



Department of Information Technology

Request for Proposal (RFP)

For

Supply, Installation and Maintenance of Hardware, Operating Systems and Database Licenses for various Projects/Applications

RFP Ref. No DIT/BPR & BTD/OA/1835/2020-21 Date-06/10/2020

Pre-Bid Responses/ Clarifications to Queries raised by the Bidder(s) Amendments, Addendums and Corrigendums

Sl. No.	RFP Page No.	RFP Clause No.	Original RFP Clause	Query Sought/Suggestions of the Bidder	Bank's Response
1.	8	Bid Control Sheet	Last Date and Time for receipts of tender bids	Would request at least Ten Days time after release of corrigendum if any	<b>Extended Till 12.11.2020.</b>
2.	10	Eligibility Criteria	Inclusion Request	Inclusion Request: Server OEM Should be present in top 3 list of Last Published Gartner's Magic Quadrant for Server OEM. Justification: This request is to ensure OEMs are not able to bid and the competition is between Standard OEMs operating in the market.	<b>Clause Stands as per RFP.</b>
3.	11	Eligibility Criteria Point no. 5	The bidder should have supplied, installed, commissioned and maintained at least 10 Rack mounted servers and SAN Storage in one Public Sector Undertaking/Bank (not necessarily in a single order but in the same PSU/Bank) in India in last three financial years.	The bidder should have supplied, installed, commissioned and maintained at least 10 Rack mounted servers and SAN Storage in one Public Sector Undertaking/Bank/Govt. (not necessarily in a single order but in the same PSU/Bank/Govt) in India in last three financial year.	<b>Please Refer to Corrigendum.</b>

4.	11	Eligibility Criteria Point no. 5	The bidder should have supplied, installed, commissioned and maintained at least 10 Rack mounted servers and SAN Storage in one Public Sector Undertaking/Bank (not necessarily in a single order but in the same PSU/Bank) in India in last three financial year.	Requesting Bank to Kindly amend the clause as follows: The bidder should have supplied, installed, commissioned and maintained at least 10 Rack mounted servers / Blade Servers and SAN Storage in one Public Sector Undertaking/Bank (not necessarily in a single order but in the same PSU/Bank) in India in last three financial year.	<b>Please Refer to Corrigendum.</b>
5.	11	Eligibility Criteria Point no. 6	Similar product offered, by the bidder, of OEMs should be installed and run in at least one PSU in India for at least One year.	Request you to please accept any reputed organization order (large Corporate) for similar product offered by the bidder. Please amend this clause as per below: Similar product offered, by the bidder, of OEMs should be installed and run in at least one PSU/any reputed organization in India for at least One year.  Similar product of OEMs should be installed and run in at least one PSU in India for at least One year. AND Bidder should have installed and supporting similar Rack servers in least one PSU in India for at least One year not specific to the proposed OEM.	<b>Clause Stands as per RFP.</b>
6.	11	Eligibility Criteria Point no. 7	The bidder should be a Certified Gold / Platinum /Partner of Microsoft.	Requesting bank to consider, bidder should be a registered Partner of Microsoft considering Microsoft is having small component in proportion to the entire bid	<b>Clause Stands as per RFP. The bidder should be a Certified Gold / Platinum Partner of Microsoft.</b>
7.	32	Part IV, Scope of Work b	b) Re-installation of OS and Database Licenses will be done by the bidder whenever required without any extra cost to Bank.	As it is required 24x24x7 service availability? In how many location onsite support engineer is required?	<b>The Clause is Self-Explanatory.</b>
8.	32	Part IV, Scope of Work a	a) The bidder should supply, install, commission and maintain the hardware, Software and Licenses mentioned below.	Need to check with OEM for onsite Firmware update	<b>Clause Stands as per RFP.</b>

9.	32	Part IV, a	a) The bidder should supply, install, commission and maintain the hardware, Software and Licenses mentioned below.	Is there any OS cluster need to create? Or simple vanilla installation with DB is required?	<b>OS Clustering will be required.</b>
10.	32	Part IV, I,6	Enhancing storage space to accommodate additional requirement	Need to know whether it is asking to upgrade the existing storage? If so , then it is blocked by existing OEM. Is it possible to quote for any other OEM with new SAN storage & mount the volume through SAN switch? if not then request to remove the clause.	<b>Clause modified as under: New Storage is required in the RFP.</b>
11.				Do you require new storage as in the RFP Technical Specification of storage is also given or you have any existing storage for enhancement - Please calrify.	
12.	33	Part-V 4. Warranty/ AMC & ATS	i. During the warranty period, the vendor will have to undertake comprehensive maintenance of the entire hardware, hardware components, system software and accessories supplied by the vendor. OS patch application as required by bank from time to time will be the responsibility of the vendor during the warranty and AMC period.	Please clarify the requirement of OS patch application, do bidder needs to provide any OS patch management solution or does the Bank's have existing OS patch management solution which can be utilized for OS patch management of proposed servers during warranty and AMC period.	<b>At present, Bank is not using OS patch management solution. The bidder needs to deploy OS patches twice annually.</b>
13.	34	Part V, 4	Warranty shall not become void even if UCO Bank buys any other supplemental hardware from a third party installs it with / in these machines. However, the warranty will not be applied to such hardware installed. Besides the above, the vendor will have to enter into Service Level Agreement (SLA) with the Bank	How third party H/W without warranty can be included in to the SLA?	<b>The selected bidder needs to enter into SLA covering the hardware supplied by the selected bidder as part of this RFP.</b>

