

REQUEST FOR PROPOSAL

For

"IP BASED CCTV Surveillance System at National Film Archive of India"

Ref Number: 302 / 35 / NFHM - 2016 Date: 04, November, 2016

Amount: Rs. 5,000/-

National Film Archive of India (NFAI) Law College Road P.O. Box - 810

Pune 411 004 Fax - 91-020-25670027 Email – <u>nfaipune@gmail.com</u>



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Disclaimer

- 1. National Film Archive of India, Pune has issued this Request for Proposal for IP BASED CCTV Surveillance System at National Film Archive of India on such terms and conditions as set out in this RFP document, including but not limited to the Technical Specifications set out in different parts of this RFP document.
- 2. This RFP has been prepared with an intention to invite prospective Applicants/Bidder and to assist them in making their decision of whether or not to submit a proposal. It is hereby clarified that this RFP is not an agreement and the purpose of this RFP is to provide the bidder(s) with information to assist them in the formulation of their proposals. This RFP document does not purport to contain all the information Bidder may require. This RFP document may not be appropriate for all persons, and it is not possible for NFAI to consider the investment objectives, financial situation and particular needs of each bidder.
- 3. NFAI has taken due care in preparation of information contained herein. However this information is not intended to be exhaustive. Interested parties are required to make their own inquiries and respondents will be required to confirm in writing that they have done so and they do not solely rely on the information contained in this RFP in submitting their Proposal. This RFP includes statements, which reflect various assumptions and assessments arrived at by NFAI in relation to the Project. Such assumptions, assessments and statements do not purport to contain all the information that each Bidder may require.
- 4. This RFP is not an agreement by and between NFAI and the prospective Bidder or any other person. The information contained in this RFP is provided on the basis that it is non-binding on NFAI, any of its authorities or agencies, or any of their respective officers, employees, agents, or advisors. NFAI makes no representation or warranty and shall incur no liability under any law as to the accuracy, reliability or completeness of the information contained in the RFP document. Each Bidder is advised to consider the RFP document as per his understanding and capacity. The Bidder(s) are also advised to do appropriate examination, enquiry and scrutiny of all aspects mentioned in the RFP document before bidding. Bidder(s) at their sole discretion may take professional help of experts on financial, legal, technical, taxation, and any other matters / sectors appearing in the document or specified work. Bidder are also requested to go through the RFP document in detail and bring to notice of NFAI any kind of error, misprint, inaccuracies, or omission in the document and submit the same in writing only as the pre-bid queries and no other way of communicating shall considered as valid. NFAI reserves the right not to proceed with the project, to alter the timetable reflected in this document, or to change the process or procedure to be applied. NFAI also reserves the right to decline to discuss the Project further with any party submitting a proposal. Any communication with the NFAI officials or its evaluation committee during the bid evaluation stage shall be liable for rejection of the Bidder(s) Proposal.
- 5. No reimbursement of cost of any type will be paid to persons, entities, or consortiums submitting a Proposal. The Bidder shall bear all costs arising from, associated with or relating to the preparation and submission of its Bid including but not limited to preparation, copying, postage, delivery fees, expenses associated with any



demonstrations or presentations which may be required by NFAI or any other costs incurred in connection with or relating to its Bid.

- 6. The issue of this RFP does not imply that NFAI is bound to select and pre-qualify Bids for Bid Stage or to appoint the selected Bidder or Concessionaire, as the case may be, for the project and NFAI reserves the right to reject all or any of the Bids without assigning any reasons whatsoever.
- 7. NFAI may, in its absolute discretion but without being under any obligation to do so, update, amend or supplement the information, assessment or assumptions contained in this RFP.
- 8. NFAI, its employees and advisors make no representation or warranty and shall have no liability (for any cost, damage, loss or expense which may arise from or is incurred or suffered on account of anything contained in this RFP or otherwise, including but not limited to the accuracy, adequacy, correctness, completeness or reliability of the RFP and any assessment, assumption, statement or information contained therein or deemed to be part of this RFP or arising in any way with eligibility of Bidder for participation in the Bidding Process) towards any Applicant or Bidder or a third person, under any law, statute, rule, regulation or tort law, principles of restitution or unjust enrichment or otherwise.
- 9. NFAI also accepts no liability of any nature whether resulting from negligence or otherwise howsoever caused arising from reliance of any Bidder upon the statement contained in this RFP.
- 10. Interested parties, after careful review of all the clauses of this 'Request for Proposal', are encouraged to send their suggestions in writing to NFAI. Such suggestions, after review by NFAI, may be incorporated into this 'Request for Proposal' as a corrigendum which shall be uploaded onto the NFAI website (<u>https://www.nfaipune.gov.in</u>)



Glossary

Terms	Definitions
AMC	Annual Maintenance Charges
AV	Audio-Video
Bidder	A Company registered under Indian Companies Act, 1956 OR A Partnership Firm registered under Indian Partnership Act, 1932 i.e. a Single Entity submitting their Proposal to NFAI for this project
FY	Financial Year (April to March)
MIS	Management Information System
NFAI	National Film Archive of India
SA	Software Assurance



1 Introduction

1.1 Key Events and Dates

S. No	Information	Details
1.	RFP Release Date	4 th November 2016
2.	Last date for submission of queries	11 th November 2016
3.	Date, Time and place of pre- bid conference	15 th November 2016 at 03.00 pm National Film Archive of India (NFAI) Law College Road P.O. Box - 810 Pune 411 004
4.	Release of response to clarifications would be available at	NFAI website http://www.nfaipune.gov.in/
5.	Last date (deadline) for submission of bids	25 th November 2016 till 3.00 pm
6.	Technical Bid opening date	25 th November 2016 4.00 pm
7.	Presentation of the qualified agencies	To be intimated later
8.	Opening of Commercial Proposal	To be intimated later
9.	Correspondence details	Shri. Santosh Ajmera, IIS. Officer on Special Duty, National Film Heritage Mission, Contact – (020) 25671569
		Email ID - osdnfhm@gmail.com

1.2 Other Important Information Related to Bid

S. No.	ltem	Description
1.	Earnest Money Deposit (EMD)	Rs. 5 Lakhs
2.	Bid Validity Period	(180) One-hundred-and-eighty days from the date of opening of Financial Bid
3.	Last date for furnishing Performance Security to NFAI (By successful bidder)	Within fourteen (14) working days of the date of notice of award of the contract or prior to signing of the contract whichever is earlier or as intimated in the work order issued by NFAI
4.	Performance Security value (Performance Bank Guarantee)	10% of Contract Value / Bid value of successful bidder

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S. No.	ltem	Description
5.	Performance Bank Guarantee (PBG) validity period	PBG should be valid till for 180 days from the end of Contract period
6.	Last date for signing contract	As intimated in work order by NFAI

2 Instructions to Bidder

2.1 Project Brief

National Film Archive of India, Pune is looking for a solution to accomplish requirements of CCTV based Security Surveillance with the aid of state of the art technology along with possible integration to the emerging technologies in future.

This RFP is for the requirement for establishment of a State of the Art Campus with OFC/ Copper Network & a highly secured IP based CCTV Surveillance system for the purpose of Security, monitoring and recording project progress within the National Film Archive of India Campuses as per the details mentioned below:

Site 1: NFAI Phase –I

National Film Archive of India, Law College Road, Pune – 411 004

Site 2: NFAI Phase – II

National Film Archive of India, Behind Doordarshan Kendra Pune MIT College Road, Kothrud, Pune – 411038

2.2 Cost of RFP

The interested Bidder(s), along with their proposal, are required to submit a Demand Draft from any scheduled commercial bank in name of "Administrative Officer, NFAI" payable at Pune as the Bid Processing fee. The Proposal without the said Demand Draft shall be straight away rejected.

S.No	Item	Details
1	Tender Fees	INR 5,000

2.3 Transfer of RFP

The RFP document is not transferable to any other Bidder. The Bidder who purchases the document shall submit the Proposal (response) for the same.

2.4 Completeness of Response

 Bidder are advised to study all instructions, forms, terms, requirements and other information in the RFP documents carefully. Submission of bid shall be deemed to have been done after careful study and examination of the RFP document with full understanding of its implications.



- 2. The response to this RFP should be full and complete in all respects. Failure to furnish all information required by the RFP document or submission of a proposal not substantially responsive to the RFP document in every respect will be at the Bidder's risk and may result in rejection of its Proposal and forfeiture of the Bid EMD.
- 3. No Bidder shall submit more than one Bid for the Project. A Bidder bidding individually or as a member of a Consortium shall not be entitled to submit another bid either individually or as a member of any Consortium, as the case may be.

2.5 Proposal Preparation Costs

- 1. The Bidder shall submit the bid at their own cost and, NFAI shall not be held responsible for any cost incurred by the Bidder. Submission of a bid does not entitle the Bidder to claim any cost and rights over NFAI and NFAI shall be at liberty to cancel any or all bids without giving any notice.
- 2. All materials submitted by the Bidder shall be the absolute property of NFAI and no copyright / patent etc. shall be entertained by NFAI.

2.6 Bidder Inquiries

Bidder shall send in their written queries to the designated officer as per the details below:

Officer on Special Duty, NFHM National Film Archive of India,

Law College Road,

Pune – 411 004

The pre-bid queries shall be submitted as per the format mentioned in the Annexure 6 only and Bidder submitting the queries in a different format shall not be considered by NFAI. The Pre-Bid queries shall be emailed on the email ID <u>osdnfhm@gmail.com</u> by **11**th **November** 2016 And 1800 Hrs. Any queries after the said submission time shall not be considered by NFAI. The response to the queries will be published on NFAI website <u>https://nfaipune.gov.in</u>. No telephonic queries will be entertained. This response of NFAI to the queries shall become integral part of RFP document.

2.7 Pre-Bid Meeting

Pre-Bid meeting of the bidders shall be convened at the designated date, time and place as mentioned in the RFP. A maximum of 2 representatives per organization shall be allowed to participate in the Pre-Bid conference. An authorization letter for the representatives attending the Pre-Bid conference duly signed and stamped by the authorized signatory of the organization has to be submitted before attending the Pre-Bid Conference.

2.8 Amendment of RFP Document

- 1. All the amendments made in the document would be published at NFAI website (www.nfaipune.gov.in) and shall be an integral part of this RFP.
- The Bidder are advised to visit the aforementioned website on regular basis for checking latest updates of this RFP document. The NFAI also reserves the rights to amend the dates mentioned in this RFP for successful bid process.



2.9 Supplemental Information to the RFP

If NFAI deems it appropriate to revise any part of this RFP or to issue additional data to clarify an interpretation of provisions of this RFP, it may issue corrigendum(s) to this RFP. Any such corrigendum shall be deemed to be incorporated by this reference into this RFP.

2.10 NFAI's right to terminate the process

NFAI may terminate the RFP process at any time and without assigning any reason whatsoever and NFAI shall not be held responsible for any cost incurred by the Bidder in bid preparation. NFAI reserves the right to amend/edit/add delete any clause of this Bid Document. However this will be informed to all and will become part of the bid / RFP.

2.11 Earnest Money Deposit (EMD)

- 1. An EMD of Rs. 5 Lakhs, in the form of Fixed Deposit Receipt or Bank Guarantee from any of the Nationalised or Commercial Scheduled bank drawn in favour of the "Administrative Officer, NFAI, Pune" and payable at Pune, must be submitted along with the Proposal. The Fixed Deposit Receipt or Bank Guarantee should be valid for 6 months from the submission date of the Bidders Bids.
- 2. The EMD shall be denominated in Indian Rupees only. No interest will be payable to the Bidder on the amount of the EMD.
- 3. Proposals submitted without EMD will be liable for rejection.
- 4. Unsuccessful Bidder's EMD shall be returned to the unsuccessful Bidder within 30 days from the date of signing of an agreement with the successful Bidder.
- 5. EMD of Successful Bidder will be returned after the award of contract and submission of the Performance Bank Guarantee within specified time and in accordance with the format given in the RFP.
- 6. EMD shall be non-transferable.
- 7. The EMD may be forfeited:
 - a) If a Bidder withdraws his bid or increases his quoted prices during the period of bid validity or its extended period, if any.
 - b) If successful Bidder fails to sign the Contract or to furnish Performance Bank Guarantee within specified time in accordance with the format given in the RFP.
 - c) If during the bid process, a Bidder indulges in any such deliberate act as would jeopardise or unnecessarily delay the process of bid evaluation and finalisation. The decision of the NFAI regarding forfeiture of the Bid Security shall be final and binding upon Bidder.
 - d) If during the bid process, any information is found false/fraudulent/mala fide, then NFAI shall reject the bid and, if necessary, initiate action.

2.12 Language of Bids

This bid should be submitted in English language only. If any supporting documents submitted are in any language other than English/Hindi a valid translation of the same in English language is to be duly attested by the Bidder and summitted with the bid, and English translation may be validated at NFAI's discretion.



2.13 Patent Claim

In the event of any claim asserted by a third party of infringement of copyright, patent, trademark or industrial design rights arising from the use of the Goods or any part thereof, the Bidder shall expeditiously extinguish such claim. If the Bidder fails to comply and NFAI is required to pay compensation to a third party resulting from such infringement, the Bidder shall be responsible for such compensation, including all expenses, court costs and lawyer fees. NFAI shall give notice to the successful Bidder of any such claim and recover it from the Bidder if required.

2.14 Bid Submission Format

The entire proposal shall be submitted strictly as per the format specified in this Request for Proposal. Bids with deviation from this format are liable for rejection.

2.15 Submission of Bids

This shall be 3 covers (sealed and signed) system where:

- a. First cover (Envelope A) shall contain the original pre-qualification documents, tender fee and cover should be clearly marked as the "Pre-qualification documents"
- b. Second cover (Envelope B) shall contain original technical proposal document and cover should be clearly marked as the "Technical Proposal"
- c. Third cover (Envelope C) shall contain original commercial proposal document and cover should be clearly marked as the "Commercial Proposal"

Note:

- 1. All three covers shall be in a one large cover, sealed and signed.
- 2. Commercial proposal should be in third cover only and any deviation will lead to disqualification of the bidder.
- 3. The Bidder should ensure that all the required documents, as mentioned in this RFP are submitted along with the bid and in the prescribed format only. NFAI will not accept delivery of Proposal in any manner other than that specified in this RFP. Proposal delivered in any other manner shall be treated as defective, invalid and rejected. Non-submission of the required documents or submission of the documents in a different format / contents may lead to the rejections of the bid proposal submitted by the Bidder.
- 4. **No Deviation Bid:** It is required that all the Bids submitted in response to this RFP should be unconditional in all respects, failing which NFAI reserves the right to reject the Bid.

2.16 Acknowledgement of understanding

By submitting a Proposal, each Bidder shall be deemed to acknowledge that he/she has carefully read all sections of this RFP, including all forms, schedules, annexure, corrigendum and addendums (if any) hereto, and has fully informed itself as to all existing conditions and limitations.



2.17 Disqualification

The Proposal is liable to be disqualified in the following cases or in case the Bidder fails to meet the bidding requirements as indicated in this RFP:

- 1. Proposal not submitted in accordance with the procedure and formats prescribed in this document or treated as non-conforming Proposal.
- 2. During validity of the Proposal, or its extended period, if any, the Bidder increases his quoted prices.
- 3. The Bidder qualifies the Proposal with his own conditions.
- 4. Proposal is received in incomplete form.
- 5. Proposal is received after due date
- 6. Proposal is not accompanied by all the requisite documents.
- 7. Proposal is not accompanied by the EMD.
- 8. If the Bidder provides quotation only for a part of the Project.
- 9. Information submitted in Technical Proposal is found to be misrepresented, incorrect or false, accidentally, unwittingly or otherwise, at any time during the processing of the Contract (no matter at what stage) or during the tenure of the Contract including the extension period, if any
- 10. Commercial Proposal is enclosed with the Technical Proposal.
- 11. Bidder tries to influence the Proposal evaluation process by unlawful/corrupt/fraudulent means at any point of time during the Bid process.
- 12. In case any one Bidder submits multiple Proposals or if common interests are found in two or more Bidder, the Bidder shall be disqualified
- 13. Bidder fails to deposit the Performance Bank Guarantee (PBG) or fails to enter into a Contract within 30 Days of the date of issue of Letter of Intent or within such extended period, as may be specified by the NFAI.
- 14. Any Bid received by NFAI after the deadline for submission of Bids shall be declared late and will be rejected, and returned unopened to the Bidder at the discretion of NFAI. The validity of the bids submitted before deadline shall be till 180 days from the date of opening of the Financial Bid.
- 15. While evaluating the Proposals, if it comes to the NFAI's knowledge expressly or implied, that some Bidder may have colluded in any manner whatsoever or otherwise joined to form an alliance resulting in delaying the processing of Proposal then the Bidder so involved are liable to be disqualified for this Contract
- 16. If the Bid Security, Pre-qualification Proposal, Technical Proposal contain any information on price, pricing policy, pricing mechanism or any information indicative of the commercial aspects of the Bid.
- 17. Bidder doesn't agree to the negotiated Terms and Conditions.

In case of any of the above conditions, NFAI reserves the right to negotiate with L2 Bidder after informing the disqualification to L1 Bidder appropriately.



2.18 Bid Opening

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- 1. Envelope A containing "<u>Pre-qualification documents</u>" shall be opened initially in the presence of Bidder and if the EMD is as per the criteria then Envelope B of the qualified Bidder only shall be opened.
- 2. Envelope B containing the Technical Proposal shall be opened in the presence of the Bidder/ representatives of Bidder who choose to attend, at the address, date and time specified in the RFP.
- 3. Envelope C containing the Financial Proposal will remain unopened and will be held in custody of NFAI until the time of opening of the Financial Proposals.
- 4. At the end of the evaluation of the Technical Proposals, NFAI shall invite Bidder who have qualified for the opening of the Financial Proposals. The date, time, and location of the opening of Financial Proposals will be informed by NFAI separately and individually to qualified Bidder.

2.19 Evaluation Process

2.19.1 Bid Evaluation Committee

- 1. NFAI will constitute a Bid Evaluation Committee (BEC) to evaluate the responses of the Bidder
- 2. The BEC constituted by the NFAI shall evaluate the responses to the RFP (Envelope A, Envelope B and Envelope C) and all supporting documents / documentary evidence. Inability to submit requisite supporting documents / documentary evidence, may lead to rejection. At the sole discretion of NFAI, NFAI may ask for clarifications in the Pre-Qualification documents submitted by the Bidder
- 3. The decision of the Bid Evaluation Committee in the evaluation of responses to the RFP shall be final. No correspondence will be entertained outside the process of negotiation/ discussion with the Committee.
- 4. The Bid Evaluation Committee may ask for meetings with the Bidder to seek clarifications on their proposals. The Bidder shall submit requisite supporting documents/ certificates on the credentials. The BEC may visit Bidder's client site to validate the credentials/ citations claimed by the Bidder.
- 5. The Bid Evaluation Committee reserves the right to reject any or all proposals basis of any deviations.
- 6. Each of the responses shall be evaluated as per the criterions and requirements specified in this RFP.
- 7. The BEC would submit its decision to the competent authority whose decision would be final and binding upon the Bidder.



2.19.2 Pre-Qualification Criteria

The Bidder shall fulfill all of the following eligibility criteria independently on date of submission of bid:

Sr. No	Eligibility Criteria	Document Proof
1	The bidder / consortium should be a Company Registered under Indian Companies Act, 1956 OR A partnership firm registered under Indian Partnership Act, 1932. Note: Consortium of maximum 2 members are allowed to participate in the bid.	 Copy of the Memorandum and Article of Association OR Copy of the registered Partnership Deed OR Copy of the Certificate of Incorporation
2	 During last 5 years: The Bidder / Any member of the consortium should have satisfactorily executed / completed at least 1 project of value 25 Lakh and of "Supply, Installation, Implementation, Testing, Commissioning and Maintenance of CCTV surveillance system" using same/similar products from the same OEM, in Government of India / State Government or in Private AND The Bidder / Any member of the consortium should have satisfactorily executed / completed at least 2 projects of value 1 Crore each using same/similar products from the same OEM and of "IT infrastructure" in Government of India / State Government Note: 5 years will be counted backwards from the month of release of this RFP. E.g. If date of release is 15th October 2016, then 5 years that shall be counted will be October 2011 to September 2013, October 2013 to September 2014, October 2014 to 	 Work Order / Project completion certificate clearly mentioning nature of the work carried out by the Bidder and the value of the project AND Project citation format as per Annexure 7 AND Note: The date on Project work order / completion certificate shall be in the 5 preceding years



Sr. No	Eligibility Criteria	Document Proof
	September 2015 and October 2015 to September 2016	
3	The Bidder/Any member of the consortium must have an average annual turnover of INR 1.5 crore (Rupees One Crore Fifty Lakh) in the last three financial years i.e. FY 2012-13, FY 2013-14 and FY 2014-15.	 A duly signed and stamped certificate from the Chartered Accountant mentioning the average annual turnover details of the last three financial years i.e. FY 2012-13, FY 2013-14 and FY 2014-15. OR Audited P&L Statement in last three financial years i.e. FY 2012-13, FY 2013- 14 and FY 2014-15.
4	The Bidder/Any member of the consortium must possess an ISO 9001:2008 Certification.	Copy of the valid Certificate
5	Manufacturer Authorization Form (MAF) from the Original Equipment Manufacturer (OEM) on their original letterhead for all Products mentioned in BOQ (excluding 9U network rack) Note: The MAF shall be for this project and should specifically mention that	MAF shall be strictly as per the format enclosed in Annexure 3
6	The Bidder/Any member of the consortium should not be blacklisted by PSU / Government of India / State Government Departments as on date of submission of bid	A duly signed and stamped undertaking on the letter head of the Bidder should be provided

2.19.3 Process of Evaluation

- 1. Bidder shall be evaluated as per prequalification criteria mentioned at 2.19.2.
- 2. The Bidder who fulfil all the prequalification criteria shall be qualified for further Technical Evaluation (Envelope B)
- 3. Bidder with technical score of 75 marks or above in technical evaluation will be considered to be eligible for financial evaluation (Envelope C).
- 4. Amongst the bidder who are considered for financial evaluation, the lowest bidder would be considered for allocation work.
- 5. The Bid Evaluation Committee reserves the right to accept or reject any or all bids without giving any reasons thereof.



6. In case of Single Bid, NFAI reserves the right to accept or reject the bid on approval of component authority at its discretion.



2.19.4 Technical Evaluation

The Bidder with 75 or above score in the technical evaluation will be qualified for the financial bid evaluation. The proposals from Bidder will be evaluated based on evaluation parameters mentioned below.

