

Date: 14/11/2017

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

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

Sr. No.	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	Page 23, G.2	The bidder should have minimum annual turnover of Rs. 150 Crores in the Financial Year 2016-17 and in at least one of the two previous Financial Years, namely 2015-16 & 2014-15.	The bidder should have minimum annual turnover of Rs. 200 Crores in the Financial Year 2016-17 and in at least one of the two previous Financial Years, namely 2015- 16 & 2014-15.	The bidder should have average turnover of Rs. 150 Crores in the last three Financial Years, i.e., 2016-17, 2015-16 & 2014-15.
2	Page 23, G6	Bidder must have implemented Hyper-Converged Infrastructure (HCI) solution of proposed OEM in at least 2 BFSI companies worth not less than Rs 50 Crores for supply of HCI/Integrated Systems in India in any of last three financial years (i.e., 2016-17, 2015-16, 2014-2015).	Bidder must have implemented Hyper-Converged Infrastructure (HCI) solution in at least 1 BFSI/PSU companies worth not less than Rs 50 Crores for supply of HCI/Integrated Systems in India in any of last three financial years (i.e., 2016-17, 2015-16, 2014-2015).	Bidder/OEM must have implemented HCI/Integrated Systems/ Virtualization/Enterprise Backup/Storage solution of OEM in India in at least 2 BFSI/PSU/Govt/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).
3	Page 31, Clause 9	Similarly, the spares for all the hardware provided under the scope of this RFP shall be available for a period of six years from the date of PO.	Kindly consider spares validity for 5 years.	Similarly, the spares for all the hardware provided under the scope of this RFP shall be available for a period of seven years from the date of installation of the Hardware.
4	Page 23,	The Bidder should be in a business of supply, delivery, installation, configuration and maintenance and support of Integrated Systems, Virtualization and Enterprise Storage	The Bidder should be in a business of supply, delivery, installation, configuration and maintenance and support of Integrated Systems,	The Bidder should be in a business of supply, delivery, installation, configuration and maintenance and support HCI/Integrated Systems/ Virtualization /Enterprise Backup/ Storage systems

	Point 4	systems and equipment in India for at least last 3 years (2016-17, 2015-16, 2014-2015).	Virtualization and Enterprise Storage systems and equipment in India for at least last one years(2016-17).	and equipment in India for at least last 3 years(2016-17, 2015-16, 2014-15).
5	Page 16-11d	The Bidder may quote one or more models of each line item.	Can we quote 2 models here.	The Bidder may quote one model of each line item.
5a	Page 34	Delivery and Installation Period	Increase the delivery and Installation timelines	No change in Timelines. @ 0.2% for delay up to 15 days and then @ 1.0%
6	Page 21 Point F	Whenever required, the Resident Engineer may have to visit the Near DR and Far DR sites for support and maintenance activities after the installation of the HCI setup is over(at all 3 sites).	As per RFP 'Location of Near DR, Far DR site shall be informed later by LIC'. To maintain the SLA Resident Engg. Can be planned but the distance between the site is an ambiguity. Request details of the same.	Whenever required, the Resident Engineer may have to visit the Near DR(Pune) and Far DR(Delhi) sites for support and maintenance activities after the installation of the HCI setup is over(at all 3 sites).
7	Page 23, Point 3	The bidder should have been making profit (after tax) during any two out of last three financial years i.e., 2016-17, 2015-16, 2014-2015 from supply of Integrated IT Solutions, Cloud based Solutions in India.	We do have Business -segment Profits but Overall company profits can be projected in P&L accounts. Request you to dilute the clause as: The bidder should have been making profit (after tax) during any two out of last three financial years i.e., 2016-17, 2015-16, 2014-2015 from IT/ITES in India.	The bidder should have been making profit (after tax) during any two out of last three financial years i.e., 2016-17, 2015-16, 2014-2015 from supply of IT/ITES projects in India.
8	Page 35	d) 30% of the payment will be made on delivery of the Hardware and submission of Invoice cum delivery Challan duly printed on the vendor's own letter head, which should contain description of hardware and machine serial numbers invariably and signed by LIC's officials with name, designation, date and stamp and Octroi receipt (if any) or the Delivery Report (DR) which is generated online from LIC's Module and Octroi receipt (if any). f) Balance 30% after six months after the date of issuance of certificate of successful commissioning and implementation of the project by LIC.	Kindly consider 80 % against delivery, 20 % against installation.	d) 50% of the payment will be made on delivery of the Hardware and submission of Invoice cum delivery Challan duly printed on the vendor's own letter head, which should contain description of hardware and machine serial numbers invariably and signed by LIC's officials with name, designation, date and stamp and Octroi receipt (if any) or the Delivery Report (DR) which is generated online from LIC's Module and Octroi receipt (if any). e) 30% payment will be made on installation. f) 10% payment will be made after Migration, Acceptance

