

F.No.1/25/2023/G.II
UNION PUBLIC SERVICE COMMISSION
DHOLPUR HOUSE, SHAHJAHAN ROAD
NEW DELHI-110069

NOTICE INVITING TENDERS

Online bids are invited for bunched bidding on GeM portal to deliver comprehensive services for UPSC's IT revamping system including Supply, Installation, Testing and Commissioning of the following items from authorized vendors/partners of the proposed OEMs:-

S.No.	Name of the Items	Quantity
1.	Hyper Converged Infrastructure Solution. a. 9 Nodes (5 Production + 4 DR) at NIC b. 12 Nodes in the Commission's Office	21 nodes
2.	Network Switch for Data Center – Top-of-Rack Switch fully loaded with module a. 4 Switches (2 Production + 2 DR) at NIC b. 6 Switches in the Commission's Office	10
3.	Management Switch	2
4.	Standard Server Rack 42U	3
5.	Multi-mode OFC patch cord 5 meter (25G Support)	100
6.	Multi-mode OFC patch cord 20 meter (100G Support)	20
Licences/Subscriptions		
7.	Red Hat Enterprise Linux for virtual Data Center	21
8.	Elastic search (search engine)	3

Detailed advertisement along with tender document may be downloaded from UPSC website <https://www.upsc.gov.in/tenders>. Bids shall be submitted only on GeM portal at <https://gem.gov.in>. The GeM Bid No. for the above bidding is **GEM/2023/B/3749439**. Manual bids shall not be accepted.

The last date of submission of bid is 23-08-2023 at 10:00 AM.

Sd/-

(Rakesh Kumar Dixit)
Under Secretary
Telephone: 011-23388418



Bid Number/बोली क्रमांक (बिड संख्या):
GEM/2023/B/3749439
Dated/दिनांक : 31-07-2023

Bid Document/ बिड दस्तावेज़

Bid Details/बिड विवरण	
Bid End Date/Time/बिड बंद होने की तारीख/समय	23-08-2023 10:00:00
Bid Opening Date/Time/बिड खुलने की तारीख/समय	23-08-2023 10:30:00
Bid Offer Validity (From End Date)/बिड पेशकश वैधता (बंद होने की तारीख से)	180 (Days)
Ministry/State Name/मंत्रालय/राज्य का नाम	Ministry Of Personnel Public Grievances And Pensions
Department Name/विभाग का नाम	Department Of Personnel And Training
Organisation Name/संगठन का नाम	Union Public Service Commission (upsc)
Office Name/कार्यालय का नाम	Central Delhi, New Delhi 110069
Total Quantity/कुल मात्रा	180
Item Category/मद केटेगरी	Hyper Converged Infrastructure Solution , Network Switch for Data center Top-of-Rack switch fully loaded with module , Management Switch , Standard Server Rack 42U , Multi-mode OFC patch cord 5 meter 25G Support , Multi-mode OFC patch cord 20 meter 100G Support , Red Hat Enterprise Linux for virtual Data center , ElasticSearch Version 8.8.0 or higher
BOQ Title/बीओक्यू शीर्षक	Procurement of Hyper Converged Infrastructure Solution and related items
Minimum Average Annual Turnover of the bidder (For 3 Years)/बिडर का न्यूनतम औसत वार्षिक टर्नओवर (3 वर्षों का)	3500 Lakh (s)
Years of Past Experience Required for same/similar service/उन्हीं/समान सेवाओं के लिए अपेक्षित विगत अनुभव के वर्ष	3 Year (s)
MSE Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से एमएसई छूट	No
Startup Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से स्टार्टअप छूट	No

Bid Details/बिड विवरण

Document required from seller/विक्रेता से मांगे गए दस्तावेज़	Experience Criteria,Past Performance,Bidder Turnover,Certificate (Requested in ATC),OEM Authorization Certificate,Additional Doc 1 (Requested in ATC),Compliance of BoQ specification and supporting document *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
Past Performance/विगत प्रदर्शन	80 %
Bid to RA enabled/बिड से रिवर्स नीलामी सक्रिय किया	Yes
RA Qualification Rule	H1-Highest Priced Bid Elimination
Type of Bid/बिड का प्रकार	Two Packet Bid
Primary product category	Hyper Converged Infrastructure Solution
Time allowed for Technical Clarifications during technical evaluation/तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय	2 Days
Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
Evaluation Method/मूल्यांकन पद्धति	Total value wise evaluation

EMD Detail/ईएमडी विवरण

Advisory Bank/एडवाइजरी बैंक	State Bank of India
EMD Amount/ईएमडी राशि	3326000

ePBG Detail/ईपीबीजी विवरण

Advisory Bank/एडवाइजरी बैंक	State Bank of India
ePBG Percentage(%) / ईपीबीजी प्रतिशत (%)	10.00
Duration of ePBG required (Months) / ईपीबीजी की अपेक्षित अवधि (महीने).	63

(a). EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy./जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित कैटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज़ प्रस्तुत करने हैं। एमएसई कैटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के दायरे से बाहर रखा गया है।

(b). EMD & Performance security should be in favour of Beneficiary, wherever it is applicable./ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए।

Beneficiary/लभार्थी :

Secretary

Central Delhi, New Delhi 110069, Department of Personnel and Training, Union Public Service Commission (UPSC), Ministry of Personnel Public Grievances and Pensions
(Vasudha Mishra)

Splitting/विभाजन

Bid splitting not applied/बोली विभाजन लागू नहीं किया गया.

