Stock Holding Corporation of India Limited
(StockHolding)

RFP Reference Number: IT-01/2024-25

Date: 16.Apr.2024

GEM Reference No.: GEM/2024/B/4866968

Design, Site Preparation, Supply, Installation, Testing, Commissioning, and 5 years of AMC Services of Non-IT Infrastructure at Mahape Data Center

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This RFP document is not an agreement and is not an offer or invitation by *StockHolding* to any parties other than the applicants who are qualified to submit the bids ("bidders"). The purpose of this RFP is to provide the bidder(s) with information to assist the formulation of their proposals. This RFP does not claim to contain all the information each bidder may require. Each bidder should conduct its own investigations and analysis and should check the accuracy, reliability and completeness of the information in this RFP and where necessary obtain independent advice. *StockHolding* makes no representation or warranty and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this RFP. *StockHolding* may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information in this RFP.

RFP Document Details

Name of Organisation	Stock Holding Corporation of India Limited
RFP Reference No.	IT-01/2024-25
Requirement	Design, Site Preparation, Supply, Installation, Testing, Commissioning, and 5 years of AMC services of Non-IT Infrastructure at Mahape Data Center
Interest free Earnest Money Deposit (EMD)*	₹25,00,000/-(Indian Rupees Ten Lakh Only) by way of RTGS/NEFT to be paid to Stock Holding Corporation of India Limited as Earnest Money Deposit should be submitted separately before submission of online bids by way of RTGS/NEFT on/or before bid end date StockHolding's Bank Account No.: 004103000033442 Bank: IDBI Bank (Nariman Point Branch) IFSC: IBKL0000004. Please share the UTR details to us on below mentioned email address.
Date of issue of RFP document	16th April, 2024
Onsite Visit	Interested bidders can schedule onsite visit between 19th April, 2024 to 24th April, 2024. After due-date, no onsite visits will be allowed For onsite visit, bidders can send email request to PRIT@stockholding.com.
Pre-bid online meeting	25th April, 2024 11:00 AM For participation in pre-bid meeting, bidders can send mail to PRIT@stockholding.com on or before 24th April, 2024 02:00 PM.
Email Address	PRIT@stockholding.com
Date and Time of submission of online bid	07th May, 2024 07:00 PM

This bid document is nontransferable.

[*] - Bidders registered under Micro, Small and Medium Enterprises (MSME) for specific trade are exempted from tender fees and EMD. Bidders shall upload the scanned copy of necessary documents as part of eligibility criteria documents.

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Overview – About Stock Holding Corporation of India Limited

StockHolding, a subsidiary of IFCI Limited was promoted by the public financial institutions and incorporated as a public limited company on July 28, 1986. StockHolding is a Government Organization, being a subsidiary of IFCI. StockHolding, one of the largest Depository Participants (DP) and also largest premier Custodian in terms of assets under custody, provides post trading and custodial services to institutional investors, mutual funds, banks, insurance companies, etc. StockHolding acts as a Central Record Keeping Agency (CRA) for collection of stamp duty in 21 States and Union Territories on pan India basis. StockHolding is one of the largest Professional Clearing Members of the country.

In Retail segment besides DP services, StockHolding offers stock broking services through its wholly owned subsidiary SHCIL Services Ltd. (SSL). StockHolding is also into distribution of various investment and retirement solutions viz. Fixed Deposits, Bonds & NCDs of reputed institutes and corporates, Mutual Fund Schemes, Initial Public Offers (IPOs) and National Pension System (NPS). RBI has designated StockHolding as one of the Agency Banks to distribute GoI Bonds in dematerialized form. StockHolding also offers the Government of India Sovereign Gold Bonds. StockHolding is a corporate agent registered with IRDAI for distribution of insurance (Life, Health & General) products.

StockHolding has its registered office at Mumbai, main operations office at Navi Mumbai and operates through its over 200 retail branches all over India.

Submission of Proposal:

StockHolding invites e-tender through GeM Portal, in two bid system (Technical and Commercial bid), from bidders having experience in design, supply, installation, commissioning and maintenance of Non-IT Infrastructure of Data Centres.

Submission of Bids:

The online bids will have to be submitted within the time specified on website https://gem.gov.in/ the following manner:-

1. Technical Bid (.pdf files)
2. Commercial Bid (.pdf files)

Objective of the RFP

This RFP is being floated to select the most appropriate bidder to Design, Site Preparation, Supply, Installation, Testing, Commissioning, and 5 years of AMC services of Non-IT Infrastructure at Mahape Data Center. The model of the proposed Data Center (DC) should be capable of enhancing capacities by incrementally augmenting the infrastructure. The monitoring of the proposed DC is planned through an Integrated Building Management System (IBMS) and therefore, the equipment's to be installed in the proposed Data Centre should be BMS compliant.

As a part of this project, Stock Holding Corporation of India Limited (StockHolding) invites eligible bidders for supply, installation, commissioning and AMC Services of Data Centre Solutions, as per the requirements stipulated in this RFP.

Due Diligence:

The bidder is expected to examine all instructions, Forms, Terms, Conditions and Specifications in this RFP. Bids shall be deemed to have been made after careful study and examination of this RFP with full understanding of its Implications. The Bid should be precise, complete with all details required as per this RFP document. Failure to furnish all information required by this RFP or submission of Bid not as per

RFP requirements will be at the bidder's risk and may result in rejection of the bid and the decision of *StockHolding* in this regard will be final and conclusive and binding.

Cost of Bidding:

The bidder shall bear all costs associated with preparation & submission of its bid and *StockHolding* will in no case be held responsible or liable for these costs, regardless of conduct or outcome of the bidding process

Clarifications regarding RFP Document:

- Before bidding, the bidders are requested to carefully examine the RFP Document and the Terms and Conditions specified therein, and if there appears to be any ambiguity, contradictions, gap(s) and/or discrepancy in the RFP Document, they should forthwith refer the matter to *StockHolding* for necessary clarifications.
- A bidder may obtain clarification for their queries on this RFP via email to PRIT@stockholding.com
- *StockHolding* shall not be responsible for any external agency delays.
- *StockHolding* reserves the sole right for carrying out any amendments / modifications / changes in the bidding process including any addendum to this entire RFP
- At any time before the deadline for submission of bids / offers, *StockHolding* may, for any reason whatsoever, whether at its own initiative or in response to a clarification requested by bidders, modify this RFP Document.
- It may be noted that notice regarding corrigendum/addendums/amendments/response to bidders' queries, etc., will be published on StockHolding's website only. Prospective bidders shall regularly visit StockHolding's same website for any changes/development in relation to this RFP.
- *StockHolding* reserves the rights to extend the deadline for the submission of bids, if required. However, no request from the bidders for extending the deadline for submission of bids, shall be binding on *StockHolding*.

- StockHolding reserves the right to reject any or all the responses to RFPs / Bids received in response to this RFP at any stage without assigning any reason whatsoever and without being liable for any loss/injury that Bidder might suffer due to such reason. The decision of StockHolding shall be final, conclusive and binding on all the parties directly or indirectly connected with the bidding process.
- It may be noted that bidder mentioned in the document may be either OEM/Distributor/System Integrator (SI).

Requirement details with Terms & Conditions

(1) **Eligibility Criteria**

Only those Bidders who fulfil the following criteria are eligible to respond to the RFP. Document/s in support of all eligibility criteria are required to be submitted along with the Technical Bid. Offers received from the bidders who do not fulfil any of the following eligibility criteria are liable to be rejected.

For Bidder Company:

Criteria (Documents to be submitted online along with Technical Bid)

SN.	Criteria	Documents to be submitted by bidder
1	The Bidder should be a registered Company in India as per Indian Companies Act, 1956 or Indian Companies Act, 2013 having minimum of 5 years of experience of Managing Non-IT Infrastructure of data Centre	Documentary Proof to be attached (Certificate of Incorporation) and Self-declaration from bidder on their letter head duly signed by authorised signatory for experience
2	Bidder should have an average annual turnover of at least ₹25 Crores per annum for last three financial years (2020-21, 2021-22 and 2022-23). It should be of individual entity and not of Group of entities	Copy of CA certificate mentioning the annual turnover over the past 3 years
3	Bidder should not be blacklisted by any Government, Government Body, PSU, Bank, Autonomous body and any other entity for any reasons.	Self-declaration by the bidder on it Letter Head duly signed by the Authorized Signatory
4	Bidder should have positive Net Worth in the last 03 (three) audited financial years	Copy of CA Certificate for past 03 (three) years
5	Bidder should have valid ISO 9001:2015 Certification	Valid Certificate need to be provided
6	The bidder should have completed at least 02 (two) Tier III certified projects from Uptime in the past 3 years, OR The bidder should have completed at least 2 Rated-3 certified projects from TIA-942 in the past 3 years.	PO/Completion certificate should be attached and signed by Authorised signatory
7	Bidder should have following certified Datacenter Professionals on company payroll and is should be	A copy of the Valid certificate shall be enclosed with the bid

	working with the bidder for a minimum of 1 year: • Minimum 5 employees CDCP, CDCS, CDCE or 2 ATD • Minimum 5 employees having Project Management Personnel (PMP/Prince2) certification	along with PF/ESIC deposit slips from the organization verifying the employment of the personnel with the organization for the past 1 year or more as on date of release of RFP.
8	Bidder partner should have minimum 50 Data Centre (Non-IT staff) persons on the payroll of the company	Copy of EPF challan showing the number of employees And Self-Certification signed by HR head and counter signed by Authorized Signatory
9	The bidder must have successfully implemented / managed at end client sites at least 02 (two) numbers of data centers in India in last 05 (five) years. Each of the data centers should be with minimum of UPS feeding power of 400 KVA means supply ,installed, testing and commissioned and minimum feeding cooling load of 150 Tons (excluding redundancy) means supply, install, testing and commissioned (UPS and cooling to be considered only for server area) along with Fire- fighting and suppression systems with high end integration of building management system and all the allied works required for successful installation & completion of the Data Centre	PO/Completion certificate should be attached and signed by Authorised signatory
10	The bidder should have built at least 02 (two) data centre in India out of which; 3 **Similar completed works each costing not less than ₹ 10 Crores each OR 2 Similar completed works each costing not less than ₹ 15 Crores each OR 1 Similar completed work costing not less than ₹ 30 Crore ** Definition of Similar Work: • The scope of work should include Data Center	PO/Completion certificate (on the name of bidder only) should be attached and signed by Authorised signatory. End customer completion certificate should be submitted in case the order is placed by a private firm on behalf of the Govt. end customer.

	Design & Build of minimum 100 Rack and 2MW IT Load including SITC of UPS (in N+N), PACs/PAHU/Inrow (in N+1), Electrical Panels (in N+N), Electrical Cables, BBT for Rack Distribution, Complete IBMS system including Fire Suppression System along with BMS software, Generators (optional), passive network cabling (optional)etc. • It should not include any IT equipment (servers, storages, and networking switches) which are installed in the 42U server racks as part of the scope. • It should be a turn-key project with the complete end-to-end scope in the name of the bidder only.	
11	The bidder should have undertaken/ completed the activities of providing on-site support and facility management / O & M services to at least 02 (two) data centres during last 5 years in India. The scope of the activity should cover operation and maintenance of Electrical Systems, Cooling systems (Chillers, PAC/PAHU /In ROW etc.) UPS and Battery, IBMS etc. Bidder to provide the documentary evidence that minimum 3 technical manpower had deployed at site and maintaining electrical system and cooling system. Such Data centre having minimum cooling load of 150 Tons. The value of the project; 01 Project worth ₹ 1 Crore Or, 02 Projects worth ₹ 60 Lacs each Or, 03 Projects worth ₹ 50 Lacs each	Documentary Proof to be attached along with Purchase Order / Contract copy.
12	Bidder should have fully operational service/support office in Maharashtra for last 3 years.	Address of the bidder's service support center(s)

Eligibility Criteria (**For Proposed Resources – Total 7 nos.**)

(A)	Resource Type	Qualification	Experience	Certification Required
1	Data Centre Facility	Minimum Graduate / Technical Diploma	1. Experience in design, implementation of Data	▪ Relevant valid Certification in

	Manager (DCFM)	Holder in IT / Computers / Electrical / Mechanical or related field with minimum 10 years of experience in design, implementation of Data Centre BMS equipment's	Centre Power management, Cooling Management, BMS management, Civil infrastructure and Passive cabling infrastructure management 2. Experience in design, implementation / managing for Data Centre Non-IT infrastructure of at least 3 Data Centre's project in India during last 5 years	Data Centre Management Services ▪ Experience Certificate / relevant documents for Data Centre Projects
2	Data Centre Engineer (DCE)	Minimum Graduate / Technical Diploma Holder in related field with minimum 05 years of experience in Data Centre Non-IT Infrastructure	Experience in managing BMS System / Civil infrastructure / Passive cabling infrastructure / Power systems etc.	Relevant valid Certification in Data Centre Management Services
(B)	**Criteria**		**Documents to be submitted by bidder**	
1	Proposed resources must be on the Payroll of either Prime bidder or Consortium partner (out-sourcing staff not allowed). However, proposed Project Manager must be on the Payroll of Prime bidder.		▪ Last 3 Months Payslips ▪ Offer letter of present organization	

(2) **Validity of bid:**

Bid should be valid for a minimum period of **90 days** in the event of delay in issuance of Purchase Order (PO) by StockHolding.

(3) **Warranty:**

All the equipment and components supplied must have 05 (five) years onsite comprehensive warranty from date of successful installation,

(4) **Payment Terms:**

a. Supply and Installation Cost (New Purchase):

Sl. No	Equipment details	Payment Terms
1	2 X 150 KVA UPS in 200 KVA frame size along with Li Ion Battery bank in Rack for 10 minutes back up time with 5 years warranty and EOL will be 10 years along with 2 X 300 Amps MCCB as separate isolator electrical panel. Scope is including appropriate size of Cu cabling for input as well as output.	▪ 70% payment on completion of delivery of bill of material & on submission of invoice, delivery challan, and against physical verification and acknowledgement by StockHolding. ▪ 20% payment will be released on successful installation and sign-off from StockHolding. ▪ Balance 10% payment for above charges will be released post successful Go-live of the project.
2	DX based PAC Units (7 X 10 Tr) with 5 years warranty	▪ 70% payment on completion of delivery of bill of material & on submission of invoice, delivery challan, and against physical verification and acknowledgement by StockHolding. ▪ 30% payment will be released on successful installation and sign-off from StockHolding. ▪ Balance 10% payment for above charges will be released post successful Go-live of the project.
3	Raised floor tiles in Server room and Network room	100% payment for this activity will be released post successful Go-live of the project.
4	Equipotential earthing grid below raised floor - 25 X 3 mm Cu strip in 2 X 2 meter grid type. Earthing wire of 25 sq mm Green colour to be bolted one end to this grid and other end to the rack earthing point at two locations. Existing raised floor pedestal to be grounded with same size wire to this earthing grid. Each alternate pedestal is required to be grounded. This requirement is for server area, PAC area and network area. Scope of work also included four nos. earthing pits as specified above. At four corners of equipotential grid needs to be grounded to these earthing pits.	100% payment for this activity will be released post successful Go-live of the project.

	Location of earth pits will be at ground floor exactly back side of server area.	
5	BMS System software along with 32" LED monitor, Integration of PAC , all load managers, PDU, fire inputs, I /O modules, programming ,control and monitoring.	100% payment will be released on successful installation and sign-off from StockHolding.
6	Removing, dismantling etc. job as per project requirement.	100% payment for this activity will be released post successful Go-live of the project.
7	Extension of Novec Piping along with new Nozzle in each POD.	100% payment for this activity will be released post successful Go-live of the project.
8	Blanking Panels	100% payment for this activity will be released post successful Go-live of the project.

b. For FMS Services: Monthly on submission of Invoice and based on the number of resources deployed in StockHolding (in that quarter) from the date of joining (on pro-rate basis) based on attendance details duly certified by StockHolding official(s). One day leave is permissible per month for each of the deployed technical qualified (skilled) resources. Payment against absenteeism will be deducted from the payment(s).

c. For AMC Services (Existing Equipment's): Quarterly advance payment. Last quarter payment will be released at the end of the quarter after deducting applicable penalty if any.

d. Bank Guarantee (this will be 5% of the total Contract value value) to be submitted along with acceptance of the PO issued by StockHolding. All Payments as mentioned above will be released only after submission of the required Bank Guarantee (BG).

e. All Applicable taxes payable extra at actual.

f. Applicable TDS, etc. will be deducted from the payment(s)

(5) **Bank Guarantee (BG)**

Successful Bidder shall, at own expense, deposit with the StockHolding, within seven (7) days on issuance of PO, a Bank Guarantee (BG) for the value of 5% of total Contract value from scheduled commercial banks. This Bank Guarantee shall be valid up to 60 days beyond the completion of the contract period.

Bank Guarantee may be discharged / returned by StockHolding upon being satisfied that there has been due performance of the obligations of the Bidder under the contract. However, no interest shall be payable on the Bank Guarantee.

Stockholding reserves the right to invoke the BG in the event of non-performance by the bidder.

(6) **Taxes & levies:**

Applicable taxes payable at actual as per prevailing rate of taxes as per Government notification. Applicable deduction if any may / will be recovered (deducted) from the payment(s).

(7) **Refund of Earnest Money Deposit (EMD):**

a. EMD will be refunded through NEFT to the successful bidder on providing (a) an acceptance confirmation against the PO issued by StockHolding and (b) submission of Performance Bank Guarantee.
b. In case of unsuccessful bidders, the EMD will be refunded to them through NEFT within 15 days after selection of successful bidder/issuance of PO to successful bidder.

(8) **Scope of Work (SOW)**

a. Supply, install, testing and commissioning of New DX based variable flow PAC units, raised floor, BMS system including software and integration with new and existing field devices.
    - Replacement of existing raised floor tiles only. Equipotential earthling grid below existing raised floor along with new earthing pits.
    - Warranty should be for five years for new PAC units.
    - The Rack cold aisle Containment with frame, sliding glass doors and doors to be opened manually and to be closed automatically.
    - Dismantle, removal of existing operating PAC units under Buy Back scheme.
b. Provide Back-to-back AMC from respective OEM for devices not attaining EoL (End of Life) and for EoL devices AMC need to be provided only by respective bidder.
c. Provide FMS services to monitor Non-IT equipment's for the period of 5 years.

A. Data Centres on Turn-key Basis

The Data Centre is required to be built on 'Turn-key' basis. The successful bidder should build the entire data center infrastructure which includes replacement of existing raised floor tiles only by new one of same UDL and Point load capacity, environmental controls like humidity, temperature etc., Replacement and buyback of existing PACs with Cu Piping Indoor and outdoor unit by new PACs unit , replacement and by back of existing 2 X 250 KVA monolithic UPS along with batteries ,DC breaker, battery stand by new 2 X 150 KVA modular UPS along with Li Ion battery for 10 minutes back and 10 years end of life (

EOL),new electrical isolators for UPS ,NEW BMS system and integration with existing field devices and new equipment's as PACs ,UPS ,LI ION Battery etc. as specified. The rack Cold Aisle Containment for POD-1, POD2 and POD-3 with frame, sliding glass doors and doors to be opened manually and to be closed automatically. The layout drawing provided is with Point of Delivery Architecture (POD). POD architecture is a repeatable in design pattern, and its components maximize the modularity, scalability, and manageability. POD architecture is required to be with COLD aisle containment. The responsibility towards required material/items/equipment, work, man power etc. rests with the successful bidder. The overall requirements and available information/ data/documents are included in this Section. The bidders are advised to go through same and visit the sites before working out the details in this perspective and submit the solution document complete in all respects.

1) General Requirements:

The general requirements applicable to the data centres are given below. Other than these requirements, depending on the site conditions, the bidder may propose appropriate changes in other requirements. However, the responsibility towards successful installation and commissioning and smooth running of data centres rests with bidder only.

a. The solution shall comprise of supply, installation, testing, commissioning training and handing over of all materials, equipment, hardware, software, appliances and necessary labour to commission said system complete with all the required components strictly as per the latest IS, IEC, IEEE, ASHRAE, ASHRAE TC9.9 2017,NBC etc. codes.

b. Also, the scope includes the supply, installation & commissioning of any material or equipment including civil works, electrical work that are not specifically mentioned in the specifications and design details but are required for successful commissioning of the project.

c. The bidder shall provide detailed design, documentation, make, and model, efficiency including user, system and operation manuals along with the necessary diagrams, design drawings and details bifurcation of Bill of Quantity (BOQ) along with details description. Design drawing should include but not limited equipment sizing and selection along product selection calculations etc. with clear sectional drawings for data centre cooling equipment's and electrical equipment's i.e. PAC,UPS ,Li Ion battery rack, electrical isolator etc.

d. The bidder shall take the necessary clearance / approval from StockHolding for the drawings, design, quality of material, make and model of the quoted material etc. prior to the execution of the project.

e. Electrical power and water during construction will be provided at one location. Client shall not provide any accommodation for the contractor and his staff including labor.

f. The scope of installation, configuration, integration and commissioning shall mean to install and configure all components and subsystems integrating the Building Management System with the required components, integrating the entire facility and make the system operational as per scope of work.

g. To assess the efficiency of the data centres the power usage effectiveness (PUE) will be computed as

$$PUE = \frac{\text{Total Power}}{\text{IT power}}$$

2) Factory Test Reports:

Bidder shall provide factory test report for all products after testing each parameter of products as per their standard test procedure.

- PAC
- Raised floor tiles
- UPS
- Li Ion battery

3) Design of Data Centre

The proposed designs and indicative drawings enclosed in the RFP document are for reference and for the purpose of bidding. The bidder so finalized would be required to make the necessary shop drawings within the layouts so as to arrive at a final scheme in line with the requirements and in accordance with the requirements of Indian standards, IEC, IS,IEEE,NBC etc. However no change whatsoever in the price schedules would be allowed after the award of the work and the price shall remain firm throughout the project and the entire works are to be executed within the quoted price schedules.

The shop drawings during execution should include the following, but is not limited to,

a. Floor plan with design layout and detailed drawings, showing necessary sections etc.
b. Layout of raised floor and false ceiling layout
c. Layout of UPS Room
d. Technical Details of UPS and Li Ion Battery

4) Design Inputs

Tables given below are the details of exact load parameters. These values are given to the bidders to come out with appropriate configuration and sizing. The major sub systems of the DC infrastructure are:

a. Buy back of Existing UPS along with Batteries.
b. Buy back of existing PAC unit with Indoor as well as Outdoor unit and all accessories.

c. Existing False Ceiling

d. Replacement of existing raised floor tiles only

e. Replacement of existing PAC units with Air cooled condenser and related accessories by new DX based PAC unit with variable flow , CU piping , Insulation on piping , Cable tray for piping, Outdoor unit etc. work

f. New BMS system and integration with existing and new field devices.

g. Replacement of existing 2 X 250 KVA monolithic UPS units with existing battery bank and accessories by new 2 X 150 KVA UPS with 200 KVA frame size and LI Ion Battery rack with 10 minutes battery backup for 10 years End of life. Battery sizing to be on 150 KVA rating.

h. New CU Cabling

i. New Isolator for 2 X 150 KVA UPS of 300 Amps rating 4 pole.

The specifications and requirement of the entire solution is stipulated in the RFP with respect to the design and solution, certain indicative inputs like layout, etc. are provided. Bidder may follow the indicative inputs provided in this RFP or come out with innovative design which is optimal and cost effective without violating any of the specifications given.

The envisaged IT load for data centre: 130 KW max.