Sr. No.	Criteria	Description	Maximum Marks
1	Profile of the Bidder:FinancialExperience	Qualitative assessment based on supporting documentation and demonstration provided by the Bidder	20
2	Technical Compliance to all the tables mentioned in Annexure 5	100% Compliance = 20 Marks Else 0 Marks	20
3	Quality of the Equipment's and products in the solution	Qualitative assessment based on supporting documentation and demonstration provided by the Bidder	20
4	Presentation on the Proposed Solution, Approach and Methodology	 Network Design Approach Implementation Approach Control Center Approach Implementation team proposed Implementation Timelines 	40
Grand Tot	al		100

2.19.5 Award Criteria

Prior to expiry of the validity period, NFAI will notify in writing that the successful Bidder's proposal has been accepted. Upon the successful Bidder's furnishing of a Performance Bank Guarantee, the contract signing process will commence. In case the successful Bidder is unable to furnish the Performance Bank Guarantee and execute contract within 30 days, NFAI shall forfeit the Earnest Money Deposit and shall invite the Bidder ranked second in the commercial bid subject to the condition that the second rank Bidder shall match the price quoted by the earlier successful Bidder.



2.19.6 Signing of Contract

Once NFAI notifies the successful Bidder that its proposal has been accepted, NFAI shall enter into a separate Agreement, incorporating the conditions of the RFP and its amendments and any special conditions during negotiations between the NFAI and the successful Bidder.

3 Scope of Work:

Bidder has to take up the contract on turnkey basis, i.e. supply, installation, implementation, testing, commissioning and maintenance of IP BASED CCTV SURVEILLANCE system as per following details:

- 3.1 Installation of 59 nos. (Details mentioned in annexure 1) cameras including poles as required & with suitable mounting arrangement in a Vandal Proof Housing. The number of cameras mentioned in indicative and the requirement of number of cameras may increase/decrease at the time of placing order or thereafter in future. The rate per unit quoted by the Bidder shall be used for the future requirements.
- 3.2 Laying, terminating & connecting Multimode Optical Fiber Cable (OFC) with redundancy between cameras & control room.
- 3.3 Establishing control rooms for configuration, operation, monitoring & maintenance with 2 nos. of 40" Full HD LED Display each for monitoring purpose has to be setup & joystick based zoom control for camera for configuration of minimum 59 Cameras (expandable as per the need). Alternate monitoring at another Location having two existing additional 40" LED Display for full view. National Film Archive of India will provide control room location and facilities.
- 3.4 Installation, configuration & customization of video software. The software package will support up to 59(expandable as per the need) cameras at a time from the Main Control Room and Alternate Control Rooms respectively.
- 3.5 Installation & commissioning of storage (SAN) for Digital Video Storage, Desktop PC, Workstations, Switches, Weather Proof Panel box for cameras, Industrial grade outdoor Switches, Fiber Laying & Termination, LAN/Power cables, UPS, poles for camera, Power to camera and weather proof enclosure and Surge & lightening protection for each camera etc.
- 3.6 Training: Bidder will provide training of Minimum 1 Month to a team of 10 Persons from NFAI Security Staff Team for Surveillance Monitoring and maintenance.



3.7 The Bidder shall also provide technical support for a period of 5 years. This support has to be made available on call basis as and when required. It shall be the responsibility of the bidder for maintenance and Annual Maintenance Contract (AMC) of the project

4 System Description

4.1 General system description and overall requirements remote camera based monitoring system, which shall consist of:

- 4.1.1 A Combination of Network Surveillance Colour IP cameras 59 nos. located all over the campus at the identified locations as per annexure- 1.
- 4.1.2 Reception of the digital video from all cameras at the Control room called Central Monitoring Station (CMS) and additional stations over Web Browsers. CMS should have computer with customized software for all two-way control system, monitoring on all LED display, data logging and recording of the operation on the CMS as well as the Storage Area Network (SAN) at Central Monitoring System.
- 4.1.3 On line computer display of Individual camera video on large screen (40 inch LED TV).
- 4.1.4 Archival of sub framed rate or full frame digital video of all or selected camera(s) in computer disks. On line replay capability from SAN and/ or Selected Backup disks for a period up to 90 days.
- 4.1.5 Back-up Archival of video from main workstation HDD to Storage (SAN) along with reload facility.

4.2 Operational Flexibility Of The System:

- 4.2.1 On line replacement of malfunctioning camera + technical redundant infrastructure, Switches without affecting overall system.
- 4.2.2 Expansion of system should be possible with software setting at monitoring station by adding cameras. Bidder shall provide information on maximum camera capacity of video software.
- 4.2.3 Relocation of camera units within radius of 20 meters without any change of hardware. Physical changeover and civil work charges, if any, can be paid at actuals.



4.2.4 Remote maintenance & diagnostic of any kind of fault for all camera & network should be possible and remote maintenance also be possible. Camera failure history should be in work station/PC based Monitoring Software Logs.

national film archive of india order Rose stopper



5 Detailed Item-Wise Specifications

5.1 IP –Network PTZ Camera (IR- 50 Mtr)

Sr. No.	Feature	Parameter
1	Image Sensor	1/3 type 2 Megapixel sensor
2	Scanning	Progressive scan
3	Minimum Illumination	Color: 0.56 lx, B/W: 0.07 lx at F1.4 or better
4	Image Resolution	1920X1080 or better, 30 fps
5	Compression	Multiple H.264 high profile, JPEG
6	No of streams	Minimum 3 streams at different resolution and bit
		rate
7	Day/Night	True Day/Night with IR cut filter
8	Focal Length	4.5 mm - 128 mm or better, 30X optical zoom
9	Digital zoom	Minimum 10X
10	Inter-operability	ONVIF profile S, G Compliant
11	Wide Dynamic range	True WDR 100 dB or more
12	Intelligent Compression	50% reduction in bandwidth during zero motion
12		with same fps and resolution
13	Anti corrosive Body	Camera shall be protected from salty environment.
		Suitable body shall be provided
14	Pan Tilt Motor	Gear based drive preferred instead of belt drive
15	AGC	Shall be available
16	Digital Noise Reduction	3 D noise reduction
17	VMD	Minimum 3 area with different sensivity levels
18	Image Stabilization	Shall be available
19	Panning	360° endless
20	Tilt	-90 to +90 deg
		Camera shall have sufficient hardware as well as
21	Image Stabilization	software design to withstand wind speed of 200
		Km/hr and give stable image
22	IR Range	Adaptive IR 150 mtrs or more
23	Humidity	Inbuilt mechanism to remove humidity in the
23		camera body



Sr. No.	Feature	Parameter
24	Camera Rating	IP67
25	Outdoor performance	Camera shall be equipped with wiper & defroster
	Impact Protection	Ik10 rated
26	Power	External power as specified by OEM
27	Alarm	3 Terminal inputs, VMD Alarm Action :SD memory recording, E-mail notification, Camera positioning, FTP image transfer, Terminal output, Auto tracking
28	Certification	UL, CE
29	Mount	Both vertically upward as well as downward shall be possible
30	Approved makes	Axis, Panasonic, Bosch, Sony

5.2 Dome camera Specification (IR-30 Mtr) -

Sr. No.	Feature	Parameter
1	Sonsor	Image Sensor 1/3 type CCD/CMOS/MOS
		Sensor
2	Scanning	Progressive scan
3	Minimum	Color 0.5 lux and B/W: 0.02 lux F1.4 or
5	Illumination	better
4	White Balance	Shall be available
	Light Control	indoor/outdoor mode selection, High light
5		compensation to reduce vehicle head light
		impact
	Shutter Speed	min. 1/30 - 1/10000
6	Dynamic Range	Min. 130dB True WDR
7	Intelligent	50% reduction in bandwidth during zero
1	Compression	motion with same fps and resolution
8	IR illumination	Integrated IR Illumination for 30 mtrs / 50
		mtrs
9	AGC	Shall be available



Sr. No.	Feature	Parameter
10	No. Of Strooms	Min. 3 streams or more at H.264 high profile
10	No. Of Streams	with 1 JPEG. Total 4 streams
11	Alarms	Minimum 2 terminals
12	Audio	2 Way Audio
13	Back focus	automatic with hardware button and web
15	adjustment	based control
14	Certification	CE, UL
15	Firmware upgrade	Free for next 5 yeas
	SDXC momory card	SDXC slot, Preferably SD card shall be
16	slot	locked with password and recorded video
	500	shall have alteration detection
	Supported Image Resolution	H.264: 2,048 x 1,536 @ 30 fps and
17		1920X1080 resolution should support 60
		fps
18	Network	RJ45, IPv4 & Ipv6 compliant
10	Interoperability	ONVIF profile S compliant, should be listed
13		on ONVIF site
20	Remote view	shall be possible to view on mobile /
20		Remote PC
21	Outdoor Installation	Auto IRIS and Auto ELC
22	Power	PoE, 12 V DC
23	Lens	3-9mm or better, motorised
24	Temperature	-10 to + 50 deg C
25	Motion Detection	Minimum 3 programmable areas with
20		atleast 10 sensitivity levels
26	Outdoor Housing	Integrated IP66 with mount, Ik10 rated,
20		inbuilt de-humidifcation

5.3 Specification of Bullet Camera (30 Mtr)

Sr. No.	Feature	Parameter
1	Sensor	Image Sensor 1/3 type
I		CCD/CMOS/MOS Sensor



Sr. No.	Feature	Parameter
2	Scanning	Progressive scan
3		Color 0.5 lux and B/W: 0.02 lux F1.4 or
		better
4	White Balance	Shall be available
		indoor/outdoor mode selection, High
5	Light Control	light compensation to reduce vehicle
		head light impact
	Shutter Speed	min. 1/30 - 1/10000
6	Dynamic Range	Min. 130dB True WDR
7	Intelligent	50% reduction in bandwidth during zero
/	Compression	motion with same fps and resolution
8	IR illumination	Integrated IR Illumination
9	AGC	Shall be available
10		Min. 3 streams or more at H.264 high
10	No. Of Streams	profile with 1 JPEG. Total 4 streams
11	Alarms	Minimum 2 terminals
12	Audio	2 Way Audio
13	Back focus	automatic with hardware button and
15	adjustment	web based control
14	Certification	CE, UL
15	Firmware upgrade	Free for next 5 yeas
	SDXC memory card slot	SDXC slot, Prereabally SD card shall
16		be locked with password and recorded
		video shall have alterdation detection
17	Supported Image	H.264: 2,048 x 1,536 and 1920X1080
17	Resolution	resolution should support 30 fps
18	Network	RJ45, IPv4 & Ipv6 compliant
19	Intereperability	ONVIF profile S compliant, should be
		listed on ONVIF site
20	Romoto view	shall be possible to view on mobile /
		Remote PC
21	Outdoor Installation	Auto IRIS and Auto ELC



Sr. No.	Feature	Parameter
22	Power	PoE, 12 V DC
23	Lens	3-9mm
24	Temperature	-10 to + 50 deg C
25	Motion Detection	Minimum 3 programmable areas with atleast 10 sensitivity levels
26	Outdoor Housing	Integrated IP66 with mount

5.4 Specification of Box Camera (50 Mtr)

Sr.No.	Feature	Parameter
1	Sensor	Image Sensor 1/3 type CCD/CMOS/MOS Sensor
2	Scanning	Progressive scan
3	Minimum Illumination	Color 0.5 lux and B/W: 0.02 lux F1.4 or better
4	White Balance	Shall be available
5	Light Control	indoor/outdoor mode selection, High light compensation to reduce vehicle head light impact
	Shutter Speed	min. 1/30 - 1/10000
6	Dynamic Range	Min. 130dB True WDR
7	Intelligent Compression	50% reduction in bandwidth during zero motion with same fps and resolution
8	IR illumination	50 mtrs range internal / external optional
9	AGC	Shall be available
10	No. Of Streams	Min. 3 streams or more at H.264 high profile with 1 JPEG. Total 4 streams
11	Alarms	Minimum 2 terminals
12	Audio	2 Way Audio
13	Back focus adjustment	automatic with hardware button and web based control
14	Certification	CE, UL, FCC
15	Firmware upgrade	Free for next 5 yeas
16	SDXC memory card slot	SDXC slot, Preferably SD card shall be locked with password and recorded video shall have alteration detection
17	Supported Image Resolution	H.264: 2048X1536 @ 30 fps and 1920X1080 resolution should support 60 fps
18	Network	RJ45, IPv4 & Ipv6 compliant
19	Interoperability	ONVIF profile S compliant, should be listed on ONVIF site
20	Remote view	shall be possible to view on mobile / Remote PC



21	Outdoor Installation	Auto IRIS and Auto ELC
22	Power	PoE, 12 V DC
23	Lens	3 MP Lens 3-8/ 8-40mm or better of OEM/Tamaron/Fujinon make
24	Temperature	-10 to + 50 deg C
25	Motion Detection	Minimum 3 programmable areas with atleast 10 sensitivity levels
26	Outdoor Housing	IP66, IK10 rated with mount



5.5 LED colour TV FULL HD 40" – nos. Make: LG / Samsung / Sony

Sr. No	Specifications
1	Display
1.1	Resolution: Full HD (1920X1080)
1.2	LED Backlight: Edge LED
1.3	Screen Size: 101.6 cm (40 inch)
1.4	Aspect Ratio:16:9
1.5	Viewing Angle: 89:89(L: R)/89:89(U: D)
2	Video Signal
	1080 / 24P (HDMI™ ONLY),480 / 60I, 480 / 60P, 576 / 50I,576 / 50P,720 / 24P
	(HDMI™ ONLY), 720 / 30P (HDMI™ ONLY), 720/60P, 1080 / 60I, 1080 / 50I,
	1080 / 30P (HDMI™ ONLY), 1080 / 60P (HDMI™ / COMPONENT), 1080 / 50P
2.1	(HDMI™ / COMPONENT)
3	Interfaces
3.1	HDMI™ INPUT: 2
3.2	COMPOSITE VIDEO INPUT: 1
3.3	COMPONENT VIDEO INPUT: 1
3.4	RF CONNECTION INPUT:1
3.5	ETHERNET INPUT:1
3.6	Internet Group Management Protocol (IGMP)
3.7	USB INPUT: 2
3.8	AUDIO OUTPUT: 1
4	Built in Tuner
4.1	Analogue
5	Audio
5.1	Audio Power Output: 8W x2 + 14W
5.2	DOLBY® DIGITAL / DOLBY® DIGITAL PLUS / DOLBY® PULSE: Yes
6	Wireless Feature
6.1	Built in Wi-Fi® for Media Sharing, Screen Mirroring,Wi-Fi® Direct
7	Power & Energy Specifications



7.1	POWER CONSUMPTION (ON MODE / STANDARD): 63 W
7.2	POWER CONSUMPTION (STANDBY): 0.5 W
7.3	Mode Supported: Power Saving Mode, Backlight Off Mode

5.5 Specifications for Casing Patti, HDPE Pipe & Flexible Pipe – ISI Mark only

5.6 Specifications for Wall mount Rack Systems

Nos	Description
1	The specification of Wall mount Rack should meet the standards as specified below:
A	9U WALL MOUNT RACK
i	WALL MOUNT 9U X 600 mm Width X 500 mm, Depth, Integrated Side Panels, Single Section, (Grye Color)
ii	90 CFM ,230 V Fans
iii	A/C Distribution BOX 5 Socket / 5 Amps
iv	1U CABLE MANAGER METAL TYPE
v	MOUNTING HARDWARE PKT OF 10

5.7 Specification of LAN Switches (PoE)

Sr. No	Specifications
1	Architecture
1.1	Shall be 1RU, 19" Rack Mountable
1.2	24 RJ-45 autosensing 10/100/1000 PoE+ports
	The switch shall support up to four 10-Gigabit ports SFP+ in addition to the
	above ports , Switch should have one expansion module slot
1.3	
1.4	1 RJ-45 Out of band Management port
1.5	2 GB SDRAM and 512 MB flash
1.6	Shall have switching capacity of 168 Gbps
1.7	Shall have up to 154.8 million pps switching throughput



Sr. No	Specifications	
	Shall provide Gigabit (1000 Mb) Latency of < 5 μ s and 10 Gbps Latency of <	
1.8	1.5 μs	
1.9	The switch shall have minimum 740 Watts for PoE Power	
2	Resiliency	
	Shall have the capability to extend the control plane across multiple active	
	switches making it a virtual switching fabric, enabling interconnected switches	
	to perform as single Layer-2 switch and Layer-3 router and switch should	
2.1	support single IP management upto 8 Switch	
	The modules/cables to create virtual switching fabric shall be provided,	
2.2	wherever multiple switches are co-located	
	Shall support up to 80 Gbps total stacking bandwidth (full duplex) in a resilient	
2.3	stacking configuration	
2.4	Shall support redundant power supply	
	IEEE 802.1D Spanning Tree Protocol, IEEE 802.1w Rapid Spanning Tree	
2.5	Protocol and IEEE 802.1s Multiple Spanning Tree Protocol	
2.6	IEEE 802.3ad Link Aggregation Control Protocol (LACP)	
	Ring protocol support to provide sub-100 ms recovery for ring Ethernet-based	
2.7	topology	
3	Layer 2 Features	
3.1	Shall support up to 4,000 IEEE 802.1Q-based VLANs	
	Shall support GARP VLAN Registration Protocol or equivalent feature to	
3.2	allow automatic learning and dynamic assignment of VLANs	
	Shall have the capability to monitor link connectivity and shut down ports at	
3.3	both ends if uni-directional traffic is detected, preventing loops	
	Shall support IEEE 802.1ad QinQ and Selective QinQ to increase the	
3.4	scalability of an Ethernet network by providing a hierarchical structure	
3.5	Shall support Jumbo frames on GbE ports	
3.6	Internet Group Management Protocol (IGMP)	
3.7	Multicast Listener Discovery (MLD) snooping	
3.8	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)	
3.9	Shall support Voice VLAN feature to automatically assigns VLAN and priority	



Sr. No	Specifications	
	to devices like IP phones	
5	Layer 3 Features (any additional licenses required shall be included)	
5.1	Static Routing and RIP V1/V2 for IPv4	
5.2	Static Routing and RIP for IPv6	
	User Datagram Protocol (UDP) helper function to allow UDP broadcasts to be	
5.3	directed across router interfaces	
5.4	Dynamic Host Configuration Protocol (DHCP) client and Relay	
5.5	Proxy ARP to allow normal ARP operation between subnets	
6	QoS and Security Features	
6.1	Access Control Lists for Layer 2 to Layer 4 traffic filtering	
6.2	Shall support global ACL, VLAN ACL, port ACL, and IPv6 ACL	
63	Traffic classification using multiple match criteria based on Layer 2, 3, and 4	
6.3	information	
6.4	Powerful QoS feature supporting strict priority (SP) queuing, weighted round	
	robin (WRR) and SP+WRR	
6.5	Shall support applying QoS policies on a port, VLAN, or whole switch, to set	
6.5	priority level or rate limit selected traffic	
6.6 IEEE 802.1x to provide port-based user authentication with multi authentication sessions per port	IEEE 802.1x to provide port-based user authentication with multiple 802.1x	
	authentication sessions per port	
6.7 Media access control (MAC) authentication to provide simple authe		
6.7	based on a user's MAC address	
6.8	Dynamic Host Configuration Protocol (DHCP) snooping to prevent	
	unauthorized DHCP servers	
6.9	Port security and port isolation	
6.10	STP BPDU port protection to prevent forged BPDU attacks	
6.11	STP Root Guard to protect the root bridge from malicious attacks or	
••••	configuration mistakes	
6.12	IP Source guard to prevent IP spoofing attacks	
6.13	Dynamic ARP protection blocking ARP broadcasts from unauthorized hosts	
7	Management Features	
7.1	Configuration through the CLI, console, Telnet, SSH and Web Management	



Sr. No	Specifications	
7.2	SNMPv1, v2, and v3 and Remote monitoring (RMON) support	
7.3	sFlow (RFC 3176) or equivalent for traffic analysis	
7.4	Management security through multiple privilege levels	
7.5	FTP, TFTP, and Secure FTP support	
	Port mirroring to mirror ingress/egress ACL-selected traffic from a switch port	
7.6	or VLAN to a local or remote switch port	
7.7	RADIUS/TACACS+ for switch security access administration	
7.8	Network Time Protocol (NTP) or equivalent support	
7.9	Shall have Ethernet OAM (IEEE 802.3ah) management capability	
8	Environmental Features	
8.1	Shall provide support for RoHS and WEEE regulations	
8.2	Shall have features to improve energy efficiency like variable-speed fans,	
	shutoff unused ports etc	
8.3	Operating temperature of 0°C to 45°C	
84	Safety and Emission standards including UL 60950-1; IEC 60950-1; VCCI	
0.4	Class A; EN 55022 Class A	
9	Software Defined Networking (SDN) Capability	
9.1	OpenFlow protocol capability to enable software-defined networking	
	Allows the separation of data (packet forwarding) and control (routing	
	decision) paths, to be controlled by an external SDN Controller, utilizing	
9.2	Openflow protocol	
10	Warranty and Support	
	The below Warranty shall be offered directly from the switch OEM.	
10.1	Lifetime warranty with advance replacement and next-business-day delivery	
10.2	The Switch should be enterprise class switch and having Full CLI support	

5.8 Cabling System and Component Specifications

5.8.1 Specifications of UTP Cabling System

Sr.	Description
No	



Sr.	Description			
No				
1	Specifications of UTP Cabl	Specifications of UTP Cabling System		
2	The specification of UTP C	abling system should be meet standards as		
a	specified below:			
		Unshielded twisted pair cabling system,		
i	Туре	TIA / EIA 568-C.1 addendum Category 6		
		Cabling system		
		10 / 100 Ethernet, 155 Mbps ATM, 1000		
ii	Networks Supported	Mbps IEEE 802.3ab Ethernet, and		
		proposed Cat 6 Gigabit Ethernet		
	TIA / FIA 568-B 1	ERTL, ETL Verified and UL Certified -		
		All three Certificates are mandatory		
iv	IEEE 802.3ab	Zero-bit Error, ETL verified		
		25-year systems warranty; Warranty to		
v	Warranty	cover Bandwidth of the specified and		
v	Wananty	installed cabling system, and the		
		installation costs		
	Performance	Attenuation, Pair-to-pair and PS NEXT,		
vi	characteristics to be	ELFEXT and PSELFEXT, Return Loss,		
VI	provided along with bid	ACR and PS ACR for 4-connector		
		channel		
Ь	The specification of UTP C	The specification of UTP Cable should be meet standards as specified		
~	below:	below:		
		ERTL certified		
i	Type	Unshielded Twisted Pair, Category 6,		
1	1,500	TIA / EIA 568-B.2		
ii	Conductors	23 AWG solid bare copper		
iii	Insulation	Polyethylene		
		Should be a cross Fluted filler. Any other		
iv	Separator	filler type, like bi-directional strip would		
		not be acceptable.		
V	Jacket	Flame Retardant PVC		



