalent of one keystroke.

The workstation shall have the capability to display CT and MRI scout images with the slice position lines overlaid on the image. User shall have the option of displaying all lines or only 1 line specific to one image

Rapid sequential paging through images of an exam displayable on a single monitor shall be provided.

Should display indication of printed studies

Should display indication of finalized studies

Should be possible to give keywords to any images and search on those later

If multiple image series are viewed, it shall be possible to page through the series independently.

The workstation shall support arranging groups of images into a stack (with only the top image visible) and displaying them sequentially forward or backward.

The workstation shall support Thumbnail view providing a quick glance at the series within a study.

The workstation shall support image display based on Acquisition time, Table position and Instance number of CT images

The workstation shall support linking two or three image stacks and moving through them synchronously so that the same anatomic position or image sequence position is displayed in each stack.

The Workstation shall provide for full screen image display and paging in this full screen window.

A cine function with a user selectable, variable frame rate of at least 1 to 30 frames per second shall be provided

The cine function shall support user selectable continuous display, reverse playing and true size display of images.

The user shall be able to extract frames from the cine file and save it as individual image.

The workstation shall display all images of a cine file in user selectable display format in one keystroke/mouse click

The workstation shall provide dynamic window width and level through the entire image grayscale dataset.

The window width and level function shall be applicable to a single image, selected images or all images

Window width and level values shall be displayed on the image in real time

Display of the inverse grayscale of any image shall be supported

The system shall provide unlimited user-configurable window width and level defaults for each user.

Window width and level defaults shall be user-, modality- and organ-specific.

A rapid method to select among default window width and level values shall be provided. The intent of this requirement is to allow the user to jump between, for example, bone windows and soft tissue windows in CT using function keys.

If an image is received from a modality along with a window width and level for viewing, the window width and level parameters shall be used for the initial display on the workstation

If an image is displayed for which no window width and level is available, the workstation shall select a set of values, which at least make the image visible as a starting point for subsequent manual changes.

Ability to load different studies of different patients, side by side for comparison

System should provide a quick filter function for one click search of studies (Weekly, Daily, Monthly)

Predefined modality-specific display layouts

The workstation shall allow user to convert image/series/study from DICOM to JPEG/BMP format for local storage.

Image Orientation, Zoom, Pan, and Magnifying Glass

The workstation shall allow sequential 90 degree clockwise and counter-clockwise rotation of any image as well as flip in the horizontal and vertical axes.

The workstation shall support angular rotation in any degree

It shall be possible to reorient a single image, selected images, or all images in one operation.

The workstation shall be capable of enlarging an image by interpolation of pixel values

It shall be possible to zoom a single image, selected images, or all images in one operation

Zoomed images shall be repositionable by panning (roaming) the image within the area allocated for display of the image

When the actual image size is greater than the monitor resolution or the resolution of the available display window, it shall be possible to display the image in True size

The workstation shall include a magnifying glass function

It should be possible to invert, reverse, flip an image or images

Region of Interest, Distance, and Angle Measurements

The workstation shall compute point-to-point measurements with automatically calibrated, user- selectable scales (micrometers, mm, cm, or inches).

The workstation shall support angle measurement

The workstation shall support region of interest mean (in image units, e.g., Hounsfield units for CT) and area measurement based on ellipses and rectangular tracing.

The Workstation shall provide a tool to compute Cobbs Angle

The Workstation shall provide Protractor and Cross Product calculation tools

The tools should have user definable color and line settings

The workstation shall allow cropping/masking of image using ellipse or rectangle

The workstation shall allow user to select a region of interest and move it to another part of image for highlighting a pathology.

The workstation shall allow automatic edge detection in a image

The Workstation shall provide a tool to compute CT Ratio

Image Annotation

The workstation shall provide tools allowing the user to position and orient multiple instances of text and graphics (lines, arrowheads, rectangle, freehand and circles) for image annotation.

The Workstation shall provide tool for automatic labeling of intervertebral space and vertebrae (Spine Labeling)

It shall be possible to edit or delete the annotations if required at a later date

It shall be possible to print the annotations on film if required

It shall be possible to change the color, size and font of the annotations and set them as default.

Image Identification

The workstation shall display along with each image at least the following patient data, where appropriate for the image and modality:

- o patient name

- o patient ID

- o exam date and time

- o image orientation

- o kVp

- o mAs

- o pulse sequence

- o slice position

- o image or slice number

- o referring physician

- o Institution Name Equipment Model

All the above shall have configurable position for display on any corner of image and user can set it in default position.

The workstation shall allow the user to toggle the display of image identification text on and off.

The workstation shall provide a function to display the entire contents of the DICOM header for a selected image.