				Test and Go Live (completion of entire scope of work activity to make the Infrastructure ready for use). The Installation Report (IR) will be generated online from LIC's Module at the location where hardware installation has been done and the installation details generated online will be available in the Payment Module of LIC which will be considered for release of installation payment on receipt of claim for Installation Payment, from the Vendor. g) Balance 10% after user approved issuance of certificate of successful commissioning and implementation of the project by LIC. h) The breakdown charges if any, during the warranty period of five years accumulated will be recovered from any amount payable to the Vendor or by invoking the Performance Bank Guarantee available with LIC.
9	Page 30 Clause 7 a	A Performance Bank Guarantee (as per Annexure VI-B) to the tune of 15 % of the Grand Total Cost, shall be submitted by the selected Vendor, as Performance Bank Guarantee (PBG) for the equipment(s) supplied/ Services offered against this RFP.	Kindly consider A Performance Bank Guarantee (as per Annexure VI-B) to the tune of 10 % of the Grand Total Cost, shall be submitted by the selected Vendor, as Performance Bank Guarantee (PBG) for the equipment(s) supplied/ Services offered against this RFP.	A Performance Bank Guarantee (as per Annexure VI-B) to the tune of 10% of the Grand Total Cost, shall be submitted by the selected Vendor, as Performance Bank Guarantee (PBG) for the equipment(s) supplied/ Services offered against this RFP.
10	Page 21 Point 3 c	Immediately thereafter the engineer will be called for an interview by LIC and if rejected, vendor will have to provide an alternate candidate within a period of 14 days. If the alternate candidate is not provided within 14 days a penalty of 5% per day of the L2 engineer's monthly rate approved by LIC will become applicable. If the second candidate also fails penalty @ 5% per day of the L2 engineer's monthly rate approved by LIC, will be recovered. The selected engineer has to report to the LIC Central Office, Mumbai within 2	Kindly consider penalty of 0.5% per week of the L2 engineer's monthly rate approved by LIC will become applicable. If the second candidate also fails penalty @ 0.5% per week of the L2 engineer's monthly rate.	Immediately thereafter the engineer will be called for an interview by LIC and if rejected, vendor will have to provide an alternate candidate within a period of 7 days . If the alternate candidate is not provided within 7 days a penalty of 2% per day of the L2 engineer's monthly rate approved by LIC will become applicable. If the second candidate also fails penalty @ 2% per day of the L2 engineer's monthly rate approved by LIC, will be recovered. The selected engineer has to report to the LIC Central Office, Mumbai