Sr.	Description	
No		
vi	Approvals	UL and ERTL Listed
vii		ETL verified to TIA / EIA Cat 6
viii	Operating temperature	-20 Deg. C to +60 Deg. C
ix	Frequency tested up to	600 MHz
Х	Packing	Box of 305 meters
xi	Delay Skew	25ns / 100m MAX.
No vi viii ix x xii xiii xiii xiv c i ii ii vi vi vi vi vi vi vii viii	Attonuction	22.8dB/100m at 250MHz (or less
	Allenualion	attenuation values)
xiii	Impedance	100 Ohms + / - 15 ohms
	Performance	Attenuation, Pair-to-pair and PS NEXT,
xiv	characteristics to be	ELFEXT and PSELFEXT, Return Loss,
	provided along with bid	ACR and PS ACR
^	The specification of UTP Ja	acks should be meet standards as specified
C	below:	
		Unshielded Twisted Pair, Category 6,
		conform to ANSI/TIA/EIA-568-C.2
i	Туре	Category 6, CENELEC EN 50173 and
		ISO/IEC-11801 (2nd Edition)
		requirements.
ii	Modular Jack	1000 mating cycles
iii	Wire terminal	200 termination cycles
i ii iii v	Accessories	Strain relief and bend-limiting boot for
	Accessones	cable
V	Dust cover	Integrated hinged dust cover
vi	Housing	Poly-phenylene oxide, 94V-0 rated
vii	Wiring blocks	Polycarbonate, 94V-0 rated
viii	lack contacts	Phosphorous bronze, plated with
	Jack contacts	1.27micro-meter thick gold
ix	Approvals	UL listed
v	Performance	Attenuation, NEXT, PS NEXT, FEXT
ixFrequency tested up toixPackingxiDelay SkewxiiAttenuationxiiiImpedancexivPerformancexivcharacteristics to be provided along with bidcThe specification of UTP Jacks below:iTypeiiModular JackiiiWore terminalivAccessoriesvDust coverviHousingviiWiring blocksviiiJack contactsixApprovalsxPerformancexPerformance	and Return Loss	
	1	



Sr.	Description			
No				
	provided with bid			
4	The specification of UTP Ja	ck Panels LOADED should be meet		
u	standards as specified belo	w:		
		24-port, Modular, PCB based,		
i	Туре	Unshielded Twisted Pair, Category 6,		
ii		TIA / EIA 568-C.2		
ii	Ports	24 Ports loaded		
iii	Port arrangement	Individual keystone type		
iv	Category	Category 6		
V	Circuit Identification	Icons on each of 24-ports		
v	Scheme			
vi	Port Identification	9mm or 12mm Labels on each of 24-		
VI		ports (to be included in supply)		
vii	Height	0.5 U		
viii	Modular Jack	1000 mating cycles		
ix	Wire terminal (110 block)	200 termination cycles		
x	Accessories	Strain relief and bend limiting boot for		
		cable		
xi	Housing	Polyphenylene oxide, 94V-0 rated		
xii	Wiring blocks	Polycarbonate, 94V-0 rated		
xiii	lack contacts	Phosphorous bronze, plated with		
		1.27micro-meter thick gold		
xiv	Panel	Fully powder coated pencil grey		
XV	Approvals	UL listed		
xvi	Termination Pattern	TIA / EIA 568 A and B;		
	Performance	Attenuation NEXT PS NEXT FEXT		
xvii	Characteristics to be	and Return Loss		
	provided along with bid			
P	The specification of facepla	The specification of faceplates (Work area will have face plate with		
e bac	back box and jacks)			



Sr.	Description	
No		
		Conforms to CAT6 Work Area Data I/O
		Outlet (RJ45) adhering to EIA/TIA-568-
i	Standard	C.2, ISO/IEC 11801(2002) and
		CENELEC EN50173-1 (2002)
ii		specifications
ii	Туре	1-port, WhiteFace plate with PMC Logo
iii	Material	ABS / UL 94 V-0
iv	No. of ports	One
£	The specification of Workstation / Equipment Cords should be meet	
1	standards as specified below:	
	Turce	Unshielded Twisted Pair, Category 6,
i	Туре	TIA / EIA 568-C.2
ii	Conductor	24-26 AWG , multi - stranded copper
iii	Longth	2 meter for workstation and 1 meter for
	Lengui	Jack panel/equipment
iv	Plug Protection	Conforms to CAT6 Work Area Data I/O Outlet (RJ45) adhering to EIA/TIA-568- C.2, ISO/IEC 11801(2002) and CENELEC EN50173-1 (2002) specifications 1-port , WhiteFace plate with PMC Logo ABS / UL 94 V-0 One cstation / Equipment Cords should be meet elow: Unshielded Twisted Pair, Category 6, TIA / EIA 568-C.2 24-26 AWG , multi - stranded copper 2 meter for workstation and 1 meter for Jack panel/equipment Matching colored snag-less, elastomer polyolefin boot 25-year component warranty after site certification Phosphor Bronze, 50 micron gold plating over selected area and gold flash over remainder, over 100 micron nickel under plate PVC Flame Retardant Polyethylene
IV		polyolefin boot
N	Warranty	25-year component warranty after site
v	Wallality	certification
		Phosphor Bronze, 50 micron gold plating
vi	Terminals	over selected area and gold flash over
vi		remainder, over 100 micron nickel under
		plate
vii	Jacket	PVC
viii	Insulation	Flame Retardant Polyethylene

5.8.2 Specifications for Fiber Optic Cabling Systems

5 No Description	S No Description	
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S No	Description		
1	The specification of Fiber optic Cable should be meet standards as		
	specified below:		
i		6 core, Multi Mode, Armored, Loose-tube,	
1		Gel filled	
		MM - OM3, 50 / 125, 250 micron primary	
ii	Fiber Type	coated buffers. UL Listed fiber - OM3 -	
		Corning make raw fiber	
	Fiber core must be	As per Telecordia GR20, TIA -568-C.3 for	
		OM3, IEC 60793-2-10 - Type A1a.2 fiber,	
iv	No of cores	6 or 12	
V	Armor	Corrugated Steel Tape Armor - Loose	
V	AIIIO	tube design - multi tube	
	Cable Construction	BELLCORE GR 20 / IEC 794-1 - Losse	
vi		tube Corrugated steel tape (0.155mm	
	i ype	Min)CSTA provided	
	Outor lockot	High density polyethylene, anti - termite,	
vii		anti - rodent suitable for direct burial	
	Construction	application.	
viii	@ 850nm	< = 2.50 dB/Km	
ix	@1300nm	< = 1.00 dB/Km	
х	Max Tensile Load	>= 2670 N	
vi	Maximum Crush	2000N	
XI	resistance	300014	
vii	Operating	-40 deg Cel to +70 deg Cel	
	Temperature	-40 deg Certo +70 deg Cer	
		Must pass the following : - IEC794-1-E1,	
xiii	Test Deremeters	IEC794-1-E2, IEC794-1-E3, IEC794-1-	
		E4, EIA-455-104, IEC794-1-E7, IEC794-	
		1-E10, IEC794-1-E11, IEC794-1-F5	
xiv	Marking:	The cable has identification marking at	
		regular intervals of 1 meter which will be	



S No	Description	
		of permanent nature. The accuracy of the
		sequential marking will be within +/-
		0.5%.
2	Pigtail Type	
i	Connector Type	SC -Style, Simplex
	Operating	
	temperature	
iii	Standard	Fully in compliance with JIS C5973 F04
	Standard	Туре.
iv	Durability	(500 Mattings): < 0.2 dB Max
		Pre-radius Ceramic Zirconia Ferrule.
v	Ferrules	Bayonet Coupling: 2.5 mm Zirconia
		Ferrule
vi	Attenuation	Not more than 0.75 dB per mated pair
vii	Parameters /	Meets and exceeds ITU specifications,UL
	standard	listed and 3rd Party RoHS compliant
3	Patch Cord (LC - FC) - 3mtr	
		SC-SC type MM OM3. Available in either
i	Cable type	1.6mm or 3mm simplex or Duplex
		Zipcord.
		Multi-mode 50/125 250 micron primary
11		coated buffers
	No of cores	2 Cable construction Type PVC outer
111		jacket
iv	Outside Diamotor	1.6mm x 3.0mm (Simplex) or 1.6mm x
IV		3.3mm(Duplex)
V	Minimum Cable	1 6mm; 11 24 lbs (50 N)
v	Retention Strength	
vi	Operating	
	Temperature	
vii	Length	3 meter



S No	Description			
4	The specification of Fiber Optic Patch Panels should be meet			
	standards as specified	standards as specified below		
i	Fiber optic patch	19-inch, Rack mounted Fiber optic patch		
	panel	panel		
ii	Height	1U		
iii	# of fibers	12 & 24 in 1U		
iv	# of OSP Cables for termination	Minimum 2		
v	Grounding	2 Nos. of earthing lugs, pre-loaded		
. vi	Cable Management	Front and rear cable management rings,		
VI	rings	pre-loaded		
vii	Adapter plates	6 Port adapter plates		
viii	Fiber optic patch panel	Rack mounted Fiber optic patch panel		
	Dimension	12 & 24 Port LIU : 370 * 350 * 80 mm		
IX	Dimension	(H*W*D)		
~	Construction	Complete Aluminum Alloy housing, fully		
X	Construction	powder coated		
vi	Splice trov	Dimension: 140 * 125 * 10 mm. Included		
XI	Splice tray	in LIU not to be quoted separately.		
	Splice trov	Fully cushioned splice holder containing		
xii	Splice tray	grooves for fixing splice protective		
	Construction	sleeves		
viii	Cable Speels	Flame retardant plastic, high impact		
XIII		resistance. Must be part of LIU.		
		Two halves spool design , Stackable		
xiv		design, sufficient room provided for		
	Construction	storage of excess cable		
F	The specification of Fiber Optic Adapter plates and Adaptors			
5	should be meet standar	should be meet standards as specified below:		
i	Fiber Optic adapter	6-port, SC-Style, MM Adapter with		



S No	Description	
	plate	Adapter Plate
ii	Attenuation	Max of 0.75 dB per mated pair
iii	Adapters	Available in Simplex types.
iv	Durability	< 0.2 dB max (1000 Matings)
V	Standard	Compliant as per EIA/TIA 568-C and
v		ISO/IES 11080

5.9 Specification of Server

Sr.	Item	Description
No.		
1	Processor	Server should be populated with 2Nos of Intel E5 2620 V4 proc (8
		core, 2.1 Ghz, 20MB cache)
2	Chipset	C610 or higher
3	Memory	Server to be populated with 2 x 8GB DDR4 2400 MT/s
4	DIMM Slots	Minimum 12 DIMM slots
5	Memory	Advanced ECC memory protection, Memory mirroring or Equivalent
	Property	
6	Hard Disk	3 x 900GB SAS 3.5" Drive in RAID 5
7	Drives	Server should support Min 8 x 3.5" drives
8	RAID	Integrated hardware RAID controller and should support Raid 0,1,5
	Controller	and 5
9	Optical Drive	DVD-ROM
10	Ethernet	2 X 10 Gb LOM
	Ports	
11	Add on	Dual port 8GB Optical Fibre HBA
	Cards	
12	Expansion	Minimum 5 X Pci-E slots with minimum 2 PCI-E 3.0 enabled
	Slots	Expansion Slots



Sr. No.	ltem	Description
13	Remote	OEM should provide embedded features that helps to manage
	Management	Servers in physical, local and remote environments, operating in-
		band or out-of-band, with or without a systems management software
		agent.
		 Should include Power Management, necessary licenses should be
		included.
		Power Management should give historical data for atleast 72 hours.
		• Should also support IPv6
		 Should support remote scripted reconfiguration tools.
		• Should be able to monitor all systems components (BIOS, HBA's,
		NICs, CNA's).
14	Redundant	Redundant hot swap power supplies.
	Power	Should be 92% + efficient at 100% Load
	Supply	
15	Redundant	should have hot-swap redundant cooling fans. Fans should
	Cooling	automatically
	Fans	adjust speeds depending on the temperature inside the server
		chassis
16	Failure	The server should be able to alert impending failures on maximum
	Alerting	number of components. The components covered under alerting
	Mechanism	mechanism should at least include Processors, memory, PCIe slots,
		VRMs, power supplies, fans, hard disk drives
17	Cluster	Should support High Availability Clustering
	Support	
18	Form Factor	2U Rack form factor
19	OS	Microsoft Windows Server® 2008 R2, Microsoft Windows Server 2012
	Certification	Microsoft Windows Server 2012 R2,Novell® SUSE® Linux Enterprise
		Server
		Red Hat Enterprise Linux



Sr. No.	ltem	Description
20	Server	Smart Embedded Systems Management should be able to
	Management	automate task like discovery deploy monitor and update.
		 Should not be dependent on agents to for life cycle management.
		Should be OS Agnostic.
		 Should be able to provide Single console to manage Servers.
		 Power management tool – Single interface to optimize ad control
		every usage for servers and Racks.
		 Should be able to integrate to 3rd party management tools.
21	Warranty	24X7, 365 days Comprehensive onsite warranty for 5 years
22	Rails	Must be supplied with cable management arms and rails to rack
		mount the servers

5.10 Specification of Tape Library and Backup solution:

Specifications for Supply, Installation, Testing and Commissioning of Archival Tape Library

Feature	Description
Drive	2 No. Of LTO 7 drives required, scalable up-to 18 Drives if
Technology	required.
Drive Interface	8Gb fibre required (Optional Support:- 4Gb fibre, 6Gb SAS, 3Gb
	SAS, SCSI-2/SCSI-3 LVD interface)
Library	8Gb fibre required (Optional Support:- 4Gb fibre, 6Gb SAS, 3Gb
Interface	SAS, SCSI-2/SCSI-3 LVD interface)
Capacity	Offered Library should be with Min. 41 Slots active, including I/E
	slots and scalable up-to 409 slots with expansion module and
	capacity on demand license if required.
Performance	Inventory Speed: 55 seconds for average of 41 slot configuration.
	Configuration: Auto-discovery and auto-calibration for



Feature	Description
	installed/added components (modules, tapes, drives, magazines,
	etc.) Drive Throughput - Native 300MBps/Compressed 750MBps
	Library MSBF It should be greater than 2,000,000
Connectivity	8 Gbps Fibre Channel
Supplied	Supply 100 nos of LTO-7 RW cartridges with Customized Barcode sticker
Cartridges	and 5 nos of Cleaning cartridges.
Supported host	Windows 2003/2008 Server, IBM AIX, SUN Solaris and Linux
platforms	environments.
Architecture	Modular Rack Mount Architecture with Continuous Robotics.
Management	GUI based Control Panel on Library and Web GUI.
Misc	Features "Capacity-on-Demand Growth. Optional Support for Mobile
	Library Status update. Optional Support for Drive Encryption. Support for
	Advanced Reporting – Media, drive and security reports of library
	utilization and performance. Automated report scheduling and
	distribution. Library Partitioning: Supports up to 18 partitions for tape
	consolidation Should have optional support for Extended Data Life
	Management: Media health reports of cartridges stored for long-term
	archive and DR, information is collected outside of normal operations: -
	Automated scheduling for scanning tapes – Notifications on test results –
	Policy-based data migration to new cartridges Should have optional
	support for Native Storage Networking: Control Path Failover, Data Path
	Failover, LUN Mapping, and Drive Firmware Auto levelling. The Offered
	Library should be certified with the HSM (Hierarchical Storage
	Management) and should support LTFS.

Specification of Backup Solution

S No.	Description
1	Backup Software must be capable of dedupe various database including Oracle,



S No.	Description
	DB2, Exchange, SharePoint Informix, Sybase, MS SQL MaxDB and backed up
	over fiber channel using client binary instead of configuring production machines as
	Media/storage server.
2	Should support single pass backup for faster backup/recovery
	The backup software must have integrated advanced backup technologies i.e.
3	deduplication and tape archiving. Deduplication should work with SAS, SATA and
5	near line SATA. There should not be any dependency of SSD for dedupe backups
	(in terms of performance)
	The proposed Backup Solution should be available on various OS platforms such
1	as Windows and UNIX platforms and be capable of supporting SAN based backup
4	using client footprint instead of media server footprint from various platforms
	including IBM AIX, HP-UX, Linux, Solaris and Windows
	The proposed Backup Solution supports the capability to write up to 32 data
5	streams to a single tape device or multiple tape devices in parallel from multiple
	clients to leverage the throughput of the Drives using Multiplexing technology.
6	The proposed backup solution should allow creating tape clone facility after the
0	backup process which can have different retention policy than first backup set.
	The backup software must use an open format (TAR) for writing backup data to
	tapes, so that native OS tools can also be used to recover in case the backup
7	application is not available. It will also allow the data backup from one Unix platform
1	to be restored on another platform.
	Backup Software is able to rebuild the Backup Database/Catalog from tapes in the
	event of catalog loss/corruption
	The backup solution must provide file backup, Bare Metal restore, deduplication,
8	encryption, database online backup, etc with single agent. Multiple agents/clients
	should not be installed in server to achieve above features
9	Backup Solution shall support automatic skipping of backup during holidays.
10	Backup solution must have inbuilt data replication feature independent of hardware
10	for creating multiple copy at different locations with different retention.
11	Backup solution to support Cloud storage as Backup Target. Viz Amezon S3,
	Google Neardrive.
12	Backup solution to support Bare Metal Restore to help P2P, P2V, V2V conversion.

S No.	Description
	Proposed Appliance & backup Software should be from same vendor. Appliance
13	Hardware components, Operating System & Backup solution must be supported by
	single vendor to avoid multivendor ownership.
14	The proposed solution should have operating system disk in mirroring and data disk
	on RAID 6 with Hot Spare.
15	The backup solution should belong to the leaders in Gartner Magic Quadrant.

5.11 Technical Specifications for Integrated Modular 2 Rack Data Centre Solution

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Item	Description
Integrated Infrastructure Solution	It is required to deploy Pre-Fabricated Data Centre Solution for Critical IT Equipment. Site conditions require that the entire Pre-Fabricated DC Solution be delivered in CKD (Completely Knock-Down Condition) and system be assembled at site.
Scale and Density of Integrated Data Center	Required solution comprises of 2 Racks of 2100 mm Height (Min) having effective mounting space of minimum 66U available for IT Eqipment.
Inbuilt redundancy compliant to Tier 2/3 guidelines	Solution should be incorporating in-built redundancy for Power and Cooling inline with the requimerments under Tier II / III guidelines. Other supportive utilities and services like Fire Detection & Suppression, PDU, Electrical DB, Water leakage detection and Monitoring system with Auto door opening should be provided with high availability of each equipment for this proposed requirement of Pre-Fabricated DC Solution.
Main Electrical Panel & Cabling	DB panel mounted inside cabinet with all internal cabling integrated into the same. Adequate precaution and compliances to be taken care for sizing/ratings of cables and switchgear inside Rack.
Uninterrupted Power Supply(UPS)	Rack mount on line double conversion UPS of 10 KVA up to 94% efficiency at full load and 0.8 output power factor. UPS to be provided with External battery bank with SMF batteries for 60 min. backup on 100% IT load with required rack mount accessories.



Cooling System	Solution provided should have integrated Rack Mounted - Self- contained Split Type Cooling Unit designed for cooling the racks with 24X7 operations in all respect as per ISHRAE/ASHRAE standard and also integrated with remote monitoring system. N+N Redundant cooling units with each unit of minimum 2 TR/ 7KW capacity for 2 Rack Integrated DC. In order to enhance return air efficiency, bottom mounted cooling unit should have provision to tak return air continuously from middle of the rack depth till rear of the rack so as to have effective air circulation.
Out Door Unit	Copper piping with insulation tube of elastomeric, nitrile foam between each sets of outdoor & indoor unit as per specification. Piping to be properly supported by MS clamp. All transmission wiring between indoor to outdoor unit is kept in PVC conduit.
Racks	 Individual racks should be of 42U (Height - Min) x 800 mm (width - Min) x 1300 mm (Depth - Min) All Steel Construciton Rack with an Integral Plinth should have following features: Cold Air Column Space in the front of the mounted equipment in the rack should be at least 790 mm wide and 275 mm deep for each rack. Simpar space should be available at the rear of the rack also to facilitate appropriate movement of air. Above Rack Mounted Split Type Cooling Unit (Evaporator Unit) 33U Rack Space Should be Available in Each Rack. Thus total of minimum 66U Space will be required between two racks. After mounting of the UPS - between both the racks, minimum of 52U Mounting Space should be available of the IT Equipments. It is very important that 19" Mounting rails be provided with U Identification Notch as well as Unique U Numbers and these unmbers should be visible even after mounting of the equipment. Rack Colour will be required to be customised as per requirement and our Logo will be required to be etched on both the front glass doors of the rack.