Utility Functions

During the execution of a time-consuming function, the workstation shall indicate that the system is working.

The workstation shall provide a function to allow the user to protect selected images from deletion.

The workstation shall provide a function to allow the user to mark interesting studies and search them.

Should support a user-friendly admin user interface

User creation and different rights assignment should be available

Remote administration of workplaces and servers should be possible

Should be possible to store the client configuration data centrally

IT Dashboard which provides information of major activities like number of users logged in, study status, DICOM Services status should be available

Statistical reports must be possible to be produced based on different criterion like TAT, Study volumes, radiologist TAT, CD Written, Films printed etc

Should be possible to export the MIS reports to MS Excel

System should support roaming user profiles (After logon, the user-specific settings are loaded independently on the workplace).

Settings should be saved in a central repository

Should define user groups according to the departmental structures

User administration possible should be without programming skills

Should provide complete audit trail of activities in the system

Ensure high-volume study handling (CT, MRI, PET-CT) and studies with high number of images up to 10000 images per study

Hard Copy Printing

The workstation shall allow users with the proper privileges to print exams on any DICOM image printer connected to the network

No installable program must be required for printing films from any station

Requests for printing shall not compromise workstation operation or performance.

The workstation shall allow the user to choose from multiple standard image formats: 1:1, 2:1, 4:1, 6:1, 9:1, 12:1, 16:1, 20:1 and 24:1

The workstation shall allow the user to create his own customizable nonstandard format like 1:3, 2:3, 2:5 etc

The workstation shall allow the user to arrange the images of the examination within the selected image format.

The workstation shall allow the user to produce multiple copies of the same image with one request, up to a maximum limit specific to the user

The workstation shall allow the user to cancel a print request which he has previously entered.

Adding Header/Footer and changing the position of the same should be possible

Hospital Icon should be allowed to be added for printing

The workstation shall allow user to select different film sizes and film orientation

It shall allow configuration of multiple DICOM printers into the system

The workstation shall allow the user to print multimodality images on same film.

The system shall have a film composer window with ability to process images before printing

The system shall also allow image printing on standard paper printers

Server type 1 (Min Specs)

Specification	Description
Processor(s)	Dual Processor which must be x86 architecture-based AMD/Intel generation, each processor with clock speed of 2.00 GHz base frequency, Each processor with 16 Cores.
Memory	Total 256 GB Memory or more. At least 8 DIMM slots or more.
Accelerator	System must support at least one double width or lesser width-based GPUs with required expansion slots and optimum power supplies
Drives	2 x 960GB SATA Enterprise Grade SSD populated from day one.
RAID Controller	SAS 12Gbps controller with provision and supports RAID 0, 1, 10, 5 ,50 ,60 & 6 with dedicated 1GB cache memory. RAID card must support all HDD bays w/o any additional item to be added. with supported backplane for drive bays.
I/O slots	5 × PCIe Expansion slots including x16 & x8 bandwidth-based slots
Graphic Controller	Integrated/Addon Graphics. A dedicated video port available
Ethernet ports	At least Dual 10 Gbps Ethernet LAN ports and 16Gig FC Dual Port Connectivity with cables
Ports	2 USB ports, 1 VGA, 1 COM Port/header, 1 TPM Header
Chipset	Compatible CHIPSET
OS	RHEL or equivalent or Windows Server 2022 Std preloaded or Linux
OS	The offered system supports to Windows, SUSE, VM Ware.
Certifications	Certificate/compliance copy should be submitted with bid.
Regulatory Compliance	OEM must be ISO14001, Govt. of India E-Waste Regulation Compliance / Registered, all Certificate copy must be attached with Bid.

Storage type I

Storage Capacity (TB)	200 Terabyte or higher (useable)
Storage System Type	Unified Storage
Total Number of Front-end Ports (Per Controller)	32GB FC Dual
Type of Back-end Ports	SAS
Controllers	2 or Higher in Active -standby Mode with latest Intel processor
RAID Level Support	0,1,5,6,01,10,50 & 60
Remote Replication	Yes
Asynchronous Replication Support	Yes
Cache Per Controller	16GB or higher
Disk Type	SAS SSD and SAS HDDs

