

TERMS OF REFERENCE (TOR)

SUPPLY OF NETWORK EQUIPMENT, DELIVERY, AND INSTALLATION OF SERVER, AND UNINTERRUPTIBLE POWER SUPPLY (UPS) EQUIPMENT FOR THE QUEZON CITY - LGU DATA CENTER

I. PROJECT RATIONALE AND OVERVIEW:

Over the last decade, the Quezon City Government has made significant progress in adopting and implementing IT-based technologies, relying on a strong connectivity infrastructure. As the number of IT equipment users has grown exponentially, the existing data network is under strain. To address this, the city recognizes the need to support the increasing volume of data exchange and ensure optimal performance by acquiring additional network and server equipment.

By upgrading the network and server infrastructure, the city aims to seamlessly connect all desktop workstations in buildings within the Quezon City Hall compound, enabling real-time data sharing, streamlined communication, and efficient collaboration among different offices and departments. This proactive approach reflects the city's commitment to staying at the forefront of modernization and improving public services through cutting-edge solutions.

II. PROJECT OBJECTIVE:

The primary objective of this project is to enhance data connectivity and communication within the QC Hall complex by upgrading network equipment, implementing device upgrades, and installing additional infrastructure where necessary. Once implemented, it will integrate a seamless and efficient network that supports full-duplex mode with a ten-gigabit bandwidth capacity, enabling simultaneous two-way data transmission and accommodating high data traffic during peak usage alongside the existing data network. This upgrade aims to improve operational efficiency by facilitating better communication, collaboration, and data exchange between departments and offices within the complex.

1. Supply and delivery of network equipment and Server: The project will involve replacing outdated network equipment with carefully selected upgrades that will integrate with the current infrastructure. Additional equipment will be added to areas with insufficient connectivity to ensure comprehensive coverage throughout the complex.

2. Delivery and Installation of additional UPS unit: To support the increased power load requirements at the QC-LGU Data Center due to the additional equipment, an additional Uninterruptible Power Supply (UPS) unit will be installed. This will provide stable power supply and minimize the risk of data loss or downtime due to power fluctuations.

Overall, the project aims to modernize the data connectivity system within the QC Hall complex, improve operational efficiency, and support future growth and technological advancements.

III. PROJECT SCOPE OF WORK:

The project shall cover the supply and delivery of network equipment, with the supply, delivery, and installation of Server and UPS equipment. Installation services include, but are not limited to, configuration, testing, and commissioning.

1. Project Implementation Plan
 - a. Develop a project schedule outlining tasks, milestones, and deliverables.
 - b. Provide schematics of Server and UPS installation.
 - c. Construct a detailed schematic single-line diagram for the UPS installation.
 - d. Detailed implementation document of the modular UPS in the server room.
2. Supply and delivery of Network and Monitoring Equipment, Server, and UPS.
3. Installation and Assembly Service for Server and UPS Equipment.
4. Conduct Training and Knowledge Transfer on the user's basic maintenance and monitoring of the installed Server and UPS equipment based on manufacturer specifications/recommendations.