14.	34	Part V 5. Payment Terms	<p>50% of the order value along with applicable taxes on actual basis will be paid on successful delivery. 40% of the order value along with applicable taxes on actual basis will be paid on successful user acceptance after delivery, installation of the ordered items, after realizing penalty charges for late delivery and / or late installation, if any. The claim of payment should contain proof of delivery, installation note and User Acceptance Report signed with date by an authorized official of UCO Bank at the respective sites, waybill etc. Remaining 10% of the cost along with applicable taxes would be paid after <b>one year</b> from Go-live and successful operation. However, payment may also be released before one year period on submission of an additional Bank Guarantee of equal amount having the validity of 1 year.</p> <p>AMC for Hardware shall be paid in quarterly arrear basis.</p> <p>ATS on software item shall be paid in yearly in advance basis.</p>	<p>Request you to modify the same as follows: 70% of the order value along with applicable taxes on actual basis will be paid on successful delivery. 30% of the order value along with applicable taxes on actual basis will be paid on successful user acceptance after delivery, installation of the ordered items, after realizing penalty charges for late delivery and / or late installation, if any. The claim of payment should contain proof of delivery, installation note and User Acceptance Report signed with date by an authorized official of UCO Bank at the respective sites, waybill etc. AMC for Hardware shall be paid in yearly in advance basis.</p> <p>ATS on software item shall be paid in yearly in advance basis.</p>	<p><b><u>Clause Modified as under</u></b>  <b>50% of the order value along with applicable taxes on actual basis will be paid on successful delivery.</b></p> <p><b>40% of the order value along with applicable taxes on actual basis will be paid on successful user acceptance after delivery, installation of the ordered items, after realizing penalty charges for late delivery and / or late installation, if any. The claim of payment should contain proof of delivery, installation note and User Acceptance Report signed with date by an authorized official of UCO Bank at the respective sites, waybill etc.</b></p> <p><b>Remaining 10% of the cost along with applicable taxes would be paid after three months from Go-live and successful operation.</b></p> <p><b>AMC for Hardware shall be paid in quarterly arrear basis.</b></p> <p><b>ATS on software item shall be paid in yearly in advance basis.</b></p>
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15.	34	Part V, 5. Payment Terms	<p>50% of the order value along with applicable taxes on actual basis will be paid on successful delivery. 40% of the order value along with applicable taxes on actual basis will be paid on successful user acceptance after delivery, installation of the ordered items, after realizing penalty charges for late delivery and / or late installation, if any. The claim of payment should contain proof of delivery, installation note and User Acceptance Report signed with date by an authorized official of UCO Bank at the respective sites, waybill etc. Remaining 10% of the cost along with applicable taxes would be paid after one year from Go-live and successful operation. However, payment may also be released before one year period on submission of an additional Bank Guarantee of equal amount having the validity of 1 year. AMC for Hardware shall be paid in quarterly arrear basis.</p> <p>ATS on software item shall be paid in yearly in advance basis.</p>	<p>Requesting Bank to Relax the Payment Terms as follows: 80% of the order value along with applicable taxes on actual basis will be paid on successful delivery. 15% of the order value along with applicable taxes on actual basis will be paid on successful user acceptance after delivery, installation of the ordered items, after realizing penalty charges for late delivery and / or late installation, if any. The claim of payment should contain proof of delivery, installation note and User Acceptance Report signed with date by an authorized official of UCO Bank at the respective sites, waybill etc. Remaining 5% of the cost along with applicable taxes would be paid after one year from Go-live and successful operation. However, payment may also be released before one year period on submission of an additional Bank Guarantee of equal amount having the validity of 1 year. AMC for Hardware shall be paid in quarterly in advance basis. ATS on software item shall be paid in yearly in advance basis.</p> <p>70% of the payment against successful delivery 20% payment against successful installation We would request bank to release remaining 10% on completion of installation itself and not ask for additional BG since successfull bidder is already submitting 10% PBG for the project value + 3months.</p> <p>AMC of Hardware with OEM is paid at the beginning of the AMC and is on yearly basis hence would request you to make the AMC Payment yearly at the start of AMC Period</p>	<b>Please Refer to Sl. No.14</b>
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16.	35	Part V, 6	The Bidder shall have to enter into "Service Levels Agreement" with Bank covering all terms and conditions of this tender while providing the service support and onsite support. Once go live of application, the services should be available on 365X24x7 basis and hence any technical problem should be resolved as per the response Time Matrix given below.	As it is required 365x24x7 service availability, how many location onsite support engineer is required?	<b>Clause is Clarified as Under: No onsite support engineer is required.</b>
17.	35	Part V, 6	Bidder is expected to response and resolve issue within prescribed time frame based on the severity description decided by bank mentioned above and needs to strictly adhere to Server Level Agreement (SLA).	In case of H/W failure also the same SLA is applicable? As H/W replacement takes time due to availability.	<b>Please Refer to the Corrigendum.</b>
18.	35	Part V, 6	Severity 1 - If the call is pertaining to production and there is complete disruption of services resulting in non-functioning of business/ application operations. The operation is mission critical due to major disruption of business continuity. Resolution Time - Within 2 Hrs of call reported	Please clarify, production disruption of services resulting in non-functioning of business/ application operations pertaining to supplied software for this tender only, resolution time is within 2 hrs. of call reported. For Hardware (spare replacement) 6 hr. CTR from OEM needs to be maintain.	<b>Please Refer to the Corrigendum.</b>
19.	36	Part V, 6	The bidder shall guarantee 99.98% uptime. The Bidder shall be liable for penalties for uptime maintained below 99.98% in a month.	Uptime is not mentioned clearly, whether it is entire infra uptime, DB level up time or end user connectivity level uptime?	<b>Uptime of Individual items supplied under this RFP shall be calculated individually.</b>
20.	36	Part V, 7	Notwithstanding Bank's right to cancel the order, liquidated damages at 1% (One percent) of the undelivered portion of the order value per week will be charged for every week's delay in the specified delivery schedule subject to a maximum of 10% of the total cost of ownership.	Request you to modify this as: Notwithstanding Bank's right to cancel the order, liquidated damages at 0.5% (One percent) of the undelivered portion of the order value per week will be charged for every week's delay in the specified delivery schedule subject to a maximum of 5% of the total cost of ownership.	<b>Clause Stands as per RFP.</b>

