

JHARKHAND MANTRALYA
DPRD BUILDING
DHURWA, RANCHI-834004.
OFFICE OF THE D.G. & I.G. OF POLICE
Re- Tender Ref. No.: 05/2020-21

IG of Police (Provision), Jharkhand Police Headquarters Ranchi, invites sealed Technical & Commercial Bids on behalf of Office of the D.G & I.G of Police, Government of Jharkhand For "Annual Maintenance Contract" of the IT Equipments To Jharkhand Police.

'Annual Maintenance Contract' of IT equipments as per the given in the bill of materials in the tender documents.

A complete set of Bid Documents may be purchased by any interested eligible Bidder on the submission of a written application to the IG Provision Jharkhand Police Head Quarter, Dhurwa, Ranchi-834004 upon payment of a non refundable fee of **Rs. 2500/- (Rupees Two Thousand Five Hundred only)** in the form of Demand Draft in favor of IG Provision Jharkhand Police, Ranchi, payable at Ranchi.

The Bid Document may be purchased personally during office hours on all working days from **02.12.2020.**

Bidder can also download the Tender document from Jharkhand Police Web-site www.jhpolice.gov.in in case the tender downloaded the bidder has to enclosed a demand draft of Rs. 2500/- (Rupees Two Thousand Five Hundred only) in favour of IG of Police (Provision) along with the tender document.

Interested and eligible Bidders are required to submit the Technical and Commercial Bids in two separate sealed envelopes.

The Technical and Commercial Bids should be accompanied by a bid security as specified in this Bid Document.

The Bid Security (In the form of Demand Draft) should be included in the same envelope containing the Technical Bid.

The Technical and Commercial Bids along with the Bid Security must be delivered to IG Provision Jharkhand Police head quarter, Dhurwa, Ranchi-834004 on or before **15.12.2020 till 4.00 pm.**

The envelope containing the Technical Bid and the Bid Security will be opened on the specified date & time in the presence of the Bidders or their authorized representatives who choose to attend.

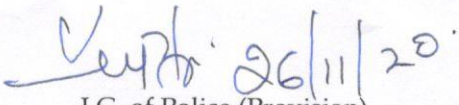
In the event of the date specified for bid receipt and opening being declared as a holiday for the Office, the due date for submission and opening of bids will be the following working day at the appointed times.

The summary of various activities with regard to this invitation of bids are listed in the table below:-

1	Bid Reference No.	05/2020-21
2	Price of Tender Document	Rs. 2500/-
3	Date of commencement of sale of Tender Documents	02.12.2020
4	Last date and Time for purchase of Tender documents	Till 3.00 pm on 07.12.2020
5	Pre-bid Meeting	08.12.2020 at 11.30 am
6	Last date & Time for submission of Bids	Till 4.00 pm on 15.12.2020
7	Date & Time of opening of Bids	11.00 am on 16.12.2020

Due to COVID Pandemic, Jharkhand police wants to make Pre-Bid Conference through Google Meet which link is <https://meet.google.com/gbv-cxft-rxg>. Interested Firm can participate or send Pre-Bid inquiry from e-mail on ig-prov@jhpolice.gov.in Inquiry must receive in specified Time (Till 17.00 Hrs on 07.12.2020).

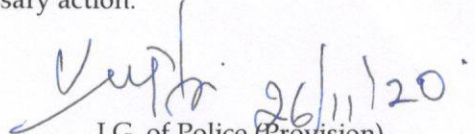
Document related to Pre-Bid queries, response and amendments can be downloaded from Jharkhand Police Web-site "www.jhpolice.gov.in".


I.G. of Police (Provision)
Jharkhand Ranchi

Memo No. — 630 /TS, dt- 26/11/2020.
06.33.2018

Copy to:-

1. Director, PRD, Jharkhand, Ranchi for kind information and necessary action.
2. Data Centre, PHQs, for information and necessary action.


I.G. of Police (Provision)
Jharkhand Ranchi



2020

Request for Proposal
For "Annual Maintenance Contract" of IT
Equipments To Jharkhand Police



DEPARTMENT OF POLICE,
GOVERNMENT OF JHARKHAND
Police HQ, Dhurwa, Ranchi –
834004

Last date of Submission
15.12.2020

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Section -I
Invitation for Bids
Bid Ref. No.: 05/2020-21

IG of Police (Provision), Jharkhand Police Headquarters Ranchi, invites sealed Technical & Commercial Bids on behalf of Office of the D.G & I.G of Police, Government of Jharkhand For "Annual Maintenance Contract" of the IT Equipments To Jharkhand Police.

'Annual Maintenance Contract' of IT equipments as per the given in the bill of materials in the tender documents.

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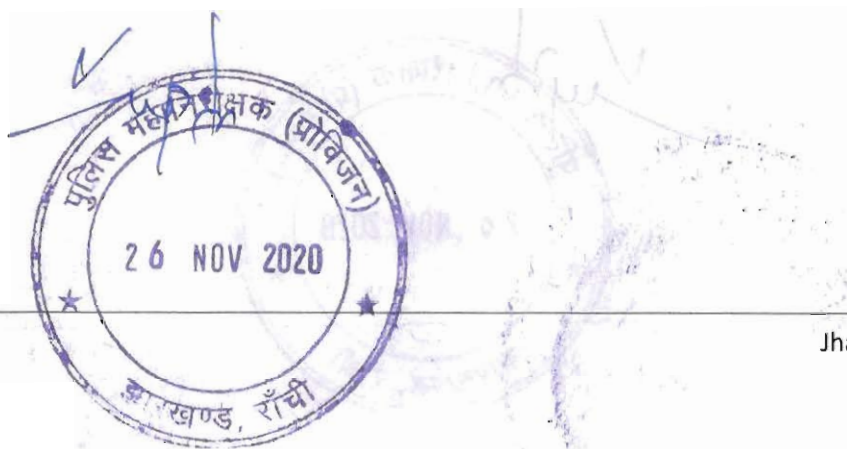
Interested and eligible Bidders are required to submit the Technical and Commercial Bids in two separate sealed envelopes. The Technical and Commercial Bids should be accompanied by a bid security as specified in this Bid Document. The Bid Security (In the form of Demand Draft) should be included in the same envelope containing the Technical Bid. The Technical and Commercial Bids along with the Bid Security must be delivered to IG Provision Jharkhand Police head quarter, Dhurwa, Ranchi-834004 on or before 15.12.2020 till 4.00 pm.

The envelope containing the Technical Bid and the Bid Security will be opened on the specified date & time in the presence of the Bidders or their authorized representatives who choose to attend. In the event of the date specified for bid receipt and opening being declared as a holiday for the Office, the due date for submission and opening of bids will be the following working day at the appointed times.



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The summary of various activities with regard to this invitation of bids are listed in the table below:-

1	Bid Reference No.	05/2020-21
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Section-II Scope of Work

Introduction

Jharkhand Police Headquarter, Government of Jharkhand, intends for the state of art Data Centre at their premises and was developed in the year 2007 with 16 rack capacity. Various networking devices, Servers, Storage, Security equipments and Contact Centre with Unified solution have been deployed in the Data Centre for smooth running of the various IT Services.

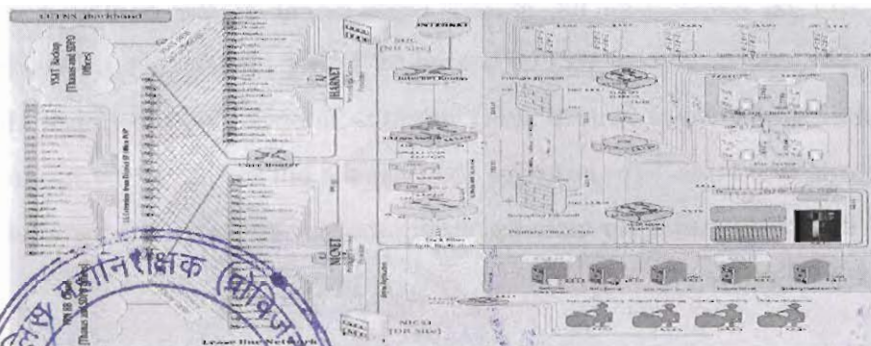
Details of various equipments as per the **Annexure- 5** and Model and Serial number as per the **Annexure-11**

Contact Centre with Unified solution is fully configured and running in the Data Centre for last 3 years. This Project is required for AMC Services of the IT equipments from the OEM (Back to Back OEM support) for 2 Years which is covered all devices in this deployed bundled solution.

List of Unified Services running in the Data Centre:-

- Integrated IP networks with NICNET, SWAN & BSNL.
- IP Phone communication at Police Station level
- Unified Communication with VHF/UHF.
- Audio/Video Conferencing including Desktop & Mobile.
- CCTNS Networks including Police Stations.
- Integrated MCU with Desktop and Mobile conferencing.
- Server / Network Monitoring

IT Equipments like Cisco Router, Cisco Switch, Cisco IP Phone, Cisco IP-PBX, Cisco Contact Centre and Delta 2KVA Online UPS and Cisco Conferencing Servers/ Storage and other Cisco Servers as per the bill of materials for the solution related to Unified Communication/ Networking. Jharkhand Police, Datacenter were purchased under CCTNS Project. Above services are dependent on these devices. So, the AMC of these devices is required for 2 Years for smooth running of the services in the Jharkhand Police, Data Centre.



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Detail Scope of work

The Scope of work shall include maintenance support of IT equipments as per the given list in the bill of materials in the tender documents.

- The bidder will submit support warranty documents for 2 Years from the OEM and S.I declaration letter for external support of faulty equipments /replacement with the same model or higher version which will not be covered by the respective OEM in the name of the "I.G Provision", Jharkhand Police at Central Store, Hotwar, Ranchi of Jharkhand Police and accordingly price may be quoted in the financial bid.
- The bidder will also submit an OEM declaration letter for the items/equipments which has reached "End of the sale" or "End of the Life".
- To ensure the service within the stipulated time period with standby devices and actual hardware should be replaced within 15 days.
- Onsite replacement of faulty IT equipments like router, switch, IP Phone and audio/video conferencing items etc.
- Bidder is responsible for maintenance and support services at onsite of the IT equipments as given in the bill of materials of under the contract at least for a period of 2 years from the date of final acceptance of the system.
- The maintenance services, including spares shall be free of cost during the AMC period for 2 years. During the term of AMC the service/repair calls should be attended by the bidder within two hours for Data Centre and 24 Hours for District HQ and Police Stations equipments for smooth operation of the Services.
- Ensuring 99% uptime of Data Centre IT equipments which is covered in the tender for 2 years.
- The bidder should provide the comprehensive maintenance/Support with standard mechanism under stipulated time.
- The bidder will be provided OEM TAC user and password for ticketing system management.
- The bidder will be responsible for battery replacement of the deployed UPS, In case of battery replacement, The cost of battery will be beared by Police Headquarter, Jharkhand. The bidder has to submit the offer unit price of battery along with the financial bids to Police Headquarter, Jharkhand. The bidder has to first replace the batteries and raise the bill to Police Headquarter, Jharkhand.
- The bidder will be responsible for technical configuration support of the installed software/ Hardware in the deployed solutions.



- The bidder should provide the preventive maintenance of all the supplied/ AMC items in half yearly basis.



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Section-III

Terms & conditions

1. Bidders are advised to study all technical and commercial aspects, instructions, forms, terms and specifications carefully in the tender document. Failure to furnish all information required in the tender document or submission of a bid not substantially responsive to the Tender document in every respect will be at the bidders risk and may result in the rejection of the bid. It will be imperative on each bidder to fully acquaint himself with all the local conditions and factors, which would have any effect on the performance of the contract.
2. Sealed offers prepared in accordance with the procedure enumerated in tender document should be submitted to the IG Provision Jharkhand Police head quarter, Dhurwa, Ranchi-834004, not later than the date and time laid down and at the address given in the tender document.
3. All bids must be accompanied by a Earnest Money Deposit (EMD) of **Rs. 300000/-** (Rupees Three Lakh) in the form of Demand Draft from any scheduled commercial bank in favor of IG Provision Jharkhand Police **payable at Ranchi**. Tenders not accompanied by earnest money deposit or incomplete in any respect will be rejected outright. This tender document is not transferable.
4. The categories of items and quantity will be as per requirements. IG Provision Jharkhand Police reserves the right to increase or decrease the quantity or delete some or all of the items depending on the needs of the project without assigning any reasons.
5. The bidder should indicate specifically the **Make & Model** of the items, **OEM** declaration etc. Basic Price, Taxes/Excise duty, other duties (if any), and levies chargeable quantitatively against each item. No additional information will be entertained after due date. Blank Price Bid (mentioning the required quantity) should be submitted in the technical Bid with all the relevant information of basic prices and all taxes.
6. The tender should be submitted in Two separate envelope i.e a: Technical Bid and b: Price Bid. There should be proper indication of the contents on each envelope.
7. The demand draft must be in a separate sealed envelope indicating the amount, tender notice number, and due date enclosed with the bid.
8. The details particularly the GST, any other duty should be clearly mentioned else it will not be admissible at a later date.
9. The bidders are required to quote for each item separately in terms of basic price and all other charges as applicable. Prices should be quoted in Indian currency only.



10. The Tender must be submitted along with the Manufacturers authorization letters from the manufacturer.
11. IG Provision Jharkhand Police reserves the right to reject any or all tenders without assigning any reason whatsoever.
12. The technical & financial bid will be opened on the date and time indicated in the presence of bidders. If the date of opening is declared to be a holiday then bid will be opened on the next working day.
13. All damaged or unapproved goods shall be returned at the bidders risk and cost and the incidental expenditure thereupon shall be recovered from the concerned party.
14. Once L1 is finalized, the date of delivery should be strictly adhered to otherwise, IG Provision Jharkhand Police reserves the right not to accept the delivery in full or in part. In case the order is not executed within the stipulated period, IG Provision Jharkhand Police will be at liberty to make purchases through other sources, and to forfeit the earnest money deposit of the L1 bidder.
15. Party should offer replacement of the materials from the same OEM Product under AMC Project.
16. Party shall be responsible for faulty hardware item replacement, Software configuration & technical support and OEM Ticket (TAC) responses for 2 years.
17. Party will be provided OEM TAC user and password for Incident ticket management and latest software patch downloads.
18. The Bidder should have Support centre in the State of Jharkhand or they will setup the office within two months after winning the bid.
19. To fulfill the eligibility criteria for bidding, the consortium/Sub-contract of parties will not be allowed.
20. The bidder only can participate in the bid process who is the active authorized partner of the Original Equipment Manufacturer (OEM) of the AMC items.



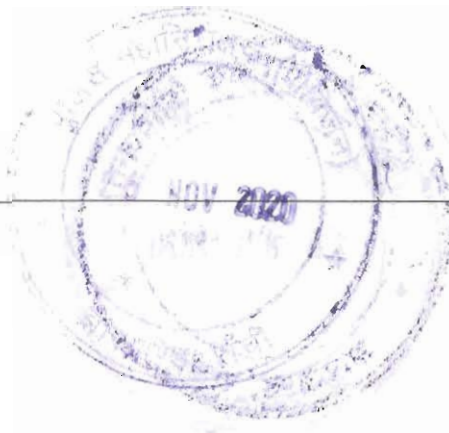
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Section -IV

Eligibility Criteria

The Bid is open to all qualified Bidders who fully meet the following qualifying requirements:-

- a. The bidder should have successfully completed minimum 3 years in similar project like Hardware Supply/ Installation/ Maintenance or AMC of IT Equipments. The total value will be minimum of Rs.1 Crores of at least 2 project during the last three years (Provide the work order details as per the format given in Annexure 2).
- b. The Bidder should have an average annual turnover of not less than 5Cr. in the last three financial years.
- c. The Bidder should have at least 25 professionals on rolls in the last three years.
- d. The Bidder should have Service Tax & GST/VAT registration Certificate. The Latest VAT/GST & Service Tax Return / Acknowledgement should be submitted along with the above Registration Certificates.
- e. Bidders should not be under a declaration of ineligibility for corrupt and fraudulent practices issued as on the date of tender submission. A Self - Declaration Certificate should be enclosed as in Annexure -3.
- f. Company should be a CMMI Level-3/ ISO 9001:2015 / ISO 27001 or higher certified company in the field of IT infrastructure/ Services.
- g. The bidder should have the active certificate of the Authorized Partner from the Original Equipment Manufacturer (OEM).



