Terms of Reference
Ver. 2.0

Supply, Delivery, Installation, and Commissioning of
DATA CENTER
for the National Security Council Secretariat and the Presidential Situation Room

A. BACKGROUND

The National Security Council (NSC) is the principal advisory body on the proper coordination and integration of plans and policies affecting national security (Executive Order 115, series of 1986; as amended by Executive Order No. 33, series of 1992; and Executive Order 34, series of 2001). Whether the NSC Proper or its Executive Committee convenes or not, the National Security Adviser and Director-General of NSC is expected to advise the President on matters affecting the security of the nation supported by the National Security Council Secretariat (NSCS).

The Presidential Situation Room (PSR) was activated pursuant to Administrative Order No. 2 series of 2010 under the management of the NSCS. The PSR is mandated to serve as the primary monitoring, coordination and communications center in the Office of the President on classified information.

In order to effectively fulfill said mandate and facilitate the delivery of NSCS core and support functions, it maintains the 24/7 operations of the PSR Server Closet, which hosts various application servers and other communication and network equipment; and the NSCS Server Closet which caters to the NSCS Local Area Network.

With the need to upgrade the existing PSR Server Closet to a fully functional Data Center, the NSCS is seeking to create a Data Center at the Second Floor (2/F) National Security Council Building, Presidential Security Group Compound, Malacañang Park; and at the Eighth Floor (8/F) National Intelligence Center (NIC) Building, Quezon City. This will serve and host the voice and data requirements of the PSR and NSCS, and to some extent, the Security, Justice and Peace Cabinet Cluster. This project is undertaken in consideration of the Special Requirement of the agency as stated in Section 5.2 of DICT Department Order 2017-002.

The Data Center will include the following infrastructure components:

- Site Preparation (Civil, Mechanical, and Electrical Works)
- Uninterruptible Power Supply
- Power Distribution Units
- Equipment / Server Rack(s)
- Precision Air-Conditioning Units
- Fire Detection, Alarm, and Suppression System
- Environmental Monitoring System (with SMS Alerts)
- Door Access System
- CCTV System
- Generator Set with Automatic Transfer Switch (ATS)
- Server, Licenses, Storage, Services (Hyperconverge Infrastructure)

Objectives of the project:

- To protect and secure the agency’s existing ICT investments (firewalls, routers, switches, servers, etc.);
- To ensure a dependable and efficient ICT support services (Internet, Intranet, database and printer sharing, etc.); and
- To create the much needed Active Directory for the NSC and PSR LANs for an effective management of network resources.

Once the NSC and PSR Data Centers are established, creation of ICT-related and Cybersecurity policies will be easier to adopt and implement. This will cover all authorized NSC or PSR issued ICT equipment/device, and extended to equipment/device that will be brought in by employees and guests.
### B. TECHNICAL SPECIFICATIONS

The bidder shall supply and deliver the following minimum specifications:

<table>
<thead>
<tr>
<th>Item No. 1</th>
<th>DATA CENTER for the Presidential Situation Room (DC#1)</th>
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<tr>
<td></td>
<td>• Site Preparation (Civil, Mechanical, and Electrical Works)</td>
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<tr>
<td></td>
<td>• Uninterrupted Power Supply</td>
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<tr>
<td></td>
<td>• Power Distribution Unit</td>
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<tr>
<td></td>
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<td>• Server, Licenses, Storage, Services (Hyperconverge Infrastructure)</td>
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</table>

#### Component 1 Site Preparation (Civil, Mechanical and Electrical Works)

- Installation of Tempered Glass Panels and Doors
- Electrical Wirings with Grounding
- Service Entrances for Utilities
- Excavation/Backfilling from building to powerhouse for the encasement of feederline for GENSET
- Wall Rehabilitation (Fire Rated Cladding)
- Ceiling Installation (Gypsum Board Finish)
- Creation of Office Space and Storage Area
- Relocation of existing Split-Type Air-Conditioning Unit

#### Component 2 Uninterrupted Power Supply (UPS) – 4 Units

<table>
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<tr>
<th>Minimum Requirements</th>
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<tbody>
<tr>
<td>Output</td>
</tr>
<tr>
<td>• Output Power Capacity: 4.5KWs / 5.0KVA</td>
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<tr>
<td>• Nominal Output Voltage: 230V</td>
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<tr>
<td>• Output Voltage Distortion: Less than 2%</td>
</tr>
<tr>
<td>• Output Frequency: 60Hz</td>
</tr>
<tr>
<td>• Topology: Double Conversion Online</td>
</tr>
<tr>
<td>• Wave form: Sinewave</td>
</tr>
<tr>
<td>Input</td>
</tr>
<tr>
<td>• Nominal Input Voltage: 230V</td>
</tr>
<tr>
<td>• Input Frequency: 40-70Hz (auto sensing)</td>
</tr>
<tr>
<td>• Input Connections: Hard Wire 3 wire (1PH+N+G)</td>
</tr>
<tr>
<td>• Input Voltage adjustable range for mains operation</td>
</tr>
<tr>
<td>Battery</td>
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<tr>
<td>• Battery Type: Maintenance – free sealed Lead-Acid battery with suspended electrolyte: leakproof</td>
</tr>
<tr>
<td>• Included Battery Modules: 2</td>
</tr>
<tr>
<td>• Typical Charge Time: 1.5 hours</td>
</tr>
<tr>
<td>• Expected Battery Life (years): 3 - 5 years</td>
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<tr>
<td>Others</td>
</tr>
<tr>
<td>• With Rack Mounting Kit</td>
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<tr>
<td>• Interface Ports: RJ-45 10/100 Base-T</td>
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<td>• Control Panel: Multi-functional LCD Status and control console</td>
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<tr>
<td>• Approvals: CE, CE Mark, EAC, EN/IEC 62040-2, Energy Star V 1.0 (EU), IRAM, RCM, VDE</td>
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<td>• Warranty: 3 years repair or replace and 2 years for battery</td>
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<tr>
<td>• Must have an Authorized Service Partner/Center in the Philippines</td>
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<tr>
<td>Power Distribution Unit</td>
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<tr>
<td>-------------------------</td>
</tr>
<tr>
<td>Type: Metered</td>
</tr>
<tr>
<td>Orientation: Vertical, Zero U</td>
</tr>
<tr>
<td>Load capacity: 7400va</td>
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<tr>
<td>Maximum input current: 32 A</td>
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<tr>
<td>Input connections: IEC 309 32A</td>
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<tr>
<td>Output connections: (6) IEC 320 C19 (Battery Backup)</td>
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<tr>
<td></td>
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<tr>
<td>Nominal Voltage: 230V</td>
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<tr>
<td>- Shall have Hydraulic-magnetic circuit breakers</td>
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<tr>
<td>- Shall have Locking IEC receptacles and locking power cord compatible</td>
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<tr>
<td>- Shall have Environmental monitoring port for external temperature/humidity monitoring</td>
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</tbody>
</table>