Storage -type II

Specification	Description
Processor(s)	Dual Processor which must be x86 architecture-based AMD/Intel generation, each processor with clock speed of 2.00 GHz base frequency, Each processor with 8 Cores.
Memory	Total 128 GB Memory or more, by using 16GB memory modules.
Drives	Must support SSD, SAS and SATA drives of various capacities
RAID Controller	Supports RAID 0, 1, 10, 5 ,50 ,60 & 6. RAID card must support all HDD bays w/o any additional item to be added. with supported backplane for drive bays.
I/O slots	4 × PCIe Expansion slots including x16 & x8 bandwidth-based slots.
Graphic Controller	Integrated/Addon Graphics. A dedicated video port available
Ethernet ports	At least Dual 10 Gbps Ethernet LAN ports
Ports	USB, 1GbE, 10GbE
Chipset	Compatible CHIPSET
Power supplies	Redundant.
OS	RHEL or Latest Windows Server 2022 Std preloaded

Security features	Automated BIOS/System level encryption to authenticate input and output data passing thru. System information including, keys, passwords and digital certificates stored/created must be secured from external software attacks. Cryptographic functions offered for system security. Details of utility must be submitted with bid.
Management features	Real-time out-of-band hardware performance monitoring & alerting Agent-free monitoring, driver updates & configuration, power monitoring & capping, RAID management, external storage management, & system health Out-of-band hardware & firmware inventory Auto deploy a baseline configuration profile. Should display status information and should light up during normal system
BIS Registration	OEM must have Bureau of Indian Standards certification for Server product category. Certification copy must be attached with bid documents
Warranty	5 years onsite warranty by OEM. OEM must have online current warranty status portal available. Details of the same must be submitted with bid.
Form Factor	2U or higher in Form Factor, System with Air Cooling Technology with optimized acoustics and auto-controlled heat emission.
Onsite Installation	Installation, Testing, Training, and Implementation should be done by OEM/Bidder engineers only.

Workstation type 1

Processor(s)	Intel Core Ultra 9 285 processor
Memory	Total 64 GB Memory, by using 16GB memory modules. Min 4 DIMM slots or more.
RAID Controller	SATA RAID Controller Supports RAID levels 0, 1 & 10
HDD & SSD	1 TB SSD
HDD bays	At least 4 Hard drives/ SSD, including support for min 2 x NVMe/M.2 drives and necessary controller for the connectivity is on board.
I/O slots	3 × PCIe 3.0 slots including x16 & x4 bandwidth-based slots
Ethernet ports	Only 1 RJ45 port available
Ports	4 USB ports, 1 DP/ graphics port, 1 COM Port/header
GPU	One NVIDIA A400 4 GB Graphics, each with on board GPU Memory 4GB GDDR6 with 384 CUDA Cores, 2 display port available in device
Job Scheduling Utility License	Unified system management/monitoring toolset for configuration diagnosis and management of the system. Toolset/Manager is capable of supporting package and image-based provisioning, intuitive web interface for managing and customize the node, and tool set with provisioning, monitoring, and reporting capabilities. With JOB scheduling capabilities on single node for CLI and GUI based end user applications. S/W utility from the H/W OEM and not from a third-party vendor.
Chipset	Compatible Chipset
Power supplies	Highly efficient 500W, 80 plus certified power supplies.
Operating System	Windows 11 Professional (64 Bit)
System Security	Automated BIOS/System level encryption to authenticate input and output data passing through. System information including keys, passwords and digital certificates stored/created are secured from external software attacks. Cryptographic functions offered for system security. Details of utility must be submitted
Form Factor	Tower form factor System.
Compliance	Offered system BIS certified workstation.
Local support	OEM have their own registered Service and support Centre. Details are listed on OEM Website.
Monitor	2 MP Clinical DICOM calibrated

Server type 2

Specification	Description
Processor	2 x Intel Silver 12 core processor or above
Memory	128 GB RAM
GPU	NVIDIA GPU
HDD	2 x 480GB SSD 3 x 1.92 TB SSD
Power Supply	Dual, Hot-Plug, Power Supply Redundant (1+1)
OS	Windows Std OS
BIS Registration	OEM must have Bureau of Indian Standards certification for Server product category. Certification copy must be attached with bid documents
Warranty	5 years onsite warranty by OEM. OEM must have online current warranty status portal available. Details of the same must be submitted with bid.
Form Factor	2U or higher in Form Factor, System with Air Cooling Technology with optimized acoustics and auto-controlled heat emission.
Onsite Installation	Installation, Testing, Training, and Implementation should be done by OEM/Bidder engineers only.