SECTION - V

Instructions to the Bidders

1. Cost of Bidding

The Bidder shall bear all the costs associated with the preparation and submission of its bid, and the Tendering Authority in no case, will be responsible or liable for these costs, regardless of conduct or outcome of the bidding process.

2. Bidding Document

The Bidder is expected to examine all instructions, forms, terms and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in rejection of the bid.

3. Preparation of Bids

a. Language of Bid

The bid prepared by the Bidder, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Tendering Authority shall be in **English only**.

b. Bid Currency

Prices shall be quoted in Indian Rupees only.

4. Documents Comprising the Bids

a. Bid Prices

The Performa of the bid price form is in **Annexure 7**. If required the tendering authority may at a later stage (i.e. after the finalization of contract or at the time of agreement) ask for a component wise breakup of basic prices of items and taxes etc.

b. Bid Proposal Sheet

Bid Proposal sheet duly filled in and signed and complete in all respects should be submitted (Format in **Annexure 1**).

5. Documents Establishing Bidder's Eligibility and Qualification.

1. Bidder should attach all documentary proof for the eligibility criteria mentioned in the Section IV.



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6. Earnest Money Deposit

1. The Bidder shall furnish, as part of its bid, an Earnest Money Deposit (EMD) in the form of a demand draft in favor IG Provision Jharkhand Police payable at Ranchi for an amount of Rs. 300000/- (Rupees Three Lakh Only)
2. The EMD shall be in Indian Rupees only.

7. Period of Validity of Bids

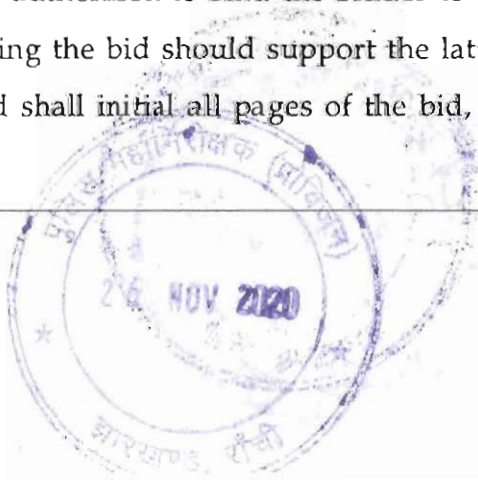
- a. Bids shall be valid for 90 days after the date of bid opening. A bid valid for a shorter period shall be rejected by the tendering authority as non-responsive.
- b. In exceptional circumstances, the Tendering Authority may solicit the Bidders consent to an extension of the period of validity. The request and response thereto shall be made in writing.
- c. Bid evaluation will be passed on the bid prices without taking into consideration the above changes.

8. Contents of Envelopes

- a. It will be a two envelope bid comprising of technical bid and commercial bid.
- b. **First envelope** shall be marked as Envelope No. 1 Technical

Envelope and shall contain:

- Demand Draft for Earnest Money Deposit (EMD)
 - The documents establishing Bidder's eligibility, qualifications and conformity mentioned Tender Document.
 - Technical Bid Offer including all technical & contractual compliance.
- c. **Second envelope** shall be marked as envelope No.2 "Commercial Envelope" which will contain only price schedule in the prescribed Performa in **Annexure 7**.
 - d. The Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to bind the Bidder to the Contract. A Written power-of-attorney accompanying the bid should support the latter authorization. The person or persons signing the bid shall initial all pages of the bid, except for un-amended printed literature.



- e. Any interlineations, erasures or overwriting shall be valid only if they are signed by the person(s) signing the bid. The bid will be summarily rejected if all the documents mentioned are not enclosed in technical bid.

9. Submission of Bids

Sealing and Marking of Bids

- i. The Bidders shall seal the envelope No.1 Technical envelope and envelope No.2 Commercial envelope in separate inner envelopes, duly marking the envelopes as "envelope No.1, Technical Envelope" and "envelope No.2 Commercial Envelope". He shall then place these two envelopes in an outer envelope. Both the inner envelopes and the outer envelope should be addressed to: **I.G Provision Jharkhand Police Head Quarter, Dhurwa, Ranchi-834004.**
- ii. The inner and outer envelopes shall bear the words: **Invitation for Bids for For "Annual Maintenance Contract" of IT Equipments for Jharkhand Police.**
- iii. Both the inner envelopes shall indicate the name and address of the Bidder.
- iv. If the outer envelope is not sealed and marked, the Tendering Authority will not be responsible for Bid's misplacement or premature opening.
- v. Telex, cable or facsimile bids will be rejected.

b. Deadline for Submission of Bids

- i. Bids must be received by The Tendering Authority at the address, not later than the time and date specified in the **Invitation for Bids (Section I)**. In the event of the specified date for the submission of Bids being declared as a holiday for the Tendering Authority, the bids will be received up to the appointed time on the next working day.
- ii. The Tendering Authority may, at its discretion, extend this deadline for submission of bids by amending the bid documents, in which case all rights and obligations of The Tendering Authority and Bidders subject to the deadline will thereafter be subject to the ~~deadline as~~ extended.



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c. **Late Bids**

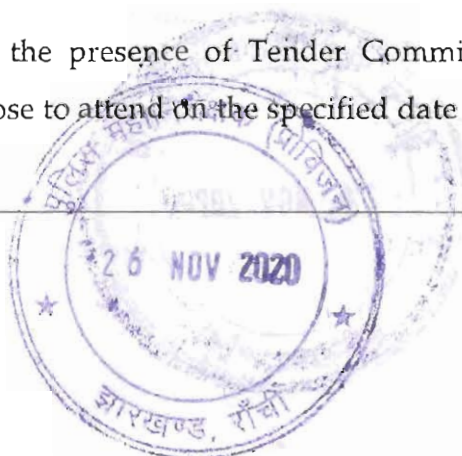
Any bid received by the Tendering Authority after the deadline prescribed by the Tendering Authority, will be rejected and/or returned unopened to the Bidder.

d. **Withdrawal of Bids**

- i. The Bidder may withdraw its bid after the submission, provided that the Tendering Authority receives written notice of the withdrawal, prior to the deadline prescribed for submission of bids.
- ii. In case the Bidder wants to withdraw, the Bidder's withdrawal notice shall be prepared, sealed, marked and dispatched to the Tendering Authority in original.
- iii. No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of the bid validity specified by the Bidder on the Bid Form. Withdrawal of a bid during this interval shall result in the Bidder's forfeiture of its bid security.

10. **Bid Opening and Evaluation of Bids**

- a. After opening of the technical bid, those bidders, who are technically eligible (i.e. who satisfy the eligibility criteria) and have submitted all the documents mentioned in the tender document, the financial bids of the technically qualified bidders will be opened.
- b. The Bidder or their authorized representative who wish to be present shall sign an attendance.
- c. The Bidder's name, bid modifications or withdrawals, bid prices and presence or the absence of requisite bid security and such other details as, the Tendering Authority at his discretion, may consider appropriate, will be announced at the time of opening. No bid shall be rejected at the openings except for the late bids, which shall be returned unopened to the Bidders.
- d. Bids that are not opened and read out at bid opening shall not be considered for further evaluation, irrespective of the circumstances. Withdrawn bids will be returned unopened to the Bidders.
- e. Bids will be opened in the presence of Tender Committee as well as Bidders or their representatives who choose to attend on the specified date and time.



- f. The Tendering authority reserves the right to disallow the opening of bid of any of the bidders without assigning any reason.

11. Clarification of Bids

During evaluation of bids, Tendering Authority may at its discretion, ask the Bidder for clarification of their bid. The request for clarification and response shall be in writing and no change in prices or substance of the bid shall be sought, offered or permitted.

Any effort by a Bidder to influence the Tendering Authority in its decision on bid evaluation, bid comparison or contract award may result in disqualification of the Bidder's bid and also forfeiture of his bid security.

12. Award of Work

The finalization of the successful bidder will be done by a tendering committee.

- a. The Tendering Authority will award the work to the Successful bidder whose bid has been determined as the lowest amount evaluated bid provided further that the bidder is technically eligible.
- b. The Tendering Authority's may vary scope of contract at the time of award.

12. Tendering Authority's Right to Accept / Reject Any or All Bids

The Tendering Authority reserves the right to accept or reject any bid, or to terminate the Bidding process and reject all bids at any time prior to the award of Contracts, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Tendering Authority's action.

13. Performance Guarantee

Within 20 days after receipt of notification of award of work from the office of IG Provision Jharkhand Police, the successful Bidder shall furnish performance Bank Guarantee bond to the IG Provision Jharkhand Police which shall be equal to 5 percent of the value of the contract and shall be from scheduled commercial bank valid up-to 24 months from the date of award of work.



14. Corrupt or Fraudulent Practices.

The Tendering Authority requires that the Bidders/suppliers/ contractors under this tender observe the highest standards of ethics during the procurement and execution of such contracts. In pursuance of this policy, the Tendering Authority:

a. Defines for the purposes of this provision, the terms set forth as follows:

- I. "Corrupt practice" means the offering, giving, receiving or soliciting of anything of value to influence the action of the public official in the procurement process or in contract execution; and
- II. "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or a execution of a contract to the detriment of the Tendering Authority, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Tendering Authority of the benefits of the free and open competition;

b. The tendering Authority will reject a proposal for award if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.

- I. The tendering Authority will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in corrupt and fraudulent practices in competing for, or in executing, a contract.
- II. The past performance of the Bidder will be crosschecked if necessary. If the facts are proven to be dubious, the Bidders tender will be ineligible for further processing.

15. Interpretation of the clauses in the Tender Document / Contract Document

In case of any ambiguity in the interpretation of any of the clauses in Tender Document or the Contract Document, the Tendering Authority's interpretation of the clauses shall be final and binding on all parties.

16. Decision Taken

The decision taken by the Tender Committee in the process of Tender evaluation will be final.



SECTION VI

GENERAL CONDITIONS OF CONTRACT

1. Definitions

In this Contract, the following terms shall be interpreted as indicated:

"The Contract" means the agreement entered into between the Tendering Authority and the Supplier, as recorded in the Contract Form Signed by the parties, including all the attachments and appendices thereto and all documents incorporated by reference therein.

"Bidder" means any agency that is participating in the tender process.

"Provider" means any agency that is a successful Bidder and to whom the contract will be awarded.

"The Contract Price" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations.

The " Items " means the material which the Bidder is required to supply to the Department under the Contract.

The **"User Department"** means Office of the D.G & I.G of Police, Jharkhand Police Headquarters -Ranchi

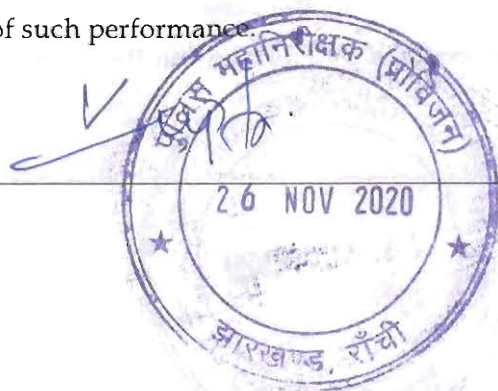
"Service" means the Provider should come up with a Comprehensive solution as defined in the Scope of Work. The work will not be allotted in piecemeal. Bidders providing for part services / activities will not be considered.

2. Application

These General Conditions shall apply to the extent that provisions in other parts of the Contract do not supersede them.

3. Use of Contract Documents and Information

- a. The Provider shall not, without the Tendering Authority's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Tendering Authority in connection therewith, to any person other than a person employed by the Provider in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.



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- b. Any document, other than the Contract itself, shall remain the property of the Tendering Authority and shall be returned (in all copies) to the Tendering Authority on completion of the Supplier's performance under the Contract if so required by the Tendering Authority.
- c. The Service Provider shall permit the Tendering Authority to inspect the Service Provider's accounts and records relating to the performance of the Service Provider and to have them audited.

4. Delivery of Items

The vendor shall be responsible for delivery of the ordered AMC item(s) at the site and for making them fully operational at no extra charge within 30 days of the date of Supply order.

Delivery of the AMC Items shall be made by the Provider in accordance with the terms specified by the Tendering Authority in the work order.

5. Incidental Services

The Provider is required to provide the following services, including additional services, if any:

- Performance or supervision of the on-site assembly and/or start-up of the supplied Items;
- Furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Items;
- Performance or supervision or maintenance of the supplied items for the period of time mentioned in the Tender notification.

6. Delays in the Bidder's performance

Performance of the Contract shall be made by the Bidder in accordance with the time schedule specified by the IG Provision Jharkhand Police as indicated in tender document.

An unexcused delay by the Bidder in the performance of its contract obligations shall render the Bidder liable to any or all of the following sanctions:

- i) Forfeiture of its performance security;
- ii) Imposition of liquidated damages; and/or
- iii) Termination of the Contract for default.

As soon as practicable, after receipt of the Bidder's notice, the IG Provision Jharkhand Police shall evaluate the situation and may at its discretion extend the Bidder's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

7. Acceptance

The Acceptance Tests for delivery, installation and maintenance shall be conducted by the Bidder in the presence of a core Group of experts nominated by IG Provision Jharkhand Police. The Acceptance Test



must be completed by the Bidder to the satisfaction of the Core Group within a period of thirty (30) days after Implementation.

8. Liquidated Damages

In the event of failure of the Bidder to secure acceptance of the items by the IG Provision Jharkhand Police, within ninety (90) days after implementation, the IG Provision Jharkhand Police reserves the option to recover from the Bidder as liquidated damages and not by way of penalty for the period after the said ninety (90) days, until acceptance a sum equivalent to two percent (2%) of the contract value for each month of the failure of Bidder up to a maximum deduction of Ten (5) percent, to secure acceptance or part thereof, without prejudice to the IG Provision Jharkhand Police other remedies under the Contract.

9. Penalty Clause

If the Provider is not executing the contract to the satisfaction of the tendering authority then he may invoke any or all of the following clauses.

The reported failure/malfunctioning must be resolved within 6 hours for Data Centre equipments, 48 Hours for District HQ and Police Station equipments from the time of login. If the failure/malfunctioning is not resolved within 6 hours/48 Hours there will be a penalty charge of @Rs 500.00 per hour upto maximum of 5% of faulty equipment costs which will be encashed from the performance Guarantee Amount.

The Project Support service is 24X7 basis.

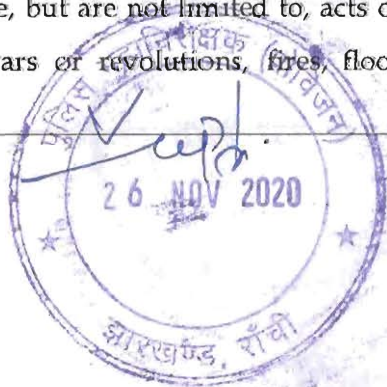
10. Termination

The Tendering Authority may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Provider, terminate the Contract in whole or part:

- i. If the Provider fails to deliver any or all of the AMC Items within the period(s) specified in the Contract.
- ii. If the Provider fails to perform as per the performance standards.
- iii. If the Provider fails to provide the IT Support as specified in BOM.
- iv. If the Provider, in the judgment of The Tendering Authority has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

11. Force Majeure

- a. For purposes of this clause, "Force Majeure" means an event beyond the control of the Provider and not involving the Provider's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchase either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.