IV. LIST OF DELIVERABLES & SPECIFICATIONS:

Item No.	Description	Qty	Unit of issue
1	HARD DISK DRIVE 4TB - Capacity: 4TB, Interface: USB 3.2, Read Speed: 1050MB/s, Write Speed: 1000MB/s, Dimensions (WxHxD): 5.2x0.9x10.1cm, Weight: 63g, Colour: Black	3	units
2	NETWORK-ATTACHED STORAGE DEVICES - Synology minimum technical specification: Network Attached Storage that will serve as media archiving of production database backup files at QC-ITDD Data Center and Disaster Recovery Site capable of 32TB (8Bay x 4TB)	4	units
3	NAS SATA - 6Gb/s NCQ 64MB Cache 3.5-inch internal hard drive (ST4000VN008) New 4TB / Optimized for NAS enclosures with AgileArray, Multi-User technology for increased user workload rate / 24-7 always on, always accessible with NAS enclosures	25	unit
4	2U Rackmount Server - Trusted Platform Module: TPM 2.0V3, 2.5" Chassis Configuration: Chassis with up to 8 Hard Drives Operating System: Windows Server 2022 Datacenter, 16CORE x 6 OS Media Kits: Windows Server 2022 Datacenter, 16CORE, DF Recovery Image, Multi Lang, Processor: 2x Intel® Xeon® Platinum 8260 2.4G, 24C/48T, or its equivalent benchmark Additional Processor: 2x Intel® Xeon® Platinum 8260 2.4G, 24C/48T, or its equivalent benchmark Memory: 32x 64GB RDIMM, 3200MT/s, Dual Rank, 16Gb Hard Drives: 5x 800GB SSD SAS Mixed Use up to 24Gbps 512e 2.5in Hot-Plug, AG Drive Network Daughter Card: Quad Port 1GbE BASE-T, rNDC Additional Network Cards: 1x Dual Port 10/25GbE SFP28 Adapter, PCIe Full Height, V2 Optics & Cables for Network Cards: SFP28 SR	4	units

	<p>Optic, 25GbE, 85C, for all SFP28 ports</p> <p>Power Supply: Dual, Hot-plug Power Supply, 2400W, 250 Volt Power Cord Required for Use with 2 Power Cords (C19 to C20, PDU Style, 2FT)</p> <p>Inclusion: Sliding Rails With Cable Management Arm Equipped with 2x 10G SFP transceiver multimode</p>		
5	<p>RACKMOUNT NETWORK-ATTACHED-STORAGE</p> <p>- 16-bay rackmount NAS, Intel® Xeon® D-1541 8-core 2.1 GHz (turbo to 2.7 GHz) or its equivalent benchmark, 16GB RAM (up to 64GB), 2x10GbE Base T, Redundant power (drives not included), 5 years warranty "with Active backup for Business SSD 2.5" Enterprise Standard 2.5" SATA SSD SAT5210 3.84TB x16; SLIDING RAIL KIT (Rail Kits with 1-year limited warranty)</p>	4	units
6	<p>Line Interactive UPS 900W</p> <p>- Output power capacity with at least 900W/1600VA, Output connectype: with minimum of 4 universal, Nominal input/Output Voltage: 220-230V, Battery Type: Lead-Acid battery</p>	40	units
7	<p>2U Rackmount server for WSUS</p> <p>- Trusted Platform Module: Trusted Platform Module 2.0 V3, Chassis Configuration: 2.5" Chassis with up to 24 Hard Drives, Operating System: Windows Server 2022 Datacenter, 16CORE x 4, OS Media Kits: Windows Server 2022 Datacenter, 16CORE, DF Recovery image, Multi Lang, (Downgrade not included) Processor. 2x Intel® Xeon® Platinum 8253 2.2G, 16C/32T, 10.4GT/s, Additional Processor. 2x Intel® Xeon® Platinum 8253 2.2G, 16C/32T, 10.4GT/s, Memory: 16x 64GB RDIMM, 3200MT/s, Dual Rank, 16Gb, 2x 800GB SSD SAS ISE, MU, up to 24 Gbps 512e 2.5in Hot-Plug, AG Drive Network Daughter Card: Quad Port 1GbE BASE-T, rND, Additional Network Cards: Intel X710 Dual Port 10GbE SFP+ Adapter, PCIe Full Height, V2, Power Supply: Dual, Hot-plug Power Supply, 2400W, 250 Volt Power Cord Required for Use, Power Cords: 2x C19 to C20, PDU Style, 2FT Power Cord, North America.</p>	1	unit
8	<p>LFD Monitor - 65"</p> <p>- 3840x2160 65" Ultra High-Definition Commercial. Resolution: 4K UHD 2160p. Display Size: 65.0 inches</p>	2	units
9	<p>Digital Fiberscope</p> <p>- Fiberscope features:</p> <p>1-button to auto-focus, center, capture, analyze, and save, IEC, IPC, and user-defined pass/fail analysis, Untethered, compact, hand-held inspection, use independently or pair with OTDR, save 10K results internally or share via Wi-Fi or USB</p> <p>Applications</p> <p>Inspect connectors on patch cords or in bulkhead adapters, Optical network installation, troubleshooting, and maintenance, Inspect MPO/MTP multi-fiber connectors, ensure critical fiber infrastructure performs properly, Keep fiber</p>	2	units

