



**CORRIGENDUM TO THE RFP FOR SELECTION OF SYSTEM INTEGRATOR FOR SUPPLY, INSTALLATION, INTEGRATION, IMPLEMENTATION, MAINTENANCE AND FACILITY MANAGEMENT SERVICES OF HARDWARE, SOFTWARE, NETWORK FOR CORE BANKING SYSTEM (FINACLE 10.2.25) FOR FIVE YEARS (RE-TENDER) (E – TENDER)**

**RFP Ref. No: PBGB/HO/DIT/746/2023-24 Date: 23/06/2023**

S.No	RFP Page No.	RFP Clause No.	Original RFP Clause	Modified Clause
1	141	Table A Annexure D	DC site: d. 2 Nos. Physical server shall contain (Type C) i. 2 (Uniser) virtual Node ii. 2(C24) virtual Node iii. 2(CSIS APP) virtual Node Each physical server should host 1 no. C24, 1 no. CSIS APP and 1 no. Uniser APP virtual node	DC site: d. 2 Nos. Physical server shall contain (Type D) i. 2 (Uniser) virtual Node ii. 2(C24) virtual Node iii. 2(CSIS APP) virtual Node Each physical server should host 1 no. C24, 1 no. CSIS APP and 1 no. Uniser APP virtual node
2	144	Table B Annexure D	Type G: Minimum number of Physical servers from day-1 - 4 nos. at DC.	Type G: Minimum number of Physical servers from day-1 - 5 nos. at DC.
3	23	Part –II: INVITATION FOR BIDS AND INSTRUCTIONS TO BIDDERS ; Point 21 Period of Bid Validity	21. Period of Bid Validity  Bids shall remain valid for one year after the date of bid opening prescribed by BANK. BANK holds the rights to reject a bid valid for a period shorter than 1 year as non-responsive, without any correspondence. In exceptional circumstances, BANK may solicit the Bidder's consent to an extension of the validity period. The request and the response thereto shall be made in writing. Extension of validity period by the Bidder should be unconditional and irrevocable. The Bid Security provided shall also be suitably extended. A bidder acceding to the request will neither be required nor be permitted to modify its bid. A bidder may refuse the request without forfeiting its bid security. In any case the bid security of the bidders will be returned after completion of the process.	21. Period of Bid Validity  Bids shall remain valid for 90 days after the date of bid opening prescribed by BANK. BANK holds the rights to reject a bid valid for a period shorter than 90 days as non-responsive, without any correspondence. In exceptional circumstances, BANK may solicit the Bidder's consent to an extension of the validity period. The request and the response thereto shall be made in writing. Extension of validity period by the Bidder should be unconditional and irrevocable. The Bid Security provided shall also be suitably extended. A bidder acceding to the request will neither be required nor be permitted to modify its bid. A bidder may refuse the request without forfeiting its bid security. In any case the bid security of the bidders will be returned after completion of the process.

4	50	3.9	System Integrator should supply, install new setup & integrate with old setup for migration of data.	Clause stands deleted
5	53	3.38	The System Integrator should deliver the proposed hardware and software at respective delivery locations at Kolkata & Bangalore. Delivery, installation, commissioning of the hardware / software at all the two sites should be completed within 8 weeks from the date of purchase order.	The System Integrator should deliver the proposed hardware and software at respective delivery locations at Kolkata & Bangalore. Delivery, installation, commissioning of the hardware / software at all the two sites should be completed within 12 weeks from the date of purchase order.
6	60	5.14	The System Integrator shall ensure seamless integration of the upgraded Core Banking Solution with other existing applications/utilities, network, security, platform and storage infrastructure in the Bank's Data Centre, Near Site and Disaster Recovery Site.	The System Integrator shall ensure seamless integration of the upgraded Core Banking Solution with other existing applications/utilities, network, security, platform and storage infrastructure in the Bank's Data Centre and Disaster Recovery Site.
7	65	6.3	System Integrator's support team and the Bank's team would liaise with the ATS team of OEM Vendor (Infosys) to report product related bugs and obtain fixes(if applicable) for the same. • If the issue is a bug and would require a fix, restoration would be provided by the support team. • If the issues are because of the incorrect understanding, the issue would be closed with appropriate explanation. • If the issues require changes in the product setup or data, the SystemIntegrator's team would suggest the required changes to the parameters / data to be made. The changes will have to be carried out in concurrence with the Bank's team. • Upon receipt of a patch for a bug, the same would be intimated to the PBGB team & System Integrator would be required to download the patch, deploy and PBGB Bank's UAT team would certify the same before deploying it in the production. • Once the issue is resolved or a restoration is provided to the issue, the PBGB team would intimate the same to the Bank's end users	Clause stands deleted

