

## Answer to Queries raised during Pre-Bid Meeting dated 2076-03-17, Clarification and Amendment in Technical Specifications in Bid Document

Category	Item	Bank's Requirement	Query	Response
A.1 Virtualization Software	License	Perpetual license for VMware vSphere 6.7 Enterprise Plus Edition with Operations Management for 4 processor.	1) Request to amend to read: "vSphere 6.7 Enterprise Plus edition - 4 Qty and vRealize Operations Standard - 4 Qty" 2) Request to change the requirement to 4 CPU vSphere Enterprise Plus and vRealize Operations Managers. Reason: Operations Management no longer bundled with Enterprise Plus Edition.	The requirement is amended as: "4 x Perpetual license for VMware vSphere 6.7 Enterprise Plus edition plus 4 x vRealize Operations Standard"
	Warranty	1 year OEM Support, Service and full Subscription.	1) Request to clarify whether Basic (working days/Working hour) or Production (24x7) support is required.	The requirement is amended as: "1 year OEM basic support (working days/Working hour), Service and full Subscription."
	Training	Bidder shall provide 40 hours VCP level (VMware vSphere 6.7: Install, Configure and Manage) instructor-led training for two groups with at least 2 people in each group. The instructor shall be Certified Professional by VMware on specified topic.	1) Request to clarify on arrangement of Venue and precise number of Participants. Also, Request to clarify whether both groups can be combined.	Training will be a site determined by vendor, outside NRB. There will be two groups of at least 2 people and at most 4 people per group. Groups can not be combined.

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	System Deployment	Bidder shall required to supply, install and configure fully operational system. Therefore, they need to supply all components required for a fully operational system, regardless of whether that component are mentioned in the requirements. It shall be reponsibility of bidder to make adequate tuning and/or migration on existing system during system deployment if required.	1) Request to clarify on exact number of Physical-to-Virtual and Virtual-to-Virtual Migration. Also, request to clarify whether migration can be done during office hour or off hours	Roughly 50+ machines (Physical and Virtual) will be there for migration. Migration can not be done during office hour unless there is a guarantee of zero downtime.
B.1 Enterprise Email system (Exchange Server)	Warranty	1 year OEM Support, Service and full Subscription for Enterprise e-mail System as a whole.	1) Request to clarify on whether Vendor support is acceptable as OEM will not directly provide support	The requirement is ammended as: "1 year OEM and/or Vendor Support, Service and full Subscription for Enterprise e-mail System as a whole."
	Training	Comprehensive Technical, Operational and Troubleshooting training along with training materials shall be provided for the supplied solution. (14 hrs each for two groups).	1) Request to clarify on tentative number of participants an location of training	Training will be a site determined by vendor, outside NRB. There will be two groups of at least 2 people and at most 4 people per group. Groups can not be combined
B.2 Microsoft Windows Server 2016	Microsoft Windows	Microsoft Windows Server 2016 Standard Edition with minimum numbers of CAL	1) Request to clarify whether NRB will use existing CAL for implementing AD	NRB will use existing CAL for its AD deployment
C.1 Storage Area Network	Interface	Shall have 6 x 16Gbps or higher FC Ports per controller with 16Gbps SFPs and cables	1) Request to ammend to read: "Shall have 4x16Gbps or higher FC ports per controller with 16 Gbps SFPs and Cables"	The requirement is not changed, however, the vendor must also accommodate for SAN Switch SFP as well as SAN Storage
	Compatibility	Shall support existing SAN infrastructure including SAN Switch and SAN Storage	1) Request to provide existing SAN detail	SAN Switch is Cisco MDS 9148S. Existing SAN storage is Netapp FAS 2552

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D.1 Consolidated Backup Software	Product adaption	Backup solution shall have at least one installation in any Enterprise / Govt organization in Nepal for 50 TB or higher Backup solution Capacity in last 3 years and prove of the same shall be provided by bidder in behalf of OEM.	1) Request to remove Reason: New product in Nepal, and hence not widely adopted.	No change
	Replication and Optimization	All necessary hardware and licenses for achieving consistent replication of backup data shall be quoted	1) Request to clarify on whether hardware is required for replication	Vendor can purpose the hardware for replication if necessary.
			1) Request to clarify on number of CPU of Vmware hosts and Physical Servers that are planned to take backup	The requirement for this group is based on total backup volume, and is irrespective of number of machines
				The vendor must ensure that the backup server is compatible with existing SAN infrastructure as mentioned above as well as Quantum Scalar i80 tape library with SAN tape drive, and hence must include any additional hardware in order to make it functional
E.1 Edge Firewall	Brand	Listed in Gartner's Magic Quadrant for Enterprise Network Firewalls, Published on 10 July 2017 ID:G00310171	1) Request to ammend to read: "Listed in Leader quadrant of Gartner's Magic Quadrant for Enterprise Network Firewall since past 3 years, Published on 10 July 2017"	No change
	Interface	8 x 1G ports and 4 x 10 G ports or Higher	1) Request to clarify on Copper and Optical SFP required to provide	Copper ports are required for 1G ports, 10G ports can be either copper or fiber. In either case, appropriate SFP modules should be incorporated
	Hardware Architecture	Atleast 200GB SSD to storage OS/Application/Logs etc and shall have additional SSD slot for future upgrade.	1) Request change 200GB SSD to 900GB HDD/SSD	No change