- 815
- b. If a force Majeure situation arises, the Provider shall promptly notify the Tendering Authority in writing of such conditions and the cause thereof. Unless otherwise directed by the Tendering Authority in writing, the Provider shall continue to perform its obligations under the Contract as far as it reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure.

12. Termination for Insolvency

The Tendering Authority may at any time terminate the Contract by giving written notice to the Provider. If the Provider becomes bankrupt or otherwise insolvent, in this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Tendering Authority.

13. Resolution of Disputes

The matter regarding any dispute shall be sorted out at the level of DGP Jharkhand Police and his decision shall be final.

14. Legal Jurisdiction

All legal disputes are subject to the jurisdiction of Ranchi courts only.

15. Taxes and Duties

The rates quoted shall be in Indian Rupees and shall be inclusive of all taxes, duties as applicable up to the completion of job. Taxes will be applicable as per government norms.

16. Binding Clause

All decisions taken by The Tendering Authority regarding the processing of this tender and award of contract shall be final and binding on all concerned parties.

17. Tendering Authority, reserves the right:-

- a) To verify, modify, revise, amend or change any of the terms and conditions mentioned above or to reject any or all the tender/s without assigning any reason whatsoever thereof or may terminate the tender process midway without assigning any reason.
- b) The Decision regarding acceptance of Tender by the Tendering Authority will be full and final.
- c) Conditional tenders shall be summarily rejected.
- d) The vendor should be in a condition to fulfill the repeat orders, if asked to do so.



SECTION- VII

SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract.

1. Provider's Integrity

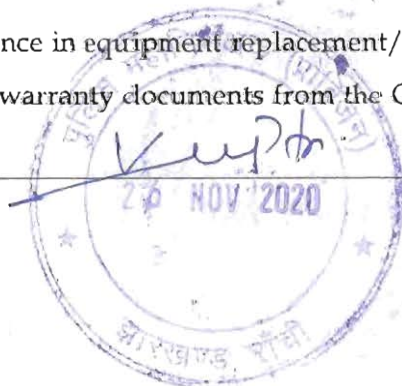
The Provider is responsible for and obliged to conduct all contracted activities as defined in the scope of work in accordance with the Contract.

2. Provider's Obligations

- a. The Provider is obliged to work closely with the Tendering Authority's staff, act within its own authority and abide by directives issued by the Tendering Authority.
- b. The Provider will abide by the job safety measures prevalent in India and will free the Tendering Authority from all demands or responsibilities arising from accidents or loss of life the cause of which is the Provider's negligence. The Provider will pay all indemnities arising from such incidents and will not hold the Tendering Authority responsible or obligated.
- c. The Provider is responsible for managing the activities of its personnel or sub-contracted personnel and will hold itself responsible for any misdemeanor.
- d. The Provider will treat as confidential all data and information about The Tendering Authority, obtained in the execution of his responsibilities, in strict confidence and will not reveal such information to any other party without the prior written approval of the Tendering Authority.

3. The bidder will submit all deliverable specified in RFP and should mention the make & model no. and OEM for clarity.

4. Depending upon the project requirement the quantity of items as specified in the tender may increase. If some item other than the mentioned is required, it has to be arranged by the supplier.
5. In case of any negligence in equipment replacement/support during the AMC period or any discrepancy in supplied Support warranty documents from the OEM, the IG Provision Jharkhand Police may cancel the



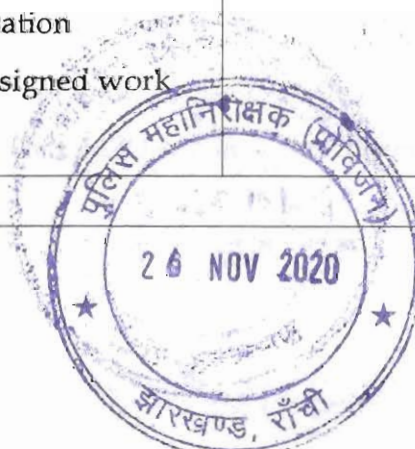
entire purchase order and return the item(s)/ warranty documents back to the vendor at vendor's own cost and risk.

6. Payment and penalty terms

Payments will be released only on satisfactory acceptance of the deliverables for each Task as per the following schedule:

The contract value shall comprise of one components-"Annual Maintenance Contract" of the IT Equipments. Payments shall be released only on the satisfactory acceptance of the deliverables by the purchaser /client based on the inputs provided by the Technical committee. The prices should remain firm and not subject to any upward revisions on any account whatsoever throughout the period of contact.

S.No	Cost component		
1.	WS1- "Annual Maintenance Contract" of IT Equipments To Jharkhand Police.	Component 1 (Total Project Cost)	
S. No	Milestone	Fee Payable	Penalty
Milestone based payment and timelines			
1.	Quarterly payment for 2 years after Successful delivery of AMC document in the name of I.G Provision, Jharkhand Police from the OEM.(Payment will be done after completion of the four months after deduction of any applicable penalties. The invoice should contain reports of support annual license from OEM and performance evaluation certificate of the assigned work from the client.	M1= 12.5% Quarterly payment of Components 1 (For 2 Years)	If any problem like hardware failure for 6 hours for Data Centre/ 48 Hours for District HQ and Police Stations then the penalty will be started after 6 hours/ 48 Hours of Rs. 500.00 per Hours.



Bid Proposal Sheet

To

The IG Provision
Jharkhand Police Head Quarter,
Dhurwa, Ranchi-834004

Subject: For "Annual Maintenance Contract" of IT Equipments To Jharkhand Police.

Sir,

1. We, the undersigned Bidders, having read and examined in detail the Specifications and all the bidding documents as specified in the Bidding documents No. < _____ >.

2. **PRICE AND VALIDITY**

All the prices mentioned in our proposal are in accordance with the terms as specified in bidding documents. All the prices and other terms and conditions of this proposal are valid for a period of 90 calendar days from the date of opening of the Bids.

We are an Indian firm and do hereby confirm that our Bid prices include all taxes including Income Tax and Professional Tax.

We have studied the Clause relating to Service Tax and hereby declare that if any Income Tax, Surcharge on Income Tax, Professional Tax and other Corporate Tax is altered under law, we shall pay the same.

3. **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.

4. **EMD**



811
We have enclosed a Demand Draft in favour of **IG Provision** Jharkhand Police Payable at Ranchi for a sum of Rs 300000/- (RupeesThree Lakhs) only. This **EMD** is liable to be forfeited in accordance with the provisions of Bid documents.

We declare that all the Services/Works shall be performed strictly in accordance with the Scope of Work.

5. **Bid Pricing**

We further declare that the prices stated in our proposal are in accordance with your Instructions to Bidders included in bidding documents.

6. **Bid Price**

We declare that our bid prices are for the entire scope of the work as specified in the technical specification and bid documents. These prices are indicated in **Annexure 7** attached with our proposal as part of the Commercial Bid.

7. **Contract Performance Guarantee**

We hereby declare that in case the Contract is awarded to us, we shall submit the performance Bank Guarantee as prescribed in bid document.

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

Thanking you,

Yours faithfully,

(Signature)

Printed Name and Designation

Seal

Date:

Place:

Business Address:



WORK EXPERIENCE CERTIFICATE

Name of the firm _____ Address: _____

Period from _____ to _____

Order Number and date	Order Placed by (full contact address of such organizations)	Solution provided	Value of order in Rupees

Date: _____

Place: _____

Signature of the Bidder: _____





SELF-DECLARATION

Ref: _____

Date: _____

To,

The IG Provision
Jharkhand Police,
Dhurwa, Ranchi-834004

In response to the tender No. _____ dt. _____. We hereby declare that our Company M/s _____ is having unblemished past record and was not declare ineligible for corrupt & fraudulent practices at the time of bid submission.

Name of the Bidder: -

Signature: -

Seal of the Company: -



CERTIFICATE OF CONFORMITY

Date:

To,

The IG Provision,
Jharkhand Police,
Dhurwa, Ranchi-834004

CERTIFICATE

This is to certify that service for "Annual Maintenance Contract" of IT Equipments To Jharkhand Police, Which I shall provide, if I am awarded with the work, are in conformity with the Scope of Work in the Tender document.

I also certify that the price I have quoted per unit cost basis is inclusive of all the cost factors involved in the execution of the project, to meet the desired standards set out in the Conditions of the contract.

Name:

Designation:

Seal:



Bill of Materials

'Annual Maintenance Contract' (AMC) requirement for IT equipments to Jharkhand Police for 2 Years.

S. No	Item description	Make/ Model	Qty [In Pieces]
1	Aggregation Routers (1-port Channelized STM-1, Gigabyte Ethernet – 4 , Fibre SFP port – 2) at DHQ	Cisco ASR 1002-X	26
2	24 port Network Switch	Cisco 2960S	35
3	IP-PBX with redundant server	Cisco UCS C220	1
4	Inbound Contact Centre with redundancy {Provision to integrate with IP-PBX from day one}[License for 10 users] (1 set)	Cisco CCX 9.0	1
5	IP Phones with License for Thana and Higher Offices	Cisco SIP Phone 3905	700
6	Conferencing System	Cisco MCU 5k, TMS, VCS etc	1
7	Router with E1 Cards and DSP modules	Cisco 2901	25
8	Router with 6 E1 ports and 256 DSP resources	Cisco 3945	1
9	Server for the solution (With Pre Installed Software including OS)	Cisco MSP 2-RU Cisco Physical Security Multiservice	2
10	Software solution & license for the solution	Cisco IPICS 4.X Server	1
11	IP Phone with License for XML based PTT Integration	Cisco IP Phone 6941	100
12	2KVA online UPS with 2hrs backup full load	Delta - 2 KVA Online UPS	24



Support Warranty Documents

- The bidder will submit support warranty documents for 2 Years from the OEM and S.I declaration letter for external support / faulty equipment replacement which will not be covered by the respective OEM in the name of the "I.G Provision", Jharkhand Police at Central Store, Hotwar, Ranchi of Jharkhand Police.
- The bidder will also submit an OEM declaration letter for the items/equipments which has reached "End of the sale" or "End of the Life".
- To ensure the service within the stipulated time period with standby devices and actual hardware should be replaced within 15 days.
- Support/ Maintenance will be cover at Data Centre, Police Headquarter, Dhurwa, Ranchi and 24 Districts of Jharkhand.



Bid Price Form

Prices for "Annual Maintenance Contract" of IT Equipments To Jharkhand Police in manner as specified in Specifications and Bidding documents.

Bidder's Name & Address

To

The IG Provision,
Jharkhand Police ,
Dhurwa, Ranchi-834004



Form-1- Pricing summary

The AMC rates quoted should be inclusive of GST and any other applicable taxes. Pricing format given below. Battery replacement charges will be reimbursed separately and other than battery No any other expenses will be reimbursed during the project. All travel and other expenses to be arranged by the SI at his own cost.

Pricing Format for 'Annual Maintenance Contract' (AMC) requirement for IT equipments for 2 Years.

S. No	Item description	Make/ Model	Qty [In Pieces] [A]	AMC Unit Rate [incl. of all taxes (In Rs.) /yr] [B]	Total AMC Price for 2 Years [incl. of all taxes] (In Rs.) X = [A X B]
1	Aggregation Routers for DHQ (1-port Channelized STM-1, Gigabyte Ethernet – 4 , Fibre SFP port – 2) at DHQ	Cisco ASR 1002-X	26		
2	24 port Network Switch	Cisco 2960S	35		
3	IP-PBX with redundant server	Cisco UCS C220	1		
4	Inbound Contact Centre with redundancy [Provision to integrate with IP-PBX from day one][License for 10 users] (1 set)	Cisco CCX 9.0	1		
5	IP Phones with License for Thana and Higher Offices	Cisco SIP Phone 3905	700		
6	Conferencing System	Cisco MCU 5k, TMS, VCS	1		
7	Router with E1 Cards and DSP modules	Cisco 2901	25		
8	Router with 6 E1 ports and 256 DSP resources	Cisco 3945	1		
9	Server for the solution (With Pre Installed Software including OS)	Cisco MSP 2-RU Cisco Physical Security Multiservice	2		
10	Software solution & license for the solution	Cisco IPICS 4.X Server	1		
11	IP Phone with License for XML based PTT Integration	Cisco IP Phone 6941	100		
12	2KVA online UPS with 2hrs backup full load	Delta - 2 KVA Online UPS	24		
GRAND TOTAL [In Rs.]					

Note* Please read the guidelines and the service requirement as mentioned in the RFP carefully.

** L1 is based on the lowest price of Grand Total of S.No from 1 to 12.

Total Amount in Rupees for: (In figures)

[In Words]

Signature of Bidder

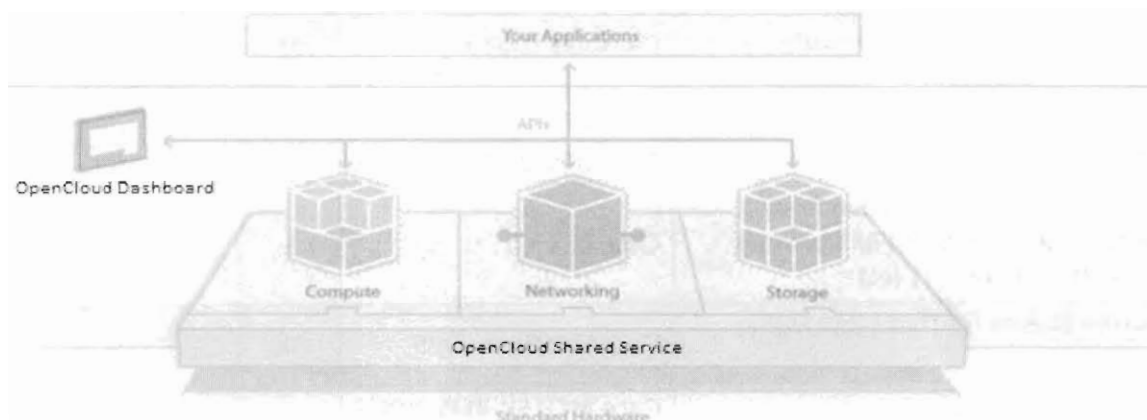
Seal



Solution Architecture & Technology

CLOUD DATA CENTER AND UNIFIED NETWORKS

JHPOLICE CLOUD DATA CENTER is open source based on the platform of Open Stack. This is a cloud operating system that controls large pools of compute, storage, and networking resources throughout a datacenter, Management of Open stack Cloud through a dashboard that gives administrators control while empowering their users to provision resources through a web interface.



Open Stack Dashboard

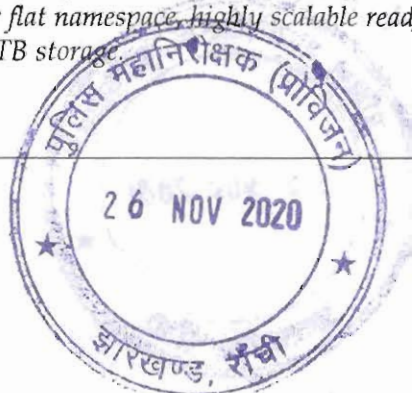
The Open Stack dashboard provides administrators and users a graphical interface to access, provision and automate cloud-based resources. The dashboard is an extensible web app that allows cloud administrators and users to control their compute, storage and networking resources as per the requirements. This is the totally seamless architecture.