8	92	7.19 Network Management Point no. xxxii	The System Integrator has to ensure that any equipment to be supplied as part of this RFP should not have either reached end of sales for at least 3 years post-date of acceptance of such equipment by the Bank. Further any equipment supplied by the System Integrator, should not have reached end of support/life for at least 2 years from the date of contract expiry. In the event if any equipment supplied by the System Integrator, reaches either end of sales / life support as stipulated in this clause, within the period of contract, the System Integrator has to immediately replace the equipment at no additional cost to the Bank.	The System Integrator has to ensure that any equipment to be supplied as part of this RFP should not have either reached end of sales for at least 1 year post-date of acceptance of such equipment by the Bank. Further any equipment supplied by the System Integrator, should not have reached end of support/life for at least 2 years from the date of contract expiry. In the event if any equipment supplied by the System Integrator, reaches either end of sales / life support as stipulated in this clause, within the period of contract, the System Integrator has to immediately replace the equipment at no additional cost to the Bank.
9	170	Table K - S. No.9	Routers should have Class-based queuing	Routers should have queuing facility.
10	Pg No. 56	Clause 4.1 Subpoint O	Bank shall accept the application software (provided by the System Integrator) only after critical or major Bugs are fixed and are ready for production Implementation. However System Integrator needs to fixed bugs and problem with consultation of application OEM/OSD of Finacle 10.x after GO live of Finacle 10.x during application L2 support period.	Bank shall accept the application software (provided by the System Integrator) only after critical or major Bugs are fixed and are ready for production Implementation. However, System Integrator needs to fixed bugs and problem with consultation of application OEM/OSD during application FM support period.
11	137	ANNEXURE - A	We agree to abide by the terms and conditions of this tender and our offer shall remain valid for one year from the date of commercial bid opening and it remain binding upon us which may be accepted by The Bank any time before expiry of one year.	We agree to abide by the terms and conditions of this tender and our bid shall remain valid for 90 days from the date of submission of bid and price will be valid for one year from the date of submission of bid and it remain binding upon us which may be accepted by The Bank any time before expiry of one year.

12	148	Annexure D:Table D: Minimum technical requirement for Enterprise class Storage at DC and DR, Point 6	The Storage System should have minimum of 512 GB of Cache and should be scalable to 1 TB Cache for data and control operation. The write cache must be mirrored /protected to avoid any data loss in case of a failure	The Storage System should have minimum of 256 GB of Cache and should be scalable to 512 GB Cache for data and control operation. The write cache must be mirrored / protected to avoid any data loss in case of a failure
13	159	Table H: Minimum Technical requirement for SAN Director/switch, Point 3	Minimum 24X 32 Gbps/16 Gbps FC ports per Switch	Minimum 24X 32 Gbps FC ports per Switch
14	159	Table H: Minimum Technical requirement for SAN Director/switch , Point 6	The bidder has to give certificate of assurance for supply of proposed SAN switch over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory.	The bidder has to give certificate of assurance for supply of proposed SAN switch over a period of one (1) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory.
15	158	Table G: Minimum Technical requirement for Tape Backup Library, Point 16	The bidder has to give certificate of assurance for supply of proposed SAN switch over a period of five (5) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory.	The bidder has to give certificate of assurance for supply of proposed SAN switch over a period of One (1) year and support for period of seven (7) year shall be submitted on OEM letter head duly signed by authorized signatory.

16	14 & 199	Eligibility Criteria, Point 6 Annexure - F Eligibility Criteria Compliance, Point 6	Proposed OEMs for storage, load balancer, SAN switch, NAS Tool, Core Router, Core Switch, Core Firewall should have been supplied, integrated and running successfully as on date in at least one Public Sector Bank / Regional Rural Bank in India.	Proposed OEMs for storage, load balancer, SAN switch, Core Router, Core Switch, Core Firewall should have been supplied, integrated and running successfully as on date in at least one Public Sector Bank / Regional Rural Bank in India.
17	161	Annexure D Table I Pt. no. 16	The proposed solution should provide out of the box root cause analysis with multiple root cause algorithms inbuilt for root cause analysis.	Clause stands deleted
18	43	2. Broad Scope	m. Bank has taken SMS alert services through M/s. Netcore.	Clause stands deleted
19	51	3. Hardware Capacity Sizing	System Integrator has to migrate existing 200 nos. of LTO 4/ LTO 6 tapes to LTO 9 tapes to preserve all data files.	System Integrator has to migrate existing 80 nos. of LTO 6 tapes to LTO 9 tapes to preserve all data files.
20	Page 182	Table OHardware & Networking /Interface features for all firewallsPoint 7	The appliance hardware should be with at least 16 physical and 32 virtual cores with hyperthreading enabled, 64 GB RAM and at least 1 X 480 GB SSD storage from day 1	Clause stands deleted
21	Page No. 182	19	Vendor must provide evidence of year over year leadership position of Gartner Magic Quadrant for Enterprise network Firewall Gartner Magic Quadrant for last 5 years	clause stands deleted