	Sr. No.	Rack	Input Voltage	Actual UPS1 Load in Amp	Actual UPS2 Load in Amp	UPS 1 + UPS 2 Amps	Load Power Factor	UPS 1 + UPS 2 - Calculated KW	UPS 1 + UPS 2 - Calculated KW - Overlap - Existing + Migration	UPS 1 + UPS 2 - Calculated KW-After Migration
POD-1	1	RACK-01	215	4.71	5.89	10.60	0.95	2.17	2.17	2.17
	2	RACK-02-EXISITING IBM STORAGE	215	4.11	5.9	10.01	0.95	2.04	4.09	2.04
	3	RACK -03-EXISITING IBM STORAGE	215	3.24	2.92	6.16	0.95	1.26	2.52	1.26
	4	RACK-04	215	1.27	0.78	2.05	0.95	0.42	0.42	0.42
	5	RACK-05	215	11.7	11.09	22.79	0.95	4.65	4.65	0.00
	6	RACK-06	215	2.41	6.17	8.58	0.95	1.75	1.75	1.75
	7	RACK-07	215	0.6	1.19	1.79	0.95	0.37	0.37	0.00
	8	RACK-08	215	0.6	0.6	1.20	0.95	0.25	0.25	0.25
	9	RACK-09	215	0	4.24	4.24	0.95	0.87	0.87	0.00
	10	RACK-10	215	5.57	9.2	14.77	0.95	3.02	3.02	0.00
	11	RACK-11	215	10.5	0	10.50	0.95	2.14	2.14	0.00
	12	RACK-12-EXISITING IBM TO NEW IBM	215	4.91	1.24	6.15	0.95	1.26	1.26	1.26
	13	RACK-13-EXISITING IBM TO NEW IBM	215	14.43	13.26	27.69	0.95	5.66	5.66	5.66
	14	RACK-14-IBM TAPE LIBRARY	215	0.78	1.28	2.06	0.95	0.42	0.42	0.42
	15	RACK-15-EXISITING ORACLE TO NEW ORACLE	215	4.03	8.63	12.66	0.95	2.59	5.17	2.59
	16	RACK-16-EXISITING ORACLE TO NEW ORACLE	215	4.42	3.84	8.26	0.95	1.69	3.37	1.69
		DUMMY RACK								
					Total			**30.54**	**38.11**	**19.49**

		Rack	Input Voltage	Actual UPS1 Load in Amp	Actual UPS2 Load in Amp	UPS 1+ UPS 2 Amps	Load Power Factor	UPS 1 + UPS 2 - Calculated KW	UPS 1 + UPS 2 - Calculated KW - Overlap - Existing + Migration	UPS 1 + UPS 2 - Calculated KW-After Migration
POD-2	1	RACK 23- EXISITING IBM STORAGE TO NEW STORAGE	215	0	8.35	8.35	0.95	1.71	3.41	1.71
	2	RACK 24- NEW IBM TAPE LIBRARY	215	1.88	0	1.88	0.95	0.38	0.38	0.38
	3	RACK 25- NEW CLOUD SET UP	215					9.50	9.50	9.50
	4	RACK 26- NEW IBM STORAGE						1.40	1.40	0.00
	5	RACK -27- NEW ORACLE						9.30	9.30	9.30
	6	RACK 28- NEW ORACLE						6.60	6.60	6.60
	Sr. NO.	**SDMS**								
	1	RACK 20	215	6.27	6.38	12.65	0.95	2.58	2.58	2.58
	2	RACK 19	215	6.27	8.85	15.12	0.95	3.09	3.09	3.09
	3	RACK 21	215	4.46	5.42	9.88	0.95	2.02	2.02	2.02
	4	RACK 22	215	3.75	2.23	5.98	0.95	1.22	1.22	1.22
	Sr. NO.	**SSL**								
	1	RACK 18	215	8.21	6.7	14.91	0.95	3.05	3.05	3.05
	2	RACK 17	215	8.57	8.35	16.92	0.95	3.46	3.46	3.46
					Total			**44.30**	**46.01**	**42.90**

	Network Area									
	Sr. No.		**Input Voltage**	**Actual UPS1 Load in Amp**	**Actual UPS2 Load in Amp**	**UPS 1+ UPS 2 Amps**	**Load Power Factor**	**UPS 1 + UPS 2 - Calculated KW**	**UPS 1 + UPS 2 - Calculated KW - Overlap - Existing + Migration**	**UPS 1 + UPS 2 - Calculated KW-After Migration**
POD-3	1	Rack -1	215	2.17	3.31	5.48	0.95	1.12	1.12	1.12
	2	Rack -2	215	1.411	0	1.411	0.95	0.29	0.29	0.29
	3	Rack -3	215	0	0	0	0.95	0.00	0.00	0.00
	4	Rack -4	215	0.62	0.811	1.431	0.95	0.29	0.29	0.29
	5	Rack -5	215	0.8	1.62	2.42	0.95	0.49	0.49	0.49
	6	Rack -6	215	2.23	0	2.23	0.95	0.46	0.46	0.46

	7	Rack -7	215	0	0	0	0.95	0.00	0.00	0.00
	8	Rack -8	215	0	0	0	0.95	0.00	0.00	0.00
	9	Rack -9	215	1.51	0.98	2.49	0.95	0.51	0.51	0.51
	10	Rack -10	215	0.73	0	0.73	0.95	0.15	0.15	0.15
	11	Rack -11	215	0.92	0.866	1.786	0.95	0.36	0.36	0.36
	12	Rack -12	215	1.13	1.23	2.36	0.95	0.48	0.48	0.48
	13	Rack -13	215	1.85	0	1.85	0.95	0.38	0.38	0.38
	14	Rack -14	215	1.61	0	1.61	0.95	0.33	0.33	0.33
					Total			**4.86**	**4.86**	**4.86**

	Summary				
Sr. No.	**Description**		**UPS 1 + UPS 2 - Calculated KW**	**UPS 1 + UPS 2 - Calculated KW -Overlap - Existing + Migration**	**UPS 1 + UPS 2 - Calculated KW- After Migration**
1	IT Load - Server Area with Diversity and Design Margin	Kw	116.00	130.39	96.71
2	IT Load - Network Area with Diversity and Design Margin	Kw	5.83	5.83	5.83
3	Total IT Load - Network + Server Area	KW	121.83	136.22	102.54

5) Requirements towards Civil/Interior work

a Civil architecture and preparation of Data centre: Interiors of the data centre (including, civil works, foundation work, raised floor tile, sliding door frame for containment etc.)

b Raised flooring: Suitable raised false flooring as per prevailing standards should be provided as per site requirements. The entire Access floor system shall be made from high density cementations board and provide Class O as per BS 476 PART 6 for Fire propagation index and Class 1 as per BS 476 Part 7. Fire Ratings tested as per CIRC 91/61 or BS 476 Part 6 & 7 fire resistance up to 60 min as per NFPA. System should have antistatic property and air leakage resistance. The system shall be able to withstand a minimum UDL of 1500 kg per sq meter and a point load of minimum 300 kg and rolling load of minimum of 200 Kg.

c Panel should meet the below requirements:

- The panel shall be coated with epoxy coating on the exposed surface. Have an infill of light weight cementations material. Insulated against heat and noise transfer. Panels shall be finished with High Performance Anti-Static Laminate.. Panels will remain flat through and stable unaffected by humidity or fluctuation in temperature throughout its normal working life. Panels will provide for impact resistance top surfaces minimal deflection, corrosion resistance properties and

shall not be combustible or aid surface spread of flame. Panels will be insulated against heat and noise transfer. Panels will be 600 x 600mm and fully interchangeable with each other within the range of a specified layout. Panels shall rest on the grid formed by the stringers which are bolted on to the pedestals. Panels shall be finished with anti-static 0.9 mm Laminate and thick plastic edge material that is self-extinguishing and will be PVC free. Panel should withstand a Concentrated Load of minimum 300 Kg applied on area 25mm x 25mm in the centre of the panel which is placed on four steel blocks without deflecting more than 2.5mm and without setting permanently more than 0.20mm

- Pedestal- Existing to be used
- Bidder to consider to providing 2 nos. 2-point panel remover, lead, lift, steps for 600mm raised floor etc.

d Opening for the Cables or other utility services which are coming inside the building needs to be sealed by Fire resistance board system, water soluble fire retardant solutions, fire expanding foam etc. having minimum of 2 hours' fire rating when tested in accordance with BS 476 part 20 and UL 1479 for horizontal and vertical openings in RCC slabs, Beams, walls, Brick masonry or Gypsum partitions for passing service shafts. The service lines could be of various types like electrical cables, cable trays or metal pipes etc. The foam shall have Acoustic property as per DIN 4109 and Smoke and Air Seal. The Foam should have the feature of Re penetrability for future maintenance or repair activities. Fire soluble cable coating should be suitable for protecting against spread of flame on timber panels and tested as per IEC 332 part 3 standard for reduced spread of flame & tested as per FM Class 3971. It should have no derating effect on cables, free from fiber, asbestos, odourless and solvent free, flexible when dry after application.

e HOUSE KEEPING: The bidder is responsible for keeping the site clean and deep cleaning by removing all the debris etc. every day, using adequate covering/tarpaulin sheets etc. to cover the any areas required (client property etc.). All cleaning equipment's like heavy duty vacuum cleaners etc. to be according to the approval.

6) Requirements towards Electrical Work

a Existing electrical equipment's available at site and need to be used and to be integrated on in new BMS platform. Existing BMS platform is in running condition with integrated existing utilities.

Sr. No.	Description	Rating	Quantity	Make
1	LT Panel -1		1	
2	LT Panel -2		1	

Sr. No.	Description	Rating	Quantity	Make
3	UPS-1	250 KVA	1	
4	UPS-2	250 KVA	1	
5	PDU-1	250 KVA	1	
6	PDU-2	250 KVA	1	

b UPS System:

- Existing UPS of 2 X 250 KVA along with SMF batteries needs to be taken as by back. Existing UPS make is of Emerson with monolithic construction. Batteries are one year old and with 30 minutes back up at 250 KVA. These are on MS stand. Bidder to consider entire thing for by back including DC breaker, DC cabling, MS stand etc.
- Modular UPS for IT load -Location of these new 2 X 150 KVA UPS with frame of 200 KVA UPS along with Li Ion battery rack will be in UPS room as shown in the drawing. This UPS should be with standalone separate 300 Amps 4 Pole MCCB isolator, location of same as shown in the drawing. Existing UPS are at two different locations as shown in the drawing along with two numbers of DC LT Panels. As per new design UPS along with Batteries to be in one room. Bidder to consider appropriate length of the cable in the scope of appropriate rating. These cables should be 1 Core Cu only. The UPS and associated equipment shall operate in conjunction with a primary power supply and an output distribution system to provide quality uninterrupted power for mission critical, electronic equipment load.
- Each UPS Frame shall be sized for kW =kVA load i.e. Unity Output power Factor with no derating at 40 Degree Celsius. Design of UPS should be Insulated-gate bipolar transistor (IGBT) rectifier and 3 level IGBT inverter switching with double conversion as per IEC 62040-3 operating modes. Inverter Switching Frequency shall be ≥18 kHz to keep the noise minimum. Inverter shall be PWM controlled using DSP logic. Analog control shall not be acceptable. Each UPS shall be of modular architecture with Power Unit & removable sub power modules rating from 20kW to 30 kW achieve highest system protection and UPS should be with live swappable modules. Failure of any sub power module in individual UPS Frame shall not lead to entire Frame Capacity down but only the failed sub power module capacity shall go down. i.e. in case of Failure of any one Sub Power module, rest of the available power module in the frame shall continue to operate in normal double conversion mode of operation with reduced capacity. This shall also be applicable to all UPS's operating in parallel configuration.
- The UPS shall be housed in a freestanding cabinet with casters and shall contain Input, Output, and Static Bypass isolator. Steady state voltage regulations will be

within 1% of nominal output voltage, linear load harmonics distortion should be less than 3% and non-liner load harmonics distortion should be less than 5%. UPS should be capable of 100% unbalanced load. Efficiency of UPS should be minimum 95% from 25% to 75% in double conversion mode. Noise generated by UPS under normal steady state condition should not be more than 70 DB as per ISO 7779. UPS should be ROHS complied product. All serviceable components to be from front. UPS display should show the battery status monitoring, UPS mode, Alarm (Audio and visible), Events etc. The UPS communication capability should be able to integrate into any industry standard Building Management System (BMS). Adequate protections for UPS, for rectifier, bypass, battery, battery against overload, short circuit, battery over charging, battery over discharging, transients, surges (as per IEEE 587) etc. needs to be considered as per IEC 62040-1. Built in SNMP card, MODBUS TCP IP, Dry contacts card to be standard feature in UPS. Should comply with UL 1973/ CE/IEC 62619 /UN 38.3 for LITHIUM ION BATTERIES.

- The UPS shall be have self-regulating and self-protection against Over voltage, Powerline surges, Under voltage and overcurrent induced by the mains, Sudden changes in the output load and short circuits at the output, Transient, surges, voltage spikes shall be suppressed .Critical Cards within UPS which are directly exposed to air should be conformably coated to protect the UPS from Moisture and Conductive dust. IP rating of Min IP 20. It must be possible the connection of minimum 4 units of same size to set up a distributed parallel system, in order to increase system capacity or achieve system redundancy. Parallel control logic must ensure a high load sharing accuracy (less than 5% of nominal power) and no single points of failure. That is a distributed control design must be implemented (no master/slave architecture), so that any failure in one equipment won't impact operation of the whole parallel system. Parallel control connections must provide high noise rejection. UPS to Battery Inter connecting cables, Links- Racks and standard accessories Connections to the Incoming terminals will be provided and take the load from Outgoing terminals of the UPS. All other equipment necessary to operate the UPS is in the scope of the bidder. The UPS shall be housed in freestanding cabinets. The mechanical structure of the UPS shall be sufficiently strong and rigid to withstand handling and installation operations. The sheet metal elements in the structure shall be protected against corrosion by a suitable treatment, such as zinc electroplating, bi-chromatin, epoxy paint, or an equivalent. The UPS shall be designed for forced air cooling. Air inlets shall be provided from the front bottom of the UPS enclosure. Air exhaust shall be from the top portion of the unit. STANDARDS - Product should confirm to minimum applicable standards as IEC 62040-3 UPS PERFORMANCE, IEC 60950-, CE, VDE,

UPS Input:

AC input nominal voltage	340/380/400/415/440/460 VAC, three phase 50 Hzs, 5 wire (L1+L2+L3+N+G)
AC input voltage window	340V to 460V(@ 400V)
Input frequency range	49-51Hz
Input Power Factor	> 0.99 at 100% load
Input Current Distortion	< 4% at 100% load

UPS Output:

AC Output Nominal Output	(Customer configurable)-380VAC, 400VAC or 415VAC, Three phase five wire, 50 Hz
AC output voltage distortion	Max. 2% @ 100% linear load, Max. 5% @ 100% non-linear Load
AC output voltage regulation (Static)	+/-1%
Voltage Transient Response	+/- 8% maximum for 100% load step
Voltage Transient Recovery	within < 50ms recovery time
Output Voltage Harmonic Distortion	<3% THD maximum for a 100% linear load <5% THD maximum for a 100% non-linear load
Overload Rating- Online	125% - 1 minute; 150% - 10 Sec
System AC-AC Efficiency	Greater than 95% from 25% load to 75% load in Double Conversion Mode
Output Power Factor Rating	unity power factor KVA=kW @ 40 Degree Celsius without any de rating from 0.8 lagging to 0.9 leading
Output frequency	50 +/- 1Hz tracking
Output connectors	Three phase: Hardwire 5-wire (3 Phase + N + G)

ENVIRONMENTAL

Operating Ambient Temperature	+ 20 to +30°C
Relative Humidity	0 to 95% non-condensing
Operating altitude	
Audible noise	<70 dbA
Conformal coating PCBs	Required

Bidder to submit GTP for UPS in below format

Sr. No	Description	Requirement	Bidder to Specify for 150 KVA
1	MODEL	please specify	
1.1	TECHNOLOGY	IGBT Rectifier & IGBT Inverter, Microprocessor based, true online double conversion, Online Transformer free Technology ,Modular Technology	
1.2	Inverter	IGBT	
1.3	Rectifier	IGBT	
1.4	Max. Permissible Non-linear loads	100%	
1.5	Max. unbalanced load	100%	
2	PHYSICAL Dimension & Weight		
2.1	Construction	Compact. Modular design	
2.2	UPS Floor Space		
2.2	Ventilation	Specify	
2.3	UPS Dimension & weight		
	Length in MM	Specify	
	Width in MM	Specify	
	Height in MM	Specify	
	Weight in kgs	Specify	
2.4	Li Ion Battery Bank (Dimension and weight)		
	Length in MM	Specify	
	Width in MM	Specify	
	Height in MM	Specify	
	Weight in kgs	Specify	
	Accessibility (front & back with clear Dimension to be specified)	Specify	
	Cable connection Bottom for Input & Output.	Specify	
	Parallel Configuration up to no of Module.	Specify	

	Minimum Input circuit breaker required to be specified	Specify	
3	INPUT		
3.1	Voltage	380V -400V- 415V -433V	
3.2	Voltage range	340 to 460V	
3.3	Frequency	50 Hz	
3.4	Frequency range	+/- 5 Hz	
3.5	Ripple content	<1% with battery connected	
3.7	Input Power Factor		
	100%	0.99	
	75%	0.99	
	50%	0.99	
	25%	0.98	
3.8	Current Harmonic on source		
	100%	<3%	
	75%	<5%	
	50%	<5%	
	25%	<10%	
3.9	Maximum current without Battery Charging	Amps	
4	OUTPUT		
4.1	Voltage	380/ 400/ 415 V	
4.2	KW=KVA		
4.3	Voltage regulation		
	Balanced	+/- 1%, 3 Ph. + N	
	Un Balanced	+/- 3%, 3 Ph. + N	
4.4	Power Factor	0.8lag - unity- 0.98 lead (Derating of UPS not	
		acceptable in this range)	
4.5	Frequency	50Hz	
4.6	Frequency range	+/- 0.5 Hz	
4.7	Frequency synch. range	0.25 to 3 Hz	
4.8	Transient output voltage variation for 100% block loading	+/-2%	
4.9	Recovery time for 100% block load	< 5 mill second (ms)	
4.11	Wave form	Sinusoidal	
4.12	Total Voltage Distortion output		

	side		
	Linear load	< 2 %	
	Non-Linear load	< 3 %	
4.13	Crest Factor	3:1	
4.14	Phase Displacement		
	a) Balanced load	120 +/- 0.65°	
	b) 100 % Unbalanced load	120 +/- 2°	
4.15	Inverter Efficiency		
	c) 100 %	Specify	
4.16	Overall Efficiency for UPS		
	b) 50 %	95%	
	c) 75 %	95%	
	d) 100 %	95%	
4.17	Efficiency of UPS in Battery Operations		
	b) 50 %		
	c) 75 %		
	d) 100 %		
4.18	Overload		
	a) 125 %	10 minutes	
	b) 150 %	10 Sec	
4.19	Short circuit Capability	Bidder to Specify	
5	BUILT IN STATIC BYPASS	Required but not used for IT load in operation	
5.1	Inverter and Static Bypass change over time	Specify	
5.2	Fuse @ static bypass	No as per IEEE standards.	
5.3	Short circuit Capability	Bidder to Specify	
5.4	Overload	Specify	
5.5	Transfer time	Less than 5 ms	
5.6	Manual Bypass inside UPS only (input/output)	Required	
6	DC CHARACTERISTIC		
	Battery backup to be calculated at unity pf.		
6.1	VAH	Specify	

6.1	DC bus voltage	Specify	
6.2	DC Current	Specify	
6.3	No. of cells with AH	Specify	
6.4	battery voltage	Specify	
6.5	End. Cell voltage	Specify	
6.6	Float voltage	specify	
6.7	DC current at 100% load	specify	
6.8	Charging current	specify	
6.9	Charging time		
6.1	True autonomy / measurement	Software on SNMP & UPS monitor panel	
6.11	Temp. compensated charger	Required/ Mandatory	
6.12	Automatic battery load test	Required/ Mandatory	
6.13	Battery Breaker with protection	Required/ Mandatory	
	Required Battery Back Up	10 Minutes	
7	PROTECTION		
7.1	Overload (O/L)	Required	
7.2	Short circuit (SC)	Required	
7.3	Input low voltage	Required	
7.4	Output over voltage	Required	
7.5	Battery over charging	Required	
7.6	Battery over discharging	Required	
7.7	IP Protection		
7.8	DC over current Protection		
8	ENVIRONMENTAL		
8.1	Ambient temperature range	0 to 40° C	
8.2	Relative humidity	95 % RH	
8.3	Max. operating altitude without derating	0 M above MSL	
8.4	Acoustic Noise	65db (Specify)	
9	AUDIO / VISUAL DISPLAY		
9.1	Over load	Required	
9.2	Short circuit	Required	
9.3	Input low voltage	Required	
9.4	Input over voltage	Required	

9.5	Battery over discharging	Required	
9.6	Battery on load	Required	
9.7	Battery low	Required	
9.8	Fuse failure	Required	
9.9	Fan failure	Required	
9.1	Inverter failure	Required	
9.11	DC over voltage	Required	
10	VISUAL DISPLAY		
10.1	Input/output voltage	Required	
10.2	Output current.	Required	
10.3	Input/ Output frequency	Required	
10.4	Output power in KVA and KW	Required	
10.5	Output load power factor	Required	
10.6	Output load crest factor	Required	
10.7	battery DC voltage	Required	
10.8	Charging current	Required	
10.9	Dis-Charging Current	Required	
10.1	Autonomy Time	Required	
10.11	Event logs	2500 events mandatory	
11	OTHERS		
11.2	Software with LAN connect	Required	
11.3	Auto paging	Required	
11.4	SNMP compatibility	Required	
11.5	Diagnostic system	Required	
11.6	Single line mimic diagram	Required	
11.7	Telemonitoring with software	Required- Mandatory	
11.8	Capability to parallel 6 similar UPS systems	required	
11.9	ventilation	forced air cooling with integral fans	
11.1	Operating temperature	0-40deg.C	
11.11	Battery management	required	

11.12	Power Transfer Mode	auto systems (during fault condition)	
12	Colour		
13	Online Thermal Dissipation in Btu/Hr		
	at 100 %		
	at 75 %		
	at 50 %		
	at 25 %		

c Choices of lithium chemistries and cell designs: Based on long calendar life, high safety and high power density Bidder to choose either any one maintained below chemistry of Lithium.

NMC (LiNiMnCoO2 - Lithium Nickel Manganese Cobalt Oxide)
LFP (LiFePO4 -Lithium Iron Phosphate))

d Selection of a particular chemistry should be made with safety in mind as well as the other system requirements, namely float service life, footprint or volume of the solution, power capability, temperature of operation and discharge time etc. Bidder need to consider above aspects while selection chemistry of Lithium. A Battery system shall be furnished for the UPS with backup time of 10 Minutes at Unity PF, capacity to maintain UPS output at the specified load for the duration. Battery protection shall be provided by thermal-magnetic melded-case circuit breakers in each battery rack. UPS battery should be Lithium Ion based (LFP or LMO or NMC) battery as per recommended makes with back up time of 10 Minutes at Unity PF with Built in DC Breaker, Battery Cabinet and Battery Monitoring system. These Batteries are to be in the RACK. The battery system shall be designed with highest level of protection built into the battery system against potential safety risk – over voltage and short circuit. Bidder to submit the compatibility certificate with Offered Model of Battery and UPS. Bidder to submit Battery Sizing calculation for backup. The Complete battery system should be comprised of multiple such module in series / parallel combination to arrive at the required backup and DC voltage requirement of UPS.

e **Batteries should be compliant to**

Safety Cell	UL1642
Module	UL1973
Transportation	UN38.3
Seismic	GR63
EMC	IEC61000-6-2, and 61000-6-4
Rack Level	UL 1998,991

Battery Module & Switchgear	UL 1973 with each component level
battery Aging factor	IEEE 495
Battery manufacturer should have Quality Certificate	(i) ISO 14001:2004 (Environment) & OHSAS 18001:2007 (Health & Safety) and (ii) ISO 9001-2008

The Battery System should be equipped with Battery Management system to indicate the availability and health of entire battery system and cell balancing activity. Battery cabinet should be free standing housing Battery modules with Battery breaker, Battery management system, and Communication protocol for BMS etc. The lithium ion battery solution shall communicate with the UPS via dry contact. Battery monitoring shall be provided at the module, rack, and system level. A switched-mode power supply shall be included and shall provide power for the battery monitoring system from UPS Input and Output. The battery system shall consist of a 3 level of protection namely, cell, module and rack level.

