



BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)

P.O. BHEL Jhansi -284129

Information Technology

TENDER DOCUMENT

For

**Supply, Installation, configuration, testing
and
maintenance of servers Equipment and Licenses
at
BHEL Jhansi**

(Tender Enquiry No: JS/IT/WC/13-14/001)

Issued To	-	
Bid Submission Date & Time	-	On or before 11-Oct-2013 at 13:45 Hrs.
Technical Bid Opening Date & Time	-	11-Oct-2013 AT 14:00 Hrs.

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Tender Notice

Ref. No.:

Date:

M/s

Dear Sir,

Subject: Supply, installation, configuration, testing and maintenance of servers Equipment and licenses at BHEL, Jhansi.

Sealed quotations are invited for the above work as per specifications detailed under "TECHNICAL SPECIFICATION" and Terms and Conditions as enclosed. Firm offers should be submitted in two parts as detailed in relevant sections. All the parts should be individually sealed and super scribed indicating Part No. as required and enclosed in the main cover duly sealed and super scribed.

Before preparing the bids, please see the details in various Annexure.

Please note that the sealed tenders will be received by us up to **13:45 Hrs. on 11-Oct-2013** along with the EMD of Rs. 2, 00,000 only. EMD and Techno Commercial Bid (PART-I) will be opened on the same day at **14:00 Hrs.** in the presence of such bidders and /or their authorized representatives who choose to be present. The representative should be the same person who has signed the documents or his authorized representative with duly authorized letter. There shall not be any overwritten figures in document. All the cutting should be duly signed by the authorized person submitting the offer and should be rewritten in figures and words both.

BHEL reserves the right to accept or reject any or part of the tender without assigning any reason thereof.

Tender should be dropped in the tender box at the address mentioned below:

Tender Box
CISF Control Room/Office
Administrative Building BHEL
Jhansi (U.P.)-284129

With regards, for Bharat Heavy Electricals Ltd.

Ms. N S L Ekka
Sr. DGM (IT)
Information Technology
Telephone No: - (0510)-2412746
Email Id: - neelam@bheljhs.co.in

1. Requirement and Procurement process

1.1 Introduction

Bharat Heavy Electricals Ltd., Jhansi (A Govt. of India Undertaking) invites tenders from bidders who qualify as per criteria listed below. The tender is invited for supply of computer system on financial lease for a period of 5 years for replacement of existing system running oracle based database and applications. The new hardware should meet the capacity required to meet the business growth during the next five years. The requirement is for industry standard, state-of-art computer system with associated software and accessories to run the applications on 24x7 (throughout the contract period) basis. All the hardware and software shall be highly resilient, high performing and certified for the latest version of oracle database and application server. The hardware and software will be installed in the server room at Information Technology Dept.

The entire system is required on 5-year financial lease basis and if BHEL opts, the bidder shall undertake to provide maintenance support for two years after the expiry of the financial lease period of 5-year.

Total Price shall be for the complete scope as per technical specifications, inclusive of comprehensive onsite maintenance including repair/replacement of parts during the entire lease period, all taxes & duties, insurance, any other incidental charges, etc. Lease Period of five years shall start from the date of successful completion of installation and acceptance by BHEL.

1.2 Documents issued to the bidders

Following are the tender documents issued to the bidders.

1. Requirement and the Procurement process
2. Eligibility Criteria for bidders
3. Technical Terms and conditions
4. Commercial Terms and Conditions
5. Technical Specification (Requirement in the form of Check-list)
6. Format for declaring deviations (Annexure-A)
7. No Deviations Certificate (Annexure-B)
8. Acceptance to Participate in Reverse Auction(RA) (Annexure-C)
9. Non-disclosure agreement (Annexure-D)
10. Authorization by OEM (Annexure-E)
11. Annual turnover of Bidder (Annexure-F)
12. Major order received within stipulated Time(Annexure-G)
13. Price Format (Annexure-H(a, b))
14. Minimum License Details of Oracle RDBMS and Application Server
15. Integrity Pact(Annexure-I)
16. Minimum Qualifying requirements(Annexure-J)

1.3 Amendment of bidding documents

BHEL may at its sole discretion amend the bidding documents at any time prior to the deadline for submission of bids. However in case of such amendment, the bid submission date may be extended at the discretion of BHEL.

Amendments made prior to submission of bid will be provided in the form of addenda / corrigendum to the bidding documents and will be posted on the BHEL Jhansi web site(<http://www.bheljhs.co.in>, <http://www.bhel.com>) in tender notification site.

1.4 Documents to be submitted along with the Bid

Following documents shall be submitted in the bid. The Bidder shall bear all costs associated with the preparation and submission of its bid and BHEL will in no case be responsible or liable for those costs.

The bid, all correspondence and documents related to the bid shall be in English.

Documents required for meeting the Eligibility Criteria of the bidder

Documents related to Technical and Commercial offer

Sr.	Documents	Reference
1	Acceptance of Technical Terms and Conditions	Clause-3 of Tender
2	Acceptance of Commercial Terms and Conditions	Clause-4 of Tender
3	Technical specification of the offered solution to be filled in the Check-list format issued as “technical specification”(Requirements) in the tender document.	Clause-5 of tender
4	Technical Brochures	
5	Other Documents to support the compliance	
6	Deviations, if any, as per BHEL’s Format or “No-Deviations” Certificate	Annexure-A,B
7	Un-priced Commercial offer as per Price Format	Annexure-H(a, b)
8	Minimum Oracle License Requirement	Annexure-H(c, d)
9	Certificates from respective OEMs of all items quoted, declaring support for a minimum period of seven years from the date of commissioning.	Annexure-E
10	Earnest Money Deposit (EMD) of Rs.2,00,000/-	
11	Tender fee of Rs 1000/- + VAT@14%= Rs 1140/-	
12	Authorization letter from OEM citing reference no of this tender.	Annexure-E
13	Non-Disclosure Agreement	Annexure-D
14	Integrity Pact	Annexure-I
15	Qualifying Requirements	Annexure-J

Document to be submitted for the Price Bid

1	Price in the Price Format	Annexure-H(a, b)
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1.5 Late Bids

Any bid received by BHEL after the deadline for submission of bids will be summarily rejected and returned unopened to the bidder.

1.6 Evaluation of Bids

BHEL will evaluate the bids as follows;

Stage-I : Evaluation of Eligibility Criteria of bidder, Technical & Commercial Bids

These are mandatory requirements to be met by the Bidder.

The EMD would be opened on the tender opening date and if EMD is not furnished the offer will be duly rejected immediately.

Commercial and Technical bid including Eligibility Criteria of the bidder shall be opened and evaluated for acceptability of Eligibility ,Technical offer, deviations and their acceptability, technical suitability, acceptance of technical and commercial terms.

BHEL's Tendering Committee will evaluate the Bid submitted by the Bidders. During the Evaluation of the bid, BHEL may ask for additional information / resources to validate the bid. These may include Supporting documents towards Eligibility Criteria , Technical documents / white papers from OEM or third party, references, demonstration of a proof of concept or solution, visit to OEM's lab or their clients reference site, etc.

Though, offer of higher warranty/ configuration/ rating, than what is required as per tender Specifications may be accepted, no extra weight age or preference will be given for the same.

Failure to furnish all information as required or to submit a bid not substantially responsive to the bidding documents may result in rejection of the bid. If there are any deviations in the technical solution offered, without affecting the functional requirement, they shall be filled-in the Deviation format issued with the tender document and submitted along with the bid. In case of no deviations, "**No Deviation Certificate**" shall be submitted. The deviations from the tender specification shall be clearly indicated giving the reference of the specification, if any, as per format for declaring deviations. If deviation other than what is specified in the list is found, the bid will be liable for rejection.

BHEL reserves the right to accept or reject any deviation.

Bids meeting BHEL's requirements as specified in tender document only will be considered for Stage-II evaluation of the Price Bid.

Stage -II: Evaluation of the Price Bid:

Prices of optional items, if quoted, shall not be considered for Price evaluation and comparison. The taxes shall be extra at actual.

After finalizing the techno-commercial offer, BHEL may open the Price Bid or adopt reverse auction

(RA) process for arriving at lowest price offer. BHEL will claim depreciation as per provision of income-tax act.

Bidders clearing the Technical and Commercial evaluation will have their Price Bids considered. The total cost of the bid will be calculated as under:

- 1.6.1 Bidder shall quote the equal quarterly rental charges (including Principle repayment, tax, interest, Support Charges, etc.) for 5 years for Hardware, Software, other items in the requirement and the estimated cost of electrical energy consumed by all hardware including Air-conditioners, Fire fighting equipments supplied, as per the Price Format issued with the tender document. L1 will be evaluated based on total of quarterly rental charges including taxes and quarterly energy cost (as per price format).

The energy cost will be calculated based on current Uttar Pradesh Electricity Board tariff rate indicated in price format. Payment will be made only for the quarterly rental charge. No Payment other than the quarterly rental charges will be made to the vendor. The cost of excess energy consumption if any per quarter beyond the quoted energy unit, indicated in the price format, at the tariff rate prevailing at the end of quarter will be deducted from the quarterly rental charge.

- 1.6.2 The quarterly rental charges will be payable after the end of each quarter.
- 1.6.3 The bid having the least total cash outflow for 5 years will be considered for order placement.
- 1.6.4 Bidder shall agree to provide AMC service for at least two years after the five year lease period. The AMC amount shall not be more than 10% of the outright Purchase value. BHEL reserves the right to opt for continuation of maintenance support for the hardware and software at end of five year lease period by way of awarding AMC contract to bidder at the rate equal to maintenance charges paid per quarter during the original lease contract. The Technical terms of AMC shall be same that of maintenance support during the lease period. The payment for AMC will be made quarterly at the end of the each quarter.
- 1.6.5 BHEL Reserves the right to retain the hardware, software and other items supplied in this procurement at the end of the lease period on payment of Re. 1/- (Rupee One only). If BHEL does not retain the equipment, the vendor shall dismantle all the equipment and move it away from BHEL's premises. All the software licenses including Oracle will remain with BHEL Jhansi.

1.7 BHEL's Right to accept or Reject any or all Bids

BHEL reserves the full right to accept or reject any bid or to annul the bidding process and reject all bids at any time prior to Contract award, without thereby incurring any liability to the Bidders.

2. Eligibility Criteria for Bidders

2.1 General

- 2.1.1 This bidding process is open to the manufacturers of the RISC Servers (OEM Supplier or authorized Partners of the OEM can also quote on behalf of the OEM supplier the authorized partner shall submit documentary evidence in this regard, failing which their offer will be rejected.
- 2.1.2 There can be only one bid from each Bidder.
- 2.1.3 Bidders are required to quote for all the items of the Tender Enquiry specified in the technical specification (Requirement) document and incomplete offers will be rejected.
- 2.1.4 The Vendor should have PF and ESI/Medical Policy for persons deployed at BHEL Site.
- 2.1.5 Relevant portions, in the documents submitted in pursuance of eligibility criterion shall be highlighted. If the offer is not accompanied by all the documents in **2.2 Eligibility Criteria**, the same would be rejected.
- 2.1.6 BHEL reserves the right to verify / confirm all original documentary evidence submitted by vendors in support of the eligibility criteria. Upon verification, evaluation / assessment, if any information furnished by the bidder is found to be false / incorrect, their total bid will be rejected and no further correspondence on the same shall be entertained.

2.2 For the OEM of the RISC Servers

- 2.2.1 Must be a manufacturer of UNIX based Server on RISC architecture. Must submit self-certificate to this effect from the OEM's authorized signatory.
- 2.2.2 Must have supplied the server, which is currently running, based on class of processors or its predecessor for oracle database and oracle application for minimum 28000 SAPs in an order for single site of a company in India during the last 03(Three) years. Bidder must submit documentary evidence in support of this.
- 2.2.3 The Bidder must have executed at least 2(Two) such orders in the last 5 years having Total lease / outright value of minimum Rs10.00crore's in each order. Bidder shall submit copy of order and the project completion certificate signed by customer as evidence to support this.
- 2.2.4 Self certified document indicating details of customer (Name, Address, contact person, Phone and Email), supplied server details like the CPU, OS etc. delivered to the customer. Order copies shall be submitted.
- 2.2.5 If OEM is the bidder, then OEM must undertake the complete responsibility of the supply and commissioning of the hardware, software and other equipment, i.e. the entire scope of work of this tender.
- 2.2.6 Offered Servers will be running Oracle based Applications & Oracle Database, therefore Oracle Products for the existing version & future/next version must be Supportable on offered hardware platform - Bidder has to submit certification from Oracle.

2.3 For the OEM's Authorized Hardware Partner

- 2.3.1 Must be an Authorized partner of the OEM for the products quoted for minimum of 12 months. Submit certificate from the OEM to this effect.
- 2.3.2 Must have Average annual turnover of minimum Rs 100.00 Crores for the last 3 financial years. Audited copies of Balance Sheets of the last three financial years (2010-11, 2011-12,

2012-13) to be submitted as proof.

2.3.3 Must have registered office in India. Documentary proof shall be submitted.

2.3.4 Must have executed at least 02(Two) orders on lease in the last 5 years in India having total lease / outright value of minimum Rs10.00 Crores in each order. Authorized partner submit copy of order and the project completion certificate signed by customer as evidence to support this.

2.3.5 All the Eligibility Criteria mentioned in **2.2 For the OEM of the RISC Servers** shall also be met by the OEM of the bidder. A declaration duly signed by the authorized signatory of the OEM in OEM's letter head to this effect is to be submitted by the bidder.

2.4 Purchaser's Right to accept or Reject any or all Bidders

BHEL reserves the full right to reject any bidder based on other reasons deemed fit but not mentioned above.

