

Not Part of Bidding Document

Leveraging ICT for Growth, Employment & Governance Project



Bangladesh Computer Council (BCC)

Information and Communication Technology Division

Ministry of Posts, Telecommunications and Information Technology

ICT Tower, Plot # E-14/X, Agargaon, Dhaka-1207, Bangladesh

Phone: 8181392, 8181397 Fax: 8181383, E-mail: pd.lict@bcc.gov.bd

Memo No 56.109.007.0000.87.2018- 1048

Date: 14 October 2018

Minutes of the Pre-bid meeting on Supply, Installation and Commissioning of Cloud Computing Platform in National Data Center (Contract Package# AF-G8):

A Pre-bid meeting for the procurement of Goods for Supply, Installation and Commissioning of Cloud Computing Platform in National Data Center (Contract Package# AF-G8) was held on October 03, 2018 at 11:00 a.m. at the Conference Room of the Bangladesh Computer Council (BCC). The Pre-bid meeting was chaired by Project Director, Leveraging ICT for Growth, Employment and Governance Project. Project officials and representatives from potential bidders participated in the Conference (Attendance record is attached herewith as Attachment- 1).

2. The Chairperson welcomed the representatives of the potential bidders present in the meeting and explained the objectives of the project briefly. He then requested the participants to introduce themselves.

3. The Deputy Project Director of the project delivered a power point presentation highlighting important milestones & guidelines to be followed in the procurement process. Deputy Project Director Mr. Tarique M. Barkatullah gave emphasis on important milestones. The last date of the bid submission is October 24, 2018 at 3.00 PM and the opening will be at 3.30 PM on the same date in presence of bidders' representatives (if present). He appraised the potential bidders to prepare their bids in compliance with the requirements specified in ITB, Bid Data Sheet, GCC & SCC clauses mentioned in the Bidding Document.

4. He informed the meeting that the selection method of the Goods is International Competitive Bidding (ICB). He clearly discussed the bid and bid security validity period. Bid validity will be 120 days after the deadline of bid submission and the bid security validity will be 28 days beyond the validity period of the bid i.e.148 days (120 plus 28 days).

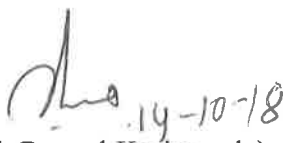
5. After completion of the presentation session, the Chairperson opened the floor to for clarifications from the potential bidders' representatives present in the pre-proposal conference. Project Director requested the potential bidders to send their queries on or before October 03, 6.00 pm. He also informed that the authority has already received queries from two firms. The written response to the queries will be send in due time.

6. During discussion the project authority informed the meeting that the bid price will include three years warranty period.

7. The meeting was also informed that in the case of a Bidder who offers to supply and install major items of supply under the contract that the Bidder did not manufacture or otherwise produce, the Bidder shall provide the Manufacturer's Authorizations from the Manufacturer's Official Channel for the end user's territory (i.e. Bangladesh), using the form provided in Section IV, showing that the Bidder has been duly authorized by the manufacturer or producer of the related sub system or component to supply and install that item in the Purchaser's Country.

8. Project authority has received the following queries through email from the potential bidders. The responses are also provided against the queries (**Attachment-2**).

11. Having no other queries to be clarified, the meeting ended with a vote of thanks from the Chair.


(Md. Rezaul Karim, ndc)
Project Director

Memo No 56.109.007.0000.87.2018-1048

Date: 14 October 2018

Copy forwarded for kind information & necessary action with request to acknowledge receipt in writing within 2 days:

1. Name:

Address:

2. Office Copy.


(Md. Rezaul Karim, ndc)
Project Director





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Attendance of Bidder/Bidder's representatives

Ref.: Memo No. 56.109.007.0000.87.2018-981

, Date: 10/09/2018

Pre-bid meeting for "Supply, Installation and Commissioning of Cloud Computing Platform in National Data Center (Package #AF-G8)"

Date: October 03, 2018

Time: 11:00 am

SL	Name and Designation	Name of the Firm with address, contract no. and e-mail	Signature
1.	MR. SAIDUL ISLAM TALUKDER Network Architect	Oculin Tech BD Ltd. 822/3, Begum Rakya Sharani, Mirpur CALL NO: 01755639343 SAIDUL ISLAM @oculintech.com	
2.	Engr. Inzul Hasan Prot. Manager	Oculin Tech BD Ltd. 822/3, Begum Rakya Sharani Mirpur Mobile: 01717713353 Email: inzul.hasan@oculitech.com	
3.	Mohammad Zohurul Haq Country Manager.	N-able PST Limited. 0187181176 zohurul@n-able.biz ✓ zohurul@n-able.biz	
4.	Mamun Sirajul Majid Mr. Debashis	Subra Systems Ltd Tech Mahindra	



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SL	Name and Designation	Name of the Firm with address, contract no. and e-mail	Signature
5.	Maruf AL Mahmud Manager, Enterprise Sol	Reve Systems Ltd 9, Puboachal Empress 01814655931 maruf.mahmud@revesoft.com	
6.	Moshiruz Ahamed Manager - Pra Sol	Thakral Informatics Systems Ltd. 01709654176 moshiruz.ahamed@thakralbd.com	
7.	Rezwana Mahbub	Thakral Inf Systems Pvt Ltd. 01911511912 r.mahbub@thakralbd.com	
8.	Md. Moimul Haque DGM, Sales	Computer Services Ltd. Mohakhali Dots Phone # 01819258772 abu.sadek@computerservicesltd.com	
9.	KAUSHIK MITRA AGM -	Express Systems Ltd 01755513830 kaushik.mitra@est.com.bd	



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SL	Name and Designation	Name of the Firm with address, contract no. and e-mail	Signature
10.	Md. Rajul Hasan Senior Engineer, Application & Platform	Express Systems Limited, 8/2, Syamoli, Dhaka-1207 Cell: 01755013814 Email: rajulhasan@est.com.bd	
11.	Md. Golam Quawser Manager, DE facilities	n	
12.	FEROZ AHMED AGM, DE Infrastructure fiber@home	Fiber@Home 7/B Awlsham - 1 A-15 email: feruz@fiberathome.net	
13.	Ishtat Jahan Deputy Manager Business Development	Fiber@Home Ltd. email: ishtat.jahan@fiberathome.net ishtat.jahan@fiberathome.net	
14.	Fuad Enayet AGM, DE Infra	Fiber@Home Limited	



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SL	Name and Designation	Name of the Firm with address, contract no. and e-mail	Signature
15.	Saminan Chakrabarty Senior BDM	Data edge limited 01833320866 saminan@data-edge.com	
16.	Md. Hossain Ferdousi GM, Corp. Sales 1	FLORA LIMITED 01819-231608 ferdousi@floralimited.com richard@floralimited.com	
17.	Md. Mamunur Rashid Asst. Manager	Computer Services Ltd, 01723-543753 mamun@computerservicesltd.com	
18.	AZAD	TECH VALLEY NETWORKS. LTD	



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Sl.	Name and Designation	Name of the Firm with address, contract no. and e-mail	Signature
19	Safayat Hossain Sr. Solution Architect	TVNL, 4 Mohakhali, Dhaka. safayat@tvnlbd.com	
20	B.M. Khalid AGM	Penta Global Ltd 01730265145 bm.khalid@pentabd.com	
21	Sultan Ahsan Sr. Network Engg. Sultan.Ahsan1982@gmail.com	FNR. Solution Texas, USA. 01616754159.	
22	Zunun		
23	Fajiy Rabby	Smart Technologies (BD) Ltd. 01730354804 rabby@smart-bd.com	
24	Md Jahiruzzaman	~ 017099986876 md.jahiruzzaman@smart- bd.com	



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SL	Name and Designation	Name of the Firm with address, contract no. and e-mail	Signature
25	Sayfuluddin Deputy Manager	eGeneration Ltd. 01833328673 SAYFUDDIN.SHIKDER@EGENERATIO .COM	
26	AMIRUDDIN AHMED MANAGING DIRECTOR	ANWARA TRADE INT. LTD. Amiruddin@Anwaratrade .com	
27	RAJIB Pro. Manager	Oregenic Imaging JV emailrhm@gmail.com	
28	Md. Shariful Islam NEA Manager	LICT	
29	A.K.M. GOLAM SARWAR NEA Manager	LICT	
30	Shahadat Flora Ltd	LICT Shahadathossain@flora limited.com	





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Sl.	Name and Designation	Name of the Firm with address, contract no. and e-mail	Signature
31	MO. Mesyaul Hemin	Pearl Limited, 192 289, Kathal Bagan pcl@pearlbd.com	
32	Ashique + Hasini	Progenic Imaging Sol ⁿ ashique@progenicgroup-bd.com rahman.ashique@gmail.com	
33	EMED HASIN	u	
34	DIPAYAN ROY MANAGER KPMG - INDIA	KPMG INDIA dipayanroy@ kpmg.com +91 9831873660	
35	Md. Lokman Hossain Manager data edge limited	data edge limited lokman@data-edge.com +8801833320873	
36	MD Saibul Islam	sai Zaads corporation Ztd saibul-islam@zads-ltd.com 01844051951	



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SL	Name and Designation	Name of the Firm with address, contract no. and e-mail	Signature
37	SK ABDULLAH AL MAMUN AGM-SALES	LEADS CORPORATION LTD- 01711082758 SK.MAMUN@LEADS-BD COM	
38			