**Component 3**

<table>
<thead>
<tr>
<th>Display and Management</th>
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<tbody>
<tr>
<td>- Shall have User-interactive LCD display for local access</td>
<td></td>
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<tr>
<td>- Shall have Field-replaceable network management module</td>
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<td>- Shall have Local USB port for easy local firmware updates</td>
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<tr>
<td>- Shall have Active current measurements (amps) and power metering capability</td>
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<tr>
<td>- Shall have User-customizable alarms and warnings</td>
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<tr>
<td>- Shall have Embedded log memory to record/review/report historic metered data</td>
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</tr>
</tbody>
</table>

Warranty: 3 years warranty for unit repair / replace.

Power distribution unit shall be same brand with the UPS, PACU and server rack.

<table>
<thead>
<tr>
<th>Precision Air Conditioning Unit (PACU)</th>
<th>2 units</th>
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<tbody>
<tr>
<td>- Shall have a nominal capacity up to ten (10) kW</td>
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<tr>
<td>- Shall be in Air-cooled and row-based type</td>
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<tr>
<td>- Shall be 230VAC, 1PH, 60Hz input</td>
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<tr>
<td>- Shall use R410A Refrigerant gas</td>
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<tr>
<td>- Shall have Variable-speed fans</td>
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<tr>
<td>- Shall have Standby input features</td>
<td></td>
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<tr>
<td>- Shall have Common alarm output features</td>
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<tr>
<td>- Shall have Internal condensate pump</td>
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<td>- Shall have Top or bottom piping</td>
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<tr>
<td>- Shall have Network Management Card (NMC)</td>
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<tr>
<td>- Shall have Remote temperature sensors</td>
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<tr>
<td>- Shall have Microprocessor controller</td>
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<tr>
<td>- Shall have Insulated cabinet</td>
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<tr>
<td>- Shall have washable filter</td>
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<tr>
<td>- Shall have condensate management with dual floats</td>
<td></td>
</tr>
<tr>
<td>- Shall have condensate pump</td>
<td></td>
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<tr>
<td>- Shall have Scroll compressor</td>
<td></td>
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<tr>
<td>- Shall have hot gas bypass</td>
<td></td>
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<tr>
<td>- Shall have 3 years warranty for unit repair / replace.</td>
<td></td>
</tr>
<tr>
<td>- Must have an Authorized Service Partner/Center in the Philippines.</td>
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</tr>
</tbody>
</table>

**Component 4**

<table>
<thead>
<tr>
<th>Fire Suppression System</th>
<th>1 Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Shall be computed for the entire data center area.</td>
<td></td>
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<tr>
<td>- Shall be HFC-227ea Factory Filled and Pressurized clean agent gas</td>
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<tr>
<td>- Shall have impulsive valve operator kit on the cylinder tank</td>
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<tr>
<td>- Shall have 360 degree discharge nozzle</td>
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</tbody>
</table>
- Shall include control panel with transformer and battery.
- Shall be interface to PACU from control panel for automatic shut-off in case of smoke detection.
- Shall have at-least conventional smoke detector and base
- Shall include strobes, horns and bells
- Shall have manual release and abort switches
- Shall provide complete signage.
- Shall submit hydraulic flow calculations and drawings
- Shall provide certification from distributor that they are certified user of FM-200 refilling station located in the Philippines.
- Shall provide electrical and mechanical system test to guarantee proper operation before turn over.
- Shall provide door fan testing.
- Shall have 1 year warranty for unit repair / replace.
- Must have an Authorized Service Partner/Center in the Philippines

### Equipment / Server Rack – 4 units

- Rack Height: 42U
- Maximum Height: 1991mm
- Maximum Width: 600mm
- Maximum Depth: 1070mm
- Color: Black
- Rack width: 19 Inches
- Protection class: IP20

#### Cable Management Accessories
- Horizontal cable manager
- Vertical Cable Organizer
- Cable trough on roofing
- Data Cable partition on roofing
- Server Rack shall be same brand with the UPS, PACU and Power distribution unit

Warranty: 5 years warranty for unit repair / replace.

### Environmental Monitoring System (EMS) – 1 Unit

- Shall include integration with user-defined alerts features
- Shall have Adjustable alert thresholds (multiple thresholds per sensor, scheduling, severity levels).
- Alerts View features for easily review and correlate alerts. Provide context to alerts by attaching video clips, graphs, and maps.
- Shall support the following sensors: temperature, humidity, vibration, smoke, rope leak, and alarm beacon monitoring.
- Shall support email notifications alerts.
- Shall have Web interface GUI.
- Shall rack-mountable appliance.
- Shall support communication protocols of TCP/IP; HTTP; HTTPS; SMTP; SNMP v1, v2c, and v3; DHCP; DNS; Socks v4 or V5 Proxy Server; A-Link
- Shall include an external GSM Modem Gateway with at least 3 SIM slots for SMS Alert
- Shall support 78 universal sensors.
- Shall have 3 years warranty for unit repair / replace.

### Door Access System – 2 Doors

- Shall have Fingerprint Identification system: Optical fingerprint collector (Resolving power 500DPI)
- Identification angle: 360-degree rotation with high sensitive and accurate identification.
- Shall have verification method via fingerprint + password
- Shall be in English language for machine and its software
- Alarm function: Intimidation alarm Dissolution alarm break-in alarm unlock overtime alarm entrance point alarm
- Shall have the Function of inquiring the record
- Shall be capable to provide intelligent study fingerprint from year to year.
- Shall have Exit release button: can be connected with usual exit button or remote control release button
- Shall have Lock combination function
- Shall have bell function
- Shall have fingerprint capacity of 2000
- Shall have transaction capacity of 1000
- Shall have voice display
- Shall be capable to record 50000 events.
- Shall have the capability to communicate in TCT/IP, RS485, USB
- Shall have LCD Display 128mm x 64mm
- Shall have electromagnetic locks that withstand 600lbs.
- Shall have L&Z Bracket, magnetic door contact, metal push button exit, emergency break glass, and enclosure panel for the controls and power supply.
- Shall have desktop system with 19 inch LCD Monitor, Back-UPS and Core i5 CPU for monitoring and accessing of security door access system data. Licensed OEM OS installed should be compatible with Door Access System Application.
- Shall have 1 year warranty for unit repair / replace.