1st Level Protection – Battery Management System (BMS) & Switch Gear: Each battery rack shall be installed with main switch gear to isolate the affected battery rack in the event of a fault. BMS shall also be included in each rack to provide continuous monitoring of the voltage and temperature of each cell within the rack. BMS gathers and analyses the rack current. In the event of over voltage or short circuit, the BMS will trip the MCCB at rack level.

2nd Level Protection – Fuse: Fuses are built into the main switch gear at rack level. In the event of a fault current (caused by short circuit) which the MCCB cannot be activated in the shortest time, fuses will be activated to clear the fault current without damaging the cells.

3rd Level Protection – Cell: Several protection features shall be incorporated into the cell namely, safety function layer (SFL), Multi-layers Separator, Safety Vent, Safety Fuse and Overcharged Safety Device. These safety features are to protect the cell from overcharging and thermal runaway.

Bidder to consider Li Ion Battery End of Life should be 10 years for 10 minutes at 150 KVA and power factor to be considered as 0.9.

f Earthing and Earthing Pits: All Electrical Equipment must be efficiently double earthed in accordance with the requirement of IS-3043/IEEE 80 and relevant regulations of Electrical. The earth pits shall be as per IS with proper arrangement for testing.

Maintenance free earth pits to be used. All Earthing conductors shall be hot dip galvanized / electrolytic grade base copper conductor. The main earthing rings shall be done as per practice laid in Indian Standard. All electrical equipment shall be connected to the earth bus at two points except the lighting fittings and junction boxes. All hardware for bolted joints shall be galvanized and the size of the bolt shall not be more than quarter of the size of earth conductor. Tinned copper lugs shall be provided where round earthing conductors are used. The 415V neutral shall be solidly earthed by means of two separate and distinct connections to earth. The earth pits shall be interconnected between themselves and the main earthing grid to form an earthing ring. All joints in the main earthing conductors shall be welded. Terminal joints on the equipment shall be bolted. Removable test links shall be provided near the earth pits to facilitate testing of earth pits. Where the earthing terminal diameter provided on equipment is larger than quarter of the size of the earth conductor, connection shall be made using a wider flag welded to the conductor. The equipment to be earthed shall be connected to a common earth grid of power system. The number of earth pits will depend upon soil resistivity and the voltage of the system. The earth pit together with the electrode shall be constructed as per IS-3043-1987. The potential difference between neutral and earth should be less than 3 V. A bolted assembly link shall be provided in the connection between earth electrode and the main earth conductor. Existing Earth pits cannot be used all should be new one. Equipotential earthing inside the data center needs to be considered with grid below raised flooring of 2 X 2 meter of 25 X 3 mm Cu strip and all end corners after covering complete room needs to be grounded. Pedestal /stringers, Rack body to be grounded to this grid so that flooring and equipment's are at equal potential.

g Cables - All Low tension cables should be of 1.1 KV grade, All power cables from 25 Sq.mm to 400 Sq.mm should be with stranded, compact aluminium conductor, with XLPE insulated, PVC inner sheathed, galvanized steel strip armoured and overall PVC sheathed conforming to IS:7098 /88. As stated in Electrical single line diagram for Cu flexible cables should be of Solid/Stranded Copper conductor, XLPE Insulated, cores laid up, PVC tape/PVC Extruded Inner sheathed for Multicore Cables, Unarmoured, extruded PVC Type ST2 Sheathed as per IS 7098 (Part 1) 1988.

7) Requirements towards Heating, ventilation, and air conditioning work

a Existing working cooling equipment's available at site Bidder to consider the same in buy back. Details are as below:

Sr. No.	Description	Rating	Quantity	Make
1	DX based PAC system	14 Tr	7	Libert

	with2 X 7 T fixed flow compressor unit with Cu Piping and condenser unit.			

b All cooling equipment selection to be done based on American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE n=20) standard. The cooling systems should perform efficiently at variable load conditions. The overall cooling solution should be designed to achieve better cooling and low operating cost. The supply air temperature to the server should be maintained at 20 +/- 2 Deg. C and humidity as per ASHRAE TC 9.9 2017 guidelines. The cooling system in the server rack area should be designed as per layout design provided in Layout Drawings. Heating and humidifier to maintain correct operating environment throughout the data centre needs to be considered. Relative humidity to be maintained in the Data Centre will be from 45% to 55%.

c Bidder to consider removing of existing 7 X 14 TR PAC along with CU piping, ODU unit etc. job . At most care to be taken while removing this existing PAC. Work to be in synchronization with supply of new PAC units and removing of existing. No shut down will be provided.

d Computer room Precision air System (PAC):

- Supply, installation, testing and commissioning of self-contained direct expansion type Precision air conditioning units suitable for operation on R410a/R407C refrigerant & should have advanced microprocessor and electronically communicated. Modular construction Precision air conditioning unit suitable for operation on R-410a / R407C refrigerant with bottom discharge arrangement consisting of inlet filter, draw through direct drive Electronically commutated Motors and Backward curved Plug fans, fan motor assembly to deliver desired air quantity, variable flow Inverter Scroll, Direct Expansion Cooling Coil, Heater banks to maintain humidity inside the space, condensate drain pan of stainless steel construction, Microprocessor panel, programmable control complete with display. The unit shall be suitable for operation on 415 V, 50 Hz, AC supply. The controller unit should also be capable of starting the standby other DX base unit in case the temperature is not able to achieve with the working units. For Basis of Design Bidder to consider site ambient data along with following parameters.

Equipment Parameters

Net Sensible Cooling Capacity: 10 Tr

Equipment air inlet :(Input to server rack): 21 Degree Celsius +/- 2 Degree & 50% RH

Machine configuration : Bottom discharge

Actual Capacity : As provided
Flow Direction : Bottom discharge
Machine Capacity control : Return Air
Compressor type : Variable flow with inverter
Evaporator Fan : Blades with Electronically commutated (EC) motor
Humidification & De-humidification: In built feature of humidification & dehumidification
Filters : Filter to be provided on the Package unit, having 95% efficiency down to 5 Microns

- Base panel shall be constructed out of sandwich panels of galvanized steel and painted with epoxy powder coated (Insulation on all 4 sides). All four side panels shall be insulated. Unit shall be complete with space for refrigeration equipment, fans, cooling coils, liquid receiver, Liquid line solenoid Valve, NRV and multistage strip heaters and modulating Humidifiers and water cooled condenser unit. Unit shall be provided with welded tubular steel floor stand with adjustable legs and requisite vibration isolation pads.
- The units should be equipped with direct driven backward curved EC radial fans with electronically commutated brushless motors. The technology employed by these motors allows straightforward control of fan speed by means of the electronic controller in order to obtain adjustment of air flow rate and static pressure to ensure correct distribution of the treated air. The filter chamber shall be an integral part of the system and withdraw able from the front of the unit. Low airflow and clogged filter alarm sensors consisting of two pressure switches for controlling the operating conditions of the fans and the build-up of dirt on the air filters inside the unit. The motor's high efficiency should make for less energy absorption, especially at partial loads and during starting (lowering of peak current), which means a reduction in power consumption of approximately 30% compared to AC motor. The motor shall have minimum IP54 Protection. Evaporator Coil Precision packaged unit shall comprise of cooling coil of copper tubes expanded into aluminium fins with corrugated profile and hydrophilic treatment. Face and surface areas shall be such as to assure rated capacity and the air velocity across the coil. Complete Coil should flat and should be fully accessible from front. Drain pan shall be made of stainless steel with nitrile rubber insulation
- Variable flow Scroll Compressor: The compressor shall be of the high efficiency scroll design operating with R410A / R407C refrigerant and 415V/3~/50 Hz supply. The compressors are provided with integrated thermal overload protection. The compressor motor control driver is provided with integral electronic protection against over temperature, over current, over or under-voltage with absence of one

or more phases. The compressor shall be charged with mineral oil and designed for operation on environment friendly refrigerantR410a /R407C.The machine should be inbuilt with the liquid receiver & pressure relief valve, Liquid line solenoid Valve, NRV for better performance of the machine. The refrigeration system shall be of the Single circuit direct expansion type and incorporate hermetic scroll compressors, complete with crankcase heaters. Scroll compressors in each machine should be inverter.

- The refrigerant circuit comprises:
  - Liquid receiver inbuilt in the indoor unit
  - Electronically- controlled expansion valve (EEV)
  - Solenoid valve for shutting off the refrigerant liquid
  - Refrigerant liquid flow indicator
  - Solid cartridge Freon filter
  - Safety valve
  - High pressure safety pressure switch with manual reset
  - Low pressure switch with automatic reset
  - Copper refrigerant pipes with anti-condensation insulation on the suction line
  - Pipe taps on suction and delivery side and charging valve on liquid side.
  - Each Compressor / refrigerant circuit to have its own independent Evaporator coil and Condenser coil.
- Electronic Expansion Valve (EEV) The unit should have Electronic Expansion Valve and should be capable of responding to the varying load conditions. It should be able to provide following advantages:
  - Fast, high precision adjustment of refrigerant flow;
  - Fast arrival of the unit at steady-state conditions;
  - Superheating value remains constant in variable thermal load conditions;
  - Efficient operating conditions of the compressor, especially in the presence of low room temperatures;
  - Wide working range with consequent extension of the unit's operating limits. These properties result in enhanced performance of the unit and make it possible to obtain very significant energy savings.
- Condenser shall be air-cooled type, suitable for outdoor installation as per site ambient and shall be suitable for operating at high ambient of 40 degree Celsius Dry Bulb Temperature (db) and at per ASHRAE n=20. The condenser shall be complete with provisions for refrigerant piping connections, shut off valves and any other standard accessories necessary with the equipment supplied. Each Circuit to have its independent set of air cooled condenser coil. Location of condenser unit will at terrace floor and at the location of existing ODU unit.
- Electric heaters-Each packaged unit shall be provided with multi stage heating elements constructed from aluminium. Electric heaters shall be of the low temperature totally enclosed strip type fitted with radiation fins. If overheating

occurs, a safety thermostat should cuts off the voltage supply to the heaters and triggers an alarm.

- Humidifier-Boiling water in a polypropylene steam generator shall provide humidification. The humidifier shall be capable of providing continuous auto modulation in steam generation from 30-100% as per the steam requirement per hour. The humidifier shall be fully serviceable with replaceable electrodes. Waste water shall be flushed from the humidifier by initiation of water supply valve via U-trap. The microprocessor should be able to display the current drawn and actual steam output in the microprocessor.
- De-humidification cycle shall operate by keeping the airflow constant but with the help of EEV to reduce the ADP of the coil. The system shall be provided with relevant water detection kit which shall have sensors with wire of minimum 1.5mtrs and each of the sensor must be capable to detect individually any water below the false floor near the unit, the sensor must be connected to the unit microprocessor thus enabling the controller to give an alarm in case of wet floor. - A microprocessor shall continuously monitor operation of each Server room air-conditioning unit continuously digitally display room temperature and room relative humidity, alarm on system malfunction and simultaneously display problem. When more than one malfunction occurs, flash fault in sequence with room temperature, remember alarm even when malfunction cleared, and continue to flash fault until reset. Microprocessor to control the following functions:
  - Room Temp temperature
  - Humidity (HH versions)
  - Speed of the delivery fans
  - Timing of compressors with automatic rotation
  - Alarm signal on two levels
  - Controlled automatic reset of high and low pressure alarms
  - The machine should be programmable to set the rotation time between the working & standby units as per client requirement.

Bidder to submit technical information as per below table.

S.No.	DESCRIPTION	UNIT	Technical requirements	Supplier Details
DESIGN CONDITIONS				
1	Required Capacity	KW (TR)	36(10)	
2	Airflow	CFM (Minimum)	5,000	
3	Return air temperature	Degree Celsius	32+/-2 Degree Celsius	
4	Return air RH	%	30 to 40	
5	ESP	Pa	50	
6	Supply air temperature	Degree Celsius	19+/-1	
7	Supply air RH	%	50 +/-5 %	

8	Type of PAC	(DIRECT EXPANSION - DX)	DX	
9	Discharge Type of PAC	(FRONT /TOP/BOTTOM)	BOTTOM	
10	False Flooring height	mm	450	
11	Ambient Temperature	Degree Celsius	As per n=20 ASHRAE Data	
UNIT DETAILS				
1	Make of Proposed unit	-	Required	
2	Model of Unit Proposed	-	Required	
3	Total Cooling Capacity	TR	Required	
4	Sensible Cooling Capacity	TR	Required	10 Tr
5	Unit Size (L x D x H)	mm	Required	
6	Unit weight	kg	Required	
7	Unit Power Consumption	kW	Required	
8	Dual refrigerating circuits	Yes/No	Not Required	
9	Noise levels at 1.5m distance from unit	dbA	Required	
UNIT CASING DETAILS				
1	Single / Double skin	mm	Required	
2	Outer Casing material	-	Required	
3	Outer Casing thickness	mm	Required	
4	Inner Casing material	-	Required	
5	Inner Casing thickness	mm	Required	
6	Insulation material - thickness / Density	mm	Required	
7	Drain Pan Material & Thickness.		Required	
8	Drain Connection Dia	mm	Required	
9	Access Door Location	Front / Back /Side	Required	
EXPANSION VALVE				
1	Make	-	Required	
3	Dual Power supply. (RAW + UPS)	Yes/No	Required	
COOLING COIL				
1	Type	-	Required	
2	Face Area	Sqft	Required	

3	Face Velocity	FPM	Required	
4	No of evaporator per unit	Nos.	Required	
5	Tube Material	-	Required	
6	Tube OD and Thickness	mm	Required	
7	Fin Material & Thickness	mm	Required	
8	Fin Spacing	FPI	Required	
9	Type of treatment for Fins	-	Required	
10	Coil air inlet temperature (DB &RH)	Degree Celsius	Required	
11	Coil air outlet temperature (DB &RH)	Degree Celsius	Required	
12	Total Cooling capacity	kW	Required	
13	Sensible Cooling capacity	kW	Required	
EVAPORATOR FAN				
1	Type of Fan	-	Required	
2	Fan make	-	Required	
3	Discharge type	-	Required	
4	No of evaporator per unit	Nos.	Required	
5	No. of fans per evaporator	Nos.	Required	
6	Total No of fans per unit	Nos.	Required	
7	Fan Dia	mm	Required	
8	Fan Operating Speed	Rpm	Required	
10	Airflow per unit	CFM	Required	
11	Internal pressure drop	Pa	Required	
12	Blower ESP	Pa	Required	
13	Total Static Pressure	Pa	Required	
14	Fan static efficiency	%	Required	
15	Fan Total efficiency	%	Required	
16	Power Consumption each fan	kW	Required	
17	Power Consumption of Unit	kW	Required	
18	Type of Drive	Direct / Belt	Required	
19	Type and make of Bearing	-	Required	
20	Material of casing	-	Required	

23	Fan placement	Infloor / In cabinet	Required	
24	Fan Statically & Dynamically Balanced	Yes/No	Required	
25	Fan performance curve to be submitted for approval	Yes/No	Required	
FAN MOTOR				
1	Manufacturer / Make	-	Required	
2	Type of Motor	-	Required	
3	Motor Rating	kW	Required	
5	Operating Speed	Rpm	Required	
6	IP Protection	-	Required	
7	Motor winding Insulation class	-	Required	
9	Connected load	kW	Required	
10	Electrical Supply	V/ph/Hz	Required	
COMPRESSOR				
1	Manufacturer / Make	-	Required	
2	Model	-	Required	
3	Qty.	Nos.	Required	
4	Type of compressor	Inverter Scroll	Inverter Scroll	
5	Refrigerant	-	Required	
6	Phase/V/Hz	-	Required	
8	Crankcase Heater	Yes/No	Required	
9	Modulation Range	%	Required	
CONDENSER				
1	Make	-	Required	
2	Model	-	Required	
3	Casing Material & thickness	mm	Required	
5	Outdoor Unit Dimensions W x D x H	mm	Required	
6	Operating weight- ODU	Kg	Required	
7	No. of fans/condenser	Nos.	Required	
8	Operating voltage	Volts	Required	
9	Noise level at 1m – dBA.	Dba.	Required	
10	No. of condensers per machine (Indoor Unit)	Nos.	Required	
11	Phase/V/Hz	-	Required	
FILTER SECTION				
1	Manufacturer	-	Required	

2	Filter media	-	Required	
3	Type of filter	-	Required	
4	Airflow per filter	CFM	Required	
5	Air Face Velocity across filter	m/sec.	Required	
6	Size of filter	Mm	Required	
7	Quantity of filter	Nos.	Required	
8	Pressure drop-Clean	Pa	Required	
9	Pressure drop-Clogged	Pa	Required	
10	Performance as per ASHRAE Test Std.52, 76	-	Required	
11	a) Efficiency	%	Required	
12	b) Dust holding capacity	-	Required	
13	Material of construction	-	Required	
14	a) Filter frame	-	Required	
HUMIDIFIER				
1	Manufacturer	-	Required	
2	Type of Humidifier	-	Required	
3	Capacity	kg/hr	Required	
4	Input Power	kW	Required	
5	Settings	Amps	Required	
6	Electrical Characteristics		Required	
7	Humidifier Inlet pipe Connection - Dia	mm.	Required	
HEATER				
1	Manufacturer	-	Required	
2	Type of Heater	-	Required	
3	Capacity	kW	Required	
SUMMARY OF POWER CONSUMPTION				
1	Compressor	KW	Required	
2	Evaporator Fan	KW	Required	
3	Condenser	KW	Required	
4	Max. of Heater/Humidifier	KW	Required	
5	Total (Including Heater/Humidifier)	KW	Required	
6	Total (Excluding Heater/Humidifier)	KW	Required	
7	Specific Power	Ikw/TR	Required	

	Consumption (At Design Conditions)			
8	Specific Power Consumption shall be submitted for the following operating conditions: 1) 100% load on cooling coil 2) 80% load on cooling coil 3) 60% load on cooling coil 4) 30% load on cooling coil	Yes/No	Required	
ELECTRICAL				
1	Unit Total connected power	KW	Required	
2	Full Load current FLA	Amps	Required	
3	Starting current	Amps	Required	
4	Locked rotor current on full load	Amps	Required	
5	Required MCB / MCCB Rating		Required	
6	Isolation for Incoming	Yes/No	Required	
7	MCB/ MPCB for critical components like Compressor, Fan Heater, Humidifier	Yes/No	Required	
8	Terminal strip for all connection with cable marking	Yes/No	Required	
9	Single phase converter	Yes/No	Required	
10	Low voltage / high voltage cut off	Yes/No	Required	
11	Inbuilt ATS for Dual power supply	Yes/No	Required	
12	High speed harmonic distortion	%	Required	
13	Low speed harmonic distortion	%	Required	
MICROPROCESSOR CONTROLLER				
1	Microprocessor Based	Yes/No	Required	

2	P/PI/PID Logic	Yes/No	Required	
3	Return air humidity sensor	Yes/No	Required	
4	Auto restart after a power failure	Yes/No	Required	
5	Sequencing of Multiple units	Yes/No	Required	
6	Interlock with Damper	Yes/No	Required	
7	List of Trip signal	Yes/No	Required	
8	List of alarm	Yes/No	Required	
9	Display of Various modes of operation (cooling, heating, humidifying and de-humidifying),	Yes/No	Required	
10	Date, time and unit identification display	Yes/No	Required	
11	Visual system alarm indication (along with mutable audio alarm as well)	Yes/No	Required	
12	Records total run hours for all main components	Yes/No	Required	
13	Monitoring card should be able to support any one of the protocol (Modbus)	Yes/No	Required	
14	Each unit Controller should be capable of control, monitoring, sharing set points and alarms	Yes/No	Required	
15	Control logic to be submitted for approval	Yes/No	Required	

e COLD AISLE CONTAINMENT SYSTEM- Cold aisle containment has a series of panels, door frames and doors, and air blocks to enclose a cold aisle zone which contains IT equipment. The cold aisle zone is the space between two rows of IT equipment racks with cold air being supplied between the two rows of racks and the IT equipment exhausts hot air away from the aisle. In this enclosed space cooling unit supply air is collected inside of the Cold Aisle Containment. The cool air is supplied to the IT equipment while the IT equipment exhaust air is pushed outside the Containment and returned to the cooling

unit. By preventing mixing of cool supply air and hot exhaust air, this self-contained configuration is capable of supporting heat density loads.

- HORIZONTAL CEILING PANELS- Ceiling panels are with 4.0 mm thick Lexan clear panels which has removable option with the help of wing nuts. Minimum Light Transmission per ASTM D1003 varying between 84% - 87% Ceiling panels are designed to be supported by the frames of the IT Equipment racks. Ceiling Panel frames sizes are suitable to match up with rack, row width, and cold aisle widths. The ceiling system are designed to permit removal of the ceiling panel from within the contained zone without the use of tools for service access to the space above the containment. Lexan sheet has good fire behavior characteristics. Lexan sheet does not contribute significantly to the spread of fire or to the generation of toxic gases. Toggle down top panels are provided with magnetic latches at the place of fire suppression nozzle.
- DOOR FRAMES AND DOORS- Aluminum extruded profile-based door frames and doors shall be provided to establish air containment at the end of two rows of racks with clear opening at aisle entry/exit. The door frame system matches the height of the rack-based equipment and match the design width of the contained aisle. Extruded aluminum frame is with "IS 1060 H2" standard Doors are with sliding mechanism, to permit access into the contained aisle for maintenance or servicing. Standard door operation shall not interfere with access or service on any rack or rack-based equipment. Doors are with Lexan panels for clear visibility of aisle with proper handles for door operation with automatic door closure .system. Doors will have door stopper in order to avoid door closing during material movement or service
- FRAMES AND COMPONENTS SEALS-Foam Rubber gaskets are installed at containment joints to minimize open gaps between containment system components, such as door frames, ceiling and filler panels, and IT Equipment racks and rack-based equipment. Metallic filler panels are provided for uneven height of rack with proper sealing with gasket. Polyamide brushes are provided at bottom of door to avoid air leakage
- Powder Coating and Finish - Powder coat is with Nano ceramic pre-treatment process using a zirconium coat. The Powder coating process is ROHS compliant. Powder coating thickness will be 80 to 120 microns

f Bidder to consider additional 20 % blanking panels apart from below table:

Sr. No.	Rack	Used U space -Network Rack	Used U- Space - Server Rack	
1	Rack-1	2U + Patch Panel	21 U	
2	Rack-2	5U + Patch Panel	17 U	
3	Rack-3	Patch Panel	7 U	
4	Rack-4	5 U + Patch Panel	6 U	
5	Rack-5	2U + Patch Panel	24 U	
6	Rack-6	6U + Patch Panel	22 U	

7	Rack-7	17 U	12 U	
8	Rack-8	8 U + Patch Panel	17 U	
9	Rack-9	12 U	29 U	
10	Rack-10	15 U	19 U	
11	Rack-11	6 U	28 U	
12	Rack-12	6 U	4U	
13	Rack-13	12 U	9 U	
14	Rack-14	16 U	Tape Library	
15	Rack-15		14 U	Sun Oracle
16	Rack-16		16 U	Sun Oracle
17	Rack-17		40 U	SSL
18	Rack-18		40 U	SSL
19	Rack-19		16 U	
20	Rack-20		34 U	
21	Rack-21		32 U	
22	Rack-22		16 U	
23	Rack-23		Storage	
24	Rack-24		New Tape Library	

8) Requirements towards IBMS work

a Supply and implement environmental Controls and other sensors (Air conditioners, humidity controls, etc.)

