

REF:CO/IT/BPR/HW/ULP-CENTRAL-CORR-X

15/01/2018

RFP Ref: LIC/CO/IT-BPR/HW/ULP-CENTRAL/17-18/03 Dated: 23/08/2017
CORRIGENDUM – X

Following clarification is being issued under the above referred RFP. The bidders to note that this clarification shall form an integral part of the above referred RFP and resulting contracts, if any.

RFP Related

SLNO	Clause ref.	Clause (in brief) of RFP requiring clarification(s)	Points of Clarification referred by Bidders	LIC Clarification/modification in clause (highlighted in bold)
1	Pg-9,10 Bid Submission/ Eligibility Bid opening	Bid Submission Date & Time Eligibility Bid Opening date/time/venue	Bid Submission to be extended by few days	On 30/01/2018 latest by 3.30 p.m. The Eligibility Bids will be opened by the Tender opening committee of LIC in the presence of the bidders' representatives who choose to attend, at the above mentioned address, on 30/01/2018 at 4.00 p.m.
2	Page-25,26 H. Bid Submission Clause – H, Point 2	2. Criteria for Technical Evaluation	Scoring Model for Technical Evaluation	Clause – H, Point – 2 Criteria for Technical Evaluation Detailed process is given in the below table -
3	Pg-37 K.1.a) SLA Breakdown Table K.1.b) Incident and Defect Resolution Matrix	SLA Incident Breakdown	Overall Penalty Cap to be considered	a) In case of any breakdown / malfunctioning of HCI hardware, hardware components, accessories, system software etc., the relevant defect should be attended to within 2 hours, 4 hours, 6 hours onsite of the receipt/ notice of the complaint for Critical Level L1, L2, L3 calls respectively as per the Incident & Defect Resolution Matrix. On failing to do so, penalty will be levied in case of every event of breakdown / defect/ malfunctioning of hardware, hardware component, accessories, system software, due to patch download / upload or for any reason, as follows:

					<table><tr><th>Sr No</th><th>Period of delay</th><th>Penalty amount</th></tr><tr><td>1</td><td>>Two hours up to four hours</td><td>Rs. 5,000</td></tr><tr><td>2</td><td>>Four hours up to six hours</td><td>Rs. 10,000</td></tr><tr><td>3</td><td>>Six hours up to eight hours</td><td>Rs. 10,000 + Rs.5,000 per hour or part thereof</td></tr><tr><td>4</td><td>> Eight hours up to twelve hours</td><td>Rs. 20,000 + Rs.10,000 per hour or part thereof</td></tr><tr><td>5</td><td>> Twelve hours up to twenty four Hours</td><td>Rs. 60,000 + Rs. 20,000 per hour or part thereof</td></tr><tr><td>6</td><td>> Twenty four hours</td><td>Rs. 3,00,000 + Rs. 30,000 per hour or part thereof</td></tr></table> Maximum Penalty due to breakdown – 10% of the Total Contract Value b) Incident and Defect Resolution Matrix <table><tr><th>Level Of Incident</th><th>Time (hrs.)</th><th>Description</th></tr><tr><td>Critical Level 1 Incident</td><td>2 hrs.</td><td>Entire HCI Setup /Environment is not available</td></tr></table> PS: Critical Level 2 and 3 Incidents shall remain same as mentioned in Clause K.1.b, ie, Clause for Incident and Defect Resolution Matrix.	Sr No	Period of delay	Penalty amount	1	>Two hours up to four hours	Rs. 5,000	2	>Four hours up to six hours	Rs. 10,000	3	>Six hours up to eight hours	Rs. 10,000 + Rs.5,000 per hour or part thereof	4	> Eight hours up to twelve hours	Rs. 20,000 + Rs.10,000 per hour or part thereof	5	> Twelve hours up to twenty four Hours	Rs. 60,000 + Rs. 20,000 per hour or part thereof	6	> Twenty four hours	Rs. 3,00,000 + Rs. 30,000 per hour or part thereof	Level Of Incident	Time (hrs.)	Description	Critical Level 1 Incident	2 hrs.	Entire HCI Setup /Environment is not available
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4	Page-39 K. Service Level Agreement Point 4	Service Level Agreement – Site-uptime Penalty Table	Overall Penalty Cap to be considered	Required Site-Uptime and Penalties applicable if the desired Site uptimes are not met <table><tr><th>Required Site-Uptime on Monthly basis (All sites)</th><th>99.9%</th></tr><tr><th>Percentage Site-up time(both sites)</th><th>Penalty Applicable (% of the Notional AMC amount)</th></tr><tr><td>99.9</td><td>0</td></tr><tr><td>99.8</td><td>1</td></tr><tr><td>99.7</td><td>2</td></tr><tr><td>99.6</td><td>3</td></tr><tr><td>99.5</td><td>4</td></tr><tr><td>99.4</td><td>5</td></tr><tr><td>99.3</td><td>6</td></tr><tr><td>99.2</td><td>7</td></tr><tr><td>99.1</td><td>8</td></tr><tr><td>99</td><td>9</td></tr><tr><td>98.9-98.0</td><td>10</td></tr><tr><td>97.9-97.0</td><td>15</td></tr><tr><td>96.9-95.0</td><td>20</td></tr><tr><td>94.9-92.0</td><td>25</td></tr><tr><td>91.9-90.0</td><td>30</td></tr><tr><td>For every 0.5% decrease in site uptime(after 90.0)</td><td>additional 1% of the Notional AMC Amount will be deducted as penalty plus the base cap on 90.0% Site uptime</td></tr></table> [Notional AMC Amount –8% of the Hardware Cost]	Required Site-Uptime on Monthly basis (All sites)	99.9%	Percentage Site-up time(both sites)	Penalty Applicable (% of the Notional AMC amount)	99.9	0	99.8	1	99.7	2	99.6	3	99.5	4	99.4	5	99.3	6	99.2	7	99.1	8	99	9	98.9-98.0	10	97.9-97.0	15	96.9-95.0	20	94.9-92.0	25	91.9-90.0	30	For every 0.5% decrease in site uptime(after 90.0)	additional 1% of the Notional AMC Amount will be deducted as penalty plus the base cap on 90.0% Site uptime
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5	Page-41 K. Service Level Agreement Point 8(New)	Service Level Agreement	Overall Penalty Cap to be considered	8. Penalty Cap – a) The total penalty for Delivery and Installation shall not exceed 20% of the Total Hardware Cost . b) The overall accrued penalty(other than the above) shall not exceed 20% of the Total Contract Value and Total AMC Value for the warranty period and AMC period respectively. c) Accrued Penalties will be assessed on a half-yearly basis and LIC will recover the same from any payment due to the Vendor, or asking the Vendor to pay at the counter or by invoking the PBG. d) If the maximum cap is reached, LIC will review the situation and at its sole discretion, may consider cancelling the contract.
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Table-A(Detailed process for Clause H, point-2 : Criteria for Technical Evaluation

- a) Only the bidders qualifying all the Eligibility Criteria(Clause – G, all 10 points) will be eligible for the next stage of Evaluation, ie, Technical Evaluation.
- b) Apart from complying with the 'Clause H, point-1', the Bidder should also comply with all the detailed Technical Specifications mentioned in the **last revised Technical Annexure**(Deviations, if any, should be clearly justified and should meet the specified requirement with relevant documentation). LIC, at its sole discretion, may/may not accept the deviation and will evaluate the same on its merit and suitability to the specified requirement.
- c) The bidders who are qualified from this stage will be evaluated further based on the Technical Scoring Model Criteria mentioned below –