22	109	Clause 6 Payment Terms Payment related to table A & B Point C	Remaining 50%, cost of Finacle related Hardware, Network equipment and Software cost (table A & table B) will be payable after successful migration (Go-Live) of Finacle 7.0.18 version to 10.2.25 with all the functionalities of the said software, including implementation of all hardware (Finacle & Biometric), software (related to Finacle & Biometric), network equipment at DC & DR sites and acceptance sign-off from the Bank realizing penalty charges, if any.	40%, cost of Finacle related Hardware, Network equipment and Software cost (table A & table B) will be payable after successful installation against a Bank Guarantee of same amount i.e., 40% cost of Finacle related Hardware, Network equipment and Software cost valid for 1 year with 3 months claim period. the BG is additional to performance Bank Guarantee and can be revoke in case of delay in installation of Finacle related Hardware, Network equipment and Software beyond the Liquidated damage period.  Remaining 10%, cost of Finacle related Hardware, Network equipment and Software cost (table A & table B) will be payable after successful migration (Go-Live) of Finacle 7.0.18 version to 10.2.25 with all the functionalities of the said software, including implementation of all hardware (Finacle & Biometric), software (related to Finacle & Biometric), network equipment at DC & DR sites and acceptance sign-off from the Bank realizing penalty charges, if any.
23	112	9. Uptime & Penalty	Core Network - 99.9%	Core Network - 99.5%
24	169	Table K - S. No.3	Should have at least 4 nos. 1000 Mbps Ethernet (copper) LAN/WAN, 4 no. of OFC WAN port with SR module and should have at least 2 No. of 10 Gigabit Ethernet (Fibre) with SR module from day one.	Should have at least 4 nos. 1000 Mbps Ethernet (copper) LAN/WAN, 2 no. of 1 Gigabyte OFC WAN port with SX/SR module and should have at least 2 No. of 10 Gigabit Ethernet (Fibre) with SR module from day one.
25	169	Table K - S. No.4	Routers should have at least 1 open slot for modular LAN and WAN connectivity options including Gigabit Ethernet and Fast Ethernet, interface modules.	Clause stand deleted
26	170	Table K - S. No.25	Routers should have Packet Filters like: Standard ACL, Extended ACL, Time range ACL"s etc.	Standard ACL, Extended ACL, Time range ACL"s etc. or equivalent
27	174	Table M - S. No.12	ACL & QoS entry support : minimum 16K ACL & minimum 16K QoS entry	ACL entry support : minimum 16K ACL

28	174	Table M - S. No.16	STP, PVLAN, First Hop Security(IPv6 Snooping Policy,IPv6 FHS Binding Table Content,IPv6 Neighbour Discovery Inspection,IPv6 Source Guard,IPv6 Prefix Guard,IPv6 Destination Guard etc), Link Aggregation Protocol (LACP)	Switch should support STP,PVLAN, LACP protocols
29	174	Table M - S. No.18	During system boots, the system's software signatures should be checked for integrity. System should capable to understand that system OS are authentic and unmodified, it should have cryptographically signed images to provide assurance that the firmware & BIOS are authentic.	Switch should have the hardened & updated BIOS & bootloader and the kernel are cryptographically protected
30	174	Table M - S. No.21	Proposed Switch should support dual serviceable FAN trays for cooling that is accessible from both front and rear side of chassis	Proposed Switch should support hot-swappable, redundant FANs for cooling
31	174	Table M - S. No.23	Switch should support PIM Spare Mode (PIM-SM), PIM Dense Mode (PIM-DM), PIM Sparse-Dense Mode (PIM-SDM), and PIM Source Specific Multicast Mode (PIM-SSM).	Switch should support PIM Spare Mode (PIM-SM), PIM Dense Mode (PIM-DM), and PIM Source Specific Multicast Mode (PIM-SSM)
32	176	Table M - S. No.25	Proposed switch should support minimum 8 power supply from day 1.	Proposed switch should support dual redundant (1+1) and hot-pluggable power supply from day 1
33	175	Table M - S. No.36	Switch should support a blue beacon LED which allows easy identification of the switch being accessed.	Switch should support a blue beacon LED which allows easy identification of the switch being accessed or equivalent
34	175	Table M - S. No.38	Switch should support GRE tunnels and NAT (Static, Dynamic, PAT) for integration with 3rd party or migration kind of scenarios	Switch should support GRE tunnels for integration with 3rd party or migration kind of scenarios
35	175	Table M - S. No.41	The switch should be CE Marking, UL 60950, EN 60950 and ROHS5	The switch should be CE Marking, UL 60950, EN 60950 and ROHS5 or higher
36	175	Table M - S. No.42	Switch should be at least EAL2 (Common Criteria) or above or NDPP Certified.	Switch should be at least EAL2 (Common Criteria) or above or NDPP or NDcPP Certified.