- Humidity Sensor: The humidity sensor shall be in an independent housing or be combined with the room /duct type temperature sensor in the common housing as per application requirement. The sensor should be electronic type with capacitive sensing element. Relative Humidity (RH) sensors shall be of standard 0-10 VDC or 4-20 mA type, well protected against solid and liquid contaminants with a permeable coating. Range of 0-100% RH. Accuracy: +/- 3%Operating temperature range of 0 to 50 °C. Stainless steel sheath construction complete with integral shroud to enable specified operation in air streams of up to 10 m/sec. Maintenance of Sensor to be by a simple field method such as solvent or mild detergent solution washing, to remove anticipated airborne contaminants. Maximum sensor non-linearity of ±3% RH with defined curve.

b BMS System: - The proposed software shall be independent software platform for monitoring the parameters of Mechanical systems, Electrical systems, Dry Cooler, Chiller, In Row Units, RDHX, DG Sets, PHE etc. system as applicable. The BMS shall monitor the parameters of the data centre mechanical equipment to maintain environmental conditions, such as temperature, pressure, and humidity, within acceptable limits and at optimal energy efficiency. The operation of the system is governed by the Sequence of Operation (SOO), which is based on the mechanical system design. A graphical user interface (GUI) or Human Machine Interface (HMI) needs to

provide as a visual representation of local conditions, equipment overrides, set point adjustments, historical trends, and alarms conditions at the equipment level. The BMS also functions to notify the proper recipients, onsite or offsite, in the event of abnormal operation, and archive historical data for use in troubleshooting and analysing system operation. MS software must have web client and should be able to access from any standard Web browser (Chrome, Firefox, Edge, Internet Explorer etc.) without any plugins and shall be supplied with minimum inbuilt 5 licenses. BMS Software patches update and Version updates to be considered as part of scope during Warranty and AMC Period. BMS should have minimum 3-year historical data storage capacity. BMS software should have activity/auditing functionality so that each user action can be tracked based on login.

Architecture of BMS system shall be of:

- Management Level (BMS Servers/Software)
- Control Level (DDC Controllers)
- Field Level (Field Sensors)
- BMS should have capability to show real time PUE, trends and record historical data of PUE.
- BMS should generate event notifications over emails, data for events based on which uptime and downtime will be calculated.
- BMS should generate alarm signal and tripping signal at abnormal situations. This should be software generated and any one can be utilized for giving tripping command for shutting down the some servers or all.
- Reduce maintenance cost by improving the system performance and efficiency by suitable analytics.
- Allow easy access to documentation such as images, manuals and allows user to locate equipment on floor plans and maps instantly.
- 3D Graphics to be considered. Operator customizable Report/Trend module to be considered. The BMS software shall provide for Extensive Graphics Functionality for HVAC / Electrical / Auxiliary Systems, with online display of parameter values.

There should be real-time reporting of:

- Component wise and aggregate power consumption - Energy meters are provided in the Electrical Design in SLD to monitor the usage of the Electrical Energy at various stages.
- Temperature and relative humidity in the data center and UPS room.
- Instantaneous PUE, hourly PUE, daily PUE, monthly PUE and annual PUE.

- Alarm indicators for component failures.
- GUI with SLD, P *ID, Equipment's visuals etc.
- BTU Meters are provisioned in the P & ID Design to ensure a Real-time measurement of the BTU being consumed, and this information needs to be available to the BMS System.

The BMS system should allow for the monitoring, control, interrogation, alarm handling and routing for the following equipment's but not limited to:

- HVAC equipment –PAC
- UPS and Battery system
- LV metering and equipment.
- Fire Alarm Systems.
- Water Leak detection System.
- Rodent Repellent System

There should be real-time monitoring and logging of all parameters of the data centre as per ASHRAE/TGG 2009 Real time energy consumption measurements in data centres guidelines (best practical). There should be facilities for periodic reports (including uptime reports) of all aspects of the data Centre. All the required hardware and software eco-system which store at least two months of historical data (High end PC, 32" LCD HD Monitor, Key Board, Mouse etc.) has to be supplied by the bidder.

c The Integrated Control Platform shall support encrypted password authentication for all web services whether serving or consuming.

d Supply, Installation, Testing and Commissioning of BMS System which includes Main Building Automation Graphic Software, BMS Machine, DDC Controllers with necessary Panels, Field Sensors, Third Party Integrations as PAC , Load Manager, Integration with fire alarm panel, Monitoring and control of cooling units , monitoring and controlling of pump and valve operations etc.

e The BMS IO summary bidder to prepare and submit with the BID. This summary shall define the actual Digital/Analogue Input/output points and soft points to be considered for the functioning of the BMS. The Actual soft points shall be considered during the detail design stage based on the actual parameters selected and the mapping points. Bidder shall work out the Servers configuration and storage calculation based on the requirements as stipulated in this document considering inputs and the exact count of IO, Soft points.

f BMS should control the operation of oxygen pumping equipment's as PAC units under fire situation.

g Fire Suppression Nozzle and extension of pipe in each POD - At existing NOVEC gas suppression system is in operating condition. Due to changes in the Layout and incorporation of POD architecture it is mandatory to have one fire suppression nozzle in each POD. In order to carry out the same Bidder to consider extension in nearest existing nozzle, by another seamless pipe in each POD and add with one more nozzle. This should be in compliance with applicable requirements of NFPA 2011 standards.

9) Indicative Schematic Design

Minimum rating of components at site ambient conditions (considering deration factors, taking in to account utilization of 90% under peak load) along with rating is as shown in below table.

Sr. No.	Name of Components	Rating for each unit	Qty.	Redundancy
1	DX based PAC Units	10 Tr	7	N+N
2	Raised floor tiles in Server room and Network room and PAC area as shown in the drawing	Lot	1	
3	Equipotential earthing grid below raised floor - 25 X 3 mm Cu strip in 2 X 2 meter grid type. Earthing wire of 2.5 sq mm Green colour to be bolted one end to this grid and other end to the rack earthing point at two locations. Existing raised floor pedestal to be grounded with same size wire to this earthing grid. Each alternate pedestal is required to be grounded. This requirement is for server area, PAC area and network area. Scope of work also included four nos. earthing pits as specified above. At four corners of equipotential grid needs to be grounded to these earthing pits. Location of earth pits will be at ground floor exactly back side of server area.	Lot	1	
4	BMS System software along with 32 " LED monitor , Integration of PAC , all load managers, PDU, fire inputs, I /O modules, programming ,control and monitoring.	1 Lot		

Sr. No.	Name of Components	Rating for each unit	Qty.	Redundancy
5	Removing, dismantling etc. job and Buyback of existing PAC units along with Cu piping + ODU unit and existing 2 X 250 UPS units and existing battery bank	1 Lot		
6	Blanking Panels			
7	Cold Aisle containment with frame , door, along with all accessories etc.			
8	Extension to existing fire suppression pipe and additional on nozzle in each POD.			
9	2 X 150 KVA UPS in 200 KVA frame size along with Li Ion Battery bank in Rack for 10 minutes back up time and EOL will be 10 years along with 2 X 300 Amps MCCB as separate isolator electrical panel.			N+N

10) Applicable Standards but Not Limited to

Installation and materials shall also confirm to latest amendments of

a. Indian Electricity Rules
b. Indian Factories Act
c. National Electric Code
d. Petroleum rules
e. Quality and Safety Standards

Sr. No.	Code Number	Description
1	IS 2309	Protection of buildings and allied structures against lightning.
2	IS 3043 /IEEE 80	Code of practice for earthing.
3	IS 5216	Safety procedure and practices in Electrical work.
4	IS 3106	Code of practice for selection, installation and maintenance of fuses (Voltage not)
5	IS 1646	Code of practice for fire safety of buildings (general) Electrical installation.
6	IS 9921	Alternating Current Dis connectors above 1000 V.
7	IS 2551	Danger notice plates.
8	IS 1248	Electrical indicating instruments.
9	IS 722	AC Electric meters.
10	IS 3156	Voltage transformers.

Sr. No.	Code Number	Description
11	IS 10118	Installation and maintenance of switchgear.
12	IS 398 /IEC 1089-1991	ACSR conductors
13	IS 7098	Cross linked polyethylene insulated PVC sheathed cables up to 33 KV
14	IS 12943	Brass glands for PVC cables
15	IEC 99-4	Gapless Surge Arrestors
16	IS-900	Code of practice for Installation and Maintenance of Induction Motors
17	IS-1255 -1983	Codes of practice for Installation and Maintenance of Power Cables up to and including 33 KV Rating.
18	IS-732 1989	Code of practice for Electrical Wiring Installation. (System Voltage not exceeding660 Volt).
19	IS-1913	General and Safety Requirements for Luminaries.
20	IS-1646	Code of Practice for Fire Safety of Building (General) Electrical Installation.
21	IS 8130	Conductors for insulated electrical cables and flexible cords.
22	IS 3975	Specification for mild steel wires, strips and tapes for armouring of cables
23	IS-2667	Specification for Fittings for Rigid Steel Conduits for Electrical Wiring.
24	IS 3615	Glossary of terms used in Refrigeration and Air-conditioning.
25	IS 325	Three phase induction motor.
26	IS 1239	Mild steel tubes, tubular and other wrought steel fittings.
27	IS 639	Steel pipe flanges.
28	IS 277	Galvanized sheet steel.
29	IS 5831	Specification for PVC insulation sheath for electric cables.
30	IS 655	Metal air ducts.
31	IS 732	Code of practice for electrical wiring and fittings for buildings.
32	IS 900	Code of practice for installation and maintenance of induction motors.
33	IS 1248	Direct acting electrical indicating instruments.
34	IS 6392	Steel pipe flanges.
35	IS 1367	Technical supply conditions for threaded steel fasteners.
36	IS:10462	Thickness of the PVC outer sheath
37	IS 4894	Centrifugal fan.

Sr. No.	Code Number	Description
40	IS 1554	PVC insulated (heavy duty) electrical cables for working voltages up to and including 1100 V.
41	IS 659	Air-conditioning safety code.
42	IS 616	Mechanical refrigeration safety code.
43	IS: 1554 -	PVC insulated (heavy duty) electric (Part I) Cables - Part I for working voltages up to and including 1100V.
44	IS: 1753 -	Aluminium conductors for insulated cables.
45	IS: 3961 -	Recommended current ratings for (Part II) cables: Part-II PVC insulated and PVC sheathed heavy-duty cables.
46	IS: 3975 -	Mild steel wires, formed wires and tapes for armouring of cables
47	IS: 5831 -	PVC insulation and sheath of electrical cables.
48	IEEE 519:1992	Harmonics
49	IS 277	Galvanized Steel Sheet (Plain and corrugated).
50	IS 655	Metal Air Ducts.
51	IS 737	Wrought Aluminium and Aluminium Alloy sheet and strip for general engineering purposes.
52	UL 181	Factory – Made Air ducts and connectors.
53	UL 555	Fire Dampers.
54	ASHRAE 70	Method of testing for rating the performance of Air Outlets and inlets.
55	BS 649	Diesel Engines for general purpose.
56	BS 2613	Rotating Electrical Machinery.
57	IS 4722	Electrical performance of rotating electrical machinery.
58	IS 4728	Terminal markings for rotating electrical machines.
59	IS 4729	Measurement of vibrations of rotating electrical machines.
60	IEC60034	Rotating Electrical Machines
61	IEC60034.1	Rotating Electrical Machines Part1: Rating and Performance
62	IEC60947	Low Voltage Switchgear and Control Gear
63	ISO 8528 Part 1 to 10:	Reciprocating Internal Combustion engine Driven Alternating current Generating Sets
64	IS-375	Marking and arrangement for switchgear bus bars, main connection and auxiliary wiring.
65	IS-722 Part – I	AC Electricity Meters
66		Part - I General requirements and tests
67	IS-1248	Direct acting indicating analogue electrical measuring instruments and their accessories.

Sr. No.	Code Number	Description
68	IS-1822	AC Motor starters, of voltage not exceeding 1000 volts.
69	IS-2147 IS-2208	Degrees of protection provided by enclosures for low voltage switchgear and control gear.
70		HRC cartridge fuse links for voltage above 650V.
71	IS-2419	Dimensions for panel mounting indicating and recording electrical instruments.
72	IS-2516	Circuit Breakers - Requirements and Test voltages not exceeding 1000V AC or 1200V DC.
73	IS-2607	Air break isolators for voltages not exceeding 1000 volts.
74	IS-2959	Contactors for voltages not exceeding 1000V AC or 1200V DC
75	IS-3072	Code of practice for installation and maintenance of switchgear.
76	IS-3106	Code of practice for selection, installation, maintenance of fuses (voltage not exceeding 650V).
77	IS-3156, Part - I	Voltage Transformer - General Requirements.
78	Part – II	Voltage Transformer - Measuring Voltage Transformers.
79	Part – III	Voltage Transformer - Protective Voltage Transformers.
80	IS-3231	Electrical Relays for Power System Protection.
81	IS-3914	Code of practice for selection of AC Induction Motor Starters (Voltage not exceeding 1000V)
82	IS-4047	Heavy-duty air-break switches and composite units of air-break switches and fuses for voltages not exceeding 1000 Volts.
83	IS-4064	Air break switches, air break disconnections, air break switch disconnections and fuse combination units for voltages not exceeding 1000V AC or 1200V DC.
84	Part – I	Part I - General Requirements.
85	IS-4146	Application guide for Voltage Transformers.
86	IS-4201	Application guide for Current Transformers.
87	IS-4237	General Requirements for Switchgear and Control Gear for Voltages not exceeding 1000V AC or 1200V DC.
88	IS-4483	Preferred panel cut-out dimensions for electrical relays - flush mounting IDMTL relays.
89	IS-4794, Part- I	Push Button Switches - General Requirement and Tests.
90	IS-5082	Wrought aluminium & aluminium alloy bars, rode, tubes and sections for electrical purposes.

Sr. No.	Code Number	Description
91	IS-5987	Code of practice for selection of switches (Voltage not exceeding 1000V).
92	IS-6236	Direct recording electrical measuring instruments.
93	IS-6875	Control switches (switching devices for control and auxiliary circuits including contactor relays) for voltages up to and including 1000V AC and 1200V DC.
94	IS-8623	Factory built assemblies of switchgear and control gear for voltages up to and including 1000V AC and 1200V DC.
95	IEC 62040-3	(International Electro technical Commission) – Uninterruptible power systems (UPS) – Part 3: Method of specifying the performance and test requirements.
96	IEEE 587 (ANSI C62.41)	Category A & B (International Electrical and Electronics Engineers) – Recommended practices on surge voltages in low voltage power circuits.
97	ANSI B 31.5	Code for Refrigeration Piping
98	ASHRAE 30	Methods of Testing Liquid Chilling Packages
99	ASHRAE 15	Safety Code for Mechanical Refrigeration
100		

Bidder is required to submit compliance sheet in the tabular format for the selected products against above applicable code provision.

11) Safety Regulations

The Successful bidder shall at his own expense, arrange for the safety provisions as per the codes of Indian Standard Institution, Indian Electricity Act / Rule and such other Rules, Regulations and Laws as may be applicable in respect of all labour, directly or indirectly employed in the work for performance of the Contractor's part of this agreement. While the Indian Electricity Rules 1956, as amended up to date, are to be followed in entirety, any installation or portion of the installation that does not comply with these Rules, should be rectified immediately.

The contractor shall be responsible for and indemnify the buyer against all injury to persons – both his own workmen and others and for all damage to structural and / or decorative part of the buyer's property during erection and commissioning of the equipment. The contractor shall repair / reinstate all such damage at his own cost.

It shall be ensured that the control switches and distribution boards are duly marked, the distribution diagrams of substations are prominently displayed, and the substation premises, main switch rooms and D.B. enclosures are kept clean. Particular care should be taken to

prevent the substation being used as store for inflammable materials, broken furniture, waste materials etc.

No inflammable materials shall be stored in places other than the rooms specially constructed for this purpose in accordance with the provisions of the Indian Explosives Act. If such storage is unavoidable, it should be allowed only for short period and in addition, special precautions such as cutting off supply such places at normal times, storing materials away from wiring and switch boards, giving electric supply for a temporary period with due permission of engineer-in charge shall be taken.

Protective and safety equipment such as rubber gloves, earthing rods, line men's belt, portable respiration apparatus, necessary number of caution boards such as " Man on Line", "Don't switch on" etc. should be provided in easily identifiable locations. Where electric welding or such other nature of work is undertaken, goggles shall be provided.

Rubber or insulating mats should be available in front of the main switchboards or any other control equipment of medium voltage or above.

Standard first Aid boxes containing materials as prescribed by Indian red cross should be provided in easily identifiable locations and should be easily available.

Periodical examination of the first aid facilities and protective and safety equipment provided should be undertaken and proper records shall be maintained for their adequacy and effectiveness.

Charts (one in English and one in regional language) displaying methods of giving artificial respiration to a recipient of electrical shock shall be prominently displayed at appropriate places.

A chart containing the names, addresses and telephone numbers of nearest authorized medical practitioners, hospitals, fire brigade and also officers in charge shall be displayed prominently along with the first Aid box.

Steps to train supervisory staff and authorized persons of the engineering staff in the first Aid practices, including various methods of artificial respiration with the help of local authorities such as fire brigade, St. John's Ambulance Brigade, Indian Red Cross or other recognized institutions equipped to impart such training shall be taken, as prompt rendering of artificial respiration can save life at the time of electric shock.

Electrical wiring and control switches should be periodically inspected and any defective wiring switches which will expose live parts should be replaced immediately to make installation safe.

No work on live L.T. bus bars or pedestal switch boards should handle by a person below the rank of a wire man and such a work should preferably be done in the presence of the Engineer in charge of the work.

a When working on or near live installation, suitable insulated tools should be used, and special care should be taken to see that these tools accidentally do not drop on live terminals causing shock or dead short.
b The electrical switchgear and distribution boards should be clearly marked to indicate the area being controlled by them.
c Before starting any work the existing installation, it should be ensured that the electric supply to that portion in which the work is undertaken is preferably cut off. Precautions like displaying “Men at Work” caution boards on the controlling switches, removing fuse carrier from these switches and these fuse carriers being kept with the person working on the installation, etc., should be taken against accidental energization. “Permit to Work” should be obtained from the Engineer-in-charge. No work on H.T. main should be undertaken unless it is made dead and discharged to earth with an earthing lead of appropriate size. The discharge operation shall be repeated several times and the installation connected to earth positively before any work is taken up.
d Before energizing any installation after the work is completed, it should be ensured that all the tools have been removed and accounted and no person is present inside any enclosure of the switchboard. Any earthing connection made for carrying out the work should be removed. "Permit to work” should be received back duly signed by the person to whom it was issued in token of having completed the work and the installation being ready for energisation and “Men at Work” caution Boards removed.
e In case of electrical accidents and shock, the electrical installation on which the accident occurred should be switched off immediately and the affected person should be immediately removed from live installation by pulling him with the help of coat, shirt, and wooden material or with any other dry cloth. He should be removed from the place of accident to a nearby safe place and artificial respiration continuously given as contained in BIS code and standard prescribed by St John Ambulance Brigade or Fire Brigade.
f While artificial respiration on the affected person is started immediately, help of Fire Brigade and Medical Practitioner should be called for an artificial respiration should be continued uninterrupted until such help arrived.
g These instructions should be explained in Hindi / local language to those staff who does not understand English.

h The contractor shall ensure that all portable power tools used by the workman are rated 230 volts, double insulated and has to be taken through 100 mA Earth Leakage Circuit Breaker (ELCB). Also all temporary lighting shall be supplied through 30 mA ELCB. Inserting wire into the sockets without the plug tops is not allowed. The length of the extension cord for portable tools should not be more than 5 feet. Temporary cables and flexible wires of short length should be bunched up and supported at inaccessible height. Temporary lamps should be mounted at inaccessible height. If lamps are incandescent, they should be protected by wire-mesh.

i All power supply / Distribution Boards shall have canopy for protection against weather if located outdoors.

j While carrying out work in Vessels / AC ducts or any other confined place, hand lamps with metallic guard suitable for 24 Volts AC supply shall be used All non-current carrying metallic parts of electrical system and equipment shall be earthed with two separate earthing wires of adequate capacity.

k <u>General Responsibility</u>

- The contractor shall obtain a "Work Permit" from the Site Engineer / Client before starting any work at site. The work permits are issued to prevent any one working in unauthorized areas and they are valid for specific period.
- The contractor shall produce test certificates from Government approved certifying authorities for all the lifting gear & hoists (slings, chains, hooks, chain pulley blocks, winches, cranes etc.) before starting the work. The contractor's supervisor for subsequent spot checks shall retain the certificates.
- The gas cylinders should be used in safe manner. They should not be dropped from heights. Acetylene cylinder should be kept upright position. Oxygen cylinders should not be kept near inflammable materials like oil etc.
- The contractor is to remove all waste materials from and around the work site and leave the work spot spick and span.
- Works like Gas cutting, welding etc.
- Before carrying out any work like gas cutting, welding etc. the contractor shall contact the site-in -charge to ascertain about the safety of the area for welding work.
- The contractor shall produce certificates for his welding sets checked by the site in charge before starting the work. The certificates shall have to be renewed every two months. A copy of the current certificate shall be displayed on the welding sets.
- Only cables in good condition and insulated holders are to be used. The length of the supply cable shall not exceed 25 feet and the welding set body shall be properly earthed. Under no circumstance building structure pipeline should be used as a return path of the current.

- A charged fire extinguisher of CO2 type is to be carried with each welding set.
- The welder is to wear good quality insulated welding gloves, shoes & goggles while at work.
- Tarpaulins are not be used in the vicinity of welding / gas cutting jobs.

l Excavation

In the event of an excavation being made, it is the responsibility of the contractor to see that any opening, sump or pit caused by them is securely fenced as required by the Factory Act.

m Working at Height

For carrying out work at heights exceeding 6 feet or over and near the opening in floors, roofs, etc. the following precaution to be taken.

The written permission of the Departmental Manager is to be taken before carrying out any work. Adequate safety precautions like use of safety belts, crawling ladders etc. are to be taken.

All personnel engaged on overhead work shall be men experienced in such work.

Whenever possible timber staging or platform shall be erected with planks of minimum thickness 2 inches and minimum width 12 inches when the nature of work demands staging of a greater width than plank provided then additional planks shall be added and lashed securely.

Staging shall be provided with simple safety rails or ropes throughout its length, at waist height and on each open side.

Staging supports shall be of standard steel scaffolding safely secured and supported on firm level footings or slung from overhead beams. The supports shall be situated at a maximum distance of 8 feet apart and staging shall be secured to each support.

In case the site or nature of work is unsuitable for erection of proper staging all workers shall wear safety belts around their waists and secure their lifelines to strong scaffolding or structural members.

