CORRIGENDUM-2

To the National Competitive Bidding (NCB)
ARIAS/ACCSDP/405/2021/188 dated 13th April, 2022
For Supply, Installation, Commissioning and Maintenance of Hardware Infrastructure for Augmentation of State Data Center (SDC) for hosting ARTPS and associated web applications under ACCSD Project

No. ARIAS/ACCSDP/405/2021/309 **Dated, Guwahati the 21st May , 2022**

In partial modification to the NCB issued vide this office no. ARIAS/ACCSDP/405/2021/188 dated 13th April, 2022 **for Supply, Installation, Commissioning and Maintenance of Hardware Infrastructure for Augmentation of State Data Center (SDC) for hosting ARTPS and associated web applications under ACCSD Project** under the World Bank financed ACCSDP, the following amendments are hereby issued:

Sl.No	Clause /Ref/Page	Original Provision	Amendments
1	3. TECHNICAL SPECIFICATIONS Name of Goods or Related Service: Server Load Balancer with Web Application Firewall Point. No. 4 Page No. 70	The proposed appliance should have: 4 x 10Gbps populated with 4 nos. of 10Gbps multimode transceiver. 32GB RAM Layer 4 connections per second: 10,00,000 Layer 7 connections per second: 500,000 SSL connections per second: 10,000 TLS 1.3 Support from day 1 Should support 5 million SYN/sec as part of DDoS solution.	The proposed appliance should have: 4 x 40Gbps ports populated with 4 nos. of 40Gbps multimode transceiver & 2x10Gbps ports populated with 2 nos. of 10Gbps multimode transceiver. 32GB RAM Layer 4 connections per second: 10,00,000 Layer 7 connections per second: 500,000 SSL connections per second: 10,000 TLS 1.3 Support from day 1
2	3. TECHNICAL SPECIFICATIONS Name of Goods or Related Service: Server Load Balancer with Web Application Firewall Sl. No. 6 Page No. 71	The proposed device should be able to be partitioned into 8 Virtual Instances from Day 1	The proposed device should be able to be partitioned into 5 Virtual Instances from Day 1
3	3. TECHNICAL SPECIFICATIONS. Name of Good	Each Storage Node should have minimum 2x480GB NVMe SSD with RAID 1 for operating System.	Each Storage Node should have minimum 2x400GB NVMe SSD or higher with RAID 1 for operating System.

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	Service: Storage Node Page No :64 Sl.No : 4		
4	3. TECHNICAL SPECIFICATIONS. Name of Good Service: Server Switch Page No :65 Sl.No : 1.(ii)	ii) RAM – 32GB or higher	ii) RAM – 8GB or higher
5	3. TECHNICAL SPECIFICATIONS. Name of Good Service: Server Switch Page No :67 Point .No : D. 7	100K IPv4 Unicast Routes and 8K IPv4 Multicast Routes	100K IPv4 Unicast Routes and 4K IPv4 Multicast Routes
6	3. TECHNICAL SPECIFICATIONS. Name of Good Service: Server Switch Page No :67 Sl.No : G.6	Python, RESTAPI Plug-in/equivalent	Python, RESTAPI Plug- in/ OpenFlow/ equivalent.
7	Post-qualification Requirements (ITB 36.1), Point No : i Page 40	Three (3) single work order involving supply of "similar component /Solutions" of minimum value 5 (five) Crore each within the last 5 (five) years as on bid submission date.	Two (2) single work order involving supply of "similar component /Solutions only" of minimum value Rs. 3 (Three) Crore each within the last 5 (five) years as on bid submission date.
8	Post-qualification Requirements (ITB 36.1), Point No. 2 (A) (b) (i) , Page No. 39	The bidder is an established Solution Provider of Compute, Storage, Network Solution for Data Center (SDC) for the past Ten (10) years or more to be supported by documentary evidence.	The bidder should be an established Solution Provider of Compute, Storage, Network Solution for Data Center (DC) for the past Five (5) years or more (to be supported by documentary evidence)
9	3. TECHNICAL SPECIFICATIONS (Computer Solution) Pg 63-64)	Generic query over and above the 15 points of "Point 1". Clarification sought on OS platform and HCL visualization software	Assam State Data Center has cloud, network and security infrastructure in place along with Near DR and Far DR facility. Proposed hardware components will augment the existing IT infrastructure of SDC.
10	3. TECHNICAL SPECIFICATIONS. Item No 5. Server Load Balancer with Web Application Firewall.	SSL connections per second: 10,000	SSL connections per second: 25,000

