AIRPORTS AUTHORITY OF INDIA
Airport Systems Dept
Chennai Airport, Chennai – 600016

NOTICE INVITING TENDER

<u>Name of the work:</u> **SITC of Servers, Storage, Software's and Networking for SCCTV System with Three years onsite warranty and Three years CAMC with spares at Chennai Airport.**

Estimated Cost   :   Rs. 14,02,04,000.00
(Inclusive of GST & all applicable Taxes)

Time Period   :   Time Allowed SITC: - 5 Months
(Warranty – 3 Years & CAMC - 3 Years).

<u>This NIT Document contains 73 pages</u>.

TABLE OF CONTENTS

<u>This NIT Document contains 73 (Seventy-Three) pages only</u>.

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SECTION –1

NOTICE INVITING TENDER

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Airports Authority of India invites Tender through GEM Portal from the professionally competent and experienced firms (OEM authorized) in similar nature of work for the work of **"SITC of Servers, Storage, Software's and Networking for SCCTV System with Three years onsite warranty and Three years CAMC with spares at Chennai Airport."**

Name of the Work	Estimated Cost (INR)
SITC of Servers, Storage, Software's and Networking for SCCTV System with Three years onsite warranty and Three years CAMC with spares at Chennai Airport	**14,02,04,000.00** **(Inclusive of GST & all applicable taxes)**

1. **GeM Portal:**
   Any Queries relating to the process of online bid submission or queries relating to GeM portal Kindly Contact GeM Helpline.
   Mail: helpdesk-gem[at]gov[dot]in
   Toll Free Numbers (Inbound):
   1800-419-3436
   1800-102-3436
   (9:00 am - 10:00 pm Mon to Sat)

2. **MSME/ NSIC Concessions:**

   Concessions / award of work to the MSME registered with NSIC should be applicable as per the directives of Govt. of India (http://dcmsme.gov.in). However, kindly note this contract work composite in nature, work should not be awarded by splitting the order. Firms should submit UDYAM, UDYOG ADHAAR valid certificate for EMD Exemption.

3. **MAKE IN INDIA PRODUCTS:**

   Firms Quoting Items should submit the Certificates / Documents / Local content declaration from OEM as per the Govt of India guidelines. However, Items should meet the specifications as per Tender Documents. This contract work is in composite nature, hence purchase preference on item wise work should not be awarded by splitting the order.

   Provisions contained in Public Procurement (Preference to Make in India), Order 2017 issued by Department for Promotion of Industry and Internal Trade (DIPP), Ministry of Commerce & Industries vide letter No. P45021/2/2017 PP (BE II) dated 04.06.2020 and subsequent amendment & directives should be followed. Accordingly, offer will be evaluated & processed in conformation with above referred GOI order (Specially mentioned below). The bidder should provide compliance and undertaking as per order and hereafter amendments:
   a) Order no: F.No.6/18/2019 PPD dated 23.07.2020 of Department of Expenditure), Ministry of Finance Under Public procurement division for the General Financial rule (GFRs).
   b) Class I local supplier means a supplier or service provider, whose goods, service or works offered for procurement, has local content equal to or more than 50%, as defined under order.
   c) Class II local supplier means a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%, as defined under this Order

d) Bidders offering imported products will fall under the category of non-local suppliers. They cannot claim themselves as Class I Local suppliers / Class II local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training and after sales service support like AMC/CMC etc. as local value addition.

4. **EMD:**

EMD should submit by the firm online as per GeM portal guidelines. EMD should be @ 2% (Rs. 28,04,080.00) of the Estimated Cost i.e., Rs. 14,02,04,000.00.

EMD should submit within Three working Days after Tender submission End Date. If not submitted Bid will be rejected without any further process.
EMD should be submitted to; **Dy. GM (AS)**
Airport Systems Dept.
Operational Offices, Airports Authority of India
Chennai Airport, Chennai 600 016.

5. **Technical Bid: - To Qualify in Technical Bids, Contractor / Firms are to submit the documents as mentioned below;**
a) Integrity Pact Performa.
b) Unconditional Acceptance Letter.
c) Firm Registration / Incorporation Certificate Copy.
d) PAN Copy & GST Registration Copy.
e) **Power of Attorney**: Power of Attorney on non-judicial stamp paper of Rs.100/-, authorizing the designated executive to sign all documents on behalf of the company or Firm if the bid is not signed by the Director of the Company or Proprietor of the Firm.
f) **OEM Authorized valid certificate** for the firm / bidder for providing supply and service support. Certificate validity should cover Warranty and CAMC period.
g) **Proof of Experience of Works**: should have satisfactorily completed similar type of works. The firm should have experience in SITC of Servers, Storage, Software's and Networking for SCCTV Systems in Govt./PSU/Private organizations. (Phase/Part/ subcontracted completion of the scope of work in a contract should not be considered).

One Work Order value of Rs.11,21,63,200.00 or higher with completion Certificate.
Or
Two Work Orders value each of Rs.7,01,02,000.00 or higher with completion Certificates.
Or
Three Work Orders value each of Rs.5,60,81,600.00 or higher with completion Certificates.
Nature of work orders should be SITC of Hyper-Converged Infrastructure (HCI) solution / Servers, Storage, Software's and Networking for SCCTV Systems, works in Govt./PSU/Private organization during last 7 years in India.

Completion certificates for experience should show the nature of work done, the value of work, date of start, date of completion as per agreement, actual date of completion and satisfactory completion of work.
Firms showing work experience certificate from non-government / non-PSU organizations should submit copy of Tax Deduction at Sources (TDS) certificate in support of their claim for having experience of stipulated value of work.
However, to Qualify in Technical Bid, Firms should also have Additional Experience in HCI-Solution based SITC works. Accordingly, bidder should submit the work orders and completion certificates for completed jobs in Govt Organizations / Private firms. (SITC of Minimum Total 50 nodes or higher).

h) Firm's Details.
i) Firm's Bank Details.
j) **Latest 3 years Balance Sheet as of 31.03.2024.**
Bidder should have annualized Average financial turnover of **Rs.4,20,61,200.00** against works executed during last three years ending **31st March 2024**. As a proof of financial turnover, **copy of Abridged Balance Sheet along with Profit and Loss Account Statement of the Bidder duly certified by a Chartered Accountant with UDIN**.
k) Declaration of Not Black-Listed/Debarred Firm.
l) UNDERTAKING FOR GST.
m) Undertaking for Environment Management System
n) Make In India (MII) Local content declaration documents from OEM for Items.
o) Signed Tender Documents (All pages should be signed & sealed)
Signed Tender Document copy, (All pages should be signed & sealed by the authorized designated official to sign the documents on behalf of firm)
Please refer Section-VII, strictly upload requested, relevant documents only.

6. **Bids Evaluation Process**:

TECHNICAL BID (uploaded by the contractors/firms):
Participated firms Technical Bids are evaluated as per AAI tender Terms & Conditions. Evaluation carried out on submitted documents if any shortfalls related to submitted documents same should be requested through GeM portal. If any Bidder /Firm submit new documents to meet technical criteria as short-fall documents same should not be accepted.

FINANCIAL BID: Technically qualified Contractors/Firms Financial Bids are processed for further. However, Selection of L-1 Bid through Reverse Auction as per GeM portal procedures. Reverse Auction should be on the overall tender value / price and not on individual components. Acceptance of MSME / MII Vendors Bids as per Government of India guidelines.
Bidding and Reverse Auction (RA) online through GeM portal

7. AAI reserves the right to accept or reject any or all bids without assigning any reasons. AAI also reserves the right to call off tender process at any stage without assigning any reason.
8. **AAI reserve the right to verify the credential submitted by the Firms at any stage (during Bid Process or post bid process). If any stage, any information/documents submitted by the firm is found to be incorrect / false or have some discrepancy which disqualifies the firm then AAI should take the following actions:**
The agency should be liable for debarment from tendering in AAI, apart from any other appropriate contractual/legal action.
9. Consortium / JV companies should not be permitted.
10. If the entity participating in any of the tenders is a private or public limited company, Partnership firm or proprietary firm and any of the Directors/Partners/Proprietor of such company is also a director of any other company or partner of a concern or a sole proprietor having established business with AAI and has outstanding dues payable to the Authority, then the said entity should not be allowed to participate in AAI tenders.

Sd/-
Airport Systems Dept.
Operational Offices,
Airports Authority of India, Chennai Airport

SECTION - II

INSTRUCTIONS TO BIDDERS

A. INTRODUCTION

1. DEFINITIONS

1.1 "AAI / The Buyer" means the Airports Authority of India

1.2 "The Bidder / Vendor/ Firm" means the individual or firm who participates in this tender and submits its bid.

1.3 "Project Leader AAI" means the AAI executive responsible for signing all documents from AAI side and should coordinate all the activities of the project with the bidder / contractor.

1.4 "The Supplier / Contractor" means the individual or firm taking up the work as defined under the Notice Inviting Tender. "The Works Order" means the order placed for the work "**SITC of Servers, Storage, Software's and Networking for SCCTV System with Three years onsite warranty and Three years CAMC with spares at Chennai Airport**" by the Buyer on the Contract signed by the Buyer including all attachments and appendices thereto and all documents incorporated by reference therein.

1.5 "The Contract" means the agreement signed between the Buyer and the Contractor as per the terms and conditions contained in the Works Order / Purchase Order.

1.6 "The Contract Price" means the price payable to the Contractor under the Works Order / Purchase Order for the full and proper Performance / Security of its contractual obligations.

1.7 "Non-responsive Bid" means a bid, which is not submitted as per the instructions to the bidders or Earnest Money Deposit has not been attached, or the required data has not been provided with the Bid or intentional errors have been committed in the Bid.

2. **COST OF BIDDING:** The Bidder should bear all costs associated with the preparation and submission of the bid. The Buyer, will in no case, be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

B. THE BID DOCUMENTS:

1. **The Bidder is expected to examine all instructions**, forms, terms, and specifications in the Bid Documents. Failure to furnish all information required as per the Bid Documents or submission of bids not substantially responsive to the Bid Documents in every respect will be at the bidder's risk and should result in rejection of the bid.

2. AMENDMENTS TO BID DOCUMENTS

2.1 At any time, prior to the date of submission of bids, the Buyer may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the bid documents by amendments.

2.2 The amendments should be through GeM portal and these amendments will be binding on them.

3. DOCUMENTS ESTABLISHING ITEMS CONFORMITY TO BID DOCUMENTS:

3.1 Bidder should furnish, as part of his bid, documents establishing the conformity of his bid to the Bid document of all Items and services, which he proposes to supply under the Contract. Submission should be as follows:

3.2 The documentary evidence of the Items and services in conformity to the Bid Documents should be in the form of literature, drawings and data that the Bidder

should furnish.

3.3   The supporting documents downloaded from websites should have the complete URL of the page in the header or footer.

4.   PERIOD OF VALIDITY OF TENDER (BID)

4.1   The tender (Bid) should remain valid for a minimum of **90 Days** from the date of opening of the technical bid. The bidder should not be entitled, to revoke or cancel the offer or to vary any term thereof, during the said period of validity without the consent in writing of AAI. In case of the bidder revoking or canceling the offer or varying any term in regard thereof, the bidder's earnest money deposit should be forfeited.

4.2   If there is any delay in finalization due to unforeseen factors, all the bidders should be asked to extend the validity for an appropriate period, specifying a date by which tender is expected to be finalized. However, the tender process should not be initiated if any tenderer declines to extend the offer as requested for.

5.   SUBMISSION OF BIDS:

The Buyer should receive the bid on-line through **Government e-Marketplace (GeM), Government of India- https://gem.gov.in/** only. The portal should automatically stop accepting bids at the schedule date and time specified in the Bid. Partially submitted bids should be treated as **invalid** and should not be processed. Bidders are advised to upload and submit their bids timely in view of the electronic process so as to avoid last minute issues.

C.   CONTACTING THE BUYER:

1.1   **All the queries related to this bid, should be requested through GeM portal only. Requested through other modes (mails/ letter) will not be entertained**.

1.2   Canvassing in any form in connection with the tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing are liable for rejection. Such rejected tenders will not be returned

1.3   No bidder should try to influence directly or through external source, the Buyer on any matter relating to its bid, from the time of publication of NIT till the time the contract is awarded.

1.4   Any effort by a bidder to influence the Buyer, for extending bid submission date, changing of NIT conditions, during bid evaluation, bid comparison or contract award decisions should result in the rejection of the bid, and such actions will be considered as bad Performance for future Projects.

D.   RIGHT TO ACCEPT OR REJECT THE TENDERS:

1.1   The right to accept the tender in full or in part/parts will rest with AAI. However, AAI does not bind itself to accept the lowest tender and reserves to it-self the authority to reject any or all the tenders received without assigning any reason whatsoever.

1.2   Tenders not accompanied with prescribed information or are incomplete in any respect, and/or not meeting prescribed conditions, should be considered non-responsive and are liable to be rejected.

1.3   The Buyer reserves the right to accept or reject any bid or a part of the bid or to annul the bidding process and reject all bids, at any time prior to award of contract without assigning any reason whatsoever and without thereby incurring any liability to the affected bidder or bidders on the grounds for the Buyer's action.

1.4   Should a bidder have a relation or relations employed in AAI in the capacity of an officer, the authority inviting tender, should be informed. In the event of failure to inform and in a situation where it is established that the relation or relations employed in AAI has / have tried to influence the tender proceedings then AAI at its sole discretion may reject the tender or cancel the contract and forfeit the Earnest Money.

E.   **Forfeiture of EMD:**

1.1   Bidder's Bid Security will be forfeited if the bidder withdraws or amends its bid or breach of the conditions or the tender of impairs or derogates from the   tender   in any respect within the period of validity of the tender.

1.2   If the successful bidder fails to enter into a contract with AAI within 30 calendar days (or an extended period as approved by the Accepting Authority in AAI) after the receipt of the purchase order / work order.

1.3   If the successful bidder fails to submit the contract Performance / Security bank guarantee as stipulated in the General Conditions of Contract within 30 calendar days (or an   extended period as approved by the Accepting Authority in AAI) after the receipt of   the purchase order / work order

1.4   If the bidder knowingly and willfully supplied incorrect information in the tender.

1.5   In the event of not accepting the conditions of the contract even after agreeing to do so and submitting the letter of un-conditional acceptance of terms and conditions of the tender.

1.6   AAI may issue a Letter of Intent (LOI) to the declared L1 bidder and ask the bidder to accept the LOI within the specified time. If the bidder fails to accept the LOI, it will be construed that the Bidder is not interested in the offer. In such a situation AAI will forfeit the EMD.

F.   SIGNING OF CONTRACT:

The issue of Works Order / Purchase Order through GeM portal should constitute the award of contract on the bidder. The signing of the Contract as per the agreement Format of AAI, should be completed within 15 days of the acceptance of the Works Order. Acceptance of PO issued by the AAI, should be within 7 days from the date issue of work order

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SECTION - III

SCOPE OF WORK

1.   Purpose & Scope:

1.1   This document sets out the terms & conditions be met in connection with the provision of **"SITC of Servers, Storage, Software's and Networking for SCCTV System with Three years onsite warranty and Three years CAMC with spares at Chennai Airport."** to AAI for the work as per details given in the Notice Inviting Tender with specifications.

2.   Security Regulations

2.1   The contractor is responsible to get the **Airport Entry Pass (AEP**) from Bureau of Civil Aviation Security (BCAS) /Airport Security Dept AAI for the staff deputed to execute this contract. If any fees are levied by BCAS or if any other expense occurs related to AEP, then the contractor should be liable to pay the same. Firm should fully responsible for obtaining the AEP, by fulfilling the guidelines of BCAS.

2.2   A distinct proof of identity (uniform with firm logo/ name) should be provided by the contractor to his employees who are deployed at the airport for execution of the work.

2.3   The contractor should engage the necessary engineers who are physically fit, sound in health and having knowledge of safety regulations.

3.   LABOUR REGULATIONS

3.1   The Contractor should abide by the provisions of all applicable laws including the Labour Laws of Govt of India in respect of the services. If any violations firm should be responsible.

4.   SCOPE OF WORK

1.   Scope of work is briefly but not exhaustively described in succeeding paragraphs. The bidder must quote the price for the items of schedule as considering the complete scope of work to meet general, qualitative, and technical requirements of tender.

2.   Bidder responsibility of commissioning of installed HCI solution, servers, storage, Softwares and n/w switches completely with accessories as required to meet the specified requirements, regardless of the bill of quantities. Accordingly, bidder must quote the price.

3.   **As per this Contract SITC work should to be done in site. AAI having Data running Center setup with full infrastructure. Bidder has to be made all items installations, commissioning in dedicated / allotted 4 Nos. Network Racks (42U-600Wx1000D) for this work. Racks with redundancy power PDUs. All the HCI Infrastructure, Servers, Storage, switches etc. should accommodate in racks. Bidder should ensure supply of items should 19-inch rack mountable. For installation if extra PDUs, other accessories required same should be supplied by the Bidder within quoted price.**

4. **HCI solutions, Network switches, Servers, Storage, Softwares, and, work stations installation, solution and configurations should be done by OEM Certified Engineers only.**

5. **Due to security reasons and other not disclosable reasons, Configurations of Installed items from Off-site / Remote access not permitted strictly, except OEM Technical Support.**

6. **Firm should depute the Qualified Engineers as required On-site for Installation, Testing, Commissioning and migration works to complete the Jobs in-time successfully.**

7. **The bidder firm should provide and install the fault-tolerant Surveillance CCTV (SCCTV) System with supply of all required hardware such as HCI-Infrastructure, HCI Solution, VMS, VAS Softwares, Storage, Workstations, Core and Network Switches, Monitors, Antivirus including their installation, integration with existing system, testing & commissioning as per site requirements.**

8. **It should be the responsibility of the bidder to ensure the Performance of all items as per standard and configuration, to meet the 99.9% of serviceability of system during warranty & CAMC periods.**

9. **The upgrades for the supplied Application, Antivirus, Control and Management Software and firmware should be supplied and installed by the bidder firm within the quoted cost and without any legal implication to AAI, during the warranty period and CAMC period.**

10. **Bidder / Firm should update Two Times, the Video Management Software, Video Analytics Software and Antivirus packages with latest versions without any changes /upgradations in Hardware, during Warranty period and CAMC period respectively. (Before expiring Warranty Period One Time and before Expiring of CAMC 3rd Year).**

11. **However, upgradation schedule / decision should be fixed by the AAI in coordination with Firm by assessing the effects of upgradation on system and operational effects. The upgradation of Software packages in the scope of Bidder / Firm, accordingly, bidder must quote the price.**

12. Payments towards this work should be made as per actuals, subject to joint measurements, after successful completion of the work.