Attachment-2

Responses of Queries for Supply, Installation and Commissioning of Cloud Computing Platform in National Data Center (Contract Package# AF-G8)

This is for information of all concerned bidders that Instructions to Bidders (ITB) and General Conditions of Contract (GCC) clauses cannot be modified in any manner. Where an ITB or GCC clause contains reference to the Bidding Data Sheet (BDS) or Special Conditions of Contract (SCC) respectively, additional or specific information is written into the corresponding BDS or SCC clause to amplify or clarify the main BDS or SCC clause. Some of the BDS or SCC clauses may be subsequently modified as a result of suggestions received from bidders. However the BDS and SCC can never be used to circumvent in any way the intent of the parent ITB or GCC clause.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
1	Page 129	Manageability	Touch-screen LCD	Delete	Server is usually managed through KVM or management port remotely. Touch screen LCD is not necessary in the real scenario.	Most x86-architecture servers today include a management function commonly known as a baseboard management controller (BMC). The BMC is usually embedded on the motherboard or main circuit board of the server and includes a specialized service processor and firmware to monitor and manage the physical state of the server hardware. This allows the user to manage the server remotely. Touch-screen LCD is not mandatory. Please refer to 1 st Addendum of bidding document.
2	Page 132	Manageability	Touch-screen LCD	Delete	Server is usually managed through KVM or management port remotely. Touch screen LCD is not necessary in the real scenario.	Most x86-architecture servers today include a management function commonly known as a baseboard management controller (BMC). The BMC is usually embedded on the motherboard or main circuit board of the server and includes a specialized service processor and firmware to

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
						monitor and manage the physical state of the server hardware. This allows the user to manage the server remotely. Touch-screen LCD is not mandatory. Please refer to 1 st Addendum of bidding document.
3	Page 135	Manageability	Touch-screen LCD	Delete	Server is usually managed through KVM or management port remotely. Touch screen LCD is not necessary in the real scenario.	Most x86-architecture servers today include a management function commonly known as a baseboard management controller (BMC). The BMC is usually embedded on the motherboard or main circuit board of the server and includes a specialized service processor and firmware to monitor and manage the physical state of the server hardware. This allows the user to manage the server remotely. Touch-screen LCD is not mandatory. Please refer to 1 st Addendum of bidding document.
4	Page 149	Snapshot	2. It should be possible to create the copies in a different disk array/system using virtualization capability.	2. It should be possible to create the copies for a different disk array/system using virtualization capability.	Snapshot is to create copies for disk, so description of "create the copies in a different disk array/system" is not accuracy, it should be "create the copies for a different disk array/system".	The requirement is that the storage should support to take over other disk array/system, whatever the OEM of the disk array/system, and can take snapshot for the above mentioned "other disk array/system".
5	Page 152	Frame Buffer	8,1102 frames dynamically assigned	8,192 frames dynamically assigned	"8,1102" might be wrongly typed. Actually 48-port switch in the industry (such as Brocade 6510) can not support this specification. The high end model Brocade X6-8 support 15360 only. Please refer to item 10.12 Frame Buffer of FC SAN	Accepted. Changed to "8192 frames dynamically assigned". Please refer to 1 st Addendum of bidding document.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
6	Page 165	Data Center Physical Infrastructure Items	Dismantling of the existing any items		SWITCH FOR DC, it should be "8192". Please specify the dismantling items	Wall, Door, Glass, Railing, etc. Please survey reception area and exiting phase-1 of data center for details of required items to be dismantled.
7	Page 166	Data Center Physical Infrastructure Items	(Glass partition will be double for outside due to thermal protection)		Please clarify. Does it mean 100 mm glass on two sides?	Outside glass will be two glass partition in a single wall to avoid condensation on the outer part of glass. There should be sufficient gap between two glasses and gap space should be vacuumed. Glass thickness shall be 10 mm.
8	Page 166	Data Center Physical Infrastructure Items	Bag Scanner		Please specify in details	Not required Please refer to 1 st Addendum of bidding document.
9	Page 166	Data Center Physical Infrastructure Items	Auto Glass Door		Please specify in details	Changed to "Steel Door"
10	Page 179	Steel Truss structure and Air conditioned enclosure for Battery installation	Sufficient lighting and few socket outlet		Please specify areas	Please consider the area same as enclosure (8' -0" x 40' -0") Please refer to 1 st Addendum of bidding document.
11		Uptime Institute Tier-III Certification			Tier-III certification needs Total Facility's SLD (not only of Phase-2) and many other design-drawings and parameters for both Mechanical and Electrical components. Please make sure that BCC is providing it to acquire the Tier-III TCCF, in favor of the Contractor (winning bidder).	Design and as built documents shall be provided to the bidder with whom the contract for this assignment will be signed.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
12			Uptime Institute Tier-III Certification		UpTime Institute does not perform only Phase-2 kind of certification. Will BCC bear the Total Facility's certification?	Certification Cost for as built construction facility should be quoted by bidder.
13			Uptime Institute Tier-III Certification		Who will pay for the Consumables (i.e. Load Bank, Heaters, Fuel, Man Power, ...) during TCCF Audit?	The bidder shall arrange the required facilities for testing and shall bear all related expenses including consumables.
14			Uptime Institute Tier-III Certification		BCC should make sure that existing (of Phase-1) Products, Topology and Implementation are Tier-III compliant. Hence, should BCC provide the SLD, Layout, Working Drawing, Ventilation Calculation, Engine Generator ratings and existing TCDD issued by UpTime Institute?	Design and as built documents shall be provided to the bidder with whom the contract for this assignment will be signed.
15			Uptime Institute Tier-III Certification		As Phase-1 and/or Total Facility (Phase-1 and Phase-2 together) does not have Tier-III TCDD (Reference: https://uptimeinstitute.com/Tier-Certification/design-document-certifications.php). Please confirm the followings: a. Who will be responsible for Tier-III TCDD of Total Facility? b. Who will be responsible for Change in BoQ, Change in Project Scope, etc. ? c. BCC should make sure that Existing (of Phase-1) Products (who are not upgraded in Phase-2, like: Gen-Set) are meeting the capacity requirement or not?	Successful Bidder will responsible Successful bidder will responsible and propose for any change in BOQ with proper supporting documents if necessary. For better understating please do survey. Successful bidder will get all the documents .

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
16					d. Existing (of Phase-1) Products are of correct Ambient Temperature and System Loss as per UpTime or not? The selected bidder (Contractor) will be responsible to acquire the Tier-III TCCF only based on the given SLD, BoQ, Calculations and most importantly Tier-III TCDD by the BCC. Please confirm if our understanding is clear.	Yes.
17					Regarding Jessor DR - We need to integrate with Fusion Computer system. But do we need to do any DC Physical Infrastructure things there? Would request for a separate work breakdown for Jessor and Agargaon.	In the Jessor DR, there is enough rack space and power supply for the new equipment. DC physical infrastructure is not required in Jessor DR.
18					Both in Jessor and Agargaon, the existing system of Fusion Computer, NetApp Storage, etc. needs to be aggregated with old one. However, will BCC allow to deploy other solutions (new, convenient, open source, etc.) and then to replicate the old system with the newer one? "8,1102" might be wrongly typed.	Please follow the bid document.
19	Page 152	11.12	8,1102 frames dynamically assigned	8,192 frames dynamically assigned		Accepted. Changed to "8,192 frames dynamically assigned". Please refer to 1 st Addendum of bidding document.
20	Page 160	11.17d	Forecasting – The software should	Forecasting – The software should enable forecasting	"what-if" is VMware specific function and no other OEM can	Forecasting will be used for statistical analysis of the resource

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
21	Page162	Item-14	enable forecasting spend associated with currently deployed cloud resources and services. This includes performing "what-if" analysis to determine the financial impact of scaling up/down as demand changes. Tender document does not include the backup server.	spend associated with currently deployed cloud resources and services. Need to clarify if backup server is required or not.	support it.	usage and needs to display the trend of resource usage. "Dropped." Plesae refer to 1 st Addendum of bidding document. The bidder should provide one additional rack server for backup software. The minimum specification requirement is as follows: .CPU: 2 x Intel Xeon Gold 5120 Memory: 128GB DDR4 Disk: 2 x 1.2 TB SAS HDD and 4 x 800G SAS SSD Port: 4 x 10GE , 4 x 16GbFC OS: As per solution requirement. (All bidders are required to quote for all items. Partial bids shall be disqualified). Plesae refer to 1 st Addendum of bidding document.
22		2.4.2 Specific Experience	Participation as a prime supplier, management contractor, JV3 member, in at least one (01) contract within the last five (5) years, with a value of at least US\$ 3.5 million or equivalent amount, that have been successfully and	Participation as a prime supplier, management contractor, JV3 member, in at least one (01) contract within the last five (5) years, with a value of at least US\$ 3.5 million or equivalent amount, that have been successfully and		Please follow the bidding document.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
			US\$ 5 million or equivalent amount, that have been successfully and substantially completed and that are similar to the proposed Information System. The contract will be treated as similar, which includes establishment of Cloud / Virtualized /Server computing platform with similar type of installation as described in Section VII, Purchaser's Requirements.	substantially completed and that are similar to the proposed Information System. The contract will be treated as similar, which includes establishment of Cloud / Virtualized /Server computing platform with similar type of installation as described in Section VII, Purchaser's Requirements.		
23	Page 128. SL. # 1.	Rack Server for Managed Node (Brand)	Must be an internationally reputed brand to be mentioned by the tender	Must be an internationally reputed brand and recognized as Leader in Magic Quadrant	To invite leading vendors and also Same requirement for both server & storage	Bidders are required to use products/solutions from the Magic Quadrant. All other specifications remain unchanged. Please refer to 1 st Addendum of bidding document.
24	Page 131. SL#2	Rack Server for Managed Node (PCIe)	The server supports minimum 10 PCIe Slots	The server supports minimum 8 PCIe Slots	Allow more bidder to participate	Accepted. Changed to "The server supports minimum 8 PCIe Slots". Please refer to 1 st Addendum of bidding document.
25		Rack Server for Managed Node (Memory)	Provide minimum 16 x 32GB,DDR4 RDIMM Memory, 2400MT/s, 2 Rank	Provide minimum 16 x 32GB,DDR4 RDIMM Memory, 2400MT/s		ECC function is important for RAM, so ECC is required. Please follow the bidding document.

