

Bid Document



GUJARAT INFORMATICS LIMITED

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**Bid for Supply, Installation, Commissioning
and Maintenance of Storage System & Services
including Data Migration for Online IFMS
Application on behalf of Director of Accounts &
Treasuries, Finance Department, Gandhinagar
(Tender No. HWT030117407)**

Pre-bid meeting: 10.01.2017 on 1500 hours

Last Date of Submission of Bid: 24.01.2017 till 1500 hours

Last Date of Submission of Bid Processing Fees & EMD: 24.01.2017 till 1500 hours

Date of Opening of Technical Bid: 24.01.2017 on 1700 hours

Bid Processing Fee: Rs. 15,000/-

Gujarat Informatics Limited (herein after referred to as GIL), on behalf of Director of Accounts & Treasuries, Finance Department, Gandhinagar (herein after referred to as the Purchasers) for their requirements of purchase of new Storage System and migration of data from existing Storage to new Storage, intend to invite your bid for Supply, Installation, Commissioning and Maintenance of Storage System & Services including Data Migration for Online IFMS Application on behalf of Director of Accounts & Treasuries, Finance Department, Gandhinagar. (Tender No. HWT030117407).

SECTION I

Eligibility Criteria for the bidder:

1. The bidder should have a total sum of turnover of Rs. 5 Crore (Minimum) in the last three financial years. The copies of Audited Annual Accounts/Balance Sheet along with Profit & Loss Account and CA Certified Statement for last three financial years shall be attached along with the bid. **(Form no. E-1)**
2.
 - a) The bidder must have one office in Gujarat. Please attach the copies of any two of the following: Property Tax Bill of last year / Electricity Bills of last one year / Telephone Bills of last one year / VAT Registration / CST Registration / Valid Lease Agreement. **(Form no. E-2). In case, bidder does not have office in Gujarat, bidder should give undertaking to open office in Gujarat within 45 days from the date of purchase order.**
 - b) Bidder must ensure that the warranty support & service should be available up to delivery locations to provide repairing cum replacement services of faulty equipments within 48 hrs. Bidder is required to provide the name & address & contact details of the firm for providing warranty support & repairing cum replacement service up to delivery locations. **(Form no. E-3)**
3. The bidder should be authorized by its OEM (for the offered Storage System) to quote this bid **(Form no. E-4)**. Please attach the copy of Authorization on OEM letter head and signed by authorized signatory for the item(s) to be offered in this bid.
4. **If bidder is Consultants / firm, and any of its affiliates hired to provide consulting services for the preparation or implementation of a project under this tender, then bidder will be disqualified for providing goods or works or services related to the initial assignment for the same project.**

Note:

1. All the details and the supportive documents for the above mentioned items should be uploaded in eligibility section in the bid.
2. Bidders who wish to participate in this bid will have to register on <https://gil.nprocure.com>. Further bidders who wish to participate in online bids will have to procure Digital Certificate as per Information Technology Act 2000 using which they can sign their electronic bids. Bidders can procure the same from (n) code solutions – a division of GNFC Ltd., or any other agency licensed by Controller of Certifying Authority, Govt. of India. Bidders who already have a valid Digital Certificate need not procure a new Digital Certificate.

SECTION II

Scope of Work

Finance Department, Government of Gujarat has implemented Integrated Finance Management System in 2009. The application developer and system integrator of IFMS is M/s TCS Ltd.

The detail of existing IFMS IT infrastructure is as below:

Sr. No.	Item	Minimum Specifications	Quantity at Primary Site	Quantity at DR Site	Make & Model
1	Database Server	RISC/EPIC/ 16 Processing Cores /96 GB RAM/4xFC HBA/RPS/Unix O.S. with 100% Head room	2	1	Sun M5000
2	OS Cluster for Database Server	OS Clustering for Failover and high availability (for Database Server as mentioned in Sr. No. 1 above)	1	0	Sun Solaris
3	Cyber Treasury Database Server	RISC/ EPIC/8 Processing Cores /32 GB RAM/2xFC HBA/RPS/Unix O.S. with 100% Head room	0	1	Sun M4000
4	App Server	RISC/ EPIC/ 8 Processing Cores/32 GB RAM/RPS/Unix O.S. with 100% Head room	4	2	Sun M4000 + Sun D240
5	Maintenance Server	RISC/ EPIC/ 4 Processing Cores/16 GB RAM/2x FC HBA/RPS/Unix O.S. with 100% Head room	1	0	Sun M4000 + Sun D240
6	LDAP Server	Intel/ E5410/ 8 Processing Cores/16 GB RAM/146 GB*2 HDD with RAID 1/RPS/Unix/Linux O.S.	2	2	Sun X4150
7	Backup Server	RISC/ EPIC/ 8 Processing Cores/16GBRAM/2X73GB/3XDUAL PORT FC HBA / RPS / UNIX O.S.	1	1	SUN T2000
8	Management Server	Intel/ E5410 / 4 Core CPU/8 GB RAM/146 GB*2 HDD with RAID 1/RPS/Unix/Linux O.S.	1	0	Sun X4150
9	BI deployment server	Intel/ E5410 / 4 Core CPU/8 GB RAM/146 GB*2 HDD with RAID 1/ 2xFC HBA/RPS/Unix/Linux O.S.	1	1	Sun X4150
10	Additional Server	Intel/ X7350 / 4 Quad Core CPU/32 GB RAM/4*146 GB HDD RPS/Unix/Linux O.S.	1	0	Sun X4450
11	Storage Area Network (SAN)	FC SAN/End to end 4 Gbps/Dual controller/60*146 GB 15K RPM FC HDD & 8*750 GB 7.2K RPM SATA HDD Storage/16 GB Cache	1	1	Sun Storagetek 9985V + Sun Storage 6140
12	SAN Switch	16 Ports FC SAN Switch with 4 IP Ports	2	2	Cisco MDS 9222i
13	Backup Device (Tape Library)	FC Tape Library with 3 Nos. Ultrium Generation 4 drives and 100 slots	1	1	Sun Storagetek SL 500
14	Backup Software	Backup Software	1	1	Veritas Net Backup

15	Link Load Balancer	ASIC based, Min. 8 Ethernet Ports, 256 MB RAM, 200 Mbps L7 Throughput, Support bandwidth management based on L3-L7 information	2	0	Radware LinkProof 202
16	L2 Switch	24 Port 10/100/1000 Gbit Manageable Switch	2	0	Cisco Catalyst 3560
17	L3 Core Switch	24 Port 10/100/1000T L3, 4 SFP Ports, L3 Switch	2	1	Cisco Catalyst 3560
18	Application Load Balancer	Min. 10 Gigabit Copper Ports & 4 SFP, Min. 1 Gigabit L7 Throughput upgradable to 4 Gbps, Min. 2 GB RAM	2	1	Radware AppDirector 1016 ODS2
19	SSL Accelerator	4000 TPS, HTTP Data compression & caching, RAM upgrade without appliance change, 2 Gigabit Ethernet Ports	2	1	Radware AppXcel 4000

The Database of IFMS is MySQL & Application Server Software is Sun Glassfish software. The detailed Specification & detailed Bill of Material of IFMS Storage and Database Server Configuration of IFMS is as per Annexure B.

Initially the IFMS Storage (Sun Storagetek 9985V) having total space of 6TB was configured and partitions were made as follow: IFMS_Master: 2TB + IFMS_Slave: 2TB + CTP_Master: 1TB + CTP_Slave: 1TB.

Now the Department is in requirements of purchase of new Storage System equivalent or higher / better than existing IFMS storage with at least 15 TB usable space after RAID 5 by replacing existing SAN Storage.

The bidder may offer their solution for the said requirements for Supply, Installation, Commissioning and Maintenance of Storage System & Services including Data Migration for Online IFMS Application from existing IFMS Storage to New proposed Storage System considering the required necessary software / licenses for the same including the backup of data. The storage system is required at both side Primary Site (SDC, Gandhinagar) & DR Site (NIC Data Center, Hyderabad).

The bidder will also have to configure the proposed solution and integrate with the existing IFMS infrastructure including the creation of LUN as per the user requirements and necessary scripting will be required to configure considering the backup policies of IFMS. The bidder will also have to carry out the necessary configuration on OS of database servers (Sun Solaris 10). The bidder will have to co-ordinate with all the stack holders of IFMS to carry out the activities as defined in this RFP.

The bidder will have to carry out the migration of data from the existing storage LUNs to the new offered storage solution. Bidder will have to consider all the necessary software / licenses for virtualization / migration for the said activities to achieve the requirements as defined in RFP. The bidder will also have to consider the all the required accessories to configure the offered Storage Solution with the existing IFMS infrastructure.

The bidder may visit the Primary Site - State Data Center, Gandhinagar & DR Site – NIC, Hyderabad to understand the requirements before submitting their proposal.