Open Stack Compute

Open Stack Compute provisioning and managing large networks of virtual machines. Compute resources are accessible via APIs for developers building cloud applications and via web interfaces for administrators and users. The compute architecture is designed to scale horizontally on standard hardware; **we can add 'N' number of compute node in Open Stack environment,**

Open Stack Storage (CEPH Technology)

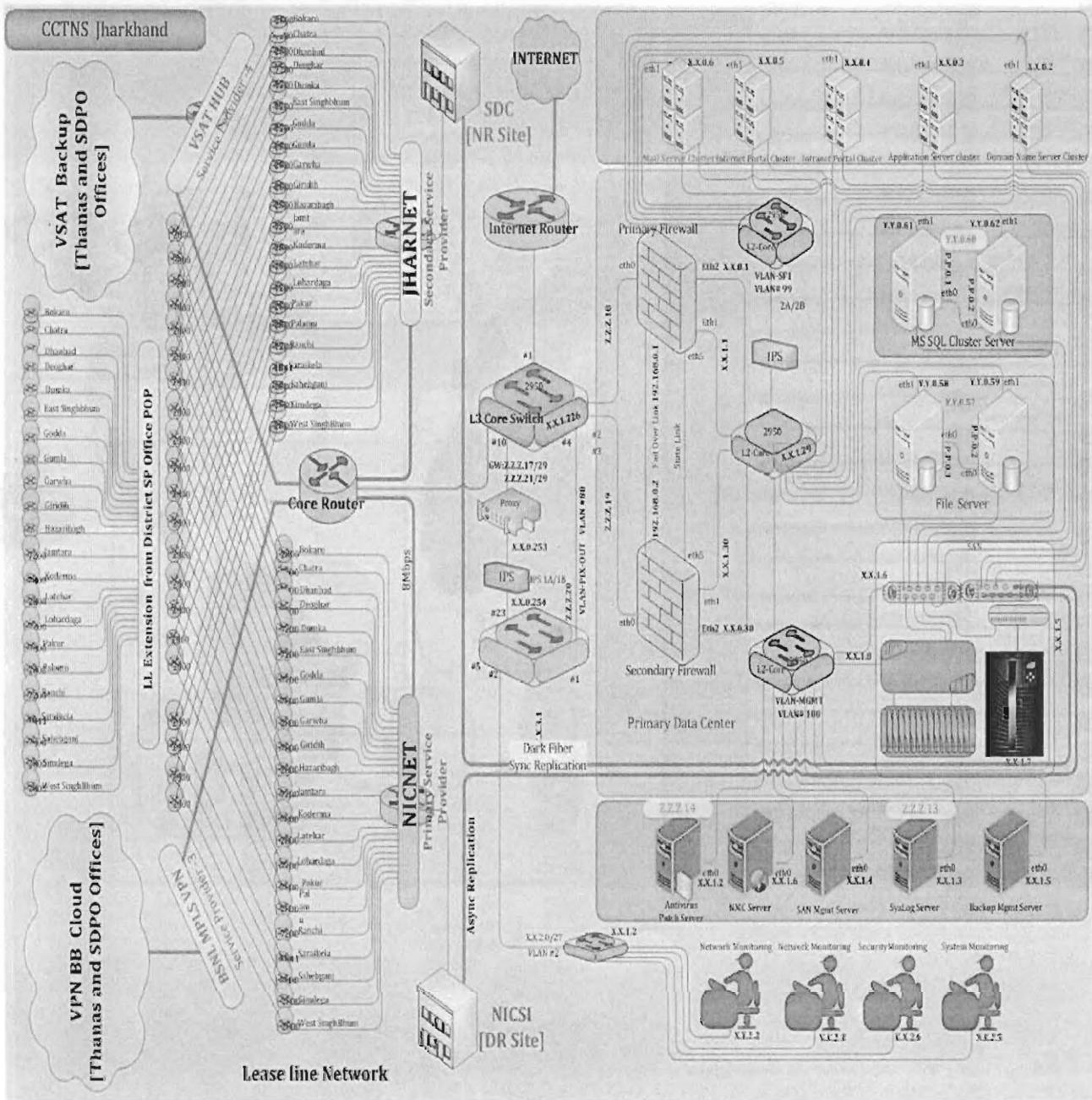
Open Stack has support for both Object Storage and Block Storage, with many deployment options for each depending on the use case. Object Storage is ideal for cost effective, scale-out storage. It provides a fully distributed, API-accessible storage platform that can be integrated directly into applications or used for backup, archiving and data retention. Block Storage allows block devices to be exposed and connected to compute instances for expanded storage, better performance and integration with enterprise storage platforms. *We use Ceph Technology they provide huge & flat namespace, highly scalable read/write accessibility to serve content directly from storage system, currently we have 96 TB storage.*



UNIFIED NETWORKS

JHPOLICE UNIFIED NETWORKS currently 24 districts S.P offices connected and integrated with NICNET, SWAN and BSNL links also connected with 700 locations and integrated with the NICNET & SWAN Networks and also we have IP Phones and IPICS solution. Proposed solution also runs and integrate with the existing unified networks and integrated with the IPICS solution.

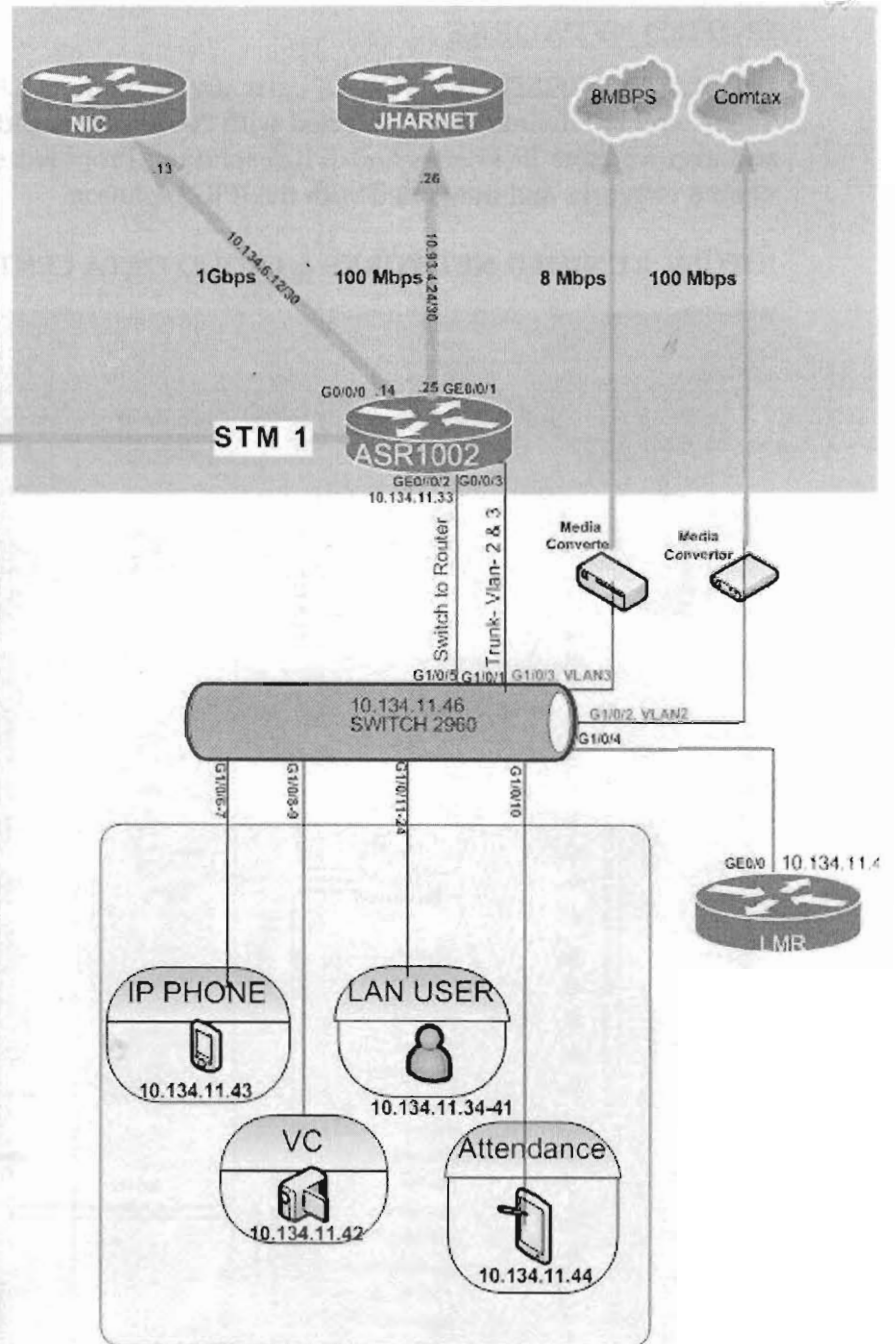
JHPOLICE UNIFIED NETWORKS & CLOUD DATA CENTER



DHQ-NOC Network Diagram

S.P. Red	1	10.134.11.12/28	10.134.11.12/28
S.P. Office, OCP	2	10.93.11.8/30	10.93.11.8/30
S.P. Office, SAR	3	10.93.11.4/30	10.93.11.4/30
S.P. CITY	4	10.93.11.12/30	10.93.11.12/30
S.P. RURAL	5	10.93.11.16/30	10.93.11.16/30
DSP HQ 2	6	10.93.11.20/30	10.93.11.20/30
DSP City	7	10.93.11.24/30	10.93.11.24/30
DSP Law & Order	8	10.93.11.28/30	10.93.11.28/30
DSP Ghatsila	9	10.93.11.32/30	10.93.11.32/30
Ghatsila CI	10	10.93.11.40/30	10.93.11.40/30
Talco CI	11	10.93.11.52/30	10.93.11.52/30
Sidpara CI	12	10.93.11.64/30	10.93.11.64/30
Dy. SP Mussabani	13	10.93.11.112/30	10.93.11.112/30
Dy. SP Palamda	14	10.93.11.116/30	10.93.11.116/30
JWP-6	15	10.93.11.36/30	10.93.11.36/30
Palkeane	16	10.93.11.128/30	10.93.11.128/30
District Control Room	17	10.93.11.130/30	10.93.11.130/30
Traffic Training school	18	10.93.11.120/30	10.93.11.120/30
Sakchi	19	10.93.11.8/30	10.93.11.8/30
S.P. Rail JSR	20	10.93.11.124/30	10.93.11.124/30
Parasuthi	21	10.93.11.44/30	10.93.11.44/30
Telco	22	10.93.11.48/30	10.93.11.48/30
Gevindpur	23	10.93.11.56/30	10.93.11.56/30
Biranagar	24	10.93.11.60/30	10.93.11.60/30
Sichgora	25	10.93.11.64/30	10.93.11.64/30
Geimun	26	10.93.11.72/30	10.93.11.72/30
Bistapur	27	10.93.11.76/30	10.93.11.76/30
Kadma	28	10.93.11.80/30	10.93.11.80/30
Sonari	29	10.93.11.84/30	10.93.11.84/30
Mango	30	10.93.11.88/30	10.93.11.88/30
Azadnagar	31	10.93.11.92/30	10.93.11.92/30
Rail	32	10.93.11.96/30	10.93.11.96/30

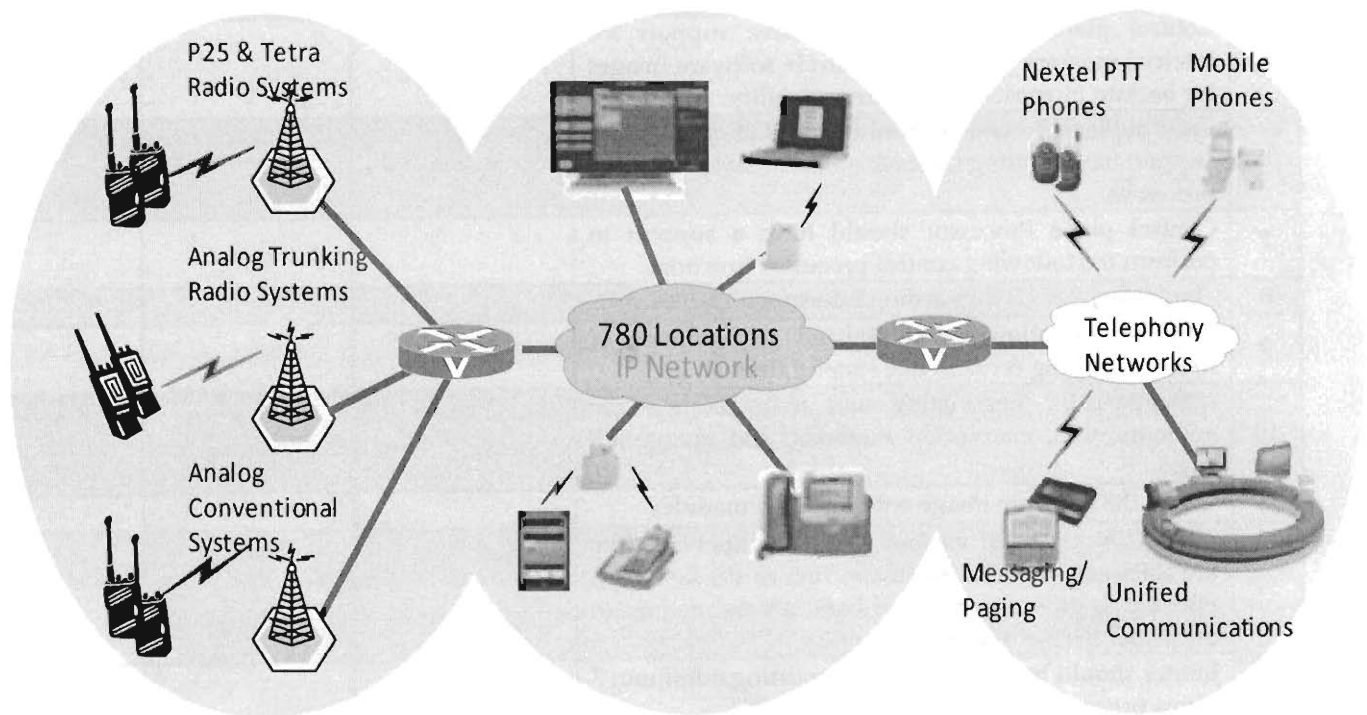
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Presently Jharkhand Police provides Unified Communication with VHF, IP Networks, Mobile and all types of conferencing in a single platform.

Facility:-

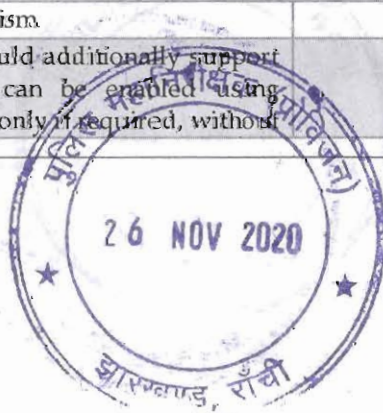
1. Migrated IP networks with NICNET, SWAN and BSNL at district level.
2. Integrated IP networks with VHF in a single platform.
3. Presently IP Phone communication at Police Station level.
4. Inter communication between IP Phones to VHF and Mobile.
5. Integrated MCU with Desktop and Mobile conferencing.