37	177	Table N - S. No. 14	VLAN encapsulation. Up to 64 VLANs should be supported. Support for 4000 VLAN IDs. Centralized VLAN Management. VLANs created on the Core Switches should be propagated automatically. Should support 802.1d, 802.1s, 802.1w, 802.3ad, Port Aggregation Protocol (PAgP), Link Aggregation Protocol (LACP). Support for Detection of Unidirectional Links and to disable them to avoid, Per-port broadcast, multicast, and storm control to prevent faulty end stations from degrading overall systems performance..	VLAN encapsulation. Up to 64 VLANs should be supported. Support for 4000 VLAN IDs. Centralized VLAN Management. VLANs created on the Core Switches should be propagated automatically. Should support 802.1d, 802.1s, 802.1w, 802.3ad, Link Aggregation Protocol (LACP). Support for Detection of Unidirectional Links and to disable them to avoid, Per-port broadcast, multicast, and storm control to prevent faulty end stations from degrading overall systems performance..
38	178	Table N - S. No. 34	The Switch should support Bridge protocol data unit (BPDU) Guard to shut down Spanning Tree Port Fast when BPDUs are received to avoid accidental topology loops.	The Switch should support Bridge protocol data unit (BPDU) Guard when BPDUs are received to avoid accidental topology loops."
39	178	Table N - S. No. 36	The Switch should support software image update and switch configuration without user intervention. - Optional	The Switch should support software image update and switch configuration.
40	179	Table N - S. No. 45	The Switch should support Full Flexible NetFlow v9 or equivalent which provides ability to characterize IP traffic and identify its source, traffic destination, timing, and application information and is critical for network availability, performance, and troubleshooting.	he Switch should support NetFlow/Jflow/Sflow or equivalent
41	179	Table N - S. No. 53	The Switch should have feature of configuration of settings for duplex(half or full), as well as for Bandwidth Ingress Rate(Upload Limit) and Egress Rate(Download Limit) for theswitches.	The Switch should have features of configuration of settings for duplex(half or full) and bandwidth rate limiting.
42	181	Table O Core firewall Point 1	The appliance hardware should be with atleast 6 physical with hyperthreading enabled /12 virtual cores, 16 GB RAM with option of compact flash.	The appliance hardware should be with atleast 6 physical with hyperthreading enabled /12 virtual cores, 16 GB RAM with option of compact flash/SSD



43	149	Table D: Minimum technical requirement for Enterprise class Storage at DC and DR, Point,12	Industry Standard RAID array supporting minimum 6 levels. It should support a mix and match of RAID levels behind a pair of controllers. The storage array should allow online expansion of existing RAID Groups / SSD Disk Pools.	Industry Standard RAID array supporting minimum 6 levels. The storage array should allow online expansion of existing RAID Groups / SSD Disk Pools
44	246	Table A: Summary Sheet for minimum Hardware/Software/Solution requirement for Finacle 10.x, 4	NAS for Finacle App layer - Enterprise Network Attached Storage (NAS) having all flash drives.  All flash drives to support 50000 NFS IOPS/concurrent connection or above with response time of < 2 milliseconds having usable 2 TB (RAID 6) and minimum 65534 subdirectories for a given directory from day 1	NAS for Finacle App layer - Enterprise Network Attached Storage (NAS) having all flash drives/SSD  a. Highly Available NAS Solution with SSD drives for metadata and data drives. b. Support of NFS & CIFS Protocols c. Minimum 2 x 10G NIC Ports for connecting to the app servers d. Minimum 2TB usable storage scalable to 10TB r. 30000 or more sub-directory support
45	178	Table E Minimum Technical Requirement for Network Attached Storage at DC, DR , Point 2	Propose Network Attached Storage System (NAS) with no single point of failure architecture. NAS solution should have file access with host connectivity for CIFS and NFS.	Propose Network Attached Storage Solution (NAS) with no single point of failure architecture. NAS solution should have file access with host connectivity for CIFS and NFS.
46	179	Table E Minimum Technical Requirement for Network Attached Storage at DC, DR , Point 6	The proposed storage array must support all Industry Standard RAID levels including 0, 1, 10, 5 and 6. The storage array should allow online expansion of existing RAID/Disk group.	The proposed NAS Solution must be configured with RAID6.

47	179	Table E Minimum Technical Requirement for Network Attached Storage at DC, DR , Point 7	The storage array should support Global Hot Spare (HS) Disks. A minimum of one global hot spare per 30 disks should be supplied and configured. These should be of the same type as used for all the type of disks used in this solution.	The storage array should support Global / Distributed Hot Spare disks as offered by the latest technology standard for highest uptime and resilience
48	179	Table E Minimum Technical Requirement for Network Attached Storage at DC, DR , Point 9	The storage array must have Space-efficient copy-on-write snapshots; supports NDMP-based backup	The storage array must have Space-efficient snapshots
49	179	Table E Minimum Technical Requirement for Network Attached Storage at DC, DR , Point 10	The Storage should support the following Network Protocols : NFS v3 & v4 (TCP/IP; UDP/IP); CIFS, NDMP v3, iSCSI (multitarget & multi-LUN), SNMP MiB II, HTTPS .	The Storage should support the following Network Protocols : NFS v3 & v4 (TCP/IP; UDP/IP); CIFS
50	179	Table E Minimum Technical Requirement for Network Attached Storage at DC, DR , Point 11	The storage array should support industry-leading Operating System platforms & clustering including: Windows, VMWare, Linux, Sun Solaris, HP -UX, IBM-AIX, OS, etc.	Clause stands deleted