5 MP Colour Monitor – type 2

5 MP Colour Clinical Monitor			
Sr.	Category	Specification Item	Parameters
1	Display	Aspect Ratio	3:4 for each display in portrait mode, 3:2 overall
		Uniformity correction	ULT
		Backlight Technology	LCD
		Maximum luminance	1300 cd/m ²
		DICOM calibrated luminance	600 cd/m ²
		Color Bit	10bit
		Color Gamut (Typ.)	sRGB over 99%(Coverage)
		Contrast Ratio (Typ.)	1400:01:00
		Pixel Pitch (H x V)	0.1545mm
		Resolution	5.8MP (2100 x 2800 pixels)
		Response Time (GTG)	12.5ms
		Size (Diagonal, Inch)	21.3
		DICOM Compliant	Yes
2	SW Application	QA software	Yes
3	Connectivity	DisplayPort	Yes(1ea) Display Controller from same OEM

3 MP Monitor- type 1

Sl. No.	Item Description	Specification
1.	Display Size	21.3 inch
2.	Aspect Ratio	4:3
3.	Panel Type	IPS
4.	Resolution	3MP (1536 × 2048)
5.	Brightness (Typical)	1050 cd/m ²
6.	Contrast Ratio (Typical)	2000:01
7.	Viewing Angle	178° (Horizontal) / 178° (Vertical)
8.	Response Time	12 ms (Gray to Gray)
9.	Surface Treatment	Anti-glare, 3H
10.	DICOM calibrated luminance	600 cd/m ²
11.	DICOM Compliance	Yes
12.	Hardware Calibration	Yes (Internal Front Sensor)
13.	Pixel pitch	0.2115 mm
14.	Input Ports	DisplayPort ×2
15.	Output Ports	DisplayPort ×1
16.	USB Ports	1 Upstream, 2 Downstream
17.	Power Input	AC 100–240V, 50/60Hz
18.	Power Consumption (Max)	45 W (nominal)
19.	Power Consumption (DC Off)	< 0.3 W
20.	Stand Adjustments	Tilt, Pivot, Height (110 mm)
21.	Weight (With Stand)	9.0 kg
22.	Weight (Without Stand)	8.0 kg
23.	Certifications	IEC 60601-1 / 60601-1-2, FCC Class A, FDA 510(k), RoHS, REACH, WEEE

Film Scanner

Film Scanner (diagnostic scanner pro)

It should be based on HD-CCD technology

- 1 It should have Clinical Optical Density Range of 0.5 to 3.6
- 2 It should have depth of 16-bit mapped to 12-bit (4096) and 8-bit (256) grayscale output.
- 3 It should be for Dual use – general radiography or mammography
- 4 It should have depth of 16-bit mapped to 12-bit (4096) and 8-bit (256) grayscale output
- 5 It should be capable of scanning film sizes of width: 7” to 14” (18 cm to 35.6 cm) and length: 8” to 17” (20 cm to 43 cm).

- 6 It should be possible to do easy and error-free patient demographic entry with Modality Work List generation and should have DMWL license
- 7 It should have automatic Digitizer Calibration
- 8 Desktop HP/DELL or Equivalent
Intel® Core™ i7 or higher
16GB RAM
1TB SSD Hard Drive
Intel® Integrated Graphics
Windows 11 Professional 64-bit
USB Keyboard
USB Optical Mouse
21.5" Color LED Monitor
5 years onsite parts and labor warranty for system and monitor

Workstation -2

Sr. No.	Description
	Clinical Workstations for Wards/ Clinicians
1	• Operating System: Windows 10 Pro 64 or higher
2	• Processor: Intel® Core™ i7 Processor.
3	• Memory: 16 GB, DDR4-2666 DIMM Memory
4	• Internal storage : 500 GB 7200 RPM
5	• Graphics card : NVIDIA® GeForce® GT 730 Graphics (2 GB, 1 Display port/HDMI, 1 DVI).
6	• Security: Intrusion Sensor, HP Dual Head Keyed Cable Lock

Antivirus

S. No.	Specification
1	Anti-Virus, Anti-Malware, Anti-Phishing, Anti-Rootkit, Anti-Spyware, Anti-Trojan, Anti-Worm, Anti-Spam, Anti-Adware, Anti-Ransomware, Boot time protection, Removable Media Scan, Protection from Browser Exploits, Incoming and Outgoing Email Protection, Instant Messaging Protection, On-Demand Scanning, On-Access Scanning, Scheduled Scanning, Vulnerability Scanning
2	Data Backup option for Ransomware protection
3	Offered OEM must have patented detection technology for viruses and malware and indigenous scan engine
4	Boot Time Scan, Auto Tuneup, Disk Cleanup, Registry Cleanup, Traces Cleanup, Defragmenter
5	Must protect users from threats that have never occurred before (Zero Day attacks)
6	Must have Artificial Intelligence algorithm to learn and evolve in real-time, providing predictive detection
7	Must have capability to check if personal data such as name, email address, phone number, IP address etc. has ever been leaked or hacked online
8	Must have Anti-Tracker feature to block trackers collecting browsing footprints
9	Must protect credentials including bank account, username, and password during online banking and shopping
10	Must detect new and unknown malicious threats based on behavioral classification of documents and files