MII Purchase Preference/एमआईआई खरीद वरीयता

MII Purchase Preference/एमआईआई खरीद वरीयता	No
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Details of the Competent Authority for MII

Name of Competent Authority	Manoj Soni
Designation of Competent Authority	Chairman
Office / Department / Division of Competent Authority	Union Public Service Commission
CA Approval Number	06/HC
Competent Authority Approval Date	25-07-2023
Brief Description of the Approval Granted by Competent Authority	Exemption from operation of Order No. P-45021/2/2017(BE-II) dated 04.06.2020 regarding Public Procurement (Preference to Make in India), Order 2017 - Revision for the above procurement

Competent Authority Approval for not opting Make In India Preference : [View Document](#)

MSE Purchase Preference/एमएसई खरीद वरीयता

MSE Purchase Preference/एमएसई खरीद वरीयता	Yes
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1. The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of the previous financial year, should be as indicated above in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the bidder is less than 3-year-old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.
2. Experience Criteria: In respect of the filter applied for experience criteria, the Bidder or its OEM {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt Organization / PSU / Public Listed Company for number of Financial years as indicated above in the bid document before the bid opening date. Copies of relevant contracts to be submitted along with bid in support of having supplied some quantity during each of the Financial year. In case of bunch bids, the category of primary product having highest value should meet this criterion.
3. Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises. In respect of bid for Services, the bidder must be the Service provider of the offered

Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service. If L-1 is not an MSE and MSE Seller (s) has/have quoted price within L-1+ 15% (Selected by Buyer) of margin of purchase preference /price band defined in relevant policy, such Seller shall be given opportunity to match L-1 price and contract will be awarded for 25%(selected by Buyer) percentage of total QUANTITY. The buyers are advised to refer the OM No.F.1/4/2021-PPD dated 18.05.2023

[OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.

4. Estimated Bid Value indicated above is being declared solely for the purpose of guidance on EMD amount and for determining the Eligibility Criteria related to Turn Over, Past Performance and Project / Past Experience etc. This has no relevance or bearing on the price to be quoted by the bidders and is also not going to have any impact on bid participation. Also this is not going to be used as a criteria in determining reasonableness of quoted prices which would be determined by the buyer based on its own assessment of reasonableness and based on competitive prices received in Bid / RA process.

5. Past Performance: The Bidder or its OEM {themselves or through re-seller(s)} should have supplied same or similar Category Products for 80% of bid quantity, in at least one of the last three Financial years before the bid opening date to any Central / State Govt Organization / PSU / Public Listed Company. Copies of relevant contracts (proving supply of cumulative order quantity in any one financial year) to be submitted along with bid in support of quantity supplied in the relevant Financial year. In case of bunch bids, the category related to primary product having highest bid value should meet this criterion.

6. Reverse Auction would be conducted amongst all the technically qualified bidders except the Highest quoting bidder. The technically qualified Highest Quoting bidder will not be allowed to participate in RA. However, H-1 will also be allowed to participate in RA in following cases:

- i. If number of technically qualified bidders are only 2 or 3.
- ii. If Buyer has chosen to split the bid amongst N sellers, and H1 bid is coming within N.
- iii. In case Primary product of only one OEM is left in contention for participation in RA on elimination of H-1.
- iv. If L-1 is non-MSE and H-1 is eligible MSE and H-1 price is coming within price band of 15% of Non-MSE L-1
- v. If L-1 is non-MII and H-1 is eligible MII and H-1 price is coming within price band of 20% of Non-MII L-1

Hyper Converged Infrastructure Solution

Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Rakesh Kumar Dixit	110069,UPSC, Dholpur House, Shahjahan Road, New Delhi	21	30

Network Switch For Data Center Top-of-Rack Switch Fully Loaded With Module

Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्र

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्र	Delivery Days/डिलीवरी के दिन
1	Rakesh Kumar Dixit	110069,UPSC, Dholpur House, Shahjahan Road, New Delhi	10	30

Management Switch

Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्र

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Rakesh Kumar Dixit	110069,UPSC, Dholpur House, Shahjahan Road, New Delhi	2	30

Standard Server Rack 42U

Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Rakesh Kumar Dixit	110069,UPSC, Dholpur House, Shahjahan Road, New Delhi	3	30

Multi-mode OFC Patch Cord 5 Meter 25G Support

Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्र

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्र	Delivery Days/डिलीवरी के दिन
1	Rakesh Kumar Dixit	110069,UPSC, Dholpur House, Shahjahan Road, New Delhi	100	30

Multi-mode OFC Patch Cord 20 Meter 100G Support**Technical Specifications/तकनीकी विशिष्टियाँ**

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्र

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्र	Delivery Days/डिलीवरी के दिन
1	Rakesh Kumar Dixit	110069,UPSC, Dholpur House, Shahjahan Road, New Delhi	20	30

Red Hat Enterprise Linux For Virtual Data Center**Technical Specifications/तकनीकी विशिष्टियाँ**

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्र

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्र	Delivery Days/डिलीवरी के दिन
1	Rakesh Kumar Dixit	110069,UPSC, Dholpur House, Shahjahan Road, New Delhi	21	30

ElasticSearch Version 8.8.0 Or Higher**Technical Specifications/तकनीकी विशिष्टियाँ**

Specification Document	View File
BOQ Detail Document	View File

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्र

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्र	Delivery Days/डिलीवरी के दिन
1	Rakesh Kumar Dixit	110069,UPSC, Dholpur House, Shahjahan Road, New Delhi	3	30

Buyer Added Bid Specific Terms and Conditions/क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें**1. Scope of Supply**

Scope of supply (Bid price to include all cost components) : Supply Installation Testing Commissioning of Goods and Training of operators and providing Statutory Clearances required (if any)

Disclaimer/अस्वीकरण

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent

Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. Any clause(s) incorporated by the Buyer regarding following shall be treated as null and void and would not be considered as part of bid:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process.
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

[This Bid is also governed by the General Terms and Conditions/ यह बिड सामान्य शर्तों के अंतर्गत भी शासित है](#)

In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws./जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्रवाई का आधार होगा।

---Thank You/धन्यवाद---

BID DOCUMENT FOR
PROCUREMENT OF HARDWARE & SOFTWARE FOR
REVAMPING OF IT SYSTEM

Bill of Quantities (BOQ)

S.No.	Name of the Items	Quantity
1.	Hyper Converged Infrastructure Solution	21 nodes (A – E)
2.	Network Switch for Data center – Top-of-Rack switch fully loaded with module	10
3.	Management Switch	2
4.	Standard Server Rack 42U	3
5.	Multi-mode OFC patch cord 5 meter (25G Support)	100
6.	Multi-mode OFC patch cord 20 meter (100 G) Support	20
Licences/Subscriptions		
7.	Red Hat Enterprise Linux for virtual Data center	21
8.	ElasticSearch (search engine) – Version 8.8.0 or higher	3