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
26		Rack Server for Managed Node (Storage)	(2G*4bit), 1.2V, ECC Provide minimum 3 x 1.6TB SAS SSD DWPD (Drive Writes Per Day) should be Three (3).	Provide minimum 3 x 1.6TB SAS SSD		Drive Writes Per Day (DWPD) measures how many times you could overwrite the drive's entire size each day of its life. The higher DWPD, the longer lifespan of SSD drive. It is important for SSD life time and quality, and bidder should provide SSD disk with equal or higher than 3 DWPD. Please follow the bidding document.
27		Rack Server for Managed Node (Certification)	CE, UL, FCC, CCC, and RoHS	FCC Class A/B		Certification is basic requirement for quality. Every OEM should have certification of CE, UL, FCC, CCC and RoHS. Please follow the bidding document.
28	Page 131. SL#2	Rack Server for Managed Node (Integrated video card)	Integrated video card for standard configuration 32 MB display memory with the resolution 1920 x 1200	Integrated video card for standard configuration 16 MB display memory with the resolution 1920 x 1200		Accepted. Changed to "Integrated video card for standard configuration 16 MB display memory with the resolution 1920 x 1200" Please refer to 1 st Addendum of bidding document.
29		Rack Server for Managed Node (PSU)	Redundant hot-swappable PSUs in full configuration Power cables provided with the server. Provide 900W Enhanced Platinum AC Power Module	Redundant hot-swappable PSUs in full configuration Power cables provided with the server. Provide Minimum 800W Enhanced Platinum AC Power Module		900W enhanced platinum AC power module is the basic requirement. Please follow the bidding document.
30	Page 131. SL#2	Rack Server for Managed Node (Operating temperature)	Long-term operating temperature: 5°C to 45°C (41°F to	To be mentioned by the bidder		The long-term operating temperature is important for the equipment longevity, but it is not mandatory to be 5°C to 45°C.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
			113°F)			<p>Plesae refer to 1st Addendum of bidding document.</p> <p>Bidder can mention the server long-term operating temperature, and purchaser will consider as a quality point of the server.</p>
31		Manageability	<p>Manageability and maintainability:</p> <ol style="list-style-type: none"> Supports integrated system management: <ul style="list-style-type: none"> Automatically restarts servers Monitors and controls fan modules, power supplies, and temperature Starts and shuts down servers Restarts servers in sequence Updates local firmware Records error logs Provides a visualization tool Provides GUIs for management and other advanced management functions. Provides independent remote 	<ul style="list-style-type: none"> Integrated remote management capability from day 1 with dedicated network connection supporting GUI. Remote console Intelligent system tuning 	<p>Common Management features for most of the OEM</p>	<p>Please quote with enterprise management features.</p>

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
32			management and control ports and GUIs for remote monitoring to implement remote full control over servers independent of OSs. Remote full control includes remote startup, shutdown, and reset, and virtual floppy and DVD-ROM drives			Please follow the bidding document.
33			The bidding product supports out-of-band fault detection, does not rely on the OS, and can detect and generate pre-warnings against hardware faults such as CPU, I2C and IPMB bus, memory, PCIe device, and hard drive faults; and can analyze and locate faults for system crash, black screen, blue screen, and abnormal reboot. A white paper or official website proof materials is required. Bandwidth			Please follow the bidding document.

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
			management port (GE)			
34			Supports the black box function.			Please follow the bidding document.
35			Last-screen information			Please follow the bidding document.
36		Security	<ul style="list-style-type: none"> Power-on password Administrator password Trusted Platform Module (TPM) Front bezel 	<ul style="list-style-type: none"> Power-on password Administrator password Trusted Platform Module (TPM) Front bezel Configurable for PCI DSS compliance Support for Commercial National Security Algorithms (CNSA) Chassis Intrusion detection option Tamper-free updates - components digitally signed and verified 	<p>Need more security features to make the system foolproof against any Intrusion and to be within the compliance</p> <p>This is the basic requirement. Welcome the bidders to provide more security features.</p> <p>Please follow the bidding document. There is no change for this clause.</p>	
37	Page 131 . SL. # 2. Rack Server for Network Node	Brand	Must be an internationally reputed brand to be mentioned by the tender	Must be an internationally reputed brand and recognized as Leader in Gartner's Magic Quadrant	To invite leading vendors and also Same requirement for both server & storage	Bidders are required to use products/solutions from the Magic Quadrant. All other specifications remain unchanged. Please refer to 1 st Addendum of bidding document..
38		Memory	Provide minimum 10 x 32 GB, DDR4 RDIMM Memory, 2400MT/s, 2 Rank(2G*4bit), 1.2 V, ECC	Provide minimum 10 x 32GB,DDR4 RDIMM Memory, 2400MT/s		ECC function is important for RAM, so ECC is required. Please follow the bidding document.
39			Minimum Number of DIMMs: 24			Please follow the bidding document.
40		Certification	CE, UL, FCC, CCC,	FCC Class A/B		Certification is basic requirement for

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement and RoHS	Request for Change	Bidder's Comment	Purchaser's Response
41		PSU	Redundant hot-swappable PSUs in full configuration Power cables provided with the server. Provide Minimum 800W Enhanced Platinum AC Power Module	Redundant hot-swappable PSUs in full configuration Power cables provided with the server. Provide Minimum 800W Enhanced Platinum AC Power Module		quality. Every OEM should have certification of CE, UL, FCC, CCC and RoHS. Please follow the bidding document. 900W enhanced platinum AC power module is the basic requirement. Please follow the bidding document.
42		Manageability	Manageability and maintainability: 1. Supports integrated system management: - Automatically restarts servers - Monitors and controls fan modules, power supplies, and temperature - Starts and shuts down servers - Restarts servers in sequence - Updates local firmware - Records error logs - Provides a visualization tool 2. Provides GUIs for management and	<ul style="list-style-type: none"> ▶ Integrated remote management capability from day 1 with dedicated network connection supporting GUI. ▶ Remote console ▶ Intelligent system tuning 	Common Management features for most of the OEM	Please quote with enterprise management features.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
			<p>other advanced management functions.</p> <p>3. Provides independent remote management and control ports and GUIs for remote monitoring to implement remote full control over servers independent of OSS. Remote full control includes remote startup, shutdown, and reset, and virtual floppy and DVD-ROM drives.</p>			
43			<p>The bidding product supports out-of-band fault detection, does not rely on the OS, and can detect and generate pre warnings against hardware faults such as CPU, I2C and IPMB bus, memory, PCIe device, and hard drive faults; and can analyze and locate faults for system crash, black screen, blue screen, and abnormal reboot. A white</p>			Please follow the bidding document.

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
44			paper or official website proof materials is required. Bandwidth management port (GE) Supports the black box function. Last-screen information			Please follow the bidding document.
45						Please follow the bidding document.
46						Please follow the bidding document.
47		Security	<ul style="list-style-type: none"> Power-on password Administrator password Trusted Platform Module (TPM) Front bezel 	<ul style="list-style-type: none"> Power-on password Administrator password Trusted Platform Module (TPM) Front bezel Configurable for PCI DSS compliance Support for Commercial National Security Algorithms (CNSA) Chassis Intrusion detection option Tamper-free updates - components digitally signed and verified 	<p>Need more security features to make the system foolproof against any intrusion and to be within the compliance</p> <p>This is the basic requirement. Welcome the bidders to provide more security features.</p> <p>Please follow the bidding document. There is no change for this clause.</p>	
48	Page 134. Sl. # 3	Brand	Must be internationally reputed brand to be mentioned by the tender	Must be an internationally reputed brand and recognized as Leader in Gartner's Magic Quadrant	To invite leading vendors and also Same requirement for both server & storage	Bidders are required to use products/solutions from the Magic Quadrant. All other specifications remain unchanged.
49	Page 134. Sl. # 3 Rack Server	PCIe	The server supports minimum 10 PCIe Slots	The server supports minimum 8 PCIe Slots	Allow more bidder to participate	<p>Please refer to 1st Addendum of bidding document.</p> <p>Accepted. Changed to "The server supports minimum 8 PCIe Slots"</p>