- 11 Must have cloud-based web portal for comprehensive monitoring and remote management of computers and laptops
- 12 Must have cloud-based web portal to view device security status, license history, license details, and renew licenses
- 13 Must erase traces from popular applications such as Microsoft Office, Adobe Acrobat Reader, Media Player, WinZip, WinRAR, browser cookies, and saved passwords
- 14 Offered OEM should have ISO 27001 & ISO 20000 certified Technical Support

Server Load Balancer

A Hardware Details each SLB Device

- 1 Proposed hardware platform should be of high performance, highly scalable, and purpose-built next Generation platform for application delivery as Server Load Balancer. SLB should not be virtual SLB and it should not white labeled SLB running on third party hardware.
- 2 The document/cross reference provided by the OEM for each clause asked in the RFP must be available on global public domain like product datasheets, product guides etc. and the proposed solution must support all technical features specified in the RFP from the date of issue of this RFP
- 3 Bidder/OEM may be asked to demonstrate all the technical features asked in the RFP through a POC and any non-compliance in the technical functionality/feature will lead to rejection of the bid.
- 4 The Server Load Balancer shall have at least 04 nos. 10G base-X ports complying to IEEE 802.3ae standard which is able to drive the link up to 250 Meter at speed of 10 Gbps on Multi Mode fiber. The hardware of all these ports should be complete in all respect. 10gig interface should be upgradeable to 25Gig by changing transceivers only.
- 5 The Server Load Balancer shall have minimum 04 nos. 1/10Gig Rj45 ports from day 01
- 7 The Server Load Balancer shall have a 100/1000 Base Tx Port for out of bound management.
- 8 The Server Load Balancer shall have a console port based on RS-232 / RJ-45 for configuration and diagnostic purposes.
- 10 The Server Load Balancer shall have enough CPU capacity and 32GB Memory so as to efficiently meet all the capability parameters as well as functionalities laid down in the specifications.
- 11 The Server Load Balancer hardware shall be designed to run both IPv4 & IPv6 simultaneously (Dual Stack) from day one.
- 12 The Server Load Balancer shall be capable of working with AC Power supply with a Voltage varying from 170 -240 Volts at 50 +/- 2 Hz.
- 13 The Server Load Balancer shall have internal Redundant Power Supply (RPS). The primary as well as redundant power supply shall be hot swappable and no downtime / reboot shall be required for addition / removal of power supply module.
- 14 The Server Load Balancer shall support 19" Rack mounting with 1U form factor.

B Solution Capabilities:

- 1 The Solution shall have minimum 10 Gbps L4-L7 throughput.
- 2 The Server Load Balancer Solution shall have minimum 15 Million concurrent TCP connections.
- 3 The Server Load Balancer Solution shall have minimum 1 Lakh L4 TCP connections / second.
- 4 The Server Load Balancer Solution shall have minimum 500K HTTP request / second.

5 The SLB shall support minimum 5,000 RSA and 5,000 ECC SSL transactions per second. SLL TPS rating specify the number of new SSL connections (Key exchanges) per second without session key reuse.

6 The Application Delivery Controller shall support minimum of 5 Gbps SSL throughput and compression of 5 Gbps.

7 The Server Load Balancer Solution shall support HTTP1.0, HTTP1.1 & HTTP/2 protocols.

8 The Server Load Balancer Solution shall be configured. In case of failure of one of the equipment; the other available equipment/s shall serve all the requests without any disruption or degradation in overall performance. In addition to this, the offered high availability cluster of SLB.

9 The software solution must support Programmability to support Automation, native integration and orchestration. It should enable declarative provisioning and configuration of the software solution across cloud environments and integration with automation and CI/CD tools including Ansible, Jenkins, and Terraform.

C **Native and Kubernetes integration Features:**

1 The Server Load Balancer shall have integration with Kubernetes Platforms and requisite controller/license/container plugin shall be provided with SLB solution from day one. Controller/Plug-in should be from same make as SLB. It should not be third party or opensource.

2 The Controller/Container Plugin shall support both Nodeport and ClusterIP mode of deployment and also as an Ingress service.

3 The Controller/Container Plugin shall support Application Delivery Controller orchestration to dynamically create and manage SLB objects.

4 The Controller/Container Plugin shall support PER NAMESPACE operations with the capability to run Ingress service plugins on a PER NAMESPACE basis

5 The Server Load Balancer shall be capable to forward traffic to container cluster via NodePort and ClusterIP.

6 Controller/Container Plugin should use Custom resources extensions of the Kubernetes API. It should registers to the Kubernetes client-go using informers to retrieve Virtual Server, TLSProfile, Service, Endpoint and Node create, update, and delete events. Resources identified from such events are pushed to a Resource Queue maintained by controller.