ELIGIBILITY CRITERIA

Sr. No.	Eligibility of the bidder	Documents to be submitted
1.	The bidder should necessarily be a legally valid entity either in the form of a Limited Company or a Private Limited Company registered under the Companies Act, 1956/2013 in the business of System Integration/ IT Solution for the last 5 years.	Respective valid documentary proof of: Certificate of incorporation /Certificate of Commencement/ Certificate consequent to change of name if applicable/Copy of Memorandum of Association
2.	The Bidder should hold a valid GST Number & PAN Card and should be registered with the appropriate authorities for all applicable statutory taxes/duties.	1. Copy of GST certificate to be submitted 2. Copy of PAN Card to be submitted
3.	The bidder must have an average annual turnover of 35 Crore in the last three financial years as per the audited balance sheet available at the time of submission of tender, of the individual company and not as group of companies.	Copy of Audited Balance Sheet and Certificate from a Chartered Accountant for preceding three Financial Years.
4.	The bidder should have made operating profits in each of the last three financial years	Copy of Audited Balance Sheet and Certificate of the Chartered Accountant for preceding three FY.
5.	The Bidder should be an Authorized Vendor/Partner of the proposed OEM.	A valid Manufacturer Authorization Form from the OEM to be submitted
6.	The bidder should have experience in providing services to PSUs, Banks (BFSI), Defence and State/Central Government within India. Specifically, the bidder must have completed at least three orders for Supply, Installation, and Commissioning of Hyper Converged Infrastructure solutions in the last three financial years. Out of these, at least one order should be of minimum of 20 nodes. Further, a.) the value of at least three orders should be more than Rupees 6 Crore each or b.) the value of at least two orders should be more than Rupees 8 Crore each or c.) the value of one order should be more than Rupees 13 Crore	Work/purchase order/ contract agreement along with the completion certificate or any other authorised document from the clients to satisfy the respective clauses.
7.	The Bidder must have on its roll technically qualified professionals in the common domain of HCI/ networking/System Administration/systems integration etc.	Certificate from Bidder's HR/Authorized signatory of the company.
8.	The Supplier has to provide evidence of the HCI domain Expert for onsite deployment. i. Quantity -03 ii. The proposed resources must have HCI certification of respective OEM as per the proposed solution. iii. The certification of the proposed resource will be verified from the respective OEM.	Certification of proposed resources to be submitted.
9.	Bidder should not have filed for bankruptcy in any country including India.	Self-Declaration letter by Bidder's authorized signatory.

Sr. No.	Eligibility of the bidder	Documents to be submitted
10.	The Bidder should not be blacklisted by any blacklisted/debarred/ by any Govt. / IBA/ RBI/PSU /PSE/ or Banks, Financial institutes or Enterprise in India for any reason or non-implementation/delivery of the order as on the date of the submission of bid.	Self-Declaration letter by Bidder's authorized signatory.
11.	At the time of bidding, there should not have been any pending litigation or any legal dispute in the last five years, before any court of law between the Bidder or OEM and the Bank regarding supply of goods/services	Self-Declaration letter by Bidder's authorized signatory.
12.	Bidder must have valid ISO 9001:2015, ISO/IEC 20000-1:2018, ISO/IEC 27001:2013 & CMMI Level 3 Certificate on the date of submission of bid	Copy of relevant certifications
13.	Bidder must furnish an undertaking in respect of its compliance with Rule 144 (xi) of GFR 2017 i.e. restrictions on procurement from a bidder of a country which shares a land border with India	An undertaking by Bidder's authorized signatory.

TECHNICAL SPECIFICATIONS

1. HYPER CONVERGED INFRASTRUCTURE SOLUTIONS

A. Production Set-up (NIC) - GENERIC NODES CLUSTER (QUANTITY – 5)

S. No.	PARAMETERS	MINIMUM SPECIFICATIONS
1.	Type of HCI offered	Generic node HCI
2.	Number of nodes	5
3.	Total Cores (Usable) available across cluster	250 or higher
4.	Total Storage (RAW) with SSD & HDD Drives supplied across cluster (TB) for capacity	396
5.	Total Storage (USABLE) with SSD & HDD Drives supplied across cluster (TB) for capacity	165
6.	Total RAM (RAW) supplied across cluster (GB)	5120
7.	Total RAM (USABLE) supplied across cluster (GB)	4800
8.	Types of data copies across Cluster available in the offered solution	2
9.	Number of Nodes offered in HCI Cluster	5 or more
10	Number of Sockets offered per Node	2
.11.	Number of Cores per Sockets	28
12.	Number of populated Processor per Node	2
13.	Type of Processor offered in the system	Intel Icelake or higher
14.	Indicate Processor Model number with Make	Intel Latest @ 2.6 GHz or more
15.	Type of storage media offered with the solution	SSD & HDD (20:80) ratio
16.	Number of Network ports per node	4
17.	Throughput Per Network port	10 Gbps
18.	Type of Network port	SFP+ ports
19.	Number of L2 Switches to be offered for Interconnection all the Network Ports in the Cluster	2 (as per the config given for Interconnect switches later in the RFP)

B. Production Set-up (UPSC) - GENERIC NODES CLUSTER (QUANTITY – 5)

S. No.	PARAMETERS	MINIMUM SPECIFICATIONS
1.	Type of HCI offered	Generic node HCI
2.	Number of nodes	5
3.	Total Cores (Usable) available across cluster	250 or higher
4.	Total Storage (RAW) with SSD & HDD Drives supplied across cluster (TB) for capacity	396
5.	Total Storage (USABLE) with SSD & HDD Drives supplied across cluster (TB) for capacity	165
6.	Total RAM (RAW) supplied across cluster (GB)	5120
7.	Total RAM (USABLE) supplied across cluster (GB)	4800
8.	Types of data copies across Cluster available in the offered solution	2
9.	Number of Nodes offered in HCI Cluster	5 or more
10.	Number of Sockets offered per Node	2
11.	Number of Cores per Sockets	28
12.	Number of populated Processor per Node	2
13.	Type of Processor offered in the system	Intel Icelake or higher
14.	Indicate Processor Model number with Make	Intel Latest @ 2.6 GHz or more
15.	Type of storage media offered with the solution	SSD & HDD (20:80) ratio
16.	Number of Network ports per node	4
17.	Throughput Per Network port	10 Gbps
18.	Type of Network port	SFP+ ports
19.	Number of L2 Switches to be offered for Interconnection all the Network Ports in the Cluster	2(as per the config given for Interconnect switches later in the RFP)