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
	for Backup Node					Please refer to 1 st addendum of bidding document
50		Memory	Provide minimum 4 x 32GB, DDR4 RDIMM Memory, 2400MT/s (2G*4bit), 1.2 V, ECC	Provide minimum 4 x 32GB, DDR4 RDIMM Memory, 2400MT/s		ECC function is important for RAM, so ECC is required. Please follow the bidding document.
51			Minimum Number of DIMMs: 24			Please follow the bidding document.
52		Certification	CE, UL, FCC, CCC, and RoHS	FCC Class A/B		Certification is basic requirement for quality. Every OEM should have certification of CE, UL, FCC, CCC and RoHS. Please follow the bidding document.
53	Page 134. Sl. # 3 Rack Server for Backup Node	Integrated video card	Integrated video card for standard configuration Minimum 32 MB display memory with the resolution 1920 x 1200	Integrated video card for standard configuration 16 MB display memory with the resolution 1920 x 1200		Accepted. Changed to "Integrated video card for standard configuration 16 MB display memory with the resolution 1920 x 1200". Please refer to 1 st addendum of bidding document
54		PSU	Redundant hot-swappable PSUs in full configuration Power cables provided with the server. Provide Minimum 800W Enhanced Platinum AC Power Module	Redundant hot-swappable PSUs in full configuration Power cables provided with the server. Provide Minimum 800W Enhanced Platinum AC Power Module		900W enhanced platinum AC power module is the basic requirement. Please follow the bidding document.
55	Page 134. Sl.	Operating temperature	Long-term operating	To be mentioned by the bidder		The long-term operating temperature is important for the equipment

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
	# 3 Rack Server for Backup Node		temperature: 5°C to 45°C (41°F to 113°F)			longibility, but it is not mandatory to be 5°C to 45°C. Please refer to 1 st addendum of bidding document. Bidder can mention the server long-term operating temperature, and purchaser will consider as a quality point of the server.
56		Manageability	<p>Manageability and maintainability:</p> <ol style="list-style-type: none"> Supports integrated system management: <ul style="list-style-type: none"> Automatically restarts servers Monitors and controls fan modules, power supplies, and temperature Starts and shuts down servers Restarts servers in sequence Updates local firmware Records error logs Provides a visualization tool Provides GUIs for management and other advanced management functions. Provides 	<ul style="list-style-type: none"> Integrated remote management capability from day 1 with dedicated network connection supporting GUI. Remote console Intelligent system tuning 	Common Management features for most of the OEM	Please quote with enterprise management features.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
			<p>independent remote management and control ports and GUIs for remote monitoring to implement remote full control over servers independent of OSs. Remote full control includes remote startup, shutdown, and reset, and virtual floppy and DVD-ROM drives.</p>			
57			<p>The bidding product supports out-of-band fault detection, does not rely on the OS, and can detect and generate pre-warnings against hardware faults such as CPU, I2C and IPMB bus, memory, PCIe device, and hard drive faults; and can analyze and locate faults for system crash, black screen, blue screen, and abnormal reboot. A white paper or official website proof materials is required.</p>			Please follow the bidding document.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
58			Bandwidth management port (GE)			Please follow the bidding document.
59			Supports the black box function.			Please follow the bidding document
60			Last-screen information			Please follow the bidding document
61			Touch-screen LCD			No Mandatory. Please refer to 1 st addendum of bidding document.
62		Security	<ul style="list-style-type: none"> Power-on password Administrator password Trusted Platform Module (TPM) Front bezel 	<ul style="list-style-type: none"> Power-on password Administrator password Trusted Platform Module (TPM) Front bezel Configurable for PCI DSS compliance Support for Commercial National Security Algorithms (CNSA) Chassis Intrusion detection option Tamper-free updates - components digitally signed and verified 	<p>Need more security features to make the system foolproof against any Intrusion and to be within the compliance</p> <p>This is the basic requirement. Welcome the bidders to provide more security features.</p> <p>Please follow the tender document. There is no change for this clause.</p>	
63		Brand	Must be an internationally reputed brand and to be mentioned by the tender	Must be an internationally reputed brand and recognized as Leader in Gartner's Magic Quadrant	To invite leading vendors and also Same requirement for both server & storage	<p>Bidders are required to use products/solutions from the Magic Quadrant. All other specifications remain unchanged.</p> <p>Please refer to 1st Addendum of bidding document.</p> <p>ECC function is important for RAM,</p>
64		Memory	-Provide minimum	-Provide minimum 16 x		

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
	SL. # 4 Blade Server for Computing Node (2 Socket)		16 x 32GB,DDR4 RDIMM Memory, 2400MT/s, 2Rank(2G*4bit), 1.2V,ECC - Support number of memory slots should be minimum 24	32GB,DDR4 RDIMM Memory - Support number of memory slots should be minimum 24		so ECC is required. Please follow the bidding document.
65		Number of Hard Disks	Provide minimum 2 x 800GB SAT A SSD, Read Intensive			Please follow the bidding document.
66		RAID Support	Independent RAID controller cards RAID0,1,10,12Gb/s	Independent RAID controller cards RAID0,1,12Gb/s		RAID10 is dropped. Please refer to 1 st Addendum of bidding document.
67		Operating Systems Support	Supports mainstream operating systems (OSs), such as Windows, Redhat Linux, SuSE Linux, and Citrix XenServer, FusionSphere, VMware	Supports mainstream operating systems (OSs), such as Windows, Redhat Linux, SuSE Linux, and Citrix XenServer, VMware	FusionSphere is vendor specific term	The existing cloud platform is FusionSphere, the new hardware should be compatible with existing platform.
68	Pg. 137. SL. # 4 Blade Server for Computing Node (2 Socket)	Operating Temperature	5°C to 40°C	To be mentioned by the bidder		The long-term operating temperature is important for the equipment longevity, but it is not mandatory to be 5°C to 40°C. Please refer to 1 st addendum of bidding document. Bidder can mention the server long-term operating temperature, and purchaser will consider as a quality

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
69		Performance	The SPEC power test result is released to the public at the SPEC website (www.spec.org) for the server model for bidding.	To be mentioned by the bidder		point of the equipment. The bidder need to provide the SPEC of the server for purchasers to evaluate the server performance.
70		Manageability	Manageability and maintainability: 1. Supports integrated system management: - Automatically restarts servers - Monitors and controls fan modules, power supplies, and temperature - Starts and shuts down servers - Restarts servers in sequence - Updates local firmware - Records error logs - Provides a visualization tool 2. Provides GUIs for management and other advanced management functions. 3. Provides independent remote	To be mentioned by the bidder		Please quote with enterprise management features.
71						Please follow the bidding document.
72						Please follow the bidding document.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
73			management and control ports and GUIs for remote monitoring to implement remote full control over servers independent of OSs. Remote full control includes remote startup, shutdown, and reset, and virtual floppy and DVD-ROM drives.			
74			4. Supports the black box function. 5. Provides last-screen information.			Please follow the bidding document. Please follow the bidding document.
75	Pg. 139. Sl # 5.	Brand	Must be internationally reputed brand to be mentioned by the tender	Must be an internationally reputed brand and recognized as Leader in Gartner's Magic Quadrant	To invite leading vendors and also Same requirement for both server & storage.	Bidders are required to use products/solutions from the Magic Quadrant. All other specifications remain unchanged. Plesae refer to 1 st Addendum of bidding document.
76	Pg. 139. Sl # 5. Blade Server for Computing Node (4 Socket)	Number of DIMMs	Provide 32 x 32GB,DDR4 RDIMM Memory, 2400MT/s (2G*4bit), 1.2V, ECC Supported number of memory slots should be minimum 24	Provide 32 x 32GB,DDR4 RDIMM Memory, 2400MT/s Supported number of memory slots should be minimum 24		ECC function is important for RAM, so ECC is required. Please follow the bidding document.
77		Number of Hard Disks	Provide minimum 2 x 800GB SAT A			Please follow the bidding document.

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
78	Pg. 139. SI # 5. Blade Server for Computing Node (4 Socket)	RAID Support	SSD, Read Intensive RAID Card, RAID 0, 1, 1E, 10, 12Gb/s	Independent RAID controller cards RAID0,1, 12Gb/s		RAID10 is a desirable requirement, not mandatory. Please refer to 1 st addendum of bidding document.
79		Operating Systems Support	Supports mainstream operating systems (OSS), such as Windows, Redhat Linux, SuSE Linux, and Citrix XenServer, VMware	Supports mainstream operating systems (OSS), such as Windows, Redhat Linux, SuSE Linux, and Citrix XenServer, VMware	FusionSphere is vendor specific term	The existing cloud platform is FusionSphere, the new hardware should be compatible with existing platform.
80	Pg. 139. SI # 5. Blade Server for Computing Node (4 Socket)	Operating Temperature	Supports mainstream operating systems (OSS), such as Windows, Redhat Linux, SuSE Linux, and CitrixXenServer, FusionSphere, VMware 5°C to 40°C	To be mentioned by the bidder		The long-term operating temperature is important for the equipment longevity, but it is not mandatory to be 5°C to 40°C. Please refer to 1 st addendum of bidding document. Bidder can mention the server long-term operating temperature, and purchaser will consider as a quality point of the equipment.
81	Pg. 140. SI # 6.	Brand	Must be internationally reputed brand to be mentioned by the	Must be an internationally reputed brand and recognized as Leader in Gartner's Magic Quadrant	To invite leading vendors and also Same requirement for both server & storage	Bidders are required to use products/solutions from the Magic Quadrant. All other specifications remain unchanged.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
			tender			Please refer to 1 st Addendum of bidding document.
82	Pg. 140. SI # 6. Blade Server Chassis	Blade	Support minimum 16 blade Servers in a single Chassis	Support minimum 12 blade Servers in a single Chassis	Allow more bidder for participation	16 blade servers in a single Chassis is required. The specification can't be downgraded. Please follow the bidding document.
83	Pg. 140. SI # 6. Blade Server Chassis	Processor	Chassis should support multi-generation Intel processors simultaneously. Include Romley, Grantley, Brickley and Purley.	Chassis should support multi-generation Intel processors simultaneously		Accepted. Should be read as "Chassis should support multi-generation Intel processors simultaneously" Please refer to 1 st addendum of bidding document.
84		Switch module	Configure redundant 10GE switch modules and 16G FC switch module. Each chassis should provide 4*40GE, 16*10GE and 16*16G FC uplink ports. The switch modules can be stacked.	Configure redundant 10GE switch modules and 16G FC switch module. Each LAN Switch should provide Minimum 4*40GE & Minimum 12*10GE Downlink Each SAN Switch Should Provide Minimum 8*16G FC uplink & Minimum 12*16G FC Downlink ports.	Allow more bidder for participation	The specification can't be downgraded. Please follow the bidding document.
85		Power management	The server provides a power history curve of a single compute node or the entire chassis for one day or one week.	To be mentioned by the bidder		Power history curve is required to monitor status of power module. Please quote with enterprise management features.