		weeks of being intimated of the selection.		within 1 week of being intimated of the selection.												
11	Page-40	Table 2 -@ 5% per day of the engineer's monthly rate approved by LIC	Penalty need to reduce from 5 to .5%	<table><tr><th colspan="3">Table-2: Penalties regarding onsite L2 engineers</th></tr><tr><th>Sl. No</th><th>Description of the item</th><th>Penalty applicable</th></tr><tr><td>1</td><td>If the candidate engineer called for interview is not found to be suitable, vendor will have to provide an alternate candidate within a period of 7 days. If not provided then penalty will be imposed till the candidate is provided. Additionally, if the second candidate is not found suitable, and fails then penalty will be imposed till the selection and deputation of the subsequent L2 engineer.</td><td>@ 2% per day of the engineer's monthly rate approved by LIC</td></tr><tr><td>2</td><td>The on-site Engineer should be present in LIC's premises as per the RFP conditions. In case of a person going on leave, suitable replacement shall be provided for that period. If not provided then, penalty will be imposed</td><td>@ 2% per day of the engineer's monthly rate approved by LIC</td></tr></table>	Table-2: Penalties regarding onsite L2 engineers			Sl. No	Description of the item	Penalty applicable	1	If the candidate engineer called for interview is not found to be suitable, vendor will have to provide an alternate candidate within a period of 7 days. If not provided then penalty will be imposed till the candidate is provided. Additionally, if the second candidate is not found suitable, and fails then penalty will be imposed till the selection and deputation of the subsequent L2 engineer.	@ 2% per day of the engineer's monthly rate approved by LIC	2	The on-site Engineer should be present in LIC's premises as per the RFP conditions. In case of a person going on leave, suitable replacement shall be provided for that period. If not provided then, penalty will be imposed	@ 2% per day of the engineer's monthly rate approved by LIC
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				3 If the on-site Engineer leaves before expiry of one year, penalty will be imposed(To be replaced by a suitable Engineer immediately not later than 7 days.) @5% of the L2 engineer's annual quotes approved by LIC in case of first incident(from the 8th day onwards). The penalty will be incremented @ 5% for each such repetition.
				4 In case the engineer is to be changed by the Vendor, minimum of one month (30 days) advance notice shall be given by the vendor to LIC. Additionally, an overlapping period of at least 21 days has to be there between the new and old engineer. If not done, penalty will be imposed. @ 2% per day of the engineer's monthly rate approved by LIC
12	Page-31	The rates approved by LIC will be valid up to 30/09/2018. The selected bidder(s) should ensure that the hardware items quoted will be available for supply for Purchase Orders issued up to 30/09/2018.	Request LIC to reduce the validity period to 60 days only as OEM provides such a long validity, this is OEM dependent clause on vendor	9. Approved Rates Under RFP: The rates approved by LIC will be valid up to 31/12/2018. The selected bidder(s) should ensure that the hardware items quoted will be available for supply for Purchase Orders issued up to 31/12/2018. 10. Repeat Orders: Beyond the validity period that is 31/12/2018 mentioned above, LIC reserves the right to place repeat orders for additional hardware and services on the same terms & conditions at prices which will be negotiable. Repeat Orders for Part-I items may be placed after the price validity period 31/12/2018.

13	Page-19 Clause-C.19.c	The Bidder who has been declared Eligible after the Eligibility Bid Evaluation and who on the basis of scoring at least 70% marks in the Technical Evaluation(as described in Clause H.1 and H.2 below), will be eligible for Commercial evaluation.		The Bidders who have been declared Eligible will proceed for Technical evaluation of bids as per clause H.1 and H.2(as per the technical scoring model tabulated below in the RFP and the subsequent corrigenda) . The bidder should enclose relevant documents as per the requirement of technical evaluation. The bidders getting 70% or more points shall be declared successful to be eligible for conducting POC. If less than 3 bidders score more than or equal to 70%, LIC may, at its sole discretion, relax the score to allow more participation of bidders in the next stage of Evaluation, ie, POC.						
14	Page-25	2. Criteria for Technical Evaluation – The Technically qualified bidders will be shortlisted for Commercial Evaluation as per the following process – <u>Scoring model for Technical Evaluation</u> <table><tr><th>Criterion</th><th>Criterion Description</th><th>Weight</th></tr><tr><td>Ability to Meet Requirements</td><td>1) Quality of technical solution(including assessment of sizing) and consulting services. 2) Ability to meet milestones and deadlines</td><td>30%</td></tr></table>	Criterion	Criterion Description	Weight	Ability to Meet Requirements	1) Quality of technical solution(including assessment of sizing) and consulting services. 2) Ability to meet milestones and deadlines	30%	Should be only quality of Technical Solution as sizing is already given.	2. Criteria for Technical Evaluation – a) The Technical evaluation of bids will be done as per clause H.1 and H.2(as per the technical scoring model tabulated below in the RFP and the subsequent corrigenda) . The bidder should enclose relevant documents as per the requirement of technical evaluation. The bidders getting 70% or more points shall be declared successful to be eligible for conducting POC. If less than 3 bidders score more than or equal to 70%, LIC may, at its sole discretion, relax the score to allow more participation of bidders in the next stage of Evaluation, ie, POC. <u>TABLE – Technical Scoring Model Criteria</u> <u>NOTE : Kindly see Table – Technical Scoring Model Criteria below</u> b) All eligible and technically qualified bidders(after clause H.1 and H.2.a) will be allowed to conduct POC at the LIC premises. The details such as installation guide, patches, and migration scripts will be informed to the eligible bidders at appropriate time before POC. There are ten objectives of the POC(tabulated below). All the objectives should be successfully achieved and
Criterion	Criterion Description	Weight								
Ability to Meet Requirements	1) Quality of technical solution(including assessment of sizing) and consulting services. 2) Ability to meet milestones and deadlines	30%								