Wherever it is not possible to put up staging and / or use safety belts, safety nets or sheets shall be slung beneath the place of work.

When working in open process vessels or tanks, safety belts or safety nets shall always be used whether or not staging and scaffolding is provided.

Safe access to all points of work should be provided in the form of suitable ladders, stairways etc.

Contractor's employee of at least status of a foreman shall examine all arrangements before starting such work is commenced and shall satisfy himself that all reasonable safety precautions have been taken.

n Fire Instructions

Before carrying out any gas cutting, welding etc., the contractor shall contact the site-in-charge to ascertain about the safety of the area for welding work.

Smoking is strictly prohibited in premises. Severe action will be taken if any of the contractor's workmen is found smoking at the work site area.

In case fire is discovered, dispatch additional force & site Engineer. Wherever possible switch off any electrical and gas apparatus near the fire.

Check the nature of fire, pick up appropriate fire extinguisher and try to put out fire. For Electrical fire use carbon dioxide fire extinguisher.

o Personal Protective Equipment

The personal protective equipment should be worn wherever necessary.

p Review Meetings

Periodic safety review meeting shall be conducted to review safety and for better coordination with other agencies.

Periodically safety review will be held with Site Engineer and issues will be discussed and action points shall be monitored and recorded in a separate safety Register / File.

q Work After Normal Working Hours

Extra care need to be taken for jobs being carried out after normal working hours with due revalidated work permit.

r Accidents

In case of injury or serious illness, the department should be informed immediately. All injuries are to be reported by filling in the "injury report" form, which will be available with the respective department / site engineer.

These safety conditions should not be regarded as exhaustive. These have been issued for the guidance of the contractor and will not in any way absolve the contractor from any obligations or liabilities that might incur or transfer such obligations on liabilities to the company.

B. Support for Data Centre Facility (BMS and Non- IT Equipment)

Bidders are expected to provide Back-to-back AMC from respective OEM for devices not attaining End of Life (EoL) and for EoL devices AMC need to be provided only by respective bidder (Back-to-back not required). A summary of the services covered under this contract have been tabulated as below:

Sr No	Device Name (Qty)	Make	Model No	Sr. No	Support status	Existing AMC End Date
1	LT panel(11), UPS Panel(2), PAC Panel(2)	Schneider	ZENER Electrical	NA	Can be supported under AMC	31-June-2024
2	Breaker(8)	Schneider	SCHNIEDER	9191478949, 9191478940, 9191478941, 9191478943, 1133080101, 1133080203, 1133080103, 1133080303.	Can be supported under AMC	
3	ATS -100AMp (2)	Vertiv	Emerson(ASCO 7000)	532381-001WE 766264, 532381-002WE 766264,	Can be supported under AMC	
4	UPS 250KVA (2)	Vertiv	HIPULSE/7400D/7400	200904HI3413, 200904HI3407	Can be supported under AMC	
5	Active filter(2)	Vertiv	AFCECMIED	TD9B0220001, TD9B0220002.	Can be supported under AMC	
6	PDU -100 amp(2)	Vertiv	APC Schneider	DWCK38008, DWCK38007.	Can be supported under AMC	
7	PDU -400 amp(2)	Vertiv	APC Schneider	DWCK38005, DWCK38006.	Can be supported under AMC	
8	Battery Breaker(2)	L&T	L&T	DNX4-8700H3, DNX4-8700H4	Can be supported under AMC	
9	PAC 14Ton (7)	Vertiv	PEX250ECICOM	092142506C01, 092142506C02, 092142506C03, 092142506C04, 092142506C05, 092142506C06, 092142506C07.	End Of Life	
10	Novec Cylinder(5)	FDC	MX-1230 SYSTEM	B-1161, B-12549,B-1168, B-1169, B1174.	To be Monitored	
11	Rodent controller(4)	Maser	MASER (TORRANT)	5317, 5318, 5319, 5320.	Can be supported under AMC	

12	Rodent Transastar(80)	Maser	MASER (TORRANT)	NA	Can be supported under AMC	
13	VESDA (2)	Europlex	EUROPLEX	B394678-VLC-500, B394678-VLC-012	Can be supported under AMC	
14	Camera(16)	HIKVISON	DS-2CD1321-I	20190411AAWR231945056, 20190411AAWR231945057, 20190411AAWR231945058, 20190411AAWR231945059, 20190411AAWR231945060, 20190411AAWR231945061, 20190411AAWR231945062, 20190411AAWR231945063, 20190411AAWR231945064, 20190411AAWR231945065, 20190411AAWR231945071, 20190411AAWR231945072, 20190411AAWR231945073, 20190411AAWR231945074, 20190411AAWR231945075.	Can be supported under AMC	
15	Access Control Reader(19)	ICLASS-R10	R-640X-300 (R10)	20190411AAWR231945056	Can be supported under AMC	
16	Door Lock(21)	SOLUS (HID)	TE-600LM, 600-LED	6L9-175001, 6L9-174998, 276AC3N-8P61781,	Can be supported under AMC	
17	Access Controller(15)	Honeywell	PRO03000	001F5507E42C, 001F5507E755, 001F55078512, 001F5503C255, 001F55078558, 001F553CB4A7, 001F553CC4AC, 001F553CDFD9, 001F553CDC03, 001F553CD390, 001F553C5391, 001F55078343, 001F5507834D, 001F553C3E76, 001F5507E754.	Can be supported under AMC	
18	Biometric device(1)	SCHLAGE	HK-II	1303628	Can be supported under	

					AMC	
19	Amplifier(1)	BOSCH	LBB1990/00 Plena	040500098300010032	Can be supported under AMC	
20	Speakers(23)	BOSCH	LBD 0606/10	4090404099	Can be supported under AMC	
21	Mike(1)	BOSCH	Plena	ZX2D12730849612356	Can be supported under AMC	
22	Fire Panel (1)	GST	GST200N-1	10105118	Can be supported under AMC	
23	Monitor Module/ Control Module(15)	GST	I-9300(GST)	10106302, 10106303, 10106304, 10106305, 10106306, 10106307, 10106308, 10106309, 10106310, 10106311, 10106312, 10106313, 10106314, 10106315, 10106316.	Can be supported under AMC	
24	GRP Panel(1)	Ravel	RE-25AR-W	R25ARULMIT000247	Can be supported under AMC	
25	Hooters FIRE/ WLD/MRY(10)	Johnson Control	NA	NA	Can be supported under AMC	
26	Emergency Switch(4)	NA	NA	NA	Can be supported under AMC	
27	Temperature & Humidity Reading Unit(2)	Johnson Control	HE-67P3	HE-67P3-0N0BT1, HE-67P3-0N0BT2	Can be supported under AMC	
28	Smoke detector(97)	Johnson Control	GST	L1/01 To L197.	Can be supported under AMC	
29	DDC panel (2)	L&T	L&T(BSRC800D)	BSRC800D	Can be supported under	

					AMC	
30	Water leak detection panel(1)	Johnson Control	Johnson Control	JE/14890	Can be supported under AMC	
31	WLD sensor(7)	Johnson Control	Johnson Control	Johnson Control	Can be supported under AMC	
32	CCTV software(1)	FLIR	FLIR	V9.0.1.3011	Can be supported under AMC	
33	Network switch-POE (1)	CISCO	CISCO	SF300-24PP 10/10PoE+	Can be supported under AMC	
34	Network D-LINK switch (3)	D-LINK	D-LINK, DES-1008C, DES1008A	Sr : AB/2TK089M230280, QS7L2J8004112, R3UR1EB022955.	Can be supported under AMC	
35	BMS Software(1)	ELESTA	ELESTA-V2.4.1	V2.4.1	Can be supported under AMC	
36	Access Control Software (1)	WIN-PACK	WIN-PACK-V4.0	V4.0	Can be supported under AMC	
37	CTV LCD (1)	SAMSUNG	LH32MGQLBC/XL	MG32HMPSB00166N	Can be supported under AMC	
38	Access Door Push Button Unit (5)	NA	NA	NA	Can be supported under AMC	
39	Break Glass Unit(15)	NA	NA	NA	Can be supported under AMC	
40	Emergency Gas Release/Abort Switch(4)	Ravel	Ravel	NA	Can be supported under AMC	
41	Precision AC Switchover Switch(7)	Schneider	ZENER Electrical	NA	Can be supported under	

					AMC	
42	1.5 TON Split AC(10)	Godrej / Electrolux/ Camipro/	GSC18DGN3 DWQH, ES18F3C/2017/CMSMW, GSC12SA04587, AS-18KPREMIUM GOLD, GSC 18 RGN CWQR.	1804006126A22349, '24003035940171130880056, 1804006125A04817, '500321225169000936, 1804006125A04587, 1804006126A04895, 1804006127A22347, '500321225169000940, 1810100618SA01210, 1810100618SA01510	Can be supported under AMC	
43	Electrical light DB(2), AC highwall DB(2), AC CAC DB(2), AC VRF DB(2), Raw power DB(1),Delta UPS (1), BMS(2)	Legrand	Legrand	NA	Can be supported under AMC	
44	Delta UPS(2)	Delta	E4-10K	E5Q159600064WA, E5Q19600111WA.	Can be supported under AMC	10-Oct-2024
47	Building UPS(4)	Vertiv	SYNERGY 3300	109US5154006, 109US5154008, 109US5154009, 109US51540013,	Can be supported under AMC	30 Sep 2024
45	Delta UPS Battery (40)	EXIDE	EXIDE SMF 12V	4QN 401659	To be Monitored but not considered for AMC	01-May-2023 (One Year Warranty)
46	UPS battery(204)	ENR Rocket	Rokcet-12V/200AH	05WRM0122I, 11WRM0122I, 17WRM0322I.	To be Monitored but not considered for AMC	01 Jul 2025
48	Building UPS Battery(128)	Rocket	Enr rocket	11WRMO122I, 05WRM0128I	To be Monitored but not considered for AMC	22 Sep 2025

49	Cassette AC(14)	Voltas	VXVCA-H036/4R1A	CA-H036/4R1A0119100202, CA-H036/4R1A0119100203, CA-H036/4R1A0119100204, CA-H036/4R1A0119100205, CA-H036/4R1A0119100206, CA-H036/4R1A0119100207, CA-H036/4R1A0119100208, CA-H036/4R1A0119100209, CA-H036/4R1A0119100210, CA-H036/4R1A0119100211, CA-H036/4R1A0119100212, CA-H036/4R1A0119100213, CA-H036/4R1A0119100214, CA-H036/4R1A0119100215	To be Monitored but not considered for AMC	
50	Ductable AC(3)	Vertiv	Voltas	NA	To be Monitored but not considered for AMC	
51	Diesel Generator(3)	Powarica	KTA-50-G3, VTA-28-GS7	25840824, 25344356, 25341516	To be Monitored but not considered for AMC	
52	Transformer(2)	CTR	CTR-2921050/CTR-2920151	2925107, 2925108.	To be Monitored but not considered for AMC	
53	1.5 TON Split AC(16)	Voltas	2.0T Voltas EU 245 Zye	4551962A16A000672, 4551962A16A000720, 4551962A16A000707, 4551962A16A000699, 4551962A16A000709, 4551962A16A000714, 4551962A16A000716, 4551952a16a000686, 4551962A16A000727, 4551962A16A000702, 4551962A16A000692, 4551962A16A000717, 4551962A16A000704, 4551962A16A000703, 4551962A16A000712, 4551962A16A000689,	To be Monitored but not considered for AMC	

Note: In future, if StockHolding intends to remove any devices from the AMC list as mentioned above, the corresponding AMC amount will be paid on pro-rata basis. Replacement of End-Of-life (EOL) devices will be removed from above list on pro-rata basis and considered for Monitoring purpose only.

a General Guidelines for Data Centre maintenance

The cable paths and the entry puncturing in the individual room to the building are adequately sealed to ensure that the Rodents, Birds etc. does not enter the Data Centre. The scope of works also covers monitoring of BMS equipment, reporting failures and taking corrective actions. AMC of all the products and management of data centre services.

1. Maintenance of the necessary basic Infrastructure like VESDA, Access Control and Air- Conditioning System, comfort Air conditioning system, Fire Detection and Control System, Electrical work like Lighting system, power cabling, Power Cabling , DG set etc.
2. Maintenance of the multi- layer Physical Security infrastructure like biometric and pin based access- control system, CCTV/ surveillance systems.
3. Successful bidder will undertake Facility Management service for Data Centre Infrastructure onsite on 24x7 basis. The work involves monitoring, operations and management of Data Centre Infrastructure with 99.95% up time measured on quarterly basis. All the critical calls will be attended at response time 10 minutes.
4. Selected bidder has to depute onsite resource for system monitoring on 24x7 basis.
5. To monitor, manage and trouble shoot the various components of the data centre infrastructure components including Power, Precision Air- conditioning system, Fire Detection System, Early Smoke Detection System, Access Control, Surveillance System etc. and to provide the first level support in case of any issues.
6. Bidder will carry out maintenance schedules of BMS equipment as per best practices followed in Industry and recommended by OEM.
7. As this is a comprehensive contract StockHolding will not make any payments for any consumables excluding the diesel consumed by StockHolding DG set and UPS Batteries. Consumables like Oil, filters, fire extinguisher gas, etc. are to be estimated and included in AMC cost.
8. Selected bidder to cover all the equipment's under comprehensive AMC from respective OEM itself. In case no support received from OEM, its responsibility of bidder to maintain the equipment as per SLAs.
9. Selected bidder has to maintain all the equipment's as per OEM guidelines and should take corrective action suggested in preventive maintenance report. No additional payment will be made for any equipment/accessory replacement recommended by OEM i.e. replacement of equipment and/or associated accessories should be covered under AMC itself.
10. Selected bidder will be handed over the data centre equipment's for maintenance on as is where condition and hence he has to maintain the same.

b Data Centre Infrastructure Management services

1. Integrated Building Management System:

1. Maintain time schedules on operation of Data Centre.
2. Monitor smooth running of the Non-IT system at Data Centre.
3. Observe for Alarms on work station and take appropriate action.
4. Any other operational tasks related to the Building Management System.
5. Perform audits, maintain logs of all operations and schedule corrective action if required for smooth functioning of Data Centre
6. Plan the next schedule activity well on time

2. Fire Alarm System:

1. Test Fire Detection System for normal functioning.
2. Emergency evacuation messaging in case of fire.

3. CCTV System:

1. Monitor the CCTV cameras on the monitors provided.
2. Maintain record of Events upto 90 days – Back up to be taken
3. Refresh Hard Disks for continuous operation & recording.
4. Inform deviations from normal captured on camera to StockHolding personnel.

4. Access Control System:

1. Monitor working of all access control doors.
2. Monitor access card events in the access control software.
3. Monitor communication Status of all access doors in access control software.
4. Submission of access card event report for the client.
5. Record keeping of system log events.

5. Gas Based Fire Suppression Systems

1. Respond to any alarms if it occurs and identify the reason.
2. Monitor gas cylinder pressure gauge level for any leakage.
3. Pressure testing of Novac sprinkler system for compliance (if required).

6. UPS, Server Room AC & DG Set:

1. Monitor & check the status the systems physically & on BMS regularly. Take corrective action for abnormality and co- ordinate with equipment supplier for immediate resolution.
2. Report the critical events immediately and take the corrective action.
3. Check the DG set operation regularly in consultation with StockHolding.
4. Perform periodic drills to ensure smooth working of all equipment and DG set.

7. Handling and Attending to Complaints:

1. Register the compliant from the user & Take corrective action.
2. Print reports / history pertaining to the problem occurred.
3. Ensure smooth running and report normalcy to the user.

8. Preventive Maintenance of equipment's:

1. Preventive maintenance of all the Equipment to be done Monthly and Quarterly.
2. Selected Bidder has to follow Standard Data Centre Maintenance Practice as listed in ISO for Preventive maintenance of equipments. Bidder to provide PM schedule at the start of contract.
3. Selected Bidder has to ensure the preventive maintenance of equipment is done as per schedule.
4. Filing system related documents and production of the same on demand for any authorized personnel of the client / consultant.

9. Printing Reports:

1. Selected Bidder needs to provide Quarterly Reports of all BMS Equipment's based on standard Data Centre Practice as per ISO.
2. Selected bidder needs to provide Reports
   i. On Daily Basis
   ii. On Weekly basis.
   iii. As required by the StockHolding.

All the above listed activities would be carried out by professional, trained Engineers whose role would be to ensure overall co- ordination with the client apart from ensuring smooth functioning of the system.

10. <u>System Monitoring</u>

1. Onsite Monitoring of all the system (Hardware, Peripherals) on 24x7 basis and carry out first level problem resolution.(L2, L3 support escalation is required at times to resolve problems)
2. Escalation of issues, problem at appropriate technical level. Observe escalation procedure.
3. Vendor Management – Coordinate with other vendors and service providers to resolve issues and problem.
4. Conduct standard jobs as per requirement.
5. Maintenance and Audit as per policy, schedule and procedure.

11. <u>General Administration and Audit</u>

Services in this area include, but are not limited to, the following:

1. Development and maintenance of operations, systems and end user

documentation

2. Ensure the stability of the data Centre environment and Coordinate with facilities staff regarding adequate utility services (e.g., electrical, grounding, Air conditioning etc.)
3. Participate in services audit of SCI and take appropriate steps and responsibility to ensure closure of observations etc. made during audit on services offered by selected SCI vendor.
4. Carry out and share quarterly audit of Data Centre activities and services of all equipment and perform corrective actions with consent of SCI.
5. The periodic audit of equipment's to be performed as per best practices of Data Centre maintenance.

12. Asset Management

Asset Management is to record changes to the assets in record.

1. Monitor warranties to check adherence to preventive and repair maintenance terms and conditions
2. Configure machines and maintain up to date information.
3. Maintain latest record of all peripherals and add on accessories.
4. Submit report on asset database at quarterly intervals.

13. Vendor Management

1. Maintain database of the various vendors with details like contact person, e- mail id's, contact numbers, escalation matrix,
2. Log calls with vendors and track till resolution.
3. Timely escalate to SCI in case of any non- conformance of SLA by vendor

C. FMS Services:

Three categories of resources are required at DC:

1. Data Centre Facility Manager (DCFM)
2. Data Centre Engineer (DCE)

Resource Requirement

Minimum dedicated resources deployment (including relievers) at any point in time is given in table below:

Type of Resource	Numbers of Resources	Sift
DCFM	01	8 x 6 – General Shift Support (9.30 AM to 6 PM)
DCE	06	24 x 7 – 3 Shift Support

Selection of Resources:

The CV would be made available by Bidder for evaluation and consideration of StockHolding, at least 15 days before the expected date of vacancy. For selection of key resources will be based on the process at the technical interview stage. The Bidder shall ensure that the Teams are competent, professional and possesses the requisite qualifications and experience as appropriate to the task they are required to perform under this contract. The final authority to select or reject a candidate shall be with StockHolding. And after selection, resources should be on boarded within 03 weeks at StockHolding Data Centre.

Successful Bidder will provide an account manager who will act as Single Point of Contact (SPOC) for continual supervision of its personnel provided under the Agreement, at no additional cost to StockHolding. The SPOC should be reachable on 24x7 basis. Bidder's supervisor shall have full supervisory authority over all day-today employment relationship decisions relating to Bidder's personnel, including those decisions relating to wages, hours, terms and conditions of employment, hiring, discipline, performance evaluations, termination, counselling, and shift scheduling etc.

The selected bidder must ensure immediate replacement of resource with similar skillset in case existing resource fails to report to StockHolding office / resign from organization etc. Shadow resource has to be on site during absence of primary resource. Same skills set resource shall be provided in case of replacement of resource due to discipline or any other performance issues.

The selected bidder to abide by the applicable labour laws.

<u>On – Boarding of Resources</u>

1. Background verification certificate (bidder responsibility)
2. Photocopy of Aadhaar card and PAN card (Original to be verified at StockHolding)
3. Employment letter for On-Role manpower

<u>Off – Boarding of Resources</u>

1. Notice Period: 30 days for all resources other than Project Manager. For project Manager, Notice period will be 03 Months.
2. Once the employee's resignation is accepted by the Reporting Manager, a formal communication is required to be provided to the concerned Stockholding officer in charge a month before the last working day. For DCE and DCFM the off boarding must be done in consultation with StockHolding.

3. Hand over - take over activities like knowledge transfer, discontinuation of access, email ID's, IT assets etc. are to be completed before the release.
4. Only after acknowledgement from StockHolding, the resource shall finally be released by the bidder.

(9) **Data Centre Implementation Timelines**

The Bidder is required to adhere to the project timelines mentioned below:

No.	Service Area	Target (T)
1.	Team Mobilization, Preparation of Project / Implementation / Migration Plan, Kick-off meeting, acceptance of SLA etc. /Site readiness acceptance	T+ 2 weeks
2.	Delivery of material as mentioned in BOQ Non- IT equipment's at Data Centre	T+ 8 weeks
3.	Installation, Configuration and Commissioning	T+ 20 weeks
4.	Final Acceptance Test - Go Live	T+ 24 weeks

**T refers to date of PO acceptance or 15 days from date of PO issuance, whichever is earlier.

(10) **Service Level agreement (SLA) and Penalty**

A. Data Centre implementation on Turn-key Basis

Parameters	Penalty
Penalty for delayed Delivery, Installation and Go-live	0.5% of the Supply and Installation Cost of the delayed services as specified in the contract/PO for every week of delay on delivery or installation or Go-live, subject to the maximum value of 10% of the value of Supply and Installation Cost. Any delay because of Force Majeure will not be considered while calculating the delay period for penalties.

B. For FMS Services

(a)The selected bidder shall deploy the necessary resources as mentioned in the "Resource Requirement" section.

a. In case the selected bidder fails to deploy Data Centre resources within 03 weeks post selection of resources, StockHolding reserves the right to deduct ₹ 5000/- per day for each resource from the payment payable to selected bidder for that month.

(b)The selected bidder shall make arrangement of standby resource in case existing Data Centre resource is not reporting / available (Under normal circumstances).

a. In case the selected bidder fails to provide standby resources in the absence of any Data Centre resource, StockHolding reserves the right to deduct ₹ 1000/- per day for each resource from the payment payable to selected bidder for that month.

b. The penalty charges will be calculated on monthly basis and will be adjusted towards the subsequent month for which invoices are submitted by the bidder.

c. Replacement of existing resource – For any replacement, successful bidder has to give 01 month prior intimation to StockHolding. However, for replacement of Project Manager, successful bidder has to give 03 months prior intimation to StockHolding. In case selected bidder fails to provide a replacement within the period of Notice Period, after Notice period of existing resource, StockHolding reserves the right to deduct ₹ 1000/- per day for the period of un-availability of the replacement from the payment payable to selected bidder. However, for Project Manager, the penalty amount will be ₹ 5000/- per day for the period of un-availability of the replacement of Project Manager.

(c) However, the penalty may / will be waived off for Non-Adherence to SLA due to reasons mentioned in the Force Majeure or because of delays attributable to StockHolding. In such case(s) the bidder should notify StockHolding of the reasons for the delay within reasonable timelines.

C. AMC for BMS equipment

The purpose of this Service Level Agreement (herein referred to as 'SLA') is to set the expectations between the StockHolding & successful bidder. SLA is therefore the benchmark of how the Bidder sets and maintains commitments on managing the StockHolding Data Centre. The purpose of this SLA is to clearly define the levels of service provided by the Bidder for StockHolding Data Centre during the contract period.

a. The successful bidder will be responsible for providing the support services during the AMC period.

b. Successful bidder would be held responsible for any defect in the services rendered by OEM / OEM authorized partner.

c. Any Upgrades, Updates & support for the software / firmware shall be arranged from the OEM with no additional cost to StockHolding during the AMC period.

d. Bidder shall provide Services, as per coverage ("Coverage Hours"), for the Machines, as detailed in Inventory sheet by StockHolding. Successful bidder will provide overall annual average uptime of 99.95% of the equipment.