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
86		Stateless computing	The management modules in the chassis provide the stateless computing feature. This feature implements: - MAC address and WWN pooling and allocation - BIOS, NIC, and HBA configuration management - Migration based on blades	To be mentioned by the bidder		Mentioned features of management module are required. Please quote with enterprise management features.
87	Pg. 141. SI # 6. Blade Server Chassis	PSU	Provide no less than 6 (six) hot-swappable, redundant AC PSUs with a rated power of 3000 W or higher in full configuration N+N Redundancy 80 Plus Platinum PSU Power efficiency	Provide no less than 6 (six) hot-swappable, redundant AC PSUs with N+N & N+1 Redundancy 80 Plus Platinum PSU Power efficiency		Accepted. Should be read as "Provide no less than 6 (six) hot-swappable, redundant AC PSUs with N+N & N+1 Redundancy 80 Plus Platinum PSU Power efficiency" Please refer to 1st addendum of bidding document.
88		FAN	Provide no less than 10 (ten) or more hot-swappable, redundant Fan module Redundancy N+1 Fan modules should be hot swappable and maintained separately.	Provide no less than 10 (ten) or more hot-swappable, redundant Fan module Redundancy N+1 Fan modules should be hot swappable and maintained separately.		Please follow the bidding document.
89	Pg. 141.	Environment	Operating	To be mentioned by the		The long-term operating temperature

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
	SI # 6. Blade Server Chassis		temperature 5°C to 40°C, energy saving and environment friendliness	bidder		is important for the equipment longevity, but it is not mandatory to be 5°C to 40°C. Please refer to 1st addendum of bidding document. Bidder can mention the server long-term operating temperature, and purchaser will consider as a quality point of the equipment.
90		Certification	FCC certification UL certification	FCC certification		Certification is basic requirement for quality. Every OEM should have certification of FCC and UL.
91	Page-142.SL.# 7 Producti on Storage at DC	Brand	Must be an internationally reputed brand and recognized as Leader in Gartner's Magic Quadrant.			Please follow the bidding document. Please follow the bidding document.
92		Model	To be mentioned by the bidder			Please follow the bidding document.
93		Country of origin	To be mentioned by the bidder			Please follow the bidding document.
94		Manufacturing Country	To be mentioned by the bidder			Please follow the bidding document.
95		Node Type	Rack Mountable unified Storage Provide SAN and NAS protocol. Storage should be configured with minimum 4 (four) Controllers; each	Rack Mountable unified Storage Provide SAN and NAS protocol. Storage should be configured with minimum 4 (four) Controllers; each controller should have no	Each Storage OEM has its own proprietary Architecture	Cache is the basic requirement for higher performance of the storage. This is also relevant with the required capacity and upgradability. Please follow the bidding document.

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
96		System architecture	<p>controller should have no less than 1TB cache.</p> <p>Provide a multi-controller full-switching architecture and services will not be interrupted when any two of four controllers are faulty or removed.</p>	<p>less than 440GB cache.</p> <p>Provide a multi-controller architecture and services will not be interrupted when any two of four controllers are faulty or removed.</p>	<p>Each Storage OEM has its own proprietary Architecture</p>	<p>Full-switching architecture is required for performance and seamless scalability.</p> <p>Please follow the bidding document.</p>
97	Page-142.SL.# 7 Producti on Storage at DC		<p>Adopts high-bandwidth and low-latency PCIe, RapidIO, and Infiniband for high-speed interconnections, instead of using Fibre Channel or IP for interconnection.</p> <p>Supports up to 3000 disks</p>	<p>Supports up to 2300 disks</p>		<p>Please follow the bidding document.</p>
98		Expansion	<p>Supports scale-out to minimum 8 controllers.</p>	<p>Supports scale-up to minimum 8 controllers</p>		<p>Please follow the bidding document.</p>
99			<p>The Storage Arrays shall provide minimum One (1) PB (1024TB) usable capacity.</p> <p>SSD capacity should be at least 15% of total usable capacity with RAID 5, the capacity of</p>	<p>The Storage Arrays shall provide minimum One (1) PB (1024TB) usable capacity.</p> <p>SSD capacity should be at least 15% of total usable capacity with RAID 5, the capacity of</p>		<p>More disks will allow higher IOPS and ensure more data protection.</p> <p>Please follow the bidding document.</p>
100	Page-142.SL.# 7 Producti on Storage at DC	Capacity Requirements	<p>The Storage Arrays shall provide minimum One (1) PB (1024TB) usable capacity.</p> <p>SSD capacity should be at least 15% of total usable capacity with RAID 5, the capacity of</p>	<p>The Storage Arrays shall provide minimum One (1) PB (1024TB) usable capacity.</p> <p>SSD capacity should be at least 15% of total usable capacity with RAID 5, the capacity of</p>		<p>More disks will allow higher IOPS and ensure more data protection.</p> <p>Please follow the bidding document.</p>

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
			each SSD disk should not more than 1TB. SAS capacity should be at least 50% of total usable capacity with RAID 5, the capacity of each SAS disk should not more than 1.8TB. NL SAS capacity should be at least 35% of total usable capacity with RAID 6, the capacity of each NL SAS disk should not more than 4TB.	least 50% of total usable capacity with RAID 5, the capacity of each SAS disk should not more than 1.8TB. NL SAS capacity should be at least 35% of total usable capacity with RAID 6, the capacity of each NL SAS disk should not more than 4TB.		
101			Global hot spare disk capacity should be at least 4% of the total storage capacity			Please follow the bidding document.
102	Page-143.SL.# 7 Product on Storage at DC	Storage Controller	Offered Storage Array shall be given with minimum one (1) TB cache per controller, and provide minimum four (4) TB cache for the whole system, (excluding performance acceleration modules, NAS cache, FlashCache, PAM, or SSD Cache),	Offered Storage Array shall be given with minimum 440 GB cache per controller, and provide minimum 1.6 TB cache for the whole system, (excluding performance acceleration modules, NAS cache, FlashCache, PAM, or SSD Cache)	Each Storage OEM has its own proprietary Architecture	Cache is the basic requirement for higher performance of the storage. This is also relevant with the required capacity and upgradability. Please follow the bidding document.

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
103	Page-143.SL.# 7 Producti on Storage at DC	RAID	PAM, or SSD Cache) Offered storage system shall support RAID 1, RAID 3, RAID 10, RAID 50, RAID 5 and RAID 6.	Offered storage system shall support RAID 1, RAID 5 and RAID 6.		Changed to: Offered storage system shall support RAID 1, RAID 10, RAID 5 and RAID 6. Please refer to 1st addendum of bidding document.
104		Security	Must provide LUN data destruction feature. Need to support the two LUN data destruction modes: DoD and User-Defined data overwrite times during destruction.	Please remove this feature	Vendor specific	Please provide this or similar security feature.
105	Page-144.SL.# 7 Producti on Storage at DC	Replication	Provide remote replication function with full capacity software license, provides Fibre Channel- and IP-based replication, and offers a GUI-based management page to allow users to customize intervals for remote, asynchronous data transfer	Provide remote replication function with full capacity software license, provides Fibre Channel- and IP-based replication, and offers a GUI-based management page to allow users to customize intervals for remote, asynchronous data transfer	Interval time depends on database table.	Accepted. Should be read as "Provide remote replication function with full capacity software license, provides Fibre Channel- and IP-based replication, and offers a GUI-based management page to allow users to customize intervals for remote, asynchronous data transfer" Please refer to 1st addendum of bidding document.
106		Compatibility	Obtains certificates of SMI-S or later			Please follow the bidding document..