Technical Specification

1. Aggregation Routers for DHQs

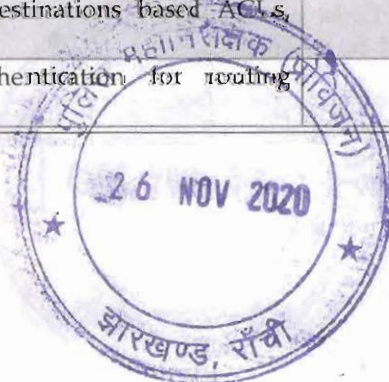
S. No	Specifications	Make & Model	Compliance (Yes/No)	Deviation / Remarks/
	District Router			
1	Router should have a dedicated data plane Processor, independent of the control plane Processor, capable of supporting at least 5 Gbps throughputs.			
2	The router should be modular in architecture with a services-based hardware architecture			
3	Should have redundant power supplies			
4	Should have individual dedicated control plane processor /forwarding engineand data plane processor module / routing engine.			
5	Control plane Processor should have support for internal memory to support multiple software images for backup purposes and future scalability.			
6	Control Plane Processor should have 4GB of DRAM to support large routing tables & other memory intensive processes.			
7	Control plane Processor should have a support to perform the following control processor functions:			
8	- building L2 & L3 forwarding information tables.			
9	- Support to allow for centralized configuration of router including services like stateful firewall etc.			
10	- Support for negotiating and maintaining IPsec authentication, encryption methods, and encryption keys.			
11	- Load the software image onto installed modules			
12	- Track the status of various system components like the software, services processor, line cards, fan trays, PSU etc & provide an out-of band access method to the router in case of a software crash			
13	Router should have capable of supporting minimum 7 Mpps processing.			
14	The Data Plane Processor should have the following functions			
15	- MAC classification & Layer 2 and Layer 3 forwarding,			
16	- QoS classification, policing and shaping			
17	- Security access control lists (ACLs),			
18	- Support for VPNs and load balancing,			
19	- Support flow-export mechanism			
20	The Data Plane Processor should additionally support the following functions & can be enabled using appropriate software licences only if required, without			



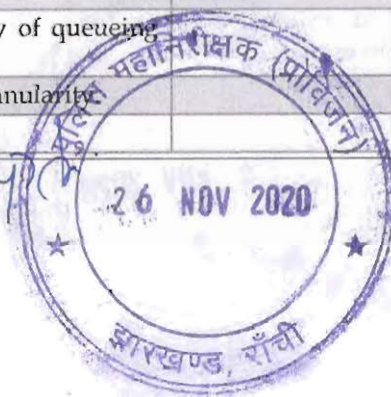
	the need for additional hardware			
21	- Firewall.			
22	- Network Based Application Recognition (NBAR)/Firewall with CoS			
23	- Network Address Translation (NAT)			
24	The Data Plane Processor should support the following performance specifications:			
25	Support for at least 256,000 IPv4 routes & 256,000 IPv6 routes			
26	- Support for at least 1,000 Compressed Real-Time Transport Protocol (CRTP) session.			
27	Router should have an integrated auxiliary, console & 10/100 management interface, in addition it should support a standard USB interface to allow for software image & configuration portability.			
28	Should be 19" rack mountable			
29	Should have status and health LEDs to diagnose system status on the front panel.			
30	Should be a single chassis solution			
31	Should have front-to-back airflow/ side to side airflow.			
32	Modules & Power supplies should be hot swappable without the need of powering down the chassis during replacement.			
33	Interfaces as per the attached excel sheet.			
34	Router should have at least 3 slots.			
35	Necessary attenuators need to be quoted separately.			
36	Interfaces Support			
37	Should support the following LAN interfaces: Fast Ethernet and Gigabit Ethernet.			
38	All the above ports should be in compliance with 802.3 standards			
39	Should be capable of supporting 802.1q VLANs and VLAN trunking.			
40	Should support port aggregation for higher bandwidth and redundancy.			
41	The Gigabit Ethernet port should support multimode and single mode fiber connectivity			
42	The router should support wide variety of interfaces including nx64, E1, E3 and Channelized STM-1 and Ethernet WAN interfaces			
43	Modules should support online insertion and removal (OIR)			
44	The Router should have minimum 2 GE ports Ethernet ports, 2 Fiber Gigabyte SFP port with LH module from day one			
45	The router should have minimum one channelized STM-1[Fibre Module] interface supporting minimum 15 k.m distance, BSNL SDH, 63x E1 Links on the router from Day-1. The Interface should be equipped with SFP supporting at least 300metres.			
	Software Features			



46	High Availability			
	The router architecture should support for two independent operating system processes to run side by side on the same kernel in hot-standby mode, each in its own protected memory space. Consequently, the router should support for a feature which can offer substantial high availability support for a compact routing solution. Active and standby images are not required to be the same (neither the same image nor from the same release).			
47	This high availability feature is not required from day 1. But the same router should support this and this feature can be added by adding the services on the same Chassis in future.			
48	Support Fast software Upgrades while the router is in service			
49	Support Stateful failover between software images with no loss of L2/L3 tables			
50	Support Non-Stop Forwarding support to ensure data forwarding during software switch-over or upgrade			
51	Should have support for modular software images, so that each software process runs independent of the other thus allowing for higher stability. Should also support online upgrade of patches for specific processes without affecting traffic forwarding operations on the router.			
52	Network			
	The operating system should support a simple CLI interface for configuration			
53	Should support the following WAN protocols : HDLC, PPP, and Frame Relay			
54	Should have Multilink PPP as per RFC 1990.			
55	Should have LFI (link fragmentation and Interleaving) for multiservice networks			
56	Support for RIPv2, OSPF, IS-IS and BGP4 routing protocols			
57	Support for Enterprise Services feature set with support for protocols like Multiprotocol Label Switching (MPLS)			
	Support for IPv6 - RIPv6 and OSPFv3 for IPv6, DHCPv6, IPv6 QoS, IPv6 Multicast support, PIM SSM (Source Specific Multicast), IPv6 PIM Source-Specific Multicast.			
58	Security			
	The router should have multiple level of privileges and authentication for user access, along with SSH support for secured device access			
59	Should support RADIUS and TACACS+ for AAA			
60	The software should support Network Address Translation (NAT)			
61	Should have source and destinations based ACLs, time based ACLs, VLAN.			
62	Should support MD5 authentication for routing protocols			



63	Support for packet filtering and firewall functionality			
64	The router should support IPSec encryption for data confidentiality.			
65	The router should support 3DES and AES encryption standards			
66	Should support protection against anti-replay attacks & perform Unicast Reverse Path Forwarding.			
67	The Data Plane Processor should support the following performance specifications:			
68	- Support for at least 2000 unique ACLs			
69	- Support for at least 1000 GRE tunnels, 4000 IPSec tunnels			
70	- Support for FW/NAT - at least 100,000 concurrent sessions, with at least 5,000 sessions/sec setup rates			
71	Support for at least 4Gbps firewall on the same router. Support for per subscriber/user firewall service.			
72	- Support for Zone based Policy Firewall.			
73	Should have at least 1 Gbps IPSEC on the same router.			
74	-Support for at least 1000 VRFs.			
75	Unless specifically mentioned for any specific router, in general firewall features are not required from day 1. But the same router should support Firewall and can be added by upgrading the services on the same Chassis in future. The Router should be equipped with IPSEC VPN features.			
76	QoS			
	Should support multilevel hierarchical queuing /policing, which includes traffic classification; two-rate / single -rate, three-color policing			
77	Should have RSVP			
78	The router should have IP precedence and also able to configure classes of service			
79	Should be able support accounting based on IP precedence/ flow accounting			
80	Support for Flexible number of queues per interface / minimum 8 number of queues per interface			
81	The router should have ingress and egress Committed Access Rate(CAR) features.			
82	Data plane processor should support for at least 64,000 queues / 8 queues per port.			
83	Support for at least three levels of hierarchy			
84	Should be possible to configure CAR based on IP precedence, TCP port number or by application flow / Should be possible to configure 16 forwarding classes with loss priorities			
85	Support for at least two Low Latency Queuing (LLQ) queues per policy, with at least 1,000 policies			
86	The router should have congestion management techniques like RED and WRED			
87	The router should support wide variety of queueing technologies like WRED, LLQ etc			
88	Support for 8 Kbps policing/queueing granularity			
89	Management Features			



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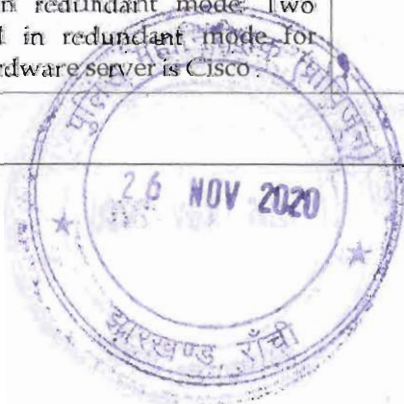
	The router should support in-band and out of band management			
90	Should be possible to boot the router from a remote system			
91	Should have SNMP v1 and v2			
92	Should support Telnet client functionality			
93	Should support TFTP for downloading software			
94	The router should be able to support multiple images for smoother up gradation			
95	Should support online and extensive debugging features			
96	Should support fine grained data collection including detail traffic statistics by protocol and IP address.			
97	Operating System - Cisco Ios			

2. 24 port Network Switch

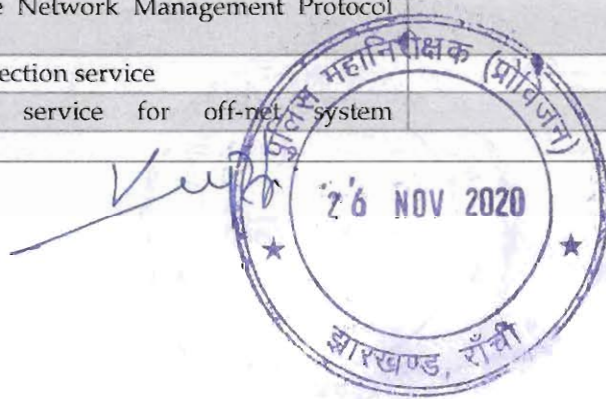
S. No	General Features	Make & Model	Compliance (Yes / No)	Deviation / Remarks/
1	The switch should have minimum 24*10/100/1000 Ethernet Ports and 2 Gigabyte SFP port from day one			
2	Switch should have fans for proper cooling.			
3	Performance			
4	At least 20 Gbps switching fabric			
5	Forwarding rate - 20 Mpps			
6	Layer-2/3 Features			
7	IEEE 802.1Q VLAN encapsulation. Upto 80 VLANs should be supported. Support for 4000 VLAN IDs,arp minimum entries 1000			
8	Control- and Data-plane QoS ACLs(optional)			
9	Trivial File Transfer Protocol (TFTP) to reduce the cost of administering software upgrades by downloading from a centralized location.			
10	Operating system support: Cisco ios			

3. IP-PBX with redundant server

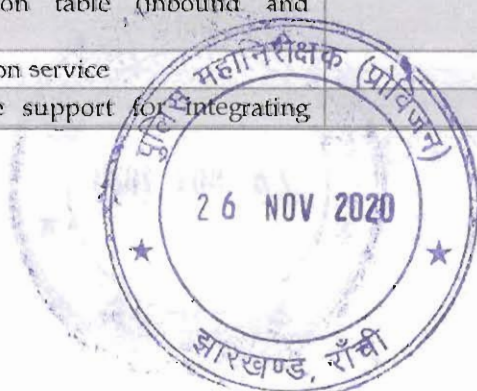
SL No.	Specifications	Make & Model	Compliance (Yes / No)	Deviation / Remarks/
IP-PBX Specification for Thana and Higher Offices Routers				
1	Communication Server in redundant mode. Two Servers to be configured in redundant mode for fallback option and the hardware server is Cisco.			



2	Single Call Server should be able to support at least 1000 IP phones. Redundant IP PBX should be provided.. Each Hardware Server should be able to manage at least 1000 IP phones. The Same hardware should be able to manage ContactCenter features and Presence services/ IVR features as well. The same system should be able to deliver ContactCenter features for Police Dedicated number for emergency handling for the state. There will be a single number provided to citizens to which they will be able to call to get access to police and to report an emergency case.			
3	There are some IP phones present in the current setup, the new communications manager should be able to handle all the old phones on the platform seamlessly if required.			
4	The system should have IP architecture and provide support for integrated telephony solution with support for Analog & IP Phones, E1, PRI gateways over IP architecture.			
6	Support for call processing and call-control.			
7	Support for configuration database (contains system and device configuration information, including dial plan)			
8	Having inbuilt administration software			
9	Provides reports for calls based on records, calls on a user basis, calls through gateways etc.			
10	Able to add bulk add, delete, and update operations for devices and users.			
11	Alternate Automatic Routing & Auto route selection.			
12	Capability to control the admission of calls over the WAN links depending on the available bandwidth.			
13	Coder-decoder (codec) support for automated bandwidth selection: G.711 μ -law, a-law, G.723.1, G.729A/B			
14	Digit analysis and call treatment (digit string insertion, deletion, stripping, dial access codes, digit string translation)			
15	Deployment of devices and applications across an IP network			
16	Support for Distributed call processing.			
17	The IP-PBX should have support for cluster-based redundancy; in an event of cluster failure.			
18	Prepackaged alerts, monitor views, and historical reports.			
19	Real-time and historical application performance monitoring through operating system tools.			
20	The IP-PBX should support survivability across the WAN.			
21	Support for Simple Network Management Protocol (SNMP)			
22	Monitored data collection service			
23	Remote terminal service for off-net system			



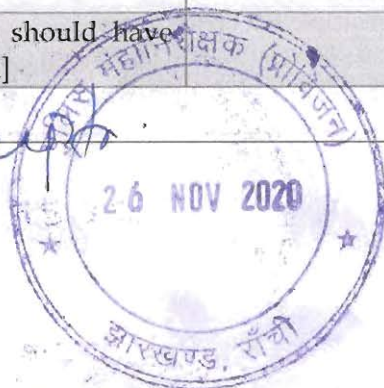
	monitoring and alerting			
24	Real-time event monitoring and presentation to common syslog			
25	Trace setting and call tracing			
26	Shall utilize LAN QoS features for providing end to end QoS 802.1p and IP Tos/DSCP QoS features			
27	Configurable operation modes: non-secure or secure Privacy: Call Server supports encryption of signaling and media.			
28	Session Initiation Protocol (SIP) Trunk support. SCCP Support for the IP Phones. The IP Phones, Contact Center Software, Gateway Hardware and IP PBX Hardware should be from the same brand.			
29	Intracuster feature transparency.[optional]			
30	Intracuster management transparency.[optional]			
31	TAPI applications enabled with automated failover and automatic update			
32	It should be possible to configure Triple IP-PBX redundancy for each IPphones.			
33	Trunk groups			
34	Support for Telephony services at remote sites by integrating with remote routers (capability to keep Telephony services available even when IP EAPBX is not available due to WAN or any other failure).[optional]			
35	Support for Video Telephony.			
36	Video calls to be placed with the same user model (IP Phone) as audio calls.[Optional]			
37	Administrative Features:			
38	Call detail records			
39	CDR Analysis and Reporting Tools			
40	Centralized, replicated configuration database, distributed Web based management			
41	Configurable Call Forward Display			
42	Database automated change notification			
43	Date and time display			
44	Lightweight Directory Access Protocol (LDAP) Version 3 directory interface to selected vendor's LDAP directories			
45	Active Directory			
46	Netscape Directory Server			
47	Debug information to common syslog file			
48	Device-downloadable feature upgrades – Phones, hardware transcoder resource, hardware conference bridge resource, VoIP gateway resource			
49	Dynamic Host Configuration Protocol (DHCP) block IP assignment – Phones and gateways			
50	Dialed Number Analyzer (DNA)			
51	Dialed number translation table (inbound and outbound translation)			
52	Dialed number identification service			
53	The IP-PBX should have support for integrating			



police UHF/VHF system. The required hardware/software solution for integrating police UHF/VHF system.			
The IP-PBX and the Conferencing solution should seamlessly integrated with the Jharkhand police UHF/VHF system.			