### CCTV System – 1 Unit

**Fixed Camera** – 8 units
- Image Sensor: Approx. 1/2.7 type CMOS image sensor
- Lens: Focal Length: 3.6 mm, Angular Field of View: H: 90° V: 48°
- Day and night: Auto(ICR) / Color/ Black & White
- Minimum Illumination: 0.1 lx / F1.2 (color)*, 0 lx / F1.2 (IR on)*1

**PTZ Camera** - 1 unit
- 3.5"PTZ camera ,1/2.9" AHD CMOS Sensor,1080P horizontal resolution, with 10M connection cable.
- 2.7-13.5mm auto focus lens 5X optical zoom. The auto focus enables the camera to focus automatically to main clear image.
- Support Pan tilt rotation, 0°-355° horizontal and 0°-90° vertical viewing angle, wide monitoring area.
- With 6pcs infrared lamps, night vision distance up to 40m.IR-CUT double filter. Auto switch between day and night, restoring clear true color

### Network
- Ethernet: 10BASE-T/ 100BASE-TX, RJ45 connector
- Resolution: 1080P(1920x1080) / 1.3 M (1280x960) / 720P (1280x720) / D1 (704x576/704x480) / CIF (352x288/352x240)
- Image compression method: H.264/ H.264H/ H.264B/ MJPEG
- Frame Rate: 1 to 25/30 fps

### General
- Power source: 12 V DC, PoE (IEEE802.3af compliant)
- Power Consumption: 512 MB RAM, 256 MB Flash
- Power: 12 V DC: 370 mA / Approx. 4.4 W PoE 48 V DC: 100 mA / Approx.
4.8 W (Class 0 device)
Ambient Operating Temperature / Humidity: -30 °C to +60 °C (-22 °F to 140 °F) 10 % to 90 % (no condensation)
Water and Dust Resistance (Main Body): IP66

**Network Video Recorder** – 1 unit
Channel: 16 channel with 1080p realtime live view
Bandwidth: Max 200 Mbps incoming bandwidth
Video output: HDMI / VGA / BNC simultaneous video output
SATA HDD: Support 4 SATA HDDs up to 16 TB, 1 eSATA up to 16 TB, 2 USB (1 USB3.0)
PoE port: 16 PoE ports
Multiple network monitoring: Web browser, EMS* (E-Series Management Software) & Mobile-EMS
Multi-Language support: English / Thai / Vietnamese

**System**
- Processor: Dual-core embedded processor
- Operating System: Embedded Linux

**Video / Audio:**
- Interface: 1 HDMI, 1 VGA, 1 BNC
- Resolution: 1920 x 1080, 1280 x 1024, 1280 x 720, 1024 x 768
- Display Split: 1 / 4 / 8 / 9 / 16
- OSD: Camera title, Time, Video loss, Camera lock, Motion detection, Recording

**Recording:**
- Compression: H.264 / MJPEG
- Resolution: 3 Mp (2048 x 1536) / 1080p (1920 x 1080) / 720p (1280 x 720) / D1 (704 x 480) / VGA (640 x 480) / CIF (352 x 240) & etc.
- Bit Rate: 4 Mbps or less
- Record Mode: Manual, Schedule (Regular (Continuous), VMD, Alarm), Stop
- Record Interval: Recording duration: 1 - 120 min (default: 60 min), Pre-record: 1 - 30 sec, Post-record: 10 - 300 sec

**Video Detection & Alarm:**
- Alarm Action: Recording, PTZ, Tour, Alarm, Video Push, Email, FTP, Buzzer & Alarm pop-up
- Video Detection: Video Motion Detection, Camera Blank
- Alarm Input: 16 channel

**Playback & Backup:**
- Sync Playback: 1 / 4 / 8 / 16
- Search Mode: Time/Date, Alarm, VMD & Exact search (accurate to second), Smart search
- Playback Function: Play, Pause, Stop, Rewind, Fast play, Slow play, Next le, Previous le, Next camera, Previous camera, Full screen, Repeat, Backup selection, Digital zoom

**Network:**
- Ethernet: 1 RJ45 port (10 / 100 / 1000 Mbps)
- Max. User Access: 128 users

**Storage:**
- 4 SATA ports, up to 16 TB (External HDD: 1 eSATA port)

**External Interface:**
- 2 ports (1 Rear USB3.0, 1 Front USB2.0)

**Display:** 21" LED TV with Mini-PC (Windows OS) wireless KBD/MSE
**Hard Disk**
- Formatted Capacity: 4TB
- Weight: 1.50lb
- Form Factor: 3.5-inch
- Advanced Format (AF): Yes

**Performance:**
- Interface Transfer rate max buffer to Host: 6Gb/s
- Host to/from drive: 150mbps
- Cache (MB): 64
- Performance Class: 5400 RPM Class

**Reliability/Data Integrity:**
- Load/unload cycles: 300,000
- Non-recoverable read error bits read: <1 in 10

**Power Management:**
- Average power requirements
- Read/White: 5.1
- Idle: 4.5
- Standby and Sleep: 0.4

**Environmental Specification:**
- Temperature Operating: 0 to 65
- Non-operating: -40 to 70

**Warranty:** 1 year warranty for unit repair / replace.

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**Generator Set** - 1 unit
- Fuel Type: Diesel
- Cylinders: 3
- Phase: Single Phase
- Power Rating (kVA): 30
- Rated speed RPM: 1500
- Cooling System: Water

Shall have 3 years warranty for unit repair / replace.
Must have an Authorized Service Partner/Center in the Philippines

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**Automatic Transfer Switch (ATS) — 1 unit**
- Rated Ampere: 225A–250A
- Phase: Single
- Rated Voltage: 200–240V
- Input frequency: 50/60Hz

Shall have 3 years warranty for unit repair / replace.
Must have an Authorized Service Partner/Center in the Philippines

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**Server, Licenses, Storage, Services (Hyperconverge Infrastructure)**

**Hardware Requirements (per node):**
- 2 x Intel Xeon Processor 2.4GHZ E5-2640 V4 90W 10C 25MB DDR4
- 128GB (8x16GB) DDR4-2400-MHz RDIMM/PC4-19200/single rank/x4/1.2v
- 10.8TB (6x1.8TB) 12G SAS 10K RPM SFF HDD
- 480GB 2.5-inch Ent. Performance 6G SATA SSD (3X endurance)
- 120GB 2.5-inch Enterprise Value 6G SATA SSD
- Dual Port 10Gb SFP+
- 2 x 64GB SD Card for Servers (Optional)
- 2 x 770W AC Power Supply for Rack Server
- Power Cord, 125VAC 13A NEMA 5-15 Plug, North America
- Standard Rail Kit for rack servers
- Support Required

**Architectural Requirements:**
- Shall have minimum cluster size of (3) three nodes and scalable
- up to (8) eight nodes
  - Shall support deduplication and compression
  - Shall support multiple Hypervisors
  - The cluster can be scaled up (optional to scaled down) in a non-disruptive manner, without having to power down any nodes.
  - The cluster can be scaled without adding any additional disk capacity.
  - Shall have a built in high availability to support drive failures or even complete node failures in the cluster.
  - Shall provide the ability to integrate existing external storage without using additional SAN switch.
  - Proposed server must have Native 40G interface and backward compatible with 10G.
  - The proposal shall include 10G top-of-rack switch supporting standard Ethernet, iSCSI, Fiber Channel, FCoE including required transceivers, modules and cables.