Since this is a live application, the downtime of maximum 1 week (from the go ahead given by the department after delivery of the material) will be given to carry out the said activities for Installation, configuration, Integration & Services including Data Migration. Successful bidder will be responsible for end to end activities and has to co-ordinate with all the stack holders like M/s TCS Ltd. (Application Developer), Oracle for Sun Hardware, M/s Hitachi Data Systems for storage.

We require the entire solution as mentioned in the scope of the work mentioned in bid document for the Storage System & Services including Data Migration and necessary configuration / reconfiguration along with the required licenses required for the same.

The offered new storage system should be of equivalent or higher / better than the existing IFMS storage configurations considering the current latest Storage technology. Department will discontinue the using old existing Storage at Primary Site & DR Site after installation of new Storage solution as the existing SAN Storage support will be discontinued in 2017.

The offered storage solution should be with the 3 year warranty from the date of installation and with back to back OEM support. Bidder will have to quote the price accordingly.

Bidder will have to submit the approach solution document for the required scope of work as a part of technical solution document in this bid. Bidder will have to submit the detailed BoQ along with the part code of the offered Storage Solution.

Successful bidder will have to carry out the configuration activities for Database Server OS & Cluster in coordination with all the stack holders of IFMS as required below:

Existing Database Server Configuration (Sun Cluster)		
Hardware Model	SUN M5000-1	SUN M5000-2
Base OS	Solaris 10	Solaris 10
Server Configuration	16 Core 96 GB RAM	16 Core 96 GB RAM
Virtual OS 1	IFMS - Master - Active : 8 Core 40GB RAM	CTP - Master- Active : 4 Core 38 GB RAM
Virtual OS 2	IFMS Slave - Active : 6 Core 40 GB RAM	CTP - Slave- Active : 4 Core 38 GB RAM
Virtual OS 3	CTP - Master- Passive : 2 Core 16 GB RAM	IFMS - Master - Passive : 4 Core 16 GB RAM
Virtual OS 4		MySQL Monitor : 4 Core 4 GB RAM
Required Database Server Configuration (Sun Cluster)		
Hardware Model	SUN M5000-1	SUN M5000-2
Base OS	Solaris 10	Solaris 10
Server Configuration	16 Core 96 GB RAM	16 Core 96 GB RAM
Virtual OS 1	IFMS - Master - Active : 16 Core 96 GB RAM	IFMS - Master - Passive : 6 Core 30 GB RAM
Virtual OS 2		IFMS Slave - Active : 8 Core 60 GB RAM
Virtual OS 3		MySQL Monitor : 2 Core 6 GB RAM

SECTION III

General Terms & Conditions:

1. The last date of submission of bid on the website <https://gil.nprocure.com> is **24.01.2017 up to 1500 Hrs.** No physical bids will be accepted under normal circumstances. However, GIL reserves the right to ask the bidders to submit the bid and/or any other documents in physical form.
2. The bid is non-transferable.
3. **The Bidder may quote only one option (i.e. only one product can be quoted) against each item.** Bidders are required to mention make & model of the product. (Do not write "OEM" against items as bidders are expected to give make & model of the product).
4. The successful bidder will have to Supply, Install, Commissioning and Maintain and provide operational training for supplied hardware and peripherals and to configuration / reconfiguration as per the scope of work and to carry out necessary integration with existing IFMS Infrastructure. The successful bidder will also have to carry out the Data Migration from existing IFMS Storage to new proposed Storage System considering the required necessary software / licenses.
5. If in any case the quoted Item is not available in the market, the bidder will have to supply Higher Version/replacement of that Item in the quoted cost in the same time duration with prior approval of GIL/Purchaser. (Make & Model quoted by the bidder should be available till the bid validity, duly supported for spares/OEM support for warranty period).
6. The Bidder shall bear all the costs associated with the preparation and submission of its bid, and GIL in no case will be responsible or liable for these costs, regardless of conduct or outcome of bidding process.
7. Technical specifications indicated are minimum specification. Bidder may quote for better solution. The bidder should provide following with the technical bid:
 - Make & Model Number
 - Name of Manufacturer
 - Technical Literature
 - Manufacturer's Data Sheet.
 - Compliance statement from the OEM of the product
8. The bidder has to upload the compliance letter on its letter head duly signed by the authorized signature & other supporting documents as asked for in the bid in scanned format. Failing to submit the same or non-compliance / deviation from any bid terms and conditions, eligibility criteria or technical specifications may result in rejection of the bid.
9. The Bidder has to examine all instructions, forms, terms, conditions 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 its bid.
10. Amendment of Bidding Documents (Corrigendum)
 - 10.1. At any time prior to the deadline for submission of bids, GIL may, for any reason, whether its own initiative or in response to the clarification request by a prospective bidder, modify the bidding documents.
 - 10.2. The corrigendum will be published on website <https://gil.nprocure.com> & www.gil.gujarat.gov.in.
 - 10.3. In order to allow prospective bidders reasonable time to take into consideration the amendments while preparing their bids GIL, at its discretion, may extend the deadline for the submission of bids.
11. Bid Currency - Prices shall be quoted in Indian Rupees only. Payment for the supply of equipments as specified in the agreement shall be made in Indian Rupees only.

12. The bidder will have to submit **Non refundable Bid Processing Fees of Rs. 15,000/- & Earnest Money Deposit (E.M.D.) of Rs. 6,00,000/- (Rupees Six Lac Only) (Refundable)** on or before date & hours of submission of bid in a sealed cover at GIL office with the heading **“Bid processing Fees & EMD for E-Tender no. HWT030117407 for Supply, Installation, Commissioning and Maintenance of Storage System & Services including Data Migration for Online IFMS Application on behalf of Director of Accounts & Treasuries, Finance Department, Gandhinagar.”**

- Bid processing fees must be in the form of Demand Draft in the name of “Gujarat Informatics Ltd.” payable at Gandhinagar along with the covering letter.
- EMD as mentioned above, shall be submitted in the form of Demand Draft **OR** in the form of an unconditional Bank Guarantee (which should be valid for 6 months from the last date of bid submission) of any Nationalized Bank including the public sector bank or Private Sector Banks or Commercial Banks or Co-Operative Banks and Rural Banks (operating in India having branch at Ahmedabad/ Gandhinagar) as per the G.R. no. EMD/10/2015/508/DMO dated 27.04.2016 issued by Finance Department or further instruction issued by Finance department time to time; in the name of “Gujarat Informatics Ltd.” payable at Gandhinagar (as per prescribed format given at Annexure A) and must be submitted along with the covering letter.

Please affix the stamp of your company on the overleaf of demand draft.

Note: Failing to submit physical covers of EMD and bid processing fees at GIL on or before **24.01.2017 up to 1500 Hrs** may lead to the rejection of the bid.

13. In case of non-receipt of Bid processing fees & EMD as mentioned above in your bid will be rejected by GIL as non-responsive.
14. Unsuccessful bidder's E.M.D. will be returned as promptly as possible after the expiration of the period of bid validity OR upon the successful Bidder signing the Contract, and furnishing the Performance Bank Guarantee as prescribed by GIL, whichever is earlier.
15. In exceptional circumstances, GIL may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. Bidder may refuse the request without forfeiting its E.M.D. A Bidder granting the request will not be permitted to modify its bid.
16. The Successful bidder has to submit Performance Bank Guarantee @ 5% of total order value within 15 days from the date of issue of Purchase order **(for warranty period + extra 3 months)** from any Nationalized Bank including the public sector bank or Private Sector Banks or Commercial Banks or Co-Operative Banks and Rural Banks (operating in India having branch at Ahmedabad / Gandhinagar) as per the G.R. no. EMD/10/2015/508/DMO dated 27.04.2016 issued by Finance Department or further instruction issued by Finance department time to time. (The draft of Performance Bank Guarantee is attached herewith).
17. Successful Bidder will have to sign the contract upon receiving the confirmed purchase order with the purchaser(s) within 15 working days from the date of confirmed purchase order. (The draft is attached herewith).
18. The successful Bidder's E.M.D. will be returned upon the Bidder signing the Contract, and furnishing the Performance Bank Guarantee @ 5% of the total order value and offer of inspection of the ordered material.
19. The E.M.D. may be forfeited at the discretion of GoG / GIL, on account of one or more of the following reasons:
- (a) If a Bidder withdraws its bid during the period of bid validity.
 - (b) If Bidder does not respond to requests for clarification of their Bid
 - (c) If Bidder fails to co-operate in the Bid evaluation process, and
 - (d) In case of a successful Bidder, if the Bidder fails:
 - (i) To sign the Contract as mentioned above or
 - (ii) To furnish performance bank guarantee as mentioned above or
 - (iii) If the bidder is found to be involved in fraudulent practices.