	<table><tr><td>References and Experience</td><td>1) Quality of work and pertinent experience, past performance and firm's qualifications. 2) Proven success in</td><td>20%</td></tr><tr><td>Company Position in Industry</td><td>1) Position in marketplace, innovation and expertise, Product</td><td>10%</td></tr><tr><td>Understanding of Scope of Work of this requirement</td><td>1) POC of Solution and Presentation to be evaluated during Technical Evaluation</td><td>20%</td></tr><tr><td>Consolidation strategy</td><td>1) Strategy should include migration from existing data and staging into the consolidated database as part of the proposed Solution.(No</td><td>20%</td></tr></table> (The Bidders scoring 70% or more will qualify for Commercial Evaluation) 3. Commercial Bid Evaluation : Commercial Bid Opening and ORA: a) The Commercial opening will be done for the successful bidders after the Technical Bid Evaluation (H.1 and H.2 above). The Commercial bids will be opened and the quotes declared. However the rules of the ORA will be shared with	References and Experience	1) Quality of work and pertinent experience, past performance and firm's qualifications. 2) Proven success in	20%	Company Position in Industry	1) Position in marketplace, innovation and expertise, Product	10%	Understanding of Scope of Work of this requirement	1) POC of Solution and Presentation to be evaluated during Technical Evaluation	20%	Consolidation strategy	1) Strategy should include migration from existing data and staging into the consolidated database as part of the proposed Solution.(No	20%	Should be dropped as it is a part of scope of services.	demonstrated before the technical team from LIC to become eligible for Commercial Evaluation. TABLE – POC Criteria <table><tr><th>SLNO</th><th>POC Criterion to be demonstrated by the bidder</th><th>Pass / Fail</th></tr><tr><td>1</td><td>Setting up the three nodes of HCI as DC and three nodes as DR in same LIC premises. The network bandwidth needs to be throttled to simulate the DC-DR setup.</td><td></td></tr><tr><td>2</td><td>Migration of sample ULIP server physical workload to virtual. Creation of web, app and database VM's as per LIC requirement.</td><td></td></tr><tr><td>3</td><td>Database consolidation test, where data from two different MySQL database VM's needs to be consolidated into single MySQL database VM.</td><td></td></tr><tr><td>4</td><td>Deploy Test war on the new setup and show execution of enquiry option.</td><td></td></tr><tr><td>5</td><td>Testing high availability of running database VM by removing network cable, Demonstrate VM motion from one node to other without any data loss.</td><td></td></tr><tr><td>6</td><td>Testing Disaster recovery management by stopping DC set of VM's and transferring user load from DC to DR set of VM's.</td><td></td></tr><tr><td>7</td><td>Testing full database backup using D2D appliance and tape library.</td><td></td></tr><tr><td>8</td><td>Demonstrate active monitoring of VM's by single management interface.</td><td></td></tr></table>	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 same LIC premises. The network bandwidth needs to be throttled to simulate the DC-DR setup.		2	Migration of sample ULIP server physical workload to virtual. Creation of web, app and database VM's as per LIC 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 network cable, 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.	
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TABLE – Technical Scoring Model Criteria