TABLE – Scoring Model for Technical Evaluation

SLNO	Criterion	Points	
		Item	Value
1	Whether proposed hypervisor is present in latest available Gartner's magic quadrant for x86 virtualization infrastructure.	Leaders	15
		Challengers	10
		Other Quadrants	5
		Others[Meeting the Technical Requirements for the Solution]	0
2	Whether proposed Hyper converged infrastructure solution is present in latest available Gartner's magic quadrant for Integrated Systems.	Leaders	15
		Challengers	10
		Other Quadrants	5
3	Whether proposed Backup solution is based on 'Disk-To-Disk-To-Tapes' Technology and the proposed backup	Leaders	10

	solution/appliance should be in the Leaders/Challengers quadrant in the latest available relevant Gartner Magic Quadrant for Backup and Recovery Solutions.	Challengers/Re-use of existing Netvault License	5
		Others[Other Backup solution/appliance even outside the quadrant but meeting the Technical Requirements for the Solution] .	0
4a	Whether proposed top of rack switch is present in the latest available relevant Gartner's magic quadrant for ToR switch.	Leaders	5
		Challengers	3
		Others[Other ToR Switches even outside the quadrant but meeting the Technical Requirements for the Cloud Solution]	0
4b	Whether proposed 10G SFP switch is present in the latest available relevant Gartner's magic quadrant for 10G SFP switch.	Leaders	5
		Challengers	3
		Others[Other 10G SFP Switches even outside the quadrant but meeting the Technical Requirements for the Cloud Solution]	0
5	The proposed solution should be able to scale up by adding more capacity in terms of memory and disk, similarly the solution should be able to scale out by adding more nodes for increasing compute power and storage capacity.	Scale up and scale out capacity	10
		Scale up or scale out capacity	5
6	Ratings given by the reference companies, where proposed HCI/Virtualization/Integrated Systems/Cloud Solution was implemented successfully by the bidder/OEM. The references of only BFSI/Government departments/PSU companies/Corporates(Turnover > Rs 200 Cr) will be considered, where at least, three nodes are configured at two different sites working as DC-DR. There should be atleast 2 or more such references. The average of all references will be taken for consideration.	Very Good Rating	15
		Good Rating	10
		Average Rating	5

	For Corporates(TO > Rs 200 Cr) documentary evidence of Financials should be provided.		
7	Whether proposed Hyper converged infrastructure solution supports multiple hypervisors	If yes	5
8	Whether proposed solution is able to provide 1 lac IOPS with less than 10 millisecond latency, exclusively for application, over and above the system requirements.	If yes	5
9	Whether proposed solution is able to provide software defined network within ULIP cluster and virtual load balancer for application traffic.	If yes	5
10	Migration experience of virtual machines using HCI implemented at reference companies, where proposed HCI based virtualization solution was implemented successfully by the bidder/OEM, such virtualized setup needs to be currently being maintained by the bidder/OEM. The references of only [Government departments, BFSI sector and PSU companies, Corporates(Turnover > Rs 200 Cr)] in India will be considered, where at least, three nodes are configured at two different sites working as DC-DR. There should be at least 2 or more such references. The average of all references will be taken for consideration. For Corporates(TO > Rs 200 Cr) documentary evidence of Financials should be provided.	Migration experience of more than 100 virtual machines.	10
		Migration experience of more than 50 virtual machines.	5

IMP NOTE :

- The SLNO 6 and 10 is mandatory for all bidders and they have to comply with the requirement by way of Official Letter/Email from the Referenced Company which must mention the rating('Very Good'/'Good'/'Average') obtained by the bidder/OEM and the Migration experience(no of virtual machines). The ratings given by the companies whose Purchase Order References are shown by the bidder are also valid. Such ratings for all mentioned references must have been obtained within the last 3 years, ie, 2016-17, 2015-16, 2014-15.

- d) The top 5 bidders scoring at least 70 marks will be eligible for POC. However, if required, LIC may, at its sole discretion, relax this condition to ensure atleast 2 DISTINCT Solution Stacks(set of same components, ie, Virtualization Software, HCI, Backup Solution) are available for POC.
- e) All eligible and technically qualified bidders need to conduct POC at the LIC premises. In exceptional cases only, LIC may allow bidders to conduct the POC at bidder/OEM Lab or at a reference site where the proposed solution is already implemented successfully.
- f) POC shall be conducted for the eligible solution stacks as mentioned above and as per the POC criteria, but not limited to, the objectives mentioned in the table given below –

