CORRIGENDUM-4

Please refer to RFP 192020 published on **01.04.2021** inviting proposal from eligible bidders for **Request for Proposal of Supply, Installation, Commissioning and Maintenance of HCI along with VMware virtualization software solution and NAS Storage device.** The corrigendum & reply to pre-bid queries are available on Bank's website https://www.bankofmaharashtra.in in the Tenders Section.

Deputy General Manager
Information Technology Department

CORRIGENDUM-4

Please refer to RFP 192020 published on **01.04.2021** inviting bids for **Request for Proposal of Supply, Installation, Commissioning and Maintenance of HCI along with VMware virtualization software solution and NAS Storage device.**

Following correction be read in the tender document.

1. Amendment in clauses in RFP. The amendments are enclosed as **Annexure-I**.

(Shirish Salway)
Deputy General Manager
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ANNEXURE-1 RFP192020 (CORRIGEDUM-4)

Sr. No.	Page #	Point/ Section	RFP Clause	Clause Revised As
21	7		The proposed SDN solution offering should be supported on multiple hypervisors like - vSphere and KVM.	The proposed SDN solution must support existing VMware vSphere hypervisor and it should have capability to support multiple hypervisors like - vSphere and KVM, Physical Server, Nutanix, Hyper-V etc.
52	14	2.3.3 Training	ii. This faculty should be solution certified up to advance level and should provide courseware with adequate lab facility as well. The training should be provided by the OEM employee and should be of minimum 3 days, 8 hours a day for each solution under this RFP. Training should be provided to 5 number of personnel identified by Bank on functional, operational and reporting aspects of the entire solution. Pre implementation training must be provided before project implementation and post implementation training must be provided after successful implementation. At the end of training participants shall be given certificate of successful completion by the OEM.	Accepted, Bidder May provide the Online training considering the Current Pandemic.
56	25	4.3 Project Scope- Enterprise Network Attached Storage (NAS) Device	4.3.10 Bidder should undertake to provide maintenance support during warranty and post warranty period for all proposed equipment's & spare parts and ensure that all the supplied items under this RFP should be available for a minimum period of 5 years from the date of signoff. Comprehensive annual maintenance contract has to be entered into separately with the bank.	Bidder should undertake to provide maintenance support during warranty and post warranty period for all proposed equipment's & spare parts and ensure that all the supplied items under this RFP should be available for a minimum period of 5 years after completion of successful installation and after obtaining sign off from Bank or 90 days from the date of delivery whichever is earlier.
63	85	Annexure 5: Eligibility Criteria Compliance	Bidder should have its own Support center for Telephonic and Remote Assistance Services in Pune and Hyderabad	Bidder should have its own Support center for Telephonic and Remote Assistance Services in Maharashtra & Telangana, however bidder has to provide onsite support at Pune and Hyderabad as per the bank requirement.
66	3	Annexure 10 : Bill of Material - Hyper Converged Infrastructure/ SR NO 1 - 8 Node QTY	All flash HCI node with 2 Sockets, 28 Cores/CPU, 1 TB RAM, 12*1.92 TB SSD, 2*16 GB SD Cards, 6*10 Gig Network Ports as per Annexure 1.1	Please refer the corrigendum for revised bill of material.