SLNO	Criterion	Points	
		Item	Value
1	Whether proposed hypervisor is present in the Leader/ Challenger/Visionary quadrant of latest available Gartner's magic quadrant for x86 Server Virtualization Infrastructure.	Leader	10
		Challenger	8
		Visionary	6
2	Whether proposed Hyper converged infrastructure solution is present in the Leader/ Challenger quadrant of latest available Gartner's magic quadrant for Integrated Systems.	Leader	10
		Challenger	5
3	Whether proposed Hyper converged infrastructure solution supports multiple hypervisors.	If yes	5
4	Whether proposed de-duplication and disk to disk backup hardware/software solution is present in the Leader/ Challenger quadrant of latest and respective Gartner magic quadrant. In case bidder is	Leader(backup hardware)	5
		Challenger(backup hardware)	3

	quoting Netvault backup solution, only hardware part of the solution should be present in the Leader/ Challenger quadrant of latest and respective Gartner magic quadrant.(The bidder proposing Netvault backup solution will get 5 points for backup software)	Leader(backup software)	5
		Challenger(backup software)	3
5	Whether proposed tape library is present in latest and respective Gartner's magic quadrant for tape library.	Leader	5
		Challenger	3
6	Whether proposed top of rack switch and 16 port 10G SFP switch is present in the latest and respective Gartner's magic quadrant for ToR switch and 10G SFP switch.	Leader(TOR switch)	5
		Challenger(TOR switch)	3
		Leader(10g SFP switch)	5
		Challenger(10g SFP switch)	3
7	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
8	Ratings given by the reference companies, where similar HCI based virtualization was implemented successfully by the bidder, such virtualized setup needs to be currently being maintained by the bidder. The references of only Government departments and PSU companies will be considered, where at least, three nodes are configured at two different sites working as DC-DR. There should be at least three such references. The average of all the three references will be taken for consideration.	Very Good Rating	15
		Good Rating	10
		Average Rating	5
		Below Average Rating	-10
9	What is the data migration experience of the bidder from physical system to virtualized system hosted on HCI platform? The bidder should give top three references in terms of data volume migrated to HCI system. References from only Government departments and PSU companies will be considered having data volume more than 20 GB.	migrated data volume > 100 GB	10
		migrated data volume > 50 GB	5
		migrated data volume > 20 GB	3
10	Whether proposed solution is able to provide de-duplication and compression features to enhance the available disk space by more than 2X capacity.	If yes	5
11	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
12	Whether proposed solution is able to provide software defined network and virtual load balancer for application traffic.	If yes	5