13. The offered System should be complete with all equipment and accessories including connectors, patch cords, other networking accessories, mounting, and fixing hardware, plugs, sockets, etc.

14. Testing of system components should be done as per original equipment manufacturer's specifications and guidelines.

15. The entire work should be executed with total responsibility by the bidder / firm. All necessary technical completeness should be ensured by the bidder / firm at the time of quoting the price.

16. **After completion of Installation, Testing of Server (HCI), Storage, Softwares, Core switches etc. before putting on AAI SCCTV Network for integration / migration, system has to be put for Vulnerability Assessment Penetration Test**

(VAPT) by the certified agency of CERT-In (The Indian Computer Emergency Response Team). <u>Applicable Expenditures born by the Bidder / Firm.</u>

17. **Bidder is responsible for the corrective / removal of Malwares, viruses, threats if any found in VAPT. Bidder has to take necessary remedial steps to as per NCIIPC, Guidelines will be shared by AAI if required. After completion of remedial actions, system will be allowed to put on AAI SCCTV Network.**

18. Bidder should configure the entire system cautiously to prevent cyber threats from external and internal virus attacks.

19. After completion of successful HCI-Infrastructure, Solution, Storage, Switches, Softwares, Desktop system should integrate with existing SCCTV Cameras by the onsite deputed engineers. During migration / addition of cameras deputed engineers should seamlessly co-ordinate with SCCTV System Engineers to complete the work as per the AAI requirement.

20. During Network integration with existing SCCTV System over AAI Network, Site Engineers are to be coordinated with IT Dept Officials and Network Engineers / Technicians for VLANs, Network policies etc. for seamless integration process.

21. Migration/addition of cameras in the installed system execution plan will be worked out with AAI before start of work. Proper planning should be done to avoid running system disruptions/blackout.

22. Bidder should be responsible to conduct Site Acceptance Test (SAT), and to supply detailed documentation including drawing in Hard and soft copy.

23. After Completion of the system, Deputed Certified Engineers should monitor the system health, correctness of the system of operation other related activities to be carried out as per OEM standard. Deputed engineers responsible for generation reports related systems components, systems health etc. Also, to coordinate with SCCTV Camera Engineers / Technicians for addition / deletion of cameras to systems as per the instructions of AAI In-Charge intimated based on operation requirements. Adding / Deleting Cameras in Analytics mode, extension of features of VMS/ VAS as required.

24. **Deputed Engineers On-site, responsible for updating software patches on regular intervals to keep the system updated and securely to prevent cyber threats and virus attacks. Updating software patches may updated on the system by offline method, system will not be connected over internet by the AAI. Scheduled Internet connectivity may or may not provide by the AAI, in this regard AAI will make effective plan in-coordination with Bidder / Firm, same should be followed by the engineers.**

25. Regarding 24x7x365 days smooth operations, AAI will provide plan in coordination with bidder, same should be followed by the Deputed Engineers.

26. Bidder has to submit detailed Escalation Matrix with contact numbers for entire period of Contract i.e., 6 years.

27. **Deputed Engineers on site is the first level. They should be provided with exclusive One contact number to escalate the first level complaints / to retrieve the system details by the AAI.**

28. **AAI will not pay any extra cost on this contract at any cost, bidder / firm should quote the price as per requirements of the SITC, Maintenance requirements based on scope of work, during warranty and CAMC periods.**

29. After SITC work Bidder / firm should responsible for clear the packing items etc. from site / Data Centre.

5. **TIME ALLOWED/ SUPPLY & INSTALLATION SCHEDULE:**

   i. **Total time allowed to complete the Supply, Installation, Testing & Commissioning work should be 05 (Five) Months from the date of acceptance of work order**.

   ii. **Pre-Delivery Inspection:**
   AAI should inspect all the material during supply, if any items are not as per Specifications, standards, make & model as offered in bidding by the firm, should not be accepted. rejected goods should be taken back by the bidder firm at his cost and risk.. Firm should supply the items as per Offered make model without any changes. PDI should be conducted by AAI officials in coordination with Firm authorized official/s. **If the Items are found not in conformance to tender technical requirements stipulated in tender, then AAI should cancel the contract as per the terms & conditions of contract if contractor fails to provide the Items as offered in Make & Model.**

   iii. **Extension of Time:** In case of work is getting delayed beyond the stipulated date of completion of the work then firm may apply for Extension of Time to keep the contract alive, well before the actual stipulated date of completion. Authority should issue provisional Extension of Time up to the expected date of completion. This provisional extension of time will be granted without prejudice to the right of AAI to recover the liquidated damages in accordance of provision of relevant clause of agreement. On actual completion date of the work, grant of Final EOT should be processed on application by the contractor on prescribed EOT application form, Same can be obtained from the AAI In-Charge office..

6. **PAYMENTS TERMS & CONDITIONS**:

   The quoted price for the work should remain firm without any escalation. Quoted price should inclusive of all taxes, levies, transport, insurance etc.

6.1 **Payment should be made for SH: I & II (Supply & ITC) in following manner;**

6.2 70% Payment: For supplied Items cost as per Purchase Order, payment should be released against receipt of goods in good conditions at site.

6.3 30% of Payment: For Supply, Installation, Testing & Commissioning etc. should be released after successful completion of work at site and completion of SAT as per NIT terms & Conditions.

6.4 **Payment should be made for SH-III Onsite Maintenance during Warranty Period & SH-IV: CAMC after Warranty Period in following manner**;

6.5 Quarterly basis payment will be paid on quarterly basis at the end each quarter, based on support at site. If any penalty, deductions same will be deducted from quarterly payment.

6.6 Payment should be done on actual work carried out and installed items, and after acceptance of AAI. Ppayments should be governed by the Govt. policies and any taxation applicable at source should be deducted from the payment.

6.7 **Penalty:** should be levied for the delayed in work, beyond the prescribed time under the scope in SITC. Penalty recovery should be made @ 0.5% of the SITC cost (Total SITC Capital Cost), per week (part of the week should be considered as one week) from the bill. The total penalty within the scope of this contract should not exceed 10% of the total Capital SITC value.

6.8 **Maintenance during Warranty & CAMC periods payment:** Payments should be paid by AAI quarterly, after the completion of each quarter for the work done in previous quarter on production of bill and submission of service reports, duly signed by AAI Officer In-Charge / user. All the necessary recoveries/penalties / deductions for which firm has made themselves liable for, should be deducted from the bills before releasing the payment. The payment should be governed by the Govt. policies and any taxation applicable at source should be deducted from the quarterly payment.

7.   PERFORMANCE / SECURITY BANK GUARANTEE (PBG)

i.   The First Performance / Security Bank Guarantee for the SITC should be furnished @ 10% of Capital Cost given in the PO (Purchase Order) within **THIRTY** calendar days of issue of purchase order.

ii.   The second Performance / Security Bank Guarantee, for the CAMC should be furnished @ 10% (% age may vary as per GoI, MoF, DoE-PPD Guidelines) of the total Comprehensive AMC Cost given in the PO or 1% of Capital Cost of PO against each year of CAMC i.e. total 3% of Capital Cost, whichever is higher, within **THIRTY** calendar days of the start of CAMC.

iii. Moreover, interest **@ 1 Percent** per month to maximum **@ 12 Percent per annum** on Performance / Security Guarantee amount would be levied (non-refundable) for delayed period of submission. The same should be deducted from running bills.

iv.   The First Performance / Security Guarantee should be valid for SIX months beyond the scheduled date of completion of work including warranty, and should remain valid as per provisional extension granted by the Project In-charge. If the agency fails to extend the validity of the Performance / Security Guarantee, the same should be encashed by AAI and should be returned only as per other provision of contract at discretion of AAI.

v.   First Performance / Security Bank Guarantee should be released after submitting the Second Performance / Security Bank Guarantee for the CAMC period after completion of warranty period.

vi.   In case the bidder firm fails to submit the second Performance / Security Guarantee within stipulated period, First Performance / Security Bank Guarantee should not be released. Moreover, interest **@ 1 Percent** per month to maximum **@ 12 Percent per annum** on Performance / Security Guarantee amount would be levied (non-refundable) for delayed period of submission. The same should be deducted from running bills of the CAMC.

vii. Second PBG should be valid for SIX months beyond the completion of CAMC period. Second PBG should be returned only as per other provision of contract at the discretion of AAI.

viii. Successful Bidder firm should not change the language contents of PBG language; if any successful bidding firm PBG is found not conforming to the language then AAI may ask to resubmit the same within the stipulated period.

ix.   The Performance / Security guarantee amount should be payable to AAI without any condition whatsoever and the guarantee should be irrevocable by the bidder firm.

x.   The Performance / Security guarantee should be deemed to govern the following guarantees from the successful bidder firm, in addition to the other provisions of the guarantee.

xi.   The Performance / Security guarantee is intended to secure the Performance / Security of the entire equipment. However, it is not to be construed as limiting the damages stipulated in any other clause.

Details for enabling SFMS facility:

CORPORATE NAME   : AIRPORTS AUTHORITY OF INDIA
BANK NAME   : ICICI BANK
IFSC CODE   : ICIC0000007
BG ADVISING MESSAGE   : IFN 760COV (BG ISSUE)
IFN 767COV (BG AMENDMENT)
UNIQUE IDENTIFIER CODE   : AAICHENNAI
(To be mentioned in field number 7037 of the BG advising message code).
"Vendor should attach copy of the SFMS BG confirmation message sent by the BG issuing bank to ICICI bank."

8. **PATENTS, LIABILITY & COMPLIANCE OF REGULATIONS**
    Bidder firm should protect and fully indemnify AAI from any claims for infringement of patents, copy right, trademark etc.

    Bidder firm should also protect and fully indemnify AAI from any claims from bidder firm's workmen/ employees, their heirs, dependents, representatives, etc. or from any other person(s) or bodies/ companies, etc. for any act of commission or omission while executing the order.

    Bidder firm should be responsible for compliance with all requirements under the laws and should protect and indemnify AAI completely from any claims/penalties arising out of any infringements by bidder firm or its workmen/employees.

9. **INSURANCE AND FREIGHT**
    The bidder firm should make arrangements at no additional cost to AAI for transporting the equipment to the ultimate consignee site as the same has been included in the quoted price.

10. **Work to be Executed in Accordance with Specifications, Drawings, Orders etc.**
    The contractor should execute the whole and every part of the work in the most substance and workman like manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor should also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respects to the work signed by the Engineer-in-Charge and the contractor should be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions as are not included in the standard specifications or in any Bureau of Indian Standard or any other published standard or code or schedule of Rates or any other printed Publication referred to elsewhere in the contract. The contractor should comply with the provisions of the contract and with the care and diligence execute and maintain the works and provide all Labour and materials, tools and plants including for measurements and supervisions of all works, structural plans, and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified, or is reasonably inferred from the contract. The contractor should take full responsibility for adequacy suitability any safety of all the works and methods of execution.

    The Engineer-in-Charge should have power to make alteration in, omissions form, additions to or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non –availability of a portion of the site or for any other reasons and the contractor should be bound to carry out the works in accordance with any instructions given to him in writing

signed by the Engineer-in-Charge such alterations, omissions, additions or substitutions should form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, should be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

11. **Contractor to Supply Tools & Plants, Vehicles etc.**

The contractor should provide at his own cost all machinery, tools & plants as per contract. In addition to this, appliances, implements, other plants ladders, cordage, tackle scaffolding and temporary works required for the proper execution of the work, whether original altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-Charge as to any matter as to which under these conditions he is entitled to be satisfied or which he is entitled to require together with carriage therefore to and from the work the contractor should also supply without charge the requisite number of persons with the means and materials, necessary for the purpose of setting out works, and counting, weighting and assisting the measurement for examination at any time and from time to time of the work or materials. Failing his so doing, the same may be provided by the Engineer-in-Charge at the expense of the contractor and the expenses may be deducted, from any money due to the contractor, under this contract or otherwise and/or from his security deposit or the proceeds of sale thereof, or of a sufficient portion thereof.

12. **Deviation / Extra Items:**
AAI may change the quantity or part thereof to be supplied by +/-30% of the tendered quantity (measurable) but within the overall deviation limit of 30% of the contract value.
AAI may purchase Extra item, as per site requirements up to the overall limit of 30% of the contract value. However, decision is bind with AAI.

13. **Substitute Items**: **NOT APPLICABLE.**

14. **Technical Training:**

Training should be imparted to AAI officials on complete system (system configuration, technical details of installed items, operation of system and fault rectification procedures) with Training Materials (Systems Block Diagram, operational / technical instructions and fault finding & rectification procedures). Trainings Cost should be borne by the Bidder / Firm.

15. **USER Training:**

Bidder / Firm should provide the Operational Training to Security Officials as required on Video Management, video analytics, ANPR, Facial Recognition and with all features, complete operational training with required training materials. However, Operational Trainings may provide periodically as a refreshment for the existing / new officials. Regarding, Trainings during Warranty & CAMC period will be

planned in coordination with AAI In- Charge. Trainings Cost should be borne by the Bidder / Firm.

16. **Documentation:**

Bidder / Firm shall submit the details like System Architecture, Physical Connectivity, IP Schema. User Credentials from Administrator to user levels. Products Serial Nos, Make/ Model, Firmware's, versions Details with OEM Back-to Back Support documents, warranty certificates etc.2 Copies of Documentations in the form of Hard and soft copies should be submitted to AAI In-Charge. Documentation is prepared on entire systems components.

17. **SITE ACCEPTANCE TEST (SAT) & COMMISSIONING**

1. It should be the responsibility of the bidder firm to submit the system test procedure for conducting the post-installation site acceptance testing. The procedure submitted by the bidder firm should be drafted in line with the standard practices followed in the industry and should be in accordance with the test procedures & practices specified by the OEM. The acceptance test procedure on approval by AAI should become the document for acceptance of the equipment after installation at the site.

2. The bidder firm should supply, install, test and commission all hardware and software as per the requirement of the tender with the system. **Bidder firm should supply technical documents (hard and soft copy - one set each) at Ultimate User consignee site with each Equipment.** The system should be commissioned after successful completion of – SAT approval, operational & maintenance training and all the works under the scope of the tender.

3. Date of successful Site Acceptance Test will be considered as Warranty Start Date / SITC Completion Date.

18. **SITE CLEARANCE**:

Firm Should clear the site from excess items, debris etc. if any after completion of measurement. Actual installed, laid items   measurement should be done, as per measurements payment should be processed.

19. **Completion Certificate:**

Completion Certificate should be recorded by AAI, on completion of the work in all respect and the same should be issued to the contractor on request. The completion certificate should   specify the date of successful completion and completion cost of work, with other details.

20. **Termination of Contract:**

The purchaser reserves its right to terminate the maintenance contract at any time after giving due notice without assigning any reason. The contractor will not be entitled to claim any compensation against such termination. However, while   terminating the contract, if any payment is due to the contractor for maintenance services already performed in terms of the contract, these would be paid to it/him as per the contract terms

21. <u>Novation Clause</u>

"Notwithstanding anything contained in this agreement, Parties agree that during the Concession Term, in the event the Authority opts to transfer its rights such as operation, maintenance, development etc. of the Airport to a third party under PPP model or in any manner as may be decided by AAI/Government of India, then the Authority should have the right to assign/novate/alter this Agreement, in favour of such third party, to which concessionaire hereby gives their consent unconditionally and Authority will not be bound to obtain any further consent of concessionaire. Such assignment/novation/alteration would release Authority of all liabilities and obligations arising under this agreement from and after the date of and other arrangements entered into in accordance with the provisions of this Agreement should be vested in such third party. The parties, along with relevant third party should execute necessary documentation or put in place necessary agreements for the aforesaid assignment/novation/alteration as and when need arise."