3. Technical Terms and Conditions

3.1 Scope of Work

- 3.1.1 The vendor shall Supply, Install, Integrate, Carry out Tests, Commissioning of Servers, Storage, Backup Solution, other related items including Operating Systems and other software at Information Technology BHEL Jhansi as per technical specifications & requirements of this tender. Movement inside factory, including shifting to requisite place is responsibility of vendor.
- 3.1.2 The vendor shall supply and install all cables, adapters, power cords and any other interconnects required by the systems to meet the specification and to make the system operational. The vendor shall carry out all electrical and systems interfacing pertaining to equipment at site as per the best international standards and practices.
- 3.1.3 Arranging requisite tools, measurement equipment and resources required for installation and commissioning of the hardware, software and other equipment is the responsibility of the vendor.
- 3.1.4 BHEL may shift the equipment of site to different site/location within the campus area only during the lease period. The vendor shall carryout the shifting activity at free of cost, at least once during the entire lease period.
- 3.1.5 All software to be provided as part of the solution should be licensed only to "**Bharat Heavy Electricals Limited - Jhansi**". All documents, manuals, administration manuals and software CD/DVDs shall be submitted to BHEL Jhansi before commissioning the systems. All software shall come with at least two sets of CDs/DVDs, etc. or the Software Product should be electronically downloadable from OEM website.
- 3.1.6 The vendor shall ensure that none of BHEL's equipment/structure/setup/facility gets damaged during commissioning and operations of the supplied equipment. Any damages, if caused to BHEL's property due to Vendor's activity/negligence or the operations of the equipment, shall be rectified, repaired by the vendor at their own cost.
- 3.1.7 Maintenance of the hardware, software and other equipment throughout the lease period as per the service level agreement.
- 3.1.8 The products those have reached the end-of-life or end-of-support need not be offered.

3.1.9 Insurance of the hardware, software and other equipment during the duration of the contract.

3.2 Installations and Commissioning

The Vendor shall install the hardware, software and other equipment as per the requirement. The vendor shall demonstrate the following fail-over scenarios as part of the installation and commissioning:

3.2.1 Fail-over test of a partition or a server.

3.2.2 Failover of clustered partitions and applications and their automatic restoration.

3.2.3 Backup and Restore as defined in the technical specifications.

3.2.4 Clustering, High availability features.

3.2.5 Backup and Restore options.

3.2.6 Fail-over of a Server with multiple partitions.

3.2.7 Failure of each SAN switches and sustenance of service.

3.2.8 Fail-over of Storage.

3.2.9 Fail-over of Storage Controller.

3.2.10 Successful running of Oracle based system and sub-systems and applications in other partitions after installation of oracle software on respective servers with acceptable performance.

3.3 Activities related to Migration of Oracle Applications

As these new servers are bought for migrating oracle applications running in old servers, the vendor shall carry out the following activities required for migrating BHEL's Oracle applications to new server.

3.3.1 Installation of required OS level Patches, updates and file-sets as recommended by Oracle.

3.3.2 Creation of required file-systems.

3.3.3 Cluster testing after Oracle migration.

3.3.4 OS level tuning for better performance.

3.3.5 Installation, configuration and testing of Oracle Products including Web logic Suite and database.

3.3.6 Vendor will design the oracle database and create roles after discussion with BHEL.

3.3.7 Vendor will create all the users, tablespace and import the data from the old database.

3.3.8 Vendor also migrate and demonstrate at least 25 different types of forms & reports into the web logic suite and provide the necessary tools needed to do the migration activity. BHEL will provide the list of 25 sample forms to demonstrate migration.

3.3.9 Maximum 48 hours shutdown shall be provided for change over to new computer system.

3.4 Documents to be submitted during Commissioning

On successful installation of the equipment and configuration of individual components and the solution as a whole, the Vendor shall submit the following documents as part of the commissioning

3.4.1 Newness certificate for all items.

3.4.2 Configuration detail for each server - name, IP address, OS version, details of Partitioning, etc.

3.4.3 Network diagrams/cabling scheme.

3.4.4 Security scheme for entire solution.

3.4.5 Clustering and failover details.

3.4.6 Details of SAN access, point in copy, replication, zoning, etc.

3.4.7 Details of Backup solution and Tape Library systems.

3.4.8 Performance Bank Guarantee.

3.4.9 Insurance documents for the entire item.

On completion of the installation, commissioning and submission of the above documents, the Vendor shall carry out Performance Guarantee Tests of the supplied hardware & software as given below:

3.5 Performance Guarantee Tests (PG Tests)

3.5.1 The Performance Guarantee Test shall start after installation and commissioning of all the Hardware & Software at site. The Performance Guarantee Tests (and repeats of such tests limited to a maximum of two) shall be the primary responsibility of the Vendor, but shall be conducted with the full cooperation of the BHEL to ascertain whether the supplied System meets the standard of performance and complete functionality as specified by BHEL.

3.5.2 The performance test will be done simultaneously for all the servers with respective oracle software installed. After successful completion of installation and commissioning, PG test shall be conducted for ascertaining the availability for a minimum period of 14 days continuously. The Performance Acceptance Tests shall be conducted by Powering Up and continuous operation of all the systems on a 24x7 basis to ascertain that all components of the solution are working in the desired fashion individually and together.

3.5.3 All the systems together shall give an uptime of 99% during the test period. The test duration

time shall be exclusive of external power failure time and any scheduled down time by BHEL. The system shall be considered as "available", if all the processors, total installed memory; all hard disks(internal & external), DAT, DVD, switches and all other supplied equipment are in service with network and external storage. Any hardware component failure in RISC servers has to be rectified /replaced without bringing down / restarting any partitions or servers.

3.5.4 If the system is found to be lacking in meeting Performance Guarantee Test, the test time will be extended by 7 days. If the equipment / system do not provide the required uptime even after 2 extensions, the supplied equipment is liable to be rejected. Downtime will not be counted, in case the failure is due to any other reasons not attributed to the Vendor.

3.5.5 All tests shall be carried out as a part of PG test. It shall also be demonstrated that all the traffic between application servers and DB servers goes through the dedicated network. In case of any disturbance in the network, the server shall continue to run without any failover.

3.5.6 Beyond the acceptable limits of PG parameters, the supplied equipment is liable to be rejected.

3.6 Commissioning Certificate

BHEL will issue a **Commissioning Certificate** on successful completion of Performance Guarantee tests of all the Hardware & Software.

3.7 Lease Agreement (LA)

Based on finalized terms and conditions, BHEL will consider signing of bi-partite Lease agreement ONLY with vendor after placement of LOI. No tri-partite agreement will be considered.

3.8 Training

3.8.1 Training at BHEL, Jhansi premises

The Vendor shall provide following training at BHEL, Jhansi premises on the procured servers. The training course shall be structured and supported by programmed illustrations, video, charts, etc. The training shall be conducted using **experienced certified personnel only**. The Vendor shall provide extensive lecture notes, handouts and other training documentations. The boarding and

lodging of trainer faculty will be responsibility of the Vendor.

Training schedule date shall be mutually discussed and agreed upon.

- a) User Level Training for a minimum period of 4 days for 5 persons in server operations, and ensure familiarity to enable them to provide and use the system efficiently.
- b) System Administration for 4 persons for minimum period of 7 days in Servers, Storage, Backup Solution, Replication, Operating System etc.
- c) Oracle database Administration for 4 persons for minimum period of 7 days.
- d) Oracle Application server administration for 4 persons for minimum of 7 days.
- e) Oracle Web Logic Development for 10 persons for minimum of 7 days.

3.8.2 Training at external certified training centers/ laboratories

Advanced System Administration Training for 2 persons at the OEM's training canter in India. In case of outstation training, travel, boarding and lodging of trainees will be responsibility of BHEL.

Note: - a) BHEL has the right to select or reject the faculty depending on his/her credential performance.

b) Training to be completed before the declaration of the system installation complete.

c) Complete training schedule, venue to be submitted within 15 days of order placement.

3.9 Special Clauses

3.9.1 Make, Model, Product No and Details of each Item must be mentioned clearly.

3.9.2 BHEL will not be responsible for any misinterpretation or wrong assumption by the vendor.

3.9.3 All the Items must be supplied in full and complete.

3.9.4 All components shall be rated for 24x7x365 operation.

3.9.5 The Vendor shall provide all other hardware and software items that are not explicitly mentioned herein, but are required by the Vendor to full-fill the intended specifications and to meet the functionality mentioned in the bid.

3.9.6 The indicated specification parameters are the minimum requirement and item with higher rating will be acceptable.

3.9.7 No item shall be offered whose end-of-sale has been declared by the OEM or has been declared to be under phase out.

3.9.8 Proper documentation, labeling and tagging shall be carried out for all the equipment's used in the entire landscape for easy management and maintenance.

3.9.9 The following documents shall be provided for all hardware, software and other equipment:

- a) User manual.
- b) Administrator manual.
- c) Complete documents for maintenance.
- d) Error Handling and troubleshooting manual.
- e) Source Code for scripts used.
- f) Documenting proof that all software Licenses are in the name of BHEL Jhansi only.
- g) Safety and Standard Operating Practices manuals.

3.10 Service Level Agreement (SLA)

3.10.1 As the equipment will be used for running mission critical ORACLE database and applications, the vendor shall provide an uptime of 99% on all hardware & software products on monthly basis.

3.10.2 If the availability of the systems, or part thereof, is below 95% on monthly basis, continuously over a period of 3 months, BHEL reserves the right to terminate the contract in full, however BHEL will make payments to vendor till the date of termination as per SLA terms.

3.11 Penalty for SLA Non-Conformance

At the end of each quarter, downtime will be calculated for all the hardware and software.

Downtime will be calculated based on uptime on monthly basis.

The deductions will be made as per the following formula:

Deduction (D) = (downtime in minutes (d) X rental per minute (r) X multiplication factor (f))

Where Multiplication Factor is given below

For Uptime > 99.00 Multiplication Factor is 0.00

For Uptime between 98.00 and 99.00, Multiplication Factor is 2.00

For Uptime between 97.00 and 98.00, Multiplication Factor is 5.00

For Uptime between 96.00 and 97.00, Multiplication Factor is 8.00

For Uptime between 95.00 and 96.00, Multiplication Factor is 12.00

For Uptime below 95.00, Multiplication Factor is 15.00

The downtime will be recorded at Purchase order item level. Even In case of failure of a component in an item, the deduction will apply to the whole item. If the failure of an item results in of major service

outage or affects the services provided by other items also, then the deduction will apply to all items affected by the failure.

3.12 Availability of Spares

Sufficient stock of critical spares shall be maintained at the site at all times to ensure the uptime.

3.13 Terms of Payment (TOP)

Lease period will start only after successful installation and commissioning of all hardware and software products as per the requirement and the issue of the commissioning certificate by BHEL. Quarterly lease rental charges (after deduction for any SLA non-conformance) become payable after the end of each quarter. Payment will made through the EFT Mode Only.

Vendor shall submit following documents for processing the bills:

1	Invoice in triplicate.
2	SLA reports for the quarter (certified by the System Administrator of BHEL)
3	Energy consumption for the quarter (certified by the System Administrator of BHEL)
4	Document proof for Software license renewal as applicable and certified .by BHEL.

3.14 Warranty & Support

3.14.1 All the supplied equipment / systems (hardware/software excluding Oracle Products) shall be covered under a Comprehensive On-Site Warranty & service support for 5 (Five) years. The period shall start from the date of successful commissioning of the Equipment / System. Warranty & Support shall be delivered directly by the OEM for Servers, Storage and Backup Systems. In case of authorized partner being the Vendor, certificate from OEM should be attached stating that the OEM will provide support directly during the warranty period, the posting of the OEM's Engineer, replacement of spares, etc. The warranty & support from OEM shall ensure the uptime requirement of 99% and above.

3.14.2 Oracle Products shall be supplied with one year support. Vendor should provide the Oracle CSI number A/W Oracle Licenses.

3.14.3 If any document / manual / CD supplied by the Vendor is found to be inadequate / incomplete within the period of the contract, the supplier shall replace/complete such document/manual/CD at their cost within 15 days' time. The document / manual / CD released with upgrades and updates shall be supplied free of cost as and when they are released.

3.14.4 On-Site Engineers

- a) The Vendor shall post two on-site engineers to run the Computer systems during round-the-clock 2-shift operations of the Site. These engineers shall be minimum Degree holders in Computer Science/Communications.
- b) Both the on-site engineer must qualified, trained and certified engineer in the respective Server and Storage Management with at least 3 years of experience on such UNIX servers, storage and backup solutions shall be posted.
- c) These site engineers shall do health monitoring, performance monitoring, capacity monitoring& critical parameter monitoring of the servers on daily basis. They will also do diagnostics, fault checking, hardware & software troubleshooting, call logging, spares replacement and also carryout regular backup of the data and critical system files. They will also be responsible for ensuring uptime of all other items supplied as part of this order like Precision AC, UPS, SAN switches etc.
- d) On-site Engineers from the third party will not be considered.
- e) Experience certificate from the relevant area should be submitted before posting of engineers at site.
- f) Site engineers will be posted along with the Appointment letter from the authorized person of the vender.
- g) At least one engineer should be posted within one week after the acceptance of “Letter of Intent / Order.”
- h) BHEL has the right to reject the engineers depending on his/her credential performance.

3.14.5 Vendor shall arrange for boarding, lodging and logistics of onsite engineer.

3.14.6 If the engineer posted goes on leave for more than a 2 day with permission from BHEL, then another equivalent engineer shall be posted till he returns back.

3.14.7 If a change of On-site Engineer is requested by BHEL, citing reasons, the vendor shall arrange a replacement of engineer within One week having the same or higher competence level.

3.14.8 Site engineers will have all the necessary tools/equipment needed to maintain/monitor the system.

3.14.9 Warranty shall cover the following

- a) Monitoring, logging and reporting on Daily/ Weekly/ Monthly basis as required by BHEL in the specified formats the Performance and operations of the Servers, storages and the back-up system on 24x7x365 basis.
- b) Periodic health checks of the systems using diagnostic tools and implementing

proactive rectification measures.

- c) Troubleshooting Servers, OS,SAN and backup related issues.
- d) Analyzing and reporting all system related issues.
- e) Managing users, roles and passwords of all the relevant subsystems of Servers, OS and Storage etc.
- f) Liaison with various vendors, OEMs, agencies and service providers for equipment maintenance & related work.
- g) All incidents must be documented and logged as per the format specified by BHEL.
- h) Any change in the IP Scheme, if required, limited to all the equipments installed at site shall be done in consultation with BHEL's Network Manager.