D **Server Load Balancer Solution Functional Requirements:**

The Server Load Balancer shall support the following Mode of deployment:

1 Reverse proxy deployment

Cluster deployment

Inline bridge deployment

The Server Load Balancer Solution shall support the following Load Balancing Features

Support for 100 servers

2 Support load balancing algorithms

Least connection

Ratio

Round Robin

weighted Least connection

Dynamic Ratio

Least Sessions

Predictive

Observed

The proposed appliance should provide multi-tenant design and should have below capabilities:

3 1) Application traffic isolation: Should be able to define separate address space, VLANs, Routing information and default gateways for each application

2) Administrative Partitions: Should ensure that specific users are granted access to only the partitions for which they are authorized

3) Segmentation / Virtualization support along with dynamic resource allocation per segment

4 The proposed solution should have inbuilt HTTP to MQTT Parser. The proposed solution should provide certificate based authentication between IOT devices and Load Balancer

The proposed solution must provide below application optimization features:

5 1) TCP Optimization: Should be able to modify TCP parameters like keep alive interval, maximum RTO, window size, Nagle Algorithm, delay window control, packet loss ignore rate, flow control, congestion control speed etc. on the fly to improve application performance

2) Compression: Solution should be able to provide cost-effective offloading of traffic compression processing to improve page load times and reduce bandwidth utilization.

3) Caching: Solution should be able to do caching to reduce network traffic and increase application performance

6 Proposed solution should support for High Availability (Active-Active and Active-Passive) with SSL and TCP session mirroring. The proposed solution should be able to maintain or mirror the SSL and TCP connection even if one of the HA or clustered devices is down.

7 The proposed solution must support SSL VPN and Single Sign On, Web application firewall, DDOS, CGNAT, DNS, GSLB functionality on the same appliance with license upgrade.

8 The proposed solution must offer out of band programming for control plane along with data plane scripting for functions like content inspection and traffic management

9 Server Load Balancer should support SQL-based querying for the following databases for health checks: • Oracle • MSSQL • SQL • DB2

10 The solution should be able to "cloak" error responses to hide sensitive server related information in the response body and response headers.

E **Management & Reporting**

1 The Server Load Balancer Solution shall support Syslog, SNMP (v2c & v3) & MIB-II.

2 The Server Load Balancer Solution shall support NTP / NTP for date & time synchronization from the NTP server.

3 The Server Load Balancer Solution shall be manageable (both GUI and CLI) using telnet, SSH, Web based management (HTTP, HTTPS), etc.

4 The solution should provide online troubleshooting and traffic analysis tool where the administrator can take a snapshot of the config and upload it on web based diagnostic tool to check the health and vulnerability of the solution with the recommended solution provided on the knowledge base link.

5 SLB should provide the application visibility and reporting with the below metrics and entity for each application:

- Client IP addresses/subnets as well as geographical regions

- Total Transactions as well as Average and Max Transactions/sec

- Most commonly requested URLs
- Server Latency and Page Load times
- Virtual Server and Pool server performance
- Page Load Time
- Response code
- OS and Browser
- URL details

6 The Server Load Balancer Solution shall have a feature to provide role-based access

F **User's access for management.**

1 The Server Load Balancer Solution & Management & Reporting Solution shall support authentication & authorization through Radius / TACACS+.

2 The Server Load Balancer Solution shall support upload /download of device configuration through secure communication with Management Server.

3 Central Management & Reporting Solution shall be able to take manual or scheduled backup of configuration of Server Load Balancers.

4 The management server must support the archiving and it shall be able to export logs/events using NFS/SMB/SCP/SFTP.

5 The Server Load Balancer Solution shall support integration with SIEM. The Server Load Balancer Solution shall be able to send logs to SIEM Servers.

6 Security events should be exportable via SNMP, SMTP, Syslog and other industry standard formats to meet auditing and regulatory compliance requirements

7 The Historical Reports shall be provided for multiple timeframes i.e., hourly, daily, weekly, monthly, and customized periods.

G **Regulatory Compliance of each SLB device**

1 The Server Load Balancer shall conform to UL 60950 or IEC 60950 or CSA 60950 or EN 60950 or equivalent Indian Standards like IS-13252 (Part 1):2010 for Safety requirements of Information Technology Equipment.

2 The Server Load Balancer shall conform to EN 55022 Class A/B or CISPR22 Class A/B or CE Class A/B or FCC Class A/B or equivalent Indian Standards like IS 6873(Part 7):2012 for EMC (Electro Magnetic Compatibility) requirements.