	connections working at optimal performance levels, Verify proper connector cleaning practices are being used.		
10	Network Tester with probe kit - Status Indicators: Toner: Display, Probe: Display 8 indicators and Synch Indicator, Connectivity Media Twisted Pair, Coaxial, 10Base-T, 1000 Base-T with up to 20 hour typical battery life, 9v DC. Voltage protection: 100V, Create and detect 1000 Hz compatible tone, Control: Thumbwheel switch, volume control wheel, Tone detection: Detects IntelliTone digital signal and 1 kHz signal from analog toners, Toner interface: Main Mode port for cable map on all 4 pairs of UTP / STP cabling. Safety: EN 61010-1 1st Edition+ Amendments 1, 2EMC; EN 61326-1	2	units
11	Professional Laser measure - heavy duty professional laser measure with up to 50m measurement range, laser colour: Red, Units of measurement m/cm, ft/inch, Data transfer: Bluetooth, with built-in Dust and splash water protection IP 54 rating, with AAA batteries, at least US or European brand	2	units
12	UPS 40kVA - 1x UPS 40kW 208V for up to 5 internal 9Ah smart; modular battery strings, Start-up 5x8; 4x 9Ah Smart Modular High Capacity Battery String: IT Expert 1 Year Digital 5 node Service License. Inclusion: 2x (1) Additional Contract Preventive Maintenance Visit 5X8 for (1) Galaxy VS 30 to 50kW 208V UPS -2x Scheduling Upgrade to 7X24 for Existing Preventative Maintenance or Additional preventive maintenance Visit for up to 40 kVA UPS -1x Assembly Service for (1) 30-50kVA -1x Scheduling Upgrade to 7X24 for Existing Startup Service for up to 40 kVA UPS or Battery Frame Professional IT Services – Separate source from server to main EE room, Supply and install of electrical wires, conduit, DP panel, and termination.	1	unit
13	Enterprise Router - 100 GbE Router with L3 Hardware offloading, 12x SFP28 port, 16gb RAM, two M.2 slots, loaded with 2x 100gbps QSFP28 Multimode and 6x 10Gbps x 80m copper SFP+, North American or European Brand	2	units
14	SWITCH - 16 Port - 2x 100 Gigabit QSFP28 ports, 16x 25 Gigabit SFP28 ports, L3 hardware offloaded routing, North American or European Brand Inclusion: 2x QSFP28 and 8x SFP28 transceiver	2	units
15	Router - 12 port - Connectivity: 12 x 10G SFP+, 2 x 25G SFP28 ports Provides incredible results in single tunnel (up to 3.4 Gbps) and BGP feed processing. with dual redundant power supply	4	units