	All Rack Doors should be easily removable type (Tool-less) to facilitate any installtion and / or service activities. Side panels of the rack should be fully secured. Industry Standrad Swing Handle Multi-point locking with Digital Locks should be provided. These locks should be able to confirm locking status electronically along with local LED Indications. EM Locks or Solenoid Type of Locks should not be used for the access control solution.
	Door sealing should be done using dual gasket. One multi- edge flat gasket on the rack side and half round PU Gaskets on the door side.
Access Control	Biometric reader (with relevant software along with licenses if needed). Integrated DC Rack doors should have digital locking to permit only authorized persons to open the doors through finger print reader. Design to be as per TIA 942 guidelines.
Integrated Fire Security & Suppression System	Fire detection and suppression system, modular type fire suppression system (FM200) to cover entire racks. Dedicated nozzles for the suppressant should be provided in each logical compartment of the entire system. Design should be as per NFPA standards guidelines.
Remote Monitoring	Pre-fabricated DC System should offer continuous monitoring of various operational parameters as under:
	Temperature, humidity, door and Locking Status, Water Leak Detectors & Spare dry contact monitoring to be integrated to any external system. Based on pre-set parameters, automated alerts and messages are sent to the intended recipients. Remote monitoring system with SNMP, email notification, event alerts.
	Integrated Monitoring System should also be able to get integrated with the Rack PDUS and offer variety of alerts / alarms based on PDU level pre-set electrical parameters.
Local Monitoring	 Eack rack should display following parametres on top of the rack : Source 1 and Source 2 : Current Temp in the inner front cold space of the rack Temp in the rear hotter space inside the rack In case of any electronics failure, it should be possible to replace / service these displays without taking any downtime. (Should be hotpluggable / swappable) AV Hooter for the Extreme Alarm Conditions



Rack PDU	Redundant Rack PDU should be Single Phase with following configuration: - 16 Sockets of IEC C13 + 4 Sockets of IEC C19 - Power Indicator on PDU - Vertical / Zero U Mounting - 2M long Inlut Cable - integrated with Rack Monitoring System Two Such PDUs per Rack
Rack Accessories	 Following Rack Accessories should be included: Blank Panels for closing the opening / gaps in the front mounting rails Rack internal Cable Management for Vertical and Horizontal Cables Front Panel Mounting Hardware Brush Panel / Glands / Seals for all Cable Entry Points in the cabinet

5.12 Unified Storage

Feature	Description
Storage	The storage system should be purpose built storage for video
	surveillance data storage and should be validated with video
	management software. The storage system should have a
	published benchmarked for 300MB/s video streaming bandwidth
Controller	The Storage System should be configured with dual redundant
	controllers. The offered SAN should be based on specialized
	operating system and should not be based on general purpose
	operating system on industry standard servers. The array should
	have a publically published uptime of five nine's
Host Ports	Array should support minimum 4x16Gbps FC port per controller for
	SAN connectivity
Cache	The system should have a minimum of 16 GB of memory across
	dual controller. Array should support cache destage to disk in order
	to avoid any data loss due to extended power outage. Array should
	support mirroring of write operation across controllers.
Disk Support	System should support Near Line SAS 7200 RPM drive. Storage
	should be scalable upto 400TB in raw capacity
Protocol	iSCSI, ARP,RIP(V1-V2), SNMP, SNTP, LDAP and FC



Description
The system should be configured with snapshot features licenses,
snapshot restore licenses for the entire systems capacity, thin
provisioning license and replication licenses for the entire system
capacity
Array should support RAID 5, 6 & 10.
The vendor should configure 50 TB usable in RAID 6 using 4TB NL-
SAS 7200RPM drives. The useable capacity should be exclusive
from overheads of hot spares, RAID or any other storage related
space requirements. Array should be configured with minimum of 1
hot spare for every 30 data disks.
Storage system should be configured in "No single point of failure
architecture" and all the components like controllers, fans, power
supplies, front-end ports and back-end ports should be redundant.
Storage system should support all industries leading operating
systems like Apple Mac O/S 10.8 or greater, Citrix Xenserver 6.1,
HP-UX, IBM AIX, IBM VIOS 2.2, 2.3, Microsoft Windows Server
2008, Microsoft Windows Server 2008 R2+, Windows Server 2012,
Windows Server 2012 R2, Microsoft Windows 7, Microsoft Windows
8 and Microsoft Windows Vista, Microsoft Hyper-V, Novell Suse
Enterprise Linux, Oracle Linux, RedHat Enterprise Linux, Solaris 10
x86, Solaris 10 sparc, Solaris 11 and 11.1 (SPARC and x86),
VMWare ESXi 5.x
Support a browser based built in management. Should be able to
support manual as well as automated email to vendor support
centre for proactive maintenance support. Storage browser based
management tools should able to manage multiple similar arrays at
the same time from the single interface.
Entire system must be manageable from a web based single,
secured interface without a separate management device or server.



Feature	Description
	Management software should be supplied along with Storage Array
Optional :	20 TB Additional RAW Storage

5.13 Specifications for Rack Mountable UPS for Network Switches:

Feature	Description
Features	a) 1KVA Rackmount UPS with Inbuilt Battery, Backup time
	more than 10 min. max size 2U,max depth 460mm. With
	5 years warranty.
	b) True Online double-conversion Rack-Mount UPS with
	1KVA Capacity
	c) User friendly & Easy-shift LCD Display
	d) Output Power Factor 0.8
	e) With inbuilt battery
	f) Backup time more than 10 Minutes
	g) 50Hz/60Hz frequency converter mode
	h) Emergency Power off function (EPO)
	i) Eco mode operation for energy saving (ECO)
	j) Input power factor correction 0.99
	k) Programmable power management outlets
	I) Generator compatible
	m) SNMP, USB & RS-232 Multiple communications
	n) Size: not more than 2U
	o) Depth: not more than 460mm.
	p) 3years onsite warranty

5.14 Specifications for Firewall under HA with Analyser:

Sr. No.	Features Description
1	The Firewall should be Hardware based, Reliable, purpose-built security appliance
	with hardened operating system supporting State full policy inspection technology.
2	Firewall appliance should have at least 12 x 10/100/1000 GE interfaces along with
	2 x GE SFP slots
3	Firewall Throughput should be at least 3 Gbps



Sr. No.	Features Description
4	Firewall should have at least 3DES IPSec throughput of 1 Gbps
5	Firewall should support at least 1500 site-to-site VPN Tunnels.
6	Firewall should support at least 75,000 new sessions per second
7	Firewall should support 3 Million concurrent sessions
8	The Firewall solution should support NAT64, DNS64 & DHCPv6
9	The proposed system should be able to operate on either Transparent (bridge)
	mode or NAT/Route mode. Both modes should also be available concurrently using
	Virtual Contexts.
10	The physical interface should be capable of link aggregation as per IEEE 802.3ad
	standard, allowing the grouping of interfaces into a larger bandwidth 'trunk'. It
	should also allow for high availability (HA) by automatically redirecting traffic from a
	failed link in a trunk to the remaining links in that trunk.
11	The proposed system should have integrated Traffic Shaping functionality.
12	The Firewall & IPSEC VPN module should have ICSA or other equivalent
	Certification.
13	Should support IPSEC, PPTP, L2TP & SSL VPN
14	The appliance should utilize inbuilt hardware VPN acceleration:
	a) IPSEC (DES, 3DES, AES) encryption/decryption
	b) SSL encryption/decryption (external device is accepted)
15	The system should support the following IPSEC VPN capabilities:
	a) Multi-zone VPN supports.
	b) IPSec, ESP security.
	c) NAT traversal
	d) Hub and Spoke architecture
	e) Redundant gateway architecture
16	The system should support 2 forms of site-to-site VPN configurations:
	a) Route based IPSec tunnel
	b) Policy based IPSec tunnel
17	The system should support IPSEC site-to-site VPN and remote user VPN in
	transparent mode.
18	The system should provide IPv6 IPSec feature to support for secure IPv6 traffic in
	an IPSec VPN.



Sr. No.	Features Description		
19	Virtual	ization	
	The pr	The proposed solution should support Virtualization (Virtual Firewall, Security	
	zones	zones and VLAN) with minimum 10 Virtual Firewall license.	
	Intrusi	on Prevention System	
	a)	The IPS capability should have NSS or other equivalent Certification	
	b)	IPS throughput should be of at least 1.5 Gbps	
	c)	The IPS detection methodologies should consist of:	
		I. Signature based detection using real time updated database	
		II. Anomaly based detection that is based on thresholds	
	d)	The IPS should be able to inspect SSL sessions by decrypting the traffic.	
	e)	The IPS system should have at least 8,000 signatures	
	f)	IPS Signatures should be updated in different ways: manually, via pull or	
		push technology. Administrator should schedule to check for new updates	
		or if the device has a public IP address, updates can be pushed to the	
		device each time an update is available	
	g)	In event if IPS should cease to function, it should fail open by default and be	
		configurable so that crucial network traffic should not be blocked and	
		Firewall should continue to operate while the IPS problem is being resolved	
	h)	IPS solution should have capability to protect against Denial of Service	
		(DOS) and DDOS attacks. Should have flexibility to configure threshold	
		values for each of the Anomaly. DOS and DDOS protection should be	
		applied and attacks stopped before firewall policy look-ups.	
	i)	IPS signatures should have a configurable actions like terminate a TCP	
		session by issuing TCP Reset packets to each end of the connection, or	
		silently drop traffic in addition to sending an alert and logging the incident	
	j)	Signatures should have severity level defined to it so that the administrator	
		can understand and decide which signatures to enable for what traffic (e.g.	
		for severity level: high medium low)	
21	Antivirus		
	a)	Should have 1Gbps of Antivirus throughput.	
	b)	Should be able to block, allow or monitor only using AV signatures and file	
		blocking based on per firewall policy based or based on firewall	



Features Description	
authenticated user groups with configurable selection of the following	
services:	
i. HTTP, HTTPS	
ii. SMTP, SMTPS	
iii. POP3, POP3S	
iv. IMAP, IMAPS	
v. FTP, FTPS	
c) Should be able to block or allow oversize file based on configurable	
thresholds for each protocol types and per firewall policy.	
Application Control	
a) Should have the ability to detect, log and take action against network traffic	
based on over 3000 application signatures	
b) The application signatures should be manually or automatically updated	
c) The administrator should be able to define application control list based on	
selectable application group and/or list and its corresponding actions	
Data Leakage Prevention	
a) System should allow administrator to prevent sensitive data from leaving	
the network.	
b) Administrator should be able to define sensitive data patterns, and data	
matching these patterns that should be blocked and/or logged when	
passing through the unit.	
High Availability	
a) System should have built-in high availability (HA) features without extra	
cost/license or hardware component	
b) Should support state full session maintenance in the event of a fail-over to a	
standby unit.	
c) High Availability feature must be supported for either NAT/Route or	
Transparent mode	
d) Should support multiple heartbeat links	



Sr. No.	Features Description		
		Passive & Clustering	
25	SSL V	PN Requirements:	
	a)	The Firewall should be integrated solution and there should be no user	
		based licensing for SSL VPN.	
	b)	The Firewall should support for TWO modes of SSL VPN:	
	c)	Web-only mode: for thin remote clients equipped with a web browser only	
		and support web application such as: HTTP/HTTPS PROXY, FTP,	
		SMB/CIFS, SSH, VNC, RDP	
	d)	Tunnel mode, for remote computers that run a variety of client and server	
		applications	
	e)	The system shall provide SSL VPN tunnel mode that supports 32 and 64-bit	
		Windows operating systems	
	f)	The proposed solution shall allow administrators to create multiple	
		bookmarks to add to a group and make these bookmarks available for SSL-	
		VPN users.	
	g)	Web & Application Content Filtering System Requirements:	
	h)	The proposed system should have integrated Web Content Filtering	
		solution without external solution, devices or hardware modules with proxy	
		functionality.	
	I) 	URL database should have at least 200 million URLs and 75 + categories.	
	J)	The proposed solution should be able to enable or disable Web Filtering per	
		tirewall policy or based on firewall authenticated user groups for both HTTP	
		and HITPS trainc.	
	к) 1)	Should blocks web plug-ins such as ActiveA, Java Applet, and Cookies.	
	() (m)	Shall include Web Exempt List	
	n)	The proposed solution should be able to replace the web page when the	
	,	web page matches the Web Filtering blocking criteria	
	0)	The proposed solution shall be able to identify retrieve and rate the actual	
		URL of the cache content commonly available in search engines such as	
		Yahoo and Google.	
	(q	The solution shall allow administrators to creat mutiple new local URL	
	17		



Sr. No.	Features Description			
		filtering categories besides dynamic categories		
	q)	Should have application control feature		
	r)	Should have the intelligance to identify & control of popular IM & P2F		
		applications like KaZaa,BitTorrent etc.		
	s)	Should have minimum database of 3000 types of application awareness		
26	User A	User Authentication		
	a)	The proposed Firewall shall be able to support various form of use		
	,	Authentication methods simultaneously, including:		
	b)	Local Database entries		
	c)	LDAP server entries		
	d)	RADIUS server entries		
	e)	TACACS+ server entries		
	f)	Native Windows AD (Single sign on capability)		
	g) Two-factor authentication without any external Hardware.			
	h)	h) Citrix Agent support for Single Sign On		
	i)	i) The solution shall be capable of providing Windows AD single sign-on by		
		means of collector agents which broker between users when they log on to		
		the AD domain and the device.		
	j)	The proposed appliance shall support inbuilt 2 factor authentication services		
		and database using tokens, email and SMS.		
	k)	System should also have capability to identify devices (ex. Android, Iphone		
		Windows etc) & should be able to write policies on basis of device identity		
	I)	Should also support Authentication-based routing		
	m)	BYOD		
	n)	create policies based on device type		
	o)	identify and monitor the types of devices connecting to your networks		
		wireless or wired		
	p)	use MAC address based access control to allow or deny individual devices		
	q)	enforce endpoint control on devices that can run FortiClient Endpoin		
		Control software		
	r)	Logging and Reporting		
	s)	Solution must offer separate appliance to store logs and reports. In-buil		



Sr. No.	Features Description			
	reporting will not be considered as it impacts firewall performance.			
	t) Separate appliance must offer at least 1 x 1 TB storage space.			
	u) It should show real-time traffic details			
	v) Logs should also show per user statistics which must include sent/receiv			
	bytes, no. of sessions, threat score, bandwidth usage, sent/receive packets			
	& source IP or user, destination country detail			
27	Firewall should not introduce more than 3 Micro Seconds Latency			
28	Anti-Virus Module should be ICSA Certified			
29	Firewall Appliance should have network's physical & logical topology view.			

5.15 SAN Switch with software license:

Sr No.	Feature
1	24 Port SAN Switch with 24 Port Licenses + 24,8/16
	GBPS SFP for SAN Switch

5.14 Video Management Software

Sr No.	Feature	
1	System	
а	Enterprise Class Application	Support- Yes
b	Max. Number of Cameras per Server	50-60 per server
С	Max. Number of Servers	Unlimited
d	Max. Number of Clients	64
е	Rules Engine	Support- Yes
f	Alarm / Event Management	Support- Yes
g	Multi-Layered Facility Map	Support- Yes
h	Windows Client	Support- Yes
i	Macintosh Client	Support- Yes
j	Web Client	Support- Yes
k	Mobile Client (iOS/Android)	Support- Yes



Sr No.	Feature	
1	Customizable User Access Levels	Support- Yes
m	Centralized Management	Support- Yes
n	Failover Recording Servers	Support- Yes
0	Bookmarking	Support- Yes
р	Active Directory Support	Support- Yes
q	Multi-Language	Support- Yes
r	360/Panoramic camera dewarping	Support- Yes
2	Supported Devices	
а	Number of Directly Supported Cameras (Not including ONVIF)	3,000+
b	Number of Supported Camera Manufactures	130+
с	Support for ONVIF compliant devices	Support- Yes
3	Cameras	
а	4K or Higher Resolution support	Support- Yes
b	MJPEG, MPEG4, H.264 Compressions	Support- Yes
с	Multi-streaming support (Dual streaming etc.)	Support- Yes
d	Camera or server side motion detection (VMD)	Support- Yes
е	Camera auto discovery on local network	Support- Yes
f	Centralized camera management	Support- Yes
g	Trigger Digital Inputs and Ouputs	Support- Yes
4	Live Viewing	
а	Drag & Drop	Support- Yes
b	Camera Group View	Support- Yes
с	Video Push	Support- Yes
d	Display pre-registered websites	Support- Yes
е	Onboard Hardware Decoder (Intel QSV support)	Support- Yes
5	Recording / Playback	
а	Pre/Post Alarm Recording	Support- Yes
b	Recroding Setting per Camera	Support- Yes
с	Record always at 1 FPS and higher frame rate on motion (VMD-based recording fps increase)	Support- Yes



Sr No.	Feature	
d	Extended Storage (SAN/NAS/DAS) support	Support- Yes
е	Archiving	Support- Yes
f	Instant Playback	Support- Yes
g	Frame by Frame or Variable Playback Speeds	Support- Yes
h	Synchronized Playback	Support- Yes (4 or 9)
i	Privacy Masking	Support- Yes
j	Watermarking on all recorded videos	Support- Yes
6	Search	
а	VMD search	Support- Yes
b	Thumbnail Search	Support- Yes
С	Timeline Search	Support- Yes
7	Export	
а	Snapshot (Capture JPEG or Print Live Snapshots)	Support- Yes
b	Video Export	AVI, EXE
С	Multi-Camera Export	Support- Yes
d	Media Player included as a standalone application	Support- Yes
е	Watermarking/Video Export Encryption	Support- Yes
8	Audio	
а	2-Way Audio	Support- Yes
b	Live Audio	Support- Yes
С	Audio Recording	Support- Yes
d	(Camera) Audio inputs and outputs support	Support- Yes
9	PTZ (Pan-Tilt-Zoom)	
а	PTZ Control	Support- Yes
b	Digital PTZ Control	Support- Yes
С	Drag Zoom (Zoom on Marked Area)	Support- Yes
d	Go to Preset Positions	Support- Yes
е	Preset Patrolling (Preset Touring)	Support- Yes
f	Priority control for PTZ operation	Support- Yes
10	Notifications and Automation (Alarms)	



Sr No.	Feature	
а	Pop-up live windows with alarmed cameras on alarm	Support- Yes
b	Instant Playback on alarm	Support- Yes
с	Sound alert on alarm	Support- Yes
d	Door control on alarm	Support- Yes
е	Record on alarm	Support- Yes
f	Swtich camera, layout or audio on alarm	Support- Yes
g	Email Notification with Text, JPEG or AVI clip	Support- Yes
h	Alarm on recognized license plate	Support- Yes
i	Ability to schedule when alarms will go off (i.e. after	Support- Yes
i	Alert when camera is down	Support-Yes
」 11	Facility Mans	
	Muti-Lavered Facility Man	Support-Yes
u h	Highlighting icons on alarm	Support-Yes
0		Support- Yes
d	View icon to display a pro-defined view	Support- Yes
u	Putton icon to trigger pro defined actions	Support Vos
e	Simple actus requires IPEC PMP or CIE images and	Support- res
f	drags and drops icons of maps, campras, layouts or	Support-Vos
1	doors on man images	Support- Tes
0	Location of plarms on man	Support-Voc
y b		Support- res
n :		Cuppert Vee
:	Fallover Recording Servers	Support- Yes
J	Storage configurable to group or individual Cameras	Support- Yes
ĸ	Clients connect to Independent Systems (Federated)	Support- Yes
1	System Health Monitor	Support- Yes
m	Enterprise config tool to setup system-wide cameras	Support- Yes
n	Support Virtualization Platforms	Support- Yes
0	Pure 64-bit Architecture	Support- Yes
р	Active Directory Support	Support- Yes
12	Web Client Features	



Sr No.	Feature	
а	View live and recorded video from any camera	Support- Yes
b	Access to all cameras in the system (so long as admin)	Support- Yes
С	View cameras in custom layouts	Support- Yes
d	PTZ control	Support- Yes
е	Facility Map support	Support- Yes
f	Timeline	Support- Yes
g	Bookmark	Support- Yes
h	Export	Support- Yes
i	System Configuration	Support- Yes
j	Restrict users views to specific cameras within web client	Support- Yes
k	IE, Safari, FF, Opera, and Chrome compatibility	Support- Yes
1	Mac support via web client	Support- Yes
13	Mobile Client Features	
а	iPad / iPhone app (free unless otherwise noted)	Support- Yes
b	Android app (free unless otherwise noted)	Support- Yes
С	Auto Import Cameras/Servers	Support- Yes
d	Stream Full Resolution with H.264	Support- Yes
е	View live and recorded video from any camera	Support- Yes
f	Adjustable frame rate	Support- Yes
g	Custom Layouts within application	Support- Yes
h	Facility Maps support	Support- Yes
i	Control PTZ from Mobile	Support- Yes
j	Email Full Resolution Snapshot	Support- Yes
k	Enable rules manager on mobile device	Support- Yes
I	Trigger I/O from mobile	Support- Yes
m	Motion Log	Support- Yes
n	System Diagnostic Information and Logs	Support- Yes
0	Approved Make	Support- Yes



6 System configuration detailed design

Bidder should give full system configuration giving diagram and detailed placement of each components/ sub systems along with technical bid.

7 On-Site Resident Engineer for Support:

Adequate manpower should be available for onsite support as and when required to keep the system in working condition. All manpower deployed should be on payroll of the company. Man power deployed will carry out:

- 1 Preventive and routine maintenance of the system.
- 2 Maintenance and bug management of the system
- 3 Operation of system Data base management
- 4 Assist NFAI in regular operation of the system
- 5 Any other work to keep system always available in working Condition

8 Document:

Operation and service manuals for each items supplied to be provided. Service Manuals will provide complete system details like operation, & maintenance of system with details configuration, relevant lay out, diagram and drawings.

9 Inspection & Acceptance:

9.1. Acceptance Test will be conducted as follows:

- a) A National Film Archive of India or any Team constituted by NFAI reserves the right to inspect all active/Passive equipment/material procured/provided under this project. The cost of all such tests shall be borne by the Bidder. Any inspected goods fail to conform the specification after installation, the National Film Archive of India may reject them and the Bidder shall have to replace the rejected goods. In case of inspection waiver the same shall be obtained before the dispatch of goods. Inspection of rest of material shall be done at site by the Engineer-In-Charge. Sample approval should be obtained before installation of such material. The Inspection shall be on premise inspection on site at NFAI.
- b) The first step will involve successful installation of all sites. The provisional acceptance of these sites will be defined as Partial Acceptance.
- c) Final Acceptance Test (FAT): After successful installation of the equipment/Material in accordance with the requirements as mentioned in Contract, Final Acceptance Test



will be conducted. After successful testing, Acceptance Test Certificate will be issued by National Film Archive of India.

- d) The date on which Acceptance certificate is issued shall be deemed to be the date of successful commissioning of the Equipment/Material.
- e) Any delay by the Bidder in the Acceptance Testing shall render the Bidder liable to the imposition of appropriate Penalties.
- f) All goods and services should have approval of TEC (wherever applicable) with ISI or other certification, as applicable, to prove the quality standards applicable in India.
- 9.2. IP Base Surveillance CCTV system with all the equipment, cable and other materials are to be inspected at Factory/Bidder Warehouse the Team constituted by National Film Archive of India before dispatch. The readiness is to be informed for this inspection.
- 9.3. Bidder shall provide details of Acceptance Test Procedure (ATP) to National Film Archive of India as per tender specifications & will demonstrate system specifications as per ATP to National Film Archive of India. During ATP Bidder shall use their own tools, equipment. National Film Archive of India will not provide any test instrument/tools.
- 9.4. Final payment will be made after satisfactory testing, commissioning and acceptance of the complete system.
- 9.5. The system will be considered as installed and accepted only after successful uninterrupted operation of the entire system at site for period of minimum 30 days.

10 Technical Terms and Conditions

national film archive of India order Reve alabered

- **10.1** Both the Camera Types and the Monitoring and Control Software has to be from a single Bidder only to ensure proper integration. All Switches have to be from a single Bidder for ease of maintenance.
- **10.2** Terms & conditions compliance statement must be attached with technical bid. Bidder must quote for all items as listed in the specifications. The specifications of the



total system shall be as per specifications or better.

