



Republic of the Philippines
DEPARTMENT OF SCIENCE AND TECHNOLOGY
Philippine Atmospheric, Geophysical and Astronomical Services
Administration (PAGASA)

27 July 2021

SUPPLEMENTAL / BID BULLETIN
ADDENDUM NO. 2021-030-01

Subject: Supply, Delivery, Installation, Integration, Testing, Commissioning and Training of Various Server and Software for Digital Tape Library for Long Term Data Storage / ABC Php 107,000,000.00 / PR No. 2021-06-0384 / Ref. No. IB 2021-030

This Bid Bulletin is being issued to all prospective bidders to clarify, amend and/or modify certain provisions in the Bidding Documents and to answer the written clarificatory questions submitted by prospective bidders, to wit:


Query from **Beacon Solutions, Inc.**

Question(s)	PAGASA BAC Answer(s)
<p>V. ID Proposal Contents</p> <p>Additional requirements which will be part of the Technical Bid Documents:</p> <ul style="list-style-type: none">• Prospective bidder must have at least (1) Certified Data Center Professional (CDCP).• Prospective Bidder must have at least (1) Certified Data Center Specialist (CDCS).• Prospective bidder must be a certified ISO/IEC 27001-2013. <p>Question(s):</p> <p>1. Can the bidder's requirement for the following certifications be relaxed?</p> <p>• Prospective bidder must submit certificate of partnership with the application system developers of PAGASA-MIS in conjunction to the existing support and warranty.</p> <p>2. Can PAGASA facilitate the required partnering with existing PAGASA-MIS System Developer? Please identify System Developer.</p>	<p>NO, additional requirements to be submitted by the prospective bidders which will be part of the Technical Bid Documents cannot modified/relaxed.</p> <p>This is to assure that the winning bidder has the appropriate skills and experience in the setup and improvement of key aspects such as power, cooling, security, cabling and safety within data center standards and best practices and ensure that there will be no interruption or disruption to all server operation during project implementation.</p> <p>Please see reference below of the System Developer:</p> <p>MicroStep-MIS info@microstep-mis.com https://www.microstep-mis.com/web/frontpage</p>
<p>VI. Technical Specifications:</p> <p>I. Tape Library Hardware & Software Solutions</p> <p>B. Active Archive System</p> <p>1. The Proposed Solution must deploy Linear Tape File System (LTFS) to read and write data on tapes.</p>	<p>ay</p>

<ol style="list-style-type: none"> 2. The Proposed Solution must deploy a single name space file system regardless of storage technology - i.e. Flash, Disks, Tapes and Cloud 3. The Proposed Solution must provide a global namespace that supports interfaces for file (POSIX, NFS, CIFS), object (S3, Swift) and Hadoop Distributed File System (HDFS). 4. The Proposed Solution must support a scalability of greater than one Exabyte 5. The Proposed Solution must support policy-based data placement. 6. The Proposed Solution must support quotas for individual users, groups of users and Individual File sets. 7. The Proposed Solution must support the implementation of data immutability to prevent files from being changed or deleted in the file system. 8. The Proposed Solution must support transparent recall of data migrated to tape. 9. The Proposed Solution must support the creation of Redundant Copies of Data on Tape. 10. The Proposed Solution must support REST-style API for management of the file system. 11. The Proposed Solution must deploy a Graphical User Interface (GUI) for management of the file system. 12. The Proposed Solution must support moving data to a different tape media generation. 13. The Proposed Solution must support file audit logging in the file system. 14. Provide for at least three (3) years of subscription and support. <p>Question:</p> <p>For licensing purposes please provide CPU core details, operating system, and other details of EXISTING and TO BE SUPPLIED equipment that will be managed by the Archiving Software?</p>	<p>Archiving is to be performed by integrating a global namespace that supports interfaces for file to the PAGASA-MIS application. The existing PAGASA-MIS application stores data in the following:</p> <ol style="list-style-type: none"> 1. Oracle Exadata X3-2 (1/8th Rack) for structured data; and, 2. Oracle ZFS Storage 7320 with two (2) ZS3-4 storage controllers for unstructured data.
<p>D. Rack Mount Server 1 Detailed Specifications</p> <p>8. Redundant Power Supply</p> <p>Question:</p> <p>This was not mentioned in the electrical requirements. Up to what extent will the redundancy be required? Does the transfer have to happen automatically? Does the</p>	<p>This is a standard power supply unit intended for an individual rack mount server. It should be automatic and highly redundant.</p>