Technical

SL No.	Query Related to	Existing Specification	Suggestion for Modification	Corrigendum
1	Page 20 Clause E ii e	Backup of 12.5 TB sharded database should happen as daily incremental and full backup on weekend, month end and year end. The backup strategy should be disk to disk to tape.	Is there any time window required for taking backup?	Backup of 12.5 TB sharded database should happen as daily incremental and full backup on weekend, month end and year end. The backup strategy should be disk to disk to tape. D2D should not disturb the application uptime. Disk to tape should be less than 4 hours.
2	Technical Annexure I SI no 6	The usable resource requirement (for Application) in each site, at least, 1) 456 physical cores, 2) 2 TB RAM, 3) 96 TB Usable Space with Hybrid (SSD plus SATA ; 50:50 ratio) storage (Enterprise Class) , 4) Additional 15 TB Usable Space at Near DR Site for Disk-To-Disk Backup, 5) Minimum IOPS required for Application is 1,00,000 (expected Read Write Ratio of 60:40) 6) Total 36 VMs, i) 15 Java VMs having 8 Cores, 16GB RAM, 50 GB Storage (without High Availability(HA)) ii) 21 Database VMs with 16 Cores, 64 GB RAM, 100 GB (out of which 11 VMs with HA)	1) The Database VM size is mentioned here as 100GB. Whereas in the RFP scope it is mentioned that each shard will be 2.5TB in size. Kindly clarify, since in HCI the DB will run within the VM 2) Kindly explain the split of the database VM's. Our understanding as per RFP there are 5 shards primary, 5 shards HA and the other 11 are read only/archival servers. Can you provide a detailed count of the different DB VM's and their HA requirements. 3) True enterprise class storage would entail use of 15k RPM/10K RPM SAS or SSD disks for production data storage. 7.2K RPM NL-SAS and SATA are best used in Archival and Long term storage use cases. We request that for such a critical application with high performance requirements, LIC should request for 100% SSD based storage solution.	The usable resource requirement(for Application, in addition to management overheads) in each site, 1) 456 physical cores, 2) 2 TB RAM, 3) 48 TB raw full flash SSD storage(Vendor to ensure at least 50 % savings in storage space using de-duplication and compression.) 4) 100 GB space for installation of a MySQL database instance, actual database storage will be from SSD disk pool, vendor can propose suitable solution. 5) 5 DB VM for primary, 5 DB VM for read only , 5 DB VM for MIS , 5 DB VM for transaction writer and one DB VM for archival. HA is required for 5 primary + 5 transaction writer and one archival VM = total 11 DB VM with HA. 3) 12.5 TB of primary database with HA and transaction database will reside in full flash SSD storage pool. 48 TB raw full flash SSD storage is required. Vendor to ensure at least 50 % savings in storage space using de-duplication and compression. This will be used for future requirements.
3	Technical Annexure I SI no 18	The proposed solution should be able to inter-operate with other existing ecosystem in the data-center (for eg. It should be able to inter-operate with traditional FC storage on other clusters so	HCI solutions by design don't connect to FC based storage. Kindly clarify this requirements.	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.

		that the platform is not locked down and siloed into only HCI technology moving forward).		
4	Technical Annexure I SI no 23	The solution shall provide the ability to boot the hosts from iSCSI, FCoE, Fibre Channel SAN, locally attached USB storage and network PXE boot.	We believe that the reference here is to the hypervisor component of the HCI solution. Since the HCI solutions don't support FC based access.	Clause removed.
5	Technical Annexure I SI no 39	The solution shall provide the ability to scale-up (by adding more disks to existing nodes) and scale-out (by adding more nodes to the cluster).	Every HCI solutions have different scalability designs based on data protection techniques they employ. Our solution can be scaled using a scale-out approach, by adding more nodes into the cluster. Since we employ RAID +RAIN based data protection we don't support the addition of disks into existing nodes. We request that LIC allow scale-out or scale-up as scalability mechanisms. Kindly provide estimated details of scalability required by LIC. Also based on our compression and de-duplication ratios we do not see the customer running out of storage but only of RAM and CPU. Hence scale-out becomes the preferred option.	The solution shall provide the ability to scale-up (by adding more disks to existing nodes) or scale-out (by adding more nodes to the cluster). The solution shall also support compute only nodes in case only compute resources need augmentation.
6	Technical Annexure I SI no 44	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 5 minutes.	Increase the RPO schedule requirements to 10 minutes. We also request LIC to clarify on the bandwidth available for the replication requirements of this project. We request LIC to ensure that the replication mechanism supports simultaneous bi-directional replication and is optimized without additional overheads (for e.g. de-duplicated and compressed data need not be rehydrated before transfer to the other locations.	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.
7	Technical Annexure I SI no 55	LTO7 FC Drives: 2 Full height Drives	LTO-7 drives are available in half-height configuration. Kindly allow the bidder to quote for the same. Kindly also clarify if the customer needs to provide the backup server for backing up this workload.	LTO7 Drives(2 Full Height) with FC/SAS/10G Network Interface