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SECTION: IV

OPERATIONAL MAINTENANCE DURING WARRANTY PERIOD AND COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT

S. No.	Scope of Operational & Maintenance.	Statement of compliance (Bidder should mark compliance acceptance)
1.	**OPERATIONAL MAINTENANCE DURING WARRANTY PERIOD**	
i.	**During the Warranty and Defects Liability period, contractor should provide sufficient certified Engineers for preventive, corrective maintenance, and smooth operation of equipment and its accessories** **Preventive maintenance should be carried out periodically / as per OEM recommendation on staggered equipment/day basis, after successful commissioning of the equipment. Corrective maintenance should be done, round the clock, on all days including holidays.** **Failure to deploy competent Maintenance Engineer onsite during Warranty period should attract penalty of Rs. 15,000/- per shift, which should be recovered by AAI from on-sire maintenance quarterly bills. However, total penalty within the scope of this contract should not exceed 10% of the On-site Maintenance Cost per Annum.** **During Warranty & CAMC period system serviceability should maintain 99.9%. However, failure in system / components should attract the penalties. Hence, Bidder / firm should build the robust system from day-1 to avoid the penalties. Due to failures by the workmanship / system faults penalties mentioned below.** **Partial Failures; If any failures related to HCI-Infra, Solution, Servers, Storage, Switches, workstations, Softwares and Applications which is not affecting the operation of system, will be attract penalties. Fault / failure should be fixed / corrected within 24 Hours from the detected / reported time. Beyond, 24 Hours and their part will be penalized Rs. 10,000.00 per day per failure. Part of the day will be considered as one day.** **Full System failure: If entire system become non-operational and affects the airport operation will be treated as full system failure. It should be fixed / restored within One Hour and system should be normalized for operation from the time of failure. Such failure will attract the penalty for each failure Rs. 1,00,000.00 without any request considerations. If failure, not restored and system not put on operation within Hour, next each Hour penalty will be Rs. 1,00,000.00. If system not restored**	Complied/ Not Complied

	and system not put on operation within 12 Hours AAI may take its own decisions to make system serviceable through other experienced firms /vendors. Further necessary actions will be initiated on bidder / firm for Termination of contract. **Accordingly, bidder / Firm should ensure system stability from Day-1 to avoid the failures. Required spares to be maintained at site.** **Deputed Engineers should dedicatedly to work for the installed system operation and maintenance without involving in any other illegal activities, if any noticed/ found AAI and Govt of India agencies will initiate action as per laws. (Theft, cyber-crime, intentionally sabotaging the systems physically or logically and involving in any other illegal activities at Airport premises). Contractor will also be held responsible for the same.**	
ii.	The contractor should replace any parts, including the supplied software found defective during Warranty period without any charges whatsoever to AAI. The services of the contractor or his principals, if required during this period, for such work should also be made available without any cost to the Authority.	Complied/ Not Complied
iii.	Maintenance during warranty period should include free replacement of any spares (same as supplied during installation) of the equipment supplied against this work in coordination with OEM suggestions if required without any cost to the AAI.	Complied/ Not Complied
iv.	Any failure (partial or complete) of the system or system related equipment leading to complete failure of the system should be considered as failure of the system. In this regard the decision of AAI Officer In-charge, should be final & binding.	Complied/ Not Complied
v.	The contractor should replace all the faulty & functionally not acceptable parts/components/ displays/monitors/ network switches, as applicable, at own cost.	Complied/ Not Complied
2.	**TERMS & CONDITIONS OF COMPREHENSIVE AMC WITH SPARES**	
	During the CAMC period, contractor should provide sufficient certified Engineers for preventive, corrective maintenance, and smooth operation of equipment and its accessories **Preventive maintenance should be carried out periodically / as per OEM recommendation on staggered equipment/day basis, after successful commissioning of the equipment. Corrective maintenance should be done, round the clock, on all days including holidays.** **Failure to deploy competent Maintenance Engineers onsite during Warranty period should attract penalty of Rs. 15,000/- per shift, which should be recovered by AAI from CAMC quarterly bills. However, total penalty within the scope of this contract should not exceed 10% of the CAMC Cost per Annum.** **Partial Failures; If any failures related to HCI-Infra, Solution,**	Complied/ Not Complied

	Servers, Storage, Switches, workstations, Softwares and Applications which is not affecting the operation of system, will be attract penalties. Fault / failure should be fixed / corrected within 24 Hours from the detected / reported time. Beyond, 24 Hours and their part will be penalized Rs. 10,000.00 per day per failure. Part of the day will be considered as one day. **<u>Full System failure:</u> If entire system become non-operational and affects the airport operation will be treated as full system failure. It should be fixed / restored within One Hour and system should be normalized for operation from the time of failure. Such failure will attract the penalty for each failure Rs. 1,00,000.00 without any request considerations. If failure, not restored and system not put on operation within Hour, next each Hour penalty will be Rs. 1,00,000.00. If system not restored and system not put on operation within 12 Hours AAI may take its own decisions to make system serviceable through other experienced firms /vendors. Further necessary actions will be initiated on bidder / firm for Termination of contract.** **Deputed Engineers should dedicatedly to work for the installed system operation and maintenance without involving in any other illegal activities, if any noticed/ found AAI and Govt of India agencies will initiate action as per laws. (Theft, cyber-crime, intentionally sabotaging the systems physically or logically and involving in any other illegal activities at Airport premises). Contractor will also be held responsible for the same.**	
2.1	**General Conditions:**	
	The contractor should carry out the work in accordance with the details specified hereunder:	Complied/ Not Complied
i.	Deployment of 01 (one) Qualified Service Engineer having good knowledge System onsite 24x7x365 days without fail.	Complied/ Not Complied
ii.	The work herein specified should be performed by competent engineers in a thorough professional manner. All materials furnished by the contractor should conform to original equipment manufacturer's standards and guidelines.	Complied/ Not Complied
iii	All deputed engineers should behave in orderly manner, should comply with the airport operational, safety and security rules and regulations, and should not indulge in any activity beyond the scope of the contract. Any staff violating these conditions should be removed from duty by the contractor with immediate effect on intimation from AAI Officer In-Charge. This will be without prejudice to any other liability to AAI, arising out of court directions/claims, etc. on account of such misdeeds.	Complied/ Not Complied
iv	Least inconvenience to passengers and staff working in the offices must be ensured while carrying out the work. The preventive maintenance is to be carried out independently during the lean period without affecting the Airport operations.	Complied/ Not Complied
v	Contractor will remove all the debris caused due to the work and clear the site after SITC work.	Complied/ Not Complied
vi	All required repairs, patchwork, etc. to restore any damages caused to AAI property during the execution of work should be carried out by the contractor.	Complied/ Not Complied
vii	Any damage to AAI property not restored properly should be recovered from the running bills of the contractor and hence utmost	Complied/ Not Complied

	precaution should be taken during the execution of the work. AAI should have full liberty to get the damage rectified at the contractor's risk and cost.	
viii	Provision of necessary Test equipment, tools, cleaning material, etc. at site should be the responsibility of the contractor.	Complied/ Not Complied
ix	The contractor will not be liable for any damages arising out of War, riots and natural calamity such as fire, storm, earthquake, etc.	Complied/ Not Complied
x	The contractor is fully responsible for safety precautions, and any accident that may take place to his engineers during the execution of the work and all expenses for his medical treatment is to be borne by the contractor.	Complied/ Not Complied
xii	If at any stage the contractor fails to provide satisfactory service, AAI should terminate the contract by giving one month's notice and Bank Guarantee will be forfeited. Any damage to the equipment and its accessories should be rectified by AAI on the contractor's risk and cost.	Complied/ Not Complied
xiv	The equipment and its accessories should be handed over to AAI in fully serviceable condition on expiry/termination of the contract.	Complied/ Not Complied
xvi	The contractor should maintain all the system to the entire satisfaction of the AAI Officer In-Charge. Since on completion of the contract period (expiry of contract/ termination of contract), the equipment is to be handed over to AAI in fully serviceable condition, it will be tested jointly for its 100% serviceability by AAI representative and contractor's representative at site. In case any spares are required to be replaced or any rectification is required to be carried out for satisfactory Performance of the System/equipment, the contractor at their cost should carry out the same.	Complied/ Not Complied
xix	The Contractor should not be entitled for any extra payment whatsoever on account of the conditions of Comprehensive Annual Maintenance Contract.	Complied/ Not Complied
2.2	**CAMC CONDITIONS:**	
a).	**Scope of CAMC Work:**	
i	Comprehensive Annual Maintenance Contract, consisting of Preventive & Corrective Maintenance.	Complied/ Not Complied
ii	Installation of software and OS as and when required: • Installation of Hotfixes and Patches, up-gradation of software as and when desired for system functionality or as recommended by the Hardware/ Software OEMs. • Bug fixing updates and modification of software/hardware to accommodate addition or deletion of system hardware.	Complied/ Not Complied
iii	• Restoration of system operation after any failure using back-up data. Changing the system configuration, parameters and reorganizing disk space etc. if required.	Complied/ Not Complied
b.	The contractor should confirm in writing, the names of the Maintenance Engineers with complete contact details (address, e-mail, mobile number, etc.). Any change in these contact details should be intimated to AAI in advance.	Complied/ Not Complied
d.	The Maintenance Engineer with adequate support staff of the contractor should ensure serviceability by periodic monitoring/ inspections, etc., and in case of any unserviceability should take immediate corrective action. AAI Officer In-charge or his authorized representative should be informed of any scheduled and corrective maintenance and post- restoration of any unserviceable equipment/system/facility.	Complied/ Not Complied
e.	In case of any breakdown, the contractor maintenance personal should rectify the fault and restore the equipment and system to the satisfaction of the AAI Officer In-charge.	Complied/ Not Complied
f.	After rectification, operation and Performance / Security of the	Complied/

	system should be checked and maintained to the satisfaction of the AAI Officer In-charge.	Not Complied
g.	**The rates quoted for the CAMC should be inclusive of all spares and services including consumables like maintenance free batteries, etc**.	Complied/ Not Complied
h.	Contractor should maintain sufficient inventory of spares to ensure compliance of terms and conditions of CAMC. Component level/card level maintenance should have to be carried out by the contractor. It is therefore necessary that sufficient stock of spares is kept with the maintenance engineer of the contractor, so that un-serviceability can be attended by the method of replacement in order to have minimum down time.	Complied/ Not Complied
j.	Contractor should ensure periodic backup of systems. In case of mal-function or damage to the Programming/ Data due to any reason, the replacement, reprogramming and restoration should be the responsibility of the contractor.	Complied/ Not Complied
k.	The repairs/maintenance of equipment is to be carried out at site. In case of a defect in equipment/its accessories, necessitating major repairs at the service center of the contractor, the same may be taken to service center under intimation to the AAI Officer In-charge. In such cases, all expenditure and arrangement to dispatch, repair and return of the equipment/sub-assembly should be borne/carried out by the contractor. Penalty should be levied for delay beyond the prescribed time in setting right the equipment. The original equipment has to be reinstated at site after the repairs have been carried out at service center at the earliest.	Complied/ Not Complied
l.	**Spares:** All spares required for repairs and maintenance of the complete system should be kept with the contractor. All critical spares required during CAMC should be analyzed and necessary inventory kept at Site.	Complied/ Not Complied
m.	**Payment:** Comprehensive AMC charges should be paid by AAI quarterly, after the completion of each quarter for the work done in previous quarter on production of bill and submission of service reports, duly signed by AAI Officer In-Charge / user. All the necessary recoveries/ deductions for which firm has made themselves liable for, should be deducted from the bills before releasing the payment. The payment should be governed by the Govt. policies and any taxation applicable at source should be deducted from the quarterly payment.	Complied/ Not Complied
n.	Penalty should be levied for the delay, beyond the prescribed time under the scope in setting right the equipment. In case of partial/complete failure of the equipment, on expiry of prescribed time limit, recovery should be made @ 1% of the Annual maintenance charges, per week (part of the week should be considered as one week) per site from the quarterly bill of the running quarter. However, if a suitable fully functional replacement is provided by the contractor in place of faulty equipment within prescribed time, no penalty should be levied. The original equipment must be reinstated at site after the repairs at the earliest. The total penalty within the scope of this contract should not exceed 10% of the Annual Comprehensive AMC value.	
o.	**Scope of Operational & Maintenance (During Warranty Period & CAMC periods) briefly mentioned but not exhaustively to achieve the best Performance / Security of system, AAI may issue time to time guidelines as required. Bidder / Firm is responsible for follow up the guidelines without any failure / lapses without adding any conditions / additional cost.**	Complied/ Not Complied

SECTION-V

DETAILED SPECIFICATIONS

(Please read the detailed specifications for BOQ Items before quoting Make & Model, Price)

1. Bidder should submit Data/ Technical specifications sheets as provided by OEM.
2. Bidder should read carefully all items' specification before mentioning Make, Models and price quote.
3. Bidder should provide the make & model as per specifications or for higher specifications.
4. Bidder should ensure not to provide low / unmatched / ambiguous specifications for items.
5. Bidder should ensure offered make/ model of items from reputed manufacturers.
6. Assembled/refurbished/ under-specifications / trial or underdevelopment Softwares offered Technical Bids are rejected outrightly & Request for change of specifications/any items not accepted.

Sl. No	Description of Items	Detailed Specifications
1.	**Video Management Servers: Hyper-Converged Infrastructure (HCI) solution.**	**Hyper-Converged Infrastructure (HCI) solution.** ➢ **Hyper-Converged Infrastructure appliance pre-installed with software including Software Defined Storage, replication, management, and hypervisor.** ➢ **HCI solution with enterprise-class storage using x86 servers, without SAN components.** ➢ **Solution should be provided with Total 3 nodes All Flash SSD cluster in N+1 configuration, each node providing Intel / equivalent processors and DDR5 Memory with following configuration:** ➢ **Solution with 3 Node HCI cluster in N+1 configuration providing at least 128 usable cores in Total, while each nodes having each Nodes with Minimum 2* 32 cores.** ➢ **Min. memory 1TB with 4 X 25G SFP+ Ports with min 2 Nos of 5 Mtr DAC cables.** ➢ **HCI Cluster Should provide 20TB SSD usable storage without considering any deduplication, compression, erasure coding or any saving techniques benefits, complete solution must be proposed with RF2/FTT1 (2 copies of the data).** ➢ **Minimum three (3) nodes; each with 2x32 core Intel Xeon processors, 384GB RAM, 4x 25G SFP+ ports, 20TB usable storage with N+1 failover, RF2/RAID10, NVMe /SSD.** ➢ **Minimum 3 nodes providing 128 usable physical cores.** ➢ **Scalability: up to 12 nodes.** ➢ **Virtualization layer directly on bare metal hardware, no general-purpose OS.** ➢ Modular scalable architecture with auto-discoverable nodes, automated deployment, and non-disruptive updates. ➢ Servers with cryptographic firmware updates, secure BIOS recovery, network card firmware boot, and system lock down on security breach. ➢ Secure Boot, system lock on breach, hardware

		root of trust, "Malicious Code Free design" (certified). ➢ Out-of-the-box security compliance with at least two industry certifications (e.g., NIST, FIPS140-2, EAL2, DISA STIG). ➢ Support for standard features like v-motion or equivalent, affinity rules, automated/dynamic resource scheduling, and replication. ➢ Enterprise data services such as de-duplication and compression without proprietary hardware. ➢ Support for at least two hypervisors out of AHV, Hyper-V, vSphere. ➢ Support for proven hypervisors out of AHV, Hyper-V, vSphere, with attached OEM MAF. ➢ Support for hot-add CPU & Memory without VM reboot, GUI base interface. ➢ Intelligent workload placement for dynamic load distribution. ➢ Virtual switch spanning across virtual data centres with multi-host connectivity. ➢ Data replication and application consistent snapshots without VM replication limits. ➢ Unified management console for virtualized environment, software-defined storage, hardware, and components. ➢ Native support for scale-out file services with detailed data insights, licenses for 10TB file storage. ➢ Support for iSCSI, NFS v3, NFSv4, SMB2, SMB3, S3 protocols with data insights. ➢ File solution with audit trails and anomaly detection. ➢ Inbuilt ransomware protection with signatures, licenses from day-1. ➢ Enhanced visibility into storage throughput and latency for troubleshooting. ➢ Support for VPC with inbuilt NAT functionality for overlapping IP addresses. ➢ Overlay network support with VPN, BGP, ACLs, Policy-based routing, licenses from day-1. ➢ Ability to push updates and patches with no VM impact and no data loss. ➢ Support for future addition of nodes with different CPU models and memory configurations. ➢ Support for hybrid & all-flash nodes and heterogeneous configurations in the same cluster. ➢ Support for Kubernetes automation for multi-master/worker provisioning with storage integration. ➢ Provisioning, operations, lifecycle management of Kubernetes, automated deployment, scaling, and container operation. ➢ Storage/VM level snapshots for local backups or equivalent. ➢ Integration with popular third-party data backup/protection solutions.

		➢ License not limiting the number of VMs.
		➢ **Mentioned HCI-Solution features are minimum bidder should provide complete solution.**
		➢ **HCI Hardware specifications are minimum. As per solution and software-Video Management, Recording, Storage, Network sizing bidder should provide HCI Hardware higher specifications**.
		➢ **Accessories: Including all accessories for mounting & installation as supplied by OEM/ recommended products of OEM.**
		➢ <u>**Bidder must submit OEM signed technical compliance document.**</u>
		➢ **OEM Service Centre Details: OEM support centre in India. Valid Documents to be submitted.**
		➢ **Proposed hardware's and software's should Direct OEM, L1, L2, L3 support 24X7X365 Technical support for 3 yrs. with 8x5xNBD for hardware must be enabled from day one. OEM have to Provide the warranty support for the CAMC Period for 3 years after completing the Warranty.**
		➢ **Bidder should make back-to-back OEM support for the 6 years (3 Years Warranty + 3 Years CAMC) from the date Site Acceptance Test by the AAI.**
		➢ **Certifications & Standards: Certifications from OEM ISO/IEC, STQC, CMMI Level-3 or higher, CE, UL RoHS, EMI and EMC etc.**
		➢ **Offered Products should comply Make in India norms. Local Content Declaration from OEM.**
		➢ **Warranty: Min. 3 years.**
2.	<u>**Storage:**</u>	➢ **SCCTV Recording storage / Unified storage hardware with dual controller with 8x25G SFP interface, with Redundant power supply from Day-1.**
		➢ **Hardware Form Factor of Storage System (RU): 12U or lesser including installation accessories.**
		➢ **Number of Front-end Ports (Per Controller): 2 x 10G SFP+ and 2 x 25G SFP28 Ethernet Ports per Controller active from day one.**
		➢ **Interconnect Support: 2 x 100G Ethernet Controller Supports for future upgrade.**
		➢ **Disks populated in Storage: 12Gbps Enterprise SAS HDDs.**
		➢ **Storage Capacity: 2000TB Raw (1800TB / 1.8 PB or higher usable Storage capacity after RAID 6 Configuration.) on NL-SAS 7.2K rpm HDDs.**
		➢ **Scalability: Min: 25%.**
		➢ **Operating System Platform and Clustering Supported by the Storage from day one: Windows, MAC OS, Linux, FreeBSD.**
		➢ Controllers: Dual Redundant Controller

configuration where in the controller should support RAID 0/1/10/5/6. Each Controller must have at least Dual Xeon Processors or equivalent.