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	Point 4 Page No: 70		
11	3. TECHNICAL SPECIFICATIONS. Item No 1. Compute Solution. Point 1 Page No: 63	1. Total Physical Cores- minimum 3072 nos. (2nd/3rd Generation Intel Xeon Scalable/AMD EPYC processor minimum 2.0 GHz base frequency) equally distributed among compute nodes.	As per Bid Document (Bidder needs design their own solution by complying the clause)
12	3. TECHNICAL SPECIFICATIONS. Item No 1. Compute Solution. Point 3 Page No: 63	3 . Each server node should have 1024 GB Memory with minimum 2933 MHz or higher speed.	As per Bid Document (Bidder needs design their own solution by complying the clause)
13	3. TECHNICAL SPECIFICATIONS. Item No 2. Storage Node . Point 1 Page No: 64	1. Total Physical Cores - minimum 384 nos. (2nd /3rd Generation Intel Xeon Scalable/AMD EPYC processor minimum 2.0 GHz base frequency).	As per Bid Document (Bidder needs design their own solution by complying the clause)
14	3. TECHNICAL SPECIFICATIONS. Item No 2. Storage Node . Point 3 Page No: 64	3. Each storage node should have at least 1024 GB Memory with minimum 2933 MHz or higher speed	As per Bid Document (Bidder needs design their own solution by complying the clause)
15	3. TECHNICAL SPECIFICATIONS. Item No 4. Data Center Firewall. Point 9 Page No: 68	9. (i) Each firewall should have a minimum 4 x 40Gbps ports populated with: - 1 no. of 40Gbps QSFP+ multimode transceiver for connecting Server Farm Switches. - 1 no. of 40Gbps single mode transceiver for connecting NKN. - 1 nos. of 40Gbps multimode transceiver for connecting SDC Infrastructure - 1 nos. of free ports for future scalability. (ii) Additional 2 x 10Gbps ports populated with - 1 no. of 10Gbps multimode transceiver to connect to State Data Center Internet Switch. - 1 no. of 10Gbps multimode transceiver to connect to State Data Center Core Switch. (iii) All proposed transceiver should be from same OEM as that of	9. (i) Each firewall should have a minimum 6 x 40Gbps ports populated with: - 2 nos. of 40Gbps QSFP+ multimode transceiver for connecting both Server Farm Switches. - 1 no. of 40Gbps single mode transceiver of 10km or higher range for connecting NKN (National Knowledge Network). - 1 nos. of 40Gbps multimode transceiver for connecting SDC Infrastructure. - 2 nos. of free ports for future scalability. (ii) Additional 4 x 10Gbps ports populated with - 1 no. of 10Gbps multimode transceiver to connect to State Data Center Internet Switch. - 1 no. of 10Gbps multimode transceiver to connect to State Data Center Core Switch. - 2 nos. of free 10Gbps ports for future scalability. (iii) All proposed transceiver should be from same OEM as that of proposed Firewall.

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		proposed Firewall.	
16	3. TECHNICAL SPECIFICATIONS. Item No 8. Server Switch. Point G (2). Page No: 76.	FTP / TFTP	2. FTP/TFTP/SFTP
17	3. TECHNICAL SPECIFICATIONS. Item No 4. Data Center Firewall. Point 18. Page No: 69.	Minimum 20000 concurrent IPSec VPN tunnels, 10000 numbers of VPN clients	Minimum 5,000 concurrent IPSec VPN tunnels, 5,000 Numbers of VPN clients.
18	3. PRICE SCHEDULE FOR SUPPLY AS PER SCHEDULE OF REQUIREMENTS Page 48	BoM- Passive Components – (Cat6 Patch Cord, Fiber Patch Cord as per design requirement)	As per design proposed by bidder. Scope of passive components is limited to bidders design to interconnect proposed appliances/devices.
19	SPECIAL CONDITIONS OF CONTRACT Page 103	"Scope of work"	Data migration is not included. Assam State Data Center has cloud, storage, network and security infrastructure in place along with Near DR and Far DR facility. Proposed hardware components will augment the existing IT infrastructure of SDC.
20	3. PRICE SCHEDULE FOR SUPPLY AS PER SCHEDULE OF REQUIREMENTS Page 48	Compute Solution for Near DR	Assam State Data Center has cloud, network and security infrastructure in place along with Near DR and Far DR facility.
21	3. TECHNICAL SPECIFICATIONS. Item No 8. Server Switch. Point : 4. Page : 74	The switch should have - i) sufficient nos. of dedicated 25Gbps downlink ports (all ports to be populated with 25Gbps multimode transceivers and cables) to connect 2 nos. of 25Gbps ports of each compute nodes. (ii) 2 nos. of 10Gbps ports populated with 2 nos. of 10Gbps multimode transceiver. (iii) 2 nos. of 10Gbps ports populated with 2 nos. of 10Gbps single mode transceivers (40km range). (Breakout cables are not allowed) ii) sufficient nos. of 100Gbps dedicated uplink ports (backward compatible with 40G QSFP+ ports) populated with: - 100Gbps multimode transceivers to connect all the proposed storage	The switch should have - (i) sufficient nos. of dedicated 25Gbps downlink ports (all ports to be populated with 25Gbps multimode transceiver and cables) to connect to atleast 2 nos. of 25Gbps ports of each compute nodes. (For example for 16 nos. of compute nodes each switch should have atleast 32 nos. of 25Gbps ports) (ii) Additional 2 nos. of 10Gbps ports populated with 2 nos. of 10Gbps single mode transceiver (40km range). (Breakout cables are not allowed) (iii) Additional 2 nos. of 10Gbps ports populated with 2 nos. of 10Gbps multimode transceiver for future scalability iv) sufficient nos. of 100Gbps dedicated uplink ports (backward compatible with 40G QSFP+ ports) populated with: - 100Gbps multimode transceiver to connect all the proposed storage nodes. - 1x40Gbps multimode transceiver to connect