Management Requirements

- Shall have intelligent cloud-like / private-cloud infrastructure management with embedded analytics.
- Shall allow systems to be monitored centrally from a single management tool including server alarms and alerts inside the virtual management interface.
- Shall provide a customizable dashboard that allows users to focus on relevant information and tasks.
- Shall automate and can simplify infrastructure provisioning and maintenance.
- Shall offer seamless automated or manual upgrades.
- Shall support multi-hypervisor, provisioning, and management solution providing physical and virtual infrastructure control, management, and monitoring through a single pane-of-glass console. This solution can help improve service levels and operational efficiencies by providing service-centric IT management with end-to-end automation capabilities.
- Shall automate policy-driven QoS and security compliance with templates (Optional).
- Creates multiple templates with just a few clicks or through XML and API, automating the provisioning process.
- Shall support installation of the network, server and storage software from a single installer.
- Shall provide single interface or templates for server configuration, which could be also used when adding additional nodes.
- Shall provide the ability to perform all storage functions (create, delete, modify from the virtual management interface).
- Shall provide a single interface for upgrade of infrastructure software and firmware.
- Shall have the capability to enforce policies in the system BIOS settings and configuration, so once administrators define a common policy for a server BIOS, all subsequent deployments use this policy. (Optional)
- Multiple Virtual Machines can be deployed from a master virtual machine or a master template.
- Virtual Machines that are created and linked to the master server identity inherits any modifications done to the master identity. (Optional)
- A virtual machine that is previously linked to a master identify can be delinked from master identity. (Optional)
- Agentless internal hard disk drive monitoring and tracking or viewed in the dashboard.
- In an event of entire cluster failure, the Disaster Recovery site will take over as production clustered.
- Automated call home capability in the event of critical server failure or thresholds that are crossed which could impact server performance or customer SLA.
- Shall have built in scheduler to set up schedules for specific actions which are disruptive.
- Shall have the ability to connect out-of-band to the server (KVM access) from the hypervisor management
- Shall provide a portal, similar to cloud for users to deploy their own VM, application with approval request from the admin.

Other Requirements

- Shall include complete licenses of hypervisor and management.
- The bidder shall provide performance documentation of their Hyperconverge Infrastructure from ESG and Gartner. (Optional)
- The bidder shall have an end-to-end support of the proposed Hyperconverge Infrastructure.
- Migration of all existing physical servers to Hyperconverge environment.
- Must have an Authorized Service Partner/Center in the Philippines

WARRANTY

- With server management software with 3 yrs support license (Technical Support and New Release Updates)
- With server monitoring software license including 3yr 24x7 Support
- 3 years support 24x7 with 4-hour response time

Microsoft Licenses

- WindowsSvrSTDCore LicSAPk OLP 2Lic NL Gov CoreLic – 10 Licenses

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</tr>
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Component 1 Site Preparation (Civil, Mechanical, and Electrical Works)

- Knockdown of existing wall
- Erection of new wall partition
- Installation of Tempered Glass Panels and Doors
- Electrical Wirings with Grounding
- Service Entrances for Utilities
- Excavation/Backfilling from building to powerhouse for the encasement of feederline for GENSET
- Wall Rehabilitation (Fire Rated Cladding)
- Ceiling Rehabilitation
- Movement of Main ICTD Main Door
Component 2

Uninterrupted Power Supply (UPS) – 4 units

Minimum Requirements

Output
- Output Power Capacity: 4.5kWatts/5.0KVA
- Nominal Output Voltage: 230V
- Output Voltage Distortion: Less than 2%
- Output Frequency: 60Hz
- Topology: Double Conversion Online
- Wave form: Sinewave

Input
- Nominal Input Voltage: 230V
- Input Frequency: 40-70Hz (auto sensing)
- Input Connections: Hard Wire 3 wire (1PH+N+g)
- Input Voltage adjustable range for mains operation

Battery
- Battery Type: Maintenance-free sealed Lead-Acid battery with suspended electrolyte: leakproof
- Included Battery Modules: 2
- Typical Charge Time: 1.5 hours
- Expected Battery Life (years): 3 - 5 years

Others
- With Rack Mounting Kit
- Interface Ports: RJ-45 10/100 Base-T
- Control Panel: Multi-functional LCD Status and control console
- Approvals: CE, CE Mark, EAC, EN/IEC 62040-2, Energy Star V 1.0 (EU), IRAM, RCM, VDE
- Warranty: 3 years repair or replace and 2 years for battery.
- Must have an Authorized Service Partner/Center in the Philippines.

Power Distribution Unit – 8 units

Type: Metered
Orientation: Vertical, Zero U
Load capacity: 7400va
Maximum input current: 32 A
Input connections: IEC 309 32A
Output connections: (6) IEC 320 C19 (Battery Backup)
(36) IEC 320 C13 (Battery Backup)
Nominal Voltage: 230V
- Shall have Hydraulic-magnetic circuit breakers
- Shall have Locking IEC receptacles and locking power cord compatible
- Shall have Environmental monitoring port for external temperature/humidity monitoring

Component 3

Display and Management
- Shall have User-interactive LCD display for local access
- Shall have Field-replaceable network management module
- Shall have Local USB port for easy local firmware updates
- Shall have Active current measurements (amps) and power metering capability
- Shall have User-customizable alarms and warnings
- Shall have Embedded log memory to record/review/report historic metered data

Warranty: 3 years warranty for unit repair / replace.