- 10.3 Bidder has to comply with each and every line item of this RFP.
- 10.4 Bidder must quote for standard 'make' items and Specify 'name of the manufacturer', make' & 'model' of the items along with product catalogue. Detail bill of material must be provided by the Bidder in the technical Section along with all Makes, Model nos.
- **10.5** Any additional details about compliance, non-compliance (Deviation) or additional feature about quoted items must be described separately in the annexure.
- **10.6** Bidder has to take up the contract on turnkey basis job, i.e. procurement, installation, commissioning and operation of the entire system (all elements included) to the entire satisfaction of National Film Archive of India
- **10.7** In case any Bidder not meeting technical specifications for any system/sub-system as per tender, it should be clearly mentioned separately in technical offer specifying details of deviation.
- **10.8** Bidder will quote all the items as per specification in price bids. Part offer will be rejected.
- **10.9** After laying of the various types of the cables and mounting the poles and cameras, Bidder will carry out related finishing and civil work as it was.
- **10.10** If any item is not quoted in price bid by the Bidder and it is required to implement this project, Bidder will supply all the required items without paying any extra cost as this is a turnkey job.
- **10.11** Bidder will lay and supply all types of cable like OFC, UTP, Power Cable, etc. Cable length shown in bill of material is approximate and payment of the cable laying and supplying will be on actual basis. (per meter)

10.12 Warranty support : Warranty Terms

All goods/materials (including Cabling) / Labour work shall be supplied/carried out strictly in accordance with the specifications, drawings, datasheets, other attachments and conditions stated in the Bid/Order/LOL. All materials supplied by the Bidder shall be guaranteed to be of the best quality of their respective kinds and shall be free from faulty design, workmanship and materials.



The Bidder shall be responsible for the warranty support and also for the post warranty support and as required by the National Film Archive of India.

- 1. In case of failure, the Bidder needs to replace or repair the faulty part/component/device to restore the services at the earliest <u>during the warranty</u> <u>period of 5 years from the date of acceptance of entire system with all subcomponents used in the project.</u>
- 2. It is Bidder's responsibility to keep the system in good working condition with minimum down time. Down Time should not be more than 30 minutes per camera per day at an average throughout the warranty period. The system should be up for more than 98% in a Quarter.
- 3. The Bidder is responsible for maintaining uptime as under:
 - Computers: At least one Monitoring work station always up (100%)
 - Network/Fiber: Central Switches 99% uptime per Quarter
 - Camera units:98% uptime per Quarter
- Local office: Bidder/Contractor shall have Pune based local office with a full fledged support facility. Bidder to give the list of the support staff and their capabilities along with technical bid.
- 5. The cost of the repairing or replacement of faulty part/component/device has to be entirely born by the Bidder.
- 6. In the event of default originating with the design, material arising at any time during the warranty period, the Bidder shall replace as may be necessary to ensure the material should function in accordance with the specification and to fulfill the foregoing Warranty without any delay.
- 7. The Bidder shall warrant that every work executed under the contract shall be free from all defects and faults in material, workmanship etc during warranty period.
- 8. In the event, the materials supplied do not meet the specifications and/or are not in accordance with the drawings data in terms of this order, and rectification is required at site, NATIONAL FILM ARCHIVE OF INDIA shall notify the Bidder giving full details of difference. The Bidder shall attend the site within seven (7)days of receipt of such notice to meet and agree with representatives of



National Film Archive of India, the action required to correct the deficiency. Should the Bidder fail to attend meeting at site within the time specified above, National Film Archive of India shall be at liberty to rectify the work/materials and Bidder shall reimburse National Film Archive of India all costs and expenses incurred in connection with such trouble or defect with appropriate penalty.

- All expenses related to part/component/device, including hiring of specialized technical expertise, in case required, has to be borne by the Bidder during warranty period.
- 10. The Bidder also has to make alternate arrangement in case of major failure happening in the network, due to which services may be affected for longer period.
- 11. After repairing or replacement of the part/component/device, the Bidder needs to put the same into operation.
- 12. Bidder has to assure back to back warranty from respective OEM are produced and assure National Film Archive of India's requirements are met. Bidder is also required to provide the certificate or proof for the same as and when requested.

10.13 Complaint Registration :

Complaint shall be sent by Email, telephone or by any other means. The Bidder should provide name, address and telephone number of the contact person in Pune who shall be available 24 hours 7 days (other than site engineer/s) to be contacted. It is desirable to provide Office & mobile telephone numbers of site engineer.

10.14 Response Time:

The Bidder should attend the call immediately on receipt of the complaint and repair the system within 2 Hours of the receipt of the complaint. If it is not possible to repair the system within stipulated time frame, the Bidder should replace within 4 Hrs the defective part. The original defective part may be repaired and replaced later on at the earliest.



10.15 The Down time:

If any, will be accounted only if the fault/defect is not rectified (except for spare replacement) within 4 Hrs and will be calculated (on quarterly basis) from time at which the complaint is lodged. If spare replacement is required, it shall be done within 24 Hours of the Call log time. Up time shall be as follows:

- Computers: At least one Monitoring work station always up (100 %) overall 95 %
- 2. Network/Fiber: Central Switches 99% uptime
- 3. Camera units: 99% at each point.

10.16 COMMERCIAL TERMS

- 1. The prices quoted by Bidder should be for delivery at the premises of the National Film Archive of India, Pune including transportation etc.
- 2. VAT/GST extra as applicable (Please indicate the percentage). Also indicate on which item the taxes are applicable (as per the price bid format).
- 3. Percentage of Service Tax extra as applicable. Also indicate on which item the Service Tax is applicable (as per the price bid format)
- **4.** Warranty: Bidder must give five years on site warranty from the date of acceptance for entire system with all the sub components used in the project.
- 5. The warranty is comprehensive with spares. It does not include consumable like printer cartridges, Blue Ray disk, papers etc.
- 6. Additional AMC charges, year wise from sixth year onwards will match sixth year onwards AMC charges as per the lowest Bidder.
- 7. All the Bidder should quote as per "TENDER PRICE" as per Table-2.
- 8. The Bidder should provide the list of consumable item along with Technical bid.

11 Payment Terms



Sr.	Milastana	Payment in % terms
No	winestone	(excluding AMC charges)
1	Mobilization Advance	10%
	At the time of Issuance of Work Order / Contract signing	
2	After submission of Performance Bank Guarantee as	30%
	mentioned in respective clause and after receipt of	
	deliveries of Material at destinations within 30 days from	
	LOI/Work Order.	
3	On successful laying and commissioning of the OFC	40%
	cables between Phase 1 and Phase 2 for connectivity	
	and after conducting a successful trial run of the entire	
	system for a period of 10 days and to the satisfaction	
	level of NFAI	
4	After successful installation and commissioning of	15%
	System as per Contract Agreement and Successful	
	Final Acceptance Test (FAT) by NFAI officials.	
6	After successful completion of Warranty period as	5%
	specified in clause Warranty Terms.	
7	Annual Maintenance Contract	Distributed equally in 20
	Annual Maintenance Contract charges to be initiated after	quarters and payable at the
	successful completion of the warranty period.	end of the quarter
	Note: This shall be the "C" of Table 4 as mentioned in	
	Annexure-4 Template for financial proposal	

12 Service support & Annual Maintenance Contract charges (AMC):

- 11.1 Bidder will provide spares & service support for 5 years. Service support commitment in writing should be given for all the supplied items from OEM on his letterhead duly signed by a competent authority.
- 11.2 OFC laying charges per meter will be On actual basis (Per Meter).
- 11.3 Installation and commissioning is in the scope of contract.
- 11.4 Bidder will provide Delivery, installation, commissioning and acceptance schedule along with technical bid.



- a) Time required for delivery after placement of order.
- b) Time required for installation & commissioning after supply.
- c) Time required for getting our acceptance after commissioning.
- 11.6 Bidder has to provide a copy of the price bid/Commercial bid format without indicating prices to this part. This is to ensure that you are quoting all the items as per our format, since Price Bid will not be opened initially.

13 Penalty Clause

13.1 Penalties for delay in implementation:

- 12.1 Failure to complete the Installation/Commissioning/ Acceptance If the Bidder fails to complete the Installation/Commissioning/ Acceptance within the time period(S)specified in the LOI/Order/Instruction, National Film Archive of India, Pune may, without prejudice to its other remedies under the Agreement, levy as Penalties a sum equivalent to 10% of the algebraic sum of the cost for the equipment installed at that particular site/sites, for each week or part thereof of delay, until actual delivery of performance. If the delay continues beyond 10 weeks, NFAI Pune may terminate the Agreement. However NFAI may consider extension of time for completion of the assigned job on proper justification being given.
- 12.2 If the Bidder fails to perform the contract the Earnest Money Deposit (EMD) shall be forfeited.
- 12.3 If NFAI fails to provide space and related clearances for installation of the equipment at designated site/sites, within 30 days from written instruction given to Bidder to carry out the job as per the agreement terms, as a result of which the installation of the equipment is delayed and the Bidder is not able to adhere to the schedule for completing the Acceptance Tests. In such an event the Bidder will prove the Acceptance Test with the completed sites and if the tests are accomplished within the scheduled time according to the Third Party Agency then the Operator will be deemed to have completed the Acceptance according to the schedule and NFAI will be required to pay the Operator as per agreement terms.



13.2 Operational Penalties:

The Bidder shall repair/ replace all faulty material covered under the warranty within the shortest possible time thus ensuring minimum downtime as mentioned at Clause "Warranty Terms", failing which applicable penalty will be imposed. The following penalties for Operational Deficiencies shall apply:

The Bidder shall be responsible for maintaining the desired performance and availability of the system/services. Bidder should ensure the prompt service support during warranty period as under:

If the Bidder fails to attend the call as specified above, the following penalty will be imposed on each delayed day, which will be recovered against due payment of Bidder/PBG:

Penalty/Day. For each day, if	Penalty/Day. For each day, if
Problem is not resolved	problem is not resolved after 2
within 30 minutes from complaint	days from complaint lodged.
10,000/- per day.	20,000/- per day.

14 Performance Guarantee

- 13.1 NFAI will require the selected Bidder to provide a Performance Bank Guarantee, within 15 days from the Notification of Award, for a value equivalent to 10% of the Total Cost of the Contract. The Performance Guarantee should be valid for the entire duration of the project. The Performance Guarantee should contain a claim period of 15 days from the last date of validity.
- 13.2 The selected Bidder shall be responsible for extending the validity date and claim period of the Performance Guarantee at least 2 months before the expiry of its validity. In case the selected bidder fails to submit the renewed performance guarantee before 20 days of expiry of its validity, NFAI at its discretion shall invoke the performance bank guarantee without giving any notice what so ever to the



bidder.

13.3 In case the selected bidder fails to discharge their contractual obligations during the period or NFAI incurs any loss due to bidder's negligence in carrying out the project implementation as per the agreed terms & conditions, NFAI may at its discretion shall invoke performance bank guarantee.



15 Annexure

15.1 Annexure –1 Bill of Quantity of Cameras and Network Active / Passive Components

Cameras

S. No	Description	Quantity	Unit of Measurement
1	40m. PTZ Camera	4	Nos
2	30m DOME Camera	40	Nos
3	50m Box Camera	6	Nos
4	30m Bullet Camera	9	Nos

SAN Switch Tape Library, HSM and Backup solution

Sr No.	Name	Feature	Quantity	Unit of Measurement
1	SAN Switch	24 Port SAN Switch with 24 Port Licenses + 24,8/16 GBPS SFP for SAN Switch	1	Nos
2	Tape Library	As per mention in clause 5.9	1	Nos
3	Backup Solution	As per Mention in clause 5.9	1	Nos
4	Unified Storage	As per mention in 5.12	50	ТВ

NETWORKING Active / Passive COMPONENTS

S. No	Description	Quantity	Unit of Measurement
1	24 Port POE+ Switch with minimum 2 SFP Port	10	Nos
5	1G SFP Modules Multi mode	4	Nos
6	Cat 6 Cable	11	Box
7	Cat 5e STP Cable	6	Box
8	Cat 6 24 Port Loaded Patch Panel	3	Nos.



S. No	Description	Quantity	Unit of Measurement
9	Cat 6 1 mtr Patch chord	90	Nos.
10	9 U Rack	6	Nos
11	1KVA Rack Mountable Ups with min 10 Minutes backup	6	Nos.
11	12 port Loaded LIU multimode	4	Nos
12	6 core OFC Multimode	450	Mtrs
13	SC-SC Patch Cord	4	Nos
14	25 mm HDPE Pipe	300	Mtr
15	GI Pipe 2" Inch	20	Mtr
16	Casing Patti` 1"	1	Nos
17	Casing Patti 2"	1	Nos
18	PVC Pipe 1 "	1	Nos

Other Components

S. No	Item Description	Quantity
1.	Supply and Installation of CCTV Camera System with VMS, Video Analysis software (quantity and Specifications as per attached document)	1
2.	Network Rack, Rack mountable UPS (details attached)	2
3	40" Video Display units	2
4	Servers	2
5	Firewall hardware	1
6	Supply, Installation, Testing, Commissioning of 2 Rack Integrated modular Data Center Infrastructure for Server Room with Comprehensive onsite warranty for 5 years on TURNKEY BASIS	1
7	Supply, Installation, Testing, Commissioning of Unified Storage of 50	1


	TB, with SAN Switch.	
8	LTO 7, Tape Library with 2 Nos. of LTO 7 Drives + File System	1
	licenses with backup software solution	



15.2 Annexure-2 Format for Performance Bank Guarantee

<<On Rs. 500 Stamp paper>>

To,

Administrative Officer, National Film Archive of India (NFAI), Law College road, Pune – 411004

Whereas, <<name of the bidder and address>> (hereinafter called "the bidder") has undertaken, in pursuance of contract no. <Insert Contract No.> dated. <Date> to provide Implementation services for <<name of the assignment>> to NFAI (hereinafter called "the employer")

And whereas it has been stipulated by in the said contract that the bidder shall furnish you with a bank guarantee by a recognized bank for the sum specified therein as security for compliance with its obligations in accordance with the contract;

And whereas we, <Name of Bank> a banking company incorporated and having its head /registered office at <Address of Registered Office> and having one of its office at <Address of Local Office> have agreed to give the supplier such a bank guarantee.

Now, therefore, we hereby affirm that we are guarantors and responsible to you, on behalf of the bidder, up to a total of Rs.<Insert Value> (Rupees <Insert Value in Words> only) and we undertake to pay you, upon your first written demand declaring the bidder to be in default under the contract and without cavil or argument, any sum or sums within the limits of Rs. <Insert Value> (Rupees <Insert Value in Words> only) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the bidder before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the contract to be performed there under or of any of the contract documents which may be made between you and the Bidder shall in any way release us from any liability under this guarantee and we hereby waive notice of any such change, addition or modification.

This Guarantee shall be valid until <<Insert Date>>)

Notwithstanding anything contained herein:

- a. Our liability under this Bank Guarantee shall not exceed Rs. <<Amount in figures>> (Rupees <<Amount in words>> only)
- b. This Bank Guarantee shall be valid upto <<insert date>>)
- c. It is condition of our liability for payment of the guaranteed amount or any part thereof arising under this Bank Guarantee that we receive a valid written claim or demand for payment under this Bank Guarantee on or before <<insert date>>) failing which our liability under the guarantee will automatically cease.

(Authorized Signatory of the Bank)

Seal:

Date:



15.3 Annexure-3 Manufacturers' / Producers' Authorization Form

(This form has to be provided by all the OEMs for their respective products that are proposed in the Proposal)

Date:

Letter No. To: Officer on Special Duty, National Film Heritage Mission, National Film Archive of India, Law College Road, Pune – 411 004.

Subject: OEM Authorization Letter Dear Sir:

Ref: Your RFP Ref: [*] dated [*]

We who reputable manufacturers producers of established and are 1 having factories / development facilities at (address of factory / facility) do hereby authorize M/s ___ (Name and address of Bidder) to submit a Bid, and sign the contract with you against the above Bid Invitation for the project of "Supply, Installation, Implementation, Testing, Commissioning and Maintenance of CCTV surveillance system at NFAI, Pune"

We hereby extend our full guarantee and warranty for the Solution, Products and services offered by the above firm against this Bid Invitation.

We also undertake to provide any or all of the following materials, notifications, and information pertaining to the Products manufactured or distributed by the Supplier:

- a. Such Products as the Employer may opt to purchase from the Supplier, provided, that this option shall not relieve the Supplier of any warranty obligations under the Contract; and
- b. In the event of termination of production of such Products:
 - i. Advance notification to the Employer of the pending termination, in sufficient time to permit the Employer to procure needed requirements; and
 - ii. Following such termination, furnishing at no cost to the Employer, the blueprints, design documents, operations manuals, standards, source codes and specifications of the Products, if requested.

We duly authorize the said bidder / prime bidder to act on our behalf in fulfilling all installations, Technical support and maintenance obligations required by the contract.

Yours faithfully, (Name) (Name of Producers)

Note: This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to bind the manufacturer. The Bidder in its Bid should include it in original.



15.4 Annexure-4 Template for financial proposal

Section A. Letter Format for Financial Proposal

(To be submitted on the Letterhead of the bidder)

[Location, Date]

То

Officer on Special Duty,

National Film Heritage Mission,

National Film Archive of India,

Law College Road,

Pune – 411 004

Ref: RFP Notification no <<>>

Subject: Submission of Financial proposal in response to the RFP for "IP BASED CCTV Surveillance System at National Film Archive of India,"

Dear Sir,

1. We, the undersigned, having read and examined in detail all the bidding documents in respect to IP BASED CCTV Surveillance System at National Film Archive of India, do hereby propose to provide our services as specified in the RFP.

2. **Price and Validity:** All the prices mentioned in our bid are in accordance with the terms as specified in the bidding documents. All the prices and other terms and conditions of this bid are valid for a period of 180 days from the date of opening of bids.

3. **Taxes:** We have studied the clause relating to Indian Income Tax and hereby declare that if any applicable direct or indirect taxes (Foreign, Central or State or Local), rates, duties, charges and levies (Foreign, Central or State or Local), except Service tax is altered under the law, we shall pay the same. If applicable, all taxes, duties, levies and charges which are to be paid for the delivery of services have been paid by the Bidders in their respective countries.

4. **Deviations:** We hereby declare that all terms and conditions mentioned in RFP (all volumes, Annexures and Corrigendum) are acceptable to us without any deviation and all the services shall be performed strictly in accordance with the bid documents.



5. **Unit Rates:** We have indicated in the relevant schedules enclosed, the unit rates for the purpose of on account of payment as well as for price adjustment in case of any increase to / decrease from the scope of work under the contract.

6. **Qualifying Data:** We confirm having submitted the information as required by you in your Instruction to Bidders. In case you require any other further information/documentary proof in this regard before evaluation of our Tender, we agree to furnish the same in time to your satisfaction.

7. **Contract Performance Guarantee:** We hereby declare that in case the contract is awarded to us, we shall submit the contract performance guarantee bond in the form prescribed in 15.2 annexure – 2.

8. **Bid Prices:** We offer to provide the services for [*Insert title of assignment*] in accordance with your Request for Proposal dated [*Insert Date*] and our Technical Proposal. Our attached Financial Proposal is for the sum of [*Insert amount(s) in words and figures*]. We are aware that any conditional financial offer will be outright rejected by NFAI. This amount is inclusive of taxes except service tax as listed at (Consolidated Cost Summary) attached.

9. We hereby declare that our bid is made in good faith, without collusion or fraud and the information contained in the bid is true and correct to the best of our knowledge and belief.

10. We understand that our bid is binding on us and that you are not bound to accept a Bid you receive. We confirm that all the members of Consortium, if any are jointly and severally responsible for this commercial offer.

We are aware that NFAI reserves the right to accept or reject any or all bids without assigning any reasons thereof.

We remain,

Yours sincerely,

Authorized Signature [*In full and initials*]: Name and Title of Signatory: Date and Stamp of the signatory Name of Firm:





Section B

Table 1 – Summary

Sr. No.	Item-wise Amounts (Inclusive of all Taxes)	Total Amount (Rs.)
Α	Cost of equipment and accessories as per Table – 2	
В	Implementation Cost as per Table – 3	
С	Maintenance and support (AMC) as per Table – 4	
Grar (This	nd Total in words (A+B+C): s figure shall be used for evaluation of financial proposals).	<u>"GT"</u>

Table 2

S.No	Description	Qty	UoM	Make / Model	Unit Price (Inclusive of all applicable Taxes) Rs.	Total Price (Rs.)
А	В	С	D	E	F	G = C X F
1	40m. PTZ Camera (Ref. 5.1)	4	Nos			
2	30m DOME Camera (Ref. 5.2)	40	Nos			
3	50m Box Camera (Ref 5.2)	6	Nos			
4	30m Bullet Camera (Ref. 5.3)	9	Nos			
5	24 Port POE+ Switch with minimum 2 SFP Port	10	Nos			
6	1G SFP Modules Multi mode	4	Nos			
7	Cat 6 Cable	11	Box			
8	Cat 5e STP Cable	6	Box			
9	Cat 6 24 Port Loaded Patch	3	Nos.			



S.No	Description	Qty	UoM	Make / Model	Unit Price (Inclusive of all applicable Taxes) Rs.	Total Price (Rs.)
А	В	С	D	E	F	G = C X F
	Panel					
10	Cat 6 1 mtr Patch chord	90	Nos.			
11	9 U Rack	6	Nos			
12	1KVA Rack Mountable Ups with min 10 Minutes backup	6	Nos.			
13	12 port Loaded LIU multimode	4	Nos			
14	6 core OFC Multimode	450	Mtrs			
15	SC-SC Patch Cord	4	Nos			
16	25 mm HDPE Pipe	300	Mtr			
17	GI Pipe 2" Inch	20	Mtr			
18	Casing Patti 1"	1	Nos			
19	Casing Patti 2"	1	Nos			
20	PVC Pipe 1 "	1	Nos			
21	Tape Library	1	Nos			
22	SAN Switch	1	Nos			
23	Backup Solution	1	Nos			
24	Unified Storage	50	ТВ			
25	Software (Provide details e.g. No of licenses, components)					
Granc (This	l Total in words - figure shall be used for evaluat	ion of t	financial	proposals).		<u>"A"</u>



Table 3 – Implementation Cost

Sr. No.	Item-wise Amounts (Inclusive of all Taxes)	Total Amount (Rs.)
1	Charges of the services related design, installations, commissioning and implementation of the CCTV network at NFAI.	
Gran (This	<u>"B"</u>	

Table 4 – Maintenance & Supports

Sr. No.	Item-wise Amounts (Inclusive of all Taxes)	Year (1) Amount (Rs.)	Year (2) Amount (Rs.)	Year (3) Amount (Rs.)	Year (4) Amount (Rs.)	Year (5) Amount (Rs.)	Total Amount (Rs.)
1	Cost of the m	naintenance	e and supp	orts			= Y1+Y2+Y3+Y4+Y5
1.1	Equipments						
1.2	Software						
1.3	Helpdesk Support						
Grand Total in words - (This figure shall be used for evaluation of financial proposals).					<u>"C"</u>		

Note:

* "GT" shall be used for arriving at the lowest Financial Bidder, where "GT" = "A" + "B" + "C" in tables 1, 2, 3 and 4 above

* In case of discrepancy in values in figures and word, the value in words shall be considered as final and will be used for financial calculations of Bidder

* Prices quoted should be inclusive of all applicable taxes



- * Rate per unit shall be used to arrive at the
- * The rates quoted shall remain effective and same throughout the contract period
- * This rate per unit shall be considered for commercial calculation to be paid to the selected Bidder

* The payment to the Bidder shall be made on the actual work performed by the Selected Bidder as per the quoted unit rates.