51	181	Table E Minimum Technical Requireme nt for Network Attached Storage at DC, DR , Point 27	Should support minimum of 65534 subdirectories for a given directory or share as a part of the proposed NAS	Offered NAS Solution should support 30000 sub-directories for a given directory share
52	181	Table E Minimum Technical Requireme nt for Network Attached Storage at DC, DR , Point 30	The system should be quoted with 5years with 24 x 7 and 4 HR CTR Support by the OEM. (3 years Upfront warranty and AMC for year 4 and Year 5) The operating system, any system software's, management tools and security tools should also be quoted with 3 years and ATS for year 4 and Year 5 support 24x7 support. All the hardware should be quoted with 99.99% SLA uptime (calculated monthly) with 4 hours response time. Proactive services like Patches & fixes for the OS shall be provided free of cost during contract period for all the systems quoted. The servers will be commissioned by the OEM certified engineers only. The supplied hardware should be covered under Data Centre mission critical or equivalent support	The system should be quoted with 5years with 24 x 7 and 6 HR CTR Support by the OEM. (3 years Upfront warranty and AMC for year 4 and Year 5) The operating system, any system software's, management tools and security tools should also be quoted with 3 years and ATS for year 4 and Year 5 support 24x7 support. All the hardware should be quoted with 99.99% SLA uptime (calculated monthly) with 4 hours response time. Proactive services like Patches & fixes for the OS shall be provided free of cost during contract period for all the systems quoted. The servers will be commissioned by the OEM certified engineers only. The supplied hardware should be covered under Data Centre mission critical or equivalent support
53	1,80,181	Table O Peripheral Firewall, Internet & Extranet Firewall Point 2	The appliance hardware should be with atleast 6 physical with hyperthreading enabled /12 virtual cores, 16 GB RAM with option of compact flash.	The appliance hardware should be with atleast 6 physical with hyperthreading enabled /12 virtual cores, 16 GB RAM with option of compact flash/SSD
54	Page No. 182	5	Onboard 10/100/1000Base-T OOB management and USB ports dedicated for console management	Onboard 10/100/1000Base-T OOB management and USB ports dedicated for console management/management Port

55	160	Point 2 Technical Specification in EMS	It should have a secured single sign-on and unified console for all functions of components offered for seamless cross- functional navigation & launch for single pane of glass visibility across multiple areas of monitoring & management	The Propose EMS solution should have a secured single sign-on and unified console for all functions of components offered for seamless cross- functional navigation & launch for single pane of glass visibility across multiple areas of monitoring & management
56	165	Table J Minimum Technical requiremen t for Load Balancer with Application Delivery controller (ADC) Sl. No. 7	Appliance should support a LCD panel/LED to display alerts and fault information for an administrator to monitor the system	Appliance should support a LCD panel/LED to display or SYSLOG to send alerts and fault information for an administrator to monitor the system. For Syslog bidder need to factor for additional syslog servers without any additional cost to bank.
57	168	Table J Minimum Technical requiremen t for Load Balancer with Application Delivery controller (ADC)Sl. No. 55	The appliance should have feature of GSLB with Per host name TTL value controlGSLB (Global Server Load Balancer) for Application Failover across Datacentre.GSLB should be capable of monitoring health of application across data centre example Primary site and DR site. Support DNS Rate Limiting and DNS report per host name	The appliance should have feature of GSLB (Global Server Load Balancer) for Application Failover across Datacentre. GSLB should be capable of monitoring health of application across data centre example Primary site and DR site.

58	169	Table J Minimum Technical requiremen t for Load Balancer with Application Delivery controller (ADC) Sl. No. 56	The proposed solution should provide DNS reporting per user request with statistics last second, minute, hour usage and peak usage per application host name	The proposed solution should provide GSLB reporting
59	72	6.6 System Administrati on	File/system/application access management in approval from Bank - Maintaining file and directory permissions on OS and application access management like creating user accounts at application level, assigning application access, setting application passwords, user lockout etc.	Clause stands deleted
60	75	6.13 Database Monitoring and Administrati on	Perform pre-batch activities- Scheduling of resources- Scheduling batch services-Define, maintain and document a work schedule for running production system batch jobs, and possible started tasks- Install and document system related batch jobs in the automated job scheduling package-Manage the root cause analysis for scheduling problems- Develop and maintain standards for job acceptance and implementation. The System Integrator can either use scripts or propose a tool for batch automation • Remove applications from the application portfolio following decommissioning from projects or improvements.	Clause stands deleted