➢ Storage Features: Storage system (disk shelves) should support SSD/NL- SAS/ SAS disks simultaneously with different rpm. Storage back-end connectivity should be at least 12Gbps SAS Ports (for optional connectivity). Other · File System with Journaling support · Support for ADS & LDAP Support for Volume Replication. The system must provide Data Compression and Deduplication features from day one. All required licenses must be provided by OEM from Day 1.

➢ Number of Drives slots: Min 200 or higher. (Auxiliary Expansion units can be add if needed). Populated Drives slots: Min.130 or higher

➢ Provision for Additional Capacity: Min. 60 LFF bays vacant from day one for future upgrade.

➢ Storage Security and Data Protection: Multiple multitenant access zones for different Active Directories and LDAP. Each Access zone with simultaneous support for local, Active Directory and LDAP users. System Auditing for system as well as supported protocols. System must provide network recycle bin. In case of any accidental data deletion data should be recovered from the network recycle bin.

➢ Number of Controllers/VSD/ Node available in the storage System on common back plane without using external switch/device OR without common backplane using switches: Min 2 or higher.

➢ User Access & capacity License: Storage must support unlimited user access and storage capacity license from day 1.

➢ Data Secure Storage Architecture: Security of the system must be based on the protection, secrecy of the cryptographically secured info provided by an embedded hardware device or controller. System must support BIOS level tamper detection and recover automatically, System Boot only from cryptographically secured storage operating system.

➢ RAID Levels & Memory support: The offered Storage should support RAID 0,1,5,6 & 10 RAID Levels. Per Controller Memory should be 450GB Memory.

➢ Remote Replication: System must provide replication of volumes to similar remote storage system (of same or higher configuration). All required licenses to be provided by the storage OEM from day one. 3rd party software's not acceptable.

➢ Asynchronous Replication Support: Required licenses for the same must be bundled.

➢ Protocols Support: Storage should support CIFS, NFS, FTP, NFS over RDMA for file storage

purpose and iSCSI, SRP/ iSER for block storage connectivity respectively.

➢ Redundancy: Complete Redundancy at the data storage level, hot swappable disks, power modules and cooling sub system level for easy operations.

➢ Storage Management: Single Graphic Use Interface (GUI) for both File and Block as well as command line interfacing. Real time Performance / Security monitoring tools giving information on CPU utilization, volume throughput, network bandwidth, and IOPs. Monitoring tool/ Software from Storage OEM only, to be bundled with system management· Web based GUI for management · Hardware monitoring · SNMP support.

➢ Storage Operating System: Embedded Operating Systems and there should be only one OS to provide the required Protocols. (It will not be a general-purpose OS such as Windows, Linux, Free NAS etc.) The OS   of the same make as that of storage or as per OEM standard. Linux based OS on Flash memory module/flash drive /or a dedicated drive separate from the storage volume, OS with Unlimited User license from day one.

➢ OEM Authorization: OEM signed technical compliance sheet.

➢ Drive Advanced Features: S.M.A.R.T. support.

➢ OS and Management Support: Storage System must be supplied with commercial support included for OS & Management utilities.

➢ Multi-pathing Supports: The Proposed Solution should support Multi-pathing from Day 1.

➢ No of Snapshot Copies Per Volume: Should support 64 Or More Snapshots from day 1.

➢ License for Snapshot: Required Snapshot Licenses should be Included with the Proposed hardware.

➢ Wide Stripping or equivalent feature: The Proposed solution should support Wide Stripping or equivalent feature from day 1.

➢ Upgrade/Updates: The Storage provide Non disruptive Firmware /Microcode upgrade from day 1.

➢ Multi-pathing and load balancing: The storage solution should support multi-pathing and load balancing and fail over software (part of supply) with license for windows/Linux servers or should support native multipathing of OS.

➢ Installation and Commissioning: Bidder must provide the Implementation and Commissioning of solution as per the Requirement of the VMS Software and other Infra Applications.

➢ **Accessories: Cable / Connector /Trans-Receivers: Required number of media should be bundled. Including all accessories for**

		mounting & installation as supplied by OEM/ recommended products of OEM.
		➢ **Bidder must submit OEM signed technical compliance document.**
		➢ **OEM Service Centre Details: OEM support centre in India. Valid Documents to be submitted.**
		➢ **Proposed hardware's and software's should Direct OEM, L1, L2, L3 support 24X7X365 Technical support for 3 yrs. with 8x5xNBD for hardware must be enabled from day one. OEM have to Provide the warranty support for the CAMC Period for 3 years after completing the Warranty period.**
		➢ **Bidder should make back-to-back OEM support for the 6 years (3 Years Warranty + 3 Years CAMC) from the date Site Acceptance Test by the AAI.**
		➢ **Certifications & Standards: Certifications from OEM ISO/IEC, CMMI Level-3 or higher, CE/ UL/ RoHS, EMI and EMC etc.**
		➢ **Offered Products should comply Make in India norms. Local Content Declaration from OEM.**
		➢ **Warranty: Min. 3 years.**
3.	**Video Management Software & Video Analytics:**	➢ **AI enabled VMS & overall Video Management system.**
		➢ **Offered Video Management Software & Video Analytics Software from one OEM, not from different OEMs.**
		➢ **Offered VMS & VA Software technically rich and with all latest features.**
		➢ **VMS: ONVIF compliant for any make cameras. VAS: ONVIF profiles S, G, T & M compliant.**
		➢ **Camera License for Min.2000 cameras.**
		➢ **Automatic Number Plate Recognition (ANPR) Camera License for 50 Nos Cameras.**
		➢ **Facial Recognition (FR) License for 50 Nos Cameras.**
		➢ **Desktop Client License for Min. 50 Nos.**
		➢ **Licenses scalability compatibility.**
		➢ **VMS should be an enterprise class Video Management Software (VMS) which should have components such as Management Server, Enterprise Database, Media Server, and Analytics Server.**
		➢ **VMS should be based on client-server architecture.**
		➢ **VMS should support virtualization on all the leading virtualization platforms.**
		➢ VMS, VAS package with full features, VMS & VAS from standard OEM latest version.
		➢ Upgradation: VMS & VAS should easily upgradable (versions/ patches) without any changes in hardware's.
		➢ VMS & VAS software with an artificial intelligence system required for centralized management of

all field camera devices, video servers, video analytics and client users.

➢ Recording of all camera should be for minimum 30 days at full HD resolution in the storage system.

➢ System should be sized to support scalability with support up to 2000 cameras in the system by augmenting the hardware & software licensing. All the Required Licenses should be provided from day one.

➢ VMS should be proposed considering no single point of failure. The proposed software should have inbuilt mechanism to maintain the failover & redundancy without having any dependency on any external application or clustering software.

➢ VMS should allow creation of customized recording profile with day and hour granularity with addition of recording profile for special days. It should have unlimited recording schedules with multiple streams.

➢ Recording configuration should have the following options:
Redundant recording, Edge recording,
Selection of SRTP or RTSPS protocols Motion only recording, FIFO and retention period based.

➢ VMS should provide replenishment of recording from camera storage in case it is not available in VMS due to a network disconnection. Such recording should be visible with different colour code in video timeline.

➢ VMS should have non-delete flag for important events, such a flag should have perennial or configurable retention period.

➢ VMS should offer three options for operator-specific recordings:
   1. Record Matrix Videos: Record a matrix of the videos being displayed on the screen.
   2. Record Matrix Videos: Record a matrix of the videos being displayed on the screen.
   3. Record Screen: Record the entire screen of the operator including matrix of cameras visible and other desktop activity being performed by the user outside of the VMS client.

➢ VMS, once configured, should work seamlessly, without any configuration, after the server/s pass through the power on-off cycle.

➢ VMS should support Microsoft Active Directory or Lightweight Directory Access Protocol (LDAP) for enterprise-wide user management.

➢ Additional security and accountability, it should be possible to:
Restrict the operator to a hardware workstation.
Addition of new user based on five different profiles with Role based Access Control
Allow verification of the user through seeking answers to the security questions during password reset.

Select a different password than the last three passwords.

➢ VMS should provide and offer surveillance chat room for collaborative vigilance;

Exchange text messages, user selectable files, archived video link, camera layouts, incident snap, clip, and VA alerts.

Colour coded status for messages which are sent, delivered, and read.

Administrator access to all the messages being exchanged in chat room

Share camera matrix of live and playback videos.

VMS should have event escalation for unattended events from the operator to the supervisor.

VMS should allow camera permissions to the users based on individual camera, group of cameras and all cameras.

VMS should allow the Administrator to audit the operator screen by importing any active users screen on the camera matrix tile to watch and record the operator's screen activity.

➢ VMS client should provide all the configuration, administration and operator functions for Video Management Server, Media Servers, Storage and Video Analytics for creating rules.

➢ Client should support following minimum functions:

Site-wise, hierarchical tree of cameras visible to all the operators with appropriate rights.

User specific, unlimited hierarchy of cameras.

Setting up of camera matrix, map view, VA alerts view on different monitors.

Setting up of camera matrix, map view, VA alerts view on different monitors.

Adjustment of buffer control parameters for fine tuning of the encoded and decoded video buffer time for the smooth playback of the video.

➢ Retention of VMS client screen state (including Video Analytics alert window, message window, Video Matrix, etc.) in case of an accidental shut down or log-off from the workstation.

➢ Selectable aspect ratio such as 4:3, 16:9 and fill-view for all cameras with override for selected cameras in matrix view.

➢ Live videos directly from camera, without any dependency on the servers or from the Media Server.

➢ Quick archive video jumping from the live view window by selecting shortcuts for 5, 10, 20, 30 seconds, 1, 5 minutes, 1, 5 hours and the exact date and time though the calendar widget.

➢ Tabbed view to show camera dashboard, events, archived videos, system configuration and client setting tabs for various system functions.

➢ Functional dashboard of the system to view and manage the cameras, operator specific camera

matrix views, map views, VA alerts and alerts from the integrated devices.

➢ Monitoring of the cameras and the external integrated systems.

➢ Monitoring the alerts from integrated systems in a new window. The alerts should also be visible on the GIS Map.

➢ Monitor and control PTZ cameras with a separate PTZ control widget.

➢ PTZ tour based on the presets available from the PTZ camera.

➢ Video segment as an event with description which should be searchable by the camera, time, and event type.

➢ Digital zoom for live and archived video. It should be possible to monitor the same camera to be viewed on multiple display tiles; one may be digitally zoomed, or on high resolution stream.

➢ Configure and send the event alerts based on priority to the designated person or a group of designated persons through SMS or Email.

➢ Audio-visual annunciation for attracting attention to detected motion or events.

➢ Map alarm type to specific user for sending alarm intimation.

➢ Events by camera, VA use case, camera group, and duration. Show graphical representation of the reports in terms of the bar charts and pie charts.

➢ Export reports in excel and CSV.

➢ Offer two-way audio and press-to-talk functions using the camera audio with the microphone button available for each camera in the matrix.

➢ Record and playback video + audio from the camera.

➢ Multiple video segments for export in a video cart and tag each segment with a text message. Export all the video segments from the cart at one go to a single folder along with a report where details of each of the video segments are listed as hyperlinks to the exported video.

➢ Export audio and video together in the AVI format.

➢ Raising support tickets from the Help menu by attaching a screenshot of the error.

➢ Record video clip of the desktop activity for problem reporting.

➢ Allow the administrator to record a movie clip of the screen activity for creating video tutorials for training purposes.

➢ VMS should offer various camera management and monitoring functionalities such as:

➢ Configuring the cameras in multiple groups independently.

➢ Unified interface for monitoring existing & new cameras, assignment of analytics, monitoring of analytics alerts, system health alerts for the new

Video Management and Analytics System. The system should also have all the recorded data (continuous video feeds, VA alerts, flagged videos, system audit logs, operator permissions, etc.) preserved and available from day one.

➢ Assign all, single or multiple groups to operators. Provide at least 100 groups with an unlimited number of cameras in each group.

➢ Seamless integration of the new and existing system to be in such a way that it should provide unification of services such as failover redundancy with the existing hardware, software and application stack.

➢ VMS, once configured, should work seamlessly, without any configuration, after the server/s pass through the power on-off cycle.

➢ Assign camera/s to single or multiple groups simultaneously.

➢ Create operator specific camera matrix of live and recorded videos.

➢ Users can share the camera matrix with other users.

➢ Provide the camera matrix for live and archived videos in multiple grids ranging from 2x2 to up to 8x8.

➢ One-click operation to view a single camera in full resolution and full screen from the camera matrix.

➢ Cyclic monitoring of the camera matrix to monitor multiple cameras on the monitor or video wall.

➢ Offer drag and drop of the cameras from the camera directory to the video matrix.

➢ Offer automatic selection of lower resolution stream for matrix monitoring and higher resolution stream for full screen monitoring.

➢ Should show colour coded camera icons in the camera tree to indicate camera status such as live, recording, stopped and VA alerts.

➢ VMS should support geo-aware vigilance with the use of layered maps using standard picture files, GIS maps and online maps such as Google, Bing, OpenStreetMap.

➢ Map functions should include: Drag and drop of the cameras on the map., Support multi-layered maps with drop-down list for map selection and viewing of live and playback videos.

➢ Associate a base camera with other neighbourhood cameras to form a group for situational awareness. In case of an alert in the base camera, live feeds from all the cameras in the group should be popped up.

➢ The window should show the live video and the alert video clip from the base camera where the alert is generated, the live video of neighbourhood cameras and geo location of the base camera on the map within the same window.

➢ Export the map view to the desired screen from

the available screens' dropdown.
➢ Pencil tool to quickly select the cameras on the map for simultaneous live or playback video viewing.
➢ Forward the map view with camera streams to another user in the system for collaborative monitoring.
➢ Search camera by camera name in the map view.
➢ Show event notification from the cameras on the map itself.
➢ Detach the map and display on another monitor, in case of multi-monitor workstation.
➢ VMS should offer the following investigation and tracking functionalities:
➢ Recreation of scene by arranging the cameras and their respective time-stamped archived video and record the matrix as evidence video.
➢ Up to 4 neighbourhood-view cameras to a base camera for tracking an activity for investigation.
➢ screen widget should show live and playback video of the base camera and live view of the associated cameras along with the map view.
➢ Video scrubbing tool to show the image snaps as the operator moves the cursor on the playback video timeline.
➢ Provide audit tool which only shows the pre and post video of the events recursively for the selected camera.
➢ Snap search feature to allow an operator to view the system generated image snap matrix for the selected duration with dynamic and high-level time interval between the snaps.
➢ VMS should show recursive set of snaps with lower time interval automatically upon clicking any snap to quickly locate the area, incident, or an object of interest in the scene.
➢ VMS should have attribute search analytics feature to select any person in the camera field of view and search for the similar looking person based on the attributes in other cameras.
➢ Search should yield a grid showing matching persons. The video should playback upon clicking any person instantly.
➢ VMS should have browser-agnostic web client and mobile client for Android and IOS platforms available from the respective Play Store and App Store.
➢ Mobile App should track other mobile app users on Google map. It should be possible to communicate with other mobile users using integrated WhatsApp messaging service.
➢ Mobile client should allow uploading of the snaps and video clips from within the application to the central VMS. The central VMS should show the uploaded snaps and videos from the mobile users.
➢ VMS should have push notifications for the alerts

for the mobile and web clients to push the event notifications from the central VMS. The alert notification should also stream the video clips associated with the alert.

➢ VA should offer a suite of analytics rules to provide automatic detection of a range of motion and non-motion behaviours of persons, objects, and vehicles.

➢ VA should be based upon Machine Learning and Deep Learning framework.

➢ VA framework should be hardware agnostic.

➢ Should options to save the VA alert clips with pre and post event buffer separately or to set the flags for pre and post event buffer in the VMS recorded video.

➢ VA use case to run on a configurable schedule. Attachment of PTZ pre-set to any video analytic use case.

➢ Multiple settings of multiple VA use cases on the same camera.

➢ Audio-visual annunciation and colour code for each VA alert by type.

➢ Associate a base camera with other neighbourhood cameras to form a group for situational awareness. In case of an alert in the base camera, live feeds from all the cameras in the group should be popped up. The window should show the live video and the alert video clip from the base camera where the alert is generated, the live video of neighbourhood cameras and geo location of the base camera on the map within the same window.

➢ Configuration and management of cameras, users, VA use cases, alerts, monitoring of the live and recorded videos from the unified user interface.

➢ Support for ONVIF compliant cameras. VMS & VA software should also be ONVIF profile S, G, T & M compliant.

➢ Multicamera live viewing & synchronized replay back of recorded video from same interface.

➢ Alert handling framework of the VMS to notify the alerts to the users via email or a text message by defining the alert criticality.

➢ Synchronization of VA settings in failover system automatically through the VMS configuration options.