3.14.10 All UPS batteries to be refreshed once after 2.5 years and also as and when they fail without any cost to BHEL.

3.15 Server Administration

Server Administration Functions include following activities for the ORACLE environment in consultation with BHEL Personnel.

- a. Operating system tuning.
- b. OS and software Re-installation in the event of system crash/failures.
- c. Configuring file systems, volumes and apportioning disk space.
- d. Ensure proper configuration of server parameters.
- e. Periodic System performance tuning for optimizing the Oracle performance.
- f. Addition, deletion, re-configuration of devices, additional users and printers etc.
- g. Implementing security patches on servers at all levels.
- h. Orderly start-up and shutdown of servers as per laid down procedures.
- i. Security management - Configuring account policy, access rights, password control as per BHEL's security policy as defined in ISMS documentation.
- j. Scheduling and optimizing all critical services run on the hardware.
- k. Maintain lists of all system files, root directories and volumes.
- l. Resolving all server related problems.
- m. Escalating unresolved problems to ensure resolution as per the agreed SLA.

3.16 Storage Administration

3.16.1 Management of storage environment to maintain performance at optimum levels.

3.16.2 Regular backups of Storage software.

3.16.3 Management of the storage solution including, but not limited to, management of space, volume, RAID configuration, configuration and management of disk array, SAN fabric /switches, tape library etc. as per mutually agreed storage management policy.

3.17 Backup and Restore

3.17.1 24x7x365 support for file and volume restoration requests.

3.17.2 Must take regular Backup of operating system, database and application as per stipulated policies and time schedule.

3.17.3 Must conduct periodic restore operations of backed up data.

3.17.4 Regular maintenance of all the media and the backup / storage devices.

3.18 The offline support shall have

3.18.1 24x7 National telephonic supports.

3.18.2 Access to raise technical assistance request at hardware vendors / supplier website.

The above Terms and Conditions are accepted.

Date: - _____



(Signature and Seal of the Vendor)

4. Commercial Terms and Conditions

General

The words incorporating singular shall include plural and vice-versa, in the words importing masculine gender shall include feminine and vice-versa and the words importing persons shall include bodies; corporate, limited liability companies, partnership and other legal entities.

4.1 General Instruction for Bidders

4.1.1 Tender documents will be available from **16-Sep-2013** on BHEL Jhansi web site. Tender can be downloaded from the site only. The tender fee of Rs.1000/-+Vat@14% should be deposited along with tender, in the form of cheque / DD in favor of "**Bharat Heavy Electricals Limited**" payable at Jhansi.

4.1.2 Last date of submission is **13:45 Hrs on or before 11-Oct-2013** and Part-I (EMD, tender fee and Techno-Commercial) bid shall be opened on the same date at **14:00 Hrs.**

4.1.3 Earnest Money Deposit (EMD) for the tender is **Rs. 2, 00,000/-** (Rupees two lakh only).

4.1.4 Tender Fee and EMD are to be submitted through separate cheque.

4.2 Bidder to inform himself fully

4.2.1 The bidder shall closely peruse all the clauses, specifications, requirements and drawings, etc., indicated in the tender documents, before quoting. Should the bidder have any doubt about the meaning of any portion of the tender specifications or find discrepancies or omissions in the specifications or if the tender documents are found to be incomplete or require clarifications on any of the technical aspects, scope of work etc., he shall at once contact the official inviting the tender, for clarifications, before submission of the tender.

4.2.2 Bidders are advised to study all the tender documents carefully. Any submission of tender by the bidder shall be deemed to have been done after careful study and examination of the tender documents and with the full understanding of the implications thereof. The specifications and terms and conditions shall be deemed to have been accepted unless otherwise specifically commented upon by the bidder in his offer.

4.3 Procedure for submission of bids

4.3.1 Tender should not be addressed to any Individual's name but only by designation to:

**Sr. Dy. General Manager (IT)
CISF Control Room/Office
Administrative Building BHEL
Jhansi-284120**

4.3.2 Bids should be free from CORRECTION AND ERASURES, Corrections if any, must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.

4.3.3 Offers should be in ENGLISH and accompanied by detailed technical literature, catalogue and detailed dimensional drawings in ENGLISH or otherwise, the offers will not be considered.

4.3.4 The Bidders shall submit the offer in THREE INNER ENVELOPES as indicated below which shall be sealed in one outer envelope.

4.3.5 Part-I: EMD & Techno-Commercial Bid

Envelope I:

- a) This sealed envelope should contain the required EMD amount of Rs.2, 00,000/- in favor of **"Bharat Heavy Electricals Limited"** payable at Jhansi. In the absence of submission of EMD, the offer will be summarily rejected.
- b) Tender fee in the form of Pay Order/ Bank Draft of Rs.1000/-+Vat@14%in favor of **"Bharat Heavy Electricals Limited"** payable at Jhansi, in case the tender has been downloaded from website. In the absence of submission of tender fee, the offer will be summarily rejected.

Envelope II:

- a. This sealed envelope should contain all the copies of technical bid together with un-priced commercial bid. This envelope should be clearly marked "Part I - Technical and commercial bid", indicating Enquiry No., Due Date and Address & Reference of the Bidder.
- b. The bidder should offer only as per Specification. BHEL Jhansi reserves the right to accept or reject the technical offer. Price bids of only techno- commercially short listed vendors will be opened.

4.3.6 Part-II: Price Bid

Envelope III:

- a) This sealed envelope should contain price details. This envelope should be clearly marked "Part-II - Price bid", indicating Enquiry No., Due Date and Address & Reference of the Bidder. Prices shall be quoted in Indian Rupees only. Vendor has to give details of applicable taxes clearly. In case of any change in applicable duties till the time of delivery, new rates shall be calculated in line with changes. The changes in the tax rates will be applicable as per actual, subjected to documentary evidence.
- b) Price Bid should not contain any technical details and/or Commercial Terms & Conditions as the same are supposed to be contained in PART-I only so that the same can be evaluated before opening of Price Bid(s).

4.4 Procedure for opening of bids

- 4.4.1 Part-I (EMD, Tender Fee & Techno-Commercial Bid) shall be opened on the due date and time as specified in the Tender Notice, in the presence of bidders who may like to attend. Part-II (Price Bid) shall be opened subsequently.
- 4.4.2 Price bid of technically suitable Bidders alone would be opened. The technically suitable Bidders would be informed about the tender opening date.
- 4.4.3 Clarifications if any required by BHEL for Technical evaluation would be sought from Bidders before opening of Part-II - price bid.
- 4.4.4 Purchaser / lessee also reserve the right to open the earlier i.e. superseded prices bids if any, submitted by the bidder(s), if required.
- 4.4.5 Not more than two representatives will be permitted to be present for the tender opening.
- 4.4.6 No correspondence shall be entertained from the bidders after the opening of Price bid(s).
- 4.4.7 Standard pre-printed conditions of the bidders attached to the offer will not be accepted and only those mentioned in the body of his offer will be considered.
- 4.4.8 Unsolicited bids shall not be entertained. Unsolicited revised Price Bids also, shall not be entertained at any stage of the tendering process and will lead to automatic disqualification of the party's bid.
- 4.4.9 Manufacturer's name, trade mark or patent no, if any should be specified.
- 4.4.10 Purchaser / lessee reserve the right to negotiate the tender, if required.
- 4.4.11 **No Literature, Pamphlets is to be enclosed. All such enclosures shall be considered as unread and also will not be considered as part of the quotation.**
- 4.4.12 BHEL reserves the right to go for a Reverse Auction (RA) instead of Opening the submitted sealed

price bid, which will be decided after techno-commercial evaluation. Information and general terms and conditions governing RA are given below.

4.5 General Terms and Conditions of RA

Against this enquiry for the subject item/system with detailed scope of supply as per enquiry specifications, BHEL may resort to "**REVERSE AUCTION PROCEDURE**" i.e., ON LINE BIDDING ON INTERNET.

- 4.5.1 For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
- 4.5.2 Bidder to submit their acceptance to participate in Reverse Auction through by filling Annexure-C.
- 4.5.3 BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
- 4.5.4 BHEL will inform the vendor in writing in case of reverse auction, the details of Service Provider to enable them to contact & get trained.
- 4.5.5 Business rules like event date, time, Start price, bid decrement; extensions etc. also will be communicated through service provider for compliance.
- 4.5.6 Vendors have to fax the Compliance form in the prescribed format (provided by Service Provider) before start of Reverse auction. Without this, the vendor will not be eligible to participate in the event.
- 4.5.7 BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Net cash outflow to BHEL" considering Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the vendor to enable them to fill-in the price and keep it ready for keying in during the Auction.
- 4.5.8 Reverse auction will be conducted on scheduled date & time.
- 4.5.9 At the end of Reverse Auction event, the lowest bidder value will be known on the network.
- 4.5.10 The lowest bidder has to Fax the duly signed Filled-in prescribed format as provided on Case-to-case basis to BHEL through Service provider within 24 hours of Auction without fail.
- 4.5.11 Any variation between the on-line bid value and the signed document will be considered as sabotaging the tender process and will invite disqualification of vendor to conduct business with BHEL as per prevailing procedure.
- 4.5.12 In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice.
- 4.5.13 BHEL reserves the right to negotiate with the L1 vendor of the Reverse Auction if needed.

4.6 Validity of Offer

Offer shall be kept valid for four months from the due date of Tender opening (Part-I), for Purchaser/lessee's acceptance.

4.7 Language and Corrections

- 4.7.1 The bidder shall quote the rates in English language and international numerals only. The metric system of units shall be used, for the purpose of tender.
- 4.7.2 Bidder shall fill the **ORIGINAL** tender documents downloaded from BHEL web site. All entries and signatures in the bid shall be in **BLUE INK only**. Each page of the bid shall be signed and stamped using official seal of the company by the bidder.
- 4.7.3 All entries shall be filled in neat and legible handwriting. No over-writings erasures and corrections are permitted and may render such bids liable for rejection.
- 4.7.4 However, if any cancellations, corrections and insertions are in the bid, the bidder shall duly attest the bidder.

4.8 Rejection of Bid and other Conditions

Any format not properly filled, partially filled or not filled will make the bid liable for rejection. Bidders are requested to note that all columns, rows and spaces provided to fill up the data must be filled with relevant data without fail. In case, any bidder fails to do so or fills up irrelevant data, BHEL is not bound to seek clarifications on such items and will be free to reject the tender summarily.

- 4.8.1 Bidder may visit the site at BHEL, Jhansi between 9A.M. to 4P.M. on working days before **05-Oct-2013**.
- 4.8.2 Any relevant information pertaining to this tender can be obtained only from:

Ms. N S L Ekka, Sr. DGM (IT)
Information Technology
Telephone No: - (0510)-2412746
Email: - neelam@bheljhs.co.in

- 4.8.3 **Canvassing in any way concerning this tender, wrong declaration, incorrect information, misleading or incorrect certifications, etc. shall be viewed seriously and suitable action will be taken as per company norms.**
- 4.8.4 The Purchaser reserves to itself, full rights for the following without assigning any reasons, Whatsoever:

- a) To reject any or all the bids.
- b) To increase or decrease the quantities.

4.8.5 The offer is liable to be rejected, if it is found after the Price Bid Opening that the Price Bid submitted by the bidder is different from the un-priced bid (Annexure H(a, b)).

4.8.6 If the bidder deliberately gives wrong information in his bid, Purchaser reserves the right to reject such a bid at any stage or to cancel the Order/Contract, if awarded and forfeit the security deposit/Bank Guarantee.

4.8.7 If the Prices/Rates of one or more of the enquired equipments have not been quoted, the offer is liable to be rejected.

4.9 Delivery Schedule

All equipment supplied and installed, at the stipulated locations shall be NEW and confirming to the contract technical specifications. The certificate of newness is to be furnished.

All the items (hardware & software) shall be supplied and successfully installed / commissioned as per scope of work in all respect within 120 days (One Hundred and Twenty days) after placement of order or issue of Letter of Intent / Work Order / Fax Order. Failure in delivery or installation within 120 days will entail Late Delivery Charges as per the LD clause of the contract. (LD will be based on contract value affected by the non-supply of delayed items)

If the delivery is delayed due to reason not attributable to BHEL, BHEL reserves the right to go for alternative procurement at the risk and cost of the Vendor/ Lessor.

4.10 Rates

Rates to be quoted are net F.O.R destination inclusive of freight, handling and packing charges, transit insurance, installation, regular insurance, and on-site comprehensive maintenance including spares at stipulated location during the entire contract/lease period and remain firm without any variation till the completion of the lease contract. However taxes like lease tax / VAT and service tax will be payable as per actual.

Rates are to be quoted as per Price Bid Format providing details of prevailing rates of taxes. Bidders, in their own interest, are requested to check up and indicate the different tax tariff like service tax etc. Taxes not mentioned by the bidder in their bid will not be entertained at later date. However, during the execution of the contract any increase or decrease in the above taxes/imposition of new taxes will be entertained against documentary proof.

4.11 Bank Charges

Unless otherwise specified, the Bank charges, if any, shall be to the account of Vendor/Lessor.

4.12 Liquidated damages (LD)

It is clearly understood among the parties to the contract the "Time is the essence of the contract". Therefore, the delivery of the goods specified in the purchase order should be made within the time prescribed. Where the seller supplies or dispatches the good, beyond the delivery period specified the purchaser will have no obligation to accept the good. If accepted liquidated damages at the rate 0.5% of the value of goods delayed for each week or part thereof of delay subject to a maximum of 10% of order value Will be levied.

4.13 Inspection & Testing

All goods shall be subject to inspection by BHEL or its authorized representatives at supplier's works or at BHEL stores or at any other place in India indicated by BHEL as the case may be. The supplier will not charge for the facilities provided for inspection of goods. In case of machine tools, the machine would be inspected and proved at supplier's works prior to dispatch however, final inspection and acceptance of the machine will be carried after installation of the machine at BHEL, Jhansi.