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		nodes. - 1x40Gbps multimode transceivers. - 1x100Gbps multimode transceivers. - 2x100Gbps multimode transceivers/direct	proposed Firewall. - 1x40Gbps multimode transceiver to connect proposed Server Load Balancer with Web Application Firewall - 1x100Gbps multimode transceiver to connect existing Core Switches at State Data Center. - 2x100Gbps multimode transceiver/direct attached cables to interconnect proposed server switches.
22	3. TECHNICAL SPECIFICATIONS. Item No 3. Server Switch. Point 4. Page No: 65.	10G, 25G and 100G port requirement	As per RFP (As per solution proposed by bidder)
23	3. TECHNICAL SPECIFICATIONS. Item No 1. Compute Solution. Point 6. Page No: 63.	Dedicated out of band management port for remote administration.	Atleast 1x1Gbps copper port for management
24	3. TECHNICAL SPECIFICATIONS. Item No 2. Storage Node. Point 7. Page No: 64.	Dedicated out of band management port for remote administration.	Atleast 1x1Gbps copper port for management
25	3. TECHNICAL SPECIFICATIONS. Item No 6. Compute Solution for Near DR. Point 6. Page No: 72.	Dedicated out of band management port for remote administration.	Atleast 1x1Gbps copper port for management
26	3. TECHNICAL SPECIFICATIONS. Item No 7. Storage Node for Near DR. Point 7. Page No: 73.	Dedicated out of band management port for remote administration.	Atleast 1x1Gbps copper port for management
27	3. TECHNICAL SPECIFICATIONS. Item No 3. Server Switch. Point B(3). Page No: 66.	Graceful Restart for OSPFv3, BGPv4, IS-IS /OSPFv3 for IPv6	Graceful Restart for OSPFv2, OSPFv3,BGPv4 and IS-IS

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28	3. TECHNICAL SPECIFICATIONS. Item No 8. Server Switch. Point B(3). Page No: 75.	Graceful Restart for OSPFv3, BGPv4, IS-IS /OSPFv3 for IPv6	Graceful Restart for OSPFv2, OSPFv3,BGPv4 and IS-IS
29	3. TECHNICAL SPECIFICATIONS. Item No 3. Server Switch. Point B(4). Page No: 66.	UDLD/DLDP or equivalent.	UDLD/DLDP or equivalent loop prevention mechanism
30	3. TECHNICAL SPECIFICATIONS. Item No 8. Server Switch. Point B(3). Page No: 75.	UDLD/DLDP or equivalent.	UDLD/DLDP or equivalent loop prevention mechanism
31	2) Post-qualification Requirements (ITB 36.1) Point A(b)(iii). Page No: 39.	iii. The bidder's respective principal/ OEM should have experience of Supply & installation of Server/Storage, Firewall, Cloud Solution, DC-DC/DC-DR, migration of enterprise database (applicable for respective items) in last 10 (ten) years as on date of bid submission to be supported by documentary evidence relating to previous supplies (supply orders in minimum of three years)	The bidder's respective principal/ OEM should have experience of Supply & installation of Server/Storage, Firewall, Cloud Solution, DC-DC/DC-DR, in last 10 (ten) years as on date of bid submission to be supported by documentary evidence relating to previous supplies (supply orders in minimum of three years)

All other terms & conditions of the bid along with corrigendum 1 remains unchanged.

State Project Director
ARIAS Society