Sr. No.	Page #	Point/ Section	RFP Clause	Clause Revised As
67	3	Annexure 10 : Bill of Material - Hyper Converged Infrastructure/ SR NO 2 - 20 Node QTY	All flash HCI Node with 2 Sockets, 28 Cores/CPU, 768 GB RAM, 12*1.92 TB SSD, 2*16 GB SD Cards, 6*10 Gig Network Ports as per Annexure 1.1	Please refer the corrigendum for revised bill of material.
68	3	Annexure 10 : Bill of Material - Hyper Converged Infrastructure/ SR NO 3 - 4 Node Quantity	HCI node with 1 Socket, 28 Cores/CPU, 256 GB RAM, 8*600 GB SSD, 2* 16 GB SD Cards, 6*10 Gig Network Ports as per	Please refer the corrigendum for revised bill of material.
69	3	Annexure 10 : Bill of Material - Hyper Converged Infrastructure/ SR NO 5 / TOR	TOR (Top of the Rack) L3 Switch with 24x10/25 Gbps and 6x40 Gbps uplink along with required stacking cables. (Note:- Bidder has to quote the number of devices required for the proposed solution with min. above configuration).	TOR (Top of the Rack) L3 Switch with 24x10/25 Gbps and 4x40 Gbps uplink along with required stacking cables. (Note: - Bidder has to quote the number of devices required for the proposed solution with min. above configuration). Single OEM should Provide Network Switch & HCI Node
71		Security Features -HCI Node - Additional Point	Request you to add Security Feature on BIOS 1. Security Features – (Very Important) a. Hardware/security Root of Trust b. Configuration and Firmware Drift Detection c. Signed and authorized Firmware Updates from OEM portal d. System Erase – (Secure Erase is the process of permanently erasing all data on an encryption-capable physical disk) e. Control Access & Secure Alerting	Hardware BIOS security features 1. Security Features – (Very Important) a. Hardware/security Root of Trust b. Configuration and Firmware Drift Detection c. Signed and authorized Firmware Updates from OEM portal d. System Erase – (Secure Erase is the process of permanently erasing all data on an encryption-capable physical disk) e. Control Access & Secure Alerting
88		1.2 NAS Compliance	Storage should be supplied with a total 400 TB usable capacity with minimum 10K or higher RPM SAS Drives excluding all overhead configuration like RAID (RAID 6 or equivalent) configuration, formatting and hot spare disk. An additional minimum 20 TB usable capacity excluding all overhead has to be provisioned in the proposed array on SSD's to be used for caching /tiering if required. The Storage system should deliver minimum 1 Lac IOPS(70:30 R /W Ratio) on Day 1 with the capacity proposed and if any performance degradation occurs additional SSD's to be factored to meet the performance. Licenses to enable policy based tiering across SAS and SSD tier should be provided for proposed capacity. Disk must be less than or equal to 1.9 TB SA	Storage should be supplied with a total 400 TB usable capacity with minimum 10K or higher RPM SAS Drives without enabling deduplication/compression and excluding all overhead configuration like RAID (RAID 6 or equivalent) configuration, formatting and hot spare disk. An additional minimum 20 TB usable capacity excluding all overhead has to be provisioned in the proposed array on SSD's to be used for caching /tiering if required. The Storage system should deliver minimum 1 Lac IOPS(70:30 R /W Ratio) on Day 1 with the capacity proposed and if any performance degradation occurs additional SSD's to be factored to meet the performance. Licenses to enable policy based tiering across SAS and SSD tier should be provided for proposed capacity. Disk must be less than or equal to 1.9 TB SAS/SSD drives and disk must be enterprise class
92		OS software license	4.1.20 The operating system licenses supplied under this RFP must be with Software Assurance (SA) for Microsoft Windows Server and Premium Support for Redhat.	4.1.20 The operating system licenses supplied under this RFP must be with 2 year Software Assurance (SA) for Microsoft Windows Server and 5 Year Premium Support for Redhat.