SLA for Onsite Team Performance:

a. Power availability

Table – E:

SLA Description	Power Availability to IT Racks
Definition of SLA	Availability of power shall be measured at each industrial power

	socket/Tap-off boxes for providing power to the PDU's of the IT Racks. Downtime will be the time interval between the time of actual fault/failure and the time of fault rectification. Downtime shall be calculated on each incident basis	
Data Collection Process and Reporting	The data for calculations can be taken from PDU logs/ Inline Energy meters / UPS logs / StockHolding Monitoring software.	
SLA Calculation	Availability = [Total Monthly Uptime / (Total Monthly Uptime + Downtime)] * 100	
Penalty Calculation	Availability	Penalty
	>=99.95%	No Penalty
	>=99.9% to <99.95%	0.5% of the total AMC value of the applicable quarter
	>=99.85% to <99.9%	1% of the total AMC value of the applicable quarter
	>99.85%	2% of the total AMC value of the applicable quarter
Measurement Interval	Quarterly	
Reports and Data to be submitted	UPS logs / IT device logs/ Inline energy meters/ Reports from StockHolding Monitoring solution	

b. CCTV Availability

Table – G:

SLA Description	CCTV Availability
Definition of SLA	Availability shall be measured for: (a) NVR (Network Video Recorder) used for storage of CCTV Footage (b) Availability of 100% cameras
Data Collection Process and Reporting	Availability of CCTV for all cameras in scope shall be determined based on the audit of the CCTV NVR recordings performed by the DCFM each month. The audit report submitted by the DCFM at the end of the month will be used to calculate the availability. The sample taken by DCFM must be selected in such a way that 100% of the cameras are covered in a period of three months with a minimum coverage of 30% each month.
SLA Calculation	Availability = [Total Monthly Uptime / (Total Monthly Uptime + Downtime)] * 100
Penalty Calculation	• Unavailability of CCTV systems due to downtime in NVR for more than 48 hours shall attract a penalty of 0.5% of the Total AMC value of the applicable quarter for the data centre.

	• Unavailability of a particular CCTV camera for more than 48 hours due to defect in camera shall attract a penalty of 0.5% of the Total AMC value of the applicable quarter for the data centre for each camera.
Measurement Interval	Quarterly
Reports and Data to be submitted	Logs / Reports from StockHolding Monitoring solution or Server logs

c. Submission of Monthly and Quarterly Reports

Table – H:

SLA Description	Submission of Quarterly Reports	
Definition of SLA	The bidder shall submit the defined MIS and quarterly reports as per the scope of work of this contract.	
Data Collection Process and Reporting	Submission of Quarterly Report by 10th day of the subsequent month of the reporting quarter by mail / hard copy as defined by StockHolding. Reports to be preferably submitted by DCFM.	
SLA Calculation	Delay in submission of report beyond the target dates.	
Penalty Calculation	Target	Penalty
	Submission of reports as per SLA	No Penalty
	Delay beyond date of submission	0.025% of the applicable Quarter's Total AMC value of the data centre for every month of delay
Measurement Interval	Quarterly	
Reports and Data to be submitted	Quarterly Reports	

d. Reporting of Incidents

Table – I:

SLA Description	Reporting of Incidents
Definition of SLA	Any failure/ incident on any part of the Data Centre infrastructure or its facilities shall be communicated to StockHolding with details of facility affected, downtime, etc. as applicable.
Data Collection Process and Reporting	The data for the calculation of this SLA is the Emails being received by the StockHolding at the occurrence of any malfunction in the existing facilities installed inside Data Centre.

	In order to monitor the SLA, following points shall be considered: 1. Bidder shall submit the incident report to StockHolding with the details of services affected, RCA, action and remedy via Email. 2. StockHolding or an agency on behalf of StockHolding will audit the actual occurrence of such incidents reported by bidder from the logs and reports of monitoring tools etc. and cross verify with respective emails received by StockHolding.	
SLA Calculation	SLA will be calculated based on the audit / surprise check conducted by StockHolding or an agency on behalf of StockHolding.	
Penalty Calculation	Target	Penalty
	100% incidents to be reported to StockHolding within 60 minutes with the details of services affected, cause, action, and remedy.	No Penalty
	Reporting of incident beyond 60 minutes	0.025% of the applicable Quarter's total AMC value of the data centre for every hour of delay on an incremental basis.
Measurement Interval	Quarterly	
Reports and Data to be submitted	Incident report and Audit report	

e. Response Time for the Breakdown / Incident calls

Table – K:

SLA Description	Response Time for the Breakdown / Incident calls
Definition of SLA	Response time is the time taken by bidder to respond (acknowledge) to StockHolding once the problem/issue is logged with the bidder in the support portal / Help Desk Solution. (Penal action shall be taken only for the equipment which are under this contract with the bidder. However, the bidder shall have to log calls with the respective service provider for other non-IT equipment of DC and follow up for resolution).
Data Collection Process and Reporting	The data for calculation of this SLA are the Helpdesk / Support portal (Service/Incident) tickets raised by the bidder resources in the Helpdesk Tool in response to any request raised by StockHolding representatives or by Bidder's resources itself if any issue (Problem/Incident) is detected in any service/system under the

	domain of the bidder.	
SLA Calculation	Calculate the time interval between the time of occurrence of Incident / issue (as per system log) till the generation of Incident ticket or e-mail confirmation for acknowledgment of the incident / issue from the respective OEM / maintenance agency.	
Penalty Calculation	Target	Penalty
	100% calls to be responded within 2 Hours	No Penalty
	Calls not responded or responded beyond 2 Hours	0.025% of the applicable Quarter's Total AMC value of the data centre for every 2 hours of delay on an incremental basis for every service/incident not responded.
Measurement Interval	Quarterly	
Reports and Data to be submitted	Reports shall be generated from Support portal / helpdesk tool.	

f. Resolution Time for the Breakdown / Incident calls

Table – L:

SLA Description	Resolution Time for the Breakdown / Incident calls	
Definition of SLA	"Resolution Time", means time taken by the bidder to troubleshoot and fix the problem from the time the call has been logged at the helpdesk tool / support portal till the time the problem has been closed. (Penal action shall be taken only for the equipment which are under this contract with the bidder. However, the bidder shall have to log calls with the respective service provider for other non-IT equipment of DC and follow up for resolution).	
Data Collection Process and Reporting	The data for calculation of this SLA are the Helpdesk / Support portal reports which shall indicate the time of call logging and the time of call closure.	
SLA Calculation	The data for calculation of this SLA are the Helpdesk / Support portal reports which shall indicate the time of call logging and the time of call closure.	
Penalty Calculation	Target	Penalty
	100% calls to be resolved. o Within 4 hours for critical calls, o Within 24 hours for major and o Within 48 hours minor calls or	No Penalty

	as per respective SLA duration whichever is lower 1. Critical Calls: Incidents which may lead to business / security impact. 2. Major Incidents Calls: Incidents because of which monitoring of DC parameters or redundancy is at stake 3. Minor calls – Calls that do not impact the DC technical parameters	
	For critical calls which are not resolved in 4 hours	0.025% of the applicable Quarter's Total AMC value of the data centre for every 4 hours of delay on an incremental basis for every unresolved call.
	For Major calls which are not resolved in 24 hours	0.025% of the applicable Quarter's Total AMC value of the data centre for every 24 hours of delay on an incremental basis for every unresolved call.
	For Minor calls which are not resolved in 48 hours	0.025% of the applicable Quarter's Total AMC value of the data centre for every 48 hours of delay on an incremental basis for every unresolved call.
Measurement Interval	Quarterly	
Reports and Data to be submitted	Reports shall be generated from Support portal / helpdesk tool.	

g. Scheduled Preventive Maintenance

Table – M:

SLA Description	Scheduled Preventive Maintenance
Definition of SLA	Bidder shall conduct Preventive Maintenance (PM) quarterly for all equipment under bidder's scope.
Data Collection	The data for calculation of this SLA is the scheduled maintenance

Process and Reporting	plan for each quarter against activities mentioned in the PM plan. Bidder will share a PM plan at the beginning of calendar year. Bidder also has to intimate StockHolding official 05 days in advance for the scheduled maintenance activity via email.
SLA Calculation	Non-availability of Preventive Maintenance (PM) in a quarter
Penalty Calculation	1% of the applicable Quarter's Total AMC value of the data centre
Measurement Interval	Quarterly
Reports and Data to be submitted	PM Activity Report

Note: The maximum penalty will be capped to 10% of Contract value. If overall penalty amount exceeds the 10% of Contract value, StockHolding reserves the right to terminate the contract.

(11) **Bids Preparation and Submission Details**

1. Technical Bid (Annexure - 3)

a. The required documents for Eligibility Criteria must be submitted (uploaded) online on GeM portal. Eligibility Criteria documents should be complete in all respects and contain all information asked for in this RFP document
b. Bidder will need to submit their proposed models with details in technical bid. If proposed model do not meet our specifications then StockHolding has discretion to reject the proposed model.
c. There should not be any hidden / conditional costs in the bids and in the event of their presence in the bid, the bid is liable to be rejected.
d. No indications pertaining to price or commercial terms should be made in the Technical Bid submission. If any price indications are made, then the bids is liable to be rejected.
e. No open ended / conditional bid shall be entertained and is liable for rejected.

2. Commercial Bid

a. The bidder will submit Commercial (Indicative Price) Bid must be submitted (uploaded) online on GeM portal. (refer **Annexure - 4)**

3. Submission of Bids

a. The required documents for Eligibility Criteria and Technical Bid, Commercial Bid must be submitted (uploaded) online on GeM portal. Technical Bid and Commercial (Indicative Price) Bid should be complete in all respects and contain all information asked for in this RFP document
b. If Interest Free Earnest Money Deposit (EMD) is not submitted by bidder / received by *StockHolding* in the form of NEFT prior to the last date of submission of bids as mentioned in this RFP, bidder will not be eligible to participate in this RFP.
c. The offer should be valid for a period of at least 90 days from the date of submission of bid.
d. The bidder shall fulfil all statutory requirements as described by the law and Government notices. The bidder shall be solely responsible for any failure to fulfil the statutory obligations and shall indemnify *StockHolding* against all such liabilities, which are likely to arise out of the bidders failure to fulfil such statutory obligations
e. The bidder shall be solely responsible for any injury, damage, accident to the workman employed by the bidder for any loss or damage to the equipment/property in the areas of work as a result of negligence/carelessness of its deployed resources.
f. No request for any further extension of the above deadline shall be entertained. Delayed and/or incomplete bid shall not be considered.
g. All employees engaged by The bidder shall be comprehensively insured for accidents and injuries by the bidder at his/her/their cost

h. The Interest free EMD should be deposited in StockHolding's bank account on or before the bid submission date.
i. Bidders are advised to submit their online Technical and commercial bids well before last date of submission.

(12) **Evaluation of Bids**

StockHolding will evaluate the bid submitted by the bidders under this RFP. The eligibility bid submitted by the Bidder will be evaluated against the Eligibility criteria set forth in the RFP. The Bidder needs to comply with all the eligibility criteria mentioned in the RFP to be evaluated for evaluation. Noncompliance to any of the mentioned criteria would result in outright rejection of the bidder's proposal. The decision of *StockHolding* would be final and binding on all the bidders to this document.
StockHolding may accept or reject an offer without assigning any reason what so ever. The bidder is required to comply with the requirement mentioned in the RFP. Non-compliance to this may lead to disqualification of a bidder, which would be at the discretion of *StockHolding*.

a Please note that all the information desired needs to be provided. Incomplete information may lead to non-consideration of the proposal.
b The information provided by the bidders in response to this RFP document will become the property of StockHolding.

Evaluation Process

Stage 1- The 'Eligibility Criteria bid document' will be evaluated and only those bidders who qualify all the requirements will be eligible for 'Technical bid'.
Stage 2- For only those bidders who have been found eligible in Stage1, "Technical Bids" will be evaluated, and a technical score would be arrived at as per evaluation steps detailed in the RFP.
Stage 3- Bidders, who have been found eligible in Stage2, shall be invited for "Commercial Bid" evaluation.
Stage 4 - The final evaluation will be made on the basis of quality-cum-cost based selection (QCBS), with a weightage to quality of services and cost in the ratio of 70:30.

Eligibility Criteria Evaluation (Stage1)

The bidder meeting the Eligibility Criteria as per **Annexure 2** will be considered for Technical evaluation. Any credential/supporting detail mentioned in "Annexure 2 – Eligibility Criteria" and not accompanied by relevant proof documents will not be considered for evaluation. All credential letters should be appropriately bound, labelled and segregated in the respective areas. There is no restriction on the number of credentials a bidder can provide.

Technical Bid Evaluation (Stage2)

The Technical bids of only those bidders shall be evaluated who have satisfied the eligibility criteria bid. StockHolding may seek clarifications from the any or each bidder as a part of

technical evaluation. All clarifications received by within stipulated time shall be considered for evaluation. In case a clarification is not received within the stipulated time, the respective technical parameter would be treated as non-compliant and decision to qualify the bidder shall be accordingly taken by the StockHolding.

Only technical bids receiving a score greater than or equal to a cut-off score of 70 marks out of maximum 100 marks will be processed further.

The proposal submitted by the bidders shall, therefore, be evaluated on the following criteria:

Sr. No	Evaluation Factor Points	Min Qualifying Marks	Max Marks	Evaluation approach
1	Technical Ability			
1.1	Understanding of the project		10	Based on Technical documents and drawing. Justify the Strengths that make the bidder is Technically Superior.
1.2	Innovativeness		2	Any value added solution without changes in the specifications.
			2	Bidder should have experience in the design of data center with cooling technologies as Rear Door Heat exchangers, Direct contact liquid cooling DCLC solutions.
			1	Bidder is on the board of research institute, member of IEEE family, Member of IEC committee.
1.3	Proposed Project Plan Quality and methodology		10	▪ Does the bidder address the timeliness which are relevance to the Bid Requirement especially to the Data Centre Project. ▪ Project Plan including day wise, week wise activities with Work Breakdown Structures, Project estimates, milestones etc. ▪ Deployment of quality and experienced technical manpower at site including Project manager and

Sr. No	Evaluation Factor Points	Min Qualifying Marks	Max Marks	Evaluation approach
				experts in the field of Electrical, Mechanical, I- BMS, Controls and Automation. ▪ Bidder to indicate number of such man power getting deployed at site and submit the resume of such expertise.
	Subtotal -	20	25	
2	Past Performance			
2.1	Evaluate this factor based on Past Experience of Work Carried out either with Stock Holding Corporation of India Limited (StockHolding)Mumbai or other similar work experience with other clients by reference check. Experience in delivering the Data centre and building construction in-line with timelines stipulated for this Bid shall be given weightage.		15	The bidder must have successfully implemented / managed at end client sites at least 02 (two) numbers of data centers in India in last 05 (five) years. Each of the data centers should be with minimum of UPS feeding power of 400 KVA means supply ,installed, testing and commissioned and minimum feeding cooling load of 150 Tons(excluding redundancy) means supply ,install, testing and commissioned (UPS and cooling to be considered only for server area) along with Fire- fighting and suppression systems with high end integration of building management system and all the allied works required for successful installation & completion of the Data Centre. ▪ 02 Projects = 8 Marks ▪ 03 Projects = 10 Marks ▪ 04 Projects = 12 marks ▪ More than 04 Projects = 15 Marks
2.2			20	The bidder should have built at least 03 (three) data centre during last 05 (five) years in India with similar work* ▪ 02 Projects = 10 Marks

Sr. No	Evaluation Factor Points	Min Qualifying Marks	Max Marks	Evaluation approach
				▪ 03 Projects = 12 Marks ▪ 04 Projects = 15 marks ▪ More than 04 Projects = 20 Marks ** Similar work should include: ▪ Data Center Design & Build of minimum 100 Rack and 2MW IT Load including SITC of UPS (in N+N), PACs/PAHU/Inrow (in N+1), Electrical Panels (in N+N), Electrical Cables, BBT for Rack Distribution, Complete IBMS system including Fire Suppression System along with BMS software, Generators (optional), passive network cabling (optional)etc. ▪ It should not include any IT equipment (servers, storages, and networking switches) which are installed in the 42U server racks as part of the scope. ▪ It should be a turn-key project with the complete end-to-end scope in the name of the bidder only.
	Subtotal – Past Performance	20	35	
3	Presentation			
3.1	Presentation by the bidder along with the Key management team, Key Technical team Staff, holding owner/employee position in the organization on following parameters:			Presentation should cover bidders in depth understanding of the project for the Electrical , Mechanical, IBMS, Civil etc. related work, execution Competency and Project execution Plan for this project with timelines (Critical Path timeline), human resource Demographics and Deployment for this project (Manpower Deployment Chart), Testimonials & Site

Sr. No	Evaluation Factor Points	Min Qualifying Marks	Max Marks	Evaluation approach
	a) Understanding of Project requirements b) Bidder's Capabilities c) Relevant Experience d) Proposed Solution e) Approach and Methodology f) Resource Deployment Plan g) Proposed Project Manager / Team lead / resources experience & skillset h) SLA Management Framework			ref, Approvals capability, List of Completed and Ongoing Projects, Tools & technology etc. Note: *The person responsible for the supervision of the contract performance shall be present during this presentation.*
	Sub Total -	30	40	
	Grand Total		**100**	

Best Value Bid Determination and Final Evaluation (Stage 4)

A composite score shall be calculated for those bidders whose bids are found to be in order.

The weightage for the composite evaluation is as described below:
a. Technical – 70%
b. Commercial – 30%

For Quality and Cost based Evaluation (QCBS), the following formula will be used for evaluation of the bids.

Bn = 0.7 * (Tn/Thigh * 100) + (0.3) * (Cmin/Cb * 100)
Where;
Bn = Overall score of bidder under consideration
Tn = Technical score for the bidder under consideration
Thigh = Highest Technical score achieved against criteria among all eligible bids

Cb = Evaluated Bid Cost (as calculated above) for the bidder under consideration
Cmin = Lowest Evaluated Bid Cost (as calculated above) among the financial proposals under consideration.

The bidder achieving the maximum overall score will be selected for the project. StockHolding reserves the right to negotiate with bidder achieving the maximum overall score.

(13) **Force Majeure:**

Neither the StockHolding nor the Bidder shall be responsible for any failure to fulfil any term or condition of the CONTRACT if and to the extent that fulfilment has been delayed or temporarily prevented by a Force Majeure occurrence, defined as "Force Majeure". For purposes of this clause, "Force Majeure" mean an event beyond the control of the Parties and which prevents a Party from complying with any of its obligations under this Contract, including but not limited to: acts of God not confined to the premises of the Party claiming the Force Majeure, flood, drought, lightning or fire, earthquakes, strike, lock-outs beyond its control, labour disturbance not caused at the instance of the Party claiming Force Majeure, acts of government or other competent authority, war, terrorist activities, military operations, riots, epidemics, civil commotions etc.
The Party seeking to rely on Force Majeure shall promptly, within 5 days, notify the other Party of the occurrence of a Force Majeure event as a condition precedent to the availability of this defence with particulars detailed in writing to the other Party and shall demonstrate that it has taken and is taking all reasonable measures to mitigate the events of Force Majeure. And, all Parties will endeavour to agree on an alternate mode of performance in order to ensure the continuity of service and implementation of the obligations of a party under the Contract and to minimize any adverse consequences of Force Majeure. Each PARTY shall bear its own cost in relation to the force majeure occurrence.

However, any failure or lapse on the part of the Bidder to mitigate the damage that may be caused due to the above-mentioned events or the failure to provide adequate disaster management/recovery or any failure in setting up a contingency mechanism would not constitute force Majeure, as set out above.

If the duration of delay exceeds ninety (90) consecutive or one hundred eighty (180) cumulative days, StockHolding and the Bidder shall hold consultations with each other in an endeavour to find a solution to the problem. Notwithstanding above, the decision of the StockHolding, shall be final and binding on the bidder.

(14) **Dispute Resolution**

In the event of any dispute arising out of or in connection with this purchase order, the parties' shall use their best endeavour to resolve the same amicably AND if the dispute could not be settled amicably, the matter shall be settled in the court under Mumbai jurisdiction only. The final payment will be released only after the bidder complies with above-mentioned clause

(15) **Right to alter RFP**

a. StockHolding reserves the right to alter the RFP terms and conditions at any time before submission of the bids.

b. StockHolding reserves the right to modify, amend, alter and/or cancel the entire RFP at any stage without assigning any reason whatsoever. We further understand and accept that StockHolding's decision in this regard will be final and binding on all bidders.

(16) **Integrity Pact**

The bidder will have to enter into an Integrity Pact with StockHolding Corporation of India Limited. The format (text) for the Integrity Pact is provided as **Annexure - 7**. The bidder will have to submit a signed and stamped copy of the Integrity Pact by the authorized signatory.

(17) **Non-Disclosure Agreement (NDA)**

The successful bidder will sign a Non-Disclosure Agreement (NDA) with Stock Holding Corporation of India Limited. The draft text of the NDA will have to be approved by legal department of Stock Holding Corporation of India Limited.

(18) **Completeness Responsibility**

The bidders may please note that this is a contract on 'Turn-key' basis. Notwithstanding the scope of work, engineering, supply and services stated in bid document, any equipment or material, engineering or technical services which are not specifically mentioned under the scope of supply of the bidder and which are not expressly excluded there from but which – in view of the bidder - are necessary for the required performance of the data centre solution in accordance with the RFP specifications are treated to be included in the bid and has to be implicitly performed by bidder. In no case, the bidder will be permitted to increase the prices quoted.

(19) **Indemnify**

The bidder should hereby indemnify, protect and save *StockHolding* against all claims, losses, costs, damages, expenses, action suits and other proceedings, resulting from infringement of any patent, trademarks, copyrights etc. or such other statutory infringements in respect of all the equipment offered by the bidder. Any publicity by bidder in which name of *StockHolding* is used should be done only with the explicit permission of *StockHolding*.

(20) **Exit Clause**

StockHolding reserves the right to terminate this Agreement by giving 01 (one) month notice, if it is not satisfied with the Services. Reasonable number of incidents of the non-performance of the obligations by the bidder as per this Agreement will be provided before the termination notice is served on the bidder. In case of termination, payments due till the date of termination only would be paid. Balance payment for remaining Agreement Term will not be paid to the bidder.

(21) **Termination**

StockHolding reserves right to terminate the contract by giving 90 days prior written notice in advance –

a) If penalty amount is equal to or more than 10% of Contract value of a particular year;
b) If at any point of time, StockHolding finds out deviation to sub-contracting clause;
c) In the event of a reasonable apprehension of bankruptcy of the System Integrator;

(22) **Exit Management**

a) Plan: An Exit Management plan shall be furnished by System Integrator in writing to StockHolding within 60 days from the acceptance of PO/Contract, which shall deal with at least the following aspects of exit management in relation to the contract as a whole and in relation to the Project Implementation, and the SLA.

b) Purpose: In the case of termination of the Contract, the Exit Management procedure should start 90 days before the expiry or termination of contact.

c) Transfer of assets: StockHolding shall be entitled to place notice in writing on the SI at any time during the Exit management period as detailed hereinabove requiring the SI to provide StockHolding with a complete and up to date list of the Project assets within 30 days of such notice. StockHolding shall be entitled to place a written notice to the SI requiring the SI to transfer all the Project assets to StockHolding. SI shall hand over possession, in a peaceful and unconditional manner, of all Project assets to the StockHolding prior 30 days of the date of expiry or termination of the contact.
d) Additionally, the outgoing vendor would be required to support StockHolding or the new vendor for smooth handover of the entire system by assisting in any manner whatsoever which shall include amongst others handing over of all technical documents such as SDLC, Design Documents etc.

e) Confidential Information, Security and Data: The SI will promptly on the commencement of the exit management period supply to StockHolding the following:
- Information relating to the current services rendered.
- Documentation relating to Project's Intellectual Property Rights.
- Project Data and Confidential Information.