4.14 Security Deposit

Security Deposit shall be collected from the successful bidder. Depending on value of contract awarded the amount of Performance Security Deposit shall be as following:

Up to Rs 10 Lakhs	10%
Above Rs 10 Lakhs & up to Rs 50 Lakhs	Rs.1.0 Lakh + 7.5% of the amount exceeding Rs 10 Lakhs
Above 50 Lakhs	Rs. 4.0 Lakhs +5% of the amount exceeding Rs. 50 Lakhs.

Bidder shall submit the 'Performance Security Deposit' within 30 days of awarding of contract/ issue of Letter of Intent as following:

4.14.1 Cash (as permissible under the Income Tax Act).

4.14.2 Pay Order, Demand Draft drawn in favor of M/s "**Bharat Heavy Electricals Limited, JHANSI**" valid for the period as aforesaid.

- 4.14.3 Local Cheque of scheduled banks, subject to realization.
- 4.14.4 Securities available from Post Offices such as NSC, Kisan Vikas Patras etc. (Certificates to be held in the name of bidder furnishing the security and duly pledged in favor of BHEL and discharged on the back)
- 4.14.5 Bank Guarantee from scheduled Banks/Public Financial Institutions as defined in Companies Act. The Bank Guarantee format should have the approval of BHEL.
- 4.14.6 Fixed Deposit Receipt (FDR) issued by Scheduled Banks/Public Financial Institutions as defined in Company's Act. The FDR should be in the name of bidder; A/C BHEL JHANSI duly discharged on the back.
- 4.14.7 The PSD can also be recovered at the rate of 10% from running bills. However in such cases at least 50% of the PSD should be deposited before the start of work and balance 50% may be recovered from running bills.
- 4.14.8 All deposits in the form of bank instruments shall be caused to be submitted preferably through the issuing bank only and deposited with the Finance Department of BHEL under receipt in duplicate with copy of receipt submitted to CDC.
- 4.14.9 The Performance Security Deposit shall not carry any interest.
- 4.14.10 Security deposit can also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of the Security Deposit should be collected before start of the work and the balance 50% may be recovered from the running bills.
- 4.14.11 EMD of the successful bidder can be converted and adjusted against the security deposit.
- 4.14.12 Stamp duty applicable as per Indian Stamp Act 1899 is as follows:

Sr.	Performance Security Deposit	Stamp Duty Applicable
1.	Pay Order, Demand Draft, Local Cheque of scheduled banks	Rs 125/- per Rs.1000
2.	Securities available from Post Offices such as NSC, Kisan Vikas Patras etc and Fixed Deposit Receipt (FDR) issued by Scheduled Banks/Public Financial Institutions	Rs 70/- per Rs.1000
3.	Bank Guarantee from scheduled Banks/Public Financial Institutions	Rs.5/- per Rs.1000 limited to Rs.10,000/-

NOTE:-

- Acceptance of Security Deposit against Sl. No. (4.14.4) and (4.14.6) above will be subject to hypothecation or endorsement on the documents in favor of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.
- Security Deposit shall be refunded to the vendor after successful completion of the work i.e., after completion of the lease period and compliance of all tender conditions after recoveries, if any..

4.15 Indemnity

Vendor/ Lessor shall fully indemnify and keep indemnified the Purchaser/Lessee against all claims which may be made in respect of the use of System/ Software/ Item(s)/ Services supplied/ rendered by the Vendor/ Lessor, for infringement of any rights protected by patent, registration of designs or trademarks and legality of the Software. However the Vendor/ Lessor will have no obligation for any claim or infringement arising from third party products not supplied in the order, modifications and technical information/ instructions advised by purchaser and use of products prohibited by product manuals.

All such claims in this regard will be settled as per Indian Laws.

In the event of any such claims being made against the Purchaser/ Lessee, Purchaser/Lessee will inform in writing to the Vendor/Lessor who shall at his own risk and cost either settle any such dispute or conduct any litigation that may arise there from.

4.16 Integrity Pact

The bidder shall sign an Integrity Pact, to comply with the requirements of the Transparency International Limited (TIL) and the Central Vigilance Commission (CVC) guidelines to ensure an ethical and corruption-free business environment. The Performa for the Integrity Pact is attached as Annexure-I.

4.17 Non-Disclosure Agreement (NDA)

Vendor shall, at all times, undertake to maintain complete confidentiality of all data, information, software, drawings & documents, etc. belonging to the Purchaser and also of the Systems, procedures, reports, input documents, manuals, results and any other company documents discussed and/or finalized during the course of execution of the order/contract.

The bidder shall sign a Non Disclosure Agreement (NDA) with BHEL. By signing the NDA, the bidder agrees not to disclose any confidential information, business or proprietary, as covered by the agreement. The Performa for the Non Disclosure Agreement is attached as **Annexure-D**.

4.18 Bidder to submit the declaration regarding not banned / blacklisted / guilty of fraud from a court-of-law on the letter head signed by the authorized person.

4.19 Bidder to submit the declaration regarding not banned / blacklisted / guilty of fraud from any unit/division of BHEL on the letter head signed by the authorized person.

4.20 Force Majure

Vendor shall not be responsible for delay in delivery resulting from acts/events beyond his control provided notice of the happening of any such act/event is given by the Vendor to the Purchaser within 15 days from the date of its occurrence. Such acts/events shall include but not be limited to acts of God, war, floods, earthquakes, strikes, lockouts, epidemics, riots, fire or Governmental regulations superimposed after the date of order/contract.

4.21 Risk Purchase

Purchaser/ Lessee shall reserve the right to terminate the order/ contract and purchase from elsewhere at the risk and cost of the Vendor/ Lessor, either the whole or part of the Systems/ goods, which the Vendor/ Lessor has failed to deliver within the stipulated delivery period or if the same were not available, the best and the nearest available substitute(s) thereof. The Vendor/Lessor would be liable to compensate the Purchaser/ Lessee for any loss, which the Purchaser/ Lessee may sustain by reason of such purchase. This clause will be operated only after completion of delivery period including extended period with penalty.

4.22 Patents and Trademarks

Vendor shall at all times indemnify the Purchaser against all claims which may be made in respect of the Systems/goods supplied by the Vendor, for infringement of any right protected by patent, registration of designs or trademarks and legality of usage of items. In the event of any such claims being made against the Purchaser, Purchaser will inform the Vendor who shall at his own cost either settle any such dispute or conduct any litigation that may arise there from.

4.23 Sub-Contracting

Order/contract or any part thereof shall not be sub-contracted, assigned or otherwise transferred without prior written consent of the Purchaser.

4.24 Termination of the Contracts & Its Consequences

4.24.1 Purchaser reserves the right to terminate the order/contract, either wholly or in part, upon situations arising due to non-compliance of stipulations of the Order/contract by the Vendor, or on-performance of the equipment/system below 95% continuously for more than 3 month, at the risk and cost of the Vendor/Lessor.

- 4.24.2 In case of the contract termination, Vendor will remove the equipment from Purchaser premise sat his own risk and cost after due permission from BHEL.
- 4.24.3 Vendor shall continue the performance of the order/contract under all circumstances, to the extent not cancelled.
- 4.24.4 BHEL reserves the rights to cancel the contract in case the equipment and services are not found to be satisfactory.
- 4.24.5 Consequences: As soon as the contract is cancelled / terminated by BHEL, no payment will be payable to the Vendor.

4.25 Settlement of Disputes

- 4.25.1 Except as otherwise specifically provided in the Order/Contract, all disputes concerning questions of the facts arising under the Order/Contract, shall be decided by the Purchaser, subject to written appeal by the Vendor to the Purchaser, whose decision shall be final to the parties hereto.
- 4.25.2 Any disputes or differences shall be to the extent possible settled amicably between the parties hereto, failing which the disputed issues shall be settled through arbitration.
- 4.25.3 However, the Vendor shall continue to perform the Order/Contract, pending settlement of dispute(s).

4.26 Arbitration

In all cases of disputes emanating from and in references to this agreement the matter shall be referred to the arbitration. All disputes or differences between the parties will be resolved through arbitration **governed by Arbitration & Conciliation Act 1996 as amended from time to time. The venue of** arbitration shall be Jhansi.

4.27 Acceptance of Order

Letter of acceptance of the Work Order along with Security Deposit (as per clause 4.14) is to be submitted within two weeks of receipt of Work Order.

4.28 Additional facility required in future on the Supplied Equipment

In case any additional facility is required on the supplied equipment / Services requiring upgrade the vendor shall provide the same at mutually agreed terms. BHEL also reserves the right to extend the contract after expiry of initial period.

4.29 Ethical Standard

Bidders are expected to observe the highest standard of ethics during the procurement and execution of this Contract. In pursuit of this policy, BHEL will reject a proposal for award if it determines that the Bidder being considered for award has engaged in corrupt or fraudulent practices in competing for the Contract. For the purposes of this provision, the terms set forth below are defined as follows:

4.29.1 "**Corrupt practice**" means the offering, giving, receiving, or soliciting of anything of value to influence the action in the procurement process or in Contract execution.

4.29.2 "**Fraudulent practice**" means a misrepresentation of facts in order to influence a procurement process including collusive practices designed to establish bid prices at artificial, non-competitive levels to deprive the benefits of competition to BHEL.

By signing the Bid Forwarding Letter, the Bidder represents that for the software it supplies, it is the owner of the Intellectual Property Rights. Willful misrepresentation of these facts shall be considered a fraudulent practice without prejudice to other remedies that BHEL take.

4.30 Income Tax Depreciation

Depreciation for Income tax purpose will be claimed by BHEL.

4.31 Limitation of Liability

Notwithstanding anything contained herein, neither Party shall be liable for any indirect, special, punitive, consequential or incidental damages (including, without limitation, loss of use, data, revenue, profits, business) under this Agreement and the aggregate liability of Vendor, under this Agreement, shall not exceed the fees received by it under this Agreement during the six months preceding the date of such claim.

4.32 Confidentiality

Vendor shall, at all times, undertake to maintain complete confidentiality of all data, information, software, drawings & documents, etc. belonging to the Purchaser and also of the Systems, procedures, reports, input documents, manuals, results and any other company documents discussed and/or finalized during the course of execution of the order/contract.

4.33 Other Terms & Conditions

- 4.33.1 The Lessor also agrees and undertakes not to sell, loan out, gift away, hypothecate or pledge or create a charge or lien or any encumbrance on the Equipment leased under this agreement except for the charge created for the purpose of financing the purchase of the Equipment.
- 4.33.2 BHEL hereby agrees to make the site ready as per the agreed specifications, within the agreed timelines. Customer agrees that Vendor shall not be in any manner be liable for any delay arising out of Customer's failure to make the site ready within the stipulated period, including but not limited to levy of liquidated damages for any delay in performance of Services under the terms of this Agreement.
- 4.33.3 EMD Amount will be refunded to the unsuccessful bidder normally within 15 days of the acceptance of award of the contract by the successful bidder.
- 4.33.4 No interest will be payable on EMD Amount.
- 4.33.5 Every year original insurance policy will be submitted to BHEL till lease period expires.

The above Terms and Conditions are accepted.

Date: - _____



(Signature and Seal of the Vendor)

5. Technical Specification (Requirement)

5.1 BHEL Jhansi is having Site in Information Technology Department. Equipment's are required as per the specification mentioned in this document.

5.2 Specifications of RISC Servers: 2 Nos.

Sr. No.	Features	Specification	Compliance (Yes/No)	Reference/ Remarks
1	Servers	Monolithic server per site shall be offered. (It shall be possible to configure the system as a single partition and non-clustered SMP architecture).		
		Both servers shall be capable of being partitioned; each partition shall have its own operating system instance, host name and IP address.		
		Both servers at site shall be of the same Make and Model.		
		Specify the make and model.		
		Both servers quoted must have the same RISC processor.		
		The future roadmap of the Server needs to be submitted.		
		All the servers shall be capable of running Oracle Web Logic Suite 11g R1 and Oracle 11g R2 RDBMS under 64-bit Unix OS. The processor should also support the future Compliance.		
2	Processor	CPUs shall be 64 Bit RISC with SMP architecture and should have minimum of 32 MB of L2/L3 Cache.		
		The CPU's future roadmap needs to be submitted.		
3	Processor Performance	The total SAPS rating for the offered RISC Server should be minimum of 28000 SAPs and the same server should be scalable up to 56000 SAPs within the same physical server .OEM to quote based on whichever performance benchmark available on third party site.		
		Nos. of Activated Cores, if any, per Processor offered (Bidder to Indicate)		
4	Main Memory	At least 12 GB per core DDR2/DDR3 with ECC and Chip Kill Memory Protection shall be offered.		
		The offered Server should be scalable to 1 TB or more RAM.		
5	Partitions	Each Application and Database instance in the system should run in an independent partition having its own operating system instance.		
		Server should be partitioned to provide minimum of		