C. Pre-Production Set-up (UPSC) - GENERIC NODES CLUSTER (QUANTITY – 4)

S. No.	PARAMETERS	MINIMUM SPECIFICATIONS
1.	Type of HCI offered	Generic node HCI
2.	Number of nodes	4
3.	Total Cores (Usable) available across cluster	200
4.	Total Storage (RAW) with SSD & HDD Drives supplied across cluster (TB) for capacity	250 TB
5.	Total Storage (USABLE) with SSD & HDD Drives supplied across cluster (TB) for capacity	105 TB
6.	Total RAM (RAW) supplied across cluster (GB)	4096
7.	Total RAM (USABLE) supplied across cluster (GB)	3850
8.	Types of data copies across Cluster available in the offered solution	2
9.	Number of Nodes offered in HCI Cluster	4 or more
10.	Number of Sockets offered per Node	2
11.	Number of Cores per Sockets	28
12.	Number of populated Processor per Node	2
13.	Type of Processor offered in the system	Intel Icelake or higher
14.	Indicate Processor Model number with Make	Intel Latest @ 2.6 GHz or more
15.	Type of storage media offered with the solution	SSD & HDD (20:80) ratio
16.	Number of Network ports per node	4
17.	Throughput Per Network port	10 Gbps
18.	Type of Network port	SFP+ ports
19.	Number of L2 Switches to be offered for Interconnection all the Network Ports in the Cluster	2(as per the config given for Interconnect switches later in the RFP)

D. DR Set-up (NIC) - GENERIC NODES CLUSTER (QUANTITY – 4)

S. No.	PARAMETERS	MINIMUM SPECIFICATIONS
1.	Type of HCI offered	Generic node HCI
2.	Number of nodes	4
3.	Total Cores (Usable) available across cluster	200
4.	Total Storage (RAW) with SSD & HDD Drives supplied across cluster (TB) for capacity	315 TB
5.	Total Storage (USABLE) with SSD & HDD Drives supplied across cluster (TB) for capacity	135 TB
6.	Total RAM (RAW) supplied across cluster (GB)	4096
7.	Total RAM (USABLE) supplied across cluster (GB)	3850
8.	Types of data copies across Cluster available in the offered solution	2
9.	Number of Nodes offered in HCI Cluster	4 or more
10.	Number of Sockets offered per Node	2
11.	Number of Cores per Sockets	28
12.	Number of populated Processor per Node	2
13.	Type of Processor offered in the system	Intel Icelake or higher
14.	Indicate Processor Model number with Make	Intel Latest @ 2.6 GHz or more
15.	Type of storage media offered with the solution	SSD & HDD (20:80) ratio
16.	Number of Network ports per node	4
17.	Throughput Per Network port	10 Gbps
18.	Type of Network port	SFP+ ports
19.	Number of L2 Switches to be offered for Interconnection all the Network Ports in the Cluster	2(as per the config given for Interconnect switches later in the RFP)

E. Backup Set-up (UPSC) - GENERIC NODES CLUSTER (QUANTITY – 3)

S. No.	PARAMETERS	MINIMUM SPECIFICATIONS
1.	Type of HCI offered	Generic node HCI
2.	Number of nodes	3
3.	Total Cores (Usable) available across cluster	54
4.	Total Storage (RAW) with SSD & HDD Drives supplied across cluster (TB) for capacity	230 TB
5.	Total Storage (USABLE) with SSD & HDD Drives supplied across cluster (TB) for capacity	100 TB
6.	Total RAM (RAW) supplied across cluster (GB)	384
7.	Total RAM (USABLE) supplied across cluster (GB)	200
8.	Types of data copies across Cluster available in the offered solution	2
9.	Number of Nodes offered in HCI Cluster	3 or more
10.	Number of Sockets offered per Node	2
11.	Number of Cores per Sockets	12
12.	Number of populated Processor per Node	2
13.	Type of Processor offered in the system	Intel Icelake or higher
14.	Indicate Processor Model number with Make	Intel Latest @ 2.1GHz or more
15.	Type of storage media offered with the solution	SSD & HDD (20:80) ratio
16.	Number of Network ports per node	4
17.	Throughput Per Network port	10 Gbps
18.	Type of Network port	SFP+ ports
19.	Number of L2 Switches to be offered for Interconnection all the Network Ports in the Cluster	2 (as per the config given for Interconnect switches later in the RFP)

PERFORMANCE & HCI FEATURES FOR (A), (B), (C), (D) & (E)

PERFORMANCE	
IOPS delivered at 70:30 Read: Write Ratio on 8K block size with latency of 5ms maximum for each node	40000 or higher
Scalability: Any additional node/ storage/ RAM added to the cluster to augment compute/storage/memory capacities, the same performance per node on upgraded node / Storage / RAM	Yes
HCI FEATURES	
HCI Features 1	HCI should have all the features of offered industry standard hypervisor.
	HCI should have independently scale storage and compute as and when needed without any downtime.
	HCI should have mechanism for Metadata protection for all offered nodes within the cluster so as to provide high availability and no single point of failure.
	HCI should have configuration of SSD/NVMe then the caching must be on appropriate capacity of SSD/ NVME drives to meet the IOPS/performance requirements.
	HCI should support thin provisioning of both storage entities and virtual machine hard disks.
	HCI should provide automatic failover in case of hardware failure.
	HCI should have VLAN for networking and integrated VM IP's Management capabilities.
	HCI should have security compliance methodology to ensure highly secure environment.
	HCI has data replication with WAN optimization providing 1 hour RPO
HCI Features 2	HCI should provide management through a remote/On premise GUI console. HCI should provide storage, compute & hypervisor metrics on a per VM /Node level as well as health and monitoring of entire platform.
	Platform should support LDAP Active Directory integration. The clients installed on any major Operating System.
	Platform should supports monitoring via SNMPv3, email alerting via SMTP.
	HCI should be capable of creating instant snapshots of virtual machines and maintaining multiple copies of snapshots & clones.
	HCI should have capability to support native VM/HCI level replication for installed Hypervisor.
	HCI should have storage policy on individual VM and should provide enhanced performance and flexibility to end user for better storage management.