Power distribution unit shall be same brand with the UPS, PACU and server rack.
### Component 4

**Precision Air Conditioning Unit (PACU) – 2 units**

- Shall have a nominal capacity up to ten (10) kW
- Shall be in Air-cooled and row-based type
- Shall be 230VAC, 1PH, 60Hz input
- Shall use R410A Refrigerant gas
- Shall have Variable-speed fans
- Shall have Standby input features
- Shall have Common alarm output features
- Shall have Internal condensate pump
- Shall have Top or bottom piping
- Shall have Network Management Card (NMC)
- Shall have Remote temperature sensors
- Shall have Microprocessor controller
- Shall have Insulated cabinet
- Shall have washable filter
- Shall have condensate management with dual floats
- Shall have condensate pump
- Shall have Scroll compressor
- Shall have hot gas bypass
- Shall have 3 years warranty for unit repair / replace.
- Must have an Authorized Service Partner/Center in the Philippines

### Component 5

**Fire Suppression System – 1 Unit**

- Shall be computed for the entire data center area.
- Shall be HFC-227ea Factory Filled and Pressurized clean agent gas
- Shall have impulsive valve operator kit on the cylinder tank
- Shall have 360 degree discharge nozzle
- Shall include control panel with transformer and battery.
- Shall be interface to PACU from control panel for automatic shut-off in case of smoke detection.
- Shall have at-least conventional smoke detector and base
- Shall include strobes, horns and bells
- Shall have manual release and abort switches
- Shall provide complete signage.
- Shall submit hydraulic flow calculations and drawings
- Shall provide certification from distributor that they are certified user of FM-200 refilling station located in the Philippines.
- Shall provide electrical and mechanical system test to guarantee proper operation before turn over.
- Shall provide door fan testing.
- Shall have 1 year warranty for unit repair / replace.
- Must have an Authorized Service Partner/Center in the Philippines.

### Component 6

**Equipment / Server Rack – 4 units**

- Rack Height: 42U
- Maximum Height: 1991mm
- Maximum Width: 600mm
- Maximum Depth: 1070mm
- Color: Black
- Rack width: 19 Inches
- Protection class: IP20

**Cable Management Accessories**

- Horizontal cable manager
- Vertical Cable Organizer
- Cable trough on roofing
- Data Cable partition on roofing
Server Rack shall be same brand with the UPS, PACU and Power distribution unit
Warranty: 5 years warranty for unit repair / replace.

Environmental Monitoring System (EMS) – 1 Unit

- Shall include integration with user-defined alerts features
- Shall have Adjustable alert thresholds (multiple thresholds per sensor, scheduling, severity levels).
- Alerts View features for easily review and correlate alerts. Provide context to alerts by attaching video clips, graphs, and maps.
- Shall support the following sensors: temperature, humidity, vibration, smoke, rope leak, and alarm beacon monitoring.
- Shall support email notifications alerts.
- Shall have Web interface GUI.
- Shall rack-mountable appliance.
- Shall support communication protocols of TCP/IP; HTTP; HTTPS; SMTP; SNMP v1, v2c, and v3; DHCP; DNS; Socks v4 or v5 Proxy Server; A-Link
- Shall include an external GSM Modem Gateway with at least 3 SIM slots for SMS Alert
- Shall support 78 universal sensors.
- Shall have 3 years warranty for unit repair / replace.

Door Access System – 2 Doors

- Shall have Fingerprint Identification system: Optical fingerprint collector (Resolving power 500DPI)
- Identification angle: 360-degree rotation with high sensitive and accurate identification.
- Shall have verification method via fingerprint + password
- Shall be in English language for machine and its software
- Alarm function: Intimidation alarm Dismantlement alarm break-in alarm unlock overtime alarm entrance point alarm
- Shall have the Function of inquiring the record
- Shall be capable to provide intelligent study fingerprint from year to year.
- Shall have Exit release button : can be connected with usual exit button or remote control release button
- Shall have Lock combination function
- Shall have bell function
- Shall have fingerprint capacity of 2000
- Shall have transaction capacity of 1000
- Shall have voice display
- Shall be capable to record 50000 events.
- Shall have the capability to communicate in TCT/IP, RS485, USB
- Shall have LCD Display 128mm x 64mm
- Shall have electromagnetic locks that withstand 600lbs.
- Shall have L&Z Bracket, magnetic door contact, metal push button exit, emergency break glass, and enclosure panel for the controls and power supply.
- Shall have desktop system with 19 inch LCD Monitor, Back-UPS and Core i5 CPU for monitoring and accessing of security door access system data. Licensed OEM OS installed should be compatible with Door Access System Application.
- Shall have 1 year warranty for unit repair / replace.
CCTV System — 1 Unit

Fixed Camera — 9 units
Image Sensor: Approx. 1/2.7 type CMOS image sensor
Lens: Focal Length: 3.6 mm, Angular Field of View: H: 90° V: 48°
Day and night: Auto(ICR) / Color/ Black & White
Minimum Illumination: 0.1 lx / F1.2 (color)*, 0 lx / F1.2 (IR on)*1

Network
Ethernet: 10BASE-T/100BASE-TX, RJ45 connector
Resolution: 1080P(1920x1080) / 1.3 M (1280x960) / 720P (1280x720) / D1 (704x576/704x480) / CIF (352x288/352x240)
Image compression method: H.264/H.264H/ H.264B/ MJPEG
Frame Rate: 1 to 25/30 fps

General
Power source: 12 V DC, PoE (IEEE802.3af compliant)
Power Consumption: 512 MB RAM, 256 MB Flash
Power: 12 V DC: 370 mA / Approx. 4.4 W PoE 48 V DC: 100 mA / Approx. 4.8 W (Class 0 device)
Ambient Operating Temperature / Humidity: -30 °C to +60 °C {22 °F to 140 °F} 10 % to 90 % (no condensation)
Water and Dust Resistance (Main Body): IP66

Network Video Recorder — 1 unit
Channel: 16 channel with 1080p realtime live view
Bandwidth: Max 200 Mbps incoming bandwidth
Video output: HDMI / VGA / BNC simultaneous video output
SATA HDD: Support 4 SATA HDDs up to 16 TB, 1 eSATA up to 16 TB, 2 USB (1 USB3.0)
PoE port: 16 PoE ports
Multiple network monitoring: Web browser, EMS* (E-Series Management Software) & Mobile-EMS
Multi-Language support: English / Thai / Vietnamese

System
- Processor: Dual-core embedded processor
- Operating System: Embedded Linux

Video / Audio:
- Interface: 1 HDMI, 1 VGA, 1 BNC
- Resolution: 1920 x 1080, 1280 x 1024, 1280 x 720, 1024 x 768
- Display Split: 1/4/8/9/16
- OSD: Camera title, Time, Video loss, Camera lock, Motion detection, Recording