20. Termination for Default:

- 20.1. The Purchaser may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Bidder. Bidder will be given notice/cure period of 30 days, after that purchaser will terminate the Contract in whole or part after:
- If the bidder fails to deliver any or all of the Goods as per the delivery schedule mentioned in the bid, or within any extension thereof granted by the Purchaser or
 - If the Bidder fails to perform any other obligation(s) under the Contract/Purchase order.
 - If the Bidder, in the judgment of the Purchaser has engaged in corrupt or fraudulent practices in competing for or in executing the Contract.

For the purpose of this clause:

“Corrupt practice” means the offering, giving, receiving or soliciting of anything of value of influence the action of a public official in the procurement process or in contract execution.

“Fraudulent practice : a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the purchaser, 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 purchaser of the benefits of free and open competition;”

- 20.2. In the event the Purchaser terminates the Contract in whole or in part, pursuant to Clause 20.1 above, the Purchaser may procure, upon such terms and in such manner, as it deems appropriate, Goods or Services similar to those undelivered, and the Bidder shall be liable to the Purchaser for any excess costs for such similar Goods or Services. However, the Bidder shall continue the performance of the contract to the extent not terminated.
21. **If the successful bidder fails to submit the Performance Bank Guarantee & sign the Contract Form within prescribed time limit, the EMD of the successful bidder will be forfeited. GIL also reserves the right to blacklist such bidder from participating in future tenders if sufficient cause exists.**
22. Price shall be inclusive of all freight, forwarding, transit insurance, installation, warranty and maintenance charges.
23. Prices shall be inclusive of Excise Duties. The prices shall strictly be submitted in the given format. Quoted prices shall be inclusive of all taxes except CST / VAT / Service Tax. The tax components like CST / VAT / Service Tax as applicable shall be mentioned separately in the respective columns.
24. Late Bids: The bidder will not be able to submit the bid after final submission date and time.
25. Modification and Withdrawal of Bids
- The Bidder may modify or withdraw its bid before the due date of bid submission.
 - No bid will be allowed to be modified subsequent to the final submission of bids.
 - No bid will be allowed to be withdrawn in the interval between the deadline for submission of bids and the expiry of the bid validity. Withdrawal of a bid during this interval will result in the forfeiture of bidder's E.M.D.
26. Bids will be opened with the buyer's private digital key in the presence of Bidder's representatives, who choose to attend. The Bidder's representatives who are present shall sign a register/attendance sheet evidencing their attendance. The representative will be held responsible for all commitments made on behalf of the bidder and that will be considered valid for all further dealings related to this bid process. In the absence of the bidder(s), the Tender Committee may choose to open the bids as per the prescribed schedule.
27. The Bidder's names, Bid modifications or withdrawals, discounts and the presence or absence of relevant E.M.D. and such other details as GIL/GoG officer(s) at their discretion, may consider appropriate, will be announced at the opening.
28. **Evaluation of the Bids:** After the closing time of submission, GIL / GoG committee will verify the submission of Bid Processing Fees & EMD as per bid terms and conditions. The eligibility criteria

evaluation will be carried out of the responsive bids. The technical bids of the bidders who are complying with all the eligibility criteria will be opened and evaluated next. GIL will seek clarifications if required on eligibility & technical section. The financial bid of the technically qualified bidders will be opened and financially L1 bidder will be decided from the sum total of prices for all line items without tax with 3 year warranty and then called for further negotiations if required.

29. As per the provision in Electronics & IT/ITeS Start-up Policy Resolution No. ITS/10/2015/5284/IT dated 6th June, 2016 issued by Department of Science & Technology; in e-Governance project undertaken by Government Departments or its Boards, Corporations or parastatal bodies getting grants from the Government, the chosen solution provider or system integrator will pass on job work or will outsource part of the work of a value ranging between 5% to 10% of the contract value to the eligible start-ups and to students of shortlisted Technical Colleges in Gujarat. In such arrangements, the responsibility of meeting SLAs (Service Level Agreements) will continue to belong to the solution provider or the system integrator.
30. **The bidder will have to offer the inspection in the manner as decided by GIL** before delivering to the respective site or at customer sites. The cost of the same has to be borne by the supplier. Any deviation found in the specification of the produced goods from the bid specification will lead to the cancellation of the order, forfeiture of EMD/PBG and prohibition in the participation in the future purchase of Government of Gujarat. GIL/GoG will not be responsible for any time delay which may arise due to any deviation from the bid technical specification found at the time of inspection and the bidder has to deliver and install the ordered goods within prescribed time limit. **At the time of inspection, bidder is required to produce OEM's confirmation on OEM's letter head for back to back warranty support as per tender terms & conditions.**
31. The Indenter's right to inspect, test and, where necessary, reject the Goods after the Goods arrival at Customer Site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.
32. **Delivery:** Within **30 working days** from the date of confirmed purchase order.
Installation, Configuration & Integration: Within 1 week from the go ahead given by the department after delivery of the material.
33. In case of successful bidder is found in breach of any condition(s) of bid or supply order/work order, at any stage during the course of supply / installation or warranty period, the legal action as per rules/laws, shall be initiated against the successful bidder and EMD/PBG shall be forfeited, besides debarring and blacklisting the bidder concerned for the time period as decided by Govt., for further dealings with GoG.
34. Bid validity will be of **90 days after the date of financial bid opening**. A bid valid for shorter period shall be rejected as non-responsive. **If required, GIL may extend the bid validity for further period from the date of expiry of bid validity in consultation with the successful bidder.**
35. Bidders are required to quote all items including optional add-ons as well. Incomplete bids will be treated as non-responsive and will be rejected.
36. **Warranty**
 - 36.1. **Warranty:** Comprehensive onsite warranty for minimum 3 Year from the date of installation of procured equipments.
 - 36.2. If any equipment gives continuous trouble, say 3 times in one month during the warranty period, the bidder shall replace the same with new equipments without any additional cost to the purchaser.
 - 36.3. If any manufacturing or other technical defects are found within the warranty period, the same will have to be replaced or rectified free of cost by the bidder.
 - 36.4. Maintenance service: Free maintenance services shall be provided by the Bidder during the period of warranty.
 - 36.5. In case, bidder is not providing satisfactory support & doing unwarranted delay in providing warranty support, Government offices reserves right to repair the equipment at risk & cost of the bidder.
 - 36.6. The Bidder / System Integrator will be required to co-ordinate with software vendor and / or do liaisoning with other service provider to achieve the end-to-end connectivity.

37. **Penalty Clause**

- 37.1. **Penalties for delay in delivery and installation:**

- a) If the bidder fails to deliver and install the requisite hardware and software within 30 working days of the issue of the confirmed purchase order, then a sum equivalent to one percent (1 %) of the total contract value shall be deducted from the payment for each calendar week of delay or part thereof.
- b) The amount of penalties for delay in delivery shall be subject to a maximum limit of 10% of the total contract value.
- c) Delay in excess of 10 weeks will be sufficient to cause for termination of the contract. In that case the Performance Bank Guarantee of the bidder will be forfeited.
- d) The successful bidder will have to carry out the Installation, Configuration, Integration & Data Migration within 1 week from the go ahead given by the department after delivery of the material. The delay in the Installation, Configuration, Integration & Data Migration will attract the penalty of Rs. 15,000/- per day delay in addition to any penalty for the delay in delivery.
- a) In case, the selected bidder does not supply the ordered items for any reason, he will be liable to pay the difference amount to the purchaser, over and above the Performance Guarantee, which indenter departments\Boards\Corporations have to pay to the next or other selected bidder for purpose of the said items.

37.2. Operational / Warranty period Penalties:

- a) During warranty period, bidder will have to response the call within 4 hours and resolve the complaint within 48 hours. If the complaint is not resolved within 48 hrs, the penalty of Rs. 1,000 per hour delay will be levied. The amount of penalty will be recovered from the Performance bank guarantee during warranty period.
- b) Successful bidder should submit the Performance Bank Guarantee @ 5% of total order value for the duration of Warranty Period + 3 months as per bid requirements. In any case, bidder is required to maintain 5% PBG at all time during the period of contract. In case of any penalty claimed from the submitted PBG during the contract period, the successful bidder is required to submit the additional PBG of the amount equal to the penalty claimed for the duration up to the validity of original Bank Guarantee. For example, "X" amount of penalty will be claimed during the 5th month of contract period, then bidder is required to submit the additional PBG of "X" amount for the period of 34 months i.e. 39 months - 5 months.

38. Payment: Payment for Goods and Services shall be made by Purchasing Department in Indian Rupees as follows:

38.1. No advance payment will be made.

38.2. 100 % payment after successful delivery, installation, integration and data migration as per the scope of work.

39. GIL reserves the right to change any bid condition of any item even after inviting the bids, with/without prior notification.