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	Performance & Scalability	Shall have atleast 10 Gbps firewall throughput	1) Request to clarify whether production or next-generation firewall throughput 2) Request to ammend to read: "At least 20Gbps firewall throughput"	NRB is looking for production throughput. Vendor is free to purpose higher than NRB requirement.
		Shall have atleast 4 Gbps of production performance / multiprotocol combined firewall &IPS throughput	1) Request to clarify on threat-prevention throughput with lab-report 2) Request to ammend to read: "At least 4.5Gbps of NGFW production performance/real world/enterprise mix traffic"	NRB is looking for production throughput. Vendor is free to purpose higher than NRB requirement.
		Shall have atleast 1.5 Gbps of IPSec VPN throughput	1) Request to include lab-reports of test 2) Request to ammend to read: "Shall have at least 5 Gbps of VPN traffic"	No change
		Shall have atleast 2,000,000 concurrent sessions with application control feature enabled	Request to ammend to read: " Shall have at least 1,000,000 concurrent TCP sessions" Request to ammend to read: "Shall have at least 10 Million concurrent sessions with application control feature enabled"	The requirement is ammended as: "Shall have at least 2,000,000 concurrent TCP/UDP sessions with application control feature enabled"
		Shall have atleast 20,000 new sessions per second with application control feature enabled	1) Request to ammend to read: " Shall have at least 20,000 new TCP session per second with application control feature enabled" 2) Request to ammend to read: "Shall have at least 160000 new sessions per second with application control feature enabled"	The requirement is ammended as: "Shall have at least 20,000 new TCP/UDP sessions per second with application control feature enabled"
		Shall support atleast 1024 VLANs	1) Request to ammend to read: "Shall support atleast 1024 VLANs with 5 virtual firewall license"	No change

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	Application control & URL filtering	Shall support Reputation- and category-based URL filtering offering comprehensive alerting and control over suspect web traffic and enforces policies on more than 280 million of URLs in more than 80 categories.	1) Vendor Specific 2) Request to ammend to read: " Shall have signature database of 6000+ application and 200 million URL's with more than 80+ categories	No change
	Management, Reporting and Alerting	Centralized management shall be separate appliance. It shall be Hardware appliance and support at least 30M events.	1) Request to ammend to read: "Centralized management shall be separate appliance" 2) Request to clarify if VM on a separate server is acceptable	VM option is acceptable if separate Server (with at least 16 core processor, 128 GB RAM and 1 TB usable storage ) is also being provided as part of the project. The specification of provided server must be enough to process one year worth of logs, and hence the vendor should increase the specification if they think above specification is not enough
	Warranty an License	Solution shall include 3 years warranty on devices and 3 years Licensing of Firewall, IPS/IDS, Application and URL Filtering, Event detection and log analysis function, Reporting and monitoring function, and Sandbox.	1) Request to ammend to read: "Solution shall include 3 years warranty on devices and 3 years Licensing of Firewall, IPS/IDS, Virtual Firewall, Application and URL Filtering, Event detection and log analysis function, Reporting and monitoring function, and Sandbox."	No change
		License period shall start from date of handover.	1) Request to clarify on date of handover	Date of handover is generally considered as date of billing, or date of issuance of PDI report, whichever is later.
F.1 Backup Server	Processor	Shall have 1 x 12 Core Intel Xeon Processors with minimum clock speed of 2.4 GHz, 25MB Cache or Higher	1) Request to update Processor to latest generation processor	The requirement is ammended as: "Shall have 1 x 12 Core Intel Xeon Processors with minimum clock speed of 2.4 GHz, 19MB Cache or Higher"

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	Storage	The server shall support at least 24 x Cisco 12G SAS/SSD Modular Raid Controller with 4GB Cache Memory.	1) Request to clarify on 4GB Cache required, or 24 bay with 4GB Cache Also, request to remove Cisco	The servers is shall be able to use existing Cisco SAS HDD. It should have RAID controller with 4GB cache memory, and bay to support 24 Cisco 12G 600GB 10K SAS HDD
				The vendor must ensure that the backup server is compatible with existing SAN infrastructure as mentioned above as well as Quantum Scalar i80 tape library with SAN tape drive, and hence must include any additional hardware in order to make it functional
F.2 Active Directory Server	Processor	2 x 12 Core Intel Xeon Processors with minimum clock speed of 2.6 GHz, 25MB Cache, or higher	1) Request to update Processor to latest generation processor	This requirement has ammended as: "2 x 12 Core Intel Xeon Processors (Sixth Generation) with minimum clock speed of 2.6 GHz, 19MB Cache, or higher"
G.1 Core Switch	Port	48 x SFP+ & 6 x QSFP+ (should be able to use 10G breakout cable for 10G) and should be equipped with 48x 10G optics MMF LC on SFP+ ports. Optics should be of same OEM as of Core switch.	Please Clarify on the Type and Quantity of Optics	48X10G optics MMF is required and should be from same OEM as of the Core Switch
	Performance	Switching capacity: 1.4 Tbps Forwarding Performance: 1Bpps	Forwarding Performance is a vendor specific	No change
	Performance	L3 Routes: IPv4 16K min./112K max., IPv6 8K min./56K max.	Request to ammend to read "L3 Routes: IP v4 min 112K, IPV6 min 56k" Reason: Vendor Specific	No Change
	L3 Features	Null route	Request to remove Reason: Vendor Specific	The requirement is removed