		14000 SAPs rating for Oracle Database Layer & 14000 SAPs ratings for Oracle Application Layer.		
		It should be possible to assign processors and memory logically to any partition or switch processors and memory between partitions without reboot of source or target partitions or applications.		
		Each partition shall be able to run same or different versions of OS kernel, patch levels, etc, independently.		
		Any configuration change in one partition shall not affect any other partition.		
		Any fault in one partition shall not bring the entire system or other partitions down.		
		The OS of each partition shall be upgradeable separately and independently without affecting the other partitions.		
		Each partition shall have the capability to start- up and shutdown independently without affecting any other partition on the server.		
		Each partition should have security isolation from one another. The partition should be certified under common access protection profile.		
		Partitions should be security certified under Common Access Protection Profile (CAPP), the Labelled Security Protection Profile (LSPP) and the Role Based Access Control Protection Profile (RBACPP).		
		Partition management software with GUI/ Web Interface shall be provided. The Web/GUI interface shall support configuration and dynamic (no-reboot) reconfiguration features.		
		Each partition should be able to utilize any combination of dedicated (specifically assigned) and shared (virtual) I/O adapters (fibre channel, Ethernet and SCSI/SAS).Dedicated adapters should be under the direct control of the partition's operating system.		
		The offered system Servers must have minimum 2 Partitions and should support at least 20 partitions. Each partition should be capable of booting different instances of Operating system and have identified separate I/O sub systems. BHEL will provide reconfiguration details with the available resources.		
6	Adapters	All adapters should be PCI/X or PCI/E.		
		The offered system Servers must have minimum 2 Nos. Dual Ports 8Gbps FC HBAs with multi path I/O trunking and automatic load balancing.		
		The offered system Servers must have minimum 8Nos. of Ethernet ports shall be of 10/100/1000 Mbps auto sensing / partition in automatic Fail-over / Redundant / trunking / Link aggregation and auto switching mode		

		per partition. There are 2 Partitions in this server.		
		Functional (Ethernet and Fibre Channel) redundancy at an adapter level shall be provided for each partition.		
		The server will be connected to SAN storage system using fibre channel links. Required compatible Fibre Channel Host Bus Adapters (minimum 8Gbps) with multi-path and automatic load balancing on the server side shall be provided to connect the storage system with 100% redundancy. All the hardware and software required for this shall be provided. Multiple fibre cards with multi- pathing capability and automatic load balancing at HBAs on servers shall be supplied.		
		USB/Serial Ports shall be supplied as per the standard availability in the model offered.		
7	Disk and Media Drive	Each partition shall be configured with minimum 300GB usable capacity on internal SAS 15KRPM disks.		
		Internal Disks or the SAN disk used for OS shall be in RAID 1+0 / Mirrored mode.		
		There shall be DVD ROM drive in the server.		
		There shall be one External LTO Generation 6 drives to be offered per location. These drives can be independently configurable to any partition manually.		
8	Operating system	Latest version of 64-bit OEM Unix Operating System with latest patch level must be provided. It should include:		
		Logical Volume Management(LVM)		
		Journal File System (JFS).		
		Mirroring Software		
		Shall be capable of running 64-bit Oracle Web Logic Suite 11gR1 or higher version.		
		Shall be capable of running 64-bit Oracle 11gR2 RDBMS or higher version.		
		The Unix Operating Systems shall be licensed to support unlimited users.		
		Partition management software having dynamic configuration feature with GUI / Web interface. Management Consoles for the same to be provided.		
		Software to be provided for capacity planning & logs maintaining, trend analysis and reporting. Software to be provided for intelligent workload & partition replacement across a virtualized environment.		
		Software and licenses to be provided for resource allocation / de-allocation to partitions.		
9	Cluster/High availability	The cluster solution must be able to provide fail-over to the other server for any failure arising in one of the system due to: Hardware, Operating System, Server		

		failure, Partition Failure, Any other failure which causes the Server / partition to fail.		
		All necessary software, oracle Database agent & hardware components for automatic high availability and seamless fail over and failback to be provided across the servers.		
		Cluster solution shall be certified by Hardware OEM.		
		No committed transactions in Oracle Database should be lost in case of failure of clustered component.		
		Once the failed system comes up they should revert back to the original configuration automatically / Manually.		
		The proposed solution of implementing the fail-over must be explained in detail in the technical proposal along with logical diagrams.		
		The oracle database and oracle web logic instances shall be clustered using high availability clustering technology and there should not be any single point of failure in the offered solution. All necessary software agents must be provided for clustering. Support for the clustering software and all software agents must be provided. Each of the production components shall have dedicated failover mechanism.		
10	Other Software	Java development kit, C, C++ compiler and development package in all partitions shall be provided.		
		Each of the offered servers shall have an inbuilt redundant service processor.		
11	RAS Features	Necessary virtualization software needs to be configured.		
		Processors shall be capable of dynamic CPU de-allocation without server reboot. In case of Core failure the partition should not be affected.		
		Memory shall be protected through Advanced ECC / Chip kill, bit-steering & chip redundancy and error correction. (Specify the technology used)		
		Power on self-test and hardware diagnostics.		
		Pre failure Alert capabilities shall be available.		
		All adapters shall be hot-swappable.		
		All the following components shall be hot swappable - Disks, Power Supplies, Fans, PCI etc.		
		PCI buses shall have error handling capability.		
		Shall have indicators to identify failed components.		
		Shall have redundant Power Supplies and provision for input from at least two sources.		
		Shall have redundant cooling fans.		
		Shall have redundant system clocks.		
		The server scalability and upgradeability path in terms		

		of CPU and RAM must be submitted.		
12	Scalability	System management shall be through dedicated ports and shall not use the adapters identified for partitions.		
13	Form Factor	Rack form factor occupying maximum 4U rack space.		
14	Others	Rack to house the server shall be from the server OEMs as per the Rack specification.		
		All cables & accessories to implement connectivity between Server, SAN switches, LAN switches, Storage and Tape library shall be provided.		
		All power cables& sockets shall be supplied. Power cables with Indian Style 3-Pin Plug/ Standard.		
		Specify power consumption on full load.		
		Specify heat dissipation on full load in BTU/hour.		
		Should support Hot Swappable Power Supply and FAN		
		Reconfigurable Input /Output Data paths Should support redundant service processor to avoid single point of failure.		
		Should not require reboot in case of memory or CPU failure.		
		Should support hot swappable Disks.		
		Should support dynamic firmware upgrade		
15	Documentation	All the documents like data sheets, architecture, line diagrams, etc, shall be submitted.		

5.3 Specifications of SAN Storage: 1 No.

Sr. No	Features	Specification	Compliance (Yes/No)	Reference/Remarks
1	Model	SAN Storage model should be rack mountable with accessories to be supplied for hosting the Storage, Tape Library, Switch's etc.		
1	Raid Controller	Dual Active Controller with no single point of failure in the storage array. RAID Array supporting at least Raid Levels 0, 1, 5, 6 and 10 or equivalent. The RAID Level should be Hardware based.		
2	Cache	The Storage subsystem shall be configured with minimum of 16 GB usable cache and shall be scalable to up to 32 GB.		
		It shall support de-staging of cache to disks on power down or shall support internal battery backup of cache for at least 48 hours. The data in cache shall not be lost in the case of power failure.		
3	Host Interface	Storage system should be configured with sufficient number of 4/8Gbps FC, front-end ports for the aggregate FC bandwidth to the host should be 64 Gbps and should be scalable to 128 Gbps.		
		Storage system should be configured with sufficient number of 1/10 Gbps front-end iSCSI ports, for the aggregate iSCSI bandwidth to the host should be 40 Gbps and should be scalable to 80 Gbps.		
4	Drive Interface	Storage should support at least 24 Gbps of backend bandwidth (or equivalent number of ports) to disks using SAS 2.0 or FC connectivity. The same should be scalable to 48 Gbps.		
5	Support Drives	The storage subsystem shall support 300/450/600 GB FC /SAS disk and 2 TB or higher SATA/FATA /Near line disk drives.		
		Storage should support SSD drive for data storage purpose .The storage shall also support the functionality to automatically move the data from lower performing disk to SAS, based on the performance requirement. Required licenses for the same shall be provided.		
6	SAN Supported	All Standard SAN Switch needs to be supported.		
7	Disk Scalability	It will have 24 HDD of 300GB and usable capacity would be 5.5 TB. The storage should be configured with RAW capacity of 7200 GB using 6 Gbps SAS 300GB 15K RPM disk. The storage should be scalable to at least 200 Drives.		
8	Availability	Should offer dual active-active and failover controllers Should offer redundant power supplies and cooling units Should support hardware based RAID 0, 1, 5 and 10 Should support LUN Masking and software for the same should be configured		
		It should support Non-disruptive component replacement of controllers, disk drives, cache, power supply, fan subsystem etc. The storage shall support the following		

		High Availability Clusters solution from HP, IBM, Symantec, EMC, SUN and Windows.		
9	Performance	Proposed storage system should offer cache IOPS of minimum 700,000 or should have SPC-1 benchmark on minimum 50,000		
10	Licensing	Licenses for software (Storage Array Management, Point-in Time Copy, Volume Copy, multipathing software for host) should be provide as part of the solution.		
		System should be configured with necessary multipath components for high availability.		
		Required licenses for Snapshots/clones/remote replication should be configured.		
11	Management	The storage system shall be configured with GUI based management software as below: •Monitor and manage the storage array •Configuring PIT's •Remote Storage base replication •Storage front end port monitoring •Disk Monitoring •LUN management. •Storage Component replacement, etc.		
12	Snapshot/ Full volume copy	The Storage shall support Point- in-time copy and full volume copy for heterogeneous storage arrays. It should support these operations from storage of one OEM to storage from another OEM.		
13	Remote Replication	The Storage arrays shall support data replication in both synchronous and asynchronous modes across heterogeneous storages from third party OEM's		
14	Operating System Support	The storage system shall support the latest OS releases & Cluster of the following mentioned servers / OS:- CISC/RISC/EPIC-based Servers running Microsoft, HP, IBM, Sun, Linux RedHat AS 5.0 etc.		
15	Heterogeneous storage support	The storage system shall support the third party storage system of all major OEMs, and should be able to virtualise.The design shall also provide provision for LUN masking and SAN security. Vendor should factor Storage Operating System disk and Global Hot Spare disks as an additional to the RAW capacity mentioned		
16	Additional Features (should support)	All specifications stated are minimum required. Proposed system may have features over and above the minimum specification stated. Bidder should ensure that the performance of storage is not negatively affected for the entire duration of the contract		

5.4 Specifications of SAN switch: 2 Nos.

Sr. No	Specification	Compliance (Yes/No)	Reference/ Remarks
1	Minimum 16 Active ports (each with minimum port speed 8 Gbps) within same switch upgradeable to 24 ports		
2	Should have 16 Nos. of 8Gbps Short Wave SFPs.		
3	All cable of length of 10 meter each and accessories for connecting Servers /Devices to SAN.		
4	It should support Inter-Switch Link (ISL) Trunking to provide a high-speed data path between switches which enables a high speed data path between two switches. It can logically group up to Eight Ports of 8Gbps and can provide up to 64 Gbit/sec bandwidth.		
5	Non disruptive subsystem maintenance		
6	Should have redundant Fans and redundant Hot plug power supplies		
7	Should have web based management software for administration and configuration		
8	Non disruptive microcode / firmware upgrades and hot code activation.		
9	Switch shall support in built diagnostics, power on self test, command level diagnostics, online and offline diagnostics.		
10	Should support hardware ACL based Port security, Port Zoning and LUN Zoning		
11	Should support Secure Shell (SSH) encryption to provide additional security for Telnet sessions to the switch.		
12	Should support multilevel security on console access prevent unauthorized users from altering the switch configuration		
13	Should support Fibre Channel trace route and Fibre Channel Ping for ease of troubleshooting and fault isolation		
14	Should support Applications for device management and full fabric management.		
15	FCIP router to be supplied for all sites in redundant configuration if required for replication purpose		

5.5 Specifications of Tape Library: 1 No.

Sr. No.	Specification	Compliance (Yes/No)	Reference/ Remarks
	Offered Tape Library should have Two (2) native fibre LTO 6 or higher scalable up to 4 drives.		
	Offered Tape Library should be rack mountable.		
	Shall have minimum 48 slots.		
	Tape identification shall be using Bar code.		
	The tape library offered shall have robotic arm to identify media, load tape media into drives and put them back into corresponding shelves automatically. Loading and unloading of tapes from the library shall also be supported by the robotic arm.		
	All the slots of the tape library shall be accessible by the robotic arm.		
	Host Platform support: HP-UX, IBM AIX, Sun Solaris, Windows 2003/2008, Linux.		
	Shall supply 25labelled, blank new LTO-6 tape media with each tape library; each with 1.5 TB uncompressed storage capacity.		
	Shall supply 5 cleaning cartridges with each Tape Library		
	The tape library shall be configured with its management software to monitor the entire backup infrastructure - drives, library assets centrally from a single console.		
	The Tape Library solution should have redundant hot swappable power supplies and cooling fans.		
	Specify actual time taken for taking backup of 3TB data using a single drive with the offered solution.		
	All the cables -- fibre, Ethernet, SAS, etc required for connecting the backup servers with the SAN Storage and other servers shall be supplied by the bidder.		
	There shall be end to end fibre connection between SAN and tape drive.		

5.6 Specifications of Backup Software: 1 No.

Sr. No	Specification	Compliance (Yes/No)	Reference/ Remarks
1	Backup software shall be a single solution for supporting multiple operating systems and application using a single product which would take care of data growth in future. Backup server must be supported on Unix, Linux OS platform		
2	Backup management software that helps monitoring of tape library shall be GUI/ web based.		
3	The offer shall cover licenses required for taking backup of the entire data residing in all the partitions and new partitions if created in future		
4	Back-up software shall be a single solution for supporting multiple operating systems and applications using a single product		
5	Back-up software shall support backed up data replication to DR for disaster recovery strategy		
6	Back-up software shall support scheduled and policy based back-ups		
7	Back-up software shall support multiple simultaneous client sessions for back-up and restore		
8	The Backup software shall maintain catalogue of all the backups for efficient management of data and for better performance. Solution should also be consider to run backup server on Unix/Linux		
9	The back-up software shall support features like Point-in- time backup/ restore and Archive /retrieve		
10	The Back-up software shall support back-up over LAN, SAN and server free backup.		
11	The back-up software shall provide integration with Enterprise Management software such as Tivoli, Unicenter TNG and HP- Open view.		
12	The software should support forever full incremental backup on disk & tape. There should not be a need to construct the full backup from all incremental.		
13	Software should have an inbuilt feature for Tape to tape copy feature (cloning, within the tape library) to make multiple copies of the tapes without affecting the clients for sending tapes offsite as part of disaster recovery strategy.		
14	Backup software should also support online backup of all industry		

	popular databases &mailing solutions like Oracle, DB2, MS-SQL, Lotus Domino & ME-Exchange		
15	The backup software must be capable of running in a clustered environment. Cluster licenses of the backup software should be provided for both the Client and the Server components		
16	The backup software must use an RDBMS as the backup catalogue for efficient management and scalability of the solution.		
17	A copy of the backed up data at one site will be maintained on the Tape Library residing on the other site		
18	The backup software should support (Role Based Access) different levels of User access, Administrator, User, Operator, so that only the authorized personnel can make changes or view the status based on the rights they have		
19	The software must have the capability for monitoring and controlling the tape sent offsite.		
20	The Software must also provide for creating a Business Continuity Plan in case of the Backup server and all other servers in the backup network being destroyed in a possible disaster. This should be a scheduled and Automated activity on the backup server		
21	The software shall also provide for restoring data at each site during complete non-availability of the other site due to disaster		
22	Restore feature: System shall be configured for full restoration of the backed up data including OS image restore to the respective storage. Solution should be licensed for OS recovery from backup, Extensive reporting capabilities to monitor the health of Backups, support HTML, TEXT and CSV outputs, support for scheduled automated generation of reports		
23	Software shall support event notification to notify backup administrator about events like Job Failed or Job aborted, etc		
24	Software shall support Scanning of Tape media to rebuild catalogue and indexes in case of disaster.		
25	Software shall offer centralized management console to remotely monitor backups.		
26	Software shall support Raw device backup of Windows / Linux / UNIX based system		
27	Software shall support online backup of oracle & shall support both		

	Online and RMAN to perform online backup		
28	In case of backup server/tape library failure at one site the other server/tape library shall be used to take backup		
29	Automatic media management shall be taken care by the backup software.		
30	The backup software should be able to support versioning and should be applicable to individual backed up object's		
31	Should have the ability to retroactively update changes to data management policies that will then be applied to the data that is already being backed up or archived		
32	Backup software should also have capability to migrate the backed up data from one technology to another like LTO5 TO LTO6 TO VTL and vice versa		
33	Proposed backup solution should provide the forever full incremental functionality which can eliminate the need for taking full backup after every periodic interval		
34	Bidder must provide following agent as part of backup solution -SAN (LAN Free) Based Hot Online backup on all quoted database production servers/Partitions - LAN Based backup License on all quoted Servers/Partitions - Open File backup agent on all quoted servers - BMR agents for all RISC Servers mentioned in the Tender RFP - License for Tape Library as per the specifications mentioned in the Tender documents.		