TABLE – POC Criteria

SLNO	POC Criterion to be demonstrated by the bidder	Pass / Fail
1	Setting up the three nodes of HCI as DC and three nodes as DR. In case of same premises, network bandwidth needs to be throttled to simulate the DC-DR setup	
2	Migration of sample ULIP server / similar configuration needs to be migrated from physical workload to virtual. Creation of web, app and database VM's similar to RFP requirement.	
3	Database consolidation test, where data from two different MySQL database VM's needs to be consolidated into single MySQL database VM.	
4	Deploy Test war on the new setup and show execution of enquiry option.	
5	Testing high availability of running database VM by removing power/network cable and demonstrate VM motion from one node to other without any data loss.	
6	Testing Disaster recovery management by stopping DC set of VM's and transferring user load from DC to DR set of VM's.	
7	Testing full database backup using D2D appliance and tape library.	
8	Demonstrate active monitoring of VM's by single management interface.	
9	Addition/deletion of CPU, memory and disk to running VM.	
10	Demonstrate patch deployment of web and app VM's without taking downtime.	

- g) **All the objectives mentioned above (but not limited to) should be successfully achieved and demonstrated before the Technical team from LIC to become eligible for Commercial Evaluation.**
- h) **All bidders quoting a particular Solution Stack whose POC has been declared successful by the Technical team from LIC, shall become eligible for Commercial Evaluation. In case, the POC of a particular Solution Stack is declared unsuccessful, all bidders quoting that Solution Stack shall be declared ineligible and shall not be allowed to participate in the next stage of Evaluation.**

- i) It is the responsibility of the bidder/OEM to ensure that the particular Solution Stack quoted by them works seamlessly in the LIC DC environment as per the requirements specified in the RFP document and is successfully integrated into the existing eco-system including, but not limited to, the network, security environment, various regulatory compliances, etc.

Notwithstanding the above, LIC's decision will be final and binding on the bidders.

3. Commercial Bid Evaluation: Commercial Bid Opening and ORA:

- a) The Commercial opening will be done for the bidders declared successful after the Technical Bid Evaluation and POC. The rules of the ORA will be shared with the eligible bidders subsequently after the opening of the Commercial Bid for the Online Reverse Auction process(TCO basis).

Technical

SL No.	Query Related to	Existing Specification	Suggestion for Modification	Corrigendum
1	Tech. Ann. Point-1	The bidder shall propose Plan & Design/ Architecture and Health check services from the OEM. In case the bidder has more than 1 year relationship with OEM, then bidder/OEM shall conduct a health-check of the deployed solution and submit a report indicating compliance to reference architecture and best practises, otherwise OEM to conduct the health check.	The Implementation should also be part of the OEM related services.	The bidder shall propose Plan, Design/Architecture, Implementation and Health check services from the OEM. In case the bidder has more than 1 year relationship with OEM, then bidder/OEM shall conduct a health-check of the deployed solution and submit a report indicating compliance to reference architecture and best practises, otherwise OEM to conduct the health check.
2	Tech. Ann. Point-3	The bidder shall propose software and hardware components from Leaders/Challengers quadrant in latest available report of Gartner 'Magic Quadrant'	In order to ensure that the bidder quotes the right products, we request you to amend this clause as : "The bidder shall propose software and hardware components from leaders/challengers quadrant in latest available report of Gartner Magic Quadrant for Modular Servers, Integrated Systems and Hypervisor/Virtualization"	The bidder shall propose software and hardware components from Leaders/Challengers quadrant in latest available report of Gartner 'Magic Quadrant', wherever mentioned, as on the date of bid submission. [The software component proposed should be of the highest edition]. *[Please see note below]
3	Tech. Ann. Point-15	The solution shall provide zero-downtime, zero-data loss continuous availability against physical host failures. This fault tolerance should be offered without any dependency on the guest operating system. The HCI solution should also store a redundant copy of the data which is accessible immediately by the Hypervisor and application.	"The solution shall provide zero-downtime, zero-data loss continuous availability against physical host failures. The fault tolerance can be offered with or without dependency on the guest operating system"	The solution shall provide zero-downtime, zero-data loss continuous availability against physical host failures. This fault tolerance should be offered without any dependency on the guest operating system. The HCI solution should also store a redundant copy of the data which is accessible immediately by the Hypervisor and application.[Alternative solution /mechanism meeting the Technical requirements for the Solution can be proposed with documentation.]