(23) **Consortium**

Consortium is only allowed for FMS services. However, entire responsibility will lies on Prime bidder.

(24) **Sub-Contracting**

No Sub-Contracting is allowed for this RFP.

Annexure – 1 - Details of Bidder's Profile

(To be submitted along with technical bid on Company letter head)

Details filled in this form must be accompanied by sufficient documentary evidence, in order to verify the correctness of the information.

Sl. No.	Parameters	Response	
1	Name of the Firm/Company		
2	Year of Incorporation in India		
3	Names of the Partners/Directors		
4	Company PAN no		
5	Company GSTN no. (please mention for all states)		
4	Name and Address of the Principal Banker		
5	Addresses of Firm/Company		
	a) Head Office		
	b) Local Office in Mumbai(if any)		
6	Authorized Contact person		
	a) Name and Designation		
	b) Telephone number		
	c) E-mail ID.		
7	**Financial parameters**		
	Business Results (last two years)	Annual Turnover (₹ in Crores)	Net Worth (₹ in Crores)
	2020-21		
	2021-22		
	2022-23		
	(Only Company figures need to be mentioned not to include group/subsidiary Company figures}	(Mention the above Amount in INR only)	
	Details of Reference Customer		
	Customer Name and Contact No.	Brief Details of hardware supplied	PO number and Date(Attached PO with masked price)
	1		
	2		
	3		

N.B. Enclose copies of Audited Balance Sheet along with enclosures

Dated this..... Day of 2024

(Signature)

(In the capacity of)
Duly authorized to sign bid with seal for & on behalf of (Name & Address of the Bidder)

Note:

1. All self-certificates shall be duly signed and Stamped by Authorized signatory of the bidder Firm unless specified otherwise.
2. Bidder response should be complete; Yes/No answer is not acceptable...
3. Details of clients and relevant contact details are mandatory. Bidder may take necessary approval of the clients in advance before submission of related information. StockHolding will not make any separate request for submission of such information.

Annexure – 2 - Eligibility Criteria

(Documents to be submitted online along with Technical Bid)

For Bidder Company:

Criteria (Documents to be submitted online along with Technical Bid)

SN.	Criteria	Documents to be submitted by bidder
1	The Bidder should be a registered Company in India as per Indian Companies Act, 1956 or Indian Companies Act, 2013 having minimum of 5 years of experience of Managing Non-IT Infrastructure of data Centre	Documentary Proof to be attached (Certificate of Incorporation) and Self-declaration from bidder on their letter head duly signed by authorised signatory for experience
2	Bidder should have an average annual turnover of at least ₹25 Crores per annum for last three financial years (2020-21, 2021-22 and 2022-23). It should be of individual entity and not of Group of entities	Copy of CA certificate mentioning the annual turnover over the past 3 years
3	Bidder should not be blacklisted by any Government, Government Body, PSU, Bank, Autonomous body and any other entity for any reasons.	Self-declaration by the bidder on it Letter Head duly signed by the Authorized Signatory
4	Bidder should have positive Net Worth in the last 03 (three) audited financial years	Copy of CA Certificate for past 03 (three) years
5	Bidder should have valid ISO 9001:2015 Certification	Valid Certificate need to be provided
6	The bidder should have completed at least 02 (two) Tier III certified projects from Uptime in the past 3 years, OR The bidder should have completed at least 2 Rated-3 certified projects from TIA-942 in the past 3 years.	PO/Completion certificate should be attached and signed by Authorised signatory
7	Bidder should have following certified Datacenter Professionals on company payroll and is should be working with the bidder for a minimum of 1 year: • Minimum 5 employees CDCP, CDCS, CDCE or 2 ATD • Minimum 5 employees having Project Management Personnel (PMP/Prince2) certification	A copy of the Valid certificate shall be enclosed with the bid along with PF/ESIC deposit slips from the organization verifying the employment of the personnel with the organization for the past 1 years or more as on date of release of RFP.
8	Bidder partner should have minimum 50 Data Centre (Non-IT staff) persons on the payroll of the company	Copy of EPF challan showing the number of employees

		And Self-Certification signed by HR head and counter signed by Authorized Signatory
9	The bidder must have successfully implemented / managed at end client sites at least 02 (two) numbers of data centers in India in last 05 (five) years. Each of the data centers should be with minimum of UPS feeding power of 400 KVA means supply ,installed, testing and commissioned and minimum feeding cooling load of 150 Tons(excluding redundancy) means supply ,install, testing and commissioned (UPS and cooling to be considered only for server area) along with Fire- fighting and suppression systems with high end integration of building management system and all the allied works required for successful installation & completion of the Data Centre	PO/Completion certificate should be attached and signed by Authorised signatory
10	The bidder should have built at least 02 (two) data centre in India out of which; 3 **Similar completed works each costing not less than ₹ 10 Crores each OR 2 Similar completed works each costing not less than ₹ 15 Crores each OR 1 Similar completed work costing not less than ₹ 30 Crore ** Definition of Similar Work: • The scope of work should include Data Center Design & Build of minimum 100 Rack and 2MW IT Load including SITC of UPS (in N+N), PACs/PAHU/Inrow (in N+1), Electrical Panels (in N+N), Electrical Cables, BBT for Rack Distribution, Complete IBMS system including Fire Suppression System along with BMS software, Generators (optional), passive network cabling (optional)etc.	PO/Completion certificate (on the name of bidder only) should be attached and signed by Authorised signatory. End customer completion certificate should be submitted in case the order is placed by a private firm on behalf of the Govt. end customer.

	• It should not include any IT equipment (servers, storages, and networking switches) which are installed in the 42U server racks as part of the scope. • It should be a turn-key project with the complete end-to-end scope in the name of the bidder only.	
11	The bidder should have undertaken/ completed the activities of providing on-site support and facility management / O & M services to at least 02 (two) data centres during last 5 years in India. The scope of the activity should cover operation and maintenance of Electrical Systems, Cooling systems (Chillers, PAC/PAHU /In ROW etc.) UPS and Battery, IBMS etc. Bidder to provide the documentary evidence that minimum 3 technical manpower had deployed at site and maintaining electrical system and cooling system. Such Data centre having minimum cooling load of 150 Tons. The value of the project; 04 Project worth ₹ 1 Crore Or, 05 Projects worth ₹ 60 Lacs each Or, 06 Projects worth ₹ 50 Lacs each	Documentary Proof to be attached along with Purchase Order / Contract copy.
12	Bidder should have fully operational service/support office in Maharashtra for last 3 years.	Address of the bidder's service support center(s)

Eligibility Criteria (**For Proposed Resource – Total 7 numbers**)

(A)	Resource Type	Qualification	Experience	Certification Required
1	Data Centre Facility Manager (DCFM)	Minimum Graduate / Technical Diploma Holder in IT / Computers / Electrical / Mechanical or related field with minimum 10 years of experience in design, implementation of Data Centre BMS	3. Experience in design, implementation of Data Centre Power management, Cooling Management, BMS management, Civil infrastructure and Passive cabling infrastructure	▪ Relevant Certification in Data Centre Management Services ▪ Experience Certificate / relevant documents for

		equipment's	management 4. Experience in design, implementation / managing for Data Centre Non-IT infrastructure of at least 3 Data Centre's project in India during last 5 years	Data Centre Projects
2	Data Centre Engineer (DCE)	Minimum Graduate / Technical Diploma Holder in related field with minimum 05 years of experience in Data Centre Non-IT Infrastructure	Experience in managing BMS System / Civil infrastructure / Passive cabling infrastructure / Power systems etc.	Relevant Certification in Data Centre Management Services
(B)	**Criteria**		**Documents to be submitted by bidder**	
1	Proposed resources must be on the Payroll of either Prime bidder or Consortium partner (out-sourcing staff not allowed). However, proposed Project Manager must be on the Payroll of Prime bidder.		▪ Last 3 Months Payslips ▪ Offer letter of present organization	

Dated this..... Day of 2024
(Signature)

(In the capacity of)
Duly authorized to sign bid with seal for & on behalf of (Name & Address of the Bidder)

Annexure – 3 – Technical BoQ

Sr. No	Description List of Makes -Electrical	Recommended Makes	Proposed Make
1	LT CABLES	RPG /KEI /FINOLEX/POLYCAB/Ravin/Lapp	
2	MS/GI CONDUITS	BEC/BHARAT/AKG/UNIVERCELL	
3	PVC CONDUITS	AVON PLAST//Precision/Dimond	
4	BRASS DOUBLE COPRESSION GLANDS	DOWELLS/COMMET/Siemens/Phoenix	
5	Terminal blocks & cage clamps	Elmexx|Phoenix|Wago	
6	Soft starters/VFD Drives	ABB|Schneider|L&T/Siemens/Eaton/Danfoss/Grandfoss	
7	UPS System	Schneider/Vertiv/Eaton/Delta	
8	Li Ion Battery	LG/Samsung/Delta	
Sr. No.	**Details of Material- Civil and Interior**		
1	Cement	ACC, L&T, Ambuja	
2	WALL PUTTY	GOLDSIZE PUTTY BY SHALIMAR PAINTS LTD., J K WALL PUTTY, Birla White	
3	STRUCTURAL STEEL	TISCO, SAIL, RINL, JINDAL, ESSAR, Tata Steel	
4	ANCHOR FASTNER	HILTI, FISHER	
5	ALUMINIUM SECTIONS	INDAL, HINDALCO, JINDAL,	
6	GYPSUM BOARD and Fire Rated partition	INDIA GYPSUM, LAFARGE BORAL, RAMCO LTD	
7	Fire Sealants	3M,Hilti,Fischer	
8	Raised/False Flooring	Unitile/Uniflair/ USG/Access Floor Systems/AET Flexiable	
9	Insulation	Armaflex/K-FLex	
Sr. No.	**System / Description-IBMS**		
A	**Building Management System**		
1	Main Control System/DDC Controllers	Honeywell, Schneider, Siemens, Rockwell	
2	Temperature, Air humidity Sensors (Duct, Room)	Azbil (Yamatake), ALC, Sauter, Siemens, Endress-Hauser	

Sr. No	Description List of Makes -Electrical	Recommended Makes	Proposed Make
3	Building Management Software	Honeywell, Siemens, Schneider, JCI, L & T, Mitsubhishi, Rockwell Automation	
4	Motorized Butterfly valves/ actuators	Rapid Cool/Audco/ Johnson/Siemens/Belimo	
5	Current/Voltage/Power Factor/Frequency KWH Transducers with digital display/Electronic Meter	Situ Electro Instuments Pvt.Ltd./ Secure metres Ltd./ Enercon/L&T	
6	Electric Actuators for 2-way ON/OFF valves	Danfoss/ Emtrack/ Johnson/ Honeywell/ Siemens/ Trane/ Cyclon Controls.	
7	CAT 6 Cable	AMP, Molex, Schneider	
8	OFC Cables	Finolex, Sterlite, HFCL	
9	LED Monitor	Samsung/LG/Sony	
B	**Mechanical Components**		
1	PAC	Schneider | Vertiev | Climaveneta	
1.1	Fan section-Blower	Kruger| Flaktwood |Nutech| TCF Nadi|	
1.2	Variable frequency drives	Danfoss |ABB/Eaton	
1.3	Variable Air Volume (VAV) Boxes	Caryaire-Titus| Trane| Johnson Control | Belimo	
1.4	Racks (42 U IT and BMS)	Schneider, Valrack,,EFS, Rittal, Netrack, Dhananjay Group	
C	**Accessories**		
1	Pressure Gauges	H.Guru |Fiebig| WAREE	
2	Thermometers	Emerald| Fiebig|WAREE	
3	Flow Switch	Anergy|Honeywell|Siemens|Johnson|Schneider	
4	Rubber Groumat/ Clamps/ Hangers	Emerald/ Resistoflex/ Kanwal	
D	**Air Filters**		
1	Filters	Airtech|Purolator|Puromatic|Thermodyne |Spectrum|Dynafilters	
E	**Insulation**		
1	Glass Wool	Owens Corning |U.P. Twiga|Kimmco	
2	Mineral Wool	Lloyd Insulation	
3	Closed Cell Elastomeric Insulation	Armaflex|Aeroflex|Vidoflex|Kflex	

Sr. No	Description List of Makes -Electrical	Recommended Makes	Proposed Make
4	Aluminium Sheets	TATA|Nippon|Hindalco|Indalco	

Dated this..... Day of 2024

(Signature)
(In the capacity of)
Duly authorized to sign bid with seal for & on behalf of (Name & Address of the Bidder)

Annexure - 4 - Commercial (Indicative price) bid format

A. Supply and Installation Cost (For New Purchase)

Sr. No.	Particulars	Qty	Unit Price (₹) without GST	Total Price (₹)
1	2 X 150 KVA UPS in 200 KVA frame size along with Li Ion Battery bank in Rack for 10 minutes back up time with 5 years warranty and EOL will be 10 years along with 2 X 300 Amps MCCB as separate isolator electrical panel. Scope is including appropriate size of Cu cabling for input as well as output.	**1 Lot**		
2	DX based PAC Units (7 X 10 Tr) with 5 years warranty	7 nos		
3	Raised floor tiles in Server room and Network room	1 lot		
4	Equipotential earthing grid below raised floor - 25 X 3 mm Cu strip in 2 X 2 meter grid type. Earthing wire of 25 sq mm Green colour to be bolted one end to this grid and other end to the rack earthing point at two locations. Existing raised floor pedestal to be grounded with same size wire to this earthing grid. Each alternate pedestal is required to be grounded. This requirement is for server area, PAC area and network area. Scope of work also included four nos. earthing pits as specified above. At four corners of equipotential grid needs to be grounded to these earthing pits. Location of earth pits will be at ground floor exactly back side of server area.	1 lot		
5	BMS System software along with 32 " LED monitor , Integration of PAC , all load managers, PDU, fire inputs, I /O modules, programming ,control and monitoring.	1 lot		
6	Removing, dismantling etc. job as per project requirement.	1 lot		
7	Extension of Novec Piping along with new Nozzle in each POD.	1 Lot		
8	Blanking Panels	1 Lot		
Cost (₹) without GST				
GST Amount (₹)				
Cost with GST (₹)				
Less: Buyback of existing PAC (Vertiv) units along with Cu piping + UPS (2 numbers of 250 KVA Vertiv make UPS) with 204 12 V 200 AH **Rocket** Brand SMF Batteries (without GST)		**1 Lot**		
Buy-back GST Amount (₹)				
Final Price after Buy-back (₹) with GST (₹)				

B. AMC of existing Non-IT equipment

Sl. No	Description of Item	Make	Model	Serial No.	Qty	1st Year AMC (₹)	2nd Year AMC (₹)	3rd Year AMC (₹)	4th Year AMC (₹)	5th Year AMC (₹)	Total AMC Cost (₹)
1	LT panel(11), UPS Panel(2), PAC Panel(2)	Schneider	ZENER Electrical	NA	15						
2	Breaker	Schneider	SCHNIEDER	9191478949, 9191478940, 9191478941, 9191478943, 1133080101, 1133080203, 1133080103, 1133080303.	8						
3	ATS -100AMp	Vertiv	Emerson (ASCO 7000)	532381-001WE 766264, 532381-002WE 766264,	2						
4	UPS 250KVA	Vertiv	HIPULSE/7400D/7400	200904HI3413, 200904HI3407	2						
5	Active filter	Vertiv	AFCECMIED	TD9B0220001, TD9B0220002.	2						
6	PDU -100 amp	Vertiv	APC Schneider	DWCK38008, DWCK38007.	2						
7	PDU -400 amp	Vertiv	APC Schneider	DWCK38005, DWCK38006.	2						
8	Battery Breaker	L&T	L&T	DNX4-8700H3, DNX4-8700H4	2						
9	PAC 14Ton	Vertiv	PEX250ECICOM	092142506C01, 092142506C02, 092142506C03, 092142506C04, 092142506C05, 092142506C06, 092142506C07.	7						
10	Novec Cylinder	FDC	MX-1230 SYSTEM	B-1161, B-12549, B-1168, B-1169, B1174.	5						
11	Rodent controller(4)	Maser	MASER (TORRANT)	5317, 5318, 5319, 5320.	4						
12	Rodent Transastar(80)	Maser	MASER (TORRANT)	NA	80						
13	VESDA (2)	Europlex	EUROPLEX	B394678-VLC-500, B394678-VLC-012	2						
14	Camera(16)	HIKVIS	DS-	20190411AAWR	16						

		ON	2CD1321-I	231945056, 20190411AAWR 231945057, 20190411AAWR 231945058, 20190411AAWR 231945059, 20190411AAWR 231945060, 20190411AAWR 231945061, 20190411AAWR 231945062, 20190411AAWR 231945063, 20190411AAWR 231945064, 20190411AAWR 231945065, 20190411AAWR 231945071, 20190411AAWR 231945072, 20190411AAWR 231945073, 20190411AAWR 231945074, 20190411AAWR 231945075.							
15	Access Control Reader(19)	ICLASS-R10	R-640X-300 (R10)	20190411AAWR 231945056	19						
16	Door Lock(21)	SOLUS (HID)	TE-600LM, 600-LED	6L9-175001, 6L9-174998, 276AC3N-8P61781,	21						
17	Access Controller(15)	Honeywell	PRO03000	001F5507E42C, 001F5507E755, 001F55078512, 001F5503C255, 001F55078558, 001F553CB4A7, 001F553CC4AC, 001F553CDFD9, 001F553CDC03, 001F553CD390, 001F553C5391, 001F55078343, 001F5507834D, 001F553C3E76, 001F5507E754.	15						
18	Biometric device(1)	SCHLAGE	HK-II	1303628	1						
19	Amplifier(1)	BOSCH	LBB1990/00 Plena	040500098300010032	1						

20	Speakers(23)	BOSCH	LBD 0606/10	4090404099	23						
21	Mike(1)	BOSCH	Plena	ZX2D1273084961 2356	1						
22	Fire Panel (1)	GST	GST200 N-1	10105118	1						
23	Monitor Module/ Control Module(15)	GST	I-9300(GS T)	10106302, 10106303, 10106304, 10106305, 10106306, 10106307, 10106308, 10106309, 10106310, 10106311, 10106312, 10106313, 10106314, 10106315, 10106316.	15						
24	GRP Panel(1)	Ravel	RE-25AR-W	R25ARULMIT0 00247	1						
25	Hooters FIRE/ WLD/MRY(10)	Johnson Control	NA	NA	10						
26	Emergency Switch(4)	NA	NA	NA	4						
27	Temperature & Humidity Reading Unit(2)	Johnson Control	HE-67P3	HE-67P3-0N0BT1, HE-67P3-0N0BT2	2						
28	Smoke detector(97)	Johnson Control	GST	L1/01 To L197.	97						
29	DDC panel (2)	L&T	L&T (BSRC80 0D)	BSRC800D	2						
30	Water leak detection panel(1)	Johnson Control	Johnson Control	JE/14890	1						
31	WLD sensor(7)	Johnson Control	Johnson Control	Johnson Control	7						
32	CCTV software(1)	FLIR	FLIR	V9.0.1.3011	1						
33	Network switch-POE (1)	CISCO	CISCO	SF300-24PP 10/10PoE+	1						
34	Network D-LINK switch (3)	D-LINK	D-LINK,D ES-1008C, DES1008 A	Sr : AB/2TK089M23 0280, QS7L2J8004112, R3UR1EB022955 .	3						
35	BMS Software(1)	ELESTA	ELESTA -V2.4.1	V2.4.1	1						
36	Access Control	WIN-	WIN-	V4.0	1						

	Software (1)	PACK	PACK-V4.0								
37	CCTV LCD (1)	SAMSUNG	LH32MGQLBC/XL	MG32HMPSB00166N	1						
38	Access Door Push Button Unit (5)	NA	NA	NA	5						
39	Break Glass Unit(15)	NA	NA	NA	15						
40	Emergency Gas Release/Abort Switch(4)	Ravel	Ravel	NA	4						
41	Precision AC Switchover Switch(7)	Schneider	ZENER Electrical	NA	7						
42	1.5 TON Split AC(10)	Godrej/ Electrolux/Campro/	GSC18DGN3DWQH, ES18F3C/2017/CMSMW, GSC12SA04587, AS-18KPREMIUM GOLD, GSC 18 RGN CWQR.	1804006126A22349, '240030359401711 30880056, 1804006125A04817, '500321225169000936, 1804006125A04587, 1804006126A04895, 1804006127A22347, '500321225169000940, 1810100618SA01210, 1810100618SA01510	10						
43	Electrical light DB(2), AC highwall DB(2), AC CAC DB(2), AC VRF DB(2), Raw power DB(1),Delta UPS(1), BMS(2)	Legrand	Legrand	NA	12						
44	Delta UPS(2)	Delta	E4-10K	E5Q159600064WA, E5Q19600111WA.	2						
45	Building UPS(4)	Vertiv	SYNERGY 3300	109US5154006, 109US5154008, 109US5154009, 109US51540013	4						

Total AMC Cost (₹) without GST							
GST amount (₹)							
Total AMC Cost with GST (₹)							

Note: *Replacement of End-Of-life (EOL) devices will be removed from above list on pro-rata basis and considered for Monitoring purpose only.*

C. Facility Management Services

Resource Type	No. of Resource	Per resource / Per Month Cost (₹)	1st Year FMS Cost (₹)	2nd Year FMS Cost (₹)	3rd Year FMS Cost (₹)	4th Year FMS Cost (₹)	5th Year FMS Cost (₹)
DCFM	01						
DCE	06						
Total Cost for FMS Services (₹) without GST							
GST Amount (₹)							
Total AMC Cost with GST (₹)							

Summery

Sl. No	Items	Total Cost (with-out tax) (₹)
1	Equipment Cost (A)	
2	AMC & ATS for Existing Hardware and Software (B)	
3	Facility Management Services (C)	
Total Cost (A+B+C) without GST		
GST Amount (₹)		
Total Cost with GST (₹)		

Dated this..... Day of 2024

(Signature)

(In the capacity of)
Duly authorized to sign bid with seal for & on behalf of (Name & Address of the Bidder)

Annexure - 5 - Interest free Earnest Money Deposit (EMD) Format

PAN & GST number of bidder	Bank Name & branch address ,IFSC code	Bank account number	EMD amount paid in INR	UTR No.	Date of Payment (NEFT)	EMD Bank receipt to be uploaded
1.						

Dated this..... Day of 2024

(Signature)

(In the capacity of)
Duly authorized to sign bid with seal for & on behalf of (Name & Address of the Bidder)

Annexure - 6 - Covering Letter-1

(To be executed on plain paper and submitted only by the successful bidder)

(_____ Name of the Department / Office) RFP No: IT-01/2024-25 dated 16-Apr-2024 for_____

This pre-bid pre-contract Integrity Pact (Agreement) (hereinafter called the Integrity Pact) (IP) is made on _____ day of the _____, between, on one hand, *StockHolding* ., a company incorporated under Companies Act, 1956, with its Registered Office at 301, Centre Point Building, Dr. Babasaheb R. Ambedkar Road, Parel, Mumbai – 400012 , acting through its authorized officer, (hereinafter called **Principal**), which expression shall mean and include unless the context otherwise requires, his successors in office and assigns) of the First Part **And** M/s._____ _____(with complete address and contact details)represented by Shri _____ (i.e. s (bidders) hereinafter called the **`Counter Party'**) which expression shall mean and include , unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

AND WHEREAS the PRINCIPAL/Owner values full compliance with all relevant laws of the land, rules, regulations economic use of resources and of fairness/transparency in its relation with Bidder(s) /Contractor(s)/Counter Party(ies).