61	79	6.24 System Configuration Management	System Release - All of the deliverables referred to below, shall be delivered to the Bank on commencement of the User Acceptance Testing (UAT) following the correction of any "Non Compliances". o Software Executables o Customized Software Source Code o System Requirements Specification o Logical Data Base Design and Data Dictionary o Technical Design Documents	Clause stands deleted
62	173	Table M - S. No.4	Switch should support field replaceable components such as Supervisor, Line cards , Power-supply and Fan trays and have embedded RFID tag which facilitates easy asset/inventory management using commercial RFID readers.	Clause stands deleted
63	175	Table M - S. No.29	Switch should support 144 numbers of 1G copper PoE+ ports OR UPOE ports	Clause stands deleted
64	175	Table M - S. No.30	Switch should support 48 nos. of 10G ports for future	Clause stands deleted
65	175	Table M - S. No.30	Switch should support 24 Multigigabit 100/1000 Mbps	Clause stands deleted
66	175	Table M - S. No.32	Switch must provide Application visibility using Deep packet inspection technology or equivalent	Clause stands deleted
67	180	Table O, Core Firewall	Intelligent mode/flow mode should be turned off while providing the details about performance number. SI may be asked to do the proof of concept to establish the fact that device meets the following performance requirement.	Clause stands deleted
68	162	Point # 22 in Table I Minimum Technical requirement for EMS Tool	Will support audit and remediation against industry best practice content such as PCI or CIS or MSFT.	Clause stands deleted

69	76	6.13 Database Monitoring and Administration	Cloning of application data environments.	Clause stands deleted
70	179	Table E Minimum Technical Requirement for Network Attached Storage at DC, DR , Point 12	The proposed storage should perform write cache mirroring for data availability. The cache mirroring should happen over dedicated paths/bus between the controllers without using the external host and/or disk ports.	Clause stands deleted
71	153	Table E Minimum Technical Requirement for Network Attached Storage at DC, DR , Point 13	The proposed storage array must have minimum 128 GB memory across the two SAN controllers and scalable to 256 GB	Clause stands deleted
72	180	Table E Minimum Technical Requirement for Network Attached Storage at DC, DR , Point 14	The cache management should be adaptive as per the I/O workload. The storage should dynamically allocate cache to accommodate the changing I/O workload and not restrict the write cache to value less than 20% of total cache available.	Clause stands deleted

73	180	Table E Minimum Technical Requirement for Network Attached Storage at DC, DR , Point 15	The proposed storage array systems must natively support automated Sub-LUN tiering of data within the Storage to achieve improved performance and lower Total cost of Ownership.	Clause stands deleted
74	180	Table E Minimum Technical Requirement for Network Attached Storage at DC, DR , Point 18	Array should be provide wish all software like clone, snap shot, replication, performance management & QOS	Clause stands deleted
75	180	Table E Minimum Technical Requirement for Network Attached Storage at DC, DR , Point 19	The storage array should support pointer based, space efficient Snapshots. The full copy Clones with update incremental data synchronization. The snapshot copies to be independent of each other, restoring a snapshot of production LUN should not invalidate the rest of the snaps for the same production LUN. If licensed separately, necessary licenses for entire capacity to be included.	Clause stands deleted
76	180	Table E Minimum Technical Requirement for Network Attached Storage at DC, DR , Point 21	The storage array should support policy-based compression and/or deduplication providing space efficiency.	Clause stands deleted



77	180	Table E Minimum Technical Requireme nt for Network Attached Storage at DC, DR , Point 22	The proposed storage array must support data at rest encryption offering industry standard certification/compliance. The storage array may implement data at rest encryption using self-encrypting drives or controller based functionality there by not impacting performance.	Clause stands deleted
78	181	Table E Minimum Technical Requireme nt for Network Attached Storage at DC, DR , Point 23	Synchronous and asynchronous replication with 2/3-way topology should be supported. If licensed separately, necessary licenses for asynchronous replication for entire capacity with above features to be included.	Clause stands deleted
79	181	Table E Minimum Technical Requireme nt for Network Attached Storage at DC, DR , Point 24	The storage array must support latest versions of leading operating systems like Solaris (Solaris 10 and onwards) Linux (RHEL and SUSE), Windows 2012/2008, UNIX (AIX / HPUX /Solaris), etc. The array system shall support virtualized environment for VMware, Citrix Xen Server and Microsoft Hyper-V.	Clause stands deleted
80	181	Table E Minimum Technical Requireme nt for Network Attached Storage at DC, DR , Point 25	Offered Storage Shall support all above OS-level Clustering from leading OEM's.	Clause stands deleted