21.	37	Price Validity	The selected bidder will be required to keep the price valid for a period of 18 months) from the date of technical bid opening. There shall be no increase in price for any reason whatsoever during the period of 18 months and Bank may place the additional Purchase Orders to the selected bidder for any or all of the services at the agreed unit rate for line items as mentioned in the commercial format i.e. Annexure – E during the price validity period of 18 months.	Keeping the commercial valid for 18 Months will be difficult as the price depends on the US Dollar fluctuation. Will request you to consider the US Dollar fluctuation	<b>Clause Modified as under.</b> The selected bidder will be required to keep the price valid for a period of 12 months from the date of technical bid opening. There shall be no increase in price for any reason whatsoever during the period of 12 months and Bank may place the additional Purchase Orders to the selected bidder for any or all of the services at the agreed unit rate for line items as mentioned in the commercial format i.e. Annexure – E during the price validity period of 12 months.
22.	50	Part V, 34	UCO Bank reserves its right to carry out a technical inspection and performance evaluation (benchmarking) of the offered item(s). Bank may instruct eligible bidders to make technical presentation at Bank's Head Office, Kolkata for the proposed solution / service. Bidders will have to make such presentation at their own cost.	What sort of performance bench mark bank wants to carry out?	<b>The details of Such technical inspection and performance evaluation will be shared in advance, prior to the activity.</b>
23.	59	Annexure – D Technical Specifications	RHEL 7.5 or above (for physical server 2 socket) - Server Type II. No of Servers - 3	As per Specification for Rack Server-Type-II (ANNEXURE –II , page 62) the CPU ask has been for "Minimum Single Intel Xeon Octa Core CPU @ Minimum 3.0 GHz or higher". Accordingly Bidder's are free to provide Single socket servers. Requesting your clarification on RHEL licenses, should bidder propose licenses accordance to proposed socket availability on servers (for 3 physical server , Type II)	<b>The Bidder needs to propose the quantity of RHEL licenses based on the servers proposed by them.</b>

24.	59	Annexure–D Technical Specifications	MS SQL Server 2016 Standard Edition (Downgradable to 2012)	MS SQL Server 2016 Standard is no more available, now MS SQL 2019 Std is available which can be downgraded to MS SQL Std 2016 hence would request you to amend the clause as " MS SQL Server 2019 Standard or Higher version downgrde to n-2 version"	<b>Clause Stands modified as under: MS SQL Server 2019 Standard Edition version downgradable to 2012</b>
25.	60,62, 64 & 66	Annexure I,II,III,IV Point No.3	<b>Form Factor</b> Maximum 4U Rack form factor with sliding rails to fit into industry standard 19" Server Rack	Maximum 2U Rack form factor Nowadays, 2P servers come in 1U/2U Form factor	<b>Clause Stands as per RFP.</b>
26.	60,62, 64 & 66	Annexure I,II,III,IV Point No.10 Cache	Minimum 24 MB L3 Cache or higher	Minimum 11MB L3 Cache The present cascade lake has a direct relationship between core and cache architecture, i.e., 1.375MB cache per core The present cascade lake architecture has maximum 16MB cache for a 4 core CPU	<b>Clause modified as under: For Type I server Only Minimum 16 MB L3 cache or higher.</b>
27.	60,62, 64 & 66	Annexure I,II,III,IV Point No.11	<b>USB Port :</b> 5 USB 2.0 ports, 1Serial, graphics (DB-15). Keyboard,Mouse shall be supported with the same USB.	In server 5 USB ports are asked, request to please change the same to 4. Explanation: no. of USB ports per server depends on the design / architecture of every OEM and may vary from OEM to OEM.	<b>Clause Stands as per RFP.</b>
28.	60,62, 64 & 66	Annexure I,II,III,IV Point No.14	<b>RAM :</b> 32 GB/64GB/256 GB (1600 MHz or Higher ) DDR4 Should be upgradable up to 256 GB	32 GB (2933 MHz or Higher) DDR4 Should be upgradable up to 256 GB. Please set the currently available memory speed standards	<b>Clause Stands as per RFP.</b>
29.	60, 62, 64 & 66	Annexure I,II,III,IV Point No.15 BUS Slots	Minimum of 2 PCI expansions/ Mezzanine 09 Bus Slots expansions	Minimum of 3 PCI expansions Slots Mezzanine is applicable for blade servers only In every server " Minimum of 2 PCI expansions/ Mezzanine 09 Bus Slots expansions" are asked and also separately " Minimum 4 no.s of PCI express slots, out of which two ports to be kept free and 2 for HBA cards." are asked, pls clarify how many PciE expansion slots are required in total, as Mezzanine slots does not come in standard Rack servers, mezzanine slots are considered in Blade servers.	<b>Clause clarified as under: Minimum of 2 PCI expansions</b>