15.5 Annexure 5 – Technical Compliance Sheets

15.5.1 Table 1 Compliance sheet for IP – Network PTZ Camera (IR -50 Mtr)

Sr. No.	Feature	Parameter	Compliance / Non Compliance	Remark
1	Image Sensor	1/3 type 2 Megapixel sensor		
2	Scanning	Progressive scan		
3	Minimum Illumination	Color: 0.56 lx, B/W: 0.07 lx at F1.4 or better		
4	Image Resolution	1920X1080 or better, 30 fps		
5	Compression	Multiple H.264 high profile, JPEG		
6	No of streams	Minimum 3 streams at different resolution and bit rate		
7	Day/Night	True Day/Night with IR cut filter		
8	Focal Length	4.5 mm - 128 mm or better, 30X optical zoom		
9	Digital zoom	Minimum 10X		
10	Inter-operability	ONVIF profile S, G Compliant		
11	Wide Dynamic range	True WDR 100 dB or more		
12	Intelligent Compression	50% reduction in bandwidth during zero motion with same fps and resolution		
13	Anti corrosive Body	Camera shall be protected from salty environment. Suitable body shall be provided		
14	Pan Tilt Motor	Gear based drive preferred instead of belt drive		
15	AGC	Shall be available		
16	Digital Noise Reduction	3 D noise reduction		
17	VMD	Minimum 3 area with different		



Sr. No.	Feature	Parameter	Compliance / Non Compliance	Remark
		sensivity levels		
18	Image Stabilization	Shall be available		
19	Panning	360° endless		
20	Tilt	-90 to +90 deg		
21	Image Stabilization	Camera shall have sufficient hardware as well as software design to withstand wind speed of 200 Km/hr and give stable image		
22	IR Range	Adaptive IR 150 mtrs or more		
23	Humidity	Inbuilt mechanism to remove humidity in the camera body		
24	Camera Rating	IP67		
25	Outdoor performance	Camera shall be equipped with wiper & defroster		
	Impact Protection	Ik10 rated		
26	Power	External power as specified by OEM		
27	Alarm	3 Terminal inputs, VMD Alarm Action :SD memory recording, E- mail notification, Camera positioning, FTP image transfer, Terminal output, Auto tracking		
28	Certification	UL, CE		
29	Mount	Both vertically upward as well as downward shall be possible		
30	Approved makes	Axis, Panasonic, Bosch, Sony		



15.5.2 Table 2 Compliance Sheet for Dome camera Specification (IR – 30 Mtr)

Sr. No.	Feature	Parameter	Compliance/ Non Compliance	Remark
1	Sensor	Image Sensor 1/3 type CCD/CMOS/MOS Sensor		
2	Scanning	Progressive scan		
_	Minimum	Color 0.5 lux and B/W:		
3	Illumination	0.02 lux F1.4 or better		
4	White Balance	Shall be available		
5	Light Control	indoor/outdoor mode selection, High light compensation to reduce vehicle head light impact		
	Shutter Speed	min. 1/30 - 1/10000		
6	Dynamic Range	Min. 130dB True WDR		
7	Intelligent Compression	50% reduction in bandwidth during zero motion with same fps and resolution		
8	IR illumination	Integrated IR Illumination for 30 mtrs / 50 mtrs		
9	AGC	Shall be available		
10	No. Of Streams	Min. 3 streams or more at H.264 high profile with 1 JPEG. Total 4 streams		
11	Alarms	Minimum 2 terminals		
12	Audio	2 Way Audio		
13	Back focus adjustment	automatic with hardware button and web based control		
14	Certification	CE, UL		
15	Firmware upgrade	Free for next 5 yeas		
16	SDXC memory card slot	SDXC slot, Prereabally SD card shall be locked with password and recorded video shall have alterdation detection		
17	Supported Image Resolution	H.264: 2,048 x 1,536 @ 30 fps and 1920X1080 resolution should support 60 fps		
18	Network	RJ45, IPv4 & Ipv6 compliant		
19	Interoperability	ONVIF profile S compliant, should be		



Sr. No.	Feature	Parameter	Compliance/ Non Compliance	Remark
		listed on ONVIF site		
20	Remote view	shall be possible to view		
20		on mobile / Remote PC		
21	Outdoor	Auto IRIS and Auto ELC		
21	Installation			
22	Power	PoE, 12 V DC		
22	Long	3-9mm or better,		
23	Lens	motorised		
24	Temperature	-10 to + 50 deg C		
		Minimum 3		
25	Motion	programmable areas with		
25	Detection	atleast 10 sensitivity		
		levels		
	Outdoor	Integrated IP66 with		
26	Housing	mount, lk10 rated, inbuilt		
	Housing	dehumidifcation		



15.5.3 Table 3 Compliance sheet for Bullet Camera (30 Mtr)

Sr. No.	Feature	Parameter	Compliance/ Non Compliance	Remark
1	Sensor	Image Sensor 1/3 type CCD/CMOS/MOS Sensor		
2	Scanning	Progressive scan		
3	Minimum Illumination	Color 0.5 lux and B/W: 0.02 lux F1.4 or better		
4	White Balance	Shall be available		
5	Light Control	indoor/outdoor mode selection, High light compensation to reduce vehicle head light impact		
	Shutter Speed	min. 1/30 - 1/10000		
6	Dynamic Range	Min. 130dB True WDR		
7	Intelligent Compression	50% reduction in bandwidth during zero motion with same fps and resolution		
8	IR illumination	Integrated IR Illumination		
9	AGC	Shall be available		
10	No. Of Streams	Min. 3 streams or more at H.264 high profile with 1 JPEG. Total 4 streams		
11	Alarms	Minimum 2 terminals		
12	Audio	2 Way Audio		
13	Back focus adjustment	automatic with hardware button and web based control		
14	Certification	CE, UL		
15	Firmware upgrade	Free for next 5 yeas		
16	SDXC memory card slot	SDXC slot, Prereabally SD card shall be locked with password and recorded video shall have alterdation detection		
17	Supported Image Resolution	H.264: 2,048 x 1,536 and 1920X1080 resolution should support 30 fps		
18	Network	RJ45, IPv4 & Ipv6 compliant		
19	Interoperability	ONVIF profile S compliant, should be listed on ONVIF site		



Sr. No.	Feature	Parameter	Compliance/ Non Compliance	Remark
20	Remote view	shall be possible to view on mobile / Remote PC		
21	Outdoor Installation	Auto IRIS and Auto ELC		
22	Power	PoE, 12 V DC		
23	Lens	3-9mm		
24	Temperature	-10 to + 50 deg C		
25	Motion Detection	Minimum 3 programmable areas with atleast 10 sensitivity levels		
26	Outdoor Housing	Integrated IP66 with mount		



Sr.No.	Feature	Parameter	Compliance / Non Compliance	Remark
1	Sensor	Image Sensor 1/3 type CCD/CMOS/MOS Sensor		
2	Scanning	Progressive scan		
3	Minimum Illumination	Color 0.5 lux and B/W: 0.02 lux F1.4 or better		
4	White Balance	Shall be available		
5	Light Control	indoor/outdoor mode selection, High light compensation to reduce vehicle head light impact		
	Shutter Speed	min. 1/30 - 1/10000		
6	Dynamic Range	Min. 130dB True WDR		
7	Intelligent Compression	50% reduction in bandwidth during zero motion with same fps and resolution		
8	IR illumination	50 mtrs range internal / external optional		
9	AGC	Shall be available		
10	No. Of Streams	Min. 3 streams or more at H.264 high profile with 1 JPEG. Total 4 streams		
11	Alarms	Minimum 2 terminals		
12	Audio	2 Way Audio		
13	Back focus adjustment	automatic with hardware button and web based control		
14	Certification	CE, UL, FCC		
15	Firmware upgrade	Free for next 5 yeas		
16	SDXC memory card slot	SDXC slot, Preferablly SD card shall be locked with password and recorded video shall have alterdation detection		
17	Supported Image Resolution	H.264: 2048X1536 @ 30 fps and 1920X1080 resolution should support 60 fps		
18	Network	RJ45, IPv4 & Ipv6 compliant		
19	Interoperatibility	ONVIF profile S compliant, should be listed on ONVIF site		
20	Remote view	shall be possible to view on mobile / Remote PC		
21	Outdoor	Auto IRIS and Auto ELC		

15.5.4 Table 4 Compliance sheet for Box Camera



	Installation		
22	Power	PoE, 12 V DC	
23	Lens	3 MP Lens 3-8/ 8-40mm or better of OEM/Tamaron/Fujinon make	
24	Temperature	-10 to + 50 deg C	
25	Motion Detection	Minimum 3 programmable areas with atleast 10 sensitivity levels	
26	Outdoor Housing	IP66, IK10 rated with mount	



15.5.5 Table 5 LED colour TV FULL HD 40"

Sr. No	Specifications	Compliance/ Non Compliance	Remark
1	Display		
1.1	Resolution: Full HD (1920X1080)		
1.2	LED Backlight: Edge LED		
1.3	Screen Size: 101.6 cm (40 inch)		
1.4	Aspect Ratio:16:9		
1.5	Viewing Angle: 89:89(L: R)/89:89(U: D)		
2	Video Signal		
	1080 / 24P (HDMI TM ONLY).480 / 60L 480 /		
	60P. 576 / 50L 576 / 50P. 720 / 24P (HDMI TM		
	ONLY), 720 / 30P (HDMI TM ONLY),		
	720/60P, 1080 / 60I, 1080 / 50I, 1080 / 30P		
	(HDMI TM ONLY), 1080 / 60P (HDMI TM /		
	COMPONENT), 1080 / 50P (HDMITM /		
2.1	COMPONENT)		
3	Interfaces		
3 1	HDMITM INDUT: 2		
5.1			
3.2	COMPOSITE VIDEO INPUT: 1		
3.3	COMPONENT VIDEO INPUT: 1		
3.4	RF CONNECTION INPUT:1		
3.5	ETHERNET INPUT:1		
3.6	Internet Group Management Protocol (IGMP)		
3.7	USB INPUT: 2		
3.8	AUDIO OUTPUT: 1		
4	Built in Tuner		
4.1	Analogue		
5	Audio		
5.1	Audio Power Output: 8W x2 + 14W		
<u> </u>	DOLBY® DIGITAL / DOLBY® DIGITAL		
5.2	PLUS / DOLBY® PULSE: Yes		
6	Wireless Feature		
61	Built in Wi-Fi® for Media Sharing, Screen		
0.1	Mirroring,Wi-Fi® Direct		
7	Power & Energy Specifications		
	POWER CONSUMPTION (ON MODE /		
7.1	STANDARD): 63 W		
	POWER CONSUMPTION (STANDBY): 0.5		
7.2	W		
7.3	Mode Supported: Power Saving Mode,		



Backlight Off Mode



Nos	Description	Compliance/ Non Compliance	Remark
1	The specification of Wall mount Rack should meet the standards as specified below:		
Α	9U WALL MOUNT RACK		
i	WALL MOUNT 9U X 600 mm Width X 500 mm, Depth, Integrated Side Panels, Single Section, (Grye Color)		
ii	90 CFM ,230 V Fans		
iii	A/C Distribution BOX 5 Socket / 5 Amps		
iv	1U CABLE MANAGER METAL TYPE		
v	MOUNTING HARDWARE PKT OF 10		

15.5.6 Table 6 Compliance sheet for Wall mount Rack Systems



Sr. No	Specifications	Compliance/ Non Compliance	Remark
1	Architecture		
1.1	Shall be 1RU, 19" Rack Mountable		
	24 RJ-45 autosensing 10/100/1000		
1.2	PoE+ports		
	The switch shall support up to four 10-Gigabit		
	ports SFP+ in addition to the above ports,		
	Switch should have one expansion module		
1.3	slot		
1.4	1 RJ-45 Out of band Management port		
1.5	2 GB SDRAM and 512 MB flash		
1.6	Shall have switching capacity of 168 Gbps		
	Shall have up to 154.8 million pps switching		
1.7	throughput		
	Shall provide Gigabit (1000 Mb) Latency of <		
1.8	5 μs and 10 Gbps Latency of < 1.5 μs		
	The switch shall have minimum 740 Watts for		
1.9	PoE Power		
2	Resiliency		
	Shall have the capability to extend the control		
	plane across multiple active switches making		
	it a virtual switching fabric, enabling		
	interconnected switches to perform as single		
	Layer-2 switch and Layer-3 router and switch		
	should support single IP management upto 8		
2.1	Switch		
	The modules/cables to create virtual		
	switching fabric shall be provided, wherever		
2.2	multiple switches are co-located		
	Shall support up to 80 Gbps total stacking		
	bandwidth (full duplex) in a resilient stacking		
2.3	configuration		
2.4	Shall support redundant power supply		
	IEEE 802.1D Spanning Tree Protocol, IEEE		
	802.1w Rapid Spanning Tree Protocol and		
2.5	IEEE 802.1s Multiple Spanning Tree Protocol		
	IEEE 802.3ad Link Aggregation Control		
2.6	Protocol (LACP)		
	Ring protocol support to provide sub-100 ms		
2.7	recovery for ring Ethernet-based topology		
3	Layer 2 Features		
	Shall support up to 4,000 IEEE 802.1Q-		
3.1	based VLANs		
	Shall support GARP VLAN Registration		
3.2	Protocol or equivalent feature to allow		

15.5.7 Table 7 Compliance sheet for LAN Switches (PoE)



Sr. No	Specifications	Compliance/ Non Compliance	Remark
	automatic learning and dynamic assignment of VLANs		
	Shall have the capability to monitor link		
	connectivity and shut down ports at both		
	ends if uni-directional traffic is detected,		
3.3	preventing loops		
	Shall support IEEE 802.1ad QinQ and		
	Selective QinQ to increase the scalability of		
	an Ethernet network by providing a		
3.4	hierarchical structure		
3.5	Shall support Jumbo frames on GbE ports		
3.6	Internet Group Management Protocol (IGMP)		
3.7	Multicast Listener Discovery (MLD) snooping		
3.8	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)		
	Shall support Voice VLAN feature to		
	automatically assigns VLAN and priority to		
3.9	devices like IP phones		
	Layer 3 Features (any additional licenses		
5	required shall be included)		
5.1	Static Routing and RIP V1/V2 for IPv4		
5.2	Static Routing and RIP for IPv6		
	User Datagram Protocol (UDP) helper		
	function to allow UDP broadcasts to be		
5.3	directed across router interfaces		
	Dynamic Host Configuration Protocol (DHCP)		
5.4	client and Relay		
	Proxy ARP to allow normal ARP operation		
5.5	between subnets		
6	QoS and Security Features		
6.1	traffic filtering		
6.2	Shall support global ACL, VLAN ACL, port ACL, and IPv6 ACL		
6.3	Traffic classification using multiple match criteria based on Layer 2, 3, and 4 information		
6.4	Powerful QoS feature supporting strict priority (SP) queuing, weighted round robin (WRR) and SP+WRR		
6.5	Shall support applying QoS policies on a port, VLAN, or whole switch, to set priority level or rate limit selected traffic		
6.6	IEEE 802.1x to provide port-based user authentication with multiple 802.1x		



Sr. No	Specifications	Compliance/ Non Compliance	Remark
	authentication sessions per port		
	Media access control (MAC) authentication to		
6.7	provide simple authentication based on a		
	user's MAC address		
6.0	Dynamic Host Configuration Protocol (DHCP)		
0.0	servers		
6.9	Port security and port isolation		
	STP BPDU port protection to prevent forged		
6.10	BPDU attacks		
	STP Root Guard to protect the root bridge		
6.11	from malicious attacks or configuration		
	mistakes		
6.12	IP Source guard to prevent IP spoofing		
	Dynamic ARP protection blocking ARP		
6.13	broadcasts from unauthorized hosts		
7	Management Features		
	Configuration through the CLI, console,		
7.1	Telnet, SSH and Web Management		
	SNMPv1, v2, and v3 and Remote monitoring		
7.2	(RMON) support		
73	SFIOW (RFC 3176) or equivalent for traffic		
7.5	Management security through multiple		
7.4	privilege levels		
7.5	FTP, TFTP, and Secure FTP support		
	Port mirroring to mirror ingress/egress ACL-		
	selected traffic from a switch port or VLAN to		
7.6	a local or remote switch port		
77	RADIUS/TACACS+ for switch security		
1.1	Network Time Protocol (NTP) or equivalent		
7.8	support		
	Shall have Ethernet OAM (IEEE 802.3ah)		
7.9	management capability		
8	Environmental Features		
8.1	Shall provide support for RoHS and WEEE		
	regulations		
82	efficiency like variable-speed fans, shutoff		
0.2	unused ports etc		
8.3	Operating temperature of 0°C to 45°C		
8.4	Safety and Emission standards including UL		
0.4	60950-1; IEC 60950-1; VCCI Class A; EN		



Sr. No	Specifications	Compliance/ Non Compliance	Remark
	55022 Class A		
	Software Defined Networking (SDN)		
9	Capability		
	OpenFlow protocol capability to enable		
9.1	software-defined networking		
	Allows the separation of data (packet		
	forwarding) and control (routing decision)		
	paths, to be controlled by an external SDN		
9.2	Controller, utilizing Openflow protocol		
10	Warranty and Support		
	The below Warranty shall be offered directly		
	from the switch OEM.		
	Lifetime warranty with advance replacement		
10.1	and next-business-day delivery		
	The Switch should be enterprise class switch		
10.2	and having Full CLI support		



15.5.8 Table 8 Compliance sheet for UTP Cabling System

Sr. No	Description		Compliance / Non Compliance	Remark
1	Specifications of UTP Cablin	g System		
a	The specification of UTP Cat standards as specified below:	oling system should be meet		
i	Туре	Unshielded twisted pair cabling system, TIA / EIA 568-C.1 addendum Category 6 Cabling system		
ii	Networks Supported	10 / 100 Ethernet, 155 Mbps ATM, 1000 Mbps IEEE 802.3ab Ethernet, and proposed Cat 6 Gigabit Ethernet		
iii	TIA / EIA 568-B.1	ERTL, ETL Verified and UL Certified - All three Certificates are mandatory		
iv	IEEE 802.3ab	Zero-bit Error, ETL verified		
v	Warranty	25-year systems warranty; Warranty to cover Bandwidth of the specified and installed cabling system, and the installation costs		
vi	Performance characteristics to be provided along with bid	Attenuation, Pair-to-pair and PS NEXT, ELFEXT and PSELFEXT, Return Loss, ACR and PS ACR for 4-connector channel		
b	The specification of UTP Cat as specified below:	ble should be meet standards		
		ERTL certified		
i	Туре	Unshielded Twisted Pair, Category 6, TIA / EIA 568- B.2		
ii	Conductors	23 AWG solid bare copper		
iii	Insulation	Polyethylene		
iv	Separator	Should be a cross Fluted filler. Any other filler type, like bi-directional strip would not be acceptable.		
v	Jacket	Flame Retardant PVC		
vi	Approvals	UL and ERTL Listed		
vii		ETL verified to TIA / EIA Cat 6		
viii	Operating temperature	-20 Deg. C to +60 Deg. C		
ix	Frequency tested up to	600 MHz		
X	Packing	Box of 305 meters		
xi	Delay Skew	25ns / 100m MAX.		