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
107			and provides screenshots and official website links. It should support all industry leading operating systems including Windows 2003, 2008, 2012 server, Sun Solaris, IBM ATX, HP-UX, VMware, CitrixXen, Hyper-V, Oracle Linux, Redhat, SUSE, Apple Mac OS.			Please follow the bidding document.
108	Page-144.SL.# 7 Product on Storage at DC		The new storage should integrate the existing storage.	The new storage should integrate the existing storage to enable data migration		Changed to: The new storage should integrate existing storage through heterogeneous virtualization function. Please refer to 1st addendum of bidding document.
109		Third-party storage array	Provide heterogeneous virtualization with minimum 1PB capacity software license or minimum 2 sets existing storage array. Could take over services from heterogeneous storage array	Provide heterogeneous virtualization to enable data migration feature. Could take over services from heterogeneous storage array transparently through Fibre Channel for data migration.		Bidder should provide storage with heterogeneous virtualization function for existing storage.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
110	Page-144.SL.# 7 Producti on Storage at DC	Manageability	transparently through Fibre Channel. Provide standard storage device management software via GUI/Web-based and CLI (Include volume management, resource allocation, host access control, data security etc.)			Please follow the bidding document.
111		Online upgrade	Supports the online upgrade function that automatically upgrades the version without any manual intervention after the upgrade package is manually imported.			Please follow the bidding document.
112	Page-144.SL.# 7 Producti on Storage at DC	Warranty	3(Three) years manufacturer's warranty should be provided for this unit from the date of commissioning			Please follow the bidding document.
113		Installation & Commissioning	Installation, testing and commissioning with necessary accessories			Please follow the bidding document.
114		Test and verification	All technical specifications and features will be			Please follow the bidding document.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
115	Page-145.SL.# 8 Storage at Disaster Recovery Site at Jessore	Node Type	tested during OAT. The supplier has the responsibility to conduct the test and submit a document describing the tests performed and corresponding results. The test results will be verified by BCC representative. Rack Mountable unified Storage Provide SAN and NAS protocol. Storage should be configured with minimum four (4) Controllers; each controller should have no less than one (1) TB cache.	Rack Mountable unified Storage Provide SAN and NAS protocol. Storage should be configured with minimum four (4) Controllers; each controller should have no less than 440GB cache.	Each Storage OEM has its own proprietary Architecture	Cache is the basic requirement for higher performance of the storage. This is also relevant with the required capacity and upgradability. Please follow the bidding document.
116		System architecture	Provide a multi-controller full-switching architecture and services will not be interrupted when any two of four controllers are faulty or removed.	Provide a multi-controller architecture and services will not be interrupted when any two of four controllers are faulty or removed.	Each Storage OEM has its own proprietary Architecture	Full-switching architecture is required for performance and seamless scalability. Please follow the bidding document.
117	Page-145.SL.# 8 Storage at		Adopts high-bandwidth and low-latency PCIe, RapidIO, and Infiniband for high-			Please follow the bidding document.

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
118	Disaster Recovery Site at Jessore	Expansion	speed interconnections, instead of using Fibre Channel or IP for interconnection. Supports up to 3000 disks	Supports up to 2300 disks		Please follow the bidding document.
119			Supports scale-out to minimum 8 controllers.	Supports scale-up to minimum 8 controllers		Please follow the bidding document.
120	Page-145.SL.# 8 Storage at Disaster Recovery Site at Jessore	Capacity Requirements	The Storage Arrays shall provide minimum 1 PB (1024TB) usable capacity. SSD capacity should be at least 15% of total usable capacity with RAID 5, the capacity of each SSD disk should not more than 4TB. SAS capacity should be at least 50% of total usable capacity with RAID 5, the capacity of each SAS disk should not more than 1.8TB. NL SAS capacity should be at least 35% of total usable capacity with RAID 6, the capacity of each NL SAS disk should not more than 4TB.	The Storage Arrays shall provide minimum One (1) PB (1024TB) usable capacity. SSD capacity should be at least 15% of total usable capacity with RAID 5, the capacity of each SSD disk should not more than 4TB. SAS capacity should be at least 50% of total usable capacity with RAID 5, the capacity of each SAS disk should not more than 1.8TB. NL SAS capacity should be at least 35% of total usable capacity with RAID 6, the capacity of each NL SAS disk should not more than 4TB.		More disks will allow higher IOPS and ensure more data protection. Please follow the bidding document.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
121	Page-145.SL.# 8 Storage at Disaster Recovery Site at Jessore	Storage Controller	more than 4TB. Global hot spare disk capacity should be at least 4% of the total storage capacity Offered Storage Array shall be given with of 1TB cache per controller, and provide 4TB cache for the whole system, (excluding performance acceleration modules, NAS cache, FlashCache, PAM, or SSD Cache)	Offered Storage Array shall be given with minimum 440 GB cache per controller, and provide minimum 1.6 TB cache for the whole system, (excluding performance acceleration modules, NAS cache, FlashCache, PAM, or SSD Cache)	Each Storage OEM has its own proprietary Architecture	Cache is the basic requirement for higher performance of the storage. This is also relevant with the required capacity and upgradability. Please follow the bidding document.
122	Page-146.SL.# 8 Storage at Disaster Recovery Site at Jessore	RAID	Offered storage system shall support RAID 1, RAID 3, RAID 10, RAID 50, RAID 5 and RAID 6.	Offered storage system shall support RAID 1, RAID 5 and RAID 6.		Changed to "Offered storage system shall support RAID 1, RAID 10, RAID 5 and RAID 6" Please refer to 1st addendum of bidding document.
123		Security	Must provide LUN data destruction feature. Need to support the two LUN data destruction modes: DoD and User-Defined data overwrite times	Please remove this feature	Vendor specific	Please provide this or similar security feature.

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
124	Page-147.SL.# 8 Storage at Disaster Recovery Site at Jessore	Replication	during destruction. Provide remote replication function with full capacity software license, provides Fibre Channel- and IP-based replication, and offers a GUI-based management page to allow users to customize intervals for remote, asynchronous data transfer	Provide remote replication function with full capacity software license, provides Fibre Channel- and IP-based replication, and offers a GUI-based management page to allow users to customize intervals for remote, asynchronous data transfer	Interval time depends on database table.	Accepted. Should be read as "Provide remote replication function with full capacity software license, provides Fibre Channel- and IP-based replication, and offers a GUI-based management page to allow users to customize intervals for remote, asynchronous data transfer" Please refer to 1st addendum of bidding document.
125	Page-147.SL.# 8 Storage at Disaster Recovery Site at Jessore		The new storage should integrate the existing storage.	The new storage should integrate the existing storage to enable data migration		Changed to "The new storage should integrate with existing storage through heterogeneous virtualization function" Please refer to 1st addendum of bidding document.
126		Third-party storage array	Provide heterogeneous virtualization with minimum IPB capacity software license or minimum 2 sets existing storage array. Could take over services from heterogeneous storage array	Provide heterogeneous virtualization to enable data migration feature. Could take over services from heterogeneous storage array transparently through Fibre Channel for data migration.		Bidder should provide storage with heterogeneous virtualization function for existing storage.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
127	Page-148.SL.# 9 Backup Storage	Form factor	transparently through Fibre Channel. Rack Mountable Storage, Redundancy Controller, 512GB Cache.	Rack Mountable Storage, Redundancy Controller, 128GB Cache.	Each Storage OEM has its own proprietary Architecture	To ensure the performance of the system, 512 GB Cache is required.
128	Page-148.SL.# 9 Backup Storage	Converge / Unified Storage	1. Offered Storage array shall be a unified storage with a single management for block and file. 2. Offered Storage array should be provided with Active/Active Controllers 3. Offered Storage array shall be provided with 16Gbps FC Front-end Connectivity and SAS 3.0 (4*12Gbps) preferable or higher backend connectivity. 4. Offered storage array shall be embedded storage virtualization capability for Data Migration.	1. Offered Storage array shall be a unified storage with a single management for block and file. 2. Offered Storage array should be provided with Active/Active Controllers for redundancy and scalable up to Eight Controllers. 3. Offered Storage array shall be provided with 16Gbps FC Front-end Connectivity and SAS 3.0 (4*12Gbps) preferable or higher backend connectivity. 4. Offered storage array shall be embedded storage virtualization capability for Data Migration.		Please follow the bidding document.

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
129	Page-148.SL.# 9 Backup Storage	Cache	external vendor neutral disk systems. Offered Storage Array shall be given with minimum 512GB cache and shall be scalable to minimum 1024GB in one system (excluding performance acceleration modules, NAS cache, FlashCache, PAM, or SSD Cache)	Offered Storage Array shall be given with minimum 128GB cache in one system (excluding performance acceleration modules, NAS cache, FlashCache, PAM, or SSD Cache)	Each Storage OEM has its own proprietary Architecture	Cache is a basic requirement for higher performance of the storage. This is also relevant with the required capacity and upgradability. Please follow the bidding document.
130	Page-148.SL.# 9 Backup Storage	Disk Scalability	The proposed storage device should be scalable to minimum 730 Drives supported with SSD, SAS and NL SAS/SATA disk without controller upgrade / replacement / adding or external storage virtualization.	The proposed storage device should be scalable to minimum 570 Drives supported with SSD, SAS and NL SAS/ SATA disk without controller upgrade /replacement /adding or external storage virtualization.		Please follow the bidding document.
131		Capacity	The single storage array shall be offered with minimum 1PB (1024TB) usable capacity in RAID6 using not more than			Please follow the bidding document.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
132	Page-148.SL.# 9 Backup Storage	Raid	8TB NLSAS HDD. Global hot spare disk capacity should be at least 4% of the total storage capacity. The Storage array should support Controller based RAID Levels: RAID 1, RAID 3, RAID 10, RAID 50, RAID 5, and RAID 6	The Storage array should support Controller based RAID Levels: RAID 1, RAID 5, and RAID 6		Changed to "Offered storage system shall support RAID 1, RAID 10, RAID 5 and RAID 6". Please refer to 1st addendum of bidding document.
133		Front End Ports	The Storage Array should be Provided with 8x10 Gbps with 16x10 Gbps iSCSI interface and 16 x 16Gbps front end Fibre Channel ports.	The Storage Array should be Provided with 8x10 Gbps iSCSI/IP interface and 8 x 16Gbps front end Fibre Channel ports.		Please follow the bidding document.
134	Page-149.SL.# 9 Backup Storage	Data Reconstruction	The storage array should support hot spare space to remove the special spare disks that was reconstruction bottleneck. The data reconstruction speed should no less than 1 TB/hour.	Please remove this feature	Vendor specific	Accepted. This feature has been removed. Please refer to 1st addendum of bidding document.
135	Page-149.SL.# 9 Backup Storage	LUN Support	The storage device should support minimum 2048 LUN.	The storage device should support minimum 2048 LUN/Initiators.		Accepted. Please read as "The storage device should support minimum 2048 LUN/Initiators" Please refer to 1st addendum of bidding document.