HCI Features 3	HCI should have redundant components with no single point of failure in the system.
	HCI should have Intelligent Optimum data distribution across all nodes.
	HCI should support container based application.
	HCI should have Single management tools to support multiple clusters and Management tool should be built into the solution, scales with the cluster.
	HCI nodes should be capable to sustain single power supply failure.
HCI Features 4	HCI must provide block, File and Object storage access to physical servers outside the HCI infrastructure.
	HCI should be proactive high-availability
	HCI should have DRS, Distributed switch.
	Management platform should provide out of the box automation and orchestration for appliance based operational tasks.
	Should provide Automated disaster recovery and DR drill capability
	HCI should support for VM or APP consistent snapshot/backup for unlimited No. of VMs
	HCI should have management tool that is built into the solution, scales with the cluster, and does not require separate hardware infrastructure.
HCI Features 5	HCI should have data Integrity Checks.
	HCI should provide management tool to provide visibility of network infrastructure.
	HCI should have Integrated management for hyper converged infrastructure and virtual environments with Storage & Compute/Storage/Network/Compute.
	HCI should provide Intelligent data distribution across all nodes and uniform capacity utilization across all nodes at all time.
Supported industry protocols by HCI	NFS/SMB, iSCSI, S3
HCI capability to support File/Block Services and file/block replication across clusters for	NFS/SMB, iSCSI
Inline data Compression & Deduplication function licences for	Unlimited Capacity license must be provided

HCI GENERIC PARAMETERS	
Number of nodes HCI supports in same cluster/deployment, such that any node out of the offered be able to use the storage of all other nodes	32
HCI support	AHV, Hyper-V, ESXi
Bare metal / Non Bare metal type of virtualization hypervisor	Bare Metal
The length of cable connecting the Nodes to the Switch (meters)	5
Software Defined Storage	HA and DRS features must be enabled where VM Automatically restarts following physical machine failure
Management	Must provide customizable dashboard
	Must provide Auto remediation of overprovisioned VM's
	Management must be redundant, such that management of cloud operations do not stop even if the server running
SUPPORT PARAMETERS	
The offered product have support from OEM for	<ol style="list-style-type: none"> 1. Updation for Patches and Bug fixes for software within support period. 2. Upgradation of version software within support period. 3. Service and support from OEM within support period. 4. The bidder must upgrade, update, and patch Red Hat Enterprise Linux (RHEL) and the Hyper-Converged Infrastructure (HCI) System at all locations without direct internet connectivity during the warranty and AMC periods. (An undertaking has to be given by OEM to facilitating bidder in this regard)
Number of Years upto which support is available from OEM for Updation (Patches and Bug fixes) within support period	5
Number of Years upto which support is available from OEM for Upgradation of version within support period	5
Number of years of service and Production support from OEM (24x7, 365 days)	5
Installation, & Commissioning by OEM resources	Yes
Number of days Training Provided at Site by the OEM resources	One week

ADDITIONAL SPECIFICATIONS FOR HYPER CONVERGED INFRASTRUCTURE:

1. HCI solutions should be capable enough to build customised dashboards with reporting that is easy for customers to use and meets their needs. They should also be able to scan and search items with powerful search capabilities to provide faster access to the data needed for troubleshooting. HCI solution should provide analytics on capacity behaviour and should be capable to display all under and over utilized VM's with the appropriate sizing data following current VM usages.
2. The proposed object storage solution must come pre-installed, pre-integrated factory shipped appliance, with fully software defined infrastructure. The Software Defined Object Storage should be supported on a virtualized environment like VMware/Hyper-V/Nutanix etc. The S3 object storage must be natively provided from the internal HCI cluster and must be managed from the same HCI management console. It should have license for 50 TB Object for each site and should be provisioned for all the 5 sites.
3. The proposed Files storage solution must come pre-installed, pre-integrated factory shipped appliance and a fully software defined infrastructure & should be natively provided from HCI console. Solution should support native file storage supporting NFS v3/v4 and SMB 2.0/3.0 for Red hat Linux and Windows Guest with unlimited shares integrated with Active directory/LDAP. Solution should provide native scale-up and scale-out distributed architecture file storage with session load balancing functionality for consistent user session. Solution should provide user and group level share quota restriction with hard and soft limit. It should have license as given below-as given below:-
 - a) 100 TB each on 2 sites,
 - b) 50TB each on 2 sites
 - c) 25TB for 1 siteThe aforementioned should be supported for at least five years.
4. The basic 3 components of the HCI node i.e. Compute, RAM, Storage should be physically inside the node and no resource should be provisioned from outside the HCI Node.

2. NETWORK SWITCHES (QUANTITY-10)

S. N.	Parameters	TOR Switch Minimum Specifications
1	General (Features/Hardware should be provided from day 1)	Should be provided with 1+1 or N+1 internal redundant power supply.
		Switch should have hot swappable fan modules and power supply
2	L3 Architecture and Memory (Features/Hardware should be provided from day 1)	Should have preferably 16GB of DRAM
		Switch should have latest supported OS of Datacentre Class.
3	Ports	Each Switch should have at least 24 x1/10/25GE port
		Should have 4x40G / 100G Uplink ports
4	Add-on Requirements	The number of ports indicated is minimum. The bidder is free to offer compatible module with higher number of ports provided other specifications are met
5	L3 Performance (should be provided from day 1)	Switch should have at least 2 Tbps throughput capacity such as all the ports should operate at non-blocking mode
6	Layer 2 Protocols and Support (All Protocols/License/Features should be provided from day 1)	Jumbo Frames support up to 9K Bytes
		Support for broadcast/ multicast/ unicast storm control and ARP storm protection to prevent degradation of switch performance from faulty end stations
		The Switch should be able to discover the neighbouring device giving the details about the platform, IP Address, Link connected through etc, thus helping in troubleshooting connectivity problems
		Should support port, subnet based 802.1Q VLANs. The switch should support at least 4000 active VLANs. Should support subnet based VLANs.
		The switch should support IEEE 802.1w RSTP and IEEE 802.1s MSTP
		Local Proxy Address Resolution Protocol (ARP)
Network Protocols (All Protocols/License/Features should be provided from day 1)		
7	IPv4 Routing Protocols (All Protocols/License/Features should be provided from day 1)	Should support Static Routing, Default Routing, RIP/RIPv2, OSPFv2, BGP
		Should support BGP4 routing protocol with CIDR and should have all necessary licenses to enable full features of BGP protocol
		Support for VRF-Lite or equivalent
		Should support DNS, TFTP and NTP protocols