30	60,62, 64 & 66	Annexure I,II,III,IV	17. Security : Power-on password, administrator password.	17. Security : Power-on password, administrator password, the Server should support "Silicon root of trust" inbuilt security feature Justification: "Silicon root of trust" Security is a "built in" hardware security feature which helps protection against threats like "Want to cry" attack which bypasses all software security layers and attacks directly on the hardware BIOS, in todays scenario, this is a must to have security feature specially for banks	<b>Clause Stands as per RFP.</b>
31.	61	Annexure I,II,III,IV	26.HBA's minimum 2x8 Gbps Fibre dual port HBA card (Multipathing and load sharing)	Two cards with dual port required? Or 2 cards with Single port require? Or Single card with dual port required? Please clarify  HBA's minimum 2x16 Gbps Fibre dual port HBA card (Multipathing and load sharing) 16 Gbps is the minimum speed available on date	<b>Clause Modified as Under:</b> HBA's minimum 2x8 Gbps Fibre port HBA card (Multipathing and load sharing)
32.	61	Annexure I,II,III		Please Mention Network Port Requirement for Type I Server, also whether SFP+ port is required or BaseT (Copper) port. Please clarify.	<b>Clause Stands as per RFP.</b>
33.	68	Annexure-V	Dimension for 42U Server Rack	Rack Frame with Minimum Dimension 600 X 1000	<b>Clause Stands as per RFP.</b>
34.	68	Annexure-V	<u>42 u Server Rack</u> 4. Floor Standing With Caster and Breaks	Floor Standing With Caster & fixing arrangement Justification: Racks should come with some fixing arrangement like feet leveller. Sometime breaks may fail & can cause problem.	<b>Clause Stands as per RFP.</b>
35.	68	Annexure-V	<u>42 u Server Rack</u> 7. Made of Aluminium Extruded Frame Structure	Mode of Metal Frame Structure Aluminium / Steel Please clarify	<b>Clause Stands as per RFP.</b>
36.	68	Annexure-V	<u>42 u Server Rack</u> 9. Front Glass and Rear Net Doors	Front & Glass door with minimum 66% perforation Justification: As per IT guidelines Server Racks door should be minimum 66% perforated for free ventilation, Glass door will stop the heat dissipation causing operational temp impact on IT machines	<b>Clause modified as under:</b> Front and Rear Net doors.

37.	68	Annexure-V	<p><u>42 u Server Rack</u> 11. Fan Mounted On Top With 4 Or More Fans</p>	<p>It should be optional Justification: If Racks comes with more than 66% perforation then no need of Fan cooling arrangement. Fan cooling may mix Hot &amp; Cold air pocket creating efficiency issue.</p>	Clause stands deleted.
38.	69	ANNEXURE – VI Point No.1 Storage System (Rack Mountable Storage System)	<p>Fiber Channel External Storage System with two RAID Controllers. Each Raid array controller should support Raid levels (0, 1, 5 and 1+0) or Equivalent Double /Triple parity RAID implementations. Storage should have high availability feature with no single point of failure. Storage should have minimum 60 Gbps front end throughput and minimum 8 no. of FC front end ports. Storage should be supplied with all required licenses to connect at least 10 no: of servers as well OS such as Red Hat Enterprise Linux 6.x or higher, Windows server 2012 (both standard and datacenter editions) or higher. The usable capacity of SAN. Storage-1: Usable storage space of 45 TB having Raid 1+0/Equivalent Double parity RAID To be Placed at BDC. Storage-2. Usable Space of 55 TB having Raid 1+0/Equivalent Double parity RAID to be place at KDC.</p>	<p>Request to modify the specification to make it open and allow other Storage OEM's to participate.</p> <p>Modern storage architecture supports simplified RAID. Request you to amend as below "Fiber Channel External Storage System with two RAID Controllers. Each Raid array controller should support Raid levels 0/1/ 5 /1+0 OR RAID6 implementations. Storage should have high availability feature with no single point of failure. Storage should have minimum 60 Gbps front end throughput and minimum 8 no. of FC front end ports. Storage should be supplied with all required licenses to connect at least 10 no: of servers as well OS such as Red Hat Enterprise Linux 6.x or higher, Windows server 2012 (both standard and datacenter editions) or higher. The usable capacity of SAN. Storage-1:Usable storage space of 45 TB having Raid 1+0 with 15K SAS or SSD in RAID6 To be Placed at BDC. Storage-2.Usable Space of 55 TB having Raid 1+0 with 15K SAS or SSD in RAID6 to be place at KDC."</p> <p>Requesting to remove Raid 0.</p>	Clause Stands as Per RFP.