4	Tech. Ann. Point-17	The proposed solution should be able to inter-operate with other existing ecosystem in the data-center. The solution should also be able to integrate with existing storages via protocols like FC,NFS, iSCSI etc., if required.	HCI solutions at present do not support FC protocol.	The proposed solution should be able to inter-operate with other existing ecosystem in the data-center. The solution should have Interoperability with other systems. Proposed solution should be able to communicate with existing and future systems using any protocol supported by the communicating systems via protocols like FC,NFS, iSCSI etc., if required.[Alternative solution /mechanism meeting the Technical requirements for the Solution can be proposed with documentation.]
5	Tech. Ann. Point-27	The solution shall provide a software-defined and virtualized networking model that allows placement of virtual workloads on segments of networks that are isolated from each other without dependence on the underlying physical networking infrastructure configuration.	The LIC Network should be up from refresh in the coming months. The refresh will mostly be an SDN based architecture. The features mentioned here are SDN based features that will be available in the network refresh. Assuming that the private cloud project incorporates these features, LIC may end up with interoperability issues in the future or get locked in to a specific vendor. Hence we suggest removal of this feature as this will be included in upcoming network refresh.	The solution shall provide a software defined network within the cluster setup of this project.
6	Tech. Ann. Point-28	The solution shall provide a virtual switching fabric that allows simplified GUI based configuration of switching capabilities such as RSPAN, ERSPAN, IPFIX, SNMP v3 & QoS across the cluster with the ability to backup & restore network configurations.	The LIC Network should be up from refresh in the coming months. The refresh will mostly be an SDN based architecture. The features mentioned here are SDN based features that will be available in the network refresh. Assuming that the private cloud project incorporates these features, LIC may end up with interoperability issues in the future or get locked in to a specific vendor. Hence we suggest removal of this feature as this will be included in upcoming network	The solution shall provide a virtual switching fabric that allows simplified GUI based configuration of switching capabilities such as RSPAN, ERSPAN, IPFIX, SNMP v3 & QoS within the cluster with the ability to backup & restore network configurations.

			refresh.	
7	Tech. Ann. Point-37	The solution shall also support storage space efficiency features like de-duplication, compression and RAID 5/6 with erasure coding i.e. protection against single drive and simultaneous dual drive failure. [All overheads should be taken care of separately]	Erasure coding is a feature specific to certain OEMs.	The solution shall also support storage space efficiency features like de-duplication, compression and RAID 5/6 with erasure coding i.e. protection against single drive and simultaneous dual drive failure. [All overheads should be taken care of separately. Alternative solution /mechanism meeting the Technical requirements for the Solution can be proposed with documentation.]
8	Tech. Ann. Point-38	The solution shall be able to use hypervisor/ VM based replication to asynchronously replicate VMs across sites based on configurable schedules of RPO as less as 10 minutes.	RPO of 10 min will lead to major overheads in network and performance of the clusters. Requesting change to RPO of 15 min or lower."	The solution shall be able to use hypervisor/ VM based replication to asynchronously replicate VMs across sites based on configurable schedules of RPO 15 minutes or lower.
9	Tech. Ann. Point-46	Additional Spec. related to Backup Solution	For backup Solution, related specs to be considered.	Proposed Backup solution should be based on 'Disk-To-Disk-To-Tapes' Technology and the proposed backup software/appliance should be in the Leaders/Challengers quadrant in the latest available Gartner Magic Quadrant for Backup and Recovery Solutions.
10	Tech. Ann. Point-46	Additional Spec. related to Backup Solution	For backup Solution, related specs to be considered.	Backup Software must support GUI with centralized management / Single interface for management of all backup activities across the entire storage capacity supplied. The backup software must have firewall support
11	Tech. Ann. Point-46	Additional Spec. related to Backup Solution	For backup Solution, related specs to be considered.	Backup Software Must support de-duplication and based on policy backup software should be able to move data to a disk 10target and subsequently move it to a tape library automatically. Restoration of data should happen directly to