S. N.	Parameters	TOR Switch Minimum Specifications
8	IPv6 Routing Protocols (All Protocols/License/Features should be provided from day 1)	Should support Static Routing, Default Routing, OSPFv3, BGP for IPv6
		Should have all necessary licenses for to enable full features of BGP protocol for IPv6
		Should support both IPv4 and IPv6 routing concurrently; Should have dual stack functionality
		Should support DNS, TFTP and NTP protocols
		Supported IPv6 features should include: DHCPv6, ICMPv6
9	Multicast (All Protocols/License/Features should be provided from day 1)	Should support IPv4 and IPv6 Multicasting
		Should have PIM-SM/PIM-Sparse-Dense mode/Bidirectional PIM/PIM- SSM for IPv4
		Should have PIM-SM/PIM-Sparse-Dense mode/ Bidirectional PIM/PIM- SSM for IPv6
		Should Support IGMP v1, v2 , v3, IGMP Snooping
10	QoS Support (All Protocols/License/Features should be provided from day 1)	Should support Ingress/Egress Queuing or QoS per port or user
		Should be able to collect and limit traffic flows based on MAC Source/ Destination address, IP Source/ Destinations address, TCP/UDP port nos etc.
		Should support policy based traffic classification based on Type of Service (ToS), IP Precedence mapping, Layer 2/3/4 defined traffic flows, MAC address, VLANs
		The Switch shall support QoS for Traffic Management, class based policing and 802.1p.
11	Management (All Protocols/License/Features should be provided from day 1)	Switch should be manageable through NMS on per port/switch basis with common interface for all manageable devices on the network. Should Support SNMP, RMON/RMON-II, or equivalent SSH V2, telnet, web management through network management software
		Should support port mirroring feature for monitoring network traffic of a particular port/VLAN/group of ports/entire switch
		The switch should support role based access control to limit access to switch operations
		The switch should support SNMP v1, v2 and V3.
		Trivial File Transfer Protocol (TFTP) / SFTP to reduce the cost of administering software upgrades by downloading from a centralized location.
		If Version of software for supplied switch should be of latest release, and to support all required features

S. N.	Parameters	TOR Switch Minimum Specifications
12	Other features (All Protocols/License/Features should be provided from day 1)	Must have the ability to complete hitless software upgrades with zero interruption to services or data forwarding
		The switch should support Access Control List to filter traffic based on Source & Destination IP Subnet, Source & Destination Port, VLAN, Protocol Type (IP, UDP, TCP, ICMP etc) and Port Range etc
		Should support integrated security features like DHCP snooping, Dynamic ARP Inspection, IP Source guard etc.
		The switch should support control plane policing to filter the unwanted traffic to fill up the CPU queues
		The Switch Should support TFTP/SFTP for remote file transfer
		Should Support VRRP Protocol or equivalent
13	Regulatory Compliance from day 1	Switch shall conform to IEC Standards for Safety requirements of Information Technology Equipment. (documentary proof shall be submitted with the bid)
		Switch shall conform to CISPR Standards or FCC for EMC (Electro Magnetic Compatibility) requirements. (documentary proof shall be submitted with the bid)
		The series/OS of the offered product have achieved Common Criteria Certification in the Common Criteria certification. (documentary proof shall be submitted with the bid)
		Command line interface of the Switch must be in English Language
		Medium of communication shall be in English language for all documents and certificates
		Operating Voltage : AC 220V \pm 5%, 50 Hz
14	On site OEM Warranty (Years)	05

3. MANAGEMENT SWITCHES (QUANTITY-2)

Sr. No.	Parameters	Minimum Specifications
1	Details	Dedicated management network should be setup using separate management switches for management of the whole solution
2	Type	Full managed non-blocking Gigabit Ethernet 1RU layer 2 switch
3	Ports Scalability	Sufficient nos. of switches must be provided for implementation of the solution with stacking capability
4	General Features	Min 48 Port Ethernet 10/100/1000 Mbps (autosensing RJ-45) and 2X10 Gig uplinks/Modules. (Optics for uplink modules to be provided along with the switch). Uplink (SFP+) ports should work simultaneously along with 48 Nos of 1G Base T ports. Should have stacking port or equivalent. Min DRAM 256 MB and External USB/flash support for uploading OS images and configuration files. Should be 19" rack mountable and all accessories for mounting should be provided.
5	Performance	At least 136 Gbps switch fabric with non-blocking mode at full duplex. Stacking bandwidth of minimum 80Gbps. Should support at least 4 Switches in one stack. Forwarding rate – at least 101 Mpps. Forwarding rate must be in such a way that all the ports should be in non-blocking mode while operating at full duplex Configurable at least 16000 MAC addresses. Jumbo frames of up to 9K bytes
6	Layer-2 Features	IEEE 802.1Q VLAN encapsulation. Support for at least 4000 VLAN IDs. Should have centralized VLAN Management. Switch should support VLAN propagation automatically created. Should have spanning-tree enhancements for fast convergence Should have all features as per IEEE 802.1d, 802.1s, 802.1w, 802.3ad Should have spanning-tree feature to prevent other edge switches becoming the root bridge Switch should have features like IGMP snooping v3, IGMP filtering Should have Link Aggregation Protocol (LACP) Should support for Detection of Unidirectional Links (in case of fiber cut) and to disable them to avoid problems such as spanning-tree loops. Switch should be able to discover the neighbouring device using CDP/LLDP or similar Should have feature for storm control to prevent faulty end stations from degrading overall systems performance. Should have Local Proxy Address Resolution Protocol (ARP) feature. Should have Multicast VLAN registration (MVR) or equivalent to continuously send multicast streams in a multicast VLAN while isolating the streams from subscriber VLANs for bandwidth and security reasons.
7	Network security features	Should have IEEE 802.1x to allow dynamic, port-based security, providing user authentication Port-based ACLs for Layer 2 interfaces to allow security policies on individual switch ports. SSHv2 and SNMPv3 to provide network security by encrypting administrator traffic during Telnet and SNMP sessions. Remote mirroring capability which helps administrators to remotely monitor ports in a Layer 2 switch network from any other switch in the same network. RADIUS authentication to enable centralized control of the switch and restrict unauthorized users from altering the configuration. Dynamic / Static ARP Inspection which can ensure user integrity by preventing malicious users from exploiting the insecure nature of the ARP protocol.