8	Technical Annexure I SI no 4	The proposed Hyper converged Infrastructure (HCI) hardware should be placed in the Leader's Quadrant in the latest available Gartner Magic Quadrant for Modular Servers	HCI appliances are governed by the Gartner's MQ for Integrated systems 2016. An HCI appliance is differs from the stand alone server in respect of it being a tightly integrated software and hardware module to enable the customer with seamless experience. Gartner itself rates these appliances in a different MQ than server MQ. Most vendors have specialized hardware series for HCI such as Dell XC, Nutanix NX, Dell VxRail, Lenovo HX. The proposed HCI appliance must be placed in the leaders Quadrant of Gartner's MQ for integrated Systems 2016 or latest.	The proposed Hyper converged Infrastructure (HCI) Solution should be placed in the Leaders/Challengers Quadrant in the latest available Gartner Magic Quadrant for Integrated Systems .
9	Technical Annexure I SI no 8	Each Node should support and be certified to host hypervisors that are part of the Leader/Challenger Quadrant in Gartner's Magic Quadrant for x86 Server Virtualization Infrastructure	Gartner has retired Magic Quadrant for hypervisors. https://www.gartner.com/doc/3642418/gartner-retires-magic-quadrant-x Server virtualization infrastructure market is now considered mature. The proposed virtualization software shall be in Leader/Challenger Quadrant of latest Gartner Magic Quadrant for x86 Server Virtualization Infrastructure. Alternatively SI's are free to propose open-source or Linux based hypervisors by guaranteeing the stated solution uptime and support services. The proposed hypervisor should be of the highest edition available to ensure LIC enjoys all the features.	Each Node should support and be certified to host hypervisors that are part of the Leader/Challenger/ Visionary Quadrant in Gartner's Magic Quadrant for x86 Server Virtualization Infrastructure. The proposed hypervisor should be of the highest edition available.
10	Technical Annexure I SI no 29	The solution shall provide unstructured data (logs) collection from various data center ecosystem components	Since HCI is an integrated solution with compute, storage and virtualization, all logs are centralized. What use cases does LIC need a dedicated log collection tool across data center. Request LIC to state the total requirement of logging as it is a very large application area. Also LIC would/should have a separate log analysis tool such as SPLUNK or others which will cover not just ULIP but other application and infrastructure areas like EFEAP,	The solution should provide a log analytical tool which will show all the logs available in one single management window to make troubleshooting easier.

			PORTAL etc. These specs seem to be specific to only one particular vendor with virtualization and limited logging solution built in. Request LIC to make this requirement optional.	
11	Technical Annexure I SI no 34	The proposed hyper-converged infrastructure software shall either be in leader/challenger quadrant or it should be compatible to work with leader/challenger of Gartner's Magic Quadrant for Integrated Systems	HCI appliances are rated in the Gartner's MQ for Integrated systems. All the leading vendors are already part of the MQ. This MQ not only covers the SDS software but also rates others aspects of a HCI appliance as single management capability, Hypervisor support maturity, market adoption and customer rating etc. Request LIC to update the spec with below - The proposed HCI appliance must be placed in the leaders Quadrant of Gartner's MQ for integrated Systems 2016 or latest.	Clause Removed.
12	Technical Annexure I SI no 41	The solution shall provide distributed RAID and cache mirroring for intelligent placement of VM objects across disks, hosts and server racks for enhanced application availability. Zero data loss with near zero downtime in case of disk, host, network, rack and near-site failure should be a design consideration.	The specification is tuned to a the architecture of a specific OEM. Different OEM's have different architecture to provide HA and resiliency to storage. Nutanix uses Software RAID compared to traditional hardware based RAID to provide Zero data loss with near zero downtime in case of disk, host, network, rack and near-site failure should be a design consideration. Additionally each component should be redundant. Ex even if 1 SSD fails in a node, the node should not go down. The proposed solution should have a design consideration for Zero data loss with near zero downtime in case of disk, host, network, rack and near-site failure. Each component proposed including SSD, HDD should be in HA mode	The solution design should have features like zero data loss and near zero downtime in case of disk, host, network and near-site failure.
13	Technical Annexure I SI no 53	Switch with 16 SFP ports of 10 G Make: OEM/ Brocade/ CISCO/ Qlogic	Request LIC to allow bidders to choose the make and model of the Switch. There are many OEM's	Switch with 16 SFP ports of 10 G Make: OEM/ Brocade/ CISCO/ Qlogic [The proposed 16 port SFP switch must be placed in the