				the production server, without any intermediate destination.
12	Tech. Ann. Point-46	Additional Spec. related to Backup Solution	For backup Solution, related specs to be considered.	Backup software should be able to replicate Backup data to another site for compliance / Disaster Recovery purposes, with or without the need of external replication tools on Backup array. All necessary hardware and licenses for achieving consistent replication of backup data should be quoted.
13	Tech. Ann. Point-46	Additional Spec. related to Backup Solution	For backup Solution, related specs to be considered.	Backup software should be supplied with licenses based on the entire storage capacity supplied, irrespective of No. of backup clients, configuration of backup clients, Tape drives, Tape libraries, etc. Should be able to perform SAN based / LAN Based backups
14	Tech. Ann. Point-46	Additional Spec. related to Backup Solution	For backup Solution, related specs to be considered.	Backup software should be able to schedule backup and restoration operations on the same host or any other host.
15	Tech. Ann. Point-47	The proposed 16 port SFP switch must be placed in the leaders/challengers Quadrant of Gartners MQ for 10G SFP switches and certified to be compatible with the proposed HCI appliance.	No of Switch Ports shall depend upon the Proposed Solution.	The proposed SFP switch must be placed in the leaders/challengers Quadrant of Gartners MQ for 10G SFP switches and certified to be compatible with the proposed HCI appliance.
16	Tech. Ann. Point-49	LTO7 Drives(2 Full Height) with FC/SAS/10G Network Interface	The LTO 7 drives are available as half-height drives. Kindly allow us to propose the same.	LTO7 Drives(2 Full/Half Height) with FC/SAS/10G Network / any other futuristic Interface which is having compatibility with proposed system.

Commercial

SLNO	Query Related to	Existing Specification	Suggestion for Modification	Corrigendum
1	Commercial Annexure	Composite Hardware and Software Components Costs	Bifurcation of Hardware and Software Costs and Annual Technical Software(ATS) for Software.	Revised Commercial Annexure-II

Clarifications

SLNO	RFP Clause	Request to consider	Remarks
1	Disk to Disk Backup should complete within 4 Hrs.	1) Request you to clarify the retention period on Disk. (may be 1 month to 45 days as per the LIC policy) 2) We need to remove/modify the Disk to tape Backup complete within 4 Hrs. Instead It should be Disk to Disk to be completed in 4-6 Hrs 3) Back software and Disk appliance should support online backup of MS SQL/ MySQL/Postgre and Oracle database. (Since the majority database used by LIC is open source). If this is not included then the Backup software and appliance quoted by bidder won't be in sync with LIC's requirement.	1) The retention period is 35 days 2) Disk to Disk backup to be completed in 4 Hrs. 3) Backup solution should support online backup of MySQL database.
2	The bidder shall propose software and hardware components from leaders/challengers quadrant in latest available report of Gartner "Magic Quadrant"	The Gartners Magic Quadrant for Load Balancer is now defunct and the Gartners Buyers guide is more relevant in today's times. Request Bank to consider Gartner Buyers Guide for Load balancer	Relevant Gartner Quadrant/Document can be used.
3	The proposed solution should be based on virtualization of physical hardware and distribution of workload over different virtual machines. LIC should be able to use the core part of solution on any virtualization technology on suitable hardware, if required.	We need to get clarity on Suitable hardware means? Suitable hardware means - proposed HCI appliance? Kindly confirm.	This RFP clause is for ULIP business functionality which cannot depend upon a specific technology. At end of life of this project the solution must provide options to migrate to technologies available at that time. The proposed solution and all required licenses should be PERPETUAL in nature and should have NO dependency on underlying hardware.
4	The solution shall provide a data caching tier that supports SSD, PCIe, UltraDIMM or NVMe.	We need clarity on check if data caching tier is required separately.	Vendor can propose caching tier above full flash storage as a part of solution.
5	Proposed Backup solution should be based on 'Disk-To-Disk-To-Tapes' Technology and the proposed backup software/appliance should be in the Leaders/Challengers quadrant in the latest available Gartner Magic Quadrant	Our proposed HCI Solution has an inbuilt Disk-Disk backup mechanism and doesn't require a third-party disk-disk backup solution like the other vendors who don't have that functionality. So we will not be able to	Vendor can propose in built disk to disk backup mechanism provided it fulfills our RFP requirements [Alternative solution /mechanism meeting the Technical requirements for the Solution can be proposed with documentation].