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SL	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
136	Page-149.SL.# 9 Backup Storage	Multipathing Driver	Multipathing driver developed by the storage vendor should be provided along with the storage device for the maximum nos. of supported host connectivity. It should optimize access path, provides fault switchover and load balancing.	Multipathing driver developed by the storage vendor/Native Tool comes with Host Operating system should be provided along with the storage device for the maximum nos. of supported host connectivity. It should optimize access path, provides fault switchover and load balancing.		Accepted. Please read as "Multipathing driver is developed by the storage vendor. Native Tool that comes with Host Operating system should be provided along with the storage device for the maximum numbers of supported host connectivities. It should optimize access path, and provide fault switchover and load balancing" Please refer to 1st addendum of bidding document.
137	Page-149.SL.# 9 Backup Storage	Snapshot	1. Should provide with point in time snapshots function with full capacity software license. Support up to 4000 such snapshots should be possible. 2. It should be possible to create the copies in a different disk array/system using virtualization capability.	1. Should provide with point in time snapshots function with full capacity software license. Support up to 1000 such snapshots should be possible. 2. It should be possible to create the copies in a different disk array/system using virtualization capability.		"Up to 1000 snapshot" is acceptable. Please refer to 1st addendum of bidding document. 2. The requirement is that the storage should support to take over other disk array/system, whatever the OEM of the disk array/system, and can take snapshot for the above mentioned "other disk array/system".
138		LUN Virtualization Capability	Offered storage should be capable of storage virtualization. It should have the capability to take over heterogeneous arrays for Data Migration.	Offered storage should be capable of storage virtualization. It should have the capability to take over heterogeneous storage arrays for Data Migration.		Bidder should provide storage with heterogeneous virtualization function.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
139	Page-150.SL.# 9 Backup Storage	Remote Replication	storage arrays for unified resource allocation and management. Heterogeneous storage virtualization should be compatible with arrays of mainstream storage vendor such as EMC, HP, HDS, IBM, Huawei and NetApp.	Provide remote replication function with full capacity software license, provides Fibre Channel- and IP-based replication, and offers a GUI-based management page to allow users to customize intervals for remote, asynchronous data transfer	Interval time depends on database table.	Accepted. Please read as "Provide remote replication function with full capacity software license that provides Fibre Channel and IP-based replication, and offers a GUI-based management page to allow users to customize intervals for remote, asynchronous data transfer" Please refer to 1st addendum of bidding document.
140	Page-150.SL.# 9 Backup Storage		CCC, CE, CB, UL, and FCC certificates are needed.	FCC certificates		FCC or similar standard certifications are acceptable Please refer to 1st addendum of bidding document.
141	Page-151.SL.	Scalability	Full fabric architecture with a	Full fabric architecture		Accepted. Please read as "Full Fabric architecture" instead of Full fabric

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
	# 10 FC SAN Switch for DC		maximum of 239 switches			architecture with a maximum of 239 switches" Please refer to 1st addendum of bidding document.
142	Page - 152, FC SAN Switch for DR Disaster Recovery Site at Jessore	Frame Buffer	8,1102 frames dynamically assigned	Please remove this line		Changed to "8192 frames dynamically assigned" Please refer to 1st addendum of bidding document.
143	Page. 153. SL # 12	Virtualization Software (Qualification)	Bidders must be mainstream VM vendors and members of Gartner's Magic Quadrant for x86 server virtualization.	Please remove this clause	Gartner Magic Quadrant for Virtualization is retired on March 2017. We request you to remove this clause as there are significant changes happened within these two years.	Accepted. This clause has been removed. Please refer to 1st addendum of bidding document.
144	Page. 153. SL # 12	Network Virtualization	Server nodes must support the virtual switch function. The virtual switch must support port aggregation, virtual port management, VLAN management, DHCP management, and QoS (traffic shaping and rate limiting) to receive, send, and forward network data packets.	Please remove the section "Server nodes must support the virtual switch function."	Different OEM does network virtualization at hypervisor level differently. So for generic setting please write the network functions that been envisioned.	Please follow the bidding document..

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
145			System must support the distributed virtual switch (DVS) across multiple physical servers. The DVS can be Provided on the web client.	Please remove this clause.	DVS is a SDN functionality and if you need SDN, kindly mention the features separately.	Distributed virtual switch is a basic function of network virtualization, this is not SDN function. Please follow the bidding document.
146	Page. 154. SL # 12	Management Features	System must support the wizard-based installation and deployment tool using Web UI, providing automatic deployment capabilities, simplifying deployment operations, improving the deployment efficiency of the virtualization system, and lowering skill requirements on O&M personnel.	Please remove the section "Web UI based deployment tool need."	Operation simplification is not a standard procedure. It differs from organisation to organisation. But if the intention is clearly defined, we Red Hat has the framework or toolsets through which the intended automated procedures can be implemented.	Web UI based deployment tool can significantly improve the maintainance efficiency. Please follow the bidding document.
147	Page. 154. SL # 12		System must support the wizard-based system upgrade tool using Web UI. Then, the upgrade can be automatically performed with high reliability, improving upgrade	Please remove the section "wizard based system upgrade tool using Web UI".	Upgrade of VM OS and Hypervisors are different for different OEM and different OEM manages it differently.	Web UI based upgrade tool can significantly improve the maintain efficiency. Please follow the bidding document.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
148	Pg. 156. SL. # 13	Cloud Management Software (Qualification)	<p>efficiency, reducing upgrade risks, and lowering skill requirements on O&M personnel.</p> <p>The cloud management platform should provide multi-tenant self-service portal with the entire out-of-box cloud service catalog. The tenant can access to the cloud to apply/delete/modify all their own cloud resource through the self-service portal.</p>	<p>Please remove the clause "Entire with the entire out-of-box cloud service catalog."</p>	<p>The catalog need to be designed and developed depend on use cases. It is suggested to do a assesment workshop and define the workloads before publishing catalogs. This is the stadard practice to adhere for any large cloud deployments. Request you to remove the clause as different OEM may have some of basic catagories of catalog which may or may not fit with the workloads and uses cases of BCC.</p>	<p>Please follow the bidding document.</p>
149	Pg. 156. SL. # 13	Approval Management	<p>The cloud management platform should provide approval process management. Cloud administrator or tenant administrator can configure whether different services need to be approved before approving resources, and can defined the approval roles in the process, the system should support multi- level</p>	<p>Please remove Multi-Level approval and opt for parallel approval.</p>	<p>Multi level approval procedure increases delay and thereby reduces the cloud success factor</p>	<p>The cloud service will be provided to different government ministries/division/ agencies, so multi-level approval is required.</p> <p>Please follow the bidding document.</p>

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
			<p>approval, at least 2nd level approval. After applying cloud services, users can check the processing flow and withdraw orders. Administrators can approve/reject/transfer to other people's approvals and support the order's email alerting ability. After the user submits the order, the system will send an email to the order approver to notify it for approval. For the soon-to-be expired order, the system supports email notification to the user to renew the order or delete the resource.</p>			
150	Pg. 158. SL. # 13	Metering	<p>The cloud management platform should support statistics on the resource usage of all tenants. Support measurement based on atomic indicators and specifications,</p>	Please remove the charge rate section	<p>The charge rate is generally defined as billing and for billing separate billing software is required which is normally not a scope of cloud management or framework</p>	<p>Metering is a basic function of cloud management. It is required for the integration of billing system. Please follow the bidding document..</p>

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
			<p>facilitating the settlement of services between the administrator and the tenant. Support the collection of raw metering data from Service Detailed Record (SDR) and cloud services, support metering by VDC usage in tenants, metering by VDC resources and metering by deleted VDCs. Support export the measurement data to excel file. Support to provide metering SDR file of multiple services which supported to be periodically synchronized to the SFTP server. Support the operation administrator sets the charge rate for each type of resource, and then obtains the charge result through "Measurement data * Rate", supporting CPU (one hour),</p>			

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
151	Pg. 158. SL. # 13	Backup Service	<p>memory (G-hour), disk (G-hour), VPC (each - Hours), Elastic IP (per hour), Security group (per hour).</p> <p>The provided platform should provide VM and cloud disk backup as a service and provide related VM and cloud disk backup license to support at least 1PB (1024TB) backup storage.</p> <ul style="list-style-type: none"> Unifies portals to deliver backup services and supports multi-tenancy, tenants serve themselves for backup and recovery, and set automated scheduling for backup policies. Tenants can apply for backup services using browsers to back-up the whole virtual machine or cloud disk. Tenants can perform back-up and recovery using 	Clarification required.	<p>Third party API supported backup software can be integrated so that the same can be used for backup by users. Is this acceptable otherwise normally this is a public cloud use case. General in private cloud environments the complete backup is to be managed and fired by administrators so that the sanity of data can be managed. Also recovery methodology in private cloud environment need to be maintained separately by Administrator and therefore the service is more over centralized and managed by administrators.</p>	<p>Backup service is required.</p> <p>Please follow the bidding document.</p>