			like Dell, HP, Mellanox who have multiple installations of HCI in the market today	Leaders/Challengers Quadrant of Gartner's MQ for 10G SFP switches and certified to be compatible with the proposed HCI appliance.]
14	Technical Annexure I SI no 54	L3 Network Switch with 24 ports enabled Make: OEM/ Brocade/ CISCO/ Qlogic	Request LIC to allow bidders to choose the make and model of the Switch. There are many OEM's like Dell, HP, Mellanox who have multiple installations of HCI in the market today	L3 Network Switch with 24 ports enabled Make: OEM/ Brocade/ CISCO/ Qlogic [The proposed L3 network switch must be placed in the leaders/challengers Quadrant of Gartner's MQ for L3 switches and certified to be compatible with the proposed HCI appliance.]
15	Technical Annexure I SI no 37	The solution shall provide a data caching tier that supports SSD, PCIe, UltraDIMM & NVMe.	This should be changed to supporting data caching tier SSD, PCIE NVMe OR UltraDIMM.	The solution shall provide a data caching tier that supports SSD, PCIe, UltraDIMM or NVMe.
16	Technical Annexure I SI no 1	The bidder shall propose Plan & Design/Architecture and Health check services from the OEM. The OEM shall conduct a health-check of the deployed solution and submit a report indicating compliance to reference architecture and best practises.	We request you to amend the clause as : "The bidder shall propose Plan & Design/Architecture and Health check services. The bidder/OEM shall conduct a health-check of the deployed solution and submit a report indicating compliance to reference architecture and best practises."	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.
17	Technical Annexure I SI no 44	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 5 minutes.	Most of the industry storage based asynchronous replication is based on minimum RPO = 15 minutes. There will be significant impact on HCI performance with RPO as low as 5min in async replication as, many databases and application are put on degraded/backup mode for data consistency. Recommended is min 15 min RPO for async replication.	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.
18	Technical Annexure I SI no 3	The bidder shall propose software and hardware components from leaders quadrant in latest report of Gartner 'Magic Quadrant'	Gartner has retired the Magic Quadrant for Modular servers, our submission is that the turn-key appliance quoted should be part of the hardware compatibility list of the software defined storage matrix.	The bidder shall propose software and hardware components from Leaders/Challengers quadrant in latest available report of Gartner 'Magic Quadrant' (wherever mentioned) .
19	Technical-Annexure-I - Functional Specifications SI no 5	Per Node/Server specifications – Minimum of 2 x 18/20/22 core CPUs of Intel E5-26XX V4 family	The E5-26xx v4 Broadwell CPU is an older generation CPU from Intel. Request to modify this to the latest generation Intel Xeon Scalable Platform CPU.	Per Node/Server specifications – Minimum of 2 x 18/20/22 core CPUs of latest Intel Xeon Scalable Platform CPU [that suits the RFP requirements]

20	Clause - D / Scope of Work / Page- 19	The primary site will be in Vile Parle DC. Location of Near DR, Far DR site shall be informed later by LIC. The successful bidder's engineers/officials may have to visit data centers of all the above 3 sites, as and when required.	Can you confirm location for NDR & FDR and also confirm the bandwidth availability between all three sites.	The primary site will be in Vile Parle DC. Near DR (Pune) , Far DR site(New Delhi). [Dedicated 50 Mbps MPLS NW bandwidth is planned between these 3 sites] The successful bidder's engineers/officials may have to visit data centers of all the above 3 sites, as and when required.
21	Functional Spec – SI no 9	The proposed solution should be based on virtualization of physical hardware and distribution of workload over different virtual machines. The solution should not insist on specific type of hardware or hypervisor and, if required, LIC should be able to use the core part of solution on any virtualization technology on suitable hardware.		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 .

EXECUTIVE DIRECTOR (IT/BPR)