40. GoG / GIL's Right to accept any Bid and to reject any or all Bids – GoG / GIL reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to awarding the 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 such decision.

41. The bid quantities are estimated based on the receipt of the requirement from Indenting Department. The quantities may decrease up to 50% of the bid quantity or increase up to 30% of the bid quantity at the time of finalization, depending upon the change in the requirements/grants available with the purchaser(s), which shall be binding to the bidder.

42. **Limitation of Vendor's Liability:** Vendor's cumulative liability for its obligations under the contract shall not exceed the contract value and the vendor shall not be liable for incidental, consequential, or indirect damages including loss of profit or saving.

43. All correction/addition/deletion shall require authorized countersign.

44. Force Majeure Shall mean and be limited to the following:

- a) Fire, explosion, cyclone, earthquake, flood, tempest, lightening or other natural physical disaster;

- b) War / hostilities, revolution, acts of public enemies, blockage or embargo;
- c) Any law, order, Riot or Civil commotion, proclamation, ordinance, demand or requirements of any Government or authority or representative of any such Government including restrictive trade practices or regulations;
- d) Strikes, shutdowns or labor disputes which are not instigated for the purpose of avoiding obligations herein, or;
- e) Restrictions imposed by the Government or other statutory bodies which prevents or delays the execution of the order;
- f) Any other circumstances beyond the control of the party affected;

The BIDDER shall intimate Purchaser by a registered letter duly certified by the local statutory authorities, the beginning and end of the above causes of delay within seven (7) days of the occurrence and cessation of such Force Majeure Conditions. In the event of delay lasting over two months, if arising out of causes of Force Majeure, Purchaser reserves the right to cancel the order.

Delivery & Installation period may be extended due to circumstances relating to Force Majeure by the Purchaser. Bidder shall not claim any further extension for delivery & installation or completion of work. Purchase / GoG shall not be liable to pay extra costs under any circumstances.

The BIDDER shall categorically specify the extent of Force Majeure conditions prevalent in their works at the time of submitting their bid and whether the same have been taken in to consideration or not in their quotations. In the event of any Force Majeure cause, the BIDDER shall not be liable for delays in performing their obligations under this order and the delivery dates can be extended to the BIDDER without being subject to price reduction for delayed deliverables, as stated elsewhere.

It will be prerogative of Purchaser / GoG to take the decision on force major conditions and Purchaser decision will be binding to the bidder.

45. The Clarifications if any should be submitted in writing to GIL at least on or before 5 days of pre-bid meeting date. Thereafter the clarifications received from the vendors will not be entertained.

Your bid should be submitted on website <https://gil.nprocure.com> on or before **15:00 Hours, 24.01.2017**.

Proposals after due time period will not be accepted.

The Technical Bids will be opened on **24.01.2017 at 17:00 Hours at GIL, Block No. 1, 8th Floor, Udyog Bhavan**, in the presence of the committee members and representatives of the bidders, who have submitted valid bids. Only one representative from each bidder will be allowed to attend the tender opening. The representative will be held responsible for all commitments made on behalf of the bidder and that will be considered valid for all further dealings related to this tender process.

Please address all queries and correspondence to

Shri Vivek Upadhyay, DGM (Tech.),
Gujarat Informatics Limited

Block No. 1, 8th Floor, Udyog Bhavan, Gandhinagar - 382010

Phone No. 079-23259239, Fax No. 079-23238925,

E-mail: viveku@gujarat.gov.in

Fax / Email should be followed by post confirmation copy.

SECTION IV

FINANCIAL BID FORMAT

Sr. No.	ITEM	Qty. (In Nos.)	Unit Price with 3 Year Warranty (In Rs. Without tax)	Total Price with 3 Year Warranty (In Rs. Without tax)	Rate of VAT / Service Tax (%)
A	B	C	D	E = C*D	F
1	Supply, Installation, Commissioning and Maintenance of Storage System & Services including Data Migration etc at Primary Site SDC, Gandhinagar as per the Scope of Work (including necessary software / licenses, configuration & integration etc.)	1			
2	Supply, Installation, Commissioning and Maintenance of Storage System & Services including Data Migration etc at DR Site NIC, Hyderabad as per the Scope of Work (including necessary software / licenses, configuration & integration etc.)	1			
GRAND TOTAL					

Note:

- L1 will be the lowest sum total of rates of all line items without tax with 3 Year Warranty.
- The Bidder shall explicitly mention the applicable rate of tax.
- Supply, installation, integration & services including Data Migration of the above mentioned materials should be carried out by the successful bidder at Primary Site - State Data Center, Gandhinagar & DR Site – NIC, Hyderabad.
- Bidder will have to consider all the necessary software / licenses for virtualization / migration for the said activities to achieve the requirements as defined in scope of the work. The bidder will also have to consider the required necessary accessories to integrate with the existing IFMS infrastructure.
- The bidder will have to upload the details for the bifurcation of the quoted cost in Financial Bid section. Bidder will have to mentioned separate rates for offered hardware components, software / licenses components and service components.

SECTION V

Bid Processing Fees & Earnest Money Deposit Details

Sr. No.	Item	Amount (In Rs.)	Name of the Bank & Branch	Demand Draft No.
1	Bid Processing Fees			
2	Earnest Money Deposit (E.M.D.)			

ELIGIBILITY CRITERIA

Form No. E1: Financial strength of the bidder

Financial Year	Turnover (Rs. In Crores)	Audited Accounts uploaded? (Yes/No)
2013-14		
2014-15		
2015-16		
Grand Total		

Note: Please fill this form and upload the Audited Annual Accounts / Balance Sheet along with Profit & Loss Account for the last three financial years.

Form No. E2: Office in GUJARAT

Sr. No.	Address	Contact Person	Contact Nos.	Type of supporting document attached
1				
2				

Note: You may mention more than one office (if applicable) by adding multiple rows which may be added by "NUMBER OF ROWS TO ADD".

Form No. E3: Warranty Support & repairing cum replacement service up to delivery locations

Sr. No.	Address	Contact Person	Contact Nos.	Type of supporting document attached
1				
2				
.				

Note: Please fill this form and upload the supporting documents.

Form No. E4: Authorization Letters

Item	Make & Model	Name of OEM	Authorization letter Submitted? (Yes/No)
Offered Storage Solution			

Note: Please fill this form and upload the OEM Authorization Letter in scanned format.

Note: You may quote only one option against any item.

Performa of Compliance letter/Authenticity of Information Provided

(On Non judicial Stamp paper of Rs. 100/- duly attested by the First class Magistrate/Notary Public)

Date:

To,
DGM (Tech.)
Gujarat Informatics Ltd.
Block-1, 8th Floor, Udyog Bhavan,
Gandhinagar

Sub: Compliance with the tender terms and conditions, specifications and Eligibility Criteria

Ref: Bid for Supply, Installation, Commissioning and Maintenance of Storage System & Services including Data Migration for Online IFMS Application on behalf of Director of Accounts & Treasuries, Finance Department, Gandhinagar (Tender No. HWT030117407).

Dear Sir,

With reference to above referred tender, I, undersigned <<Name of Signatory>>, in the capacity of <<Designation of Signatory>>, is authorized to give the undertaking on behalf of <<Name of the bidder>>.

We wish to inform you that we have read and understood the technical specification and total requirement of the above mentioned bid submitted by us on **DD.MM.YYYY**.

We hereby confirm that all our quoted items meet or exceed the requirement and are absolutely compliant with specifications mentioned in the bid document.

We also explicitly understand that all quoted items meet technical specification of the bid & that such technical specification overrides the brochures/standard literature if the same contradicts or is absent in brochures.

In case of breach of any tender terms and conditions or deviation from bid specification other than already specified as mentioned above, the decision of GIL Tender Committee for disqualification will be accepted by us.

The Information provided in our submitted bid is correct. In case any information provided by us are found to be false or incorrect, you have right to reject our bid at any stage including forfeiture of our EMD/PBG/cancel the award of contract. In this event, GIL reserves the right to take legal action on us.

Thanking you,

Dated this _____ day of _____ YYYY

Signature: _____

(In the Capacity of) : _____

Duly authorized to sign bid for and on behalf of

Note: This form should be signed by authorized signatory of bidder

Annexure A

Format of Earnest Money Deposit in the form of Bank Guarantee

Ref:

Bank Guarantee No.

Date:

To,

DGM (Technical)

Gujarat Informatics Limited

8th Floor, Block -1, Udyog Bhavan,

Sector - 11, Gandhinagar - 382010

Gujarat, India

Whereas ----- (here in after called "the Bidder") has submitted its bid dated ----- in response to the Tender no: HWT030117407 for Supply, Installation, Commissioning and Maintenance of Storage System & Services including Data Migration for Online IFMS Application on behalf of Director of Accounts & Treasuries, Finance Department, Gandhinagar KNOW ALL MEN by these presents that WE ----- having our registered office at ----- (hereinafter called "the Bank") are bound unto the Gujarat Informatics Limited in the sum of ----- for which payment well and truly to be made to Gujarat Informatics Limited, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this -----day of ----- YYYY.