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SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
152	Pg. 159, SL. # 13		the unified service operation platform without installing an additional independent client or logging in to the backup management node to operate. Automating cloud resource consumption tracking and spend is a critical Cloud Management software capability. Accurate, real-time analysis and reporting along with predictive analytics is required to contain cost. Financial capability includes Metering (which is covered in the bid document), cost allocation, chargeback, invoicing and forecasting.	Please remove invoicing	Invoicing is billing software capability and the same is not a scope of cloud management software. Central billing software need to be used for invoicing.	The solution must have option for the client to connect develop or connect 3rd party solution for invoicing. Please refer to 1st addendum of bidding document.
153	Pg. 159, SL. # 13	On Chargeback – The software must present chargeback reports to internal stakeholders. These reports should provide aggregate spend	On Chargeback – The software must present chargeback reports to internal stakeholders. These reports should provide aggregate spend along with	Please remove invoicing	Invoicing is billing software capability and the same is not a scope of cloud management software. Central billing software need to be used for invoicing.	The solution must have option for the client to connect develop or connect 3rd party solution for invoicing. Please refer to 1st addendum of bidding document.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
		along with detailed drill-down of consumption and rates by resource group and elements. The chargeback process includes receiving and reviewing the invoice.	detailed drill-down of consumption and rates by resource group and elements. The chargeback process includes receiving the and reviewing the invoice.			
154	Pg. 160. SL. # 13	On Invoicing – Invoicing extends chargeback functionality to create customer invoices. This capability is needed for service providers but also applies to IT organizations that must invoice internal customers. Multi-currency support and integration with billing system is a consideration for invoicing.	On Invoicing – Invoicing extends chargeback functionality to create customer invoices. This capability is needed for service providers but also applies to IT organizations that must invoice internal customers. Multi-currency support and integration with billing system is a consideration for invoicing.	please remove this clause	Invoicing is billing software capability and the same is not a scope of cloud management software. Central billing software need to be used for invoicing	The solution must have API to configure invoicing module by the client. Please refer to 1st addendum of bidding document.
155	Pg. 160. SL. # 13	Asset and License management – The software should also include asset and license management capability.	Asset and License management – The software should also include asset and license management capability.	please remove this clause.	EMS software capability. Not a cloud software functionality.	The cloud management software should include the information of all types of resources. Please follow the bidding document.
156	Pg. 161.	Encryption	Encryption	Clarification required	Request you to include	Please follow the bidding document.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
	SL. # 13	Management – The software must include capabilities to manage the use of encryption in the target cloud services. This includes data at rest and data in motion. The capabilities must also extend to Key Management and certificates associated with encryption capabilities.	Management – The software must include capabilities to manage the use of encryption in the target cloud services. This includes data at rest and data in motion. The capabilities must also extend to Key Management and certificates associated with encryption capabilities.		certificate system from third party systems for complete encryption deployment. This also helps to engage several hardware and software based central level of authentication mechanism.	
157	Pg. 161. SL. # 13	Identity and Access Management – Role-based access control is essential. The software must be capable of defining entitlements for all roles including end users, cloud administrators, developers and managers.	Identity and Access Management – Role-based access control is essential. The software must be capable of defining entitlements for all roles including end users, cloud administrators, developers and managers.	Clarification required	Please clarify whether we need to provide central authentication like LDAP or not for this or BCC will use their existing authentication mechanism.	The purchaser is open to Role Based Access Control (RBAC) and/or Attribute Based Access Control (ABAC). The purchase may need to have several administrators' roles, for example billing administrator, compliance administrator, application administrator, etc. And also various types of users like reports reader, support engineer, general end user with restricted read privilege, developer, etc.
158	Page 125	Backup Storage	Backup storage shall be added to the existing VTL storage so that the storage can be accessible by	Backup storage shall be added to the existing backup environment so that the storage can be accessible by existing NetBackup software	Backup storage shall be connected to the same backup network of BTL. BTL and backup storage will be working parallel and both can be accessible by existing	In the National Data Center (NDC) the purchaser presently has Virtual Tape Library (VTL). So Backup Storage shall be connected to the same backup network of Virtual Tape Library (VTL). VTL and Backup

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
159	Page 125	Virtualization and Cloud Software (120 CPU)	Require migration facility of existing Fusion Computer VM into new infrastructure on demand basis. Also computing infrastructure of Email System is required to be integrated with Cloud computing platform. Virtual Machine (VM) Backup is required to be considered	Need clarification	NetBackup software Please clarify if need migration service for existing VM of not. This item is conflicting with item 2.5.1 in page 126 "No Data Conversion and/or Migration activity is considered under this RFP".	Storage shall be working in parallel and both shall be accessible by existing NetBackup software. The supplier does not need to provide migration service for existing VMs. However the system must have capability /feature /provision of migration services to be performed for existing VMs.
160	Page 126	Data Conversion and Migration	2.5.1 No Data Conversion and/or Migration activity is considered under this RFP.	Need clarification	Please clarify if need migration service for existing VM or not. This item is conflicting with item 2.3.1 in page 125.	The supplier does not need to provide migration service for existing VMs. However the system must have capability /feature /provision of migration services to be performed for existing VMs.
161	Page 159 SL. # 11.17a		On cost allocation - Allocation cost to specific departments or organizations is a key requirement. Cost allocation definition should be configurable to meet organization's cost center structure.	On cost allocation - Allocation cost to specific departments or organizations is a key requirement. Cost allocation definition should be configurable to meet organization's cost center structure. Based on the usage of organizations resource, the system can output detailed statistical	Need to specify the exact requirement to define what kind of resource is included in the cost allocation.	Changed to: On cost allocation - Allocation cost to specific departments or organizations is a key requirement. Cost allocation definition should be configurable to meet and organization's cost center structure. The platform should provide the following resources usage analysis of each organization: 1. Random Access Memory 2. Production Storage

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
				report. This report should include the usage of computing, storage, network, security and backup service.		3. CPU utilization 4. Internet Bandwidth 5. Backup Storage 6. Backup Service 7. Security Service 8. Network Service Please refer to 1st addendum of bidding document.
162	Page – 160 SL. # 11.17d		Forecasting - The software should enable forecasting spend associated with currently deployed cloud resources and services. This includes performing "What-if" analysis to determine the financial impact of scaling up/down as demand changes.	Forecasting - The software should enable forecasting spend associated with currently deployed cloud resources and services. It supports to view the forecasted capacity usage trends of CPU, memory, block storage and public ip address in the future three months, six months, or one year.	1. "What-if" is VMware specific function and no other OEM can support it. 2. Forecasting should be used to statistics the resource usage and display the future resource usage trend.	Dropped Please refer to 1st addendum of bidding document.
163	Page- 161 SL. # 11.22b		Compliance - The software should include logic to track and manage compliance with regulatory and industry mandates. This includes preventing subscription to non-compliant cloud services.	Compliance - The software should include logic to track and manage compliance with regulatory and industry mandates. This includes cloud platform security compliance and cloud service security. The cloud platform security compliance includes network plane isolation, resource isolation. anti-IP /	Need to define the detailed requirement of the compliance. The compliance should include cloud platform security compliance and cloud service security compliance.	The Cloud Computing Platform must be more secure and compliant, not less. And a Cloud Management Software should help the purchaser regarding the following four key areas: (1) The first is governance of the ordering and change process. Of course, for serious cloud deployments, the processes of an organization must be followed. Just as there is an approval process for physical infrastructure, there is an approval process for virtual infrastructure. The purchaser needs to

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
				MAC / DHCP server spoofing, anti-DoS / DDoS attack, operating system hardening, database hardening, web security hardening, management data backup protection, and image security. The cloud service security compliance includes account security, tenant isolation, network control, access channel control, network transmission security. API security, sensitive data protection, log management and log desensitization.		integrate its cloud environment into its service management processes or its cloud will grow out of control and ultimately slower and more expensive than traditional systems. (2) Second, all cloud components in a production system should be tracked in the organization's configuration management database (CMDB). Without these IT processes, managing and resolving issues around production systems is nearly impossible. (3) Third, compliance of systems in a cloud environment is no longer optional. Even development systems need to comply with operational standards. Frequently, data and intellectual property on a development system is as important as on a production system. (4) Fourth, and finally, best practice security processes need to be followed. While there are many aspects to security, it needs to be made sure to follow the best practice patching process. Perfecting this process will dramatically reduce the risk of security issues in the cloud.
164			Procurement Related		Where can we get an "Official BID COPY" & if so, WHEN & WHERE will be available?	The official copy of bidding document is available from office of the Project Director. The official copy of bidding document will be available during office hours up to the last date before the bid submission date.
165			Procurement		Is it acceptable for Historical	Yes.

SL.	RFB Page Number	Component / Item	Existing RFP Specification/ Requirement	Request for Change	Bidder's Comment	Purchaser's Response
			Related		Financial Performance Data as per the BID REQUEST be 3 years minimum?	
166			Procurement Related		What is the projected PROJECT START DATE?	December 2018.
167			Procurement Related		What is the BID SURETY AMOUNT requested in US\$?	The amount of bid security in US\$ is 200,000.00 (US\$ Two hundred thousand only).

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