transfer require that it be thru a static or mechanical transfer?	
E. Rack Mount Server 2 Detailed Specifications Question: Same comments as item D.8 of the TOR.	Same answer as to query letter D (above).
II. Additional Hardware for the Solution B. Additional Requirements 1. Electrical Systems for four (4) 42U rack cabinets: Question: 1. What is the available voltage at site? 2. What is the distance to the tapping point?	Voltage at site is 400volts 3phase From the distribution panels to main panels, roughly 10-15 meters. Please refer to PAGASA-DOST-Data-Center-EE-Concept-Design images provided.
<ul style="list-style-type: none"> Two (2) sets of Distribution Panels with ground and neutral busbar tapped to the existing Panel board of data center. <ul style="list-style-type: none"> Main: 125AT, 3P Circuit breaker Branches: Two (2) 60 AT, 3P Circuit Breaker, Two (2) 30 AT, 3P Circuit Breaker, Eight (8) 30AT, 2P (L-N) Circuit Breaker Question: What are the required interrupting capacities?	Two (2) 60A, 230V, 3P Two (2) 30A, 230V, 3P Eight (8) 30A, 230V, 2P
<ul style="list-style-type: none"> 4 - 38mm² THHN Feeder Wire (L 1, L2, L3, N) + 1 - 14mm² THHN ground wire from the existing PP-UPS to Distribution Panel. Transient Voltage Surge Suppression System individually connected to the Main Circuit breaker of the Distribution Panel. Question: What type of TVSS is required?	Minimum Technical Specifications or better: <ul style="list-style-type: none"> Nominal Discharge Current (In) - TLE 10kA Short Circuit Current Rating (SCCR) - 65kA Operating Frequency - 50/60 Hz Connection - 10 AWG Conductors, Parallel Connected Operating Temperature -40° F to 149° F (-40° C to +65° C) Operating Humidity 0% to 95% Non-Condensing

<ul style="list-style-type: none"> • 5.5mm², 3-Wire Royal Cord cabinet feeder line from Distribution Panel to four (4) 42U rack cabinet's location. • Twelve (12) units NEMA Socket Power Outlet Rated 30AT. <p>Question:</p> <p>What is the configuration of NEMA?</p> <ul style="list-style-type: none"> • Heavy Duty Metal frame as mounting base/ support of Distribution Panel. Floor mounted and ceiling mounted I braced. Use angle bar, bolt + nuts, welded joints, Painted finish grey for both Primary and Secondary Panel. 	<p>The configuration of NEMA is 3 Pins, 32A, 230V</p>
<p>2. Electrical Systems for four (4) 42U Rack Cabinets</p> <ul style="list-style-type: none"> • One (1) set Dedicated Main Distribution Panel for two (2) x 30KVA UPS <ul style="list-style-type: none"> - Main: 500AT, 3P Circuit Breaker - Branches: Two (2) 60A T, 3P Circuit Breaker Two (4) space for 60AT,3P rated Circuit Breaker, four (4) space for 125AT, 3P Rated Circuit Breaker <p>Question:</p> <p>1. Will the UPS be tapped to this panel?</p> <p>2. Confirm if the 60AT Circuit Breaker space is for 2 Circuit Breaker's and not 4</p>	<p>NO. UPS won't be tapped to this panel.</p> <p>YES. 60AT Circuit Breaker space is for 2 Circuit Breaker and not for 4.</p>
<ul style="list-style-type: none"> • Two (2) sets Distribution Panel with ground and neutral busbar. <ul style="list-style-type: none"> - Main: 60AT, 3P Circuit Breaker - Branches: Eight (8) 30AT, 2P (L-N) Circuit Breaker • 4 - 400mm² THHN Feeder Wire (L 1, L2, L3, N) + 1 -14mm² THHN ground wire from Existing Tapping Point to the Main Distribution Panel. • 4 – 38mm² THHN Feeder Wire (L 1, L2, L3, N) + 1 -14mm² THHN ground wire from two (2) x 30KVA UPS to Distribution Panel. • Transient Voltage Surge Suppression System individually connected to the Main Circuit breaker of the Distribution Panel. <p>Question:</p> <p>Can this be installed in parallel sets using another size? What is the distance to tapping point?</p>	<p>NO. Kindly refer to the TOR.</p>