THE CONDITIONS of this obligation are:

1. The E.M.D. may be forfeited:

- a. if a Bidder withdraws its bid during the period of bid validity
- b. Does not accept the correction of errors made in the tender document;
- c. In case of a successful Bidder, if the Bidder fails:
 - (i) To sign the Contract as mentioned above within the time limit stipulated by purchaser or
 - (ii) To furnish performance bank guarantee as mentioned above or
 - (iii) If the bidder is found to be involved in fraudulent practices.
 - (iv) If the bidder fails to submit the copy of purchase order & acceptance thereof.
 - (v) If the successful bidder fails to submit the Performance Bank Guarantee & sign the Contract Form within prescribed time limit, the EMD of the successful bidder will be forfeited. GIL also reserves the right to blacklist such bidder from participating in future tenders if sufficient cause exists.

We undertake to pay to the GIL/Purchaser up to the above amount upon receipt of its first written demand, without GIL/ Purchaser having to substantiate its demand, provided that in its demand GIL/ Purchaser will specify that the amount claimed by it is due to it owing to the occurrence of any of the abovementioned conditions, specifying the occurred condition or conditions.

This guarantee will remain valid up to 6 months from the last date of bid submission. The Bank undertakes not to revoke this guarantee during its currency without previous consent of the OWNER/PURCHASER and further agrees that if this guarantee is extended for a period as mutually agreed between bidder & owner/purchaser, the guarantee shall be valid for a period so extended provided that a written request for such extension is received before the expiry of validity of guarantee.

The Bank shall not be released of its obligations under these presents by any exercise by the OWNER / PURCHAER of its liability with reference to the matters aforesaid or any of them or by reason or any other acts of omission or commission on the part of the OWNER/PURCHASER or any other indulgence shown by the OWNER/PURCHASER or by any other matter or things.

The Bank also agree that the OWNER/PUCHASER at its option shall be entitled to enforce this Guarantee against the Bank as a Principal Debtor, in the first instance without proceeding against the SELLER and not withstanding any security or other guarantee that the OWNER/PURCHASER may have in relation to the SELLER's liabilities.

Dated at _____ on this _____ day of _____ YYYY.

Signed and delivered by

For & on Behalf of

Name of the Bank & Branch &
Its official Address

Approved Bank: All Nationalized Bank including the public sector bank or Private Sector Banks or Commercial Banks or Co-Operative & Rural Banks (operating in India having branch at Ahmedabad/ Gandhinagar) as per the G.R. no. EMD/10/2015/508/DMO dated 27.04.2016 issued by Finance Department or further instruction issued by Finance department time to time.

Performa of Contract-cum-Equipment
Performance Bank Guarantee
(To be stamped in accordance with Stamp Act)

Ref:

Bank Guarantee No.

Date:

To

Name & Address of the Purchaser/Indenter

Dear Sir,

In consideration of Name & Address of the Purchaser/Indenter, Government of Gujarat, Gandhinagar (hereinafter referred to as the OWNER/PURCHASER which expression shall unless repugnant to the context or meaning thereof include successors, administrators and assigns) having awarded to M/s having Principal Office at (Hereinafter referred to as the "SELLER" which expression shall unless repugnant to the context or meaning thereof include their respective successors, administrators, executors and assigns) the supply of _____ by issue of Purchase Order No..... Dated issued by <<GoG Department>> for and on behalf of the OWNER/PURCHASER and the same having been accepted by the SELLER resulting into CONTRACT for supplies of materials/equipments as mentioned in the said purchase order and the SELLER having agreed to provide a Contract Performance and Warranty Guarantee for faithful performance of the aforementioned contract and warranty quality to the OWNER/PURCHASER, _____ having Head Office at (hereinafter referred to as the 'Bank' which expressly shall, unless repugnant to the context or meaning thereof include successors, administrators, executors and assigns) do hereby guarantee to undertake to pay the sum of Rs. _____ (Rupees _____) to the OWNER/PURCHASER on demand at any time up to _____ without a reference to the SELLER. Any such demand made by the OWNER/PURCHASER on the Bank shall be conclusive and binding notwithstanding any difference between Tribunals, Arbitrator or any other authority.

The Bank undertakes not to revoke this guarantee during its currency without previous consent of the OWNER/PURCHASER and further agrees that the guarantee herein contained shall continue to be enforceable till the OWNER/PURCHASER discharges this guarantee. OWNER/PURCHASER shall have the fullest liberty without affecting in any way the liability of the Bank under this guarantee from time to time to extend the time for performance by the SELLER of the aforementioned CONTRACT. The OWNER/PURCHASER shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the SELLER, and to exercise the same at any time in any manner, and either to enforce to forebear to enforce any covenants contained or implied, in the aforementioned CONTRACT between the OWNER/PURCHASER and the SELLER or any other course of or remedy or security available to the OWNER/PURCHASER.

The Bank shall not be released of its obligations under these presents by any exercise by the OWNER/PURCHAER of its liability with reference to the matters aforesaid or any of them or by reason or any other acts of omission or commission on the part of the OWNER/PURCHASER or any other indulgence shown by the OWNER/PURCHASER or by any other matter or things.

The Bank also agree that the OWNER/PUCHASER at its option shall be entitled to enforce this Guarantee against the Bank as a Principal Debtor, in the first instance without proceeding against the SELLER and not withstanding any security or other guarantee that the OWNER/PURCHASER may have in relation to the Seller's liabilities.

Notwithstanding anything contained herein above our liability under this Guarantee is restricted to Rs. _____ (Rupees _____) and it shall remain in force up to and including _____ and shall be extended from time to time for such period as may be desired by the SELLER on whose behalf this guarantee has been given.

Dated at _____ on this _____ day of _____ YYYY.

Signed and delivered by

For & on Behalf of

Name of the Bank & Branch &
Its official Address

List of approved Banks

Approved Bank: All Nationalized Bank including the public sector bank or Private Sector Banks or Commercial Banks or Co-Operative & Rural Banks (operating in India having branch at Ahmedabad/ Gandhinagar) as per the G.R. no. EMD/10/2015/508/DMO dated 27.04.2016 issued by Finance Department or further instruction issued by Finance department time to time.

CONTRACT FORM

THIS AGREEMENT made the _____ day of _____, YYYY ____ Between _____ (*Name of purchaser*) of _____ (*Country of Purchaser*) hereinafter "the Purchaser" of the one part and _____ (*Name of Supplier*) of _____ (*City and Country of Supplier*) hereinafter called "the Supplier" of the other part :

WHEREAS the Purchaser is desirous that certain Goods and ancillary services viz., _____ (*Brief Description of Goods and Services*) and has accepted a bid by the Supplier for the supply of those goods and services in the sum of _____ (*Contract Price in Words and Figures*) hereinafter called "the Contract Price in Words and Figures" hereinafter called "the Contract Price."

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

- 1 In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
- 2 The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - 2.1 the Bid Form and the Price Schedule submitted by the Bidder;
 - 2.2 terms and conditions of the bid
 - 2.3 the Purchaser's Notification of Award
- 3 In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
- 4 The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
- 5 Particulars of the goods and services which shall be supplied / provided by the Supplier are as enlisted in the enclosed annexure:

TOTAL VALUE:

DELIVERY SCHEDULE:

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written.