AND WHEREAS, in order to achieve these goals, the Principal/Owner has appointed Independent External Monitors (IEM) to monitor the Tender (RFP) process and the execution of the Contract for compliance with the principles as laid down in this Agreement.

WHEREAS THE Principal proposes to procure the Goods/services and Counter Party is willing to supply/has promised to supply the goods OR to offer/has offered the services and WHEREAS the Counter Party is a private Company/Public Company/Government Undertaking/ Partnership, constituted in accorded with the relevant law in the matter and the Principal is a Government Company performing its functions as a registered Public Limited Company regulated by Securities Exchange Board of India. **NOW THEREFORE**, To avoid all forms of corruption by following a system that is fair, transparent and free from any influence prejudiced dealings prior to, during and subsequent to the tenor of the contract to be entered into with a view to "- Enabling the PRINCIPAL to obtain the desired goods/services at competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and Enabling the Counter Party to abstain from bribing or indulging in any type of corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the PRINCIPAL will commit to prevent corruption, in any

form, by its officials by following transparent procedures. The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

I. Commitment of the Principal / Buyer

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

   a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender (RFP) or the execution of the contract, procurement or services/goods, demand, take a promise for or accept for self or third person, any material or immaterial benefit which the person not legally entitled to.
   b) The Principal/Owner will, during the Tender (RFP) Process treat all Bidder(s)/Counter Party(ies) with equity and reason. The Principal / Owner will, in particular, before and during the Tender (RFP) Process, provide to all Bidder(s) / Counter Party(ies) the same information and will not provide to any Bidder(s)/Counter Party(ies) confidential / additional information through which the Bidder(s)/Counter Party(ies) could obtain an advantage in relation to the Tender (RFP) Process or the Contract execution.
   c) The Principal / Owner shall endeavour to exclude from the Tender (RFP) process any person, whose conduct in the past been of biased nature.

2. If the Principal / Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal Code (IPC) / Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there is a substantive suspicion in this regard, the Principal / Owner / *StockHolding* will inform the Chief Vigilance Officer through the Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

II. Commitments of Counter Parties/Bidders

1. The Counter Party commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of bid or during any pre-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following. Counter Party (ies) / Bidders commits himself to observe these principles during participation in the Tender (RFP) Process and during the Contract execution.
2. The Counter Party will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the PRINCIPAL, connected directly or indirectly with the bidding process, or to any person organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

3. The Counter Party further undertakes that it has not given, offered or promised to give directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the Principal / *StockHolding* or otherwise in procurement the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Principal / *StockHolding* for forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Principal / *StockHolding*.
4. Bidder / Counter Party shall disclose the name and address of agents and representatives, if any, handling the procurement / service contract.
5. Bidder / Counter Party shall disclose the payments to be made by them to agents / brokers; or any other intermediary if any, in connection with the bid / contract.
6. The Bidder / Counter Party has to further confirm and declare to the Principal / *StockHolding* that the Bidder / Counter Party is the original integrator and has not engaged any other individual or firm or company, whether Indian or foreign to intercede, facilitate or in any way to recommend to Principal / *StockHolding* or any of its functionaries whether officially or unofficially to the award of the contract to the Bidder / Counter Party nor has any amount been paid, promised or intended to the be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.
7. The Bidder / Counter Party has to submit a Declaration along with Technical Bid, as given at Annexure 6. If bids are invited through a Consultant a Declaration has to be submitted along with the Technical Bids as given at Annexure.
8. The Bidder / Counter Party, either while presenting the bid or during pre- contract negotiation or before signing the contract shall disclose any payments made, is committed to or intends to make to officials of *StockHolding* /Principal, or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.
9. The Bidder / Counter Party will not collude with other parties interested in the contract to impair the transparency, fairness and progress of bidding process, bid evaluation, contracting and implementation of the Contract.
10. The Bidder / Counter Party shall not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.
11. The Bidder shall not use improperly, for purposes of competition or personal gain, or pass on to others, any information provided by the Principal / *StockHolding* as part of the business relationship, regarding plans, technical proposals and business details, including information contained in any electronic data carrier. The Bidder / Counter Party also Undertakes to exercise due and adequate care lest any such information is divulged.
12. The Bidder / Counter Party commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

13. The Bidder / Counter Party shall not instigate or cause to instigate any third person including their competitor(s) of bidding to commit any of the actions mentioned above.
14. If the Bidder / Counter Party or any employee of the Bidder or any person acting on behalf of the Bidder / Counter Party, either directly or indirectly, is a relative of any of the official / employee of Principal / *StockHolding*, or alternatively, if any relative of an official / employee of Principal /

    StockHolding has financial interest / stake in the Bidder's / Counter Party firm, the same shall be disclosed by the Bidder / Counter Party at the time of filing of tender (RFP).
15. The term `relative" for this purpose would be as defined in Section 2 Sub Section 77 of the Companies Act, 2013.
16. The Bidder / Counter Party shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employees / officials of the Principal / *StockHolding*
17. The Bidder / Counter Party declares that no previous transgression occurred in the last three years immediately before signing of this IP, with any other Company / Firm/ PSU/ Departments in respect of any corrupt practices envisaged hereunder that could justify Bidder / Counter Party exclusion from the Tender (RFP) Process.
18. The Bidder / Counter Party agrees that if it makes incorrect statement on this subject, Bidder / Counter Party can be disqualified from the tender (RFP) process or the contract, if already awarded, can be terminated for such reason.

III. Disqualification from Tender (RFP) Process and exclusion from Future Contracts

1. If the Bidder(s) / Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article II above or in any other form, such as to put his reliability or credibility in question, the Principal / *StockHolding* is entitled to disqualify the Bidder / Counter Party / Contractor from the Tender (RFP) Process or terminate the Contract, if already executed or exclude the Bidder / Counter Party / Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by Principal / *StockHolding*. Such exclusion may be for a period of 1 year to 3 years as per the procedure prescribed in guidelines of the Principal / *StockHolding*.
2. The Bidder / Contractor / Counter Party accepts and undertake to respect and uphold the Principal / *StockHolding*'s absolute right to resort to and impose such exclusion.
3. Apart from the above, the Principal / *StockHolding* may take action for banning of business dealings / holiday listing of the Bidder / Counter Party / Contractor as deemed fit by the Principal / Owner / *StockHolding*.
4. The Bidder / Contractor / Counter Party can prove that it has resorted / recouped the damage caused and has installed a suitable corruption prevention system, the Principal / Owner/ *StockHolding* may at its own discretion, as per laid down organizational procedure, revoke the exclusion prematurely.

IV. Consequences of Breach Without prejudice to any rights that may be available to the Principal / *StockHolding* / Owner under Law or the Contract or its established policies and laid down procedure, the Principal / *StockHolding* / Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder / Contractor(s) / Counter Party:-

1. Forfeiture of EMD / Security Deposit : If the Principal / *StockHolding* / Owner has disqualified the Bidder(s)/Counter Party(ies) from the Tender (RFP) Process prior to the award of the Contract or terminated the Contract or has accrued the right to terminate the Contract according the Article III, the Principal / *StockHolding* / Owner apart from exercising any legal rights that may have accrued to the Principal / *StockHolding* / Owner, may in its considered opinion forfeit the Earnest Money Deposit / Bid Security amount of the Bidder / Contractor / Counter Party.
2. Criminal Liability: If the Principal / Owner / *StockHolding* obtains knowledge of conduct of a Bidder / Counter Party / Contractor, or of an employee of a representative or an associate of a Bidder / Counter
   Party / Contractor which constitute corruption within the meaning of PC Act, or if the Principal / Owner / *StockHolding* has substantive suspicion in this regard, the Principal / *StockHolding* / Owner will inform the same to the Chief Vigilance Officer through the Vigilance Officer.

V. Equal Treatment of all Bidders/Contractors / Subcontractors / Counter Parties

1. The Principal / *StockHolding* / Owner will enter into Pacts on identical terms as this one with all Bidders / Counterparties and Contractors.
2. The Principal / *StockHolding* / Owner will disqualify Bidders / Counter Parties / Contractors who do not submit, the duly signed Pact, between the Principal / Owner / *StockHolding* and the Bidder/Counter Parties, along with the Tender (RFP) or violate its provisions at any stage of the Tender (RFP) process, from the Tender (RFP) process.

VI. Independent External Monitor (IEM)

1. The Principal / Owner / *StockHolding* has appointed competent and credible Independent External Monitor (s) (IEM) 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 Integrity Pact.
2. The IEM is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Chief Executive Officer and Managing Director, Stock Holding Corporation of India Limited.
3. The Bidder(s)/Contractor(s) / Counter Party(ies) accepts that the IEM has the right to access without restriction, to all Tender (RFP) documentation related papers / files of the Principal / *StockHolding* / Owner including that provided by the Contractor(s) / Bidder / Counter

Party. The Counter Party / Bidder / Contractor will also grant the IEM, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his Tender (RFP) Documentation / papers / files. The IEM is under contractual obligation to treat the information and documents of the Bidder(s) / Contractor(s) / Counter Party (ies) with confidentiality.

4. In case of tender (RFP)s having value of 5 crore or more, the Principal / *StockHolding* / Owner will provide the IEM sufficient information about all the meetings among the parties related to the Contract/Tender (RFP) and shall keep the IEM apprised of all the developments in the Tender (RFP) Process.
5. As soon the IEM notices, or believes to notice, a violation of this Pact, he will so inform the Management of the Principal / Owner /*StockHolding* and request the Management to discontinue or take corrective action, or to take other relevant action. The IEM can in this regard submit non-binding recommendations. Beyond this, the IEM has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
6. The IEM will submit a written report to the CEO&MD, *StockHolding*. Within 6 to 8 weeks from the date of reference or intimation to him by the Principal / Owner / *StockHolding* and should the occasion arise, submit proposals for correcting problematic situations.
7. If the IEM has reported to the CEO&MD, *StockHolding* Ltd. a substantiated suspicion of an offence under the relevant IPC/PC Act, and the CEO & MD, *StockHolding* has not within reasonable time taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, the IEM may also transmit the information directly to the Central Vigilance Officer. 8. The word `IEM" would include both singular and plural.

VII. Duration of the Integrity Pact (IP)

This IP begins when both the parties have legally signed it. It expires for the Counter Party / Contractor / Bidder, 12 months after the completion of work under the Contract, or till continuation of defect liability period, whichever is more and for all other Bidders, till the Contract has been awarded. If any claim is made / lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Integrity Pact as specified above, unless it is discharged / determined by the CEO&MD *StockHolding* **VIII. VIII. Other Provisions**

1. This IP is subject to Indian Law, place of performance and jurisdiction is the Head Office / Regional Offices of the Stockholding /Principal / Owner who has floated the Tender (RFP).
2. Changes and supplements in any Procurement / Services Contract / Tender (RFP) need to be made in writing. Change and supplement in IP need to be made in writing.
3. If the Contractor is a partnership or a consortium, this IP must be signed by all the partners and consortium members. In case of a Company, the IP must be signed by a representative duly authorized by Board resolution.

4. Should one or several provisions of this IP turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
5. Any dispute or difference arising between the parties with regard to the terms of this Agreement / Pact, any action taken by the Principal / Owner / *StockHolding* in accordance with this Agreement / Pact or interpretation thereof shall not be subject to arbitration.

IX. Legal and Prior Rights

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and / or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agrees that this Pact will have precedence over the Tender (RFP) / Contract documents with regard to any of the provisions covered under this Integrity Pact.

IN WITHNESS WHEREOF the parties have signed and executed this Integrity Pact (IP) at the place and date first above mentioned in the presence of the following witnesses:-

---

(For and on behalf of Principal / Owner / *StockHolding*

(For and on behalf of Bidder / Counter Party / Contractor)

WITNESSES:

1._____ (Signature, name and address)

2._____ (Signature, name and address)

Note: In case of Purchase Orders wherein formal agreements are not signed references to witnesses may be deleted from the past part of the Agreement.

Annexure - 7 - Covering Letter on bidder's letterhead (Annexure of Integrity Pact)

Date:

To,

Sub: RFP No: **IT-01/2024-25 dated 16-Apr-2024** for Design, Site Preparation, Supply, Installation, Testing, Commissioning, and 5 years of AMC services of Non-IT Infrastructure at Mahape Data Centre

Dear Sir,

DECLARATION

Stock Holding Corporation of India Limited (*StockHolding*) hereby declares that *StockHolding* has adopted Integrity Pact (IP) Program as advised by Central Vigilance Commission vide its Letter No. ---------- dated ---------- and stands committed to following the principles of transparency, equity and competitiveness in public procurement. The subject Notice Inviting Tender (RFP) (NIT) is an invitation to offer made on the condition that the Bidder will sign the Integrity Agreement, which is an integral part of tender (RFP) documents, failing which the tenderer / bidder will stand disqualified from the tendering process and the bid of the bidder would be summarily rejected. This Declaration shall form part and parcel of the Integrity Agreement and signing of the same shall be deemed as acceptance and signing of the Integrity Agreement on behalf of the *StockHolding*

Yours faithfully,

For and on behalf of Stock Holding Corporation of India Limited (Authorized Signatory)

Annexure - 8 - Compliance Statement

(To be submitted along with technical bid)

Subject: RFP for Design, Site Preparation, Supply, Installation, Testing, Commissioning, and 5 years of AMC services of Non-IT Infrastructure at Mahape Data Centre

Ref: RFP No. **IT-01/2024-25 dated 16-Apr-2024**

DECLARATION

We understand that any deviations mentioned elsewhere in the bid will not be considered and evaluated by StockHolding. We also agree that *StockHolding* reserves its right to reject the bid, if the bid is not submitted in proper format as per RFP.

Sr. No.	Item / Clause of the RFP	Confirmed and Accepted by Bidder (Yes / No)
1	Eligibility Criteria	
2	Service Level Agreement (SLA) / Scope of Work	
3	Non-Disclosure Agreement	
4	Payment Terms	
5	Bid Validity, Order Cancellation, Exit Clause	
6	StockHolding's Right to alter RFP	
7	Force Majeure	
8	Integrity Pact	
9	All General & Other Terms & Conditions in the RFP	
10	Requirement with terms and conditions	
11	Bid Formats Technical & commercial (Indicative Price) Bid	
12	Annexures in the RFP	

Dated this..... Day of 2024

(Signature)

(In the capacity of)

Duly authorized to sign bid with seal for & on behalf of (Name & Address of the Bidder)

Annexure – 9 - Manufacturer Authorisation Format

(To be submitted on OEM's letter head)

Ref: Date:

To

Stock Holding Corporation of India Limited
SHCIL House, Plot No. P-51, T.T.C. Industrial Area
M.I.D.C., Mahape, Kalyan-Shil Road
Navi Mumbai PIN 400710

Dear Sir,

Sub: Manufacturer Authorisation for RFP No: IT-01/2024-25 dated 16-Apr-2024

We **<OEM Name>** having our registered office at **<OEM Address>** are an established and reputed manufacturer of **<hardware details>**.

We confirm that **<Bidder Name>** having its registered office at **<Bidder Address>** is our authorized partner/ re-seller/ dealer for our **<hardware details>**. We authorize them to quote for our equipment's in the above mentioned RFP.

Further, we assure that we would extend full support to them in all respects for supply, warranty and maintenance of our products. We also ensure to provide the service support for the supplied equipment's during the warranty period as per RFP terms.

We also undertake that in case of default in execution of this contract by the **<Bidder Name>,** the **<OEM Name>** will take all necessary steps for successful execution of this project as per RFP requirements at no additional cost.

<OEM Name

<Authorised Signatory with Stamp>

Annexure – 10 – Template for Bank Guarantee

This Bank Guarantee is executed by the ---------- (Bank name) a Banking Company incorporated under the Companies Act, 1956 and a Scheduled Bank within the meaning of the Reserve Bank of India Act, 1934 and having its head office at ---------- and branch office at _____(hereinafter referred to as the "Bank", which term shall mean and include, unless to repugnant to the context or meaning thereof, its successors and permitted assigns) and Branch office at _____ in favour of Stock Holding Corporation of India Limited, a Company incorporated under the Companies Act, 1956 and having its Registered Office at 301, Centre Point, Dr. Babasaheb Ambedkar Road, Parel, Mumbai 400 012 (hereinafter referred to as "StockHolding", which term shall mean and include, unless to repugnant to the context or meaning thereof, its successors and permitted assigns) at the request of _____, a Company incorporated under the Companies Act, 1956 and having its Registered Office at (hereinafter referred to as the "Service Provider", which term shall mean and include, unless to repugnant to the context or meaning thereof, its successors and permitted assigns).

Whereas

A. StockHolding has, pursuant to the Tender No. _____, issued the Purchase Order dated _____ to the Service Provider for providing _____
B. In terms of the said Tender, the Service Provider has agreed to furnish to StockHolding, a Bank guarantee for ₹ _____ /- (Rupees _____ only) till _____ (date).
C. The Bank has, at the request of the Service Provider**,** agreed to give this guarantee as under.

NOW IN CONSIDERATION OF THE FOREGOING:

1. We, the Bank, at the request the Service Provider, do hereby unconditionally provide this guarantee to StockHolding as security for due performance and fulfilment by the Service Provider of its engagements, commitments, operations, obligations or liabilities including but not limited to any sums / obligations / claims due by the Service Provider to StockHolding for meeting, satisfying, discharging or fulfilling all or any obligation or liability of the Service Provider, under the said Tender / Purchase Order.

2. We, the Bank, hereby guarantee and undertake to pay StockHolding up to a total amount of ₹ _____/- (Rupees _____ only) under this guarantee, upon first written demand of StockHolding and without any demur, protest and without any reference to the Service Provider**.**
3. Any such demand made by StockHolding shall be conclusive and binding on the Bank as regards the amount due and payable notwithstanding any disputes pending before any

court, Tribunal, or any other authority and/ or any other matter or thing whatsoever as the liability of the Bank under these presents being absolute and unequivocal.

4. We, the Bank, agree that StockHolding shall have the fullest liberty without consent of the Bank to vary the terms of the said Tender/ Purchase Order or to postpone for any time or time to time exercise of any powers vested in StockHolding against the Service Provider and to forbear or enforce any of the Terms & Conditions relating to the said Tender / Purchase Order and the Bank shall not be relieved from its liability by the reason of any such variation, or extension being granted to the Service Provider or for any forbearance, act or omission or any such matter or thing whatsoever.
5. We, the Bank, agree that the guarantee herein contained shall be irrevocable and shall continue to be enforceable until it is discharged.
6. This Guarantee shall not be affected by any change in the Constitution of the Bank or the Service Provider or StockHolding.

NOTWITHSTANDING ANYTHING CONTAINED HEREIN ABOVE:

1. The liability of the bank under this guarantee is restricted to a sum of ₹ _____/- (Rupees _____ only).
2. This Bank Guarantee will be valid for a period up to _____ (date).
3. A written claim or demand for payment under this Bank Guarantee on or before _____ (date) is the only condition precedent for payment of part/full sum under this guarantee.

For Issuing Bank

Name of Issuing Authority:

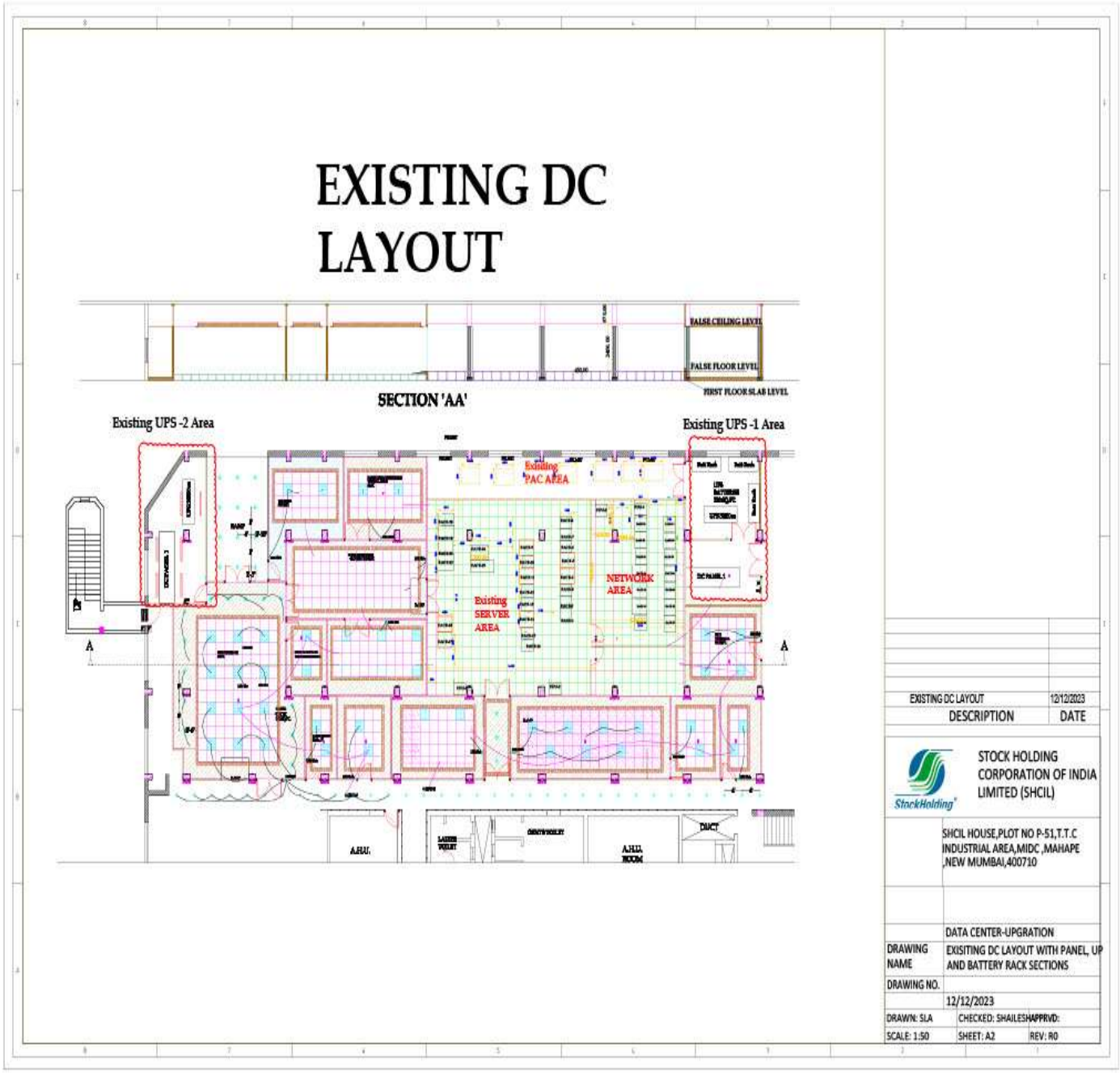
Designation of Issuing Authority:

Employee Code:

Contact Number:

Email ID:

Annexure – 11 – Existing DC Layout Diagram



Annexure – 12 – Proposed DC Layout

(*Proposed Layout is tentative in nature which may be changed)