Recording:
- Compression: H.264 / MJPEG
- Resolution: 3 Mp (2048 x 1536) / 1080p (1920 x 1080) / 720p (1280 x 720) / D1 (704x480) / VGA (640x480) / CIF (352x240) & etc.
- Bit Rate: 4 Mbps or less
- Record Mode: Manual, Schedule {Regular (Continuous), VMD, Alarm}, Stop
- Record Interval: Recording duration : 1 - 120 min (default : 60 min), Pre-record : 1 - 30 sec, Post-record : 10 - 300 sec

Video Detection & Alarm:
- Alarm Action: Recording, PTZ, Tour, Alarm, Video Push, Email, FTP, Buzzer & Alarm pop-up
- Video Detection: Video Motion Detection, Camera Blank
- Alarm Input: 16 channel

Playback & Backup:
- Sync Playback: 1/4/8/16
- Search Mode: Time/Date, Alarm, VMD & Exact search (accurate to second), Smart search
- Playback Function: Play, Pause, Stop, Rewind, Fast play, Slow play, Next le, Previous le, Next camera, Previous camera, Full screen, Repeat, Backup selection, Digital zoom

Network:
- Ethernet: 1 RJ45 port (10 / 100 / 1000 Mbps)
- Max. User Access: 128 users

Storage:
- 4 SATA ports, up to 16 TB (External HDD : 1 eSATA port)

External Interface:
- 2 ports (1 Rear USB3.0, 1 Front USB2.0)

Display: 21" LED TV with Mini-PC (Windows OS) wireless KBD/MSE

Hard Disk
Formatted Capacity : 4TB
Weight: 1.501b
Form Factor: 3.5-inch
Advanced Format (AF): Yes
Performance:
- Interface Transfer rate max buffer to Host: 6Gb/s
- Host to/from drive: 150mbps
- Cache(MB): 64
- Performance Class: 5400 RPM Class

Reliability/Data Integrity:
- Load/unload cycles: 300,000
- Non-recoverable read error bits read: <1 in 10

Power Management:
- Average power requirements
  - Read/Write: 5.1
  - Idle: 4.5
  - Standby and Sleep: 0.4

Environmental Specification:
- Temperature Operating: 0 to 65
- Non-operating: -40 to 70

Warranty: Shall have 1 year warranty for unit repair / replace.

**Generator Set** - 1 unit
Fuel Type: Diesel
Cylinders: 3
Phase: Single Phase
Power Rating (kVA): 30
Rated speed RPM : 1500
Cooling System: Water

Shall have 3 years warranty for unit repair / replace.
Must have an Authorized Service Partner/Center in the Philippines

**Component 10**

**Automatic Transfer Switch (ATS) — 1 unit**
Rated Ampere: 225A–250A
Phase: Single
Rated Voltage: 200–240V
Input frequency: 50/60Hz

Shall have 3 years warranty for unit repair / replace.
Must have an Authorized Service Partner/Center in the Philippines
### Servers, Licenses, Storage, Services (Hyperconverge Infrastructure)

#### Hardware Requirements (per node):
- 2 x Intel Xeon Processor 2.4GHZ V4 90W 10C 25MB DDR4
- 128GB (8x16GB) DDR4-2400-MHz RDIMM/PC4-19200/single rank/x4/1.2V
- 10.8TB (6x1.8TB) 12G SAS 10K RPM SFF HDD
- 480GB 2.5inch Ent. Performance 6G SATA SSD (3X endurance)
- 120GB 2.5inch Enterprise Value 6G SATA SSD
- Dual Port 10Gb SFP+
- 2 x 64GB SD Card for Servers (Option)
- 2 x 770W AC Power Supply for Rack Server
- Power Cord, 125VAC 13A NEMA 5-15 Plug, North America
- Standard Rail Kit for rack servers
- Support Required

#### Architectural Requirements:
- Shall have minimum cluster size of (5) five nodes and scalable up to (8) eight nodes
- Shall support deduplication and compression
- Shall support multiple Hypervisors
- The cluster can be scaled up (optional to scaled down) in a non-disruptive manner, without having to power down any nodes.
- The cluster can be scaled without adding any additional disk capacity.
- Shall have a built in high availability to support drive failures or even complete node failures in the cluster.
- Shall provide the ability to integrate existing external storage without using additional SAN switch.
- Proposed server must have Native 40G interface and backward compatible with 10G.
- The proposal shall include 10G top-of-rack switch supporting standard Ethernet, iSCSI, Fiber Channel, FCoE including required transceivers, modules and cables.

#### Management Requirements:
- Shall have intelligent cloud-like / private-cloud infrastructure management with embedded analytics.
- Shall allow systems to be monitored centrally from a single management tool including server alarms and alerts inside the virtual management interface.
- Shall provide a customizable dashboard that allows users to focus on relevant information and tasks.
- Shall automate and can simplify infrastructure provisioning and maintenance.
- Shall offer seamless automated or manual upgrades.
- Shall support multi-hypervisor, provisioning, and management solution providing physical and virtual infrastructure control, management, and monitoring through a single pane-of-glass console. This solution can help improve service levels and operational efficiencies by providing service-centric IT management with end-to-end automation capabilities.
- Shall automate policy-driven QoS and security compliance with templates (Optional).
- Creates multiple templates with just a few clicks or through XML and API, automating the provisioning process.
- Shall support installation of the network, server and storage software from a single installer.
- Shall provide single interface or templates for server configuration, which could be also used when adding additional nodes.
- Shall provide the ability to perform all storage functions (create,
delete, modify from the virtual management interface).
- Shall provide a single interface for upgrade of infrastructure software and firmware.
- Shall have the capability to enforce policies in the system BIOS settings and configuration, so once administrators define a common policy for a server BIOS, all subsequent deployments use this policy. (Optional)
- Multiple Virtual Machines can be deployed from a master virtual machine or a master template.
- Virtual Machines that are created and linked to the master server identity inherits any modifications done to the master identity. (Optional)
- A virtual machine that is previously linked to a master identity can be delinked from master identity. (Optional)
- Agentless internal hard disk drive monitoring and tracking or viewed in the dashboard.
- In an event of entire cluster failure, the Disaster Recovery site will take over as production clustered.
- Automated call home capability in the event of critical server failure or thresholds that are crossed which could impact server performance or customer SLA.
- Shall have built in scheduler to set up schedules for specific actions which are disruptive.
- Shall have the ability to connect out-of-band to the server (KVM access) from the hypervisor management
- Shall provide a portal, similar to cloud for users to deploy their own VM, application with approval request from the admin.

Other Requirements

- Shall include complete licenses of hypervisor and management.
- The bidder shall provide performance documentation of their Hyperconverge Infrastructure from ESG and Gartner. (Optional)
- The bidder shall have an end-to-end support of the proposed Hyperconverge Infrastructure.
- Migration of all existing physical servers to Hyperconverge environment.
- Must have an Authorized Service Partner/Center in the Philippines.