No Comp. xii Attenuation 22.8dB/100m at 250MHz (or less attenuation values) xiii Impedance 100 Ohms + / - 15 ohms	liance Remark
xiiAttenuation22.8dB/100m at 250MHz (or less attenuation values)xiiiImpedance100 Ohms + / - 15 ohms	
xiii Impedance 100 Ohms + / - 15 ohms	
xiii Impedance 100 Ohms + / - 15 ohms	
Performance characteristics Attenuation, Pair-to-pair	
xiv to be provided along with and PS NEXT, ELFEXT	
hid and PSELFEXT, Return	
Loss, ACR and PS ACR	
c The specification of UTP Jacks should be meet standards	
as specified below:	
Unshielded Twisted Pair,	
Category 6, conform to	
i Type ANSI/IIA/EIA-568-C.2	
Category 6, CENELEC EN	
50173 and ISO/IEC-11801	
(2nd Edition) requirements.	
11 Modular Jack 1000 mating cycles	
111 Wire terminal 200 termination cycles	
iv Accessories Strain relief and bend-	
limiting boot for cable	
v Dust cover	
cover	
vi Housing Poly-phenylene oxide,	
William Hall Palasate OAV Oracle	
VII WIRIng blocks Polycarbonate, 94 V-0 rated	
Phosphorous bronze, plated	
VIII Jack contacts With 1.2/micro-meter thick	
gold	
IX Approvals UL listed	
Performance Characteristics NEXT FEXT and Paturn	
to be provided with bid	
The specification of UTP Lock Papels I OADED should be	
d meet standards as specified below:	
24-port Modular PCB	
based Unshielded Twisted	
i Type Bair Category 6 TIA / FIA	
568-C 2	
ii Ports 24 Ports loaded	
iii Port arrangement Individual keystone type	
iv Category Category 6	
Circuit Identification	
v Scheme Icons on each of 24-ports	
9mm or 12mm Labels on	
vi Port Identification each of 24-ports (to be	
included in supply)	
vii Height 0.5 U	
viii Modular Jack 1000 mating cycles	
ix Wire terminal (110 block) 200 termination cycles	
Strain relief and bend	1
x Accessories limiting boot for cable	
Polyphenylene oxide. 94V-	
xi Housing 0 rated	



Sr. No	Description		Compliance / Non Compliance	Remark
xii	Wiring blocks	Polycarbonate, 94V-0 rated		
	8	Phosphorous bronze, plated		
xiii	Jack contacts	with 1.27micro-meter thick		
		gold		
		Fully powder coated pencil		
XIV	Panel	grey		
XV	Approvals	UL listed		
xvi	Termination Pattern	TIA / EIA 568 A and B;		
	Performance Characteristics	Attenuation, NEXT, PS		
xvii	to be provided along with	NEXT, FEXT and Return		
	bid	Loss		
	The specification of faceplate	s (Work area will have face		
е	plate with back box and jacks)		
		Conforms to CAT6 Work		
		Area Data I/O Outlet		
		(RJ45) adhering to		
i	Standard	EIA/TIA-568-C.2, ISO/IEC		
		11801(2002) and		
		CENELEC EN50173-1		
		(2002) specifications		
	Turno	1-port, WhiteFace plate		
11	Туре	with PMC Logo		
iii	Material	ABS / UL 94 V-0		
iv	No. of ports	One		
f	The specification of Workstat	ion / Equipment Cords		
1	should be meet standards as s	pecified below:		
		Unshielded Twisted Pair,		
i	Туре	Category 6, TIA / EIA 568-		
		C.2		
	Conductor	24-26 AWG , multi -		
11	Conductor	stranded copper		
		2 meter for workstation and		
iii	Length	1 meter for Jack		
		panel/equipment		
iv	Plug Protection	Matching colored snag-less,		
1,		elastomer polyolefin boot		
		25-year component		
v	Warranty	warranty after site		
L		certification		
		Phosphor Bronze, 50		
		micron gold plating over		
vi	Terminals	selected area and gold flash		
		over remainder, over 100		
		micron nickel under plate		
vii	Jacket	PVC		
viii	Insulation	Flame Retardant		
,		Polyethylene		



15.5.9 Table 9 Compliance sheet for Fiber Optic Cabling Systems

S No	Description		Compliance / Non	
5 10			Compliance	Remark
1	The specification of Fibe	er optic Cable should be		
	meet standards as specifi	ed below:		
		6 core, Multi Mode,		
i	Cable Type	Armored, Loose-tube,		
		Gel filled		
		MM - OM3, 50 / 125,		
		250 micron primary		
ii	Fiber Type	coated buffers. UL		
		Listed fiber - OM3 -		
		Corning make raw fiber		
		As per Telecordia		
iii	Fiber core must be	GR20, TIA -568-C.3		
111	riber core must be	for OM3, IEC 60793-2-		
		10 - Type A1a.2 fiber,		
iv	No of cores	6 or 12		
		Corrugated Steel Tape		
v	Armor	Armor - Loose tube		
		design - multi tube		
		BELLCORE GR 20 /		
	Cable Construction Type	IEC 794-1 - Losse tube		
vi		Corrugated steel tape		
		(0.155mm Min)CSTA		
		provided		
		High density		
	Outor Jackat	polyethylene, anti -		
vii	Construction	termite, anti - rodent		
	Construction	suitable for direct burial		
		application.		
viii	@ 850nm	< = 2.50 dB/Km		
ix	@1300nm	< = 1.00 dB/Km		
X	Max Tensile Load	>= 2670 N		
xi	Maximum Crush resistance	3000N		
vii	Operating Temperature	-40 deg Cel to +70 deg		
	Operating reinperature	Cel		
		Must pass the following		
		: - IEC794-1-E1,		
viii	Test Paremeters	IEC794-1-E2, IEC794-		
		1-E3, IEC794-1-E4,		
		EIA-455-104, IEC794-		
		1-E7, IEC794-1-E10,		



C M.	Description		Compliance / Non	
S NO			Compliance	Remark
		IEC794-1-E11,		
		IEC794-1-F5		
		The cable has		
		identification marking		
		at regular intervals of 1		
V 117	Morking	meter which will be of		
XIV	Marking.	permanent nature. The		
		accuracy of the		
		sequential marking will		
		be within +/- 0.5%.		
2	Pigtail Type			
i	Connector Type	SC -Style, Simplex		
	Operating temperature	-40 Degree C to +85		
11	Operating temperature	Degree C		
		Fully in compliance		
iii	Standard	with JIS C5973 F04		
		Туре.		
	Durability	(500 Mattings): < 0.2		
IV	Durability	dB Max		
		Pre-radius Ceramic		
* 7	Formulas	Zirconia Ferrule.		
v	Ferrules	Bayonet Coupling: 2.5		
		mm Zirconia Ferrule		
	Attenuation	Not more than 0.75 dB		
VI	Attenuation	per mated pair		
		Meets and exceeds ITU		
wii	Parameters / standard	specifications,UL listed		
VII		and 3rd Party RoHS		
		compliant		
3	Patch Cord (LC - FC) -	3mtr		
		SC-SC type MM OM3.		
i	Cable type	Available in either		
1	Cable type	1.6mm or 3mm simplex		
		or Duplex Zipcord.		
ii	Fiber type	Multi-mode 50/125 250		
		micron primary coated		
		buffers		
iii	No of cores	2 Cable construction		
111		Type PVC outer jacket		
	Outside Diameter	1.6mm x 3.0mm		
iv		(Simplex) or 1.6mm x		
		3.3mm(Duplex)		
V	Minimum Cable	1.6mm: 11.24 lbs (50		



C N	Description		Compliance / Non	
S NO			Compliance	Remark
	Retention Strength	N)		
vi	Operating Temperature	-40 Degree to $+60$		
VI	operating remperature	Degree		
vii	Length	3 meter		
4	The specification of Fibe	r Optic Patch Panels		
-	should be meet standards	as specified below		
i	Fiber optic patch panel	19-inch, Rack mounted		
••		Fiber optic patch panel		
11	Height			
111	# of fibers	12 & 24 m 10		
iv	# of OSP Cables for termination	Minimum 2		
v	Grounding	2 Nos. of earthing lugs,		
		Front and rear cable		
vi	Cable Management	management rings pre-		
*1	rings	loaded		
vii	Adapter plates	6 Port adapter plates		
		Rack mounted Fiber		
V111	Fiber optic patch panel	optic patch panel		
		12 & 24 Port LIU : 370		
ix	Dimension	* 350 * 80 mm		
		(H*W*D)		
		Complete Aluminium		
Х	Construction	Alloy housing, fully		
		powder coated		
	Splice tray	Dimension: 140 * 125 *		
xi		10 mm. Included in LIU		
		not to be quoted		
		separately.		
	Sulice trev	Fully cusnioned splice		
xii	Splice tray	arooves for fiving		
	Construction	splice protective sleeves		
		Flame retardant plastic		
xiii	Cable Spools	high impact resistance		
		Must be part of LIU		
		Two halves spool		
xiv	cable spools Construction	design, Stackable		
		design, sufficient room		
		provided for storage of		
		excess cable		
5	The specification of Fibe	r Optic Adapter plates		



S No	Description		Compliance / Non	
S 1NO	5 100		Compliance	Remark
	and Adaptors should be meet standards as specified below:			
i	Fiber Optic adapter plate	6-port, SC-Style, MM Adapter with Adapter Plate		
ii	Attenuation	Max of 0.75 dB per mated pair		
iii	Adapters	Available in Simplex types.		
iv	Durability	< 0.2 dB max (1000 Matings)		
v	Standard	Compliant as per EIA/TIA 568-C and ISO/IES 11080		



15.5.10 Table 10 Compliance sheet for Tape Library & Backup Solution

Tape Library

Feature	Description	Compliance	Remark
		/Non	
		Compliance	
	2 No. Of LTO 7 drives		
Technology	required scalable up to		
reennology	18 Drives if required		
Drive Interface	PCb fibro required		
Drive internace	(Optional Support, 10b		
	fibre, 6Gb SAS, 3Gb		
	SAS, SCSI-2/SCSI-3 LVD		
	interface)		
Library	8Gb fibre required		
Interface	(Optional Support:- 4Gb		
	fibre, 6Gb SAS, 3Gb		
	SAS, SCSI-2/SCSI-3 LVD		
	interface)		
Capacity	Offered Library should be		
	with Min. 41 Slots active,		
	including I/E slots and		
	scalable up-to 409 slots		
	with expansion module		
	and capacity on demand		
	license if required.		
Performance	Inventory Speed: 55		
	seconds for average of 41		
	slot configuration.		
	Configuration: Auto		
	discovery and auto		
	calibration for		
	installed/added		
	แกรเลแยน/สนันยน		



Feature	Description	Compliance	Remark
		/Non	
		Compliance	
	components (modules,		
	tapes, drives, magazines,		
	etc.) Drive Throughput -		
	Native		
	300MBps/Compressed		
	750MBps		
	Library MSBF It should		
	be greater than 2,000,000		
0			
Connectivity	8 Gbps Fibre Channel		
Supplied	Supply 100 nos of LTO-7 RW		
Cartridges	cartridges with Customized		
	Barcode sticker and 5 nos of		
	Cleaning cartridges.		
Supported host	Windows 2003/2008 Server, IBM		
platforms	AIX, SUN Solaris and Linux		
	environments.		
Architecture	Modular Rack Mount		
	Architecture with Continuous		
	Robotics.		
Management	GUI based Control Panel on		
	Library and Web GUI.		
Misc	Features "Capacity-on		
	Demand Growth. Optional		
	Support for Mobile Library Status		
	update. Optional Support for		
	Drive Encryption. Support for		
	Advanced Reporting – Media,		
	drive and security reports of		
		l	



Feature	Description	Compliance	Remark
		/Non	
		Compliance	
	library utilization and		
	performance. Automated report		
	scheduling and distribution.		
	Library Partitioning: Supports up		
	to 18 partitions for tape		
	consolidation Should have		
	optional support for Extended		
	Data Life Management: Media		
	health reports of cartridges		
	stored for long-term archive and		
	DR, information is collected		
	outside of normal operations: -		
	Automated scheduling for		
	scanning tapes – Notifications on		
	test results – Policy-based data		
	migration to new cartridges		
	Should have optional support for		
	Native Storage Networking:		
	Control Path Failover, Data Path		
	Failover, LUN Mapping, and		
	Drive Firmware Auto levelling.		
	The Offered Library should be		
	certified with the HSM		
	(Hierarchical Storage		
	Management) and should		
	support LTFS.		



Backup Solution

S	Description	Compliance/Non	Remark
No.	Description	Compliance	
	Backup Software must be capable		
	of dedupe various database		
	including Oracle, DB2, Exchange,		
1	SharePoint Informix, Sybase, MS		
	SQL MaxDB and backed up over		
	fiber channel using client binary		
	instead of configuring production		
	machines as Media/storage server.		
2	Should support single pass backup		
2	for faster backup/recovery		
	The backup software must have		
	integrated advanced backup		
	technologies i.e. deduplication and		
	tape archiving. Deduplication		
3	should work with SAS, SATA and		
	nearline SATA. There should not		
	be any dependency of SSD for		
	dedupe backups (in terms of		
	performance)		
	The proposed Backup Solution		
	should be available on various OS		
	platforms such as Windows and		
	UNIX platforms and be capable of		
4	supporting SAN based backup		
	using client footprint instead of		
	media server footprint from various		
	platforms including IBM AIX, HP-		
	UX, Linux, Solaris and Windows		
5	The proposed Backup Solution		
	supports the capability to write up		


Compliance
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S	Description	Compliance/Non	Remark
No.	Description	Compliance	
	Backup Solution shall support		
9	automatic skipping of backup		
	during holidays.		
	Backup solution must have inbuilt		
	data replication feature		
10	independent of hardware for		
	creating multiple copy at different		
	locations with different retention.		
	Backup solution to support Cloud		
11	storage as Backup Target. Viz		
	Amezon S3, Google Neardrive.		
	Backup solution to support Bare		
12	Metal Restore to help P2P, P2V,		
	V2V conversion.		
	Proposed Appliance & backup		
	Software should be from same		
	vendor. Appliance Hardware		
13	components, Operating System &		
	Backup solution must be supported		
	by single vendor to avoid		
	multivendor ownership.		
	The proposed solution should have		
14	operating system disk in mirroring		
	and data disk on RAID 6 with Hot		
	Spare.		
	The backup solution should belong		
15	to the leaders in Gartner Magic		
	Quadrant.		



15.5.11	Table 11	Compliance	sheet for	server
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Sr. No.	Item	Description	Compliance / Non Compliance	Remark
1	Processor	Server should be populated with 2Nos of Intel E5 2620 V4 proc (8 core, 2.1 Ghz, 20MB cache)		
2	Chipset	C610 or higher		
3	Memory	Server to be populated with 2 x 8GB DDR4 2400 MT/s		
4	DIMM Slots	Minimum 12 DIMM slots		
5	Memory Property	Advanced ECC memory protection, Memory mirroring or Equivalent		
6	Hard Disk	3 x 900GB SAS 3.5" Drive in RAID 5		
7	Drives	Server should support Min 8 x 3.5" drives		
8	RAID Controller	Integrated hardware RAID controller and should support Raid 0,1 , 5 and 5		
9	Optical Drive	DVD-ROM		
10	Ethernet Ports	2 X 10 Gb LOM		
11	Add on Cards	Dual port 8GB Optical Fibre HBA		
12	Expansion Slots	Minimum 5 X Pci-E slots with minimum 2 PCI-E 3.0 enabled Expansion Slots		



Sr. No.	Item	Description	Compliance / Non Compliance	Remark
13	Remote Management	 OEM should provide embedded features that helps to manage Servers in physical, local and remote environments, operating in-band or out- of-band, with or without a systems management software agent. Should include Power Management, necessary licenses should be included. Power Management should give historical data for atleast 72 hours. Should also support IPv6 Should support remote scripted reconfiguration tools. Should be able to monitor all systems components (BIOS, HBA's, NICs, CNA's). 		
14	Redundant Power Supply	 Redundant hot swap power supplies. Should be 92% + efficient at 100% Load 		
15	Redundant Cooling Fans	should have hot-swap redundant cooling fans. Fans should automatically adjust speeds depending on the temperature inside the server chassis		
16	Failure Alerting Mechanism	The server should be able to alert impending failures on maximum number of components. The components covered under alerting mechanism should at least include Processors, memory, PCIe slots, VRMs, power supplies, fans, hard disk drives		
17	Cluster Support	Should support High Availability Clustering		
18	Form Factor	2U Rack form factor		
19	OS Certification	Microsoft Windows Server® 2008 R2,Microsoft Windows Server 2012 Microsoft Windows Server 2012 R2,Novell® SUSE® Linux Enterprise Server Red Hat Enterprise Linux		



Sr. No.	Item	Description	Compliance / Non Compliance	Remark
20	Server Management	 Smart Embedded Systems Management should be able to automate task like discovery deploy monitor and update. Should not be dependent on agents to for life cycle management. Should be OS Agnostic. Should be able to provide Single console to manage Servers. Power management tool – Single interface to optimize ad control every usage for servers and Racks. Should be able to integrate to 3rd party management tools. 		
21	Warranty	24X7, 365 days Comprehensive onsite warranty for 5 years		
22	Rails	Must be supplied with cable management arms and rails to rack mount the servers		



15.5.12 Table 13 Compliance Sheet for Technical Specifications for Integrated Modular 2 Rack Data Centre Solution

Item	Description	Compliance/Non Compliance	Remarks
Integrated Infrastructure	It is required to deploy Pre-		
Solution	Fabricated Data Centre		
	Solution for Critical IT		
	Equipment. Site conditions		
	require that the entire Pre-		
	Fabricated DC Solution be		
	delivered in CKD (Completely		
	Knock-Down Condition) and		
	system be assembled at site.		
Scale and Density of	Required solution comprises of		
Integrated Data Center	2 Racks of 2100 mm Height		
	(Min) having effective mounting		
	space of minimum 66U		
	available for IT Eqipment.		
Inbuilt redundancy	Solution should be		
compliant to Tier 2/3	incorporating in-built		
guidelines	redundancy for Power and		
Ĵ Ĵ	Cooling inline with the		
	requimerments under Tier II / III		
	guidelines. Other supportive		
	utilities and services like Fire		
	Detection & Suppression, PDU,		
	Electrical DB, Water leakage		
	detection and Monitoring		
	system with Auto door opening		
	should be provided with high		
	availability of each equipment		
	for this proposed requirement		
	of Pre-Fabricated DC Solution.		
Main Electrical Panel &	DB panel mounted inside		
Cabling	cabinet with all internal cabling		
-	integrated into the same.		
	Adequate precaution and		
	compliances to be taken care		
	for sizing/ratings of cables and		
	switchgear inside Rack.		
Uninterrupted Power	Rack mount on line double		
Supply(UPS)	conversion UPS of 10 KVA up		
	to 94% efficiency at full load		
	and 0.8 output power factor.		
	UPS to be provided with		
	External battery bank with SMF		
	batteries for 60 min. backup on		
	100% IT load with required rack		
	mount accessories.		



Cooling System	Colution provided should have	
Cooling System	Solution provided should have	
	Integrated Rack Mounted - Self-	
	contained Split Type Cooling	
	Unit designed for cooling the	
	racks with 24X7 operations in	
	all respect as per	
	ISHRAE/ASHRAE standard	
	and also integrated with remote	
	monitoring system, N+N	
	Redundant cooling units with	
	each unit of minimum 2 TR/	
	7KW capacity for 2 Back	
	Integrated DC	
	Integrated DC.	
	efficiency, bottom mounted	
	cooling unit should have	
	provision to tak return air	
	continuously from middle of the	
	rack depth till rear of the rack	
	so as to have effective air	
	circulation.	
Out Door Unit	Copper piping with insulation	
	tube of elastomeric, nitrile foam	
	between each sets of outdoor &	
	indoor unit as per specification	
	Pining to be properly supported	
	by MS clamp. All transmission	
	wiring between indeer to	
	wining between indoor to	
	outdoor unit is kept in PVC	
Deelve	Conduit.	
Racks	Individual racks should be of	
	420 (Height - Min) x 800 mm	
	(width - Min) x 1300 mm (Depth	
	- Min)	
	All Steel Construciton Rack	
	with an Integral Plinth should	
	have following features:	
	- Cold Air Column Space in the	
	front of the mounted equipment	
	in the rack should be at least	
	790 mm wide and 275 mm	
	deep for each rack Simpar	
	space should be available at	
	the rear of the rack also to	
	facilitate appropriate movement	
	of oir	
	Or all.	
	- Above Rack Mounted Split	
	Type Cooling Unit (Evaporator	
	Unit) 33U Rack Space Should	
	be Available in Each Rack.	



		1	1
	Thus total of minimum 66U		
	two racks		
	- After mounting of the UPS -		
	between both the racks		
	minimum of 5211 Mounting		
	Space should be available of		
	the IT Equipments		
	- It is very important that 19"		
	Mounting rails be provided with		
	U Identification Notch as well		
	as Unique U Numbers and		
	these unmbers should be		
	visible even after mounting of		
	the equipment.		
	Rack Colour will be required to		
	be customised as per		
	requirement and our Logo will		
	be required to be etched on		
	both the front glass doors of the		
	rack.		
	All Rack Doors should be easily		
	removable type (Tool-less) to		
	facilitate any installtion and / or		
	service activities. Side panels		
	of the rack should be fully		
	secured. Industry Standrad		
	Swing Handle Multi-point		
	locking with Digital Locks		
	should be provided. These		
	locks should be able to confirm		
	locking status electronically		
	along with local LED		
	Indications. EM Locks or		
	Solenoid Type of Locks should		
	not be used for the access		
	control solution.		
	Door oppling should be deter		
	using dual gasket. One multi-		
	euge hat gasket on the rack		
	side and nail round PU Gaskets		
Access Control	Biometric reader (with relevant		
	software along with licenses if		
	needed) Integrated DC Pack		
	doors should have digital		
	locking to permit only		
	authorized persons to open the		
	doors through finger print		



	reader. Design to be as per TIA 942 guidelines.	
Integrated Fire Security & Suppression System	Fire detection and suppression system, modular type fire suppression system (FM200) to cover entire racks. Dedicated nozzles for the suppressant should be provided in each logical compartment of the entire system. Design should be as per NFPA standards guidelines.	
Remote Monitoring	Pre-fabricated DC System should offer continuous monitoring of various operational parameters as under:	
	Temperature, humidity, door and Locking Status, Water Leak Detectors & Spare dry contact monitoring to be integrated to any external system. Based on pre-set parameters, automated alerts and messages are sent to the intended recipients. Remote monitoring system with SNMP, email notification, event alerts.	
	Integrated Monitoring System should also be able to get integrated with the Rack PDUS and offer variety of alerts / alarms based on PDU level pre-set electrical parameters.	
Local Monitoring	Eack rack should display following parametres on top of the rack : - Source 1 and Source 2 : Current - Temp in the inner front cold space of the rack - Temp in the rear hotter space inside the rack In case of any electronics failure, it should be possible to	



	replace / service these displays without taking any downtime. (Should be hotpluggable / swappable) - AV Hooter for the Extreme Alarm Conditions	
Rack PDU	Redundant Rack PDU should be Single Phase with following configuration: - 16 Sockets of IEC C13 + 4 Sockets of IEC C19 - Power Indicator on PDU - Vertical / Zero U Mounting - 2M long Inlut Cable - integrated with Rack Monitoring System Two Such PDUs per Rack	
Rack Accessories	 Following Rack Accessories should be included: Blank Panels for closing the opening / gaps in the front mounting rails Rack internal Cable Management for Vertical and Horizontal Cables Front Panel Mounting Hardware Brush Panel / Glands / Seals for all Cable Entry Points in the cabinet 	



15.5.13 Table 14 Unified Storage

Feature	Description	Compliance / Non	Remark
		Compliance	
Storage	The storage system should be purpose		
	built storage for video surveillance data		
	storage and should be validated with		
	video management software. The		
	storage system should have a published		
	benchmarked for 300MB/s video		
	streaming bandwidth		
Controller	The Storage System should be		
	configured with dual redundant		
	controllers. The offered SAN should be		
	based on specialized operating system		
	and should not be based on general		
	purpose operating system on industry		
	standard servers. The array should have		
	a publically published uptime of five		
	nine's		
Host Ports	Array should support minimum		
	4x16Gbps FC port per controller for		
	SAN connectivity		
Cache	The system should have a minimum of		
	16 GB of memory across dual		
	controller. Array should support cache		
	destage to disk in order to avoid any		
	data loss due to extended power		
	outage. Array should support mirroring		
	of write operation across controllers.		
Disk	System should support Near Line SAS		
Support	7200 RPM drive. Storage should be		
	scalable upto 400TB in raw capacity		
Protocol	iSCSI, ARP,RIP(V1-V2), SNMP,		
Support	SNTP, LDAP and FC		
Licenses	The system should be configured with		
	snapshot features licenses, snapshot		
	restore licenses for the entire systems		



Feature	Description	Compliance / Non Compliance	Remark
	capacity, thin provisioning license and		
	replication licenses for the entire		
	system capacity		
RAID	Array should support RAID 5, 6 & 10.		
Support			
Storage	The vendor should configure 50 TB		
Capacity	usable in RAID 6 using 4TB NL-SAS		
	7200RPM drives. The useable capacity		
	should be exclusive from overheads of		
	hot spares, RAID or any other storage		
	related space requirements. Array		
	should be configured with minimum of		
	1 hot spare for every 30 data disks.		
No Single	Storage system should be configured in		
Point of	"No single point of failure architecture"		
Failure	and all the components like controllers,		
Architecture	fans, power supplies, front-end ports		
	and back-end ports should be		
	redundant.		
OS Support	Storage system should support all		
	industries leading operating systems		
	like Apple Mac O/S 10.8 or greater,		
	Citrix Xenserver 6.1, HP-UX, IBM		
	AIX, IBM VIOS 2.2, 2.3, Microsoft		
	Windows Server 2008, Microsoft		
	Windows Server 2008 R2+, Windows		
	Server 2012, Windows Server 2012		
	R2, Microsoft Windows 7, Microsoft		
	Windows 8 and Microsoft Windows		
	Vista, Microsoft Hyper-V, Novell Suse		
	Enterprise Linux, Oracle Linux,		
	RedHat Enterprise Linux, Solaris 10		
	x86, Solaris 10 sparc, Solaris 11 and		
	11.1 (SPARC and x86), VMWare		
	ESXi 5.x		
Management	Support a browser based built in		
	management. Should be able to support		
	manual as well as automated email to		



Feature	Description	Compliance / Non	Remark
		Compliance	
	vendor support centre for proactive		
	maintenance support. Storage browser		
	based management tools should able to		
	manage multiple similar arrays at the		
	same time from the single interface.		
	Entire system must be manageable		
	from a web based single, secured		
	interface without a separate		
	management device or server.		
	Management software should be		
	supplied along with Storage Array		
Optional :	20 TB Additional RAW Storage		



15.5.14 Table 15 Compliance Sheet for Firewall

Sr.		Compliance / Non	Remark
No.	Features Description	Compliance	
1	The Firewall should be Hardware based, Reliable,		
	purpose-built security appliance with hardened		
	operating system supporting State full policy		
	inspection technology.		
2	Firewall appliance should have at least 12 x		
	10/100/1000 GE interfaces along with 2 x GE SFP		
	slots		
3	Firewall Throughput should be at least 3 Gbps		
4	Firewall should have atleast 3DES IPSec throughput		
	of 1 Gbps		
5	Firewall should support atleast 1500 site-to-site VPN		
	Tunnels.		
6	Firewall should support atleast 75,000 new sessions		
	per second		
7	Firewall should support 3 Million concurrent		
	sessions		
8	The Firewall solution should support NAT64, DNS64		
	& DHCPv6		
9	The proposed system should be able to operate on		
	either Transparent (bridge) mode or NAT/Route		
	mode. Both modes should also be available		
	concurrently using Virtual Contexts.		
10	The physical interface should be capable of link		
	aggregation as per IEEE 802.3ad standard, allowing		
	the grouping of interfaces into a larger bandwidth		
	'trunk'. It should also allow for high availability (HA)		
	by automatically redirecting traffic from a failed link		
	in a trunk to the remaining links in that trunk.		
11	The proposed system should have integrated Traffic		
	Shaping functionality.		
12	The Firewall & IPSEC VPN module should have		
	ICSA or other equivalent Certification.		
13	Should support IPSEC, PPTP, L2TP & SSL VPN		
14	The appliance should utilize inbuilt hardware VPN		
	acceleration:		
	a) IPSEC (DES, 3DES, AES) encryption/decryption		
	b) SSL encryption/decryption (external device is		
15	I he system should support the following IPSEC		
	VPIN capabilities:		
	a) Multi-zone VPN supports.		