4. IP Phones

Sl. No.	Specifications	Make & Model	Compliance (Yes / No)	Deviation / Remarks
1	IP Phone / User Features			
2	• Adjustable ringing and volume levels			
3	• Auto-barge			
4	• Call waiting			
5	• Conference			
6	• Hold			
7	• Message-waiting indicator			
8	• Music on hold			
9	• Redial			
10	• Shared line[optional]			
11	• Transfer			
12	The following audio-compression codecs are supported: G.711a, G.711, G.729a, G.729b, and G.729ab.			
13	• Embedded web server that provides configuration and statistics			
14	• Quality-of-service (QoS) reporting: Jitter, delay, dropped packets, and latency on a per-call basis			
15	• Real-Time Control Protocol (RTCP) support and monitoring			
16	• Syslog			
17	Link Layer Discovery Protocol for Media Endpoint Devices (LLDP-MED)			
18	• Dynamic network parameters provisioned through Dynamic Host Configuration Protocol (DHCP)			
19	• Static network parameters provisioned through Embedded interactive-voice-response (IVR) system[optional]			
20	The IP Phone should be a single Line Phone System for use from the remote offices and dual line for Contact Center Agents with full duplex speaker phone.			
21	Offered IP hard phone for users should have inbuilt VPN functionality [optional]			



22	Offered IP phone should support both SIP & H.323 protocols on the same hardware [optional]			
23	Offered IP phone should have dual Ethernet/LAN port[optional]			

5. Conferencing System

S. No	Feature Description	Make & model	Compliance (Yes / No)	Deviation / Remarks/
	<p>The conferencing unit should be natively a High Definition system that support</p> <p>30 ports on High Definition in single conference or</p> <ul style="list-style-type: none"> - minimum 90 or more 4CIF/CIF/352p ports in a single conference or - 60 ports @ 448p in a single conference or sd at 30Fps <p>The conferencing should work over internet and intranet for mobile/tablet clients. The conference unit should support power redundancy through internally or externally ,if external then bidder should provide 2kva ups (2 nos) with redundancy power supply.</p>			
	Technical Specification			
1	The conference unit should support H.323, SIP, H.320 .			
2	All components of the solution -should include conference module, Gatekeeper, Gateway , Scheduling, Network Management and point to point desktop client software. ,mobile / tablet client software.			
3	The conference unit must support the latest H.323 standards. The gatekeeper should also support the same version of H.323 ITU standard.			
4	Should Support NO self see in the HD conference - with no limitation in the number of HD conferences			
5	The system should integrate with the IP-PBX from day one			
6	The system must support H.235 standard AES encryption without impacting HD port capacity			
7	The system should support personal video layout per participants			
8	The system should give each participant the ability to scale his own video for optimal display on PC and TV screens using DTMF. The SYSTEM should support HD CP at 720P receive and transmit.			
9	The system must support H.239 standard for sending/receiving multiple streams of video and presentation content. The H.239 support should not cost additional conference ports			
10	The system should support multiple HD Conferences			
11	The system should be able to handle packet losses upto 10% using appropriate packet loss algorithm			

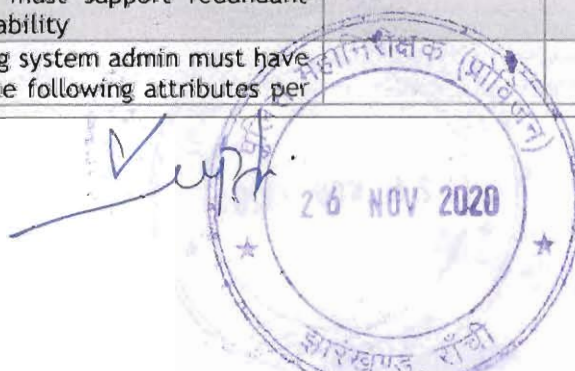
	for desktop clients.			
12	The SYSTEM should have IP based and Gatekeeper, Scheduler and Network management systems and should be external to the system			
13	The conferencing unit should be natively a High Definition system that support -30 ports on High Definition in single conference or - minimum 90 or more 4CIF/CIF/352p ports in a single conference or - 60 ports @ 448p in a single conference or sd at 30Fps The conferencing should work over internet and intranet for mobile/tablet clients. The conference unit should support power redundancy through internally or externally ,if external then bidder should provide 2kva ups (2 nos) with redundancy power supply.			
	SYSTEM Management			
1	The SYSTEM should have IP based and Gatekeeper, Scheduler and Network management systems and should be external to the system			
2	The Gatekeeper should support 120 multipoint calls ,minimum 90 GK ports and minimum 600 registrants on an external server. Internal Gatekeepers in the SYSTEM will not be accepted			
	Other technical specifications			
1	The SYSTEM should support Telnet for accessing remotely for carrying diagnostics from a remote PC in the network for diagnostics			
2	The SYSTEM should have the option of welcome screen when the conference is initiated			
	Audio Support:			
1	G.711, G.722, G.722.1, G.729, MPEG4 -AAC-LC MPEG4 - AAC-LD, G.722.1 Annex C			
	Video & Presentation Support:			
1	<ul style="list-style-type: none"> Video algorithms H.263, H.263+, and H.264 and H.264 SVC(optional) Video resolutions (CIF, 4CIF, SIF, 4SIF, 352p /480p/ 720p). 			
2	Support HD @ 720p and @ 1080p and support for IPv6			
3	Presentation video resolution - VGA, SVGA, XGA, 720p			
4	H.239 and Duo Video for presentation sharing			
	Network and Security			
1	H.235 AES encryption for secure conferencing			
2	PIN protected conferences			
3	HTTPS for secure			
4	SYSTEM must support IPV 4 and IPV6			
	Chair Control			
1	The SYSTEM should support H.243 Chair control functions for conference management by a terminal endpoint			
2	The SYSTEM must support conference control using DTMF /GUI Control functions like invite, terminate conference, take or release chair control, mute, volume control, video layout change and block or unblock admission to a conference.			
3	The SYSTEM must support Far End Camera Control,			



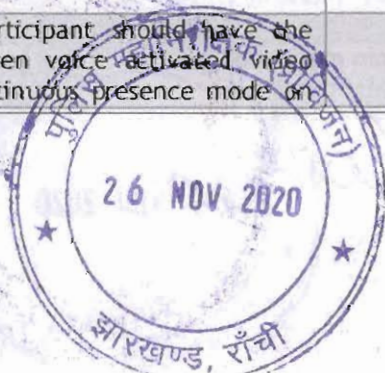
	in voice activated and continuous presence modes, using H.281 Far End Camera Control			
	Data Support			
1	The SYSTEM must support H.239 and Duo-Video standards for sending/receiving multiple streams of video and presentation content without losing SYSTEM port capacity			
	Video CP Layout			
1	The SYSTEM must support video processing capabilities that allow each site to see other sites simultaneously with minimum 20 continuous presence participants on a single screen			
1	Functions			
1	The SYSTEM will be able to indicate - A participant joins/leaves the conference; Encrypted conference ;Conference is being recorded			
	SYSTEM Interface			
1	The SYSTEM must provide a complete 'conference control' interface browser to support all 'in call' management functions with drag and drop' manipulation of parties in the call and within screen layouts.			
	SYSTEM Other Features			
1	The SYSTEM must provide standards based method of compensating and correcting for packet loss media streams loss rates. of up to 10%.			
2	The SYSTEM must support a configurable text overlay function, wherein the Name, Site Identifier or H.323 terminal info is displayable			
	External Server based Gatekeeper (H.323)			
	Gatekeeper Capacity			
1	No of Concurrent calls :90concurrent calls No of Registrations :600 registration			
2	The SYSTEM must support scaling to larger installations through Gatekeeper /Gateway load balancing /clustering and call routing rules			
3	The comprehensive solution shall include a software based H.323 Gatekeeper function.			
4	The Gatekeeper must support advanced bandwidth management for calls between Gatekeeper sub-zones and remote zones to ensure proper call access control to the TCP/IP network for H.323 calls.			
5	The Gatekeeper must support maximum bandwidth control per endpoint or per groups of endpoints.			
6	The Gatekeeper must support call Fallback policies per dialed number			
7	The Gatekeeper must support Least Cost Routing.(optional)			
8	The Gatekeeper must support Line hunting for Gateway calls.(optional)			
9	The Gatekeeper must support H.450 Call Forward and Transfer Supplementary Services. (optional).			
10	The Gatekeeper must support call forwarding options including: unconditional forwarding, forward - busy and forward - no answer, / forward			



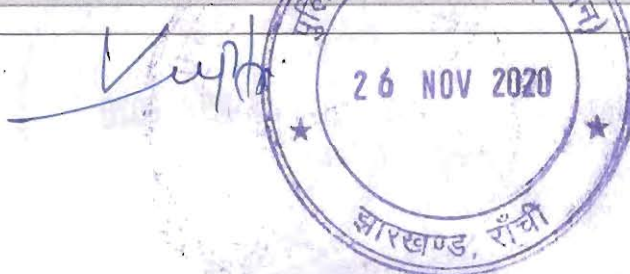
	when not registered(optional).			
11	The Gatekeeper must support real time monitoring			
12	The Gatekeeper must support RAI/RAC message for Network Load Balancing between multiple Gateways. (Optional)			
13	The Gatekeeper must support advanced call fallback to ensure call completion rates.			
14	The Gatekeeper must support H.341 for third-party customization.(Optional)			
	External Scheduling and Network Management			
1	The Scheduler should support both Microsoft and Lotus Notes scheduling with email notifications to individual participants			
2	A Web based central management interface developed by the SYSTEM manufacturer should be provided in order to control all system resources, reserve conferences, and provide ongoing conference, point to point call, and network and fault management functions			
3	The Scheduling software should able to send e- mail notification to all participants using Microsoft outlook or Lotus notes plug in			
4	The Web based application portal must implement single sign-on, wherein the enterprise Directory is accessed for pass-through authentication from the Web based application portal.			
5	The conference scheduling application must support Direct Inward Dial to scheduled meetings.			
6	The conference scheduling application must support SIP, H.323 and ISDN terminals			
7	The conference scheduling application must support intelligent and optimized real time resource allocation algorithm for SYSTEM ports and dynamically reuse the allocated ports according to the actual terminal capabilities.			
8	The conference scheduling application must support Lecture style conferences where the lecturer sees students in a continuous presence layout, and the students all see the lecturer in a single screen layout.			
9	The conferencing application should provide a reporting and statistics support which will enable the system admin generate the following graphical charts or report format in PDF : a. No of Multipoint calls records for the entire deployment b. No of Point to Point calls records for the entire deployment Calls Records per Terminal c. No of gateway calls for the deployment (optional) d. No of Desktop calls (optional) e. Multipoint calls records per specific meeting /virtual room. (optional)			
10	The conference scheduling application and network management application must support redundant deployment for high availability			
11	The conference scheduling system admin must have the ability to provision the following attributes per			



	user / groups of users: Time zone, Level of Video/Audio Services (HD, SD, Audio Only), Location Preference in a distributed deployment, Recording Policy, , Max Allowed Bandwidth for Desktop Point to Point call Maximum allowed participants per virtual room.			
12	The Scheduling Application should support personal address book .			
13	The conference scheduling application must support management, load balancing and resource reservation of multiple distributed SYSTEMs, Gateways and Gatekeepers.			
14	The conference scheduling application must support SYSTEM and Gateway Port auto selection based on service prefix support, nearest port hunting, threshold based port hunting, load balancing, and least cost routing. (Optional)			
15	The conference scheduling application must support Dial-in or SYSTEM auto-Invite (Dial-out) to terminals.			
16	The network management application must support multiple network views and configurable presentation of the network topology in a Network Tree view, flat table view and customizable views.			
	Desktop/MOBILE/TABLET Conferencing requirements: minimum 50 personal computers /laptops/Mobile downloadable clients should be provided. Minimum 50 smart phones like iPad/Iphone/Android should be able to connect with conferencing call. Point to point call between these soft clients without consuming conferencing port should also be provided.			
1	Video web access Desktop connectivity to any PCs /laptops desk top client installed and be able to participate in an ongoing conference using PC web camera and audio facilities.			
2	The solution provided should support integration with both IBM Same Time with Lotus scheduling software / Microsoft Outlook. This desktop clients on the PC should be able to initiate H.239 data collaboration and participate or View video and H.239 with support			
3	Desktop PC users must be able to traverse NAT and firewall on H.323 .Incase case the desktop requires an external device this may be provided			
4	Desktop PC users must be able to conference controls like lock meeting, terminate meeting, invite participant, mute/un-mute, disconnect any participant. (Optional)			
5	The Desktop client should support with support for full screen video on the tablets/desktop			
6	It shall be possible to switch between receiving ED/4CIF resolution			
7	Each Desktop Client participant should have the ability to change between voice activated video switching mode and continuous presence mode on			



	the fly.			
8	The Desktop Client user interface must provide simultaneous views of the participants and H.239 data collaboration portions of the conference. The user interface must provide full screen views of the participants or H.239 data collaboration portion of the conference.			
9	The Desktop Client that enables desktop client participants to text chat while in conference.(Optional)			
10	The Desktop Client user interface must provide a participant list showing which participants are currently connected to the conference (Optional)			
11	The desktop administrator must be able to provision a directory of room systems.			
12	The Desktop Client solution must be able to secure conferences via PINs/passwords.			
13	Webcast shall be available in 100 unicast and unlimited multicast. The desktop administrator must be able to determine which user receives a unicast or a multicast webcast based on their source IP address(Optional).			
	Content Management for 1 simultaneous recording of VC			
1	The system must be able to record all meeting content: video, audio and presentation on HD format			
2	The system <u>preferably</u> must have a built in content management portal that allows easy user access to all recordings.			
3	The management portal must support sort of the recordings by various parameters such as name, ID, duration and recording time.			
4	Recording rights must be able to be defined by the administrator. Everyone can initiate recording Only meeting moderators can initiate recordings Specific named individuals can initiate recordings.			
5	The system must not artificially limit the number of simultaneous playback connections for watching the recordings. The only limitation, if any, will be dependent on the server chosen to run the application.(Optional)			
6	The end user must be allowed to save the recordings file on a local disk.			
7	The administrator must be able to configure the recording speed separately from the meeting speed			
8	<i>The system must utilize/support standard based storage systems rather than built in storage. This provides the ability to independently choose the disk space required and easily add more disk space if needed.</i>			
9	The system must not artificially limit the number of simultaneous playback connections for watching the recordings. The only limitation, if any, will be dependent on the server chosen to run the			



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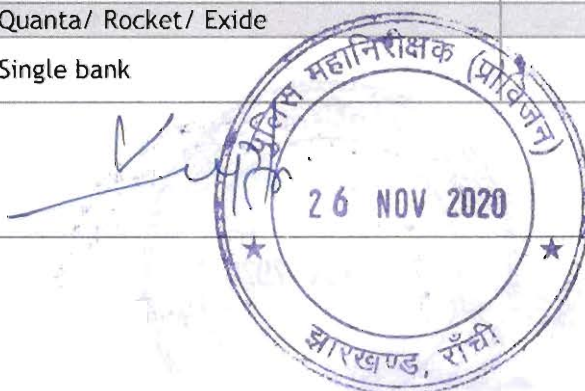
	application.(Optional)			
11	The system must be able to configure the number of concurrent simultaneous recordings. It must be easy to upgrade the system without requiring hardware repurchase.			
12	It must be possible to fast forward, rewind and skip to a specific location in the recording.			
13	Playback must be able to be done on a standard PC /Video end point.			