➢ Automatic selection of PTZ camera pre-set when an event is triggered in any fixed camera for further investigation.

➢ Periodically purge the event database based on the retention policy.

➢ Events tab within the VMS to filter the events based on priority, date, and time (from and to) and camera.

➢ Centralized as well as distributed deployment architecture.

➢ Possible to distribute the processing of the VA use case across multiple locations or servers based on the compute availability.

➢ Integrated Video Analytics Software should provide the following VA Use Cases:
> Crowd Detection,
> Violent Actions in the crowd or sudden commotion
> Fighting Detection
> Fire & Smoke detection.
> Unauthorized entry detection
> Unattended Object detection, Q Monitoring.
> Zone monitoring
> Person fallen detection.

➢ Forensic Investigation Analytics
> Attribute based Search for People, Vehicles and Objects
> Online Facial Recognition
> Offline Facial Recognition (video clips, group photos, face matching)

➢ Vehicle Related Use cases:
>Automatic Number plate capture (ANPR)
>Driver face capture (Driver to look at the camera placed for face capture & match the face with blacklisted database)
>Hot-listed/Suspicious vehicle detection / Suspicious driver (Blacklisted) detection
>Uncovered Goods Carriers

➢ VMS should have following functionalities: Show health dashboard with vital system parameters such as RAM and CPU utilization for Media Server and Local Workstation along with the status of Management, Database Server, and Storage. Camera SLA report showing uptime, recording percentage, recording status, critical events, incident video, etc. List of all active or incoming alarms by duration, alarm source, operator, and alarm state. Generate audit trail reports by Username, Audit ID, Source and Location. Provide Alert, Events and Rule Logs searchable by various parameters.

➢ VMS should be able to integrate with external devices such as various types of Cameras, Access Control, Perimeter Intrusion Detection, IP Speakers, SCADA systems, etc.

➢ VMS should show integrated devices in a list on the operator screen. The events generated from the integrated devices should be available for viewing.

➢ VMS should allow easy configuration options to connect to the external devices for integration and should also have granular control on the alert types to receive based on the information exposed by the external devices through the API or SDK calls.

➢ **Bidder must submit OEM signed technical compliance document.**

		➢ **OEM Service Centre Details: OEM support centre in India. Valid Documents to be submitted.** ➢ **Proposed VMS & VAS should Direct OEM, L1, L2, L3 support 24X7X365 Technical support for 3 years must be enabled from day one. OEM have to Provide the warranty support for the CAMC Period for 3 years after completing the Warranty.** ➢ **Bidder should make back-to-back OEM support for the 6 years (3 Years Warranty + 3 Years CAMC) from the date Site Acceptance Test by the AAI.** ➢ **Certifications & Standards: Certifications from OEM ISO/IEC, STQC, CMMI Level-3 or higher.** ➢ **Offered Products should comply Make in India norms. Local Content Declaration from OEM.** ➢ **Warranty: Min. 3 years.**
4.	**Video Analytic Servers Type 1:**	➢ **Min 2U Rack Mounted.** ➢ **Up to two Latest Intel® Xeon® Scalable Silver Emerald Rapids processors, (To be populated with dual processor each having min 16 Cores 2.0 GHz clock speed, 30MB Cache).** ➢ **32 DDR5 DIMM slots RDIMMS & LR DIMMS supporting speeds up to min 5600MT/s and scalable up to 8TB of Memory.** ➢ **Server should be configured with 256GB min 5600 MHz memory should be offered in each node.** ➢ **Up to 24 front facing SFF SAS/SATA HDDs or SAS/SATA SSDs or NVMe SSDs System should be configured with 2* 600GB SAS HDD and 2*480GB SSD Drives.** ➢ **12Gbps SAS RAID controller with 4GB Cache supporting RAID 0,1, 5, 6,10, 50, 60 supporting capacity drives configured in system.** ➢ **At least 5 * PCIe Gen 4 Slots and 3 Gen 5 Slots.** ➢ **1*Quad Port 10/25G Ethernet Ports. Should provide 2 Nos of 5-meter 25G DAC Cable.** ➢ **Each server should configure with 3 * NVEDIA L4 GPU 24GB.** ➢ **Should Support Microsoft Windows Server, Hyper-V, VMWare, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), Oracle.** ➢ Should Configured with Platinum rated redundant Power Supply. ➢ Should Support for integration with Microsoft System Centre and PowerShell toolkit. ➢ Should Support Integrated diagnostics and Power monitoring and reporting, Dynamic Power capping. ➢ System should support multiple management

interface like Web UI, CLI and XML API.

➢ Management solution should be able to manage different form factor hardware and provide single console.

➢ Real-time out-of-band hardware Performance / Security monitoring & alerting.

➢ Remote Power On, Off and reset from Web UI, XML API and KVM.

➢ The management tool should be able to provide global resource pooling and policy management to enable policy-based automation and capacity planning.

➢ Zero-touch repository manager and self-updating firmware system, Automated hardware configuration and Operating System deployment to multiple servers.

➢ Virtual IO management / stateless computing.

➢ The server should support industry standard management protocols like IPMI v2 and SNMP v3 and Redfish v1.01.

➢ Console record and play, Virtual Media, LDAP & HTML5 remote control.

➢ Server management software should provide capability to view health, inventory for third-party compute, network, storage, integrated systems, virtualization, and containers.

➢ The management software should participate in server provisioning, device discovery, inventory, diagnostics, monitoring, fault detection, auditing, and statistics collection.

➢ Server management system should provide an alert in case the system is not part of OEM Hardware Compatibility list & should provide anti counterfeit.

➢ The proposed management solution should provide proactive security & software advisory alerts and should outline the fixes required to address the issues.

➢ The proposed management solution should analyse current configurations & identify potential issues due to driver & firmware incompatibility.

➢ The proposed management solution should provide policy control to prevent drift of server configurations.

➢ The proposed solution should have customizable dashboard to show overall faults / health / inventory for all managed infrastructure. With option to create unique dashboards for individual users. The user should have flexibility to select names for dashboards and widgets (ex: Health, utilization, usage etc.)

➢ Should have a cyber resilient architecture for a hardened server design for protection, detection & recovery from cyber-attacks Should protect against firmware which executes before the OS boots;

* Hardware based Root of Trust

		* Signed firmware updates * Secure default passwords * Secure alerting * Automatic BIOS recovery * Rapid OS recovery * Chassis Intrusion Detection * System Lockdown * System Drift Detection. ➢ Configuration upgrades should be only with cryptographically signed firmware and software. ➢ The Hardware should be IPV 6 Compliant ready. ➢ **Accessories: Including all accessories for mounting & installation as supplied by OEM/ recommended products of OEM.** ➢ <u>**Bidder must submit OEM signed technical compliance document.**</u> ➢ **OEM Service Centre Details: OEM support centre in India. Valid Documents to be submitted.** ➢ **Proposed hardware and firmware must be supported 24X7X365 Technical support for 3 yrs. with NBD RMA and must be enabled from day one. OEM have to Provide the warranty support for the CAMC Period for 3 years after completing the Warranty period.** ➢ **Bidder should make back-to-back OEM support for the 6 years (3 Years Warranty + 3 Years CAMC) from the date Site Acceptance Test by the AAI.** ➢ **Certifications & Standards: Certifications from OEM ISO/IEC, CMMI Level-3 or higher, CE/ UL/ RoHS, EMI and EMC etc.** ➢ **Offered Products should comply Make in India norms. Local Content Declaration from OEM.** ➢ **Warranty: Min. 3 years.**
5	<u>**Video Analytic Servers Type 2:**</u>	➢ **Min 2U Rack Mounted.** ➢ **Up to two Latest Intel® Xeon® Scalable Silver Emerald Rapids processors, (To be populated with dual processor each having min 16 Cores 2 GHz clock speed, 30MB Cache).** ➢ **32 DDR5 DIMM slots RDIMMS& LR DIMMS supporting speeds up to min 5600MT/s and scalable up to 8TB of Memory.** ➢ **Server should be configured with 128GB min 5600 Mhz memory should be offered in each node.** ➢ **Up to 24 front facing SFF SAS/SATA HDDs or SAS/SATA SSDs or NVMe SSDs. System should be configured with 2* 600GB SAS HDD and 2*480GB SSD Drives.** ➢ **12Gbps SAS RAID controller with 4GB Cache supporting RAID 0,1, 5, 6,10, 50, 60 supporting capacity drives configured in system.** ➢ **At least 5 * PCIe Gen 4 Slots and 3 Gen 5 Slots**

| | | **1*Quad Port 10/25G Ethernet Ports. Should provide 2 Nos of 5-meter 25G DAC Cable.** **Each server should configure with 3 * NVEDIA L4 GPU 24GB.** **Should Support Microsoft Windows Server, Hyper-V, VMWare, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), Oracle.** **Should Configured with Platinum rated redundant Power Supply.** Should Support for integration with Microsoft System Centre and PowerShell toolkit. Should Support Integrated diagnostics and Power monitoring and reporting, Dynamic Power capping. System should support multiple management interface like Web UI, CLI and XML API. Management solution should be able to manage different form factor hardware and provide single console. Real-time out-of-band hardware Performance / Security monitoring & alerting. Remote Power On, Off and reset from Web UI, XML API and KVM. The management tool should be able to provide global resource pooling and policy management to enable policy-based automation and capacity planning. Zero-touch repository manager and self-updating firmware system, Automated hardware configuration and Operating System deployment to multiple servers. Virtual IO management / stateless computing. The server should support industry standard management protocols like IPMI v2 and SNMP v3 and Redfish v1.01. Console record and play, Virtual Media, LDAP & HTML5 remote control. Server management software should provide capability to view health, inventory for third-party compute, network, storage, integrated systems, virtualization, and containers. The management software should participate in server provisioning, device discovery, inventory, diagnostics, monitoring, fault detection, auditing, and statistics collection. Server management system should provide an alert in case the system is not part of OEM Hardware Compatibility list & should provide anti counterfeit. The proposed management solution should provide proactive security & software advisory alerts and should outline the fixes required to address the issues. The proposed management solution should analyse current configurations & identify potential issues due to driver & firmware incompatibility. |

| | | The proposed management solution should provide policy control to prevent drift of server configurations. The proposed solution should have customizable dashboard to show overall faults / health / inventory for all managed infrastructure. With option to create unique dashboards for individual users. The user should have flexibility to select names for dashboards and widgets (ex: -health, utilization etc.) Should have a cyber resilient architecture for a hardened server design for protection, detection & recovery from cyber-attacks Should protect against firmware which executes before the OS boots
* Hardware based Root of Trust
* Signed firmware updates
* Secure default passwords
* Secure alerting
* Automatic BIOS recovery
* Rapid OS recovery
* Chassis Intrusion Detection
* System Lockdown
* System Drift Detection. Configuration upgrades should be only with cryptographically signed firmware and software. The Hardware should be IPV 6 Compliant ready. **Accessories: Including all accessories for mounting & installation as supplied by OEM/ recommended products of OEM.** **Bidder must submit OEM signed technical compliance document.** **OEM Service Centre Details: OEM support centre in India. Valid Documents to be submitted.** **Proposed hardware and firmware must be supported 24X7X365 Technical support for 3 yrs. with NBD RMA and must be enabled from day one. OEM have to Provide the warranty support for the CAMC Period for 3 years after completing the Warranty period.** **Bidder should make Back-to-Back OEM support for the 6 years (3 Years Warranty + 3 Years CAMC) from the date Site Acceptance Test by the AAI.** **Certifications & Standards: Certifications from OEM ISO/IEC, CMMI Level-3 or higher, CE/ UL/ RoHS, EMI and EMC etc.** **Offered Products should comply Make in India norms. Local Content Declaration from OEM.** **Warranty: Min. 3 years.** |
| 6. | **Core Switches:** | **Type: Enterprise.** **Rack Mounting (1u OR 2u) with support side rails as required with all accessories.** **Switch capable to work 24x7x365.** **Switch with Minimum 24 ports support 1/10/25** |

Gbps SFP ports for host connectivity and 6*100G QSFP 28 ports for Fabric/Spine connectivity. The proposed switch should support native 25G and should be populated with 8 X 25G DAC 5Meter cables, 2 Nos of 100G DAC Cables.

➢ **Redundancy Power from day1.**
➢ Switch should support non-blocking Layer 2 switching and Layer 3 routing.
➢ Switch should support the complete STACK of IPv4 and IPv6 services.
➢ Switch should have console port for local management & management interface for Out of band management.
➢ Switch should with Modular OS with dedicated process for each routing protocol.
➢ Switch should re-converge all dynamic routing protocol at the time of routing update changes i.e. Graceful restart for fast re-convergence of routing protocols (OSPF, IS-IS, BGP).
➢ Switch should support minimum 1000 VRF instances with route leaking functionality.
➢ The switch should support min 400k IPv4 routes.
➢ The Switch should support intelligent buffer management with a minimum buffer of 40MB.
➢ The switch should have MAC Address table size of 90k or higher.
➢ The switch should support min 8K multicast routes.
➢ Switch should support Min 4000 or higher VLANs.
➢ Switch should support 64 nos of ECMP paths.
➢ Switch should support minimum 2.4 Tbps / or higher for switching capacity with non-blocking capacity.
➢ Switch should support Network Virtualisation using Virtual Over Lay Network using VXLAN.
➢ Switch should support VXLAN and EVPN, symmetric IRB for supporting Spine - Leaf architecture to optimise the east - west traffic flow inside the data centre.

Layer2 Features
➢ Spanning Tree Protocol (IEEE 802.1D, 802.1W, 802.1S).
➢ Switch should support VLAN Trunking (802.1q).
➢ Switch should support minimum 90k or higher MAC addresses.
➢ Switch should support VLAN tagging (IEEE 802.1q).
➢ Switch should support IEEE Link Aggregation and Ethernet Bonding functionality (IEEE 802.3ad) to group multiple ports for redundancy.
➢ Switch should support Link Layer Discovery Protocol as per IEEE 802.1AB for finding media level failures.
➢ Switch should support layer 2 extension over VXLAN to enable VM mobility & availability.

➤ The Switch should support DC Bridging i.e. IEEE 802.1Qbb Priority Flow Control (PFC), Data Centre Bridging Exchange (DCBX), IEEE 802.1Qaz Enhanced Transmission Selection (ETS), Explicit Congestion Notification (ECN).

➤ The switch should support BGP EVPN Route Type 2, Type 4 and Route Type 5 for the overlay control plane.

Layer3 Features

➤ Switch should support static and dynamic routing.

➤ Switch should support segment routing and VRF route leaking functionality from day 1.

➤ Switch should support Segment Routing and Layer3 VPN over Segment Routing.

➤ Switch should support multi instance routing using VRF/ VRF Edge/ Virtual Router routing and should support VRF Route leaking functionality.

➤ Switch should provide multicast traffic reachable using:
  a. PIM-SM
  b. PIM-SSM

➤ Support Multicast Source Discovery Protocol (MSDP).

➤ IGMP v1, v2 and v3.

Quality of Service

➤ Switch system should support 802.1P classification and marking of packet using:
  a. CoS (Class of Service)
  b. DSCP (Differentiated Services Code Point)

➤ Switch should support for different type of QoS features for real time traffic differential treatment using:
  a. Weighted Random Early Detection
  b. Strict Priority Queuing

➤ Switch should support Rate Limiting - Policing and/or Shaping.

➤ Switch should support to trust the QoS marking / priority settings of the end points as per the defined policy.

Security

➤ Switch should support control plane Protection from unnecessary or DoS traffic by control plane protection policy.

➤ Switch should support for external database for AAA using:
  a. TACACS+
  b. RADIUS

➤ Switch should support to restrict end hosts in the network. Secures the access to an access or trunk port based on MAC address. It limits the number of learned MAC addresses to deny MAC address flooding.

➤ Switch platform should support MAC Sec (802.1AE) encryption in hardware.

➤ VXLAN and other tunnel encapsulation/decapsulation should be performed in single pass in Hardware.

- ➢ Switch should support for Role Based access control (RBAC) for restricting host level network access as per policy defined.
- ➢ Switch should support DHCP Snooping.
- ➢ Switch should support Dynamic ARP Inspection to ensure host integrity by preventing malicious users from exploiting the insecure nature of the ARP protocol.
- ➢ Switch should support IP Source Guard to prevents a malicious hosts from spoofing or taking over another host's IP address by creating a binding table between the client's IP and MAC address, port, and VLAN.
- ➢ Switch should support unicast and/or multicast blocking on a switch port to suppress the flooding of frames destined for an unknown unicast or multicast MAC address out of that port.
- ➢ Support for broadcast, multicast and unknown unicast storm control to prevent degradation of switch Performance / Security from storm due to network attacks and vulnerabilities.
- ➢ The Switch should support LLDP.
- ➢ Switch should support Spanning tree BPDU protection.
  Manageability
- ➢ Switch should support for sending logs to multiple centralised syslog server for monitoring and audit trail.
- ➢ Switch should provide remote login for administration using:
  Telnet and SSHv2
- ➢ Switch should support for capturing packets for identifying application Performance / Security using local and remote port mirroring for packet captures.
- ➢ Switch should have Switched Port Analyzer (SPAN) with minimum 4 active session and ERSPAN on physical, Port channel, VLAN interfaces.
- ➢ Switch should support for management and monitoring status using different type of Industry standard NMS using:
  SNMP v1 and v2, SNMP v3 with Encryption
- ➢ Switch should provide different privilege for login in to the system for monitoring and management.
- ➢ Should have Open APIs to manage the switch through remote-procedure calls (JavaScript Object Notation [JSON] or XML) over HTTPS after secure authentication for management and automation purpose.
- ➢ The Switch Should support monitor events and take corrective action like a script when the monitored events occurs.
  • Flow path trace (ingress to egress switch)
  • Latency and packet drop
- ➢ Utilization of Operational like MAC/Route & Hardware resources like port utilization/ BW.