	for Backup and Recovery Solutions.	propose a D2D backup appliance from Gartner leaders category. We will propose a dedicated HCI appliance as D2D target for the same. We are proposing the re-use of the NetVault backup software licenses already held by LIC to provide the tape backup component. Kindly allow us to quote the same and award us full 5 marks in the evaluation criteria for this point.	Marks shall be awarded as per the Technical Scoring Model Criteria.
6	The proposed centralized site should be able to process 10,000 transactions per second. The estimated storage IOPS(Input Output per Second) for this load is around 1,00,000 IOPS.	What are the total Transactions per second translate to in terms of application transactions for e.g. HTTP/HTTPS/Other Requests per second / SSL TPS etc.	The proposed centralized site should be able to process 10,000 transactions per second. The estimated storage IOPS (Input Output per Second) for this load is around 1,00,000 IOPS. LIC expects 1000 HTTP connections and/or 100 HTTPS connections.
7	The solution shall provide a data caching tier that supports SSD, PCIe, UltraDIMM or NVMe.	We need clarity on check if data caching tier is required separately	Vendor can propose caching tier above full flash storage.
8	The solution should propose migration strategy of existing data at 113 locations into the Primary Site/DR Site/Far DR site with zero downtime and disturbance at the servicing centres The existing data at 113 locations is consolidated and the proposed database architecture required at the 3 central sites is based on sharding. Kindly confirm the application infrastructure details of the existing sites and their compatibility to the sharding technique in a virtualized environment	Existing ULIP application is a part of eFeap Please re-consider as Migration activity involves downtime solution distributed over 113 sites without sharding. Proposed ULIP centralization is with sharding of MySQL database at application level with no dependency on third party software or hardware.	Consolidation of MySQL database and sharding is to be successfully done in LIC test environment.
9	Bidder/OEM must have implemented HCI/Integrated Systems/ Virtualization/ Enterprise Backup/Storage solution of OEM in India in at least 2 BFSI/PSU/Govt/	1.Govt Organizations need be exempted from Turnover criteria. 2. Kindly clarify that we can show credential of having	Turnover is only for Corporates, ie, (TO > 200 Cr.). Documentary Evidence of the Corporate having (TO > 200 Cr.) must be submitted for implementation references from

	Corporates (having Turnover worth over 500 Crores) worth total Rs 20 Cr in last 3 fin. Years i.e., 2016-17, 2015-16, 2014-2015(Multiple POs of > 50 lakhs can be clubbed).	deployed any OEM solution and not specific to proposed OEM solution. 3. Proposed OEM credentials will also be considered and not necessarily of the Bidder. 4. Most of the PO are in names of Si and not the OEM, in such case can OEM declaration on their letter head of having deployed similar Solution with Value be considered?	such Corporates. Declaration on the Letter Head not a valid PO detail. The bidder can submit the PO of proposed OEM.
10	Per Node/Server specifications - Minimum of 2 x 18/20/22 core CPUs of latest Intel Xeon Scalable Processor CPU[that suits the RFP requirements] Minimum of 512 GB RAM Minimum of 2*1 Gbps NICs Minimum of 2*10 Gbps SFP Ports	In the required HCI solution requirements, the network requirements are extremely critical. Upto 48TB of VM data needs to be synchronized across the HCI nodes to ensure data availability. Also access to the VM's and backup traffic would require dedicated network paths. It is recommended that we increase the number of 1G interfaces to 4 per node or host	This is minimum requirement, vendor can propose their solution.
11	The usable resource requirement (for Application) in each site, at least, 1) 456 physical cores,	As per the individual VM requirements of the DB VM's we would need a total of (21*16 cores) for primary DB VM's and (11*16 cores) for HA DB VM's along with 15*8 cores for App VM's. This is a Total of 632 cores that will be minimum required for the application.	This is minimum application requirement, vendor to calculate and propose their solution.
12	The solution shall provide a single web based management interface	We recommend that LIC require the bidders to provide dedicated servers to run the tools for centralized management of the virtualization environment at Dc and DR location as part of the solution.	Single web based management interface is the requirement, vendor can propose alternative mechanism in their proposed solution to meet the requirement.
13	the proposed backup solution ...	We recommend that LIC require the bidders to provide a dedicated server to run the backup software for this project which will be integrated with the proposed tape	Disk to disk to tape is the requirement, vendor can propose alternative mechanism in their proposed solution to meet