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L3 Features	OSPFv2 (include RFC2328 PDC Encryption, RFC1370 Virtual Link, RFC3101 Route Aggregation, RFC1365 Route Filtering)	Request to ammend to read "OSPFv2 (include RFC2328 PDC Encryption, RFC1370 Virtual Link, RFC3101 Route Aggregation, RFC1365 Route Filtering) with OSPF v2 and OSPF v3" Reason: Vendor Specific	The requirement is ammended to read as: "Static route, RIP v1/v2, OSPFv2, OSPFv3, BGP, ECMP"
L3 Features	IP Redundancy: DHCP Relay	Request to ammend to read: "IP Redundancy: DHCP" Reason: Vendor Specific	No Change.
L3 Features IPv6	Multicast Routing: PIM6-DM PIM6-SM DHCPv6 Relay and BGP on future requirement.	Request to ammend to read: "Multicast Routing: PIM6-DM PIM6-SM DHCP and BGP on future requirement" Reason: Vendor Specific	The requirement is ammended to read: "Multicast Routing: PIM-DM, PIM-SM, PIM-DM"
Data Center Features	MC-LAG	Request to ammend to read: "MC-LAG/LACP" Reason: Vendor Specific	The requirement is ammended to read: "MC LAG or equivalent"
Data Center Features	Multicast Routing Flow Table: 72 K entries	Request to ammend to read: "Multicast Routing Flow Table: 8 K entries" Reason: Vendor Specific	No change
Power	Input Current: Max 6 A @100/120 VAC, 3 A @200/240 VAC	Request to ammend to read: "Input Current Input Voltage (AC) 100 to 240V" Reason: Vendor Specific	The requirement is ammended to read: "Input Voltage 100-240V"
Power	PSU Efficiency: Up to 93% for AC PSUs	Request to ammend to read: "PSU N+1 topology" Reason: Vendor Specific	The requirement is ammended to read: "PSU Redundant N+1"
L2 Features	MC-LAG	Request to delete Reason: Vendor Specific	The requirement is ammended to read: "MC LAG or equivalent"
L2 Features	VXLAN Ready	Request to delete Reason: Either add on TOR switch too, or remove from Core Switch	No change
L2 Features	Load balance based on MAC SA/DA, SIP, DIP, TCP/UDP Port	Request to delete Reason: Vendor Specific	Ammended: Accept to remove

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	QoS Features	Diffserv: SRTCM (1 rate 3 color) color aware/color blind	Request to delete Reason: Vendor Specific	The requirement is removed
	QoS Features	Diffserv: TRTCM (2 rate 3 color) color aware/color blind	Request to delete Reason: Vendor Specific	The requirement is removed
G.2 Link Switch	Ports	24 GE with 2x10G SFP+ & also should support 40G QSFP+ port on future requirement.	Request to ammend to read: "24 GE with 2x10G SFP+ ports"	No change
	Performance	Switching capacity: 288Gbps Forwarding Performance: 200Mpps	Vendor Specific	No change
	Stack Bandwidth	80Gbps	Vendor Specific	No change
	Storage Environment	Temperature: -40°C to 70°C Altitude: 15,000 ft	Request to ammend to read: "Temperature: -5°C to +45°C Altitude: 10,000 ft" Reason: Vendor Specific	The requirement is ammended to read: "Temperature: -40°C to 70°C, Altitude: 10.000 ft"
	Power Consumption of standalone (in Watts)	84.97 (max)	Request to delete Reason: Vendor Specific	The requirement is removed
G.3 TOR Switch	Port	24 GE with 2x10G SFP. Should be with same OEM's 2 x10G MMF LC optics on uplink ports.	Request to ammend to read: "24x Gigabit Ethernet ports"	No change
	Storage Environment	Temperature: -40°C to 70°C Altitude: 15,000 ft	Request to ammend to read: "Temperature: -5°C to +45°C Altitude: 10,000 ft" Reason: Vendor Specific	The requirement is ammended to read: "Temperature: -40°C to 70°C, Altitude: 10.000 ft"
	Power Consumption of standalone (in Watts)	84.97 (max)	Request to delete Reason: Vendor Specific	The requirement is removed

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