WARRANTY

- With server management software with 3yrs support license (Technical Support and New Release Updates)
- With server monitoring software license including 3yr 24x7 Support
- 3 years support 24x7 with 4-hour response time

Microsoft Licenses
- WindowsSvrSTDCore LicSAPk OLP 2 Lic NL Gov CoreLic – 30 Licenses
- WindowsSvrCAL 2016 OLP NL Gov UsrCAL - 100 Licenses
- WindowsSvrCAL 2016 OLP NL Gov DvcCAL – 100 Licences

B.1. Proposed Location and Components

PSR Data Center

The PSR Data Center, dubbed as DCA, will be located at the second floor of the NSC Building at the Presidential Security Group Compound, Malacañang Park. It shall occupy the room nearest the stairs coming from the back of the building. On the first floor is the Presidential Situation Room and the current PSR
Server Closet. All existing equipment used for the PSR local operations as well as the PSR Wide Area Network active components will be re-located to the DC#1. This will ensure better network equipment performance, maintenance, and security of sensitive components.

The DC#1 will be watched with at least nine (9) CCTV Cameras and Door Access System to monitor the ingress and egress of personnel accessing it. Immediate proximities will also be monitored with the CCTV along with the locations of the Generator and outdoor units of the PACU. This will be for the heightened safety and security of the DC#1 since the NSC Building is shared with personnel other Government offices.

The DC#1 will have ICT industry standards Precision Air-Conditioning and Environmental monitoring with GSM support that will send out text messages (SMS) once a change in temperature or any alert status is triggered. Fire Detection and Suppression will protect the investments with equipment-friendly gasses that is also not harmful to the environment.

Aside from the existing electric generator of the NSC Building, DC#1 will have its own generator and Uninterruptible Power Supply (UPS) to ensure the continued service of DC#1. It will have its own Automatic Transfer Switch (ATS) to manage the failover from commercial power to generator and vice-versa.

Prominent will be 4 equipment racks with metered Power Distribution Units (PDUs) that will house all the PSR's ICT equipment grouped as Server Rack, Network Rack, Power Rack, and Telco Rack.

All PSR Wide Area Network active components shall be transferred to the DC#1. Migration of the current Windows Server 2012 R2 to the virtual environment shall be done, including the configuration of the Domain Controller, Active Directory, Windows Update Services, File and Printer Sharing Services. The migration of the Zimbra e-mail server to the virtual environment shall also be done.

NSC Data Center

The NSC Data Center, dubbed as DC#2, will be located at the eighth floor of the NICA Building at No. 5 V. Luna Road, Quezon City. It shall occupy the idle office space adjacent to the ICTD Room used sometimes as Conference Area. The area shall be enclosed and a portion of the wall of the ICTD Room to be knocked down to make a door for the DC#2. Access to the DC#2 will be from the ICTD room. All existing equipment used for the NSC local operations as well as the PSR Wide Area Network active components will be re-located to the DC#2. This will ensure better network equipment performance, maintenance, and security of sensitive components.

The DC#2 will be watched with at least nine (9) CCTV Cameras and Door Access System to monitor the ingress and egress of personnel accessing it. Immediate proximities will also be monitored with the CCTV along with the locations of the Generator and outdoor units of the PACU. This will be for the heightened safety and security of the DC#2 since the NIC Building is shared between NSC and NICA.

The DC#2 will have ICT industry standards Precision Air-Conditioning and Environmental monitoring with GSM support that will send out text messages (SMS) once a change in temperature or any alert status is triggered. Fire Detection and Suppression will protect the investments with equipment-friendly gasses that is also not harmful to the environment.

Aside from the existing electric generator of the NIC Building which is only for shared spaces and facilities, DC#2 will have its own generator and Uninterruptible Power Supply (UPS) to ensure the continued service. It will have its own Automatic Transfer Switch (ATS) to manage the failover from commercial power to generator and vice-versa.

Prominent will be 4 equipment racks with metered Power Distribution Units (PDUs) that will house all the NSC's ICT equipment grouped as Server Rack, Network Rack, Power Rack, and Telco Rack.

Virtualization of servers will be implemented. These will enable the ICTD to have one (1) physical server running at least five (5) and scalable to eight (8) servers in a virtual environment. A Domain Controller, Active Directory, Windows Update Services, File and Printer Sharing Services will also be implemented. This will help us in maximizing our ICT investments to its fullest.

All NSC LAN and PSR WAN components shall be transferred to the DC#2.
C. SCOPE OF WORK

Bidders shall comply with the following:

C.1. Bidders shall be allowed to visit the actual site for the preparation of the plans prior to the submission of their proposal. Bidder shall submit an architectural and electrical layout/design based on user requirements together with their Technical Bid Proposal.

C.2. Supply, delivery and installation of complete site preparation labor and materials including other peripherals needed to complete the site without additional cost to procuring entity. Bidder shall submit complete Bill of Materials for the Site Preparation Component.

C.3. Supply, delivery and installation of complete input and output cables including rough-ins, hangers, support and other peripherals that may needed to complete system without additional cost to procuring entity.

C.4. Shall provide supply, delivery and installation of Automatic Transfer Switch and Generator Set to serve as emergency power for Data Center in the event that there is a power interruption/failure. This also includes the following:

C.4.1 Supply and installation of Genset Feeder line from the Data Center to Powerhouse including the excavation and backfilling for the encasement of feeder line for Genset.

C.4.2 Supply and installation of Data Centers Power Distribution and PACU power supply.

C.5. Shall provide supply, delivery and installation of step-up transformer from 230 volts to 400 volts input supply of the UPS.

C.6. Supply, delivery and installation of complete electromechanical, tap-water and drain line including rough-ins, hangers, support and other peripherals that may needed to complete system without additional cost to procuring entity.

C.7. Supply, delivery and installation of complete fire suppression system including hangers, support and other peripherals that may needed to complete system without additional cost to procuring entity.

C.8. Supply, delivery and installation of complete security door access input and output cables including rough-ins, hangers, supports and other peripherals that may needed to complete system without additional cost to procuring entity. Registration of personnel to door access system shall be scheduled to avoid disruption of work.

C.9. Supply, delivery and installation of complete CCTV system input and output cables including rough-ins, hangers, supports and other peripherals that may needed to complete system without additional cost to procuring entity.