H **Product / OEM Evaluation Criteria**

1 SLB / SLB's Operating System should be tested and certified for EAL 2 / NDPP (Network Device Protection Profile)/NDcPP (Network Device collaborative Protection Profile) or above under Common Criteria Program for security related functions or under Indian Common Criteria Certification Scheme (IC3S) by STQC, MeitY, Govt. of India.

2 The SLB solution should be in the Gartner's Magic Quadrant of Latest published Gartner Report "Web Application and API Protection"

I **High Availability**

1 The Proposed Solution should be able to work in High Availability (HA) mode and should be deployable in an Active-Standby & Active-Active

2 Should support transparent failover between 2 devices, the failover should be transparent to other networking devices with SSL session mirroring.

- 3 Should support network-based failover for session mirroring, connection mirroring and heartbeat check
- 4 Device level HA should support automatic and manual synchronization of configuration from the primary device to the secondary device.
- 5 SLB should provide the application visibility and reporting with the below metrics and entity for each application:
 - Client IP addresses/subnets as well as geographical regions
 - Total Transactions as well as Average and Max Transactions/sec
 - Most commonly requested URLs
 - Server Latency and Page Load times
 - Virtual Server and Pool server performance
 - Page Load Time
 - Response code
 - OS and Browser
 - URL details
- 6 The Server Load Balancer Solution shall have a feature to provide role-based access

EDR (End point Detection and Response)

- | S. No. | Specification |
|---------------|--|
| 1 | Solution should have Customizable Watermark Text: The watermark text should be personalized to include the following values: <ul style="list-style-type: none"> o Username o IP Address o MAC Address o Timestamp o Hostname o Custom Text |
| 2 | EPP cloud must have capability to scan and detect confidential data residing in image files via Optical Character Recognition (OCR) |
| 3 | EPP cloud must have the capability to display license key for MS Office (last 4 digits) |
| 4 | EPP cloud must have the capability to Control access to Personal or Corporate Google accounts. |
| 5 | EPP cloud must have the capability to Control access to YouTube videos based on their Category, Publisher etc. |
| 6 | EPP cloud must have ability to create Safelist for Applications to be allowed on the Endpoints. |
| 7 | EPP cloud must have capability to scan missing patches for Non-Microsoft applications. ex: Adobe Reader, Adobe Acrobat, Adobe Flash Player, VLC, Java, Putty, Notepad++, 7-Zip, Mozilla Firefox and Mozilla Thunderbird. |
| 8 | EPP cloud must have capabilities to maintain recovery keys per endpoint on the centralized console. |
| 9 | An Analyst EDR solution must be able to select one or many threat indicators to perform an operation. e.g. Hunting for process name = "putty.exe" or Hunting for process name = "putty.exe" AND local IP = "11.22.33.44" |
| 10 | EDR solution must be capable of finding below Threat Indicators: 1. MD5 2. SHA2 3. Process Command Line 4. Process Path 5. IP Address 6. Process Name 7. URL, Registry keys and values |
| 11 | EDR solution must be capable of hunting based on timeframe e.g.: last 7 days, last 30 days |
| 12 | Result of Threat hunting will be the list of processes in which these threat indicators are found. |
| 13 | An analyst can associate alerts and process found that are unassociated to Incidents that are already available in the system or create a new Incident and associate the alerts found |

- 14 Following information will be available in the search results: 1. Host Name of the processes 2. Related Process information (process ID, process name, process timestamp) 3. If there is/are any alert/s generated on this process and if yes, count of the alerts.
- 15 An IR can whitelist an alert raised on a process, command line, process path, network IP and protocol. He can select combination of these parameters to generate a whitelisting rule.
- 16 These rule can be modified or deleted later.