Sr. No.	Parameters	Minimum Specifications
		<p>DHCP snooping to allow administrators to ensure consistent mapping of IP to MAC addresses. This can be used to prevent attacks that attempt to poison the DHCP binding database, and to rate-limit the amount of DHCP traffic that enters a switch port.</p> <p>Port security to secure the access to an access or trunk port based on MAC address.</p> <p>Multilevel security on console access to prevent unauthorized users from altering the switch configuration using local database or through an external AAA Server.</p> <p>Spanning tree feature to shut down Spanning Tree Protocol enabled interfaces when BPDU's are received to avoid accidental topology loops.</p> <p>Should support Access Control Lists entries.</p>
8	Quality of Service (QoS) & Control	<p>Standard 802.1p CoS and DSCP</p> <p>Multiple egress queues per port to enable differentiated management of traffic types across the stack.</p> <p>Weighted tail drop (WTD) or WRR or equivalent to provide congestion avoidance</p> <p>Strict priority queuing mechanisms</p>
9	Management Function	<p>Command Line Interface (CLI) support for configuration & troubleshooting purposes.</p> <p>For enhanced traffic management, monitoring, and analysis, upto four RMON groups (history, statistics, alarms, and events) must be supported.</p> <p>FTP/ Trivial File Transfer Protocol (TFTP) to reduce the cost of administering software upgrades by downloading from a centralized location.</p> <p>Network Timing Protocol (NTP) to provide an accurate and consistent timestamp to all intranet switches.</p> <p>Telnet interface and a CLI-based management console.</p> <p>SNMPv1, SNMPv2c, and SNMPv3 built in.</p>
10	Other	<p>Should have IPv4 and IPv6 Layer 3 support which includes static routing, Default Routing. The switch shall have Dual stack mode to run both IPv4 & IPv6 simultaneously.</p> <p>Should have latest OS supported on the device.</p> <p>The series/OS of the offered product have achieved Common Criteria Certification in Common Criteria for Network Devices Features /parameters /certifications proposed to be available in near future / on roadmap shall not be considered.</p>
11	Redundancy	Switch should have Internal Redundant Power supply installed.
12	Console/Management Port	<p>Console/Management Port 1 RJ45 console port or 1 micro- USB-B console port</p> <p>CLI and GUI / Web based out of band management</p>
13	On site OEM Warranty (Years)	05

4. SERVER RACK 42U (QUANTITY-3)

S. No.	Technical Specification of 42U Server Rack
1	Rack should have 100% assured compatibility with all equipment's conforming to DIN 41494 (General Industrial Standard for equipment's) or Equivalent EIA / ISO / EN Standard.
2	The OEM must adhere to Quality Management system through ISO9001:2015 and Manufacturing facility has to be certified for the same
3	The OEM must adhere to Environmental and Occupational Health Management system through ISO14001:2004 & OHSAS 18001:2007 and Manufacturing facility has to be certified for the same
4	The OEM must adhere to Information Security Management system through ISO27000:2013 and Manufacturing facility has to be certified for the same
5	Products must be UL Certified .
6	Manufacturer must certify that the products are RoHS Compliant .
7	The rack should comply minimum of IP20 rating for protection against touch, ingress of foreign bodies and ingress of water.
8	Rack should support static load of 7500 kgs on Casters and 1250kgs on levellers.
9	Rack should supply 2 No finger type cable management with door for management of Vertical Cables
10	Rack should have Front Convex perforated door, back dual perforated doors and detachable side panels.
11	Rack should be with swing handle locking.
12	Rack should be 2115mm in height in Height, 800MM in Width & 1200MM in Depth .
13	Rack should have Adjustable mounting depth.
14	Powder coated finish with seven Tanks pre-treatment process meeting IS
15	Grounding and bonding as per UL Standards.
16	2 Nos 300mm Cable basket for management of Vertical Cables.
17	2 Nos PDUs, with single phase power supply 230V (32A) Zero U standard rack mount power distribution unit with 12X 5/15A sockets, with power cable and 2 Nos 16A MCB, The PDU input cable should be 3 mtr.
18	Rack should have Fan module Mount Provision on top Cover with 4 Fan Housing unit.
19	Rack should have provision for cable entry Exit from Both top & Bottom.
20	Rack should have 1 Packet of mounting hardware, Pack of 20.
21	Rack should have 1 No of shelf
22	Rack should have 1 Nos Channel On Front Cable Organizer
23	The Products manufactured should provide warranty for 1 year from date of invoice the warranty does not cover wrong Usage or miss-handling the products
24	Electrical items such as Sockets, switches, fans etc. should have warranty for 1 year from date of installation
25	For malfunction of any units/item in the rack, the support should be provided within the next business day

5. **MULTI-MODE OFC PATCH CORD 5 METER (25G SUPPORT) (QTY. – 100)**
6. **MULTI-MODE OFC PATCH CORD 20 METER (100G SUPPORT) (QTY. – 20)**
7. **RED HAT ENTERPRISE LINUX FOR VIRTUAL DATA CENTRE (QTY. – 21)**

Sr. No.	Specifications	Detail
1	Brand	RedHat
2	Model	Red Hat Enterprise Linux for Virtual Data Centre
3	Types of License	Subscription
4	Duration of Subscription (in Years)	5
5	Licensing Option	Per CPU
6	No of sockets supported	2
7	Number of Years upto which support is available from OEM for Upgradation of version	5
8*	Number of Years upto which support is available from OEM for Updation (Patches and Bug fixes)	5
9	Should be supported unlimited guest virtualized environment	Unlimited Guest VMs

* The bidder must upgrade, update, and patch Red Hat Enterprise Linux (RHEL) and the Hyper-Converged Infrastructure (HCI) System at all locations without direct internet connectivity during the warranty and AMC periods. (An undertaking has to be given by OEM to facilitating bidder in this regard)