5. 2KVA Online UPS

S. No	Item	Description	Make&Model	Compliance (Y/N)	Deviation / Remarks
1	Capacity	2 kVA/ 1.8 kW Online floor Mounted UPS (1-Phase Input / 1-Phase Output			
2	Technology and Capability	a) True Online configuration with double conversion UPS b) DSP based control, using IGBT devices and high switching frequency PWM (>15kHz) c) Active Power Factor Correction (APFC) in converter to improve Input Power Factor > 0.99 f) UPS should be designed at Rated output PF of 0.9			
4	Input / Wires	1-Phase / 2-Wire & Gnd (Phase & Neutral + Ground)			
5	Input Voltage Range	160 - 275V AC (On Full Load)			
6	Nominal Input Frequency	50 / 60 Hz (Auto selectable)			
7	Input Frequency Range	45 to 55 Hz			
8	Input Power Factor	> 0.99 on Full Load			
9	Input Current Harmonic Distortion (THDi)	< 6% on full resistive Load			
10	Generator Compatibility	Compatible with genset from day-1			
11	Input Protection (Thru In-built 1P MCB)	Should be provided at the input of the UPS suitable for the full rated capacity of the UPS			
12	Nominal Output voltage	220/ 230/ 240VAC (Selectable)			
13	Output Voltage Regulation	±3%			
14	Nominal Output Frequency	50 / 60 Hz			
15	Protection class	IP-20			
16	Safety	EN 62040-1			



16	Output Wave Form	Pure sine wave			
17	Output Voltage Distortion (THDu)	$\leq 3\%$			
18	Crest Factor	3 : 1 On Full Load (Minimum)			
19	Output Short circuit Protection	Electronic / Fused			
20	Transfer Time (Mode of operation)	Nil from Mains mode to Battery Mode Nil from Battery Mode to Mains mode			
21	Transfer Time (Inverter to Bypass / Bypass to Inverter)	< 2 ms (Synchronized Mode)			
22	Automatic & Bi-directional static bypass (In-built)	Should be provided to take care of uninterrupted transfer of load from Inverter to bypass (under overload / fault conditions) & automatic retransfer from bypass to inverter (on removal of overload / fault conditions)			
23	Overall Efficiency (AC to AC) - Online (Double Conversion)	> 92% (On Full R Load)			
24	Inverter Overload capacity	125% for 1Min			
25	Measurements (On LCD)	Input: Voltage / Frequency Output: Voltage / frequency Battery: Remaining time / Voltage Load: Percentage / kW			
26	Fault Indication (On LCD)	Charger Failure Battery Failed Battery Low Overload			
27	Indications (LED)	AC indicator/Battery Mode of Operation / Bypass feeding the load / UPS Fault			
28	Audible Alarms	Battery Low beep / DC Fault beep/ UPS Overload beep/ o/p short ckt fault beep/ Shutdown beep			
29	Backup Required	Minimum 120 Minute battery backup from day-1			
32	Batteries Type	Sealed Maintenance Free (SMF) - 12V Cells			
33	Battery Makes	Quanta/ Rocket/ Exide			
34	Battery Banks	Single bank			



35	Battery recharge time (After complete discharge) to 90% capacity	8-10 hours			
36	Serial Communication RS232 / RS 485 Port (Option of USB Port should be available)	RS232 Port should be provided as standard in the UPS. However there should be provision for USB port also in the UPS			
38	Management Port	SNMP features and LAN port for monitoring of the UPS.			
41	Cold Start	UPS should start up On AC Supply (Mains) without DC Supply (Batteries) On DC Supply (Batteries) without AC Supply (Mains)			
42	Automatic Restart	UPS should start up automatically on mains resumption after battery low shutdown			
43	Operating Temperature	0 to 40 deg C			
44	Storage Temperature	-15 to 50 deg C			
45	Operating Humidity	5% ~ 95%RH (No Condensing)			
46	Operating Altitude	2000 m.a.s.l (meters above sea level)			
47	Type of Cooling	Forced Air			
48	Noise Level	< 55 dbA at 1 meter distance			
49	Form Factor	Rack & Tower mountable			
50	Air Filters (mandatory)	UPS should have internal anticorrosion air filters for dust filtration			
53	Certification	QMS: As per ISO 9001: 2008 EMS: As per ISO 14001: 2004 OSHAS: As per ISO 18001: 2007			



Functional Specification of Integrated UHF/VHF

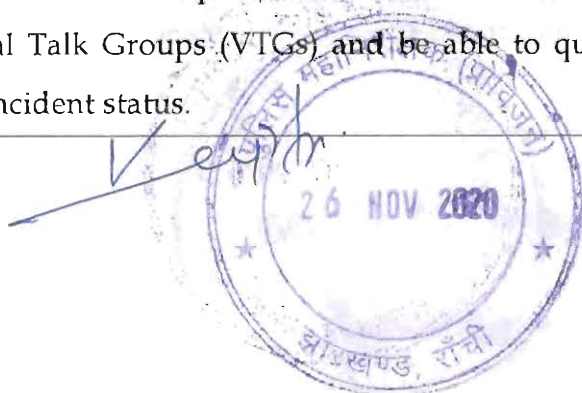
SUMMARY

Jharkhand Police IP Network infrastructure is integrated with 24 District wise Radio base Station. The Existing Cisco 2901 and 3945 Routers with Cisco IPICS4.X Servers is used for the solutions. The Bidders will be only support to AMC services / TAC support for the existing hardware and the solutions.

SYSTEM PERFORMANCE

The system shall include, as a minimum, the following features/functions/specifications:

1. The system shall create minimum 24 virtual talk groups (VTGs) to facilitate Push-to-Talk (PTT) communications between users of multiple types and technologies of Land Mobile Radios with users of PCs, landline phones, cellular and Nextel phones, and Manufacturer Unified IP phones as asked in the RFP.
2. The system shall provide a redundant server to provide high availability with no single point of failure. If a primary server fails, the secondary server automatically takes over service without communication interruption. The servers can be geographically separated or located together.
3. The system shall provide Loop Prevention: As multiple dispatchers patch channels together, there is always the possibility of creating a channel loop that causes audio feedback into the communication path.
4. The system shall provide radio pooling to enable the system administrator to group dispatch radio assets together into logical radio pools. Dispatchers, when accessing specific radio channels, may select specific channels or talkgroups. The system shall then locate a radio asset and performs tone/serial control without user intervention.
5. The system shall provide a web service API to integrate third party applications, such as Command and Control, Physical Security Information Management (PSIM) and Computer Aided Dispatch (CAD) applications.
6. The system shall provide an Incident Management administration console to provide a Web-enabled, easy-to-use interface for orchestrating communications across devices, technologies and locations.
7. The system shall allow the dispatcher to combine resources, including users and channels, to create Virtual Talk Groups (VTGs) and be able to quickly add or remove resources depending on incident status.



8. The system shall support role-based management to provide compartmentalized functions for personnel who need to perform different roles.
9. The system shall provide an audit trail for analysis, critique, and operations management.
10. The system shall provide a powerful and easy-to-use Web interface for management.
11. The system shall provide security features including a hardened operating system, strong passwords, password expiration, and user account lockout after the maximum number of invalid login attempts.
12. The System should support 100 mobile client license for communicating with the system.

Hardware & Software Specifications & Functionalities

A. Operational Views Functionalities:

- The system should support resource sharing across organizational boundaries: Participants can share agreed-upon resources, such as channels or dispatchers, across operational views to facilitate collaboration among agencies, departments, or locations.
- The system should support preservation of organization and ownership boundaries: Operational Views enables organizations to create separate operational views for their own resources, sharing resources only when needed for incident response.
- The system should support multiple virtual instances on the same server, allowing organizations to share common server hardware while still being able to control and manage their own resources.
- The system should support Centralized management. The administrator can manage all operational views from the same interface.
- The system should support incident escalation between operational views: When a dispatcher is shared among operational views, the dispatcher receives the authority to share other resources, such as radio channels or other dispatchers, as needed for effective incident response.

B. Policy Engine Functionalities:

- The system should support invite notifications: Dispatchers can quickly invite users to join a Manufacturer The system should support VTG with an Invite Notification. The dispatcher can select some or all members of a VTG and, at the touch of a button, initiate an action to notify or dial participants.
- The system should support integrated telephony interface: This feature enables personnel using landline and mobile phones to join a VTG, PTT interoperability conference between disparate land mobile radio systems, PSTN phones, IP phones, and PC clients.
- The system should support multipurpose policies: Can define flexible, powerful; multipurpose polices using an intuitive, web-based interface, shown in the following figure. Multipurpose polices enable organizations to codify frequently used or pre-planned communications strategies into standard operating procedures.

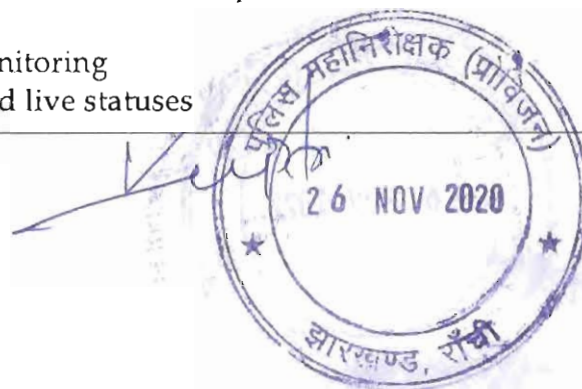


C. Mobile Client Functionalities:

- The system should support access incident-related PTT channels to communicate between responders and radio users.
- The system should support up-to-date incident status information from each responder
- The system should support access incident-related video clips, photographs, and status either pushed to them from the dispatcher or added by other responders.
- The system should allow user to dynamically add their own video clips, photographs, and status updates

D. Dispatch Console Functionalities:

- The system should support streamline radio dispatch operations and allow organizations to rapidly respond to incidents, emergencies, and facility events.
- The system should support communication barriers between land mobile radio systems and devices including mobile phones, landline phones, IP phones, and PC clients, and enable interoperable communications among users of all devices.
- The system should support end-to-end radio dispatching solution designed for mission-critical radio communications.
- It shall provide dispatchers with situational awareness.
- The system shall run on a standard PC platform, and extend existing push-to-talk (PTT) radio channels so that users with a variety of communication devices can participate.
- The system should support control of radio resources through an on-screen interface.
- It shall allow users to monitor and coordinate emergency response across incompatible radio systems and between multiple agencies, jurisdictions, and departments.
- The system GUI shall provide access to all dispatch features, including:
 - PTT and monitor up to 50 talk groups per The system should support Console
 - Channel patching
 - Integrated telephony client for incoming and outgoing calls
 - Radio to telephone patching
 - Receive and transmit on-screen indicators for channel activity
 - Handset, headset, or desktop microphone operation
 - Individual channel mute/ All mute
 - All talk
 - Instant recall recording per channel
 - Alert tones
 - Channel multi-select
 - Unit ID/ talker ID
 - Emergency alert/acknowledge
 - Coded/clear channels
- The system should support rich media incident management support, giving dispatchers the ability to consolidate information relating to an incident and instantly share it among participants, enabling the sharing of multimedia data such as the following:
 - Live video sent from surveillance cameras, access control gateways, and mobile clients
 - Archived videos such as Flip or YouTube
 - Photos
 - Alarm monitoring
 - Journal and live statuses



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- Website links to resources such as FEMA and hazardous material databases, standard operating procedures, and maps
 - The system should support any analog or digital radio system, enabling dynamic any-to-any PTT communications.
 - The system should compatible with any dispatch operation that requires radio interoperability including public safety, homeland security, emergency operations centers, defense, and physical security environments.
 - The system should provide:
 - Mobility and move with the user's PC, anywhere there is an IP network.
 - Radio interoperability and support multi-agency talkgroups, talkgroups between disparate radios, and talkgroups that include radios, PCs, phones, cell phones, and IP phones.
 - Rich media incident management and supports rich media incident management and the latest generation of mobile endpoints.
 - Integrated policy engine that includes dispatchers tools to simplify notification and improve response time.
 - Smooth evolution path to P25, Tetra, DoD, and other radio protocols.



Location details of IT Hardware equipments

S. No	Item description	Make/ Model	Qty [In Pieces]	Location details of IT Hardware equipments
1	Aggregation Routers for DHQ (1-port Channelized STM-1, Gigabyte Ethernet – 4, Fibre SFP port – 2) at DHQ	Cisco ASR 1002-X	26	2 No. of router in Data Centre, PHQ & 1 no. of Router in each 24 District SP Office.
2	24 port Network Switch	Cisco 2960S	35	11 No. of Switches in PHQ & 1 No. of Switch in each 24 District SP Office.
3	IP-PBX with redundant server	Cisco UCS C220	1	Data Centre
4	Inbound Contact Centre with redundancy [Provision to integrate with IP-PBX from day one][License for 10 users] (1 set)	Cisco CCX 9.0	1	Data Centre
5	IP Phones with License for Thana and Higher Offices	Cisco SIP Phone 3905	700	Police HQ, Ranchi CID, STF Tendergram, Ranchi and 24 District SP Office & Police Station/ Higher Offices.
6	Conferencing System	Cisco MCU 5k, TMS, VCS	1	Data Centre
7	Router with E1 Cards and DSP modules	Cisco 2901	25	1 No. of router in Data Centre & 1 No. of router in each 24 district SP Office
8	Router with 6 E1 ports and 256 DSP resources	Cisco 3945	1	Data Centre
9	Server for the solution (With Pre Installed Software including OS)	Cisco MSP 2-RU Cisco Physical Security Multiservice	2	Data Centre
10	Software solution & license for the solution	Cisco IPICS 4.X Server	1	Data Centre
11	IP Phone with License for XML based PTT Integration	Cisco IP Phone 6941	100	Police HQ, Ranchi State Dial-100 and Data Centre & 2 No. of PTT Phone in each 24 district SP Office.
12	2KVA online UPS with 2hrs backup full load	Delta - 2 KVA Online UPS	24	1 No. of UPS deployed in each 24 District SP Office.