<ul style="list-style-type: none"> • 5.5mm², 3-Wire Royal Cord cabinet feeder line from Distribution Panel to three (3) 42U PUMIS rack cabinets location. • Six (6) units NEMA Socket Power Outlet Rated 30AT. <p>Question:</p> <p>What type of TVSS is required?</p>	<p>Minimum Technical Specifications or better:</p> <ul style="list-style-type: none"> - Nominal Discharge Current (In) - TLE 10kA - Short Circuit Current Rating (SCCR) - 65kA - Operating Frequency - 50/60 Hz - Connection - 10 AWG Conductors, Parallel Connected - Operating Temperature -40° F to 149° F (-40° C to +65° C) - Operating Humidity 0% to 95% Non-Condensing
<ul style="list-style-type: none"> • Heavy Duty Metal frame as mounting base / support of Distribution- Panel. Floor mounted and ceiling mounted / braced. Use angle bar, bolt + nuts, welded joints, Painted finish grey. <p>Question:</p> <p>What is the layout of the equipment?</p>	<p>The panels should be floor mounted as dictated on the TOR. Please refer to PAGASA-DOST-Data-Center-EE-Concept-Design images provided.</p>
<p>5. Existing 30KVA UPS</p> <ul style="list-style-type: none"> • Dismantling of power cable terminations from existing ONL33-30KV A UPS. • Relocation of 30KVA UPS and 35KVA Transformer from PAGASA Science Garden to PAGASA APC Data Center, Quezon City. • Tapping of power cables in the APC Data Center to the existing UPS. • Dismantling of old batteries. • Provide and install sixty (60) new batteries 12V-7AH VRLA batteries for the existing UPS. • Provide for at least three (3) years of preventive maintenance services for existing UPS. <p>Question:</p> <p>Who will cover the transfer plans, transport to relocation site, disposal of dismantled batteries?</p>	<p>The winning bidder shall cover all activities and plans including the proper disposal of batteries</p>
<p>9. Hot Aisle Containment System and Return Duct for Existing CRAC</p> <ul style="list-style-type: none"> • Fabrication and installation of Return Duct and turning vanes using gauge 22 G.I. sheet, ¾ rubber insulation and canvass cloth and ceiling grilles with manual damper • Fabrication and installation of Hot Aisle Containment for six (6) 42U rack cabinets 	

<p>using 5mm thick acrylic with sliding door using aluminium frame</p> <p>Question:</p> <ol style="list-style-type: none"> 1. Will the bidder provide the mechanical design for this? 2. Will the hot aisle be provided with exhaust fans or will the bidder provide this? 	<p>Yes, the bidder shall provide all necessary documents as required in the Bid proposal contents</p> <p>Kindly refer to the TOR. The bidder can propose exhaust fans if required by their solution.</p>
<p>12. Three (3) 6HP floor mounted air conditioning unit with the following specifications:</p> <ul style="list-style-type: none"> • Must have a cooling capacity of 52,000 kJ/Hr • Must have power input of 5,500 Watts • Must have Energy Efficiency Ratio (EER) of 9.5 KJ/w-hr • Must have a sound level of 54 dbA at low setting <p>Question:</p> <p>This will need HVAC (heating / ventilation/ air cooling) designer. Will the bidder provide this? Need tapping pt. Please identify tapping point or if additional Panel will be provided</p>	<p>No HVAC designer is needed. This a replacement unit. The winning bidder will reuse the tapping point of the old unit.</p>
<p>C. Hardware, software and services that are not explicitly specified but are required for proper functionality of the solution should be included</p> <p>Question:</p> <p>With this stipulation, it is doubly important to provide all details of the requirement to be able to get the complete picture and to be able provide the correct price of project components</p>	<p>This clause will guarantee the functionality and operation of the system. Details for this requirement will be base from the bidder's designs and concept.</p>
<p>III. Additional Components</p> <p>3. SFP+ Transceiver Modules and Cables</p> <ol style="list-style-type: none"> 3.1 Must provide four (4) units of 10G SFP+ Huawei 02318169 Transceiver Modules 3.2 Must provide ten (10) units of Cisco 10GBASE-SR SFP Transceiver Modules <p>Must provide twelve (12) 10 meter, LC-LC fiber optic cables</p> <p>Question:</p> <p>These appears to be parts of existing equipment. Please provide complete details for scoping for spare parts.</p>	<p>10G Switch Huawei S6720-26Q-SI-24S</p> <p>10G Switch Cisco Nexus 5672UP</p>

<p>4. FC HBA for Existing Servers</p> <p>4.1 Must provide eight (8) units of 2 x Dual-port 16Gbit Fe HBA</p> <p>Question:</p> <p>These appears to be parts for existing equipment. Please provide complete details for scoping for spare parts</p>	<p>1U Rack type server Dell PowerEdge R640</p>
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Query from **SMS Global Technologies, Inc.**

Question(s)	PAGASA BAC Answer(s)
<p>1. For "Section V. Special Conditions", it says:</p> <p>"17.3 All workmanship, system parts, accessories, other materials and equipment and services shall be warranted by the Winning Bidder and shall have Five (5) year maintenance support services warranty server nodes and switches, Three (3) year standard warranty from the date of acceptance by the Procuring Entity of the delivered Goods."</p> <p>Question:</p> <p>Is the requirement 3- or 5- year maintenance?</p>	<p>It's a 3-year maintenance and support as stated in the TOR.</p>
<p>2. For "Section VI. Terms of Reference" under "III. ADDITIONAL COMPONENTS" section, item "4. Fiber Channel Host Bus Adapter (FC HBA) for Existing Servers" it says "Must provide eight (8) units of 2 x Dual-port 16Gbit FC HBA</p> <p>Question:</p> <p>Is the requirement to provide eight (8) units of Dual-port 16Gbit FC HBAs?</p>	<p>YES.</p>

This shall form an integral part of the Bid Documents.

For guidance and information of all participating bidders.



LANDRICO U. DALIDA JR., Ph.D.
Chairperson
PAGASA-BAC for Goods and Consulting Services