5.7 Specifications of Database Servers:4 Nos.(Ref Annexure-H(c))

Sr. No	Specification	Compliance (Yes/No)	Reference/ Remarks
1.	Database Server should be available and function in multiple operating systems like Linux, Unix, Windows with identical functionalities and look and feeling with 32 and 64 bit support.		
2.	Database should have native active-active clustering which should be achievable by using just two servers where both the servers act as node of cluster and able to accept the database connection and perform read-write operations on the underlying database		
3.	Database should provide horizontal scalability in such a manner that a new database node can be added (or removed) dynamically, as and when required in future, without disturbing the normal functioning of production system such as without shutdown.		
4.	Should be able to provide database level storage management mechanism, which should enable the availability by means of creating redundancy, automatically balance the data files across the available disks, i/o balancing across the available disks for the database for performance, availability and management		
5.	Database should provide high concurrency and scalability vertically and horizontally to address all types of workloads		
6.	Database should provide continuous availability features to address hardware failures, instance failures, human errors like accidental deletion of data, tables, able to repair at block level. These features should be available on all the platforms as mentioned in Sr. No.1		
7.	Should have built-in parallelism, Backup & Recovery feature, Disaster Recovery Feature, recovery for tables, rows accidentally deleted, Queue Mechanism to transfer data across to other database.		
8.	Users should be able to take Complete Database Backup Online and in Parallel. The Recovery of the Complete Database should be possible in Parallel. Database must be capable of doing the partial recovery when some of the data is lost.		
9.	Database should provide Unicode capability with Indian language support		
10.	Should provide Single system management view for database / database cluster. Should be using client independent, centralized database management console over network for monitoring hardware, operating		

	system and database resources.		
11.	Should be having built-in provision to Administer database / database clusters, Monitor performance, Maintain database, Backup and recovery, Disaster recovery management		
12.	Should have options to do diagnosis, performance tuning with the SQL analysis, finding the events, advisory based tuning mechanisms with the history.		
13.	Database should work seamlessly with ODBC, JDBC, Java, .NET, PHP		
14.	All the features and additional options to be integrated with database engine without any 3rd party products or overlay products		
15.	Database should allow storing scanned images, text documents, xml and multimedia inside the tables. It should be part of the basic database distribution without any additional cost to the organization		
16.	Database should provide option to utilize the disaster recovery environment for reporting purpose without compromising to the consistency or writing to the same.		
17.	Database should provide capability to monitor and manage the database using web based tool with additional functionality for performance management and database management.		
18.	Database should be able to handle End to End Management of patches , Upgrades and Schema Changes using web based tool and functionality should be natively integrated with the Database		
19.	Database should be able to Discover assets and Provision software using web based tool and functionality should be natively integrated with the Database.		
20.	Database should be able to track inventory, configuration drifts and compliance using web based tool and functionality should be natively integrated with the Database.		
21.	The database should be able to provide capabilities to manage Information Lifecycle management and be integrated natively in the database.		
22.	Bidder to quote for Oracle Database Licenses as per the Annexure-H(c)		
23.	The proposed database should provide on-the-fly redaction of sensitive data in database query results prior to display by applications so that unauthorized users cannot view the defined sensitive data.		
24.	The database should support plugging of multiple databases in to multitenant Container database without need to change the applications. Memory and background processes should only be required at Container database level.		
25.	The database should support analytic measures & should be able to combine Analytic functions.		

5.8 Specifications of Application Servers:4Nos.(Ref Annexure-(d))

Sr. No	Specification	Compliance (Yes/No)	Reference/ Remarks
1.	The application server must include a self-tuning feature that dynamically adjusts the number of request threads to avoid deadlocks and achieve optimal throughput		
2.	The application server must provide lowest operational costs due to most reliable operation and best automation		
3.	The application server must outperform by using one- half the hardware and memory		
4.	The application server should provide Real Operations Insight in terms of end-to-end visibility and management of various application related resources from a single GUI based dashboard.		
5.	The application server must provide a Diagnostic Framework (DF) with the necessary components to create, analyze and archive diagnostic data generated by the application.		
6.	The application server must be a leader in Object Relational support through Top Link, as well as Hibernate. The application server should be matured with EJB 3.0 and Kodosupport as well as Top Link		
7.	The application server should provide in-built tools or utilities for configuration management etc activities		
8.	The application server should provide High Availability and help reduce the planned and unplanned downtime		
9.	The application server should provide the in-built high performance messaging support like JMS (Java Messaging Service) etc.		
10.	The application server should comply with JEE 5.0 standards.		
11.	The application server must provide complete backup of artefacts and not just restrict to configuration backup.		
12.	The application server must provide an out of the box work list application to support work queuing, prioritizing and workflow support.		
13.	The application server must support multiple versions of an application to co-exist for soft retiring of obsolete versions		
14.	The application server must support graceful and time-out based application retirement policy		
15.	The application server must support configuration / GUI based roll back to previous version of applications in case the newer version has bugs during		

	the testing time or post deployment in production environment		
16.	The application server must support applying a new patch / uninstalling a patch in a rolling fashion		
17.	The application server must have the feature of intuitive and flexible drill down for problem analysis		
18.	The Application server must provide data-grid pools and share memory across environment for fast access to data.		
19.	The application server should have high performance clustering and failover capabilities.		
20.	The application server must be able to trace transactions across containers as well as to the database.		
21.	The application server must be able to analyze call paths and dependencies via graphical, architectural views		
22.	The application server must be able to automatically performance problems and identify root cause		
23.	The application server should be able to detect configuration changes in real-time and track changes historically		
24.	Bidder to quote for Oracle Application Server Licenses as per the Annexure-H(d)		

5.9 Specifications of Racks: 1 No.

Sr. No	Feature	Specification	Compliance (Yes/No)	Reference/ Remarks
1.	Make & Model	OEM Make (From Server OEM only) MS 42 U Rack		
2.	Mounting	Floor Standing		
3.	Height	42 U		
4.	Doors	Lockable front door of toughened tinted glass or perforated steel & lockable vented rear door of steel		
5.	Side Panels	Side Panels with Slam Latches and Key Locks		
6.	Top & Bottom Covers	Top & Bottom Covers with cable entry gland plates		
7.	Sliding Rotary Keyboard Tray	1 No. of 19" Sliding Keyboard Tray self		

8.	Equipment Mounting Angles	One pair of Equipment Mounting Angles to provide 19" mounting positions		
9.	Cooling Fans	Min. 4 Nos. of Cooling Fans (230VAC, 90 CFM) in top mounted Fan Housing Unit		
10.	PDU	Two horizontal , two vertical cable managers & two vertical Cable Channels with cabling loops		
11.	Castors	4 castors with foot operated brakes		
12.	Colour	Preferred Blue/Grey		
13.	16 port KVM switch	16 port KVM switch OEM with integrated 17" LCD monitor (integrated with Keyboard & trackball)and min. 8 ft. length cables for connecting offered servers		
14.	Industrial Socket for power input from UPS to rack	Suitable industrial sockets for power input to rack to be provided by the vendor		

5.10 Specifications of UPS: 2 No.

Sr. No.	Feature	Specification	Compliance (Yes/No)	Reference/ Remarks
1	System Configuration	2x20 KVA Online UPS in parallel redundant equal load sharing Mode. One UPS should be capable of taking 100% load instantaneously in case other UPS fails. The parallel redundancy equal load sharing feature should be an inbuilt feature of the UPS,through some external parallel redundancy kit.		
2	Technology	True Online, Double Conversion with PWM Technology & IGBT based Inverter		
3	Input Source	Mains/Local DG Set Compatibility		
4	Input Voltage	415V AC 3 phase, 4 wires		
5	Input Voltage Tolerance	± 15%		
6	Input Frequency	50 Hz		
7	Input Frequency Tolerance	45 HZ TO 55 HZ		
8	Input Power factor at nominal voltage and full load	>0.9		
9	Total Harmonic Distortion at 100%	<5%		

	Nonlinear Load			
10	Output Voltage	230 Volts Single Phase		
11	Output Voltage Regulation	$\pm 1\%$ - For 100% static load. THDU <3% between phase to neutral for 100% non-linear load		
12	Output Power Factor	0.8 or higher		
13	Over Load Rating	110% for 10 minutes, 125% for 01 minutes, 150% for 30 seconds		
14	Inverter Efficiency	> 89%		
15	Overall efficiency	> 85%		
16	Static Bypass switch	A Built-in static transfer switch shall be provided as an integral part of the UPS. The Static switch shall be a bi-directional naturally committed high-speed static (SCR type) device rated to carry full load current continuously.		
17	Manual Bypass switch	The UPS should have a Built-in Maintenance Bypass Isolator to directly connect the load to the input AC power source, bypassing the rectifier, inverter and static transfer switch.		
18	Battery type	Two independent Sealed Maintenance Free battery banks with a separate Battery Rack		
19	Battery make	Panasonic / Rocket / CSB		
20	Backup	Min. 60 minutes backup on full load on each battery bank		
21	Battery management	The UPS should have Battery Management feature for: Periodic Battery Test Controlling Charging Time and Increase in Battery Life Protection : Battery low Cut-off without draining current		
22	LCD Panel	The UPS should have LCD panel for measuring Output voltages, Output currents and Frequency, Battery Voltage and discharging current, display status charging / of the battery capacity and backup time left and event logging.		
23	RS232 interface	RS232 interface to be provided		
24	Power Management Software	The UPS should have Power management software and interface cable, providing complete power monitoring and control capabilities to system administrators. It should Safely shutdown & restart multiple Windows & Linux clients over LAN, voltage logging, Should support Linux & Windows		
25	SNMP Card	Should come with an SNMP Card for connecting UPS to Ethernet LAN to monitor and manage the UPS with a standard Web browser, while		

		simultaneously providing shutdown & restart for multiple windows, Linux & Unix computer systems over LAN.		
26	Synchronization	The UPS should come with hardware/software required to provide Synchronization capability between the outputs of two or more independent UPS systems.		
27	Battery Refresh	The bidder shall replace all batteries after every 3 years and whenever the batteries get faulty		
28	Compliance	Latest Version of IEC-60950-1 / IS 13252 / UL-60950		

5.11 Specifications of Backup Server: 1 No.

Sr. No	Feature	Specification	Compliance (Yes/No)	Reference/ Remarks
1.	CPU	1 No. x (Intel Six Core Xeon E5-2620 , 2.0 GHz, 15MB L3 Cache) or higher /Better		
2.	Cache L3	12 MB of L3 Cache Intel 5520 Chipset		
3.	Chipset	Intel C 600 chipset		
4.	Memory	16GB Registered DDR-3 ECC Memory Upgradeable to 192 GB		
5.	Active Memory Protection	Advanced ECC memory protection support, Memory mirroring		
6.	Drive Bays	Server should have Minimum of 8 x 2.5" Hard Disk Drive bays		
7.	Hard Disk Drives	Server should be configured with 2x300GB 10 KRPM		
8.	RAID Controller	RAID Controller with 512 MB Battery back cache. The RAID controller should support Raid 0, 1, 5, 10, 50. Raid controller should have an option to upgrade to Raid 6 and 60 as well. Raid controller should support on line Raid level migration, on line capacity expansion and data scrubbing as well.		
9.	Graphics Controller	Integrated Video Memory 16MB DDR-2 SDRAM		
10.	Ethernet Adapter	Dual-port with TCP/IP Offload Engine (TOE), Wake on LAN, Serial over LAN , PXE 2		
11.	Fibre Channel HBA Connectivity	Dual Port 4Gbps Fibre Channel Expansion Cards		

12.	I/O Expansions	Minimum Four Number of PCIe Slots		
13.	Power Supply	Dual Redundant Hot Swappable Power Supplies		
14.	Hot swap/ Redundant Fans	Server should be configured with Hot Swap Fans		
15.	Warranty	3 Years Onsite Comprehensive Warranty		
16.	Failure Alerting Mechanism	The server should be able to alert impending failures on maximum number of components. The components covered under alerting mechanism should at least include Processors, memory, voltage regulator modules (VRMs), power supplies and fans		
17.	Ease of failure identification	Server should send an alert on the system front panel for failure of any component like Processors, voltage regulator modules (VRMs),memory, power supplies, fans, HDDs, adapters and system temperature which will allow system administrator to identify the component failure		
18.	Form Factor	2U		
19.	System Software	OEM Server Management software with the device drivers		
20.	Operating System	Should support Microsoft Windows 2008 Server Standard, Enterprise, Red Hat Linux 5.x Enterprise, AP		

5.12 Precision Air-conditioning:1 No.

BHEL will provide a Computer room having 30X32 Feet for the deployment of the Computer Systems at site. The computer room will have false flooring and false ceiling. The Bidder shall offer 1 precision Air-conditioner units for site. Precision Air-conditioners shall be sized to support 150% of the heat load in each site. Temperature of 21 Deg. C +/- 1 and relative humidity of 50% +/- 5 shall be maintained in site. The computer system will be operated round the clock shift on all 365 days.