39.	70	Annexure-VI 5.Hard Disk Drive:	The storage array shall be offered with 1 TB or higher hot swappable hard disk drives, the Storage should support SAS based SSD Drive, mix and match of different type of spindles should be supported behind the same pair of controllers. The Storage shall be scalable to minimum 100 TB.	We recommend to go for SSD drives. Request to let us know whether we need to offer the storage with 15K SAS drives or SSD drives. If we need to configure SAS 15K drives then 900GB is the highest available option.	<b>Clause modified as Under: The storage array shall be offered with 1 TB or higher hot swappable hard disk drives, the Storage should support SSD Drive, mix and match of different type of spindles should be supported behind the same pair of controllers. The Storage shall be scalable to minimum 100 TB.</b>
40.	69	ANNEXURE – VI Point No.2 Raid Support	1. Offered Storage Subsystem shall support Raid ( 0, 1, 1+0, 5 and Raid 6) or Equivalent Double /Triple parity RAID technologies. Must support inter-mixing different RAID groups with one storage system. Different type of RAID levels should co-exist within the same array simultaneously to match different protection requirements of Data.	<div>Request to modify the specification to make it open and allow other Storage OEM's to participate</div> <div>Requesting to remove Raid 0.</div> <div>Modern storage architecture supports simplified RAID. Request you to amend as below "Fiber Channel External Storage System with two RAID Controllers. Each Raid array controller should support Raid levels 0/1/ 5 /1+0 OR RAID6 implementations. Storage should have high availability feature with no single point of failure. Storage should have minimum 60 Gbps front end throughput and minimum 8 no. of FC front end ports. Storage should be supplied with all required licenses to connect at least 10 no: of servers as well OS such as Red Hat Enterprise Linux 6.x or higher, Windows server 2012 (both standard and datacenter editions) or higher. The usable capacity of SAN. Storage-1:Usable storage space of 45 TB having Raid 1+0 with 15K SAS or SSD in RAID6 To be Placed at BDC. Storage-2.Usable Space of 55 TB having Raid 1+0 with 15K SAS or SSD in RAID6 to be place at KDC."</div>	<b>Clause Stands as per RFP.</b>

41.	71	ANNEXURE – VI, Point No.3	<p>1. Offered Storage Array shall be given with Minimum of 128 GB usable cache across dual controller.</p> <p>2. Shall have dynamic management of Cache block size. Cache should be mirrored between the Active-Active controllers (load balancing). The paths should be redundant (at least 2 paths) to prevent disruption if one path fails. Must support either Cache battery backup for a minimum of 72 hours or fully automatic de-stage of cache to disks or it should be non-volatile DIMM (NVDIMM) during power failure to prevent possible data loss.</p> <p>3. Cache shall not have any overhead for the operating system.</p>	Request to modify the specification to make it open and allow other Storage OEM's to participate	Clause Stands as per RFP.
				Cache is used to serve read and write request. Please mention "DRAM Cache shall be completely dynamic for read and write ratios and operations and vendor shall not offer any additional card / module / drive for write cache operations" Also request you to opt for 256 GB cache	Clause Stands as per RFP.
				<p>Requesting to change the requirement of "dynamic management of Cache block size" to "Dynamic management of cache for read and write I/Os" as below,</p> <p>"Shall have dynamic management of Cache for read and write I/Os. Cache should be mirrored between the Active-Active controllers (load balancing). The paths should be redundant (at least 2 paths) to prevent disruption if one path fails. Must support either Cache battery backup for a minimum of 72 hours or fully automatic de-stage of cache to disks or it should be non-volatile DIMM (NVDIMM) during power failure to prevent possible data loss."</p> <p>Generally, the cache block size is fixed for majority of storage OEMS but cache should be dynamically managed for read and write I/Os i.e. allocation of cache block for read and write I/Os as per application workload for optimal performance. Therefore, requesting to change the clause as suggested.</p>	Clause Stands as per RFP.