Sr. No.	Page #	Point/ Section	RFP Clause	Clause Revised As
93		1.2 Technical and Functional Requirements for Enterprise Network Attached Storage (NAS) Device / Sr. no 1	Unified NAS Storage System (non windows based) having block and file access with host connectivity for CIFS and NFS. Storage should have the capability to scale up and scale out with minimum capacity of 400 TB (i.e. with a provision of expending up to 1000 TB) with same disk configuration in future. The Unified NAS Storage System must be dedicated appliance with specifically optimized OS to provide NAS functionalities.	Unified NAS Storage System (non windows based) having block and file access with host connectivity for CIFS and NFS. Storage should have the capability to scale up OR scale out with minimum capacity of 400 TB (i.e. with a provision of expending up to 1000 TB) with same disk configuration in future. The Unified NAS Storage System must be dedicated appliance with specifically optimized OS to provide NAS functionalities.
94	77	1.2 Technical and Functional Requirements for Enterprise Network Attached Storage (NAS) Device / Sr. no 3	The system should be proposed with a minimum of 4 controllers interconnected with redundant cluster interconnect 10 Gbe Ethernet or infiniband switches only. The proposed system must have capability to Scale up & also Scale out upto a minimum of 8 controllers in the same cluster in active-active configuration.	The system should be proposed with a minimum of 4 controllers interconnected with redundant cluster interconnect 10 Gbe Ethernet or infiniband switches or Provide equivalent performance in 2 controllers. The proposed system must have capability either to Scale up or Scale out upto a minimum of 8 controllers in the same cluster in active-active configuration.
102	62	9	Response to RFP The submission needs to be made at the address given below as per the schedule mentioned in clause Schedule of events in "Invitation to tenders". All envelopes shall be securely sealed and stamped. The authorized signatories of the Bidder shall initial on all pages of the technical and commercial proposals. Bidder need to ensure that the minimum required details are submitted.	Considering current covid situation tender submission mode is online
109	70	33	The proposed HCI solution should be able to change the resiliency of the VMs within the same cluster on the fly. It should also support intelligent VM placement by ensuring that even if the VMs are moved via vMotion from one node to the other, it should not impact I/O performance or latencies of that particular VM	The proposed HCI solution should be able to change the resiliency of the VMs/Cluster. It should also support intelligent VM placement by ensuring that even if the VMs are moved via vMotion from one node to the other, it should not impact I/O performance or latencies of that particular VM
111	71	37	The proposed All-Flash SSD's should not exceed the per disk capacity limit of 2TB and should be of Enterprise class category only.	The proposed All-Flash SSD's should be of Enterprise class category only
112	71	38	Solutions requiring cache drives for performance per node should be capable of scaling to 2x of the initial configuration PER NODE to boost performance and capacity requirements if required in future. Any software license implications for expanding these resources in existing node should be provisioned on Day-1 for full scalable capacity of the Node.	Solutions requiring cache drives for performance per node should be capable of scaling PER NODE to boost performance and capacity requirements if required in future. Any software license implications for expanding these resources in existing node should be provisioned on Day-1 for full scalable capacity of the Node.
113	71	40	The enabling and disabling of storage services like deduplication, compression, erasure coding should be easily available in GUI and should be non-disruptive in nature. These policies should be applied across the entire capacity to ensure that maximum savings can be obtained	The enabling and disabling of storage services like deduplication, compression, should be easily available in GUI and should be non-disruptive in nature or it should be always ON. These policies should be applied across the entire capacity to ensure that maximum savings can be obtained

Sr. No.	Page #	Point/ Section	RFP Clause	Clause Revised As
114	71	43	The nodes should connect over 10G IP connectivity. Minimum 6 x10Gig/25Gig Ethernet port per node must be proposed. All ports need to be independent so as to provide high availability. There should be no dependency on any proprietary or specialized interconnects. The bidder should have provision for compatible L3 switch, 24 ports of 10G copper along with 6 uplink ports of 40G TOR switch with redundancy to ensure all nodes connectivity via TOR to Bank's network at each site (DC and DR).	The nodes should connect over 10G IP connectivity. Minimum 4x10Gig/25Gig Ethernet port per node must be proposed. All ports need to be independent so as to provide high availability. The bidder should have provision for compatible L3 switch, min 24 ports of 10ig/25Gig SFP along with 6 uplink ports of 40G TOR switch with redundancy to ensure all nodes connectivity via TOR to Bank's network at each site (DC and DR).
185	32	5.1.3.8	Quarterly preventive maintenance of all the equipment to be supplied, which shall interlay, includes cleaning of inside and outside of all equipment during warranty period.	Quarterly preventive maintenance of all the equipment to be supplied, which shall interlay, includes cleaning of outside of all equipment during warranty period.
195	62	9 Response to RFP	9 Response to RFP	Accepted Online
201	78	15	The multi-pathing software should provide multi-pathing from all leading OEM"s (Microsoft/ HPE/IBM/ RedHat/ Oracle/ VMware etc.)	Proposed unified storage should support industry leading multi-path software supplied by leading server/OS vendors (Microsoft/ HPE/IBM/ RedHat/ Oracle/ VMware etc.)"
202	79	21	The storage should support both local users and groups and directory server users and groups for authentication and authorization. The storage should have file level quota on volume and directory based on user, group and file set level and can be integrated with Active directory or LDAP solution. NAS protocols should be supported & provided for full scalable usable capacity of 1000 TB and beyond in future	The storage should support both local users and groups and directory server users and groups for authentication and authorization. The storage should have File level or directory level quota on volume and directory based on user, group and can be integrated with Active directory or LDAP solution. NAS protocols should be supported & provided for full scalable usable capacity of 1000 TB and beyond in future.

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