	Includes: 2x25G SFP28 (Single Mode) and 6x 10G SFP+ Multimode (100% compatible) North American or European Brand		
16	SWITCH - 48 Port - 48 port Network Switch - Managed Switch, 48x Gigabit ethernet port, 4x SFP+ port and 2x QSFP+ ports Inclusion: 10G SFP+ transceiver x2 Multimode (100% compatible) North American or European brand	62	units
17	SWITCH - 24 Port - 24 port Gigabit Ethernet router switch with 4 10Gbps SFP+ ports in 1U rackmount case, Dual Boot and PoE output, 500W, Inclusion: 10G SFP+ transceiver x2 Multimode (100% compatible) North American or European Brand	29	units
18	Rackmount UPS 2kVA - 1x UPS 2200VA 230V UPS Network Management Card 3; 1T Expert 1 year Digital 1 node Service License (for registration request 2-4 weeks) Inclusion: -1x UPS 19" Rail Kit for 2.2/3kVA for Rack mounting; -1x UPS 72V 2.2kVA RM Battery Pack, additional external battery -1x PDU Rack PDU, Basic, 0U/1U, 100-240V/20A, 220-240V/16A, (7) C13, (2) C19	32	unit
19	Access points - 2.4Ghz / 5Ghz Wireless Access Point, with modern quad-core CPU, 1GB of RAM, 2 Gigabit Ethernet ports. POE, Gen6 802.11ax with IPsec hardware encryption support, With perpetual license, unlimited updates, North American or European Brand	116	units
20	Dual-band 2.4/5 wifi base station - 5GHz. 120 degree 19dBi dual polarization sector Integrated antenna with 720Mhz CPU, 128MB RAM, 1x SFP, PSU and PoE	2	units
21	Outdoor POE Router - Weatherproof Outdoor POE Router with 7x 1G Ethernet ports, 1x 2.5G Ethernet, 10G SFP+, 1GB of RAM, 1GB NAND Storage, encryption support, With perpetual license, unlimited updates, North American or European Brand	6	units
22	Switch - 12 Port - 4x combo 10G Ethernet/ SFP+ ports, 8x 10G Ethernet ports, With Dual power supply. With perpetual license, unlimited updates, North American or European Brand	4	units
23	SFP+ Transceiver - Multimode - SFP-10G-SR Compatible 10GBASE-SR SFP+ 850nm 300m DOM Duplex LC MMF Optical Transceiver Module Cisco compatible	60	pcs
24	SFP+ Transceiver - Singlemode - SFP-10G-LR Compatible 10GBASE-LR SFP+ 1310nm 10km DOM Duplex LC SMF Optical Transceiver Module, Cisco compatible	20	pcs

25	10G Copper Fiber Module - SFP-10G-T-X Compatible 10GBASE-T SFP+ Copper RJ-45 80m Optical Transceiver Module	20	pcs
26	WIFI-BASE STATION ANTENNA - 5GHz 120 degrees 15dBi dual polarization sector integrated antenna with 720MHz CPU, 128MB RAM, SFP, PSU and PoE	5	units
27	Industry-grade Vertical Power Distribution Unit (PDU) - Industry-grade Vertical Power Distribution Unit (PDU) Power strip unit for Data Cabinet rack, High quality 12 unit universal power slots, 220 rated voltage, Max Current: 15A, Max Output power: 3300W	7	units

V. QUALIFICATIONS AND REQUIREMENTS:

The following are the minimum qualifications and requirements of the Bidder:

A. TRACK RECORD

1. The Bidder must be in the same industry as per their SEC or DTI filing.
2. The Bidder must have satisfactorily implemented a similar project within the last three (3) years.
3. The Bidder should have implemented a public or private sector ICT project with a single completed contract amounting to at least fifty percent (50%) of the ABC.

B. ORGANIZATION

1. The Bidder must have updated Platinum status in PHILGEPS.
2. The Bidder must be a duly registered company with SEC or DTI filing.
3. The Bidder must be filed with the SEC or DTI as an IT company with the purpose of the supply of IT-related goods and services.
4. The Bidder must be an AUTHORIZED RESELLER of the offered product. The Bidder will be required to submit the appropriate CERTIFICATION from the authorized distributor or manufacturer, if not the manufacturer.

C. MANPOWER

1. The Bidder must have at least two (2) Technical Support personnel as a regular, full-time employee of the company.
2. The Bidder must have available service support personnel capable of responding to a service call within the next business day during office hours, at least for the duration of the warranty.

VI. WARRANTY & AFTER-SALES SUPPORT:

The Bidder will submit an Affidavit of Undertaking stating the following:

- All hardware components will have one (1) year warranty upon delivery.
- Technical Support:
 - Workdays from 8AM to 5PM, with a response time within the day or next business day.
 - Weekends and holidays, expect a response by next business day.