All the Precision Air-conditioners shall be bottom discharge with high CFM units.

The thermal insulation below the false floor, AC ducts, diffuser and floor grills are in the scope of the bidder. The unit supplied shall have redundancy. A sequential timer facility should be available for the alternate use of the units.

The minimum requirements for the AC are mentioned below. Bidder has to comply with these specifications.

Sr. No	Specification	Compliance (Yes/No)	Reference / Remarks
1.	Precision air conditioners complete with all controls, indoor and outside units, monitoring units and complete installation and commissioning for server room.		
2.	The vendor is expected to include all auxiliary works like ducting, inlet and drain piping, piping between indoor and outdoor, cabling, acoustic and thermal insulation (Duct and floor for server room), volume control dampers, supply and returns air grills, stands for indoor and outdoor units with related civil works etc. as per the site requirements.		
3.	Automatic monitoring and control of cooling, heating, humidification, dehumidification, air-filtration, etc. should be installed		
4.	These equipment should be compliant to the following		
5.	Cabinet conforming to Class 1 BS 476 Part 6&7 standards		
6.	Air filtration conforming to EU3 standards		
7.	Electric Re-heater should be operating at black heat temperature		
8.	Humidifier should have an adjustable capacity control ranging from 40%-100%		
9.	Visual and audible alarm indication		

10.	Graphical display of temperature and humidity curves over the last 24-hour		
11.	Humidity , Ventilation, Air Conditioning (HVAC)		
12.	Air conditioning for direct expansion air conditioning is used then condensers should be located outside the building.		
13.	Optimal temperature of 21 deg C + or - 1 shall be maintained.		
14.	45 - 50% Relative Humidity shall be maintained.		
15.	Relative humidity variation shall not exceed +/- 3%.		
16.	Microprocessor controller Panel		
	The display panel should be located on the front of the unit with LCD display for monitoring and alarm indication. The panel should be used for :		
	Status detection (whether on or off)		
	Temperature controller		
	Humidity controller		
	The panel should make an audio visual alarm in case of:		
	Power failure		
	Fan overload		
	Humidifier power fault		
	Humidifier control fault		
	Heater fault		
	Airflow failure		
	Change filter		
	Control circuit trip		
	Return air temperature / RH out of range		
	Supply air temperature out of range		
	Return air humidity sensor alarm		
	Return air temp. Sensor alarm		
	Data Error		
	Service alarm		
	Electric heater alarm		
	Microprocessor fault		
	Humidifier flood		
	Water leakage alarm		
	Smoke alarm		
	Other functions of the control panel		
	Graphical display of temperature and humidity curves over the last 24-hour.		
	Self-diagnostic functionality		

	Supply air fan surge to let fan continue on operation for a period of 180 second before total shutdown		
	An automatic changeover for duty / standby unit based on time interval setting and any failure of duty unit		
	An automatic restart function with sequence start program to prevent power surge during start-up on multi- system installation		
	A graphic display to review the return air temperature and humidity condition.		
	Comprehensive event storage system by date and time of occurrence.		
	Simply user-friendly operating guidance Web enabled Remote monitoring of the Precision AC unit using desktop PC		

5.13 Fire Alarm and Detection System: 1 No.

S.N.	Description	Um	Qty	Compliance (Y/N)	Reference/ Remarks
1	Supply, Installation, Testing and Commissioning of Fire Detection system including supplying and laying of suitable FRLS cables as per OEM guidelines. Cables to laid in FRLS PVC conduit.				
2	Analogue Addressable Fire Alarm Control panel with 1 Loop Capacity. The panel shall consist with 80 character LCD display and RS 485 for networking. Loop should have the capacity to cater to 99 Detectors & 99 Modules.	Nos	1		
3	Intelligent Addressable Multi sensor Smoke detector with base	Nos	26		
4	Intelligent Addressable Single action Manual pull station	Nos	2		
5	Conventional Sounder with addressable control module.	Nos	2		
6	Short circuit Line Isolators	Nos	2		
7	Addressable control module for Sounder cum Strob, FM200 Gas Release, ACS door open & PAC tripping	Nos	5		
8	Addressable Input module for monitoring the WLD Panels	Nos	2		
9	Exit signage	Nos	1		
10	Emergency glowing signage with battery	Nos	4		
11	Response Indicator for detectors located in False Floor and False Ceiling	Nos	14		
12	Fault Isolator Module/ Base	Nos	3		

5.14 Fire Suppression System: 1 No.

S. N.	DESCRIPTION	Um	Qty	Compliance (Y/N)	Reference/ Remarks
1	Supply, Installation, Testing and Commissioning of Fire Suppression system as per OEM guidelines.				
2	80 ltrs Seamless Cylinder with valve	Nos	3		
3	Pressure Gauge +Low pressure supervisory switch	Nos	1		
4	NOVAC 1230 / HFC227ea suppression agent	Kg.	162		
5	Electromagnetic Actuator	Nos	2		
6	Manual Actuator	Nos	2		
7	Pneumatic actuator	Nos	2		
8	Flexible Discharge Hose	Nos	3		
9	Flexible Actuation Hose	Nos	3		
10	Discharge pressure switch	Nos	3		
11	Discharge Nozzles	Nos	12		
12	Rack-Wall mount kit	Nos	2		
13	Manifold	Nos	1		
14	M.S. Seamless pipes as per ASTM A 106 Gr. B, schedule 40 with necessary fittings.	Lot	1lot		
15	2 Zone Gas release panel with battery backup	Nos	1		
16	Manual Release Switch	Nos	2		
17	Abort Switch	Nos	1		

5.15 Very Early Smoke Detection System (VESDA): 1 No.

Sr.	Description	Um	Qty	Compliance(Y/N)	Remarks
1	Supply, Installation, Testing and Commissioning of VESDA System including supplying and laying of suitable armored cables/wires as per OEM guidelines.				
2	Single Zone Vesda Laser Focus Detector	Nos	1		
3	Power Supply Unit for above Detector	Nos	1		
4	Aspiration Tubes	Mtr	50		
5	Capillary Tubes	Mtr	6		
6	Air Termination Nozzles	Nos	6		
7	Electronic Hooter	Nos	1		
8	Strobe cum Sounder along with accessories	Nos	1		

5.16 LAN Switch: 2 Nos.

Sr. No	Feature	Specification	Compliance (Yes/No)	Reference/Remarks
1.	Architecture	The switch should have static route, RIPv2, OSPF, IS-IS and BGP4 routing functionalities. The switch must support following architectural features:-		
		The switch backplane bandwidth at minimum should be 160 Gbps fabric. The switch must support minimum 65 Mbps maximum forwarding bandwidth. The required forwarding rates are based 64 bytes packet length.		
		There should be no performance degradation for advanced layer 2 to Layer 4 services such as QoS and security implementation.		
		The switch must support hardware based Access Control Lists (ACLs).		
		The switch must support at least 12K MAC addresses.		
		The switch should support Ipv6 in hardware and software for routing, multicasting, security and management features.		
		The switch will have redundant internal power supply.		
		The switch should be stackable with minimum stacking bandwidth of 60 GBPS. The switch should have 48 Ethernet 10/100/1000 ports and 2 x 10Gigabit Ethernet SFP Single mode ports.		
2.	Layer-2 Protocol Feature	Hardware assisted Layer 2 forwarding.		
		Layer 2 switch ports and VLAN Trunks.		
		IEEE 802.1Q based Layer 2 VLAN encapsulation.		
		It should be possible to have the VLAN configuration done centrally using NMS / CLI.		
		Should support at least 256 active VLANs and 4096 VLAN Ids per switch.		
		IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) for rapid convergence.		
		IEEE 802.1s Multiple Spanning Tree (MSTP) to group VLANs into a spanning tree instance with each instance having a spanning tree topology independent of other spanning tree instances.		
		Internet Group Management Protocol (IGMP) snooping version 1, 2, & 3.		
		Should support Link Aggregation Protocol as per IEEE 802.3ad		
		Per port broadcast, multicast and unicast storm control prevention mechanism to		

		prevent stations from degrading overall systems performance.		
		- IEEE 802.1D STP support for redundant backbone connections and loop free networks. - The switch should support frame size of 9000 bytes on Gigabit Ethernet interfaces.		
3.	Quality of Service	- The layer 2 switch must support end-to-end QoS in the network. - The switch must support QoS access control lists (ACL) on all ports to ensure proper policing and marking on per packet basis using ACLs. Up to four queues per port must be supported for QoS implementation. - The switch must support QoS classification of incoming packets for QoS flows based on Layer 2, Layer 3 and Layer 4 fields such as MAC address, destination MAC address, 16 bit Ethertype, source and destination IP address and TCP source and destination port number. - Queuing and Scheduling must be able to be configured on a per physical port basis. - The switch must support metering/policing of incoming packets to control the flow of incoming packets. - The switches support marking/remarking based on the following mappings from DSCP to 802.1p and 802.1p to DSCP. - The switch must support widely used DSCP values and must also support Classifying and reclassifying packets based on these values. - Should support Unicast port flooding blocking and Unicast MAC filtering. - Should support Dynamic Address Resolution Protocol (ARP) inspection. - Should have capability to validate ARP packets in the Ethernet network to enable the network administrators to intercept, log and discard ARP packets with invalid MAC address to IP address bindings and to stop "man-in-the- middle" attacks. - Should support DHCP snooping to provide security by filtering untrusted DHCP messages and by building and maintaining a DHCP snooping binding table. - The switch should support capability of blocking all IP traffic on layer 2 access or trunk Ethernet ports except for DHCP packets that are captured by the DHCP snooping process. - Should support rate limiting and Committed Information Rate (CIR) which guarantees bandwidth in increments as low as 1 Mbps. - User will implement security at campus LAN		

		using standard based 802. 1x authentication mechanism. The following standard compliance is required on the switch - • 802.1x; 802.1x user authentication with VLAN assignment, port security & guest VLAN; 802.1x accounting.		
		• The switch should be able to provide the access to a restricted VLAN to the users who fail the 802.1x authentication process for very limited access as defined by the security policy		
		• The switch along with the AAA server will have to ensure that upon successful 802.1x authentication the authenticated switch will be dynamically configured with the access list based on the user identity to restrict the level of access as per the organization security policy of user.		
		• The authenticated switch ports should run periodic 802.1x re-authentication after every pre defined time to ensure security of operation. The time period of this periodic re-authentication will be decided by the security policy of user.		
		• The switch should support multiple AAA (running RADIUS or TACACS) server configured for its operation so that in case it doesn't get a response from the first server, the second server would be tried for.		
4.	Management Feature	• The switch must comply with SNMPv2 and SNMPv3.		
		• The switch must have embedded RMON software agent which supports four RMON groups (history, statistics, alarms and events) for enhanced traffic management, monitoring and analysis.		
		• The switch must isolate network error conditions and should suggest probable causes.		
		• The switch must build and maintain an up-to-date hardware and software inventory.		
		• The switch must record and display comprehensive reports of software, hardware and configuration changes.		
		• The switch must support Telnet, TFTP/FTP/SFTP and BOOTP for management access.		
		• The switch must support traffic monitoring and performance assessment.		
5.	Environmental Features	• Operating Temperature : 0 to 40° C.		
		• Storage Temperature :-40 to 50° C.		
		• Relative Humidity : 10 to 85 percent, non condensing		

6.	Regulatory Standards Compliance	• Safety : UL 60950/IEC 60950		
		• EMC: FCC Part 15 (CFR 47) Class A and its equivalent.		
		• Power Requirements: 220V regulated AC power supply.		

6. General Conditions

- 6.1** Supply of the fiber cable and its accessories like LIU, pigtail and coupler are in bidder's marker and warning tape is also in suppliers' scope.
- 6.2** Vendor shall use the fiber optic cable of make **(AMP/ Tyco / Molex)**.
- 6.3** The Vendor shall fulfill the welfare requirements of their workman.(i.e. ESI, PF etc.) as per BHEL policy.
- 6.4** It is the responsibility of the Vendor to move the materials from Informatics Centre to the respective work places.
- 6.5** If the vendor wants to visit BHEL, Jhansi to see the site, route of cabling before submitting the bid, BHEL will make necessary arrangement.

Annexure - A

Deviation in Technical Specification

Ref: BHEL's Tender No. JS/IT/WC/13-14/001 Dated: _____

Table No	Sr. No.	Item / Parameter	Specification	Deviation	Alternate solution

Date: _____

(Vendor's Signature with seal)

Annexure - B

No Deviation Certificate
(To be given on bidder's letter head)

To,

Informatics Centre,

Bharat Heavy Electricals Limited,

Jhansi, Uttar Pradesh, India-284129

Subject: No Deviation Certificate

Ref: BHEL's Tender No. JS/IT/WC/13-14/001 Dated: _____

It is certified that the offered solution vide tender No. JS/IT/WC/13-14/001 in response to BHEL's enquiry mentioned under reference has no Technical deviation with the requirement of BHEL, Jhansi given vide the Tender Technical Specification (Requirement).

Date: _____



(Vendor's Signature with seal)

[Annexure-C](#)

Acceptance to Participate in Reverse Auction (RA)

Sl	Description	Vendor's Confirmation/ Comments	
	As per Clause 4.2) acceptance for participation in Reverse auction(RA). Yes/ No to be indicated		
	Company Full address:-		
	Name of the person for participating reverse auction:		
	Landline Number:		Fax Number:
	Mobile Number:		
	Pan No.		TIN No.
	CST No.		Ser.Tax No.