Signed, Sealed and Delivered by the

Said _____ (For the Purchaser)

In the presence of _____

Signed, Sealed and Delivered by the

Said _____ (For the Supplier)

In the presence of _____

Detailed Specification & detailed Bill of Material of IFMS Storage and Database Server Configuration of IFMS

Storage Area Network Storage – Fiber Channel Based: Sun Storagetek 9985V + Sun Storage 6140

Item No.	Item	Minimum Specification
1	Reliability & Data Availability	<p>The storage array should be an all end-to-end fibre channel using 4Gbps technology and should have all active components redundant to provide "No single point of failure" array architecture.</p> <p>The storage array should support 100% data availability guarantee if required by a suitable architecture.</p> <p>The cache should be duplexed for write data to ensure 0% data loss. In the event of an error in the cache there should be a backup copy in the cache.</p> <p>The storage array should guarantee no data loss in the event of a power failure in the data centre and a component failure in the storage array. The array should be able to retain data in cache for at least 36 hours in the even of the power failure. The array should also provide a planned de-staging of cache/battery back up of cache to the disks under controlled environment.</p> <p>It shall support hot plugging and hot swapping of all components on-line (i.e., disks, cache boards, power supplies, cooling fans, microcode updates) with no disruption to any applications or loss of data.</p>
2	Performance	<p>The storage array should be rated for 700,000 cache IOPS and should have 4Gbps front end and back end.</p> <p>The storage sub-system should have separate paths for control & data. The storage sub-system should also have separate memory for control & data.</p> <p>The cache should be non-blocking & should be scalable up to 32 concurrent cache transactions including data & control.</p> <p>Internal cache bandwidth of the storage box should be scalable to 13 GBps</p> <p>The storage system should be able to provide traffic prioritization from the hosts at the FC port level to enable guaranteed bandwidth to key business applications.</p> <p>In order to achieve consistent service levels for key applications, the storage array should be partitioned with a minimum of 4 virtual storage arrays and support 8 virtual partitions. The partition should be on the basis of FC ports, Cache & Disks and should be applicable to both internal & external storage.</p>
3	Scalability	<p>The array should be able to virtualize popular storage arrays from SUN, HDS, IBM, etc.</p> <p>The storage array should support a mix of 10k & 15k disks within the same array</p> <p>The array should support a minimum of 16 FC ports scalable to 32 FC ports to connect to hosts directly or through a switch.</p> <p>Data cache should be a minimum of 16 GB scalable to 128GB excluding the cache required for control information.</p>
4	Storage requirement	<p>60 nos of 146GB 15k FC disk & 8 nos of 750 GB SATA disk, volume copy & replication software</p>
5	Data protection	<p>The storage array controller must be able to do RAID management. RAID 1+0, RAID 5 and RAID protection against two disk failures (RAID 6). RAID implementation should be hardware based, optimized for Writes.</p> <p>The storage system should be able to provide WORM (Write Once Read Many) functionality for extended data retention and compliance.</p>

		The LUN security & masking software to be provided to protect LUNs configured to heterogeneous operating hosts connected to the same FC port.
6	Management	The storage system shall simultaneously support multiple operating systems through SAN – Win2k, Tru64, NetWare, Linux, HP-Ux, SUN Solaris, IBM AIX, etc. on each FC port of the subsystem
		The storage array should support clustering solution using different clustering software listed below simultaneously, higher respective versions are acceptable. If lower versions are not supported, then higher version of respective software should be supported.
		MC/Service Guard, A.10.xx on HP-Ux 10.2, 11.0, 11i,
		Tru cluster v 1.5 on Compaq Tru64 Unix 4.0f/g, 5.0a, 5.1
		Microsoft cluster server v1.0 on WinNT 4.0 or Win2k.
		IBM HACMP 4.4 on IBM AIX 4.3x
		SUN cluster 3.0 on Solaris 8 or higher
		The management of the storage system should be GUI based and shall be able to discover and monitor the system. It shall provide pro-active intelligence by monitoring performance & host wise capacity utilization.
		The management software should also be able to provide view of capacity/performance metrics data from Oracle, SQL server database and Exchange applications.
		The management software should support advanced capacity and performance monitoring and performance and capacity forecasting of storage array.
		Storage systems should be able to identify the hot spots inside the storage.
		Storage system must be able to optimize the data storage and retrieval by analyzing the system resource and tuning the system to resolve bottlenecks of activity.
		The storage array should support up to 3 Point-in-time copies. The copies could be on an external modular system virtualized to the enterprise storage system. The PIT copies should be able to be synchronized with the original volume for regular updates.
		One PIT copy should be provided either internally or externally.
		The PIT copies must support RAID 1+0 or RAID 5.
		All re-synchronization of the PIT full copy to the original either internal to the storage system or external shall be only for changed data except for the first time synchronization.
		The PIT full copy should support consistency groups and should be consistent beyond a single storage unit.
		PIT copy relationships should support incremental synchronization and roll reversal.
PIT copy technology must support establishment of consistent copies across all the volumes in a consistency group without freezing the applications or the file systems.		
The storage system shall support data replication from one storage system to another storage system without any server intervention.		
The storage system shall support synchronous and asynchronous mode data replication.		
The storage system shall support hardware based data replication to a remote site and must support bi-directional data copy. DR to pull		
The write order fidelity should be maintained.		

		Replication technology should use cache-optimized architecture for replication. The replication methodology should use minimum CPU and cache resources of the primary storage and should not significantly affect the performance of the primary storage.
		The data mover for replication should be the remote storage system to conserve the performance of the primary storage system.
		The array storage management software should support movement data seamlessly within the storage system to different RAID groups or to other storage arrays connected to and virtualized without stopping host application.
		The storage management software provided should confirm to SNIA standards of CIM & SMI-S to support third party management and monitoring tools & avoid interoperability issues.
7	Disk drives	The disk shelves should have equipped capacity of minimum 100 numbers and scalable to 240 or higher. Must be able to incorporate 73GB, 146GB 15k RPM 4Gbps & 300GB or 400 GB 10k RPM 4Gbps drives.
8	No SPOF	Disk array should have no single point of failures (NSPoF), component and function level redundancy to provide high availability features for all the components at RAID controller level, redundant power supply, and redundant cooling fans. Each controller should have dual power supplies and dual cache batteries.

3. Bill of Materials

3.1. Primary Site

3.1.1. ST9985v Storage

Sl. No.	Product Code	Product Description	Quantity
1	TV97846544	Rack with Gray Bezels for APAC and International Americas	1
2	TV9DKC-F615I-146KS	1 HDD Canister (146G/15k min-1/4G-FC)	60
3	TV9DKC-F615I-8FS	Fibre 8-port Adapter (1-4Gbps)	1
4	TV9DKC-F615I-B2	Disk Chassis	2
5	TV9DKC-F615I-BSS	ST9985V Bezel kit SUN(SVPBATT)	1
6	TV9DKC-F615I-C4G	4 GB Cache Memory	4
7	TV9DKC-F615I-CX	Cache Memory Adapter.	1
8	TV9DKC-F615I-DKA	Disk Adapter	1
9	TV9DKC-F615I-FIS6	ST9985V Bezel 6U for SUN	1
10	TV9DKC-F615I-PHUC	DKU Power Cord Kit (1-phase 10A for USA)	2
11	TV9DKC-F615I-PLUC	DKC Power Cord Kit (1-phase 10A for USA)	1
12	TV9DKC-F615I-S4GQ	Shared Memory Module (4GB)	1
13	TV9DKC-F615I-SX	Shared Memory Adapter	1
14	TV9DKC-F615I-UC0	Device Interface Cable (DKC to DKU-R0)	1
15	TV9DKC-F615I-UC1	Device Interface Cable (DKU-R0 to DKU-R1)	1
16	TV9DKC615I-5	Control Frame	1
17	ST9985V-STRGFAMILY	ST9985V Product - Order Structuring Reference Only	1
18	TV9DKC-F615I-146K1	1 HDD SPARE Canister (146G/15k min-1/4G-FC)	1
19	TV9044-220034-01	ST9900 Basic Operating System Bundle Media Kit (ST9985V)	1
20	TV9044-220034-03	ST9900 Basic Operating System Bundle License Base (ST9985V)	1
21	TV9044-220035-01	ST9900 Disaster Recovery Bundle Media Kit (ST9985V)	1
22	TV9044-220035-03	ST9900 Disaster Recovery Bundle License Base (ST9985V)	1
23	TV9044-220035-03B	ST9900 Disaster Recovery Bndl 1TB (Above 5TB) Lic (ST9985V)	6
24	TV9044-220037-01	ST9900 In-System Replctn Bundle Media Kit (ST9985V)	1
25	TV9044-220037-03	ST9900 In-System Replctn Bundle License Base (ST9985V)	1
26	TV9044-220037-03C	ST9900 In-System Replctn Bndl 1TB (Above 10TB) Lic (ST9985V)	12
27	TV9044-220038-01	ST9900 BOS Virtualization Media Kit (ST9985V)	1
28	TV9044-220038-03	ST9900 BOS Virtualization License Base (ST9985V)	1
29	TV9044-220040-03	ST9900 Tuning Manager Lic Base (ST9985V)	1
30	TV9044-220040-03B	ST9900 Tuning Manager 1TB (Above 5TB) Lic (ST9985V)	8
31	TV9044-220154-01	ST9900 HTNM v6.0 Media Kit	1
32	ST9985V-STRGFAMILY	ST9985V Product - Order Structuring Reference Only	1