		➢ Interface statistics like CRC error **AVAILABILITY** ➢ Switch should have provisioning for connecting to 1:1/N+1 power supply for usage and redundancy. ➢ Switch should provide gateway level of redundancy Ip V.4 and IP V.6 using HSRP/VRRP. ➢ Switch should support for Bidirectional Forwarding Detection (BFD) for Fast Failure Detection. **MISCELLANEOUS:** ➢ **Console cable and power cable as per site requirement to be provided. All Cables should be factory-terminated.** ➢ **Switch should be provided with hardware replacement OEM warranty and ongoing software upgrades for all major and minor releases for a period of 6 year support from OEM** ➢ **Power Supply: AC 110-240V with redundant supply from Day-1.** ➢ **Cooling Fan : Min 1 or higher.** ➢ **Operating Temperature: -0° to +45° C** ➢ **Humidity: 10% to 90% (non-condensing)** ➢ **Accessories: Including all accessories for mounting & installation as supplied by OEM/ recommended product of OEM.** ➢ <u>**Bidder must submit OEM signed Technical Compliance document**</u>**.** ➢ **OEM Service Centre Details: OEM support centre in India. Valid Documents to be submitted.** ➢ **Proposed hardware and firmware must be supported 24X7X365 Technical support for 3 years. with NBD RMA and must be enabled from day one. OEM have to Provide the warranty support for the CAMC Period for 3 years after completing the Warranty period.** ➢ **Bidder should make back-to-back OEM support for the 6 years (3 Years Warranty + 3 Years CAMC) from the date Site Acceptance Test by the AAI.** ➢ **Certifications & Standards: Certifications from OEM ISO/IEC, CMMI Level-3 or higher, CE/ UL/ RoHS, EMI and EMC etc.** ➢ **Offered Products should comply Make in India norms. Local Content Declaration from OEM.** ➢ **Warranty: Min. 3 years.**
7.	<u>**Network Switches:**</u> .	➢ **Type: Enterprise.** ➢ **Rack Mounting (1u OR 2u) with support side rails as required with all accessories.** ➢ **Switch capable to work 24x7x365.** ➢ **Redundancy Power from day1.** ➢ **The Switch should support non-blocking Layer 2 switching and Layer 3 routing.** ➢ Switch should support the complete STACK of

IPv4 and IPv6 services.
- **Switch with Minimum 48 ports support 10/25 Gbps SFP ports for host connectivity and 6*100G ports. The proposed switch should support native 25G and should be populated with 8 X 25G DAC 5Meter cables. 2 Nos of 100G DAC Cable 5 Meters.**
- Switch should have console port for local management & management interface for Out of band management.
- Switch should with Modular OS with dedicated process for each routing protocol.
- Switch should re-converge all dynamic routing protocol at the time of routing update changes i.e. Graceful restart for fast re-convergence of routing protocols (OSPF, IS-IS, BGP).
- Switch should support minimum 1000 VRF instances with route leaking functionality.
- Switch should support 400k IPv4 routes.
- The Switch should support intelligent buffer management with a minimum buffer of 40MB.
- The switch should have MAC Address table size of 90k or higher
- Switch should support min 8K multicast routes.
- Switch should support Min 4000 or higher VLANs.
- Switch should support 64 nos of ECMP paths.
- Switch should support minimum 3.6 Tbps or higher for switching capacity (or as per specifications of the switch if quantity of switches are more, but should be non-blocking capacity).
- Switch should support Network Virtualisation using Virtual Over Lay Network using VXLAN.
- Switch should support VXLAN and EVPN symmetric IRB for supporting Spine - Leaf architecture to optimise the east - west traffic flow inside the data centre.
  Layer2 Features
- Spanning Tree Protocol (IEEE 802.1D, 802.1W, 802.1S).
- Switch should support VLAN Trunking (802.1q).
- Switch should support minimum 90k or higher of MAC addresses.
- Switch should support VLAN tagging (IEEE 802.1q).
- Switch should support IEEE Link Aggregation and Ethernet Bonding functionality (IEEE 802.3ad) to group multiple ports for redundancy.
- Switch should support Link Layer Discovery Protocol as per IEEE 802.1AB for finding media level failures.
- Switch should support layer 2 extension over VXLAN across all Data Centre to enable VM mobility & availability.
- The Switch should support DC Bridging i.e. IEEE 802.1Qbb Priority Flow Control (PFC),

Data Centre Bridging Exchange (DCBX), IEEE 802.1Qaz Enhanced Transmission Selection (ETS), Explicit Congestion Notification (ECN).

➢ Maximum number of port channels should be 48.

➢ Maximum no of ports in the port channel should be 32.

➢ The switch should support BGP EVPN Route Type 2, Type 4 and Route Type 5 for the overlay control plane.

Layer3 Features

➢ Switch should support static and dynamic routing.

➢ Switch should support segment routing and VRF route leaking functionality from day 1.

➢ Switch should support Segment Routing and Layer3 VPN over Segment Routing.

➢ Switch should support multi instance routing using VRF/ VRF Edge/ Virtual Router routing and should support VRF Route leaking functionality.

➢ Switch should provide multicast traffic reachable using:
  a. PIM-SM b. PIM-SSM

➢ Support Multicast Source Discovery Protocol (MSDP).

➢ IGMP v1, v2 and v3.

Quality of Service

➢ Switch system should support 802.1P classification and marking of packet using:
  a. CoS (Class of Service)
  b. DSCP (Differentiated Services Code Point)

➢ Switch should support for different type of QoS features for real time traffic differential treatment using:
  a. Weighted Random Early Detection
  b. Strict Priority Queuing

➢ Switch should support Rate Limiting - Policing and/or Shaping.

➢ Switch should support to trust the QoS marking/priority settings of the end points as per the defined policy.

Security

➢ Switch should support control plane Protection from unnecessary or DoS traffic by control plane protection policy.

➢ Switch should support for external database for AAA using:
  a. TACACS+
  b. RADIUS

➢ Switch should support to restrict end hosts in the network. Secures the access to an access or trunk port based on MAC address. It limits the number of learned MAC addresses to deny MAC address flooding.

➢ Switch platform should support MAC Sec (802.1AE) encryption in hardware.

- ➤ VXLAN and other tunnel encapsulation/decapsulation should be performed in single pass in Hardware.
- ➤ Switch should support for Role Based access control (RBAC) for restricting host level network access as per policy defined.
- ➤ Switch should support DHCP Snooping.
- ➤ Switch should support Dynamic ARP Inspection to ensure host integrity by preventing malicious users from exploiting the insecure nature of the ARP protocol.
- ➤ Switch should support IP Source Guard to prevents a malicious hosts from spoofing or taking over another host's IP address by creating a binding table between the client's IP and MAC address, port, and VLAN.
- ➤ Switch should support unicast and/or multicast blocking on a switch port to suppress the flooding of frames destined for an unknown unicast or multicast MAC address out of that port.
- ➤ Support for broadcast, multicast and unknown unicast storm control to prevent degradation of switch Performance / Security from storm due to network attacks and vulnerabilities.
- ➤ The Switch should support LLDP.
- ➤ Switch should support Spanning tree BPDU protection.

Manageability

- ➤ Switch should support for sending logs to multiple centralised syslog server for monitoring and audit trail.
- ➤ Switch should provide remote login for administration using:
  a. Telnet b. SSHv2
- ➤ Switch should support for capturing packets for identifying application Performance / Security using local and remote port mirroring for packet captures.
- ➤ Switch must have Switched Port Analyzer (SPAN) with minimum 4 active session and ERSPAN on physical, Port channel, VLAN interfaces.
- ➤ Switch should support for management and monitoring status using different type of Industry standard NMS using:
  a. SNMP v1 and v2, SNMP v3 with Encryption
- ➤ Switch should provide different privilege for login in to the system for monitoring and management.
- ➤ Should have Open APIs to manage the switch through remote-procedure calls (JavaScript Object Notation [JSON] or XML) over HTTPS after secure authentication for management and automation purpose.
- ➤ Switch Should support monitor events and take corrective action like a script when the monitored events occurs.
 • Flow path trace (ingress to egress switch)

		• Latency and packet drop
		➢ Utilization of Operational like MAC/Route & Hardware resources like port utilization/ BW
		➢ Interface statistics like CRC error.
		➢ **AVAILABILITY**
		➢ Switch should have provisioning for connecting to 1:1/N+1 power supply for usage and redundancy.
		➢ Switch should provide gateway level of redundancy Ip V.4 and IP V.6 using HSRP/VRRP.
		➢ Switch should support for Bidirectional Forwarding Detection (BFD) for Fast Failure Detection.
		MISCELLANEOUS:
		➢ **Console cable and power cable as per site requirement to be provided. All Cables should be factory-terminated.**
		➢ **Switch should be provided with hardware replacement OEM warranty and ongoing software upgrades for all major and minor releases for a period of 6 year support from OEM**
		➢ **Power Supply: AC 110-240V with redundant supply from Day-1.**
		➢ **Cooling Fan : Min 1 or higher.**
		➢ **Operating Temperature: -0° to +45° C**
		➢ **Humidity: 10% to 90% (non-condensing)**
		➢ **Accessories: Including all accessories for mounting & installation as supplied by OEM/ recommended product of OEM.**
		➢ **Bidder must submit OEM signed Technical Compliance document.**
		➢ **OEM Service Centre Details: OEM support centre in India. Valid Documents to be submitted.**
		➢ **Proposed hardware and firmware must be supported 24X7X365 Technical support for 3 years. with NBD RMA and must be enabled from day one. OEM have to Provide the warranty support for the CAMC Period for 3 years after completing the Warranty period.**
		➢ **Bidder should make back-to-back OEM support for the 6 years (3 Years Warranty + 3 Years CAMC) from the date Site Acceptance Test by the AAI.**
		➢ **Certifications & Standards: Certifications from OEM ISO/IEC, CMMI Level-3 or higher, CE/ UL/ RoHS, EMI and EMC etc.**
		➢ **Offered Products should comply Make in India norms. Local Content Declaration from OEM.**
		➢ **Warranty: Min. 3 years.**
8.	**Work Stations:**	➢ **Offered Work stations, from reputed brands, capable to function 24x365 seamlessly.**
		➢ **Intel Xeon 8 core 2.1 GHz,**
		➢ **32 GB RAM / Expandable up to 64 GB**
		➢ **512GB SSD / Expandable up to 1 TB.**

		1G Ethernet Port, - GPU: Min 4GB or higher NVIDIA Card - Monitor: 24" LED. - USB Ports: Min 2 Nos -2.0, 3.0 - HDMI Ports: Min 2 Nos. -2.1 - System & OS Architecture: 64 Bit - Windows Professional OS latest with MS Office Desktop edition. Required application if any as per site requirement. - Certifications & Standards: Certifications from OEM ISO/IEC, CE/ UL/ RoHS, EMI and EMC etc. - Accessories: Including all accessories for mounting & installation as supplied by OEM/ recommended product of OEM. - <u>Bidder must submit signed Technical Compliance document as provided by the OEM</u> - Offered Products should comply Make in India norms. Local Content Declaration from OEM. - Warranty: Min. 3 years. - After Warranty period Bidder / Firm should maintain the work stations, accordingly bidder / firm has to make arrangement for maintenance.
9.	**Antivirus Software:**	**Latest Antivirus software for HCI:** - Bidder should provide best in class latest software for Guest OS hosted in HCI-Environment with all security features such as HIPS and licenses. **For Servers and Workstations:** Bidder should provide best in class latest software for end-point-detection and response from day-1 with required licenses. - Supplied Licenses activated from Day1 of after installation of hardware's & Software's. - Deputed Engineers are responsible for updating the patches / versions offline / online through internet for the entire 6 years. **Bidder / Firm should update the Antivirus packages for HCI, Servers, workstations Two Times** during warranty period & CAMC period respectively to prevent latest cyber threats and virus attacks on HCI, Servers and Desktops etc. **Certifications & Standards: Certifications from OEM ISO/IEC, STQC etc.** **Offered Products should comply Make in India norms. Local Content Declaration from OEM.**
10.	**SFP Transceivers:**	**10G SFP Fiber-optic Transceiver's modules;** - Modules should be from reputed manufacturers. - Type: SMF (G.652) - Interface: LC - Data rate: 10Gbps - Wavelength: 1310 - Distance: Min: 10 Kms.

11.	**SFP Transceivers:**	➢ **40G QSFP Fiber-optic Transceiver's modules;**
		➢ Modules should be from reputed manufacturers.
		➢ Type: SMF (G.652)
		➢ Interface: LC
		➢ Data rate: 40Gbps
		➢ Wavelength: 1310
		➢ Distance: Min: 10 Kms.

- **Bidder / Firm should offer best in industry renowned brands products, to meet system requirements for smooth operation of the installed entire system for more than 6 years period.**

PROPOSED ARCHITECTURE
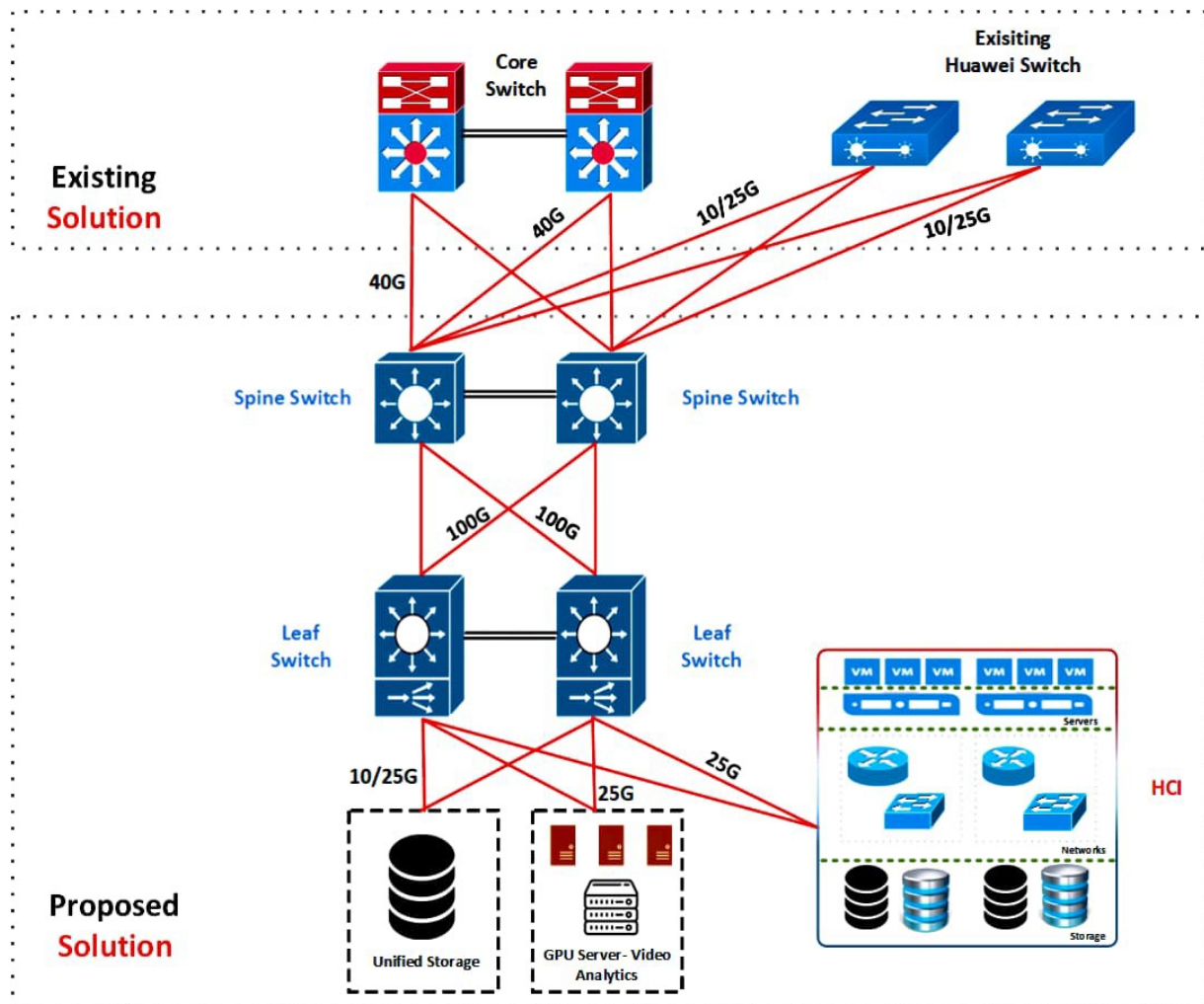
Bidder / Firm should configure the Militarized and Non-Militarized zones to prevent the easy access, external attacks etc. to Servers, Storage and Softwares etc.

Name of Work: SITC of Servers, Storage, Software's and Networking for SCCTV System with Three years onsite warranty and Three years CAMC with spares at Chennai Airport.

- 51 -

SECTION-VI

MAKE / MODEL OFFERED

Sl. No	Description of Items	MAKE	MODEL
1.	Video Management Servers - Hyper-Converged Infrastructure. HCI- Hardware		
	HCI- solution.		
2.	Storage.		
3.	Video Management Software & Video Analytics.		
4.	Video Analytic Servers Type 1.		
5.	Video Analytic Servers Type 2.		
6.	Core Switches.		
7.	Network Switches.		
8.	Work Stations.		
9.	Antivirus Software.		
10.	SFP Transceivers -10G SFP		
11.	SFP Transceivers – 40G QSFP		

NOTE:

1. **Items Make & Model should be mentioned properly. Firm should ensure the availability   of the products intime for SITC work.**

2. **Offered Make & Model items only to be supplied, Make & Model change is not acceptable at any stage.**

SECTION-VII.
Documents submission Details & Check List.