For the Presidential Situation Room (DC#1)

C.10. Supply, delivery, installation and configuration of Server, Storage, and Services to include migration of current services:

(1) Startup and Installation (Server and Storage)
(2) Hyper V Configuration
(3) Domain Controller Configuration
(4) Windows Server Update Configuration
(5) Migration of all existing physical servers to virtualized environment

For the National Security Council (DC#2)

C.11. Supply, delivery, installation and configuration of Server, Storage, and Services to include migration of current services:

(1) Startup and Installation (Server and Storage)
(2) Hyper V Configuration
(3) Domain Controller Configuration
(4) Windows Server Update Configuration
(5) Migration of all existing physical servers to virtual environment.
(6) 5-Day Administrator’s Training and knowledge transfer for 7 NSC ICTD personnel.

C.12. Transfer of existing network components from current location to new Data Centers.

C.13. Testing of each system shall be done accordingly and will be certified as completed after performing and passing the Functionality Test and the User Acceptance Test.

D. BIDDER’S ELIGIBILITY REQUIREMENT

D.1. The contractor must have at least one (1) employed electronics/electrical engineer fully certified by the vendor on the similar UPS product being offered with a minimum two (2) years’ experience in the UPS-Electrical System installation, configuration and troubleshooting. Certified Engineers should have completed the training course for the equivalent or similar UPS Certification Program from the Manufacturer. Copy of the Certification shall be provided. Certified engineer must be employed by the bidder for at least three (3) years.

D.2. Bidder must have employed and assign as authorized safety officer to oversee the implementation of the project. Copy of certification of safety training shall be attached in the bid documents. Training bodies shall be accredited by Department of Labor and Employment.

D.3. Bidder must be Certified Sales Partner/Reseller of the product offered to ensure of its technical expertise on the offered solution.

D.4. Bidder must have at least one (1) certified Data Center Professional and has been employed to the bidder for at least three (3) years.

D.5. Bidder shall have at least five (5) years’ experience in undertaking similar UPS project. Valid proof of documents must be provided along with the bid submission.

D.6. Bidder should provide certificate that has 24x7 technical support capabilities. Bidder should identify the person responsible for restoring service due to outages and provide his contact details i.e. contact person, position, contact numbers and email address.

D.7. Winning Bidder should provide list of personnel who will form part of the implementation team, complete with individual photocopies of Company IDs, Certificates of Employment, NBI Clearances, contact details, and/or technical/specialization certificates for facilitation of Work Passes.

E. WORK SCHEDULE

Regular work can be performed from Mondays to Fridays starting 8:00 a.m. up to 9 p.m. including Saturdays or Sundays.

However, for DC#1, work can be done 24 hours x 7 days a week.

For DC#2, work schedule is recommended to be from 6PM to 6AM so as not to disrupt normal work during office hours. However, for activities that are not disruptive to normal work operations, they may be done during office hours. Winning bidder shall be informed of disruptions to the work schedule as needed.

F. WARRANTY AND MAINTENANCE

1) The Bidder shall provide a Preventive Maintenance Program during the warranty period for all the delivered equipment and system.

2) The Bidder shall provide quarterly preventive maintenance on the UPS, PACU, Fire Suppression, Server Rack, Power distribution units, Door Access System and CCTV System during the warranty period.

3) The Bidder shall provide not less than 3 hours of response time after receive of calls from client during warranty period.
H. SCHEDULE OF DELIVERABLES

The delivery of the items for the Data Center shall be 90 calendar days upon issuance of corresponding Notice to Proceed (NTP). The commissioning and initial testing shall be conducted within 2-3 calendar days after each component is completed and witnessed by the BAC-TWG.

Timeline of Project should not exceed 120 calendar days upon issuance of the Notice to Proceed.

After completion of the Data Centers, the BAC-TWG shall conduct Functionality Tests and witnessed by the BAC. These will ensure that all of the project’s specifications and requirements are met.

I. INSTITUTIONAL REQUIREMENTS

a. The winning bidder shall coordinate with concerned personnel of the Information and Communication Technology Division (ICTD) for the conduct of any activity related to the fulfillment of their obligations to the NSC.

b. The bidder shall warrant that it shall conform strictly to the terms and conditions of this Terms of Reference.

c. The bidder must be an authorized distributor, reseller or partner of the manufacturer, as attested by a notarized original copy of certification to be submitted to the Chairman, NSC Bids and Awards Committee. The certification should be on a stationery bearing the letterhead of the manufacturer and signed by the authorized person representing said manufacturer.

d. The bidder must submit a copy of manufacturer’s product brochures, specifications sheet, manuals etc., as appropriate of all the required equipment and systems. Any of these evidences should be downloadable from product or manufacturer’s website or otherwise verifiable by any means reasonable and acceptable to the Bids and Awards Committee.

J. REMUNERATION AND TERMS OF PAYMENT

The winning bidder shall be paid following this schedule:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
<th>Payment Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>10% of Total Contract Price (TCP)</td>
<td>Within 7 calendar days upon receipt of NTP</td>
<td>Upon issuance of Notice to Proceed AND submission of Implementation Plan (GANTT Chart);</td>
</tr>
<tr>
<td>10% of Total Contract Price (TCP)</td>
<td>Within 21 calendar days upon receipt of NTP</td>
<td>Upon completion of Civil Works for both sites</td>
</tr>
<tr>
<td>40% of Total Contract Price (TCP)</td>
<td>Within 90 calendar days upon receipt of NTP</td>
<td>Upon completion of delivery of ALL components, equipment, materials</td>
</tr>
<tr>
<td>40% of Total Contract Price (TCP)</td>
<td>Within 120 calendar days upon receipt of NTP</td>
<td>Upon submission of Certification of 100% Completion of Project AND Passing of the Functionality Test to be administered by the BAC-TWG and witnessed by the BAC.</td>
</tr>
<tr>
<td>5% Retention Fee of every progress payment</td>
<td>Progress payment starts on the second payment schedule</td>
<td>After one (1) year from the date of project completion, Issuance of Certificate of Final Acceptance.</td>
</tr>
</tbody>
</table>
K. PENALTY CLAUSE

In case of failure to complete the project within the time specified, a penalty of one-tenth of one percent (1/10 of 1%) of the total project cost for every day of delay shall be imposed. It is construed that the Data Center Project shall be made and completed within one hundred twenty (120) calendar days from the date of the issuance of the Notice to Proceed.

L. APPROVED BUDGET CEILING

The approved budgets amounting to TWENTY FIVE MILLION PHILIPPINE PESOS (₱ 25,000,000.00) and TWENTY SEVEN MILLION PHILIPPINE PESOS (₱ 27,000,000.00) are for LOT 1 (Presidential Situation Room – DC1) and Lot 2 (National Security Council Secretariat – DC2) respectively.

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Chair, Bids and Awards Committee