Antivirus

S. No.	Specification
1	Anti-Virus, Anti-Malware, Anti-Phishing, Anti-Rootkit, Anti-Spyware, Anti-Trojan, Anti-Worm, Anti-Spam, Anti-Adware, Anti-Ransomware, Boot time protection, Removable Media Scan, Protection from Browser Exploits, Incoming and Outgoing Email Protection, Instant Messaging Protection, On-Demand Scanning, On-Access Scanning, Scheduled Scanning, Vulnerability Scanning
2	Data Backup option for Ransomware protection
3	Offered OEM must have patented detection technology for viruses and malware and indigenous scan engine
4	Boot Time Scan, Auto Tuneup, Disk Cleanup, Registry Cleanup, Traces Cleanup, Defragmenter
5	Must protect users from threats that have never occurred before (Zero Day attacks)
6	Must have Artificial Intelligence algorithm to learn and evolve in real-time, providing predictive detection
7	Must have capability to check if personal data such as name, email address, phone number, IP address etc. has ever been leaked or hacked online
8	Must have Anti-Tracker feature to block trackers collecting browsing footprints
9	Must protect credentials including bank account, username, and password during online banking and shopping
10	Must detect new and unknown malicious threats based on behavioural classification of documents and files
11	Must have cloud-based web portal for comprehensive monitoring and remote management of computers and laptops
12	Must have cloud-based web portal to view device security status, license history, license details, and renew licenses
13	Must erase traces from popular applications such as Microsoft Office, Adobe Acrobat Reader, Media Player, WinZip, WinRAR, browser cookies, and saved passwords
14	Make in India (MII) compliant product with minimum 60% local content as per MeitY notification dated 6 December 2019 for Cyber Security products
15	Offered OEM should have ISO 27001 & ISO 20000 certified Technical Support
16	OEM Experience: Must have executed minimum 3 orders from Government Departments having minimum 5000 licenses each during the last 3 years
17	Offered OEM should not be blacklisted by any Central Government / State Government / PSU in the last 5 years
18	Onsite / Remote Support from Bidder / OEM
19	Technical Training and Technical Handover from Bidder / OEM

S. No.	Item Description	Qty	Unit	Rate	Amount
1	Supply, installation, testing and commissioning of MY SQL 4 Core with minimum of 5 years support is required as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	2	Nos.		
2	Networking and OFC connectivity as per requirement	1	Lot		
3	Supply, installation, testing and commissioning of Load Balancer as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	1	No.		
4	Supply, installation, testing and commissioning of 42 U server Rack as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	2	No.		
5	Supply, installation, testing and commissioning of Antivirus with 5 years Subscription as per the requirement as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	20	Nos.		
6	Supply, installation, testing and commissioning of Server type II with minimum of 5 years support is required as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	2	Nos.		
7	Supply, installation, testing and commissioning of storage type I with minimum of 5 years support is required as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	1	No.		
8	Supply, installation, testing and commissioning of imaging software with minimum of 5 years support is required for the software as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	1	Lumpsum		
9	Supply, installation, testing and commissioning of Diagnostics/clinical Monitor type 1 with minimum of 5 years support is required as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	7	Nos.		

10	Supply, installation, testing and commissioning of Diagnostics/clinical Monitor type 2 with minimum of 5 years support is required as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	1	Nos.		
11	Supply, installation, testing and commissioning of Robotic cd/dvd Publisher with minimum of 5 years support is required as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	1	No.		
12	Supply, installation, testing and commissioning of Film Digitizer/Scanner with minimum of 5 years support is required as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	1	No.		
13	Supply, installation, testing and commissioning of Workstation type 1 with minimum of 5 years support is required as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	8	Nos.		
14	Supply, installation, testing and commissioning of main Server with minimum of 5 years support is required as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	2	Nos.		
15	Supply, installation, testing and commissioning of 6 kva UPS with minimum of 5 years support is required for the software as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	1	No.		
16	Supply, installation, testing and commissioning of EDR Licences for Servers with 5 years Subscription as per the requirement as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	4	Nos.		
17	Supply, installation, testing and commissioning of Diagnostics/clinical Monitor type 3 with minimum of 5 years support is required as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	18	Nos.		

18	Supply, installation, testing and commissioning of 3D Software Licenses with minimum of 5 years support is required for the software as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	8	Nos.		
19	Supply, installation, testing and commissioning of Workstation type II with minimum of 5 years support is required as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	10	Nos.		
20	AI Enabled Chest X-ray Detection Software (5 years Annual unlimited Study License)	1	No.		
21	Generative AI Enabled Automatic Radiology Reporting with speech to Text conversion	8	Nos.		
22	Supply, installation, testing and commissioning of Speech recognition Software with Mic with minimum of 5 years support is required for the software as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	8	Nos.		
23	Existing Data Migration is required for the software as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	1	No.		
24	Supply, installation, testing and commissioning of 1 KVA UPS with minimum of 5 years support is required for the software as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	20	Nos.		
25	Supply, installation, testing and commissioning of 10 KVA UPS with minimum of 5 years support is required for the software as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	1	No.		
26	Supply, installation, testing and commissioning of Advanced 3D Software CC Licenses with minimum of 5 years support is required for the software as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	2	Nos.		
27	Supply, installation, testing and commissioning of network Storage type-II with minimum of 5 years support is required as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	1	No.		

28	Integration of proposed Software with Radiology Modalities as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	10	Nos.		
29	Integration of proposed Software with HIS as per requirement and as per technical specification mentioned & complete in all respect and as directed to the satisfaction of engineer.	1	Lot		
	Total				