3.1.2. ST6140 Storage

Sl. No.	Product Code	Product Description	Quantity
1	TC6140R11A2-0Z	RoHS-5, Sun StorageTek (tm) 6140 array with 4GB cache and 8 host ports, Rack-Ready Controller Tray - Diskless Chassis, 0GB, 0 drives; must order minimum 6 drives. Includes: 2 * 2GB-cache memory FC RAID Controller cards, 2 * redundant AC power supplies and cooling fans, 2 * FC ports for expansion trays and 8 * host ports with shortwave SFPs, 2 * 5M fibre optic cables, 2 * 6M ethernet cables and management software, 3 years on-site warranty included (For factory integration only)	1
2	TC-ST1CF-750G7KZ	RoHS-6, Sun StorageTek (tm) 6140 array / CSM200, 750GB 7.2Krpm SATA drive (For factory integration only)	8
3	XTCCSM2-RK-19UZ	RoHS 6, Sun Modular Storage : StorageTek (tm) 6140 / CSM200, Rack Rail Kit for standard 19-inch system cabinets and racks including the Sun Rack 900/1000 racks	1
4	XTC6140-DOM4-ARY	Sun StorageTek 4 Domain right-to-use (RTU) license key for Sun StorageTek 6140 Array.SW License for 4 Storage Domains on 6140 Array	1
5	X320A	Power Cord Sun Fire 3800-4810 server, Sun Fire V490 server, Sun Fire V890 server, Direct to wall, N. American, RoHS-6	2

3.1.3. Cisco MDS 9222I SAN Switch – 2Nos.

Sl. No.	Product Code	Product Description	Quantity
1	SG-XSWCS-9222I-Z	Cisco MDS 9222I Modular Switch - 18 Fibre Channel ports + 4 GigE ports for SAN extension over IP with 1-expansion slot for additional modules. RoHS-compliant.	1
2	SG-XSWCS-CA92-NA-Z	Cisco 9216 (either 9216A or 9216i) Power Cable - North America. RoHS-compliant.	2
3	SG-XSWCS-CU-SFPL-Z	Cisco 1000 BASE-T COPPER SFP. RoHS-compliant.	2
4	SG-XSWCS-4GSFP-S4Z	Cisco 4-pack of 4Gb/s Short Wave FC SFP. RoHS-compliant.	4

3.2. DR Site

3.2.1. ST9985v Storage

Sl. No.	Product Code	Product Description	Quantity
1	TV97846544	Rack with Gray Bezels for APAC and International Americas	1
2	TV9DKC-F615I-146KS	1 HDD Canister (146G/15k min-1/4G-FC)	60
3	TV9DKC-F615I-8FS	Fibre 8-port Adapter (1-4Gbps)	1
4	TV9DKC-F615I-B2	Disk Chassis	2
5	TV9DKC-F615I-BSS	ST9985V Bezel kit SUN(SVPBATT)	1
6	TV9DKC-F615I-C4G	4 GB Cache Memory	4
7	TV9DKC-F615I-CX	Cache Memory Adapter.	1
8	TV9DKC-F615I-DKA	Disk Adapter	1
9	TV9DKC-F615I-FIS6	ST9985V Bezel 6U for SUN	1
10	TV9DKC-F615I-PHUC	DKU Power Cord Kit (1-phase 10A for USA)	2
11	TV9DKC-F615I-PLUC	DKC Power Cord Kit (1-phase 10A for USA)	1
12	TV9DKC-F615I-S4GQ	Shared Memory Module (4GB)	1
13	TV9DKC-F615I-SX	Shared Memory Adapter	1
14	TV9DKC-F615I-UC0	Device Interface Cable (DKC to DKU-R0)	1
15	TV9DKC-F615I-UC1	Device Interface Cable (DKU-R0 to DKU-R1)	1
16	TV9DKC615I-5	Control Frame	1
17	ST9985V-STRGFAMILY	ST9985V Product - Order Structuring Reference Only	1
18	TV9DKC-F615I-146K1	1 HDD SPARE Canister (146G/15k min-1/4G-FC)	1
19	TV9044-220034-01	ST9900 Basic Operating System Bundle Media Kit (ST9985V)	1
20	TV9044-220034-03	ST9900 Basic Operating System Bundle License Base (ST9985V)	1
21	TV9044-220035-01	ST9900 Disaster Recovery Bundle Media Kit (ST9985V)	1
22	TV9044-220035-03	ST9900 Disaster Recovery Bundle License Base (ST9985V)	1
23	TV9044-220035-03B	ST9900 Disaster Recovery Bndl 1TB (Above 5TB) Lic (ST9985V)	6
24	TV9044-220037-01	ST9900 In-System Replctn Bundle Media Kit (ST9985V)	1
25	TV9044-220037-03	ST9900 In-System Replctn Bundle License Base (ST9985V)	1
26	TV9044-220037-03C	ST9900 In-System Replctn Bndl 1TB (Above 10TB) Lic (ST9985V)	12
27	TV9044-220038-01	ST9900 BOS Virtualization Media Kit (ST9985V)	1
28	TV9044-220038-03	ST9900 BOS Virtualization License Base (ST9985V)	1
29	TV9044-220040-03	ST9900 Tuning Manager Lic Base (ST9985V)	1
30	TV9044-220040-03B	ST9900 Tuning Manager 1TB (Above 5TB) Lic (ST9985V)	8
31	TV9044-220154-01	ST9900 HTNM v6.0 Media Kit	1
32	ST9985V-STRGFAMILY	ST9985V Product - Order Structuring Reference Only	1

3.2.2. ST6140 Storage

Sl. No.	Product Code	Product Description	Quantity
1	TC6140R11A2-0Z	RoHS-5, Sun StorageTek (tm) 6140 array with 4GB cache and 8 host ports, Rack-Ready Controller Tray - Diskless Chassis, 0GB, 0 drives; must order minimum 6 drives. Includes: 2 * 2GB-cache memory FC RAID Controller cards, 2 * redundant AC power supplies and cooling fans, 2 * FC ports for expansion trays and 8 * host ports with shortwave SFPs, 2 * 5M fibre optic cables, 2 * 6M ethernet cables and management software, 3 years on-site warranty included (For factory integration only)	1
2	TC-ST1CF-750G7KZ	RoHS-6, Sun StorageTek (tm) 6140 array / CSM200, 750GB 7.2Krpm SATA drive (For factory integration only)	8
3	XTCCSM2-RK-19UZ	RoHS 6, Sun Modular Storage : StorageTek (tm) 6140 / CSM200, Rack Rail Kit for standard 19-inch system cabinets and racks including the Sun Rack 900/1000 racks	1
4	XTC6140-DOM4-ARY	Sun StorageTek 4 Domain right-to-use (RTU) license key for Sun StorageTek 6140 Array.SW License for 4 Storage Domains on 6140 Array	1
5	X320A	Power Cord Sun Fire 3800-4810 server, Sun Fire V490 server, Sun Fire V890 server, Direct to wall, N. American, RoHS-6	2

3.2.3. Cisco MDS 9222I SAN Switch – 2Nos.

Sl. No.	Product Code	Product Description	Quantity
1	SG-XSWCS-9222I-Z	Cisco MDS 9222I Modular Switch - 18 Fibre Channel ports + 4 GigE ports for SAN extension over IP with 1-expansion slot for additional modules. RoHS-compliant.	1
2	SG-XSWCS-CA92-NA-Z	Cisco 9216 (either 9216A or 9216i) Power Cable - North America. RoHS-compliant.	2
3	SG-XSWCS-CU-SFPL-Z	Cisco 1000 BASE-T COPPER SFP. RoHS-compliant.	2
4	SG-XSWCS-4GSFP-S4Z	Cisco 4-pack of 4Gb/s Short Wave FC SFP. RoHS-compliant.	4

2.1. Primary Storage

Hardware	Application	SAN Space Requirement
M5000-1	C1-IFMS-Master-Active	2135GB
	C2-IFMS-Slave-Active	2135GB
	C3-CTP-Maser-Passive	-
M5000-2	C4-IFMS-Master-Passive	-
	C5-CTP-Master-Active	1085GB
	C6-CTP-Slave-Active	1085GB

2.2. DR Storage

Hardware	Application	SAN Space Requirement
M5000-1	C1-IFMS-Master-Active	2135GB
	C2-IFMS-Slave-Active	2135GB
	C3-CTP-Maser-Passive	-
M4000-1	C4-IFMS-Master-Passive	-
	C5-CTP-Master-Active	1085GB
	C6-CTP-Slave-Active	1085GB

5.3.1. Primary DC

M5000 -1

- one IFMS master (active) 8 cores, 40GB RAM
- one IFMS slave 6 cores, 40GB RAM
- one Cyber Treasury Portal master (passive) 2 cores, 16GB RAM

M5000 - 2

- one IFMS (passive) 4 cores, 16GB RAM
- one Cyber Treasury Portal master (active) 4 cores, 38 GB RAM
- one Cyber Treasury Portal master slave 4 cores, 38GB RAM
- MySql Enterprise Monitor 4 cores ,4GB

5.3.2. DR DC:

M5000

- one IFMS master (active) 6 cores, 40GB RAM
- one IFMS slave 6 cores, 24GB RAM
- MySql Enterprise Monitor 4 cores ,4GB