Sl No.	Details of Documents to be submitted	Submitted YES/No
1	Integrity Pact Performa - Annexure I	
2	EMD Details / MSME Details	
3	OEM Authorization / MAF (Manufacturer Authorization Form)	
4	Proof of Experience of Works with completion certificates.	
5	Proof of Additional Experience in HCI-Solution based SITC work orders and completion certificates completed jobs in Govt Organizations / Private firms minimum total 50 nodes.	
6	Latest 3 years Balance Sheet as of 31.03.2024. Copy of Abridged Balance Sheet along with Profit and Loss Account Statement of the Bidder duly certified by a Chartered Accountant with UDIN.	
7	PAN & GST Registration Copies.	
8	Unconditional Acceptance Letter - Annexure II.	
9	Power of Attorney - Annexure III	
10	Firm Registration / Incorporation Certificate Copy.	
11	Firm's Details – Annexure V	
12	Firm's Bank Details – Annexure VI	
13	Declaration of Not Black-Listed/Debarred Firm – Annexure VII	
14	Undertaking for GST – Annexure VIII	
Sl. No: 3 to 14 Documents copies should be attested by the Notary and attested documents submission is mandatory.		
15	Environment Management System – Annexure -IX	
16	Make & Model – Ref: Section: VI	
17	Offered Make Model Items Specifications Compliance from respective OEM's for HCI, HCI Solution, Storage, Servers, Core and Network Switches and Software etc.	
18	Offered Make Model Items, Certifications as requested in Detailed Specifications – Section-V.	
19	Technical / Specifications Data Sheets (as provided by OEM) for offered items as per schedule of Quantity / BOQ.	
20	Support and Availability of spares for minimum Seven Years Certification from respective OEMs, for HCI -Infrastructure, Storage, Servers, Core and Network Switches offered items.	
21	Make In India (MII) Local content declaration documents from OEMs for Quoted Items.	
22	Technically qualified professionals in the common domain of HCI / Networking / System Administration/Systems Integration etc. in the firm roll details with HR/Authorized signatory of the company along with their valid certificates. Resources must have HCI certification of respective OEMs as per the proposed solution.	
23	Bidder Firm must have valid ISO 9001:2015, ISO/IEC 20000-1:2018 / ISO/IEC 27001:2013.	
24	Furnish an undertaking in respect of its compliance with Rule 144 (xi) of GFR 2017 i.e., restrictions on procurement from a bidder of a country which shares a land border with India, with authorized signatory.	
25	Signed Tender Document with Authorized signatory and seal.	
Sl. No: 15 to 24 Documents copies should be on OEMs / Firm letter head with authorized signature and seal as applicable.		

AAI reserve the right to verify the credential submitted by the Firms at any stage (during Bid Process or post bid process). If any stage, any information/documents submitted by the firm is found to be incorrect / false or have some discrepancy which disqualifies the firm then AAI should take the following actions: Firm should be liable for debarment from tendering in AAI, apart from any other appropriate contractual/legal action.

ANNEXURE –I

PRE-CONTRACT INTEGRITY PACT

This Pact made this ……. day of …… between Airports Authority of India, a body corporate constituted by the Central Government under the Airports Authority of India Act,1994 and having its Corporate Office at Rajiv Gandhi Bhawan, New Delhi, and offices at.. in India, hereinafter called the Authority (which term should unless excluded by or is repugnant to the context, be deemed to include its Chairman, or Member, Executive Directors, Airport Directors, officers. or any of them specified by the Chairman in this behalf, and should also include its successors and assigns) of the one part

AND

……………………………………………………………………..………. represented by …………………………….. of the other part, hereinafter called the "Bidder "(which term should unless excluded by or is repugnant to the context be deemed to include its heirs, representatives, successors and assigns of the Bidder)

WHEREAS the Authority intends to award, under laid down organizational procedures, tender/ contract for "**SITC of Servers, Storage, Software's and Networking for SCCTV System with Three years onsite warranty and Three years CAMC with spares at Chennai Airport"**. The Authority, while discharging its functions on business principles, values proper compliance with all relevant laws and regulations, and the principles of natural justice, ethics, equity, fairness and transparency in its relations with the Bidders/ Contractors.

WHEREAS the Authority is desirous to make its business mechanism more transparent, thus to ensure strict adherence of the aforesaid objectives/goals, the Authority hereby adopts the instrument developed by the renowned international non-governmental organization " Transparency International" (T I) headquartered in Berlin (Germany).The Authority will appoint an Independent External Monitor (IEM) who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

AND WHEREAS the Bidder is submitting a tender to the Authority for "**SITC of Servers, Storage, Software's and Networking for SCCTV System with Three years onsite warranty and Three years CAMC with spares at Chennai Airport"**in response to the NIT (Notice Inviting Tender) Date: ………….. Contractor is signing the contract for execution of ……

NOW, therefore,

To avoid all forms of corruption by following a system that is fair, transparent and free fromany influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to

Enabling the Authority to obtain the desired said stores/equipment/execution of works at a competitive price in conformity with the defined specifications by avoiding the high cost andthe distortionary impact of corruption on public procurement, and

Enabling Authority to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the Authority will commit to prevent corruption,in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

1. Commitments of the Authority

   1.1   The Authority undertakes that no official of the Authority, connected directly or indirectly with the contract, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contractin exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.

   1.2   The Authority will, during the pre-contact stage, treat all BIDDERs alike, and will provide to all BIDDERs the same information and will not provide any such information to any particular BIDDER which could afford an advantage to that particular BIDDER in comparison to other BIDDERs.

   1.3   All the officials of the Authority will report to the appropriate authority office anyattempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

2. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the Authority with full and verifiable facts and the same is prima facie found to be correct by the Authority, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the Authority and such a person should be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the Authority the proceedings under the contract would not be stalled.

3. **Commitments of Bidders:** The Bidder commits itself to takeall measures necessary to prevent corrupt practice, unfair means and illegal activities during any stage of its bid or during any pre-contract or post-contract stage in order tosecure the contract or in furtherance to secure it and in particular commit itself to the following: -

   3.1   The Bidder will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Authority, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

   3.2   The Bidder further undertakes

   (i)   That it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefitor other advantage, commission, fees, brokerage or inducement to any official of the Authority or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Authority for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Authority.

   (ii)   That it has not entered and will not enter with other bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specification, certifications, subsidiary

contracts, submission or non-submission of bids or any actions to restrict competitiveness or to introduce cartelization in the bidding process.

3.3   The Bidder should, when presenting his bid, disclose the name and address of agents and representatives and Indian BIDDERs should disclose their foreign principals or associates.

3.4   The Bidder should when presenting his bid disclose any and all the payments he has made or, is committed to or intends to make to agents/brokers or any other intermediary, in connection with this bid/contract.

3.5   The Bidder further confirms and declares to the Authority that the BIDDER is the original manufacturer/integrator/ authorized government sponsored export entity of the stores and has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the Authority or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

3.6   The Bidder, either while presenting the bid or during pre-contract negotiations or before signing the contract, should disclose any payments he has made, is committed to or intends to make to officials of the Authority or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

3.7   The Bidder will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation, contracting and implementation of the contract.

3.8   The Bidder will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

3.9   The Bidder should not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the Authority as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Bidder also undertakes to exercise due and adequate care lest any such information is divulged.

3.10   The Bidder will inform to the Independent External Monitor, if

   (i)   He receives demand for an illegal/undue payment/benefit.

   (ii)   He comes to know of any unethical or illegal payment/benefit.

   (iii)   He makes any payment to any Authority's associate(s)

3.11   The Bidder commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

3.12   The Bidder should not instigate or cause to instigate any third person to commit any of the actions mentioned above.

3.13   If the Bidder or any employee of the Bidder or any person acting on behalf of the Bidder, either directly or indirectly, is a relative of any of the officers of the Authority, or alternatively, if any relative of an officer of the Authority has financial interest/stake in the Bidder's/Contractor's firm, the same should be disclosed by the Bidder at the time filing of tender. The term 'relative' for this purpose would be as defined in Section 6 of the Companies Act 1956.

3.14   The Bidder should not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the Authority.

3.15   That if the Bidder, during tender process or before the award of the contract or during execution of the contract/work has committed a transgression in violation of section 2 or in any other form such as to put his reliability or credibility as Bidder/Contractor into question, the Authority is entitled to disqualify him from the tender process or to terminate the contract for such reason and to debar the BIDDER from participating in future bidding processes.

4.   Previous Transgression

4.1   The Bidder declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify Bidder's exclusion from the tender process.

4.2   The Bidder agrees that if it makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason and he may be considered for debarment for future tender/contract processes.

4.3   That the Bidder undertakes to get this Pact signed by the sub- contractor(s) and associate(s) whose value of the work contribution exceeds Rs 0.5 Crores (Rupees zero point five Crores) and to submit the same to the Authority along-with the tender document/ contract before contract signing.

4.4   That sub-contractor(s)/ associate(s) engaged by the Contractor, with the approval of the Authority after signing of the contract, and whose value of the work contribution exceeds Rs 0.5 Crores (Rupees Zero point five Crores) will be required to sign this Pact by the Contractor, and the same will be submitted to the Authority before doing/ performing any act/ function by such sub-contractor(s)/ associate(s) in relation to the contract/ work.

4.5   That the Authority will disqualify from the tender process all Bidder(s) who do not sign this Pact or violate its provisions or fails to get this Pact signed in terms of section 4.3 or 4.4 above.

4.6   That if the Contractor(s) does/ do not sign this Pact or violate its provisions or fails to get this Pact signed in terms of Section 4.3 or 4.4 above. Authority will terminate the contract and initiate appropriate action against such Contractor(s).

5.   Earnest Money, Security Deposit, Bank guarantee, Draft, Pay order or any other mode and its validity i/c Warranty Period, Performance / Security guarantee/Bond.

While submitting bid, the BIDDER should deposit an EMD/SD/BG/DRAFT/PAY ORDER ETC I/C WARRANTY PERIOD, PG/BOND, VALIDITY ETC, which is as per terms and conditions and details given in NIT / tender documents sold to the Bidders.

6.   Sanctions for Violations/ Disqualification from tender process and exclusion from future Contracts.

6.1   Any breach of the aforesaid provisions by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the

BIDDER) should entitle the Authority to take all or any one of the following actions, whereverrequired: -

(i) To immediately call off the pre-contract negotiations without assigning any reason or giving any compensation to the BIDDER. However, the proceedings with the other BIDDER(s) would continue.

(ii) To immediately cancel the contract, if already signed, without giving any compensation to the BIDDER.

(iii) If the Authority has disqualified / debarred the Bidder from the tender process prior to the award under section 2 or 3 or 4, the Authority is entitledto forfeit the earnest money deposited/bid security.

(iv) To recover all sums already paid by the Authority, and in case of an Indian BIDDER with interest thereon at 2% higher than the prevailing Prime Lending Rate of State Bank of India, while in case of a BIDDER from a country other than India with interest thereon at 2% higher than the LIBOR.If any outstanding payment is due to the BIDDER from the Authority in connection with any other contract or any other stores, such outstanding payment could also be utilized to recover the aforesaid sum and interest.

(v) To encash the advance bank guarantee and Performance / Security bond/warranty bond, if furnished by the BIDDER, in order to recover the payments, already madeby the BUYER, along with interest.

(vi) To cancel all or any other Contracts with the BIDDER. The BIDDER should be liable to pay compensation for any loss or damage to the Authority resulting from such cancellation/rescission and the Authority should be entitled to deduct the amount so payable from the money(s) due to the BIDDER.

(vii) To debar the BIDDER from participating in future bidding processes for a minimum period of three years, which may be further extended at the discretion of the Authority.

(viii) To recover all sums paid in violation of this Pact by BIDDER(s) to any middleman or agent or broker with a view to securing the contract.

(ix) In case where irrevocable Letters of Credit have been received in respect of any contact signed by the Authority with the BIDDER, the same should not be opened.

(x) Forfeiture of Performance / Security Bond in case of a decision by the BUYER to forfeit the same without assigning any reason for imposing sanction for violation of this Pact.

(xi) That if the Authority have terminated the contract under section 2 or 3 or 4 or if the Authority is entitled to terminate the contract under section2 or 3 or 4, the Authority should be entitled to demand and recover from the contractor damages equivalent to 5% of the contract value or the amount equivalent to security deposit or Performance / Security bank guarantee (PBG), whichever is higher.

(xii) That the Bidder agrees and undertakes to pay the said amount without protest or demur subject only to condition that if the Bidder/Contractor can prove and establish to the satisfaction of the Authority that the disqualification / debarment of the bidder from the tender process or the termination of the contract after award of the contract has caused no damage to the Authority.

6.2 The Authority will be entitled to take all or any of the actions mentioned at para 6.1(i) to (xii) of this Pact also on the Commission by the BIDDER or any one employed by it or acting on its behalf (whether with or without the knowledge of the BIDDER), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 That if the Bidder applies to the Authority for premature revocation of the debarment and proves to the satisfaction of the Authority that he has installed a suitable and effective corruption prevention system and also restored/recouped the damage, if any, caused by him, the Authority may, if thinks fit, revoke the debarment prematurely considering the facts and circumstances of the case, and the documents/evidence adduced by the Bidder for first time default.

6.4 That a transgression is considered to have occurred if the Authority is fully satisfied with the available documents and evidence submitted along with Independent External Monitor's recommendations/ suggestions that no reasonable doubt is possible in the matter.

6.5 The decision of the Authority to the effect that a breach of the provisions of this Pact has been committed by the BIDDER should be final and conclusive on the BIDDER. However, the BIDDER can approach the Independent External Monitor(s) appointed for the purpose of this Pact.

Allegations against Bidders/Contractors/ Sub-Contractors/ Associates: That if the Authority receives any information of conduct of a Bidder/ Contractor or Sub-Contractor or of an employee or a representative or Associates of a Bidder, Contractor or Sub- Contractor which constitute corruption, or if the Authority has substantive suspicion in this regard, the Authority will inform the Vigilance Department for appropriate action.

7. Independent External Monitor(s)

7.1 That the Authority has appointed competent and credible Independent External Monitor(s) for this Pact.

7.2 The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact. He will also enquire into any complaint alleging transgression of any provision of this Pact made by the Bidder, Contractor or Authority.

7.3 That the Monitor is not subject to any instructions by the representatives of the parties and would perform his functions neutrally and independently. He will report to the Chairperson of the Board of the Authority.

7.4 That the Bidder accepts that the Monitor has the right to access without restriction to all project documentation of the Authority including that provided by the Bidder/Contractor. The Bidder will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation including minutes of meeting. The same is applicable to Sub – Contractors and Associates. The Monitor is under obligation to treat the information and documents of the Authority and Bidder/ Contractor/ Sub-Contractors/ Associates with confidentiality.

7.5 That as soon as the Monitor notices, or believes to notice, a violation of this Pact, he will so inform the management of the Authority and request the

management to discontinue or heal the violation, or to take other relevant action. The Monitor can in this regard submit his recommendations/suggestions. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

7.6 That the Authority will provide to the Monitor sufficient information about all meetings among the parties related to the project provided such meetings could have an impact on the contractual relations between the Authority and the Contractor / Bidder. The parties offer to the Monitor the option to participate in such meetings.

7.7 That the Monitor will submit a written report to the Chairperson of the Board of the Authority within 2 weeks from the date of reference or intimation to him by the Authority and, should the occasion arise, submit proposals for correcting problematic situations.

7.8 That if the Monitor has reported to the Chairperson of the Board a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India and the Chairperson has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Department, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

7.9 The word 'Monitor' would include singular and plural.

8. Facilitation of Investigation.

8.1 In case of any allegation of violation of any provisions of this Pact or payment ofcommission, the Authority or its agencies should entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER should provide necessary information and documents in English and should extend all possible help for the purpose of such Examination.

9. Law and Place of Jurisdiction.

9.1 That this Pact is subject to Indian Law. The place of Performance / Security and jurisdiction is the Corporate Headquarter /the Regional Headquarter / office of the Authority,as applicable.

10. Other Legal Actions

10.1 That the changes and supplements as well as termination notices need to be madein writing.

10.2 That if the Bidder is a partnership or a consortium, this Pact must besigned by all the partners and consortium members or their authorized representatives.

11. Pact duration (Validity)

11.1 That this Pact comes into force when both the parties have signed it. It expires for the Contractor 12 months after the final payment under the respective contract, and for all other Bidders 3 months after the contract is awarded.

11.2 That if any claim is made / lodged during this period, the same should be binding and continue to be valid despite the lapse of this Pact as specified herein before, unless it is discharged/determined by Chairman of the Authority.

11.3 That should one or several provisions of this Pact turn out to be invalid; the

remainder of this Pact should remain valid. In this case, the parties will strive to come to an agreement to their original intentions.

12.   Company Code of Conduct

     12.1   Bidders are also advised to have a company code of conduct (clearly rejecting theuse of bribes and other unethical behaviour) and a compliance program for the implementation of the code of conduct throughout the company.

13.   The parties hereby sign this Integrity Pact at_____on _____

BUYER:	BIDDER:
Name of the Officer: Designation.	
Dept./Ministry/ PSU: **Airports Authority of India**	Authorized signature with Name & Designation)
Witness: 1.	Witness: 1.
2.	2.