--

Date: _____

(Vendor's Signature with seal)

Annexure-D

	Bharat Heavy Electricals Ltd. Jhansi	Doc. No. : ISMS-04-JS-013
		Rev. No. : 01
	THIRD PARTY NON-DISCOSURE AGREEMENT	Date of Issue : 30-SEP-08
		Page 66 of 83

THIRD PARTY NON-DISCLOSURE AGREEMENT

I, _____, on behalf of the _____ (Name of Company), acknowledge that the information received or generated, directly or indirectly, while working with BHEL on contract is confidential and that the nature of the business of the BHEL is such that the following conditions are reasonable, and therefore:

I, or any other personnel employed or engaged by our company agree as follows to maintain confidentiality & integrity of the information handled, generated & agree not to disclose, directly or indirectly, any information related to the BHEL. Without restricting the generality of the foregoing, it is agreed that we will not disclose such information consisting but not necessarily limited to:

- 1) Technical information: Methods, drawings, processes, formulae, compositions, systems, techniques, inventions, computer programs/data/configuration and research projects.
- 2) Business information: Customer lists, project schedules, pricing data, estimates, financial or marketing data

We will also keep the availability of the equipments and supplied as per the contractual agreement in PO. On conclusion of contract, I, or any other personnel employed or engaged by our company shall return to BHEL all documents and property of BHEL, including but not necessarily limited to: drawings, blueprints, reports, manuals, computer programs/data/configuration, and all other materials and all copies thereof relating in any way to BHEL's business, or in any way obtained by me during the course of contract. I further agree that I, or any others employed or engaged by our company shall not retain copies, notes or abstracts of the foregoing.

This obligation of confidentiality shall continue after the conclusion of the contract also.

I acknowledge that the aforesaid restrictions are necessary and fundamental to the business of the BHEL, and are reasonable given the nature of the business carried on by the BHEL. I agree that this agreement shall be governed by and construed in accordance with the laws of country. I understand that any violation of this agreement may invite action from BHEL.

I enter into this agreement totally voluntarily, with full knowledge of its meaning, and without duress.

Dated at _____, this ____ day of _____, 20__.

Name

Company

Signature

Annexure-E

AUTHORIZATION BY OEM

Date: _____

To,

Informatics Centre,
Bharat Heavy Electricals Limited, Jhansi,
Uttar Pradesh, India-284129

Subject: **Letter of Authority**

Tender Ref. No: JS/IT/WC/13-14/001 **dated 16-sep-2013**_____

Dear Sir,

We hereby authorize _____ who has all India presence and fulfills the requirements of the tender enquiry ref. no. JS/IT/WC/13-14/001 dated _____ to quote/ negotiate and service the equipment as required in the above tender enquiry.

This authorization is valid only for the following equipment for which we are the OEM:

Sr. No.	Equipment
1.	
2.	
3.	
4.	
5.	

The authorized agency would ensure reliable service during complete lease period and if BHEL opts, the agency would provide maintenance support for two years after the expiry of the financial lease period.

In case of any default we would do alternative arrangement on the same terms and conditions as negotiated and finalized in this tender enquiry.

(Authorized Signatory)

For _____

Note: This 'Letter of Authority' should be issued on the letterhead of OEM.
OEM: Means Original Equipment Manufacturer.

Annexure-F

Annual Turnover of the Bidder

Sr. No.	Financial Year	Turnover In Rs. Crores
1	2010-11	
2	2011-12	
3	2012-13	

Date: _____



(Vendor's Signature with seal)

Annexure-G

Major Orders Received within stipulated Time

Sr. No.	Organisation Name	Type of Order (Lease / Outright Purchase)	Order Date
1			
2			
3			
4			
5			

Date: _____

(Vendor's Signature with seal)

Annexure-I

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi – 110049 (India) herein after referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART.

And

_____, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor- which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for _____

_____. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above..

1. Section 1— Commitments of the Principal

a. The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

- i. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
- ii. The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
- iii. The Principal will exclude from the process all known prejudiced persons.

b. If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

2. Section 2 — Commitments of the Bidder(s)/ Contractor(s)

a. The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

- i. The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

- ii. The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- iii. The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant 1PC/ PC Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- iv. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- v. The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

3. Section3—Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors". framed by the Principal.

4. Section 4 — Compensation for Damages

- a. If the Principal has disqualified the Bidder from the tender process prior to the award according to Section3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/Bid Security.
- b. If the Principal has terminated the contract according to Section3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank guarantee, whichever is higher.

5. Section 5 — Previous Transgression

- a. The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- b. If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

6. Section 6—Equal treatment of all Bidders/Contractors/Sub-contractors

- a. The Bidder(s)/ Contractor(s) undertake(s) to obtain from all subcontractors a commitment Consistent with this Integrity Pact and report Compliance to the Principal. This commitment shall be taken only from those sub-contractors whose contract value is more than 20 % of Bidder's/ Contractor's contract value with the Principal. The Bidder(s)/ Contractor(s) shall continue to remain responsible for any default by his Sub-contractor(s).
- b. The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- c. The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

7. Section 7- Criminal Charges against violating Bidders/ Contractors

/Sub-contractors.

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

8. Section 8 —Independent External Monitor(s)

- a. The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- b. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.

- c. The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality.
- d. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- e. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or heal the situation, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- f. The Monitor will submit a written report to the CMD, BHEL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
- g. The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- h. If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC / PC Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- i. The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- j. The word 'Monitor' would include both singular and plural.

9. Section 9—Pact Duration

- a. This Pact begins and shall be binding on and from the submission of bid(s) by bidder(s). It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.

b. If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified as above, unless it is discharged/ determined by the CMD, BHEL.

10. Section 10—Other Provisions

- a. This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.
- b. Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- c. If the Contractor is a partnership or a consortium. this agreement must be signed by all partners or consortium members.
- d. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- e. Only those bidders/ contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

_____	_____
For & On behalf of the Principal	For & On behalf of the Bidder/ Contractor
(Office Seal)	(Office Seal)

Place: _____

Date: _____

Witness: _____ Witness: _____

(Name & Address) (Name & Address)

_____	_____
_____	_____
_____	_____

Annexure – H (a)**Price Format**

Format for Submitting the Price details of Supply of Computer Systems on finance lease for a period of 5 years for replacement of existing hardware running Oracle Applications at BHEL, Jhansi-21

5 Year Finance Lease Option (Quarterly Rental) and Energy consumption

Item No	Item description (For Supply & Commissioning at Jhansi)	Item Qty	Amount Breakup							
			Principal (A) (In Rs.)	Interest (B) (In Rs.)	Maintenance Charges (C) (In Rs.)	Lease / Service Tax % (D)	Lease / Service Value (E) (In Rs.)	Total Quarterly Rental		Total quarterly cost for L1 evaluation (Rental + energy cost) H = (F+G) (In Rs.)
								Including Tax F = (A+B+C+E) (In Rs.)	Quarter * G = (Unit x rate per unit) (In Rs.)	
5.2	RISC Servers	2								
5.3	SAN Storage	1								
5.4	SAN Switch	2								
5.5	Tape Library	1								
5.6	Backup Software	1								
5.7	Oracle RDBMS (Refer Annexure H(c))	4								

5.8	Oracle Application Server (Refer Annexure H(d))	4								
5.9	Rack	1								
5.10	UPS	2								
5.11	Backup Server	1								
5.12	Precision Air Conditioners	1								
5.13	Fire Alarm &detection system	1								
5.14	Fire Suppression System	1								
5.15	VESDA	1								
5.16	LAN Switch	2								
TOTAL (T) (In Rs.)										

Total Rental charge for 5 years (T x 5x4)(In Rs.):

Quarterly Maintenance Charges for 6th year(In Rs.):

Quarterly Maintenance Charges for 7th year(In Rs.):

*Energy cost will be calculated based on current tariff of Rs 6.00/Unit

Date:

(Signature & Office Seal of the vendor)

Annexure – H (b)**Price Format**

Format for Submitting the Price details of Supply of Computer Systems on finance lease for a period of 5 years for replacement of existing hardware running oracle based Applications at BHEL, Jhansi - 21

Outright Purchase (including AMC up to 5th year excluding Oracle Products)

Item No	Item description (For Supply & Commissioning at Jhansi)	Item Qty	Amount Breakup						
			Price without any Warranty & Excluding Taxes(A) (In Rs.)	Std. Warranty Period in no of years (B) (In Rs.)	Price with standard Warranty excluding Taxes (C) (In Rs.)	Specify % of Tax & Duties (D)	Tax Value E = (CxD) (In Rs.)	Balance AMC value after Warranty Period up to end of fifth year including Tax (F)(In Rs.)	Total Price including Taxes, Duties and AMC G=(C+E+F) (In Rs.)
5.2	RISC Servers	2							
5.3	SAN Storage	1							
5.4	SAN Switch	2							
5.5	Tape Library	1							
5.6	Backup Software	1							
5.7	Oracle RDBMS (Refer Annexure H(c))	4							

5.8	Oracle Application Server (Refer Annexure H(d))	4							
5.9	Rack	1							
5.10	UPS	2							
5.11	Backup Server	1							
5.12	Precision Air Conditioners	1							
5.13	Fire Alarm and detection system	1							
5.14	Fire Suppression System	1							
5.15	VESDA	1							
5.16	LAN Switch	2							
TOTAL (In Rs.):									

Date: _____



(Signature & Office Seal of the vendor)

Annexure – H (c)

Format for Submitting the License details for the Supply of Computer Systems on finance lease for a period of 5 years for replacement of existing hardware running oracle based Applications at BHEL, Jhansi - 21

ORACLE RDBMS

Item No	Item description	License Metric	Minimum Licenses to be quoted
1	Oracle Database Enterprise Edition (Latest Version)	Processor Perpetual	4
2	Diagnostics Pack	Processor Perpetual	4
3	Tuning Pack	Processor Perpetual	4
4	Database Lifecycle Management Pack	Processor Perpetual	4
5	Partitioning	Processor Perpetual	4
6	Oracle Multitenant (Oracle 12C feature)	Processor Perpetual	4
7	Oracle Real Application Cluster	Processor Perpetual	4
8	Oracle Advanced Security (Redaction Oracle 12C feature)	Processor Perpetual	4

Note:-Please note that Bidders need to quote for the Oracle RDBMS with minimum licenses required as above for all the RDBMS component .At the same time , Bidder also need to ensure the minimum 14000 SAPS for RDBMS across both RISC Server. Bidders should quote for additional Oracle licenses as per Oracle licensing policy if the quantity given as above is not sufficient to meet desired SAPS rating of 14000 per RISC Server for Database Layer.

[Annexure – H \(d\)](#)

Format for Submitting the License details for the Supply of Computer Systems on finance lease for a period of 5 years for replacement of existing hardware running oracle based Applications at BHEL, Jhansi - 21

ORACLE APPLICATION SERVER

Item No	Item description	License Metric	Minimum Licenses to be quoted
1.	Oracle Web logic Suite (Latest Version)	Processor Perpetual	4
2.	Web Logic Server Management Pack Enterprise Edition	Processor Perpetual	4
3.	Internet Developer Suite	Named User Plus	3

Note: -Please note that Bidders need to quote for the Oracle Application Server with minimum licenses required as above for all the Application Server component .At the same time, Bidder also needs to ensure the minimum 14000 SAPS for Application Layer across both RISC Server. Bidders should quote for additional Oracle licenses as per Oracle licensing policy if the quantity given as above is not sufficient to meet desired SAPS rating of 14000 per RISC Server for Application Layer.

Annexure-J**Qualifying Requirements**

Sr. No	Qualifying Requirements	Format attached As annexure	Whether Documents attached or not
1.	Signed copy of tender		
2.	Quoted for all items	Check	
3.	Acceptance of Technical Terms and Conditions	Clause-3 of Tender	
4.	Acceptance of Commercial Terms and Conditions	Clause-4 of Tender	
5.	Technical specification of the offered solution to be filled in the Check-list format issued as Requirements in the tender document	Clause-5 of Tender	
6.	Deviations, if any, as per BHEL's Format or "No-Deviations" Certificate	Annexure-A,B	
7.	Un-priced Commercial offer as per Price Format	Annexure-H(a, b)	
8.	Certificates from respective OEMs declaring support for a minimum period of seven years from the date of commissioning.	Annexure-E	
9.	Authorization letter from OEM citing reference of this tender	Annexure-E	
10.	Earnest Money Deposit (EMD) of Rs.2,00,000/-		
11.	Tender fee of Rs 1000/- + VAT@14%= Rs 1140/-		
12.	Copy of Purchase Orders and Project Completion Certificates for the projects executed within last 5 years. (Ref clause 2.2.2,2.3.4)		
13.	Certificate from oracle With Ref. to clause 2.2.6		
14.	Audited annual accounts indicating annual turnover of the bidder for the year 2010-11, 2011-12 and 2012-13 (Ref Clause 2.3.2)		
15.	Documentary proof for having registered office in India.		
16.	Self declaration regarding not banned/ blacklisted/ guilty of fraud by any court-of-law.		
17.	Self declaration regarding not banned/ blacklisted/ guilty of fraud by any unit/division of BHEL.		
18.	The Vendor should have PF and ESI/Medical Policy for persons deployed at BHEL Site.	PF/ESI Certificates	
19.	Income Tax Return of last three years along with the copy of PAN Card.		
20.	Copy of PAN based Service Tax Registration No.		
21.	Copy of Certificate of Incorporation		
22.	Non-Discloser Agreement	Annexure-D	
23.	Integrity Pact	Annexure-I	
24.	Acceptance to Participate in Reverse Auction(RA)	Annexure-C	Yes/ No

Note:-Your specific fulfillments of the above requirements are essential for consideration of your offer, otherwise your offer is liable for rejection.

Date: _____

(Vendor's Signature with seal)

Data Centre Hardware Connectivity Diagram

RAC / HA : *Real Application Cluster / High Availability*

————— *Optical Fiber Cannel*

----- *CAT 6 Cables*