81	166	Table J Minimum Technical requiremen t for Load Balancer with Application Delivery controller (ADC)Sl. No. 14	The Proposed solution must support Database Load Balancing at Database layer.	Clause stands deleted
82	112	9. Uptime & Penalty	Response time for replacement/rectification for UAT related hardware and Branch Network item is 24 hours If the System Integrator fails to rectify/replace faulty hardware within stipulated time mentioned above, then System Integrator will be penalized by 0.5%/per hours or part thereof of monthly facility management cost and same will be deducted from monthly FM changes. This penalty will be independent of other penalties	Response time for replacement/rectification for UAT related hardware and Branch Network item is 24 hours If the System Integrator fails to rectify/replace faulty hardware within stipulated time mentioned above, then System Integrator will be penalized by 1% per day or part thereof of faulty hardware cost and same will be deducted from monthly FM changes. This penalty will be independent of other penalties
83	172	Table L:	Minimum Technical requirement for Branch Router -Routers should have Packet Filters like: Standard ACL, Extended ACL, Time range ACL"s etc	Standard ACL, Extended ACL, Time range ACL"s etc. or equivalent
84	13 & 198	Eligibility Criteria, Point 3 Annexure - F Eligibility Criteria Compliance, Point 3	The Bidder should have operating Profit in the last three financial years (2019-20, 2020-21 & 2021-22).	Bidder should have maintained a positive net-worth in the last three financial years 2019-20, 2020-21 & 2021-22

85	Page 182	Table O Hardware & Networking /Interface features for all firewalls Point 6	The appliance must be fully populated with at least 4 X 10G SFP+ and 8 X 1G Gigabit Base-T and interfaces from day 1 with dual power supply	Clause stands deleted
86	Page 180	Table O Core firewall1 Point 1	The appliance must be fully populated with at least 4 X 10G SFP+ and 8 X 1G Gigabit Base-T and interfaces from day 1 with dual power supply	The appliance must be fully populated with at least 4 X 10G SFP+ and 8 X 1G Gigabit Base-T and 2X 10G interfaces for HA from day 1 with dual power supply
87	Page 182	Table O Hardware & Networking /Interface features for all firewalls Point 8	NGFW must have minimum Next Generation Firewall with IPS and application visibility throughput of 20 Gbps.	Clause stands deleted
88	Page 182	Table O Hardware & Networking /Interface features for all firewalls Point 9	NGFW must have minimum Firewall with IPS throughput of 20 Gbps	Clause stands deleted
89	Page 182	Table O Hardware & Networking /Interface features for all firewalls Point 10	The Next Generation Threat Prevention Throughput must be at least 5 Gbps from day 1	Clause stands deleted

90	Page 182	Table O Hardware & Networking /Interface features for all firewalls Point 12	NGFW must support at least 330K connection per second and 16M concurrent connections from day 1	Clause stands deleted
91	page 107	Clause 3	New Clause	Completion of Performance testing, Load Testing of Hardware, data Migration testing & Functional testing. - -- M7
92	Page No 148	Table D: Minimum technical requirement for Enterprise class Storage at DC and DR POINT 4	Storage system shall be configured with adequate number of Backend FC/SAS Disk ports (towards disks) so as to meet the required performance specifications.	Storage system shall be configured with adequate number of Backend FC/SAS/NVMe Disk ports (towards disks) so as to meet the required performance specifications
93	Page No 149	Table D: Minimum technical requirement for Enterprise class Storage at DC and DR POINT 9	Storage should have features like Snapshot, Clone, Temper proof/read only copy, and multisite replication etc. Storage providing enterprise class data availability	Storage should have features like Snapshot, Clone / Writeable Snapshots, Temper proof/read only copy, and multisite replication etc. Storage providing enterprise class data availability.
94	Page No 150	Table D: Minimum technical requirement for Enterprise class Storage at DC and DR POINT 23	Should be firmware upgradable for functionality improvements and enhancements. Must support nondisruptive upgrade of core software, BIOS, snapshot, clone remote mirroring and management software without shutting down the storage system. All host attached servers must be fully operational during system level or maintenance upgrade procedures.	Should be firmware upgradable for functionality improvements and enhancements. Must support nondisruptive upgrade of core software, BIOS, snapshot, clone / Writeable Snapshots remote mirroring and management software without shutting down the storage system. All host attached servers must be fully operational during system level or maintenance upgrade procedures

95	Page No 155	Table F: Minimum Technical requirement for Backup Software POINT 3	Should be available on various OS platforms which are supported by OEMs such as different variant of Windows and Linux platforms and be capable of supporting backup / restores from and various platforms including Windows, Unix Linux. Both Server and Client software should be capable of running on all these platforms.	Should be available on various OS platforms which are supported by OEMs such as different variant of Windows and Linux platforms and be capable of supporting backup /restores from and various platforms including Windows, Unix Linux. Backup Server software should be capable of running on Windows or Linux platform with High Availability configuration."
96	Page No 158	Table G: Minimum Technical requirement for Tape Backup Library POINT 4	Tape Library shall be offered with minimum of 20 cartridge slots and barcode reader. Bidder should provide all the drives in all the slots configured. Bidder should provide all the drives in all the slots configured	Tape Library shall be offered with minimum of 20 cartridge slots/library. Bidder should provide all the drives in all the slots configured.
97	Page No 146	Table C: Required Minimum Basic Technical Requirement – All Types of servers	6) Minimum 2 x 2.4 or 4X1.2 SFF 15K RPM SAS HDD / SSD Hot Pluggable Drive.	Minimum 2 x 2.4 or 4X1.2 SFF 15K RPM SAS HDD / 2x1.92 SSD Hot Pluggable Drive.