VII. DELIVERY, INSTALLATION and PAYMENT SCHEDULE:

Within Ten (10) months upon issuance of the Notice to Proceed. Payment to the winning bidder shall be based on the following milestones and acceptance criteria:

<p>MILESTONES</p>	<p>DELIVERY PERIOD</p>	<p>BASIS FOR PAYMENT</p>
<p>Submission of Project Implementation Plan</p> <ul style="list-style-type: none"> Upon submission of the Project Implementation Plan, including the minutes of initial implementation meetings, corresponding schematics, GANTT charts, and relative engineering documents, the procuring entity will release fifteen percent (15%) of the total winning bid amount to the service provider. 	<p>Within 15 calendar days</p>	<p>15%</p>
<p>Delivery of Network and Maintenance Equipment</p> <ul style="list-style-type: none"> Upon delivery of Network and Maintenance Equipment, the procuring entity will release thirty percent (30%) of the total winning bid amount to the service provider. Deliverables: Line Interactive UPS 900W (40 units), Digital Fiberscope (2 units), Network Tester with probe kit (2 units), Professional Laser measure (2 units), Enterprise Router (2 units), SWITCH - 16 Port (2 units), Router - 12 port (4 units), SWITCH - 48 Port (62 units), SWITCH - 24 Port (29 units), Rackmount UPS 2kVA (32 units), Access points (116 units), Dual-band 2.4/5 wifi base station (2 units), Outdoor POE Router (6 units), Switch - 12 Port (4 units), SFP+ Transceiver - Multimode (60 pcs), SFP+ Transceiver - Singlemode (20 pcs), 10G Copper Fiber Module (20 pcs), WiFi-Base Station Antenna (5 units) – please refer to the List of Deliverables, item no. 6, 9 to 11, and 13 to 26 for full details 	<p>Within 2 months</p>	<p>30%</p>
<p>Delivery of Monitoring, NAS, and Server Equipment</p> <ul style="list-style-type: none"> Upon delivery of Network Attached Storage (NAS), and Server Equipment, the procuring entity will release forty-five percent (45%) of the total winning bid amount. Deliverables: Hard Disk Drive 4TB (3 units), Network Attached Storage Devices (4 units), NAS SATA (25 units), 2U Rackmount Server (4 units), Rackmount Network Attached Storage (4 units), 2U Rackmount server for WSUS (1 unit), LFD Monitor - 65" (2 units), Industry-grade Vertical Power Distribution Unit 	<p>Within 3 months</p>	<p>45%</p>

(PDU) (7 units) – please refer to List of Deliverables, item no. 1-5, 7, 8, and 27 for full details.		
Delivery and Installation of UPS Equipment <ul style="list-style-type: none"> Upon delivery of UPS Equipment, the procuring entity will release the remaining nine percent (9%) of the total winning bid amount. Deliverables: UPS 40kVA (1 unit) – please refer to List of Deliverables item no. 12 for full details 	Within 10 months	9%
Performance Security <ul style="list-style-type: none"> One percent (1%) of the total winning bid amount will be released one (1) year after the final acceptance of the delivery as performance security. 	1 year after the final acceptance of the delivery	1%

VIII. APPROVED BUDGET FOR THE CONTRACT:

The Approved Budget for the Contract (ABC) amounts to One Hundred Thirty-Five Million Eight Hundred Four Thousand Five Hundred Fifty-Five Pesos only (PHP 135,801,552.25) VAT inclusive.


IX. PENALTIES FOR BREACH OF CONTRACT:

Failure to deliver the goods according to the standards and requirements set by the City shall constitute an offense and shall subject the winning bidder to penalties and/or liquidated damages pursuant to RA 9184 and its revised Implementing Rules and Regulations.


X. CANCELLATION OR TERMINATION OF CONTRACT:

The guidelines contained in RA 9184 and its revised IRR shall be followed in the termination of any service contract. In the event the City terminated the Contract due to default insolvency, or for cause, it may enter negotiated procurement pursuant to RA 9184 and its IRR.

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