42.	70	ANNEXURE – VI Point No.4 Bays:	Offered storage should support SAS hot swappable hard disk bays to accommodate above no. of hard disks and upgradable to 100 HDDs supporting 1 TB or higher hot swappable hard disk drives at 15K or higher. Offered storage shall have minimum of 8 host ports for connectivity to servers.	<p>We recommend to go for SSD drives. If still bank wants to go for SAS drives, we request to kindly change the HDD support from 1TB to 900GB . As the highest capacity available in the industry is 900GB for 15K SAS disks</p> <p>please change the clause as below "Offered storage should support SAS hot swappable hard disk bays to accommodate above no. of hard disks and upgradable to 100 HDDs supporting 1 TB or higher hot swappable hard disk drives at 10K or SSD . Offered storage shall have minimum of 8 host ports for connectivity to servers."</p> <p>In storage, disks support for 15K SAS drives with 1 TB individual disk capacity is asked, we request to change the same to 10K disks ( 1.2 or 1.8TB individual disks) or SSD ( 800GB or 1.6 TB individual disks) disks. Explanation: SSD disks are better than SAS 15K disks in performance and reliability. SAS 10 K disks are also available in individual capacity of 1.2TB or 1.8TB but not in 1TB, In 1 TB individual capacity only SAs 7.2K disks are available. So to avoid any confusion we recommend to change the disks to SSD with 800/1.6TB individual capacity.</p> <p>Request to modify the specification to make it open and allow other Storage OEM's to participate</p> <p>Please change the clause as below "Offered storage should support SAS hot swappable hard disk bays to accommodate above no. of hard disks and upgradable to 100 HDDs supporting 1 TB or higher hot swappable hard disk drives at 10K or SSD. Offered storage shall have minimum of 8 host ports for connectivity to servers."</p>	<p><b>Clause Modified as under:</b>  <b>Offered storage should support SSD hot swappable hard disk bays to accommodate above no. of hard disks and upgradable to 100 HDDs supporting 1 TB or higher hot swappable hard disk drives. Offered storage shall have minimum of 8 host ports for connectivity to servers.</b></p>
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43.	72	ANNEXURE – VI, Point No.4 Bays		<p>Kindly change the clause as , "Offered storage should support SAS hot swappable hard disk bays to accommodate above no. of hard disks and upgradable to 100 HDDs supporting 1 TB or higher hot swappable hard disk drives at 10K or higher. Offered storage shall have minimum of 8 host ports for connectivity to servers."</p> <p>With the evolution of high performance SSDs, 15K drives are becoming less desired owing to TCO and performance. Moreover, there is no considerable development around 15K drives in last 8-10 years.Also requirement of RFP is SSD. Therefore, requesting to remove the 15K drive option from the clause as suggested.</p>	Please Refer to Sl. No.42
44.	71	ANNEXURE – VI, 11 Data protection	<p>1. In case of Power failure, Storage array shall be able to hold data in the cache for at-least 72 hours of time or shall support de- staging to disk drives. Bidder shall ensure that in case of de- staging, dual redundant Standby power supplies are configured.</p> <p>2. For optimal data protection, storage shall support distribution of metadata on more than one drive shelf. (i.e., For optimal data protection, storage should have full protection of metadata.)</p> <p>3. 3. Storage should have Thin provisioning, snapshots, clone, Auto Tearing &amp; Replication.</p>	<p>Storage tiering is asked in storage – please change the same to “ Storage tiering / SSD caching” as we support SSD caching which keep the hot data on offered SSD cache layer, this is more effective way of keeping hot data on faster cache layer.</p>	Clause Modified as Under: Storage should have Thin provisioning, snapshots, clone, & Replication.
			3. Storage should have Thin provisioning, snapshots, clone, Auto Tearing & Replication.	Request to modify the specification to make it open and allow other Storage OEM's to participate	
				Please remove tiering as only one type of drive has been asked.	

45.		ANNEXURE – VI, 13 Fiber Channel Switches with necessary cables (4 numbers)	Minimum of 8 x 8-Gbit ports per trunk, Minimum 16 ports scalable up to 24 ports. Each port should be 8 Gbps with auto sensing support for 4 Gbps. must have in-built diagnostics, power on self-test, command level diagnostics, online and offline diagnostics capabilities, support online- firmware upgrades, must have redundant Control Units, Power supply, Fan Assembly and all the components shall be Hot Swappable, etc.	Please amend as below for latest generation and better TCO. Also redundant control units are not applicable for entry level SAN Switches. "Minimum of 8 x 8-Gbit ports per trunk, Minimum 16 ports scalable up to 24 ports. Each port should be 16 Gbps with auto sensing support for 8 Gbps. must have in-built diagnostics, power on self-test, command level diagnostics, online and offline diagnostics capabilities, support online- firmware upgrades, Power supply, Fan Assembly and all the components shall be Hot Swappable, etc . Offered Switch should also support 32 Gbps SW SFP."	<b>Clause Modified as Under:</b> Minimum of 8 x 8-Gbit ports per trunk, Minimum <b>32</b> ports scalable up to <b>48</b> ports. Each port should be <b>minimum</b> 8 Gbps with auto sensing support for <b>minimum</b> 4 Gbps. must have in-built diagnostics, power on self-test, command level diagnostics, online and offline diagnostics capabilities, support online- firmware upgrades, must have redundant Control Units, Power supply, Fan Assembly and all the components shall be Hot Swappable, etc.
46.	71	ANNEXURE – VI, 14 On-line RAID Group Expansion	The storage array must support RAID (0, 1, 5, 6, 1+0) levels or Equivalent Double /Triple parity RAID technologies with online expansion of RAID Group/Disk Group. Must support online expansion of volumes. Must be able to add additional disks on the fly to expand the RAID group capacity.	<div>Request to modify the specification to make it open and allow other Storage OEM's to participate</div> <div>Requesting to remove Raid 0.</div> <div>Please amend as "The storage array must support RAID 0/1/5/6/1+0 levels with online expansion of RAID Group/Disk Group. Must support online expansion of volumes. Must be able to add additional disks on the fly to expand the RAID group capacity"</div> <div>Please remove this clause</div>	<b>Clause Stands as per RFP.</b>