Device model and Serial Number details

S.N O	Product	Description	Quantity	Device Serial No.
		IP Phones		
		CCX Agent Phones	6	
1	CP-6921-C-K9=			PUC17160H8D
2	CP-6921-C-K9=			PUC171703WX
3	CP-6921-C-K9=			PUC17170LK1
4	CP-6921-C-K9=			PUC17170LRB
5	CP-6921-C-K9=			PUC17170LHL
6	CP-6921-C-K9=			PUC17170LJ3
		High Offices Phones with PTT XML	100	
1	CP-6941-C-K9=			PUC17190JVF
2	CP-6941-C-K9=			PUC17190KLG
3	CP-6941-C-K9=			PUC17190KMV
4	CP-6941-C-K9=			PUC17190KMW
5	CP-6941-C-K9=			PUC17190KMX
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13	CP-6941-C-K9=			PUC17190KM5
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15	CP-6941-C-K9=			PUC17190KNA
16	CP-6941-C-K9=			PUC17190KNH
17	CP-6941-C-K9=			PUC17190KNM
18	CP-6941-C-K9=			PUC17190KQC
19	CP-6941-C-K9=			PUC17190KQJ
20	CP-6941-C-K9=			PUC17190KVR
21	CP-6941-C-K9=			PUC17190JVC
22	CP-6941-C-K9=			PUC17190JVH
23	CP-6941-C-K9=			PUC17190JVL
24	CP-6941-C-K9=			PUC17190JWI
25	CP-6941-C-K9=			PUC17190KLL
26	CP-6941-C-K9=			PUC17190KLR
27	CP-6941-C-K9=			PUC17190KLZ

28	CP-6941-C-K9=		PUC17190KMG
29	CP-6941-C-K9=		PUC17190KMM
30	CP-6941-C-K9=		PUC17190KOJ
31	CP-6941-C-K9=		PUC17190KNN
32	CP-6941-C-K9=		PUC17190KNO
33	CP-6941-C-K9=		PUC17190KO9
34	CP-6941-C-K9=		PUC17190KOD
35	CP-6941-C-K9=		PUC17190KP9
36	CP-6941-C-K9=		PUC17190KPI
37	CP-6941-C-K9=		PUC17190KPS
38	CP-6941-C-K9=		PUC17190KPY
39	CP-6941-C-K9=		PUC17190KQE
40	CP-6941-C-K9=		PUC17190KQP
41	CP-6941-C-K9=		PUC17190J9E
42	CP-6941-C-K9=		PUC17190J9H
43	CP-6941-C-K9=		PUC17190JW9
44	CP-6941-C-K9=		PUC17190K4U
45	CP-6941-C-K9=		PUC17190K9N
46	CP-6941-C-K9=		PUC17190K9U
47	CP-6941-C-K9=		PUC17190KA2
48	CP-6941-C-K9=		PUC17190KAA
49	CP-6941-C-K9=		PUC17190KAJ
50	CP-6941-C-K9=		PUC17190KAQ
51	CP-6941-C-K9=		PUC17190DKS
52	CP-6941-C-K9=		PUC17190KJX
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54	CP-6941-C-K9=		PUC17190KLH
55	CP-6941-C-K9=		PUC17190KLK
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71	CP-6941-C-K9=		PUC17190KLO
72	CP-6941-C-K9=		PUC17190KKT
73	CP-6941-C-K9=		PUC17190KL3
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75	CP-6941-C-K9=		PUC17190KMI
76	CP-6941-C-K9=		PUC17190KMJ
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78	CP-6941-C-K9=		PUC17190KP5
79	CP-6941-C-K9=		PUC17190KT2
80	CP-6941-C-K9=		PUC17190KTA
81	CP-6941-C-K9=		PUC17190DN5
82	CP-6941-C-K9=		PUC17190DUH
83	CP-6941-C-K9=		PUC17190DWU
84	CP-6941-C-K9=		PUC17190KJU
85	CP-6941-C-K9=		PUC17190KL8
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87	CP-6941-C-K9=		PUC17190KLM
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91	CP-6941-C-K9=		PUC17190WVS
92	CP-6941-C-K9=		PUC17190WWA
93	CP-6941-C-K9=		PUC17190WVG
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96	CP-6941-C-K9=		PUC17190WXA
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98	CP-6941-C-K9=		PUC17190X5C
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5	CP-3905=		FCH17318CPM
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9	CP-3905=		FCH1730902C
10	CP-3905=		FCH17309066
11	CP-3905=		FCH17318CAE
12	CP-3905=		FCH17318CCN



13	CP-3905=		FCH17318CP3
14	CP-3905=		FCH17318CQJ
15	CP-3905=		FCH17319QX9
16	CP-3905=		FCH17298EK3
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18	CP-3905=		FCH17298H37
19	CP-3905=		FCH17298H4Y
20	CP-3905=		FCH17298H60
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41	CP-3905=		FCH17318DBE
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45	CP-3905=		FCH17298GUH
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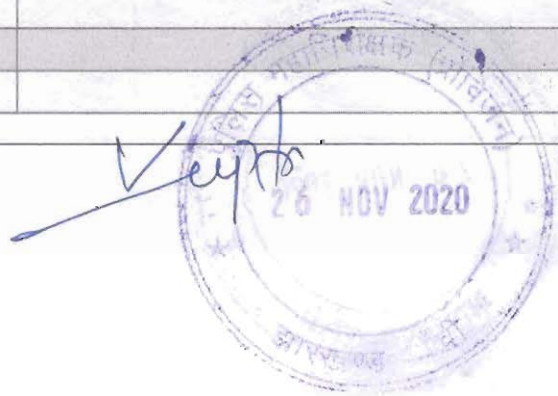
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192	CP-3905=		FCH17309DJZ
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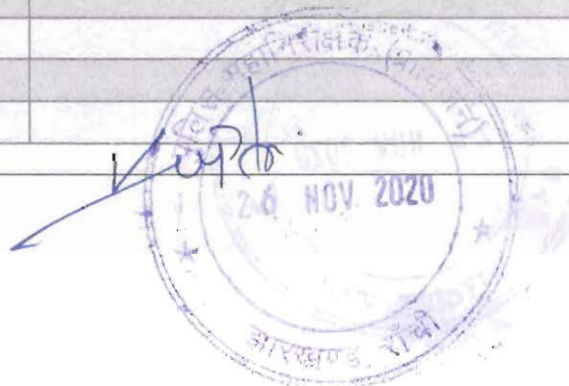
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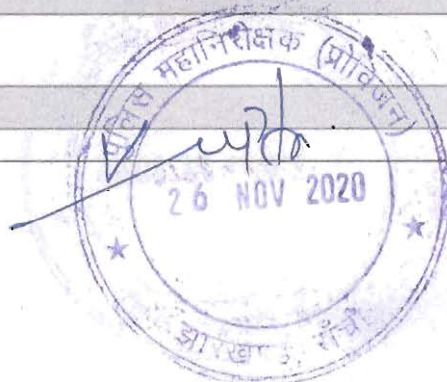
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682	CP-3905=		FCH17319R7H
683	CP-3905=		FCH17298H1Y
684	CP-3905=		FCH17309DC0
685	CP-3905=		FCH17309DKB
686	CP-3905=		FCH17318CFA
687	CP-3905=		FCH17318ECG
688	CP-3905=		FCH17319P5X
689	CP-3905=		FCH17319PZM
690	CP-3905=		FCH17319QP3
691	CP-3905=		FCH17319QU2
692	CP-3905=		FCH17319SSP
693	CP-3905=		FCH17298GUQ
694	CP-3905=		FCH17298GUR
695	CP-3905=		FCH17309DG3
696	CP-3905=		FCH17309DGE
697	CP-3905=		FCH17309DWK
698	CP-3905=		FCH17308ZNF
699	CP-3905=		FCH17309D87
700	CP-3905=		FCH17318CFH



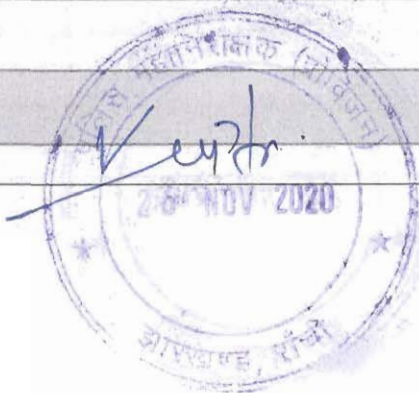
		Cisco Unified Communication Solution		
1	UCSC-C220-M3SBE=		2	FCH1734V1UL
2	UCSC-C220-M3SBE=			FCH1733V13S
3	CISCO2901-V/K9		2	FGL173422DN FGL173422DP
		Conferencing Solution		
1	CTI-TCS-5RP-K9	Tele presence Content Server	1	FCH1745V1PW
2	CTI-VCS-EXPRESS-K9	VCS Expressway	1	52A30655
3	CTI-VCS-CONTRL-K9	VCS Control	1	52A12808
4	CTI-5320-MCU-K9	MCU	2	FOC1942N3QY SUK1734000R
5	UCSC-C220-M3S	UCS server for TMS	1	FCH1807V1YD
		IPICS Solution Component		
1	CISCO3945-V/K9			FGL174110P2
		LMR Routers	25	
1	CISCO2901-V/K9			FGL1740100T
2	CISCO2901-V/K9			FGL1740100R
3	CISCO2901-V/K9			FGL17401014
4	CISCO2901-V/K9			FGL1740100W
5	CISCO2901-V/K9			FGL1740100M
6	CISCO2901-V/K9			FGL1740100Q
7	CISCO2901-V/K9			FGL1740100L
8	CISCO2901-V/K9			FGL1740100U
9	CISCO2901-V/K9			FGL17401013
10	CISCO2901-V/K9			FGL1740100X
11	CISCO2901-V/K9			FGL17401010
12	CISCO2901-V/K9			FGL17401015
13	CISCO2901-			FGL1740100N



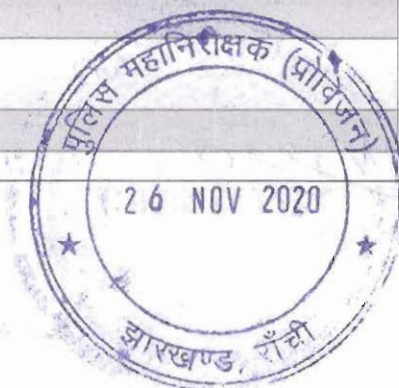
	V/K9			
14	CISCO2901-V/K9			FGL1740100V
15	CISCO2901-V/K9			FGL1740100Y
16	CISCO2901-V/K9			FGL17401012
17	CISCO2901-V/K9			FGL1740100Z
18	CISCO2901-V/K9			FGL17401011
19	CISCO2901-V/K9			FGL174221VT
20	CISCO2901-V/K9			FGL174221VY
21	CISCO2901-V/K9			FGL174221VX
22	CISCO2901-V/K9			FGL174221VV
23	CISCO2901-V/K9			FGL174221VW
24	CISCO2901-V/K9			FGL174221VU
25	CISCO2901-V/K9			FGL174221VS
	UCS Server for IPICS Application			
	UCSC-C240-M3L		1	FCH1802V1ZZ
	UCSC-C240-M3L		1	FCH1752V1KS
	L2 Switches for DHQ and PHQ		35	
1	WS-C2960S-24TS-L			FOC1738Y1W8
2	WS-C2960S-24TS-L			FOC1738Z13K
3	WS-C2960S-24TS-L			FOC1738Y1W4
4	WS-C2960S-24TS-L			FOC1738Y1VJ
5	WS-C2960S-24TS-L			FOC1738Y1VR
6	WS-C2960S-24TS-L			FOC1738Z14F
7	WS-C2960S-24TS-L			FOC1738Y1VT
8	WS-C2960S-24TS-L			FOC1738Y1VL
9	WS-C2960S-24TS-L			FOC1738Y1VG
10	WS-C2960S-			FOC1738Z14A



	24TS-L			
11	WS-C2960S-24TS-L			FOC1741V0YZ
12	WS-C2960S-24TS-L			FOC1741S12K
13	WS-C2960S-24TS-L			FOC1741S13K
14	WS-C2960S-24TS-L			FOC1741V0YS
15	WS-C2960S-24TS-L			FOC1741V0Z5
16	WS-C2960S-24TS-L			FOC1741V0YP
17	WS-C2960S-24TS-L			FOC1740S19E
18	WS-C2960S-24TS-L			FOC1741V0YR
19	WS-C2960S-24TS-L			FOC1741V0YJ
20	WS-C2960S-24TS-L			FOC1741V0Z2
21	WS-C2960S-24TS-L			FOC1738Z0YW
22	WS-C2960S-24TS-L			FOC1738Z13Q
23	WS-C2960S-24TS-L			FOC1738Z11K
24	WS-C2960S-24TS-L			FOC1738Z10Y
25	WS-C2960S-24TS-L			FOC1738Z0YR
26	WS-C2960S-24TS-L			FOC1738Z0Z7
27	WS-C2960S-24TS-L			FOC1738Z0YS
28	WS-C2960S-24TS-L			FOC1738Z114
29	WS-C2960S-24TS-L			FOC1738Z0ZQ
30	WS-C2960S-24TS-L			FOC1738Z0YQ
31	WS-C2960S-24TS-L			FOC1738Z10N
32	WS-C2960S-24TS-L			FOC1738Y1W9
33	WS-C2960S-24TS-L			FOC1738Y1WB
34	WS-C2960S-24TS-L			FOC1738Y1W2



35	WS-C2960S-24TS-L			FOC1738Y1VX
Routers For Data Network				
		Cisco ASR1002-X Chassis 6 built-in GE Dual P/S 4GB DRAM	26	
1	ASR1002-X			FOX1736G2S0
2	ASR1002-X			FOX1736G2RR
3	ASR1002-X			FOX1736G2RD
4	ASR1002-X			FOX1736G2RF
5	ASR1002-X			FOX1736G2QA
6	ASR1002-X			FOX1735G9BU
7	ASR1002-X			FOX1735H4NU
8	ASR1002-X			FOX1735G9AW
9	ASR1002-X			FOX1736G2S2
10	ASR1002-X			FOX1736G2RJ
11	ASR1002-X			FOX1735G9AH
12	ASR1002-X			FOX1736G2QB
13	ASR1002-X			FOX1736G2RE
14	ASR1002-X			FOX1736G2PZ
15	ASR1002-X			FOX1736G2R8
16	ASR1002-X			FOX1736G2PH
17	ASR1002-X			FOX1736G2RQ
18	ASR1002-X			FOX1733G4YU
19	ASR1002-X			FOX1735H4P7
20	ASR1002-X			FOX1736G2QJ
21	ASR1002-X			FOX1736G2R7
22	ASR1002-X			FOX1736G2RB
23	ASR1002-X			FOX1735GQ41
24	ASR1002-X			FOX1736G2PY
25	ASR1002-X			FOX1736G3YZ
26	ASR1002-X			FOX1735GQ43
		1-port Channelized STM-1/OC-3c to DS0 Shared Port Adapter	26	
1	SPA-1XCHSTM1/OC3			SAL1742EHQL
2	SPA-1XCHSTM1/OC3			SAL1734BW6T
3	SPA-1XCHSTM1/OC3			SAL1742EHS0
4	SPA-1XCHSTM1/OC3			SAL1742EHRV
5	SPA-1XCHSTM1/OC3			SAL1743EV5T
6	SPA-			SAL1742EHSC



	1XCHSTM1/OC3			
7	SPA- 1XCHSTM1/OC3			SAL1742EHR4
8	SPA- 1XCHSTM1/OC3			SAL1742EHQV
9	SPA- 1XCHSTM1/OC3			SAL1742EHRQ
10	SPA- 1XCHSTM1/OC3			SAL1741E3W3
11	SPA- 1XCHSTM1/OC3			SAL1741E3WK
12	SPA- 1XCHSTM1/OC3			SAL1743EV5R
13	SPA- 1XCHSTM1/OC3			SAL1743EV5L
14	SPA- 1XCHSTM1/OC3			SAL1734BW44
15	SPA- 1XCHSTM1/OC3			SAL1742EHQN
16	SPA- 1XCHSTM1/OC3			SAL1742EHRA
17	SPA- 1XCHSTM1/OC3			SAL1742EHRM
18	SPA- 1XCHSTM1/OC3			SAL1741E3WC
19	SPA- 1XCHSTM1/OC3			SAL1742EHR3
20	SPA- 1XCHSTM1/OC3			SAL1742EHS9
21	SPA- 1XCHSTM1/OC3			SAL1742EHS3
22	SPA- 1XCHSTM1/OC3			SAL1742EHSJ
23	SPA- 1XCHSTM1/OC3			SAL1742EHSG
24	SPA- 1XCHSTM1/OC3			SAL1741E3W2
25	SPA- 1XCHSTM1/OC3			SAL1742EHQR
26	SPA- 1XCHSTM1/OC3			JAE153206O2