Sr. No.	Featur	es Description	Compliance / Non Compliance	Remark
	b) IPSe	ec, ESP security.		
	c) NAT	traversal		
	d) Hub	and Spoke architecture		
	e) Red	undant gateway architecture		
16	The sy	stem should support 2 forms of site-to-site		
	VPN co	onfigurations:		
	a) Rou	te based IPSec tunnel		
	b) Polio	cy based IPSec tunnel		
17	The sy	stem should support IPSEC site-to-site VPN		
	and rei	mote user VPN in transparent mode.		
18	The sy	stem should provide IPv6 IPSec feature to		
	suppor	t for secure IPv6 traffic in an IPSec VPN.		
19	Virtuali	zation		
	The pr	oposed solution should support Virtualization		
	(Virtua	I Firewall, Security zones and VLAN) with		
	minimu	ım 10 Virtual Firewall license.		
	Intrusio	on Prevention System		
	k)	The IPS capability should have NSS or		
		other equivalent Certification		
	I)	IPS throughput should be of atleast 1.5		
		Gbps		
	m)	The IPS detection methodologies should		
		consist of:		
		I. Signature based detection using		
		real time updated database		
		II. Anomaly based detection that is		
		based on thresholds		
	n)	The IPS should be able to inspect SSL		
		sessions by decrypting the traffic.		
	o)	The IPS system should have at least 8,000		
		signatures		
	p)	IPS Signatures should be updated in		
		different ways: manually, via pull or push		
		technology. Administrator should schedule		
		to check for new updates or if the device		
		has a public IP address, updates can be		
		pushed to the device each time an update is		
		available		
	(p	In event if IPS should cease to function, it		
		should fail open by default and be		
		configurable so that crucial network traffic		
		should not be blocked and Firewall should		
		continue to operate while the IPS problem is		
		being resolved		
	r)	IPS solution should have capability to		
		protect against Denial of Service (DOS) and		



Sr.			Compliance / Non	Remark
No.	Featur	es Description	Compliance	
		DDOS attacks. Should have flexibility to		
		configure threshold values for each of the		
		Anomaly. DOS and DDOS protection should		
		be applied and attacks stopped before		
		firewall policy look-ups.		
	s)	IPS signatures should have a configurable		
		actions like terminate a TCP session by		
		issuing TCP Reset packets to each end of		
		the connection, or silently drop traffic in		
		addition to sending an alert and logging the		
	4)	Incident		
	U)	Signatures should have sevenity level		
		defined to it so that the administrator can		
		understand and decide which signatures to		
		bigh medium low)		
21	Antiviru	IS		
	d)	Should have 1Gbps of Antivirus throughput.		
	e)	Should be able to block, allow or monitor		
		only using AV signatures and file blocking		
		based on per firewall policy based or based		
		on firewall authenticated user groups with		
		configurable selection of the following		
		services:		
		vi. HTTP, HTTPS		
		vii. SMTP, SMTPS		
		viii. POP3, POP3S		
		ix. IMAP, IMAPS		
		x. FTP, FTPS		
	f)	Should be able to block or allow oversize file		
		based on configurable thresholds for each		
		protocol types and per firewall policy.		
22	Applica	ation Control		
	d)	Should have the ability to detect, log and		
		take action against network traffic based on		
		over 3000 application signatures		
	e)	The application signatures should be		
		manually or automatically updated		
	f)	The administrator should be able to define		
		application control list based on selectable		
		application group and/or list and its		
		corresponding actions		
23	Data Le	eakage Prevention		
-	c)	System should allow administrator to		
	-,	prevent sensitive data from leaving the		



Sr. No.	Featur	es Description	Compliance / Non Compliance	Remark
		network.		
	(h	Administrator should be able to define		
	α,	sensitive data patterns, and data matching		
		these patterns that should be blocked and/or		
		logged when passing through the unit		
24	High A			
24		System should have built in high availability		
	1)	(UA) footures without extra cost/license or		
		(HA) leatures without exita cost/license of		
	a)	Chauld support state full essaien		
	g)	Should support state full session		
		maintenance in the event of a fail-over to a		
		standby unit.		
	h)	High Availability feature must be supported		
		for either NAT/Route or Transparent mode		
	i)	Should support multiple heartbeat links		
	j)	High Availability Configurations should		
		support Active/Active, Active/ Passive &		
		Clustering		
25	SSL VF	PN Requirements:		
	t)	The Firewall should be integrated solution		
		and there should be no user based licensing		
		for SSL VPN.		
	u)	The Firewall should support for TWO modes		
		of SSL VPN:		
	v)	Web-only mode: for thin remote clients		
		equipped with a web browser only and		
		support web application such as:		
		HTTP/HTTPS PROXY, FTP, SMB/CIFS,		
		SSH, VNC, RDP		
	w)	Tunnel mode, for remote computers that run		
		a variety of client and server applications		
	x)	The system shall provide SSL VPN tunnel		
		mode that supports 32 and 64-bit Windows		
		operating systems		
	y)	The proposed solution shall allow		
		administrators to create multiple bookmarks		
		to add to a group and make these		
		bookmarks available for SSL-VPN users.		
	z)	Web & Application Content Filtering System		
	_,	Requirements:		
	ລລ)	The proposed system should have		
		integrated Web Content Filtering solution		
		without external solution devices or		
		hardware modules with proxy functionality		
	hh)	LIRI database should have at least 200		
		million LIRLs and $75 \pm categories$		
		minion UKLS and 75 + categories.		



Sr.		Compliance / Non	Remark
No.	Features Description	Compliance	
	cc) The proposed solution should be able to		
	enable or disable Web Filtering per firewal		
	policy or based on firewall authenticated		
	user groups for both HTTP and HTTPS		
	traffic.		
	dd) Should blocks web plug-ins such as		
	ActiveX, Java Applet, and Cookies.		
	ee) Shall include Web URL block		
	ff) Shall include Web Exempt List		
	gg) The proposed solution should be able to		
	replace the web page when the web page		
	matches the Web Filtering blocking criteria		
	hh) The proposed solution shall be able to		
	identify, retrieve and rate the actual URL o	f	
	the cache content commonly available in		
	search engines such as Yahoo and Good	e.	
	ii) The solution shall allow administrators to		
	creat mutiple new local URL filtering		
	categories besides dynamic categories		
	ii) Should have application control feature		
	(k) Should have the intelligance to identify &		
	control of popular IM & P2P applications lil	(e	
	KaZaa,BitTorrent etc.		
	II) Should have minimum database of 3000		
	types of application awareness		
6	User Authentication		
	w) The proposed Firewall shall be able to		
	support various form of user Authentication	1	
	methods simultaneously, including:		
	x) Local Database entries		
	y) LDAP server entries		
	z) RADIUS server entries		
	aa) TACACS+ server entries		
	bb) Native Windows AD (Single sign on		
	capability)		
	cc) Two-factor authentication without anv		
	external Hardware.		
	dd) Citrix Agent support for Single Sign On		
	ee) The solution shall be capable of providing		
	Windows AD single sign-on by means of		
	collector agents which broker between use	ers	
	when they log on to the AD domain and the	e	
	device.	-	
	ff) The proposed appliance shall support inbu	llt	
	ff) The proposed appliance shall support inbu 2 factor authentication services and	lit	



Sr.		Compliance / Non	Remark
No.	Features Description	Compliance	
	gg) System should also have capability to		
	identify devices (ex. Android, Iphone,		
	Windows etc) & should be able to write		
	policies on basis of device identity		
	nn) Should also support Authentication-based		
	II) BYOD ii) greate policies based on device type		
	jj) create policies based on device type		
	connecting to your networks, wireless or		
	wired		
	II) use MAC address based access control to		
	allow or deny individual devices		
	mm) enforce endpoint control on devices		
	that can run FortiClient Endpoint Control		
	software		
	nn) Logging and Reporting		
	oo) Solution must offer separate appliance to		
	store logs and reports. In-built reporting will		
	not be considered as it impacts firewall		
	performance.		
	pp) Separate appliance must offer at least 1 x 1		
	TB storage space.		
	qq) It should show real-time traffic details		
	rr) Logs should also show per user statistics		
	which must include sent/receive bytes, no.		
	of sessions, threat score, bandwidth usage,		
	sent/receive packets & source IP or user,		
07	destination country detail		
21	Firewall should not introduce more than 3 Micro		
-	Seconds Latency		
28	Anti-Virus Module should be ICSA Certified		
29	Firewall Appliance should have network's		
	physical & logical topology view.		



15.5.15 Table 16	Compliance Sheet	for SAN Switch witl	n software license
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Sr No.	Feature	Compliance/ Non Compliance	Remark
1	24 Port SAN Switch with 24 Port Licenses + 24,8/16 GBPS SFP for SAN Switch		



Sr No.	Feature		Compliance / Non Compliance	Remark
1	System			
а	Enterprise Class Application	Support-Yes		
b	Max. Number of Cameras per Server	50-60 per server		
с	Max. Number of Servers	Unlimited		
d	Max. Number of Clients	64		
e	Rules Engine	Support- Yes		
f	Alarm / Event Management	Support- Yes		
g	Multi-Layered Facility Map	Support- Yes		
h	Windows Client	Support- Yes		
i	Macintosh Client	Support- Yes		
j	Web Client	Support- Yes		
k	Mobile Client (iOS/Android)	Support- Yes		
1	Customizable User Access Levels	Support- Yes		
m	Centralized Management	Support- Yes		
n	Failover Recording Servers	Support- Yes		
0	Bookmarking	Support- Yes		
р	Active Directory Support	Support- Yes		
q	Multi-Language	Support- Yes		
r	360/Panoramic camera dewarping	Support- Yes		
2	Supported Devices			
a	Number of Directly Supported Cameras (Not including ONVIF)	3,000+		
b	Number of Supported Camera Manufactures	130+		
c	Support for ONVIF compliant devices	Support- Yes		
3	Cameras			
a	4K or Higher Resolution support	Support- Yes		
b	MJPEG, MPEG4, H.264 Compressions	Support- Yes		
c	Multi-streaming support (Dual streaming etc.)	Support- Yes		
d	Camera or server side motion	Support- Yes		

15.5.16 Table 17 Compliance sheet for Video Management Software



Sr No.	Feature		Compliance / Non Compliance	Remark
	detection (VMD)			
e	Camera auto discovery on local	Support-Yes		
C	network	Support 105		
f	Centralized camera management	Support-Yes		
g	Trigger Digital Inputs and Ouputs	Support-Yes		
4	Live Viewing			
a	Drag & Drop	Support-Yes		
b	Camera Group View	Support-Yes		
c	Video Push	Support-Yes		
d	Display pre-registered websites	Support-Yes		
٩	Onboard Hardware Decoder (Intel	Support Ves		
C	QSV support)	Support- Tes		
5	Recording / Playback			
a	Pre/Post Alarm Recording	Support- Yes		
b	Recroding Setting per Camera	Support- Yes		
	Record always at 1 FPS and higher			
c	frame rate on motion	Support- Yes		
	(VMD-based recording fps increase)			
d	Extended Storage (SAN/NAS/DAS)	Support Vos		
u	support	Support- Tes		
e	Archiving	Support-Yes		
f	Instant Playback	Support- Yes		
a	Frame by Frame or Variable	Support Voc		
g	Playback Speeds	Support- Tes		
h	Symphesized Disylasiz	Support- Yes		
11	Synchronized Flayback	(4 or 9)		
i	Privacy Masking	Support- Yes		
j	Watermarking on all recorded videos	Support- Yes		
6	Search			
a	VMD search	Support- Yes		
b	Thumbnail Search	Support-Yes		
с	Timeline Search	Support- Yes		
7	Export			
	Snapshot (Capture JPEG or Print	Company N	1	
а	Live Snapshots)	Support-Yes		
b	Video Export	AVI, EXE		



Sr No.	Feature		Compliance / Non Compliance	Remark
c	Multi-Camera Export	Support-Yes		
d	Media Player included as a	Support-Yes		
	standalone application	~ opponentes		
e	Watermarking/Video Export Encryption	Support- Yes		
8	Audio			
a	2-Way Audio	Support-Yes		
b	Live Audio	Support-Yes		
c	Audio Recording	Support-Yes		
d	(Camera) Audio inputs and outputs support	Support- Yes		
9	PTZ (Pan-Tilt-Zoom)			
a	PTZ Control	Support- Yes		
b	Digital PTZ Control	Support- Yes		
c	Drag Zoom (Zoom on Marked Area)	Support- Yes		
d	Go to Preset Positions	Support- Yes		
e	Preset Patrolling (Preset Touring)	Support- Yes		
f	Priority control for PTZ operation	Support- Yes		
10	Notifications and Automation (Alarms)			
a	Pop-up live windows with alarmed cameras on alarm	Support- Yes		
b	Instant Playback on alarm	Support- Yes		
с	Sound alert on alarm	Support- Yes		
d	Door control on alarm	Support- Yes		
e	Record on alarm	Support-Yes		
f	Swtich camera, layout or audio on alarm	Support- Yes		
g	Email Notification with Text, JPEG or AVI clip	Support- Yes		
h	Alarm on recognized license plate	Support-Yes		
i	Ability to schedule when alarms will go off (i.e. after business hours)	Support- Yes		
j	Alert when camera is down	Support- Yes		
11	Facility Maps			
а	Muti-Layered Facility Map	Support-Yes		



Sr No.	Feature	-	Compliance / Non Compliance	Remark
b	Highlighting icons on alarm	Support- Yes		
C	Mouse over of camera icons for live	Support- Yes		
<u> </u>	video pop-up	Support 105		
d	View icon to display a pre-defined view	Support- Yes		
e	Button icon to trigger pre-defined actions	Support- Yes		
f	Simple setup requires JPEG, BMP, or GIF images, and drags and drops icons of maps, cameras, layouts or doors on map images	Support- Yes		
g	Location of alarms on map	Support- Yes		
h	Enterprise Features / Integration			
i	Failover Recording Servers	Support- Yes		
j	Storage configurable to group or individual Cameras	Support- Yes		
k	Clients connect to Independent Systems (Federated)	Support- Yes		
1	System Health Monitor	Support- Yes		
m	Enterprise config tool to setup system-wide cameras	Support- Yes		
n	Support Virtualization Platforms	Support- Yes		
0	Pure 64-bit Architecture	Support- Yes		
р	Active Directory Support	Support- Yes		
12	Web Client Features			
a	View live and recorded video from any camera	Support- Yes		
b	Access to all cameras in the system (so long as admin)	Support- Yes		
с	View cameras in custom layouts	Support- Yes		
d	PTZ control	Support- Yes		
e	Facility Map support	Support- Yes		
f	Timeline	Support- Yes		
g	Bookmark	Support- Yes		
h	Export	Support- Yes		
i	System Configuration	Support- Yes		



Sr No.	Feature		Compliance / Non Compliance	Remark
j	Restrict users views to specific cameras within web client	Support- Yes		
k	IE, Safari, FF, Opera, and Chrome compatibility	Support- Yes		
1	Mac support via web client	Support- Yes		
13	Mobile Client Features			
a	iPad / iPhone app (free unless otherwise noted)	Support- Yes		
b	Android app (free unless otherwise noted)	Support- Yes		
с	Auto Import Cameras/Servers	Support- Yes		
d	Stream Full Resolution with H.264	Support- Yes		
e	View live and recorded video from any camera	Support- Yes		
f	Adjustable frame rate	Support- Yes		
g	Custom Layouts within application	Support- Yes		
h	Facility Maps support	Support- Yes		
i	Control PTZ from Mobile	Support- Yes		
j	Email Full Resolution Snapshot	Support- Yes		
k	Enable rules manager on mobile device	Support- Yes		
1	Trigger I/O from mobile	Support- Yes		
m	Motion Log	Support-Yes		
n	System Diagnostic Information and Logs	Support- Yes		
0	Approved Make	Support-Yes		



15.6 Tentative Location of Cameras

Phase – 1 Law College Road

CAMERA POSITION	DISTANCE TO BE COVERED	TYPE OF CAMERA	QTY
MAIN GATE - TO ENTRY	30 MTRS	BULLET	1
PARKING 2 WHEELER	50 MTRS	Box Camera	1
OUTSIDE PREMISES	30 MTRS	DOME	2
AC PLANT	30 MTRS	DOME	1
CHECKING ROOM CORNER	30 MTRS	BULLET	1
GENERATOR	30 MTRS	DOME	1
GENERATOR ROAD CLEAR	30 MTRS	DOME	1
GENERATOR BACK SIDE	30 MTRS	DOME	1
MAIN ENTRANCE	50 MTRS.	Box Camera	2
RECEPTION ENTRACE LOBBY	30 MTRS	DOME	1
ADMIN SECTION	30 MTRS	DOME	1
FILM PRESERVATION AREA	30 MTRS	DOME	1
3XVAULT BASEMENT CORRIDOOR	30 MTRS	DOME	1
PREVIEW THEATRE	30 MTRS	DOME	1
LIBRARY MAIN AREA	30 MTRS	DOME	1
LIBRARY PASSAGE	30 MTRS	DOME	1
DOCUMENT ROOM CORRIDOOR	30 MTRS	DOME	1
GUEST LAUNGE DIRECTOR,S ROOM	30 MTRS	DOME	1
MAIN THEATRE	50 MTRS.	PTZ	2
PREVIEW THEATRE CORRIDOOR	30 MTRS	DOME	1
ELECTRICAL SUBSTATION	30 MTRS	DOME	1
TOTAL CAMERA			24

Phase – 2 : Kothrud

CAMERA POSITION	DISTANCE TO BE COVERED	TYPE OF CAMERA	QTY
ENTRY GATE AREA	30 MTRS	BULLET	1
ENTRY GATE AREA	30 MTRS	DOME	1



50 MTRS	Box Camera	1
30 MTRS	BULLET	1
30 MTRS	DOME	1
30 MTRS	DOME	2
30 MTRS	DOME	2
50 MTRS	Box Camera	2
30 MTRS	DOME	2
30 MTRS	BULLET	1
30 MTRS	DOME	2
30 MTRS	DOME	1
30 MTRS	DOME	1
30 MTRS	DOME	1
50 MTRS	PTZ	2
30 MTRS	DOME	2
30 MTRS	BULLET	4
30 MTRS	DOME	4
30 MTRS	DOME	1
30 MTRS	DOME	2
30 MTRS	DOME	1
		35
	50 MTRS 30 MTRS	50 MTRSBox Camera30 MTRSBULLET30 MTRSDOME30 MTRSDOME30 MTRSDOME30 MTRSBox Camera30 MTRSBOME30 MTRSDOME30 MTRSDOME



15.7 Annexure 6 Pre Bid Query Format

Ref: RFP Notification <<>>

Name of the MSI:

Contact Address of the MSI:

Serial Number	Section Number	Page Number	Query

Signature:

Name of the Authorized signatory:

Company seal:

Date and Stamped



15.8 Annexure 7 Project Citation Format

Relevant projects				
General information				
Name of the project				
Client for which the project was executed				
Name and contact details of the client				
Project details				
Description of the project				
Scope of services				
Service levels being offered				
Technologies used				
Outcomes of the project				
Other details				
Total cost of the project				
Total cost of the services provided by the bidder				
Duration of the project (no. of months, start date, completion date, current status)				

Please enclose:

- a. Copy of Work Order
- b. Letter from the client to indicate the successful completion of the projects, if any



15.9 Annexure 8 Curriculum Vitae

	Name				
	Position:				
Photo	Date of Birth				
	Education:	•			
	From	То	Company	Position Held	
4. Employment Record					
5. Brief Profile	•				
8. Countries of Work Experience					
9. Languages	•				
10. Work Undertaken that Best Illus	strates Capability to	o Handl	e the Task Assig	jned	
Nature of Work:					
Year:					
Location:					
Company:					
Position Held:					
Main features:					
•					
Activities Performed:					
•					
Note: Add Number Of Rows To N	Nature Of Work Fo	r Cove	ring The Multip	le Projects, If	



Required

Certification

I, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any willful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Additionally, I also certify that I shall be available for the entire duration of the contract.

_ Date__

Signature of staff member Day / Month / Year