47.	71	ANNEXURE – VI, 17 On-Data in Place Upgrade	The proposed storage must support seamless data-in-place upgrade of existing storage controllers without having to change the disk subsystem.	Requesting to remove the clause Kindly remove this clause as not all storage OEMs support Data-in-place upgrade and this clause will lead to bid by 1 or 2 vendors only thus making the bid restrictive.	<b>Clause Stands as per RFP.</b>
				In storage “seamless data-in-place upgrade of existing controllers” is asked, please remove this or modify as “seamless data-in-place upgrade of existing controllers of same model if applicable” Explanation: This clause is applicable for the OEM who have different variant of controllers are available in same model, we have only one type of controller variant in one storage model which supports scalability in terms of disks and capacity as asked in RFP.	
48.	72	ANNEXURE – VI, 19	Data Compression: Storage array should support both Compression and de-duplication for SAN Data. The Storage specifications will be limited up to SAN only.	Request to Delete(1)/modify(2) the specification to make it open and allow other Storage OEM's to participate	<b>Clause Stands as per RFP.</b>
				Please remove de-duplication and compression as they are supported with SSD drives only and moreover it depends on the type of data how much data efficiency can be achieved after de dup and compression.	
49.	72	ANNEXURE – VI, 21	The array should support online LUN migration (transparent movement of volumes within the array). The functionality should allow cross RAID migration and cross spindle migration (e.g. 600GB SAS to NL-SAS etc.)	Please remove this clause as newer generation arrays supports simplified RAID.	<b>Clause Stands as per RFP.</b>
	95	Annexure P	Undertaking Letter on the vendor's letterhead for Central Minimum Wages Act & Labour Laws	We've submitted this against other RFPs in the past. But is it relevant in such product? If no, request you to delete this Annexure please.	<b>Clause Stands Deleted.</b>
50.		Clarification Request		Does customer has enough ports in SAN Switch ports in existing environment in DC and DR to connect these additional servers. Please clarify.	<b>Please Refer to Corrigendum.</b>



51.	73	Commercial Bid Format	(i) Bidder should quote price of licenses by specifying no of licenses based on "List of Servers for calculation of required number of Licenses " (ii) Bank will decide the actual quantity based on requirement.	Request you to take unit price to calculate TCO & buy as per your requirement.	<b>Clause stands as per RFP.</b>
52.		General		Please clarify the distance between proposed server rack to adjunct switches (core /distribution), so bidder can access the right length of patch cables (copper/fiber). Also confirm the connectivity type and availability of port with SFPs	<b>Will be shared with selected bidder only.</b>



**Supply, Installation and Maintenance of Hardware, Operating Systems and Database Licenses for various Projects/Applications**

**RFP Ref. No DIT/BPR & BTD/OA/1835/2020-21 Date-06/10/2020**

**Amendments, Addendums and Corrigendums**

SI No.	Original Clause	Revised Clause
Eligibility Criteria Point no. 5	The bidder should have supplied, installed, commissioned and maintained at least 10 Rack mounted servers and SAN Storage in one Public Sector Undertaking/Bank (not necessarily in a single order but in the same PSU/Bank) in India in last three financial years.	The bidder should have supplied, installed, commissioned and maintained at least 10 Rack mounted servers and SAN Storage in one Public Sector Undertaking/Bank/Govt. (not necessarily in a single order but in the same PSU/Bank/Govt) in India in last three financial year.
<b>Part V</b> <b>5.Payment Terms</b>	<p>50% of the order value along with applicable taxes on actual basis will be paid on successful delivery.</p> <p>40% of the order value along with applicable taxes on actual basis will be paid on successful user acceptance after delivery, installation of the ordered items, after realizing penalty charges for late delivery and / or late installation, if any. The claim of payment should contain proof of delivery, installation note and User Acceptance Report signed with date by an authorized official of UCO Bank at the respective sites, waybill etc. Remaining 10% of the cost along with applicable taxes would be paid after <b>one year</b> from Go-live and successful operation. However, payment may also be released before one year period on submission of an additional Bank Guarantee of equal amount having the validity of 1 year.</p> <p>AMC for Hardware shall be paid in quarterly arrear basis</p> <p>ATS on software item shall be paid in yearly in Arrear basis.</p>	<p><b>50% of the order value along with applicable taxes on actual basis will be paid on successful delivery.</b></p> <p><b>40% of the order value along with applicable taxes on actual basis will be paid on successful user acceptance after delivery, installation of the ordered items, after realizing penalty charges for late delivery and / or late installation, if any. The claim of payment should contain proof of delivery, installation note and User Acceptance Report signed with date by an authorized official of UCO Bank at the respective sites, waybill etc.</b></p> <p><b>Remaining 10% of the cost along with applicable taxes would be paid after three months from Go-live and successful operation.</b></p> <p><b>AMC for Hardware shall be paid in quarterly arrear basis.</b></p> <p><b>ATS on software item shall be paid in yearly in advance basis.</b></p>
<b>Annexure I.</b> <b>10. Cache</b>	Minimum 24 MB L3 Cache or higher	Minimum 16 MB L3 cache or higher.
<b>Annexure I,II,III,IV</b>	26.HBA's minimum 2x8 Gbps Fibre dual port HBA card (Multipathing and load sharing)	HBA's minimum 2x8 Gbps Fibre port HBA card (Multipathing and load sharing)