M4000

- one Cyber Treasury Portal master (active) 4 cores, 16 GB RAM
- one Cyber Treasury Portal master slave 4 cores, 16GB RAM

6.1. Primary Site

6.1.1. Hardware Configuration Summary

Sl. No.	Application	Application Tier	Software	HW Model	Container	OS / Patch Level	CPU	Memory	No. of NIC		HBA	Internal Disks	D240 (Y/N)	SAN Storage Available
									Onboard GE	PCI GE				
1	IFMS/CTP	DB	MySQL	M5000-1	Y	Solaris 10	8*2.15GHz	96GB	4	4*Quard GE	2	4*146GB	N	Y
2	IFMS/CTP	DB	MySQL	M5000-2	Y	Solaris 10	8*2.15GHz	96GB	4	4*Quard GE	2	4*146GB	N	Y

6.1.2. Container Configuration

Sl. No.	Application	Application Tier	Software	Hardware	CPU / Memory	Container	Container Usage	OS / Patch Level	CPU	Memory	Cluster Level
1	IFMS/CTP	DB	MySQL	M5000-1	8 /96GB	C1	IFMS - Master - Active	Solaris 10	8 CPU Core	40GB	OS
2						C2	IFMS Slave - Active	Solaris 10	6 CPU Core	40GB	App
3						C3	CTP - Master- Passive	Solaris 10	2 CPU Core	16GB	OS
4	IFMS/CTP	DB	MySQL	M5000-2	8/96GB	C1	CTP - Master- Active	Solaris 10	4 CPU Core	38GB	OS
5						C2	CTP - Slave- Active	Solaris 10	4 CPU Core	38GB	APP
6						C3	IFMS - Master - Passive	Solaris 10	4 CPU Core	16GB	OS
7						C4	MySQL Monitor	Solaris 10	4 CPU Core	4GB	NA

6.1.3.1. MySQL Database Servers (M5000 * 2)

Server Hardware	Container Details	Application	Mount Point	Size (GB)	Mount Point From
M5000-1	Global Zone	Root	root (/)	20	4*146GB Internal Disks
			swap(96GB)	96	4*146GB Internal Disks
	C1	IFMS - Master - Active	root (/)	10	4*146GB Internal Disks
			/ifms-m-a	2100	From SAN (ST9985v)
			/innodblog	5	From SAN (ST9985v)
			/binlog	30	From SAN (ST9985v)
	C2	IFMS Slave - Active	root (/)	10	4*146GB Internal Disks
			/ifms-s-a	2100	From SAN (ST9985v)
			/innodblog	5	From SAN (ST9985v)
	C3	CTP - Master- Passive	root (/)	10	4*146GB Internal Disks
M5000-2	Global Zone	Root	root (/)	20	4*146GB Internal Disks
			swap(96GB)	96	4*146GB Internal Disks
	C1	CTP - Master- Active	root (/)	10	4*146GB Internal Disks
			/ctp-m-a	1050	From SAN (ST9985v)
			/innodblog	5	From SAN (ST9985v)
			/binlog	30	From SAN (ST9985v)
	C2	CTP - Slave- Active	root (/)	10	4*146GB Internal Disks
			/ctp-s-a	1050	From SAN (ST9985v)
			/innodblog	5	From SAN (ST9985v)
	C3	IFMS - Master - Passive	root (/)	10	4*146GB Internal Disks
	C4	MySQL Monitor	root(/)	10	4*146GB Internal Disks
			/data	30	4*146GB Internal Disks

6.2. DR Site

6.2.1. Hardware Configuration Summary

Sl. No.	Application	Application Tier	Software	HW Model	Container	OS / Patch Level	CPU	Memory	No. of NIC		HBA	Internal Disks	D240 (Y/N)	SAN Storage Available
									Onboard GE	PCI GE				
1	IFMS/CTP	DB	MySQL	M5000-1	Y	Solaris 10	8*2.15GHz	64GB	4	2*Quad GE	2	4*146GB	N	Y
2	IFMS/CTP	DB	MySQL	M4000-1	Y	Solaris 10	4*2.15GHz	32GB	2	2*Dual GE	2	2*146GB	N	Y

6.2.2. Container Configuration

Sl. No.	Application	Application Tier	Software	HW Model	CPU/ Memory	Container	Container Usage	OS / Patch Level	CPU	Memory	Cluster Level
1	IFMS/CTP	DB	MySQL	M5000-1	8/64GB	C1	IFMS - Master - Active	Solaris 10	6 Core	32GB	NA
2						C2	IFMS Slave - Active	Solaris 10	6 Core	24GB	NA
3						C3	MySQL Enterprise Monitor	Solaris 10	4 Core	8GB	NA
4	IFMS/CTP	DB	MySQL	M4000-1	4/32GB	C1	CTP - Master-Active	Solaris 10	4 Core	16GB	NA
5						C2	CTP - Slave-Active	Solaris 10	4 Core	16GB	NA

6.2.3. File System Configuration

6.2.3.1. MySQL Database Servers (1* M5000 & 1*M4000)

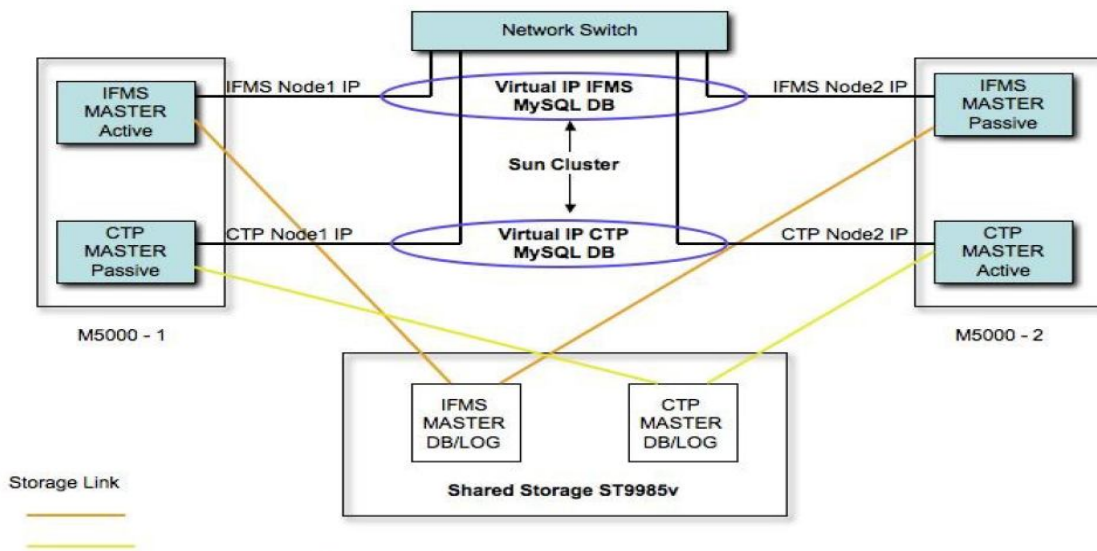
Server Hardware	Container Details	Application	Mount Point	Size (GB)	Mount Point From
M5000-1	Global Zone	Root	root (/)	20	4*146GB Internal Disks
			swap(64GB)	64	4*146GB Internal Disks
	C1	IFMS - Master - Active	root (/)	10	4*146GB Internal Disks
			/ifms-m-a	2100	From SAN (ST9985v)
			/innodblog	5	From SAN (ST9985v)
			/binlog	30	From SAN (ST9985v)
	C2	IFMS Slave - Active	root (/)	10	4*146GB Internal Disks
			/ifms-s-a	2100	From SAN (ST9985v)
			/innodblog	5	From SAN (ST9985v)
	C3	MySQL Monitor	root (/)	10	4*146GB Internal Disks
/data			50	4*146GB Internal Disks	
M4000-1	Global Zone	Root	root (/)	20	2*146GB Internal Disks
			swap(2*32GB)	64	2*146GB Internal Disks
	C1	CTP - Master- Active	root (/)	10	2*146GB Internal Disks
			/ctp-m-a	1050	From SAN (ST9985v)
			/innodblog	5	From SAN (ST9985v)
			/binlog	30	From SAN (ST9985v)
	C2	CTP - Slave- Active	root (/)	10	2*146GB Internal Disks
			/ctp-s-a	1050	From SAN (ST9985v)
			/innodblog	5	From SAN (ST9985v)
			/binlog	30	From SAN (ST9985v)

7. Sun Cluster Configuration

The sun cluster will be used for high availability of MySql database servers. Two M5000s used for installing the MySql databases. The sun cluster will be installed on two M5000s.

The sun cluster will be configured between the IFMS/CTP active & passive containers. In case of failure the passive container will become active.

The high level diagram of Sun cluster setup is as below.



Sun Cluster for IFMS & CTP MySQL Database - Primary Site