8. **ELASTICSEARCH (SEARCH ENGINE) (QTY. – 3)** – Version 8.8.0 or higher

Scope of Work

1. The complete solutions including Servers, Storage & Network components as per the technical specifications should be supplied, installed and made operational at identified locations at NDC Shastri Park, Delhi (items indicated at BOQ 1.A), NDC Pune/Bhubaneswar (Items indicated at BOQ 1.D) and the rest (items indicated at BOQ 1.B, 1.C & 1.E & items from 2 to 8) at UPSC, New Delhi.
2. All the components of the provided solution should not have any single point of failure including power, networking etc.
3. Any additional hardware / software needed for making the system operational should be provided and it is the sole responsibility of the vendor to make the system operational and integrate in the environment of UPSC.
4. Any component hardware / software which is not explicitly mentioned in the specifications, but is critical for installation, commissioning and effective utilization of the provided solution for all identified locations, must form a part and parcel of the solution offered by the bidder.
5. All the specifications mentioned in the technical specification document are minimum requirements only.
6. Supplier shall indicate make & model of the quoted equipment along with relevant detailed Technical catalogues/brochures (hardcopy / softcopy format). The Technical information provided along with bid should be sufficient to evaluate the material to be supplied.
7. All Hardware/ Software (if any) supplied should be of latest version along with permanent/subscription based licenses for complete integration and commissioning of the project.
8. Bidders must not propose solutions involving products that have reached or are near end of life. Certificate from OEM to this effect, is to be submitted along with the bid. OEM should also commit for support and availability of spares for next seven years.
9. All Hardware should be warranted for minimum of Five year from the date of acceptance.
10. Quoted Cost must include all charges / taxes / duties including freight, insurance, customs duty, installation & commissioning charges, warranty at Site etc.
11. **Authorization letter (MAF) from OEM should be submitted along with the offer.**
12. All the necessary cables, connectors and other accessories required to complete the entire scope of work must be supplied by the Supplier without any additional cost implication to UPSC.
13. Solution Document: The bidder has to submit detailed solution document for setting up the entire System with detailed layout diagrams indicating the complete integration of various components in the system, before the acceptance.
14. The implementation of solution should be done by **OEM Engineers only**.
15. The bidder should provide Upgradation/updates/patches for the Hyper-Converged Infrastructure (HCI) System and Red Hat Enterprise Linux (RHEL) without direct internet connectivity at all identified locations during the warranty period and also during AMC period.
16. The bidder should provide onsite technical support of all kind at all identified locations on 24x7 basis during warranty period and also during AMC.
17. Integration with existing infrastructure should be responsibility of the bidder/OEM, any requirement aligned with it should be fulfilled. Also, logical zone commissioning of network/infrastructure will be in the scope of the bidder/OEM.

18. **Warranty Support/SLA:**

- a. The successful bidder shall provide 5 years on-site comprehensive warranty services directly from OEM for each Hardware component. The warranty support including operating system shall be valid for a period of 5 years from the date of Final Acceptance.
- b. All support must be directly from OEM. **The back to back support agreement for the same must be enclosed and signed by signatory authority of bidder and OEM.**
- c. The onsite support of hardware, for each component must be on 6 Hour CTR (call to repair) basis with mission critical proactive services.
- d. The support provided of hardware and software must be for 24 X 7 by the respective OEMs.
- e. Proactive support on regular interval for any new version, update, upgrade and patches mentioned above will be provided on-site by respective OEM.
- f. The bidder shall provide a clear-cut escalation matrix with complete details including address, phone number, mobile number, e-mail etc. for all components of the solution. Whenever there is any change in the contact details, bidder has to intimate the same to UPSC immediately.
- g. In case of any failure/troubleshooting, bidder would log the call with the respective OEM. The bidder will be fully responsible for call tracking and its closure. This call log would be used for the purpose of calculation of downtime. However, the bidder shall provide for all the OEM's dedicated toll-free-number (as available), contact number, email id & web-portal access for call logging, call status checking & monitoring purpose including call logging procedures. Whenever there is any change in the contact details, bidder has to intimate the same to UPSC immediately.
- h. A Single Point of Contact who shall be responsible for the complete contract execution should be nominated by the successful bidder and shared with UPSC. Whenever there is any change in the contact details of the Single Point of Contact, bidder has to intimate the same to UPSC immediately.
- i. The successful bidder along with the respective OEMs shall provide and install updates and upgrades (Version / Software upgrades, firmware upgrade, patch management including security patches released by respective OEMs from time to time) for all components on requirement and pre-planned basis (date & time decided by UPSC). Software updates/upgrades shall also be done keeping in view advancement in technology, security vulnerabilities or changes required for improving functional efficiency and security level of the system. The successful bidder shall ensure complete rollback to original status in case of problem and will submit a complete analysis report and further steps to perform the upgrade. For the rollback purpose bidder shall take necessary system backups before the activity.
- j. UPSC shall not procure or stock spares. Successful bidder shall arrange its own tools and test equipment for the maintenance services.
- k. Bidder shall ensure that all the components covered under this proposal are in good condition during the warranty period and ensure timely replacement/rectification in case it becomes faulty.
- l. Successful bidder shall arrange to carry out EPM (Electronic Preventive Maintenance) Schedule quarterly from the OEM. For carrying out the same requisite logs and configuration files shall be shared with the bidder and OEMs on demand. At the end, detailed EPM report shall be submitted to UPSC along with recommendations. The report should include performance analysis for all components and the recommendations for change of parameters/configuration/resource requirement etc., if any. If the performance analysis recommendations need shutdown time for implementation, the same shall be planned in co-ordination with UPSC.

- m. During warranty period, if it is observed that any of the supplied equipments are not able to meet the specification given in the Tender, the successful bidder at its own cost shall replace that equipment with higher end equipment that meets the technical specifications.
- n. Annual uptime of the Setup must not be less than 99.50% else it will attract penalty as defined in this document.

20. **Penalty for Failure:** Penalty for equipment failures will be governed as per following procedure:-

- (i) The successful bidder shall provide system uptime guarantee of 99.50% on quarterly basis. The system will be treated as down if there is disruption on account of failure/mal-functioning of infrastructure supplied and maintained by the bidder. In case failure impacts the defined uptime for the month, it shall attract damages as defined further. Starting period of failure will be the time when it is reported/complaint is logged.
- (ii) Penalty shall be applied as per the table given below:-

S. N	Failure	Penalty
1.	Hardware / Equipment Failure	Rs. 10,000/- per hour per case of downtime after 6 hours

The penalty will be calculated on quarterly basis and total penalty will be subject to maximum of 10% of the total cost of contract.