**Additional clause:**

Sl. No	Table L1: Minimum Technical requirement for Internet, Extranet & Backup Routers	Compliance (Yes/No)	Remark
1	Modular architecture for scalability and should be a single box configuration for ease of management.		
2	Should have a dedicated console port and USB port for storage of configuration/image.		
3	Should have at least 4 Nos. 10/100/1000 Mbps Ethernet Interfaces LAN Interface from day one		
4	Should have at least 4 No. of Gigabit Ethernet WAN Port and out of that two port should be OFC WAN port with compatible SFP from day one.		
5	Should support debugging capabilities to assist in problem Resolution		
6	Should have hardware assisted VPN acceleration.		

7	Router should support minimum 100 Mbps real world WAN bandwidth with all the services enabled on the router		
8	Should have other IP Services like GRE tunnelling, ACLs, IPSEC VPNs, NAT services, Router should support HSRP or VRRP for Redundancy		
9	Routers should have queuing		
10	Routers should have marking, policing and shaping.		
11	Routers should have IPV6 compliance from day one		
12	Routers should IPv6 transport packets between IPv6-only and IPv4-only endpoints, ICMPv6, IPv6 DHCP.		
13	Support for the following IP v6 features: RIP NG , OSPF v3 , BGP Support for V6, IP V6 Dual Stack, NAT 64/Suitable Network address translation/tunnelling for IPv6, IP v6 Policy based Routing, and IP v6 QoS, SNMP V3 over IPv6		
14	Router should support protocols like IPv4, IPv6, VRRP, Static Routes, RIPv1, RIPv2, OSPF, IS-IS, BGP, MBGP, BFD, Policy based routing, IPv4 and IPv6 tunnelling from day 1		
15	The router should have WAN protocols like PPP / Multilink PPP / PPPoE, etc.		
16	Dynamic Host Control Protocol (DHCP) server/relay/client		
17	Dynamic DNS Support		
18	Support for 802.1q VLANs, Demilitarized Zone (DMZ)/security zones/Equivalent		
19	Should have IGMP v1/v2/v3, PIM-DM, PIMSM, Source Specific Multicast (SSM)		
20	Routers should have Configuration rollback		
21	Should support network traffic monitoring, Security, Denial of Service (DoS) capabilities and network monitoring		
22	Routers should support Software upgrades as and when Necessary		
23	Routers should have SNMPv2 and SNMPv3		
24	Routers should have AAA authentication using RADIUS and TACACS		
25	Routers should have Packet Filters like: Standard ACL, Extended ACL, etc.		
26	Router should support advanced application inspection and Control		
27	Routers should have Tunnels (GRE, IPsec)		
28	The router should support IPsec Framework for Secured Data transfer Key Exchange : Internet Key Exchange (IKE), IKEv2, Pre-Shared Keys (PSK), Public Key Infrastructure PKI (X.509), RSA encrypted nonces/ RSA Signatures etc, IPsec Data Encapsulation AH and ESP.		
29	NAT transparency, Firewall support for clients		
30	IPsec 3DES termination/initiation, IPsec passthrough		
31	Routers should have DES, 3DES, AES encryption, encryption. Authentication Algorithm: SHA1 and SHA2, Group: Diffie-		

	Hellman (DH) Group 1, 2, 5		
32	Routers should have generation of SNMP traps and syslog		
33	Routers should have Network address translation (NAT) and PAT		
34	Extensive debugs on all protocols		
35	Shall have Secure Shell for secure connectivity		
36	Management should support: Telnet, Simple Network Management Protocol (SNMP), CLI/Web based HTTP management, RADIUS		
37	Attach solution document containing detailed bill of material (make, model, OS details: version, date of release, date of release of next version, end of sale & support date, product development path, etc.)		
38	Solution should integrate seamlessly with Bank's existing network Infrastructure.		
39	should be at least EAL2/EAL3/or above/NIAP/NDPP/ NDcPP or above Certified		
40	The Router should not have any perforations at the top to prevent any type of contamination effect.		

### **New Items Added in Bill of Materials**

**In Annexure R: Technical Bill of Material, Annexure E : Commercial Bid, Annexure S : Mux Commercial Bid**

**Backup Router at DC 2 nos. and DR 2 Nos. as per specifications given in table L1**