<b>Part V 10. Price Validity</b>	The selected bidder will be required to keep the price valid for a period of 18 months) from the date of technical bid opening. There shall be no increase in price for any reason whatsoever during the period of 18 months and Bank may place the additional Purchase Orders to the selected bidder for any or all of the services at the agreed unit rate for line items as mentioned in the commercial format i.e. Annexure – E during the price validity period of 18 months.	The selected bidder will be required to keep the price valid for a period of 12 months from the date of technical bid opening. There shall be no increase in price for any reason whatsoever during the period of 12 months and Bank may place the additional Purchase Orders to the selected bidder for any or all of the services at the agreed unit rate for line items as mentioned in the commercial format i.e. Annexure – E during the price validity period of 12 months.
<b>Annexure-VI 5.Hard Disk Drive:</b>	The storage array shall be offered with 1 TB or higher hot swappable hard disk drives, the Storage should support SAS based SSD Drive, mix and match of different type of spindles should be supported behind the same pair of controllers. The Storage shall be scalable to minimum 100 TB.	The storage array shall be offered with 1 TB or higher hot swappable hard disk drives, the Storage should support SSD Drive, mix and match of different type of spindles should be supported behind the same pair of controllers. The Storage shall be scalable to minimum 100 TB.
<b>Annexure–D &amp; Comm. Bid</b>	MS SQL Server 2016 Standard Edition (Downgradable to 2012)	MS SQL Server 2019 Standard Edition version downgradable to 2012
<b>Annexure VI 11.Data protection Point No.3</b>	Storage should have Thin provisioning, snapshots, clone, Auto Tearing & Replication.	Storage should have Thin provisioning, snapshots, clone, & Replication.
<b>Annexure VI 13.Fiber Channel Switches with necessary cables (4 numbers)</b>	Minimum of 8 x 8-Gbit ports per trunk, Minimum 16 ports scalable up to 24 ports. Each port should be 8 Gbps with auto sensing support for 4 Gbps. must have in-built diagnostics, power on self-test, command level diagnostics, online and offline diagnostics capabilities, support online-firmware upgrades, must have redundant Control Units, Power supply, Fan Assembly and all the components shall be Hot Swappable, etc.	Minimum of 8 x 8-Gbit ports per trunk, Minimum 32 ports scalable up to 48 ports. Each port should be <u>minimum</u> 8 Gbps with auto sensing support for <u>minimum</u> 4 Gbps. must have in-built diagnostics, power on self-test, command level diagnostics, online and offline diagnostics capabilities, support online-firmware upgrades, must have redundant Control Units, Power supply, Fan Assembly and all the components shall be Hot Swappable, etc.
<b>Annexure I,II,III,IV</b>	Minimum of 2 PCI expansions/ Mezzanine 09 Bus Slots expansions	Minimum of 2 PCI expansions
<b>Annexure-V</b>	<u>42 u Server Rack</u> 9. Front Glass and Rear Net Doors	9.Front and Rear Net Doors
<b>Annexure-V</b>	<u>42 u Server Rack</u> 11. Fan Mounted On Top With 4 Or More Fans	Clause Stands Deleted.

### **Penalties & Service Level Agreement**

Bank expects that the Bidder shall be bound by the Service Levels described in this document.

The Bidder shall have to enter into "Service Levels Agreement" with Bank covering all terms and conditions of this tender while providing the service support. Once go live of application, the services should be available on 365X24x7 basis and hence any technical problem should be resolved as per the response Time Matrix given below.

SL no	Severity	Severity Description Support for Hardware	Response Time	Resolution Time
1	Severity 1	If the call is pertaining to production and there is complete disruption of services resulting in non-functioning of business/ application operations. The operation is mission critical due to major disruption of business continuity.	Within 30 Min of call reported.	Within 2 Hrs of call reported
2	Severity 2	The issue is severe in nature but services are available with restricted operations and some manageable workarounds.	Within 30 Min of call reported	Within 3 Hrs of call reported.
3	Severity 3	Minor loss of service and the impact of the issue could be minor in nature which may require some workaround to bring the normal functioning.	Within 30 Min of call reported	Within 4 Hrs of call reported.

Bidder is expected to response and resolve issue within prescribed time frame based on the severity description decided by bank mentioned above and needs to strictly adhere to Server Level Agreement (SLA).

The Bank would expect the bidder to commit to the service level assurances. The Bidder shall commit to maintain uptime of 99.98% and above per month.

The SLA will be reviewed on a monthly basis. Penalties will be applicable due to downtime of **hardwares**.

The bidder shall guarantee 99.98% uptime. The Bidder shall be liable for penalties for uptime maintained below 99.98% in a month. Penalties for downtime of the application will be as per below mentioned table:

Level of Uptime Per Month	Penalty Charges
99.98% and above	No Penalty
99.00% and above but below 99.98 %	1 % of total cost of monthly payout
98.00% and above but below 99.00 %	2 % of total cost of monthly pay-out
97% and above but below 98.00 %	5 % of total cost of monthly pay-out
below 97%	10% of total cost of monthly payout

Bank will impose penalty for every instance of service un-availability Further if the number of downtime instances during a month exceeds 3 times, an additional 0.50% downtime will be reduced from uptime and the penalty will be calculated accordingly.

Penalties, if any shall be calculated for every quarter and recovered from the Annual Technical Support/AMC/. For calculation of penalty during warranty period, ATS/AMC Cost will be considered which will be deducted from the any payments being paid. Wherever applicable as stated above while effecting any payment, deduction towards LD payment will be made. Hence the bidder should raise the invoice deducting the penalty amount.