		library.	the requirement.
14	The solution should propose migration strategy of existing data at 113 locations into the Primary Site/DR Site/Far DR site with zero downtime and disturbance at the servicing centres. The existing data at 113 locations is consolidated and the proposed database architecture required at the 3 central sites is based on sharding. Kindly confirm the application infrastructure details of the existing sites and their compatibility to the sharding technique in a virtualized environment.	Query- Migration of SQL database from 113 data centers and merged into single MYSQL database. Its P2V migration or SQL database migrate to centralize SQL database. Please elaborate the same.	This is not P2V migration but consolidation of 113 distributed instances of MySQL database into single sharded MySQL database.
15	Backup appliance(if proposed) - Do bidder need to provide the backup software with Disk to disk to tape ? If yes , then what would be backup software capacity , backup and restoration window. - Vendor should propose disk to disk backup appliance using NetVault backup solution. The 12.5 TB of consolidated backup and transactions needs to be backed up as per the backup schedule given. The retention window should be of 35 days for disk to disk backup.	Kindly Confirm. 1. What will be size of logs & capacity to be considered on the disk. 2. Instead of NetVault , we are proposing Backup Software from "Gartner Leaders Magic Quadrant for DC Backup & Recovery, As we understand this is in compliance	1. After consolidation of 113 locations the centralized location is estimated to produce 25 GB logs per day. 2. Yes
16	Backup appliance(if proposed) - Request the Bank to clarify the license capacities of the backup software that needs to be provided for all environments across all the 3 sites (DC , NDR and DR) where the backup operations need to be performed? - Sufficient capacity is available for backup at near DR site.	Since we are not proposing NetVault backup as a Solution & proposing Backup Software from "Gartner Leaders Magic Quadrant for DC Backup & Recovery", Kindly confirm below , We understand No backup License is required at DC & DR. We need backup license at NDR only , kindly confirm	Backup is planned at DC and NDR only.
17	Backup appliance(if proposed) -	Kindly confirm if backup disk appliance should have capacity Database ie 12 TB + 30 TB for Archival Data ?	As per backup policy daily incremental, weekly full, monthly full and yearly full is also required. The retention window is

	1. How many number of servers to be backed up i.e. only HCI Infra or any other existing servers as well used in ULIP setup ? 2. Total size of data to be backed up ? 3. Number and type of Data Base and VM?- 1. Only database VM's inside HCI 2. Around 12 TB active DB as per regular backup policy and 30 TB archival data (full once and incremental forever) 3. five shards of active MySQL database VM and 5 transaction MySQL database VM and one archival MySQL database VM	In this case total capacity will be 42 TB of Backup Appliance.	35 days. Vendor needs to calculate as per RFP requirement.
18	Revised Technical-Annexure-I Backup is only 12 TB for which licenses are available. Latest NetVault version with sufficient capacity.	Since we are not proposing NetVault backup Solution & proposing Backup Software from "Gartner Leaders Magic Quadrant for DC Backup & Recovery", Please confirm if in this situation also , we need to provide backup licences for NDR only.	Yes. Licenses to be capacity based.
19	Whether proposed solution is able to provide software defined network and virtual load balancer for application traffic.	If we propose a Hardware load balancer will there be an impact on Technical Scoring?	Points are awarded on satisfying the required condition.
20	Request for Change in Eligibility/Commercial/Technical queries(not mentioned above)	Seeking relaxation on these queries.	No change.

EXECUTIVE DIRECTOR(IT/BPR)