<div align="right"><u>**ANNEXURE –II**</u></div>

<div align="center">

<u>**UNCONDITIONAL ACCEPTANCE LETTER**</u>

(On Firm Letter Head)
</div>

To,

The Dy. GM (AS)
Airport Systems Dept,
Airports Authority of India,
Chennai Airport, Chennai-600016

Sir,

Subject: Acceptance of AAI's Tender Conditions.

1. The tender documents for the work **" SITC of Servers, Storage, Software's and Networking for SCCTV System with Three years onsite warranty and Three years CAMC with spares at Chennai Airport"** I / we hereby certify that I/we have read the entire terms & conditions of the tender documented made available ONLINE through GeM Portal by the Asst. General Manager (Airport Systems), AAI, Operational Building, Chennai Airport, Chennai, which should form part of the contract agreement and I/we should abide by the conditions/clauses contained therein.

2. I/we hereby unconditionally accept the tender conditions of AAI's tender documents in its entirety for the above work.

3. It is clarified that after unconditionally accepting the tender conditions in its entirety, it is not permissible to upload any additional file or put any remarks(s) /condition(s) (except unconditional rebate on quoted rate, if any) in/along with the Tender Document and the same has been followed in the present case. In case, this provisions of the tender if found violated after opening of tender, I/we agree that the tender should be rejected and AAI should without prejudice to any other right or remedy be at liberty to forfeit the earnest money absolutely.

4. **"That, I/we declare that I/We have not paid and will not pay any bribe to any officer of AAI for awarding this contract at any stage during its execution or at the time of payment of bill, and further if any officer of AAI asks for bribe/ gratification, I will immediately report it to the Appropriate Authority in AAI".**

<div align="right">Yours faithfully,</div>

<div align="right">**(Signature of the Bidder & Seal)**</div>

Date: - _____

Annexure –III

Power of Attorney Format for the Authorized Person(s)

(Bidder should submit irrevocable power of attorney on a non-judicial stamp paper of Rs.100/- signed by authorized signatory as per Memorandum of Articles authorizing the persons who are signing this bid on behalf of the company)

POWER OF ATTORNEY

By this POWER OF ATTORNEY executed on _____, we, _____, a Company incorporated under the provisions of companies Act, 1956 having its Registered Office at _____ (hereinafter referred to as the 'Company') do hereby severally appoint, constitute and nominate_____, official(s) of the Company, so long as they are in the employment of the Company (hereinafter referred to as the 'Attorneys') to sign agreement and documents with regard GEM BID No…………………………, Airports Authority of India, Chennai Airport, Chennai-600016 for " **SITC of Servers, Storage, Software's and Networking for SCCTV System with Three years onsite warranty and Three years CAMC with spares at Chennai Airport**" and to do all other acts, deeds and things said Attorneys may consider expedient to enforce and secure fulfilment of any such agreement in the name and on behalf of the Company.

AND THE COMPANY hereby agrees to ratify and confirm all acts, deeds and things they said Attorneys should lawfully do by virtue of these authorities hereby conferred.

IN WITNESS WHEREOF, this deed has been signed and delivered on the day, month and year first above written by Mr._____Secretary of the Company/Authorized Signatory, duly authorized by the Board of Directors of the Company vide it's resolution passed in this regard.

WITNES

1.

2.

By order of the Board

For _____

Company Secretary/Authorized Signatory

Attorney Signature 1._____
Attorney Signature 2._____

(Attested)

(_____)

Company Secretary/Authorized Signatory

Annexure-IV

BANK GUARANTEE PROFORMA
(To be stamped in accordance with Stamp Act)
(The non-judicial stamp paper should be in the name of issuing Bank)

(To be submitted in the non-judicial stamp paper with name of issuing Bank and to be prepared in accordance with Indian Stamp Act, 1899)

Ref: _____   Bank Guarantee No: _____

                                                                  Date: _____

To

  The Dy. GM (AS)
  Airport Systems Dept,
  Airports Authority of India,
  Chennai Airport, Chennai-600016

Dear Sir,

In consideration of the Airports Authority of India (hereinafter referred to as the Owner", which expression should unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having awarded   to   M/s
_____
_____
_____ hereinafter referred to as the 'Contractor', which expression should unless repugnant to the context of meaning thereof, include its successors, administrators executors and assigns), a contract bearing No. _____ dated _____ valued at _____ for _____ and the contractor having "**SITC of Servers, Storage, Software's and Networking for SCCTV System with Three years onsite warranty and Three years CAMC with spares at Chennai Airport"** agreed to provide a Contract Performance / Security of the entire Contract equivalent to _____ (10 per cent) of the said value of the Contract to the Owner. We at _____ _____ (hereinafter referred to as the 'BANK', which expression should, unless repugnant to the context or meaning thereof, include the successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Owner, on demand any and all money payable by the Contractor to the extent of _____ _____ as aforesaid at any time up to _____ (day/month/year) without any demur, reservation, contest, recourse or protest and/or without any reference to the Contractor. Any such demand made by the owner the Bank should be conclusive and binding notwithstanding any difference between the owner and contractor or any dispute pending before any court, tribunal or any authority.

The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Owner and further agrees that the guarantee herein contained should continue to be enforceable till the Owner discharges this guarantee. The Owner should have the fullest

liberty, without affecting in any way the liability of the Bank under this guarantee, to postpone from time to time the exercise of any powers vested in then or of any right which they might have against the Contractor, And to exercise the same at any time in any manner, and either to enforce or to forebear to enforce any covenants, contained or implied, in the Contract between the Owner and the Contractor or any other course of or remedy or security available to the Owner.

The Bank should not be released of its obligations under these presents by any exercise by the Owner or by any other matters or thing whatsoever which under law would, but for this provision, have the affect of relieving the Bank. The Bank also agrees that the Owner at its option should be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Owner may have in relation to the Contractors liabilities.

Apart from other guarantees this Bank Guarantee explicitly provides for the following:

a. The Performance / Security guarantee is intended to secure the Performance / Security of the entire system. However, it is not to be construed as limiting the damages stipulated in any other clause.

Notwithstanding anything mentioned herein above our liability under this guarantee is restricted to Rs. _____ and it should remain in force upto and including _____ and should be extended from time to time for such period (not exceeding one year), as instructed by the buyer and as desired by M/s _____ _____ on whose behalf this guarantee has been given.

WITNESS

Dated this _____ day of _____ 20 _ **at** _____

Signature   _____   Signature _____

Name   _____   (Bank's Rubber Stamp)

Official address _____   Name _____

Designation with Bank Seal

Attorney as per Power of

Attorney No. _____; Dated _____

The above Guarantee is accepted by Airports Authority of India.
For and on behalf of Airports Authority of India.

Signature _____
Name _____
Designation _____
Dated _____

<u>Note</u>:

*__For Proprietary Concerns__

Shri _____son of' _____resident of _____carrying on business under the name and style of _____at _____(hereinafter called "the said Contractor" which expression should unless the context requires otherwise include his heirs, executors, administrators and legal representatives).

__For Partnership Concerns__

1. Shri _____son of _____resident of

_____

_____

2.   Shri   _____son   of _____resident   of

_____

_____

Carrying on business in co-partnership under the name and style of _____at _____ (hereinafter collectively called "the said contractor" which expression should unless the context requires otherwise include each of them and their respective heirs, executor's administrators and legal representatives).

__For companies__

M/s _____ a Company registered under the companies Act, 1956 and having its registered office in the State of (Hereinafter called 'the said Contractor" which expression should unless the context requires otherwise include its administrators, successors and assigns).

(Letter of understanding from the Depositor to Bank to be submitted on their letterhead along with Security Deposit to Airports Authority of India.)

The Branch Manager,
……………….Bank,
……………………

Sub:- My /Our Bank Guarantee bearing No………..dated for …….amount……. issued in favour of Airports Authority of India A/c……………

Sir,

The subject Bank Guarantee is obtained from your branch for the purpose of Security Deposit on account of contract awarded/ to be awarded by M/s Airports Authority of India to me /us.

I hereby authorize the Airports Authority of India in whose favour the deposit is made to close the subject Bank Guarantee before maturity/ on maturity towards adjustment of dues without any reference/consent/notice from me/our side and the bank is fully discharged by making the payment to Airports Authority of India.

Signature of the Depositor

Place:

Date:

ANNEXURE-V

Registration details of the Firm

1. Name of the Service Provider / Contractor :

2. Address with Tel. No., Fax No., E-mail   :

3. Contact person's name   :

4. EPF Registration Details   :

5. ESI Registration Details   :

6. PAN Details   :

7. GST Registration Details   :

8. Firm Registration Details   :

Declaration

I/We hereby certify that the information furnished above is correct and true to the best of our knowledge. We understand that in the event of information being found false at any stage, the Agency will be black listed and will not have any dealing with the CMFRI, ICAR in future.

(Signature with Date of Authorized Signatory)

Annexure-VI

Bank Account Details of the Firm
(On Firm's Letter Head)

To be filled by the Contractor

Name of Firm   :

PAN No   :

GST Registration No.   :

Name of Bank   :

Name of Branch   :

Complete Address of Bank   :

A/C No. of Beneficiary   :

Type of Account   :

Core Banking Account No. in Full   :

IFSC Coe of the Bank   :

TIN No.   :

                                             Signature

                                             Name of Authorized Signatory

                                             Name & Address of the Tenderer

                                             Office Seal

Date:

Annexure-VII

Declaration of Not Black-Listed/Debarred Firm

(On a non-judicial stamp paper of Rs.100/- signed by authorized signatory as per Memorandum of Articles authorizing the persons who are signing this bid on behalf of the company)

I/We …………………………………………………………………..having office

at ……………………………………………………………………declare that I/We/Our

firm have never been Blacklisted / Debarred by any Sate Government/ Central Government or

any State/ Central Public Sector Units.

Authorized Signature with date & Seal

Annexure-VIII

UNDERLYING FOR GST

UNDERTAKING FOR GST

To,

The Dy. GM (AS)
Airport Systems Dept,
Airports Authority of India,
Chennai Airport, Chennai-600016

Sub: **Undertaking for GST reg.**

Sir/s,

I/ we do hereby undertake/ declare the following related to the "**SITC of Servers, Storage, Software's and Networking for SCCTV System with Three years onsite warranty and Three years CAMC with spares at Chennai Airport.**"

I / We would like to confirm you that, we are providing Maintenance Service / Technical Support thus we are falling under the below Chapter heading & Service Tariff Code as per the GST Law implemented from 1st of July 2017.

Service Tariff Code: HSN/SAC: ……………………………………
In this regard, we would like to confirm the following.

Our GSTIN: …………………………………………

-In case of noncompliance of GST Provision and blockage of any input credit we will be responsible to indemnify AAI.
-All input credits will be passed on to AAI.

Information provided above is true to my knowledge and belief.

Authorized Signature with Date

Annexure –IX

Environment Management System

Airports Authority of India, Chennai Airport has established an Integrated Management System (IMS) under ISO 9001:2015 (Quality Management System), ISO 14001:2015 (Environment Management System) & OHSAS 18001:2007 (Occupational Health and Safety Assessment) International Standards to provide Quality and Environment friendly services of International Standards.

1. We, the Airlines, Goods/Services providers, and Contractors of Chennai Airport appreciate and respect the commitment & initiatives taken by the management of AAI, Chennai airport to protect and preserve the environment at Airport.

2. We hereby abide by the conditions stipulated herein with respect to our activities in the airport and not to pollute the environment of the airport in any manner & cooperate with the Airports Authority of India, Chennai Airport. We hereby undertake that:
   a) The work areas should be kept clean
   b) Adequate number of Waste bins should be placed in working space to collect different type of Scraps and the Wastes.
   c) The following wastes should be segregated and stored in designated place, as far as possible.
      • Oil-soaked cotton wastes
      • Spent oil (Hazardous wastes)
      • Asbestos wastes
      • Worn out Tyres
      • Discarded Equipment's, structures
      • Construction wastes, debris
      • Glass wastes
      • Insulation wool waste
      • Metallic wastes
      • Empty Paint drums, containers (Hazardous wastes)
      • Metallic Cans
      • Polythene/plastic wastes
      • Paper/cardboard waste
      • Discarded food
      • Other biodegradable wastes
      • E wastes (Hazardous wastes)
      • Automotive/ Industrial Battery etc.

3. The waste should be stored at locations identified by AAI Management of Chennai airport. Subsequently the wastes should be disposed off in accordance with waste management plan.

4. Hazardous wastes (Spent oil, contaminated jute/cotton/gloves, e-wastes, bio medical wastes should be secured and disposed as per guidelines of regulatory authority (TNPCB).

5. To the extent possible, fuel oil, electrical power, water, cooking gas etc. will be conserved.

6. Plastic bags of less than 40 micron should not be used and /or issued by us inside AAI premises.

7. We should obtain the MSDS (Material Safety Data Sheet) of all chemicals used by us in AAI campus and study their characteristics and the disposal method. Chemicals which are found to be environmentally friendly should only be used.

8. If any chemical is found not environmentally friendly/safe, additional precautions for their use and disposal should be taken as indicated in MSDS.

9. Copies of MSDS will be retained by us & made available as and when requested by AAI officials.

10. Wherever any chemical like fuel oil, lube oil, Hydraulic oil, grease, paints are used, we should arrange or keep ready a spill control kit at our own cost, for emergency purpose and should use the same in case of emergency.

11. Diesel/ Petrol operated Vehicles used by us for transportation of man & material to and from AAI campus, Apron, Runway etc. should be PUC (pollution under control) compliant.
   Copies of the PUC certificate should be handed over to concerned AAI dept

12. Wherever we arrange food for our workmen, we should keep waste bins for collection of waste generated in the process.

13. Failure to comply with the requirements mentioned above should attract a penalty or any other strictures as deemed fit by the AAI authorities

14. We understand that AAI, Chennai Airport will organize briefing/ training of our designated Supervisor/Manager about the IMS requirements. We should ensure the presence/participation during such session. Thereafter, we should ensure the necessary training of our workmen and staff and compliance of the requirements.

15. We should identify one supervisor responsible for EMS compliance.

16. We understand and agree that no additional payment should be made by AAI management for IMS compliance

Date: Authorized Signatory
                                          Name of the Agency &Seal

Annexure-A

FINANCIAL BID

NOTE:
1. Bidder should not to mention any rate/ amount in this document.
2. Below mentioned Schedule of Quantity is for reference only.
3. Rate & Amount should quote only in GeM portal Financial Bid.

SCHEDULE OF QUANTITY

SI. No	Description of Items	Qty	Unit	RATE / Item/ Lot/ Job/ Year Incl. GST	Total AMOUNT Incl. GST
SH-I	**Supply of Items:**				
1	Video Management Servers Hyper-Converged Infrastructure (HCI) solution as per detailed specifications.	1	No		
2	Storage as per as per detailed specifications.	1	No		
3	Video Management Software & Video Analytics as per detailed specifications.	1	LOT		
4	Video Analytic Servers Type 1 as per detailed specifications.	3	Nos		
5	Video Analytic Servers Type 2 as per detailed specifications.	2	Nos		
6	Core Switches as per detailed specifications.	2	Nos		
7	Network Switches as per detailed specifications.	2	Nos		
8	Work Stations as per detailed specifications.	18	Nos		
9	Antivirus Software as per detailed specifications.	1	LOT		
10	SFP Transceivers as per specifications 10G SFP module	8	Nos		
11	SFP Transceivers as per specifications 40G QSFP module	4	Nos		
SH-II	**Installation & configuration of Supplied Items:**				
12	Installation, Configuration, Testing & Commissioning of SH-1 Items with Training and Documentation. Firm should responsible for entire system ITC as per site requirements. Ref: Section-III.	1	JOB		
SH-III	**Onsite Maintenance:**				
13	Onsite Maintenance during Warranty Period. Ref: Section IV	3	Years		
SH-IV	**CAMC after Warranty Period:**				
14	**CAMC of the System for 4th Year** as per O&M during CAMC period ref: Section IV	12	Month		
15	**CAMC of the System for 5th Year** as per O&M during CAMC period ref: Section IV	12	Month		
16	**CAMC of the System for 6th Year** as per O&M during CAMC period ref: Section IV	12	Month		

****

CORRIGENDUM-I

BID REF: GeM Bid No. GEM/2024/B/5431063 Dt: 23-09-2024

1. **SECTION-V, DETAILED SPECIFICATIONS S.No.1:**

Video Management Servers: Hyper-Converged Infrastructure (HCI) solution "Minimum three (3) nodes; each with 2x32 core Intel Xeon processors, **384GB RAM**, 4x 25G SFP+ ports, 20TB usable storage with N+1 failover, RF2/RAID10, NVMe /SSD."

Amended as;

"Minimum three (3) nodes; each with 2x32 core Intel Xeon processors, **768GB RAM**, 4x 25G SFP+ ports, 20TB usable storage with N+1 failover, RF2/RAID10, NVMe /SSD."

2. **Section-I, Notice Inviting Tender, S. No: 5;**

To Qualify in Technical Bid, Firms should also have Additional Experience in HCI-Solution based SITC works. Accordingly, bidder should submit the work orders and completion certificates for completed jobs in Govt Organizations or Private firms. **(SITC of Minimum Total 50 nodes or higher).**

Amended as;

To Qualify in Technical Bid, Firms should also have Additional Experience in HCI-Solution based SITC works. Accordingly, bidder should submit the work orders and completion certificates for completed jobs in Govt Organizations or Private firms. **(SITC of Minimum Total 25 Nodes or higher)**."

No Changes in Other TERMS & CONDITIONS

Bidders / Firms are requested to read Bid Document / Notice Inviting Tender carefully as published in